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## Introduction

### CONGRATULATIONS

Congratulations on acquiring your new Ford. Please take the time to get well acquainted with your vehicle by reading this handbook. The more you know and understand about your vehicle, the greater the safety and pleasure you will derive from driving it.

For more information on Ford Motor Company and its products visit the following website:

- In the United States: [www.ford.com](http://www.ford.com)
- In Canada: [www.ford.ca](http://www.ford.ca)
- In Australia: [www.ford.com.au](http://www.ford.com.au)
- In Mexico: [www.ford.com.mx](http://www.ford.com.mx)

Additional owner information is given in separate publications.

This Owner's Guide describes every option and model variant available and therefore some of the items covered may not apply to your particular vehicle. Furthermore, due to printing cycles it may describe options before they are generally available.

Remember to pass on this Owner's Guide when reselling the vehicle. It is an integral part of the vehicle.



**WARNING: Fuel pump shut-off:** In the event of an accident this feature will automatically cut off the fuel supply to the engine. It can also be activated through sudden vibration (e.g. collision when parking). To restart your vehicle, refer to *Fuel pump shut-off* in the *Roadside Emergencies* chapter.

### SAFETY AND ENVIRONMENT PROTECTION



#### Warning symbols in this guide

How can you reduce the risk of personal injury to yourself or others? In this guide, answers to such questions are contained in comments highlighted by the warning triangle symbol. These comments should be read and observed.

## Introduction

### **Warning symbols on your vehicle**

When you see this symbol, it is imperative that you consult the relevant section of this guide before touching or attempting adjustment of any kind.



### **Protecting the environment**

We must all play our part in protecting the environment. Correct vehicle usage and the authorized disposal of waste, cleaning and lubrication materials are significant steps toward this aim. Information in this respect is highlighted in this guide with the tree symbol.



### **CALIFORNIA PROPOSITION 65 WARNING**

 **WARNING:** Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### **PERCHLORATE MATERIAL**

Certain components of this vehicle such as airbag modules, safety belt pretensioners, and button cell batteries may contain Perchlorate Material – Special handling may apply for service or vehicle end of life disposal. See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

### **BREAKING-IN YOUR VEHICLE**

Your vehicle does not need an extensive break-in. Try not to drive continuously at the same speed for the first 1,000 miles (1,600 km) of new vehicle operation. Vary your speed frequently in order to give the moving parts a chance to break in.

## Introduction

Drive your new vehicle at least 100 miles (160 km) before performing extended wide open throttle maneuvers and at least 1,000 miles (1,600 km) before towing a trailer or before performance/competition conditions. For more detailed information about towing a trailer, refer to *Trailer towing* in the *Tires, Wheels and Loading* chapter.

Do not add friction modifier compounds or special break-in oils since these additives may prevent piston ring seating. See *Engine oil* in the *Maintenance and Specifications* chapter for more information on oil usage.

### SPECIAL NOTICES

#### New Vehicle Limited Warranty

For a detailed description of what is covered and what is not covered by your vehicle's New Vehicle Limited Warranty, refer to the *Warranty Guide* that is provided to you along with your Owner's Guide.

#### Special instructions

For your added safety, your vehicle is fitted with sophisticated electronic controls.



**WARNING:** Please read the section *Airbag Supplemental Restraint System (SRS)* in the *Seating and Safety Restraints* chapter. Failure to follow the specific warnings and instructions could result in personal injury.



**WARNING:** Front seat mounted rear-facing child or infant seats should **NEVER** be placed in front of an active passenger airbag.

### DATA RECORDING

#### Service Data Recording

Service data recorders in your vehicle are capable of collecting and storing diagnostic information about your vehicle. This potentially includes information about the performance or status of various systems and modules in the vehicle, such as engine, throttle, steering or brake systems. In order to properly diagnose and service your vehicle, Ford Motor Company, Ford of Canada, and service and repair facilities may access or share among them vehicle diagnostic information received through a direct connection to your vehicle when diagnosing or servicing

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## Introduction

your vehicle. For U.S. only (if equipped), if you choose to use the SYNC® Vehicle Health Report, you consent that certain diagnostic information may also be accessed electronically by Ford Motor Company and Ford authorized service facilities, and that the diagnostic information may be used for any purpose. See your SYNC® supplement for more information.

### Event Data Recording

**This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an airbag deployment or hitting a road obstacle; this data will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:**

- **How various systems in your vehicle were operating;**
- **Whether or not the driver and passenger safety belts were buckled/fastened;**
- **How far (if at all) the driver was depressing the accelerator and/or the brake pedal; and**
- **How fast the vehicle was travelling; and**
- **Where the driver was positioning the steering wheel.**

**This data can help provide a better understanding of the circumstances in which crashes and injuries occur.**

**Note: EDR data is recorded by your vehicle only if a non-trivial crash situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data or information (e.g., name, gender, age, and crash location) is recorded (see limitations regarding 911 Assist and Traffic, directions and Information privacy below). However, parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.**

## Introduction

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have such special equipment, can read the information if they have access to the vehicle or the EDR. Ford Motor Company and Ford of Canada do not access event data recorder information without obtaining consent, unless pursuant to court order or where required by law enforcement, other government authorities or other third parties acting with lawful authority. Other parties may seek to access the information independently of Ford Motor Company and Ford of Canada.

**Note:** Including to the extent that any law pertaining to Event Data Recorders applies to SYNC® or its features, please note the following: Once 911 Assist (if equipped) is enabled (set ON), 911 Assist may, through any paired and connected cell phone, disclose to emergency services that the vehicle has been in a crash involving the deployment of an airbag or, in certain vehicles, the activation of the fuel pump shut-off. Certain versions or updates to 911 Assist may also be capable of being used to electronically or verbally provide to 911 operators the vehicle location (such as latitude and longitude), and/or other details about the vehicle or crash or personal information about the occupants to assist 911 operators to provide the most appropriate emergency services. If you do not want to disclose this information, do not activate the 911 Assist feature. See your SYNC® supplement for more information.

Additionally, when you connect to Traffic, Directions and Information (if equipped, U.S. only), the service uses GPS technology and advanced vehicle sensors to collect the vehicle's current location, travel direction, and speed ("vehicle travel information"), only to help provide you with the directions, traffic reports, or business searches that you request. If you do not want Ford or its vendors to receive this information, do not activate the service. Ford Motor Company and the vendors it uses to provide you with this information do not store your vehicle travel information. For more information, see Traffic, Directions and Information, Terms and Conditions. See your SYNC® supplement for more information.

## Introduction

### CELL PHONE USE

The use of mobile communications equipment has become increasingly important in the conduct of business and personal affairs. However, drivers must not compromise their own or others' safety when using such equipment. Mobile communications can enhance personal safety and security when appropriately used, particularly in emergency situations. Safety must be paramount when using mobile communications equipment to avoid negating these benefits.

Mobile communication equipment includes, but is not limited to, cellular phones, pagers, portable email devices, text messaging devices and portable two-way radios.



**WARNING:** Driving while distracted can result in loss of vehicle control, accident and injury. Ford strongly recommends that you use extreme caution when using any device or feature that may take your focus off the road. Your primary responsibility is the safe operation of your vehicle.

We recommend against the use of any handheld device while driving and that you comply with all applicable laws.

### EXPORT UNIQUE (NON-UNITED STATES/CANADA) VEHICLE SPECIFIC INFORMATION

For your particular global region, your vehicle may be equipped with features and options that are different from the features and options that are described in this Owner's Guide. A market unique supplement may be supplied that complements this book. By referring to the market unique supplement, if provided, you can properly identify those features, recommendations and specifications that are unique to your vehicle. This Owner's Guide is written primarily for the U.S. and Canadian Markets. Features or equipment listed as standard may be different on units built for Export. **Refer to this Owner's Guide for all other required information and warnings.**

## Introduction

These are some of the symbols you may see on your vehicle.

### Vehicle Symbol Glossary

Safety Alert		See Owner's Guide	
Fasten Safety Belt		Airbag - Front	
Airbag - Side		Child Seat Lower Anchor	
Child Seat Tether Anchor		Brake System	
Anti-Lock Brake System		Parking Brake System	
Brake Fluid - Non-Petroleum Based		Parking Aid System	
Stability Control System		Speed Control	
Master Lighting Switch		Hazard Warning Flasher	
Fog Lamps-Front		Fuse Compartment	
Fuel Pump Reset		Windshield Wash/Wipe	
Windshield Defrost/Demist		Rear Window Defrost/Demist	

## Introduction

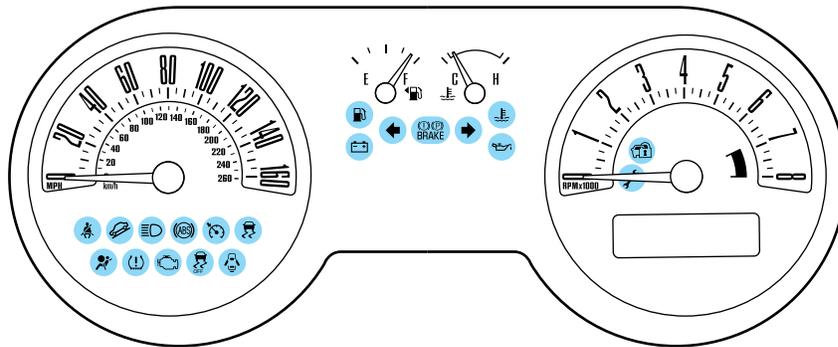
### Vehicle Symbol Glossary

Power Windows Front/Rear		Power Window Lockout	
Child Safety Door Lock/Unlock		Interior Luggage Compartment Release	
Panic Alarm		Engine Oil	
Engine Coolant		Engine Coolant Temperature	
Do Not Open When Hot		Battery	
Avoid Smoking, Flames, or Sparks		Battery Acid	
Explosive Gas		Fan Warning	
Power Steering Fluid		Maintain Correct Fluid Level	
Service Engine Soon		Engine Air Filter	
Passenger Compartment Air Filter		Jack	
Check Fuel Cap		Low Tire Pressure Warning	

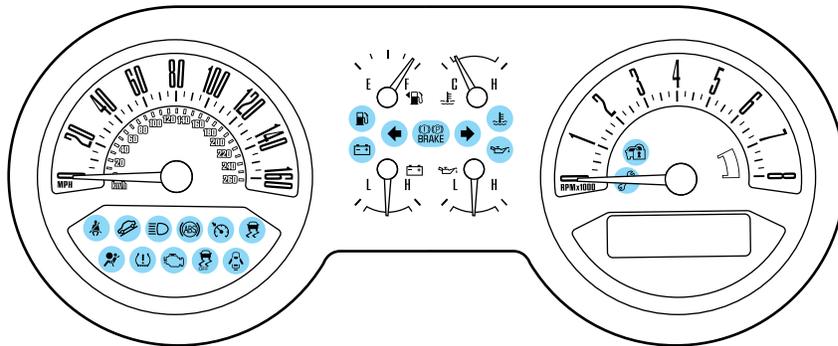
## Instrument Cluster

### WARNING LIGHTS AND CHIMES

Base V6 engine instrument cluster (standard measure shown, metric similar)



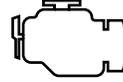
Optional V6 and GT instrument cluster (standard measure shown, metric similar)



Warning lights and gauges can alert you to a vehicle condition that may become serious enough to cause extensive repairs. A warning light may illuminate when a problem exists with one of your vehicle's functions. Many lights will illuminate when you start your vehicle to make sure the bulbs work. If any light remains on after starting the vehicle, refer to the respective system warning light for additional information.

## Instrument Cluster

**Service engine soon:** The service engine soon indicator light illuminates when the ignition is first turned to the on position to check the bulb and to indicate whether the vehicle is ready for Inspection/Maintenance (I/M) testing. Normally, the service engine soon light will stay on until the engine is cranked, then turn itself off if no malfunctions are present. However, if after 15 seconds the service engine soon light blinks eight times, it means that the vehicle is not ready for I/M testing. See the *Readiness for Inspection/Maintenance (I/M) testing* in the *Maintenance and Specifications* chapter.



Solid illumination after the engine is started indicates the on-board diagnostics system (OBD-II) has detected a malfunction. Refer to *On-board diagnostics (OBD-II)* in the *Maintenance and Specifications* chapter. If the light is blinking, engine misfire is occurring which could damage your catalytic converter. Drive in a moderate fashion (avoid heavy acceleration and deceleration) and contact your authorized dealer as soon as possible.



**WARNING:** Under engine misfire conditions, excessive exhaust temperatures could damage the catalytic converter, the fuel system, interior floor coverings or other vehicle components, possibly causing a fire.

**Brake system warning light:** To confirm the brake system warning light is functional, it will momentarily illuminate when the ignition is turned to the on position when the engine is not running, or in a position between on and start, or by applying the parking brake when the ignition is turned to the on position. If the brake system warning light does not illuminate at this time, contact your authorized dealer as soon as possible. Illumination after releasing the parking brake indicates low brake fluid level. Contact your authorized dealer as soon as possible.



## Instrument Cluster

 **WARNING:** Driving a vehicle with the brake system warning light on is dangerous. A significant decrease in braking performance may occur. It will take you longer to stop the vehicle. Contact your authorized dealer as soon as possible. Driving extended distances with the parking brake engaged can cause brake failure and the risk of personal injury.

**Anti-lock brake system (if equipped):** If the ABS light stays illuminated or continues to flash, a malfunction has been detected.

Contact your authorized dealer as soon as possible. Normal braking is still functional unless the brake warning light also is illuminated.



**Airbag readiness:** If this light fails to illuminate when the ignition is turned to on, continues to flash or remains on, contact your authorized

dealer as soon as possible. A chime will sound if there is a malfunction in the indicator light.



**Safety belt:** Reminds you to fasten your safety belt. A Belt-Minder® chime will also sound to remind you to fasten your safety belt. Refer to the *Seating and Safety Restraints* chapter to activate/deactivate the Belt-Minder® chime feature.

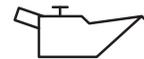


**Charging system:** Illuminates when the battery is not charging properly. If it stays on while the engine is running, there may be a malfunction

with the charging system. Contact your authorized dealer as soon as possible. This indicates a problem with the electrical system or a related component.



**Engine oil pressure (if equipped):** Illuminates when the oil pressure falls below the normal range, refer to *Engine oil* in the *Maintenance and Specifications* chapter.



## Instrument Cluster

### Engine coolant temperature:

Illuminates when the engine coolant temperature is high. Stop the vehicle as soon as possible, switch off the engine and let cool. Refer to *Engine coolant* in the *Maintenance and Specifications* chapter.



**WARNING:** Never remove the coolant reservoir cap while the engine is running or hot.

### Low tire pressure warning:

Illuminates when your tire pressure is low. If the light remains on at start up or while driving, the tire pressure should be checked. Refer to *Inflating your tires* in the *Tires, Wheels and Loading* chapter. When the ignition is first turned to on, the light will illuminate for three seconds to ensure the bulb is working. If the light does not turn on, contact your authorized dealer as soon as possible. For more information on this system, refer to *Tire pressure monitoring system (TPMS)* in the *Tires, Wheels and Loading* chapter.



### AdvanceTrac®/traction control

**active:** Flashes when the system is active. If the light remains on a malfunction has been detected; contact your authorized dealer as soon as possible. Refer to the *Driving* chapter for more information.



### AdvanceTrac®/traction control

**off light:** Illuminates when the system has been disabled (by the driver or as a result of a system failure). Refer to the *Driving* chapter for more information.



### Low fuel (if equipped):

Illuminates when the fuel level in the fuel tank is at or near empty. Refer to *Fuel gauge* in this chapter.



## Instrument Cluster

**Speed control:** Illuminates when the speed control is engaged. Turns off when the speed control system is disengaged.



**Door ajar:** Illuminates when the ignition is in the on position and any of the doors or the hood/trunk are not completely closed.



**Anti-theft system:** Flashes when the SecuriLock® passive anti-theft system has been activated.



**Electronic throttle control:** Illuminates when the engine has defaulted to a “limp-home” operation. Contact your authorized dealer as soon as possible.



**Grade assist (if equipped):** Illuminates when the overdrive function of the transmission has been turned off and the grade assist function has been turned on, refer to the *Driving* chapter.



**Turn signal:** Illuminates when the left or right turn signal or the hazard lights are turned on. If the indicators stay on or flash faster, check for a burned out bulb.



**High beams:** Illuminates when the high beam headlamps are turned on.



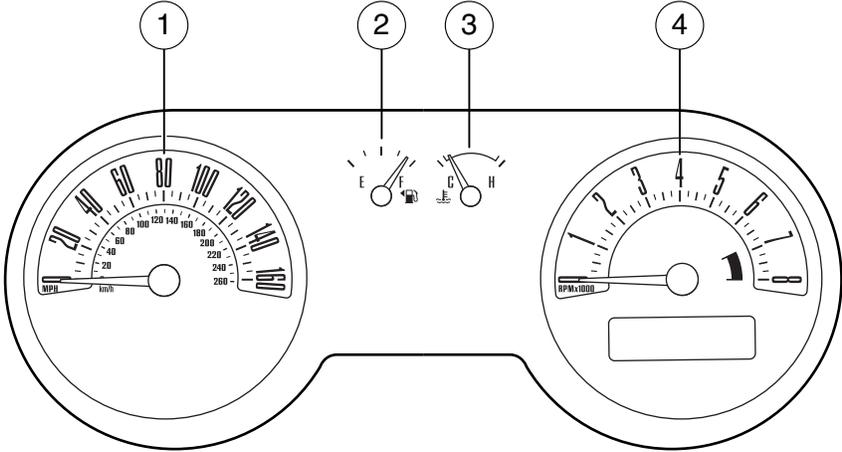
**Key-in-ignition warning chime:** Sounds when the key is left in the ignition in the off or accessory position and the driver's door is opened.

**Headlamps on warning chime:** Sounds when the headlamps or parking lamps are on, the ignition is off (the key is not in the ignition) and the driver's door is opened.

# Instrument Cluster

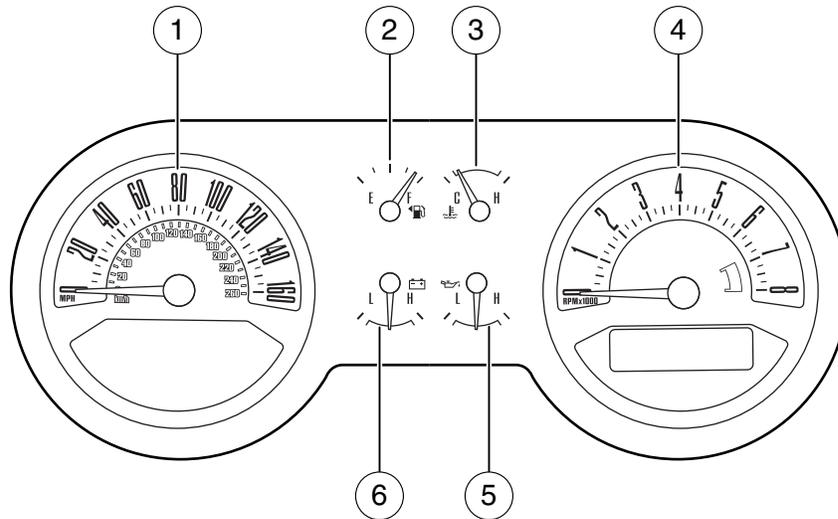
## GAUGES

Base V6 engine instrument cluster (standard measure shown, metric similar)



## Instrument Cluster

Optional V6 and GT instrument cluster (standard measure shown, metric similar)



Refer to *Message center* in this chapter to select preset colors or user definable colors (MyColor®) for the nighttime gauge backlighting.

1. **Speedometer:** Indicates the current vehicle speed.
2. **Fuel gauge:** Indicates approximately how much fuel is left in the fuel tank (when the ignition is in the on position). The fuel gauge may vary slightly when the vehicle is in motion or on a grade. The fuel icon and arrow indicates which side of the vehicle the fuel filler door is located.
3. **Engine coolant temperature gauge:** Indicates engine coolant temperature. At normal operating temperature, the needle will be in the normal range (between H and C). **If it enters the red section, the engine is overheating. Stop the vehicle as soon as safely possible, switch off the engine and let the engine cool.**
4. **Tachometer:** Indicates the engine speed in revolutions per minute. Driving with your tachometer pointer continuously at the top of the scale may damage the engine.

## Instrument Cluster

5. **Engine oil pressure gauge (optional V6 and GT cluster only):** Indicates engine oil pressure. The needle should stay in the normal operating range (between L and H). If the needle falls below the normal range, stop the vehicle, turn off the engine and check the engine oil level. Add oil if needed. If the oil level is correct, have your vehicle checked at your authorized dealer.

6.  **Battery voltage gauge (optional V6 and GT cluster only):** Indicates the battery voltage when the ignition is in the on position. If the pointer moves and stays outside the normal operating range, have the vehicle's electrical system checked as soon as possible.

**Odometer and trip odometer:** The odometer is displayed in the message center and registers the distance of individual journeys. For trip odometer, refer to *Message center* in this chapter.

### MESSAGE CENTER

Your vehicle's message center allows you to configure/personalize certain vehicle options to suit your needs.

The message center is also capable of monitoring many vehicle systems and will alert you to potential vehicle problems and various conditions with an informational message followed by a long indicator chime.

The message center display is located in the instrument cluster.

### Info

Press INFO repeatedly to cycle through the following features:



### TRIP A/B

Registers the distance of individual journeys. Press and release INFO until the A or B trip appears in the display (this represents the trip mode). Press and hold RESET for two seconds to reset.

Refer to *UNITS* later in this section to switch the display from Metric to English.

## Instrument Cluster

### **MYKEY MILES (km)**

For more information, refer to *MyKey*® in the *Locks and Security* chapter.

### **MILES (km) TO E**

This displays an estimate of approximately how far you can drive with the fuel remaining in your tank under normal driving conditions. Remember to turn the ignition off when refueling to allow this feature to correctly detect the added fuel.

LOW FUEL LEVEL will display when you have approximately 50 miles (80 km) to empty. Press RESET to clear this warning message. It will return at approximately 25 miles (40 km), 10 miles (16 km) and 0 miles (0 km) miles to empty.

Distance to empty is calculated using a running average fuel economy, which is based on your recent driving history of 500 miles (800 km). This value is not the same as the average fuel economy display. The running average fuel economy is re-initialized to a factory default value if the battery is disconnected.

### **AVG MPG (L/100 km)**

Average fuel economy displays your average fuel economy in miles/gallon or liters/100 km.

If you calculate your average fuel economy by dividing distance traveled by gallons of fuel used (liters of fuel used by 100 kilometers traveled), your figure may be different than displayed for the following reasons:

- Your vehicle was not perfectly level during fill-up
- Differences in the automatic shut-off points on the fuel pumps at service stations
- Variations in top-off procedure from one fill-up to another
- Rounding of the displayed values to the nearest 0.1 gallon (liter)

To determine your average highway fuel economy, do the following:

1. Drive the vehicle at least 5 miles (8 km) with the speed control system engaged to display a stabilized average.
2. Record the highway fuel economy for future reference.

It is important to press the RESET button (press and hold RESET for two seconds in order to reset the function) after setting the speed control to get accurate highway fuel economy readings.

For more information refer to *Essentials of good fuel economy* in the *Maintenance and Specifications* chapter.

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## Instrument Cluster

### MPG (L/km) ↑ ↓

This displays instantaneous fuel economy as a bar graph ranging from ↓ poor economy to ↑ excellent economy.

Your vehicle must be moving to calculate instantaneous fuel economy. When your vehicle is not moving, this function shows ↓, one or no bars illuminated. Instantaneous fuel economy cannot be reset.

### TIMER

Timer displays the trip elapsed drive time.

To operate, do the following:

1. Press and release RESET in order to start the timer.
2. Press and release RESET to pause the timer.
3. Press and hold RESET until the timer resets.

### Blank Screen

The message center display will be blank after cycling through all of the Info menu items.

### System check and vehicle feature customization

\*Press the SETUP button repeatedly to cycle the message center through the following features:

\***Note:** Not all personalization items will appear unless your vehicle is so equipped.



### RESET FOR SYSTEM CHECK

When this message appears, press the RESET button and the message center will begin to cycle through the following systems and provide a status of the item if needed.



1. XXX% OIL LIFE
2. CHARGING SYSTEM
3. DOORS STATUS
4. TRUNK STATUS
5. BRAKE SYSTEM
6. FUEL LEVEL

## Instrument Cluster

7. MYKEY DISTANCE (if MyKey® is programmed)
8. MYKEY(S) PROGRAMMED
9. ADMIN KEYS PROGRAMMED

**Note:** Some systems show a message only if a condition is present.

### **OIL LIFE**

This displays the remaining oil life.

An oil change is required whenever indicated by the message center and according to the recommended maintenance schedule. USE ONLY RECOMMENDED ENGINE OILS.

To reset the oil monitoring system to 100% after each oil change perform the following:

1. Press and release SETUP to display “OIL LIFE XXX% HOLD RESET = NEW”.
2. Press and hold RESET for two seconds and release to reset the oil life to 100%.

### **STEERING FEEL**

This feature allows three modes of steering feel.

Press RESET to cycle through the settings of:

- **STANDARD**– Provides a balance between a comfort and sport feel.
- **SPORT**– Slightly higher effort required for steering with more road force felt through the steering wheel. See note below.
- **COMFORT**– Slightly less effort required for steering with less road force felt through the steering wheel.

**Note:** When AdvanceTrac® sport mode is on or when AdvanceTrac® and traction control are off, the steering feel will be locked in sport mode. The display will show STEERING FEEL <SPORT> LOCKED and the steering feel will not be selectable.

See *AdvanceTrac® stability enhancement system* and *Steering* in the *Driving* chapter for more information.

### **HALO LIGHT**

Turns the halo lighting around the gauges on or off.

Press and hold RESET to turn the feature on or off.

### **AMBIENT LIGHT**

Turns the ambient lighting on or off. Ambient lighting provides accent lighting in various locations such as footwell areas, cup holders and the center console bin. The parking lamps/headlamps must be on to use ambient lighting.

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## Instrument Cluster

Press and hold RESET to turn the feature on or off.

### **AMBIENT DIM**

Use this to adjust the brightness of the ambient lighting.

Press RESET to choose the various settings.

### **GAUGE COLOR, AMBIENT COLOR, HALO COLOR**

**GAUGE COLOR:** The instrument cluster gauges are backlit with white backlighting when the headlamps are off. When the headlamps are on, you can select one of the preset colors for the nighttime gauge backlighting or create up to three custom colors using the MyColor® feature.

**Note:** A gauge in a warning condition will be lit red when the headlamps are on.

**AMBIENT COLOR:** You can select one of the preset colors for ambient lighting or create up to three custom colors using the MyColor® feature.

**HALO COLOR:** You can select one of the preset colors for halo lighting or create up to three custom colors using the MyColor® feature.

**Note:** Headlamps or parking lamps must be on to set up colors.

To choose colors for the gauges, halo color or ambient lighting do the following:

1. Press SETUP to reach the GAUGE COLOR, AMBIENT COLOR, or HALO COLOR menu.

2. Press RESET to scroll through the following color options:

- ICE BLUE
- WHITE
- GREEN
- PURPLE
- BLUE
- ORANGE
- RED
- MYCOLOR 1, 2, 3 (See *HOLD RESET TO SET MY COLOR 1, 2, 3* following, to save personalized color combinations)

### **HOLD RESET TO SET MYCOLOR 1, 2, 3 (Saving your own colors)**

Apart from the preset colors, you can create your own color by adjusting the levels of the three primary colors (red, green, and blue) through the MyColor® feature to achieve any of 125 different combinations. You can save up to three custom colors in MyColor®.

## Instrument Cluster

To enter the MyColor® adjust mode, do the following (vehicle must be stationary):

1. Press and hold RESET for three seconds at the MyColor 1, 2 or 3 menu option to reach the MyColor® adjust mode.
2. Press SETUP to scroll through the R (red), G (green), B (blue) and Exit options.
3. Press RESET to blend in more of the color being adjusted.
4. To save and exit, hold RESET for three seconds when prompted. Pressing RESET for less than three seconds will cycle back through the colors.

### **UNITS**

Displays the current units English or Metric.

Press RESET to change from English to Metric.

### **AUTOLAMP (SEC)**

This feature keeps your headlights on for up to three minutes after the ignition is switched off.

Press RESET to select the new Autolamp delay values of 0, 10, 20, 30, 60, 90, 120 or 180 seconds.

### **AUTOLOCK**

This feature automatically locks all vehicle doors when the vehicle is shifted into any gear and driven.

For more information refer to *Autolock* in the *Locks and Security* chapter.

Press RESET to turn autolock on or off.

### **AUTOUNLOCK**

This feature automatically unlocks all vehicle doors when the driver's door is opened within 10 minutes of the ignition being turned off.

Press RESET to turn autounlock on or off.

### **REAR PARK AID**

This feature sounds a warning tone to warn the driver of obstacles near the rear bumper, and functions only when R (Reverse) gear is selected.

Press RESET to turn it off or on.

## Instrument Cluster

### **CREATE MYKEY / MYKEY SETUP/ CLEAR MYKEY**

For more information refer to *MyKey*<sup>®</sup> in the *Locks and Security* chapter.

### **LANGUAGE = ENGLISH / SPANISH / FRENCH**

Allows you to choose which language the message center will display in. Selectable languages are English, Spanish, or French.

Waiting four seconds or pressing the RESET button cycles the message center through each of the language choices.

Press and hold RESET for two seconds to set the language choice.

### **System warnings**

System warnings alert you to possible problems or malfunctions in your vehicle's operating systems.

In the event of a multiple warning situation, the message center will cycle the display to show all warnings by displaying each one for several seconds.

The message center will display the last selected feature if there are no more warning messages. This allows you to use the full functionality of the message center after you acknowledge the warning by pressing the RESET control and clearing the warning message.

Warning messages that have been reset are divided into three categories:

- They will not disappear until a condition is changed.
- They will reappear on the display 10 minutes from the reset.
- They will not reappear until an ignition off/on cycle has been completed.

This acts as a reminder that these warning conditions still exist within the vehicle.

**CHECK BRAKE SYSTEM** — Displayed when the brake system needs servicing. If the warning stays on or continues to come on, contact your authorized dealer as soon as possible.

**DRIVER DOOR AJAR** — Displayed when the driver's door is not completely closed.

**PASSENGER DOOR AJAR** — Displayed when the passenger side door is not completely closed.

**FUEL LEVEL LOW** — Displayed as an early reminder of a low fuel condition.

## Instrument Cluster

**CHECK FUEL FILL INLET** — Displayed when the fuel fill inlet may not be properly closed. Refer to *Easy Fuel*® “no cap” fuel system in the *Maintenance and Specifications* chapter.

**CHECK CHARGING SYSTEM** — Displayed when the electrical system is not maintaining proper voltage. If you are operating electrical accessories when the engine is idling at a low speed, turn off as many of the electrical loads as soon as possible. If the warning stays on or comes on when the engine is operating at normal speeds, contact your authorized dealer as soon as possible.

**CHECK PARK AID (if equipped)** — Displayed when the transmission is in R (Reverse) and the reverse sensing system (park aid) is disabled. Refer to *Rear park aid* in this section to enable.

**BRAKE FLUID LEVEL LOW** — Indicates the brake fluid level is low and the brake system should be inspected immediately. Refer to *Brake fluid* in the *Maintenance and Specifications* chapter.

**LOW TIRE PRESSURE** — Displayed when one or more tires on your vehicle has low tire pressure. Refer to *Inflating your tires* in the *Tires, Wheels and Loading* chapter.

**TIRE PRESSURE MONITOR FAULT** — Displayed when the tire pressure monitoring system is malfunctioning. If the warning stays on or continues to come on, contact your authorized dealer as soon as possible.

**TIRE PRESSURE SENSOR FAULT** — Displayed when a tire pressure sensor is malfunctioning, or your spare tire is in use. For more information on how the system operates under these conditions, refer to *Tire Pressure Monitoring System (TPMS)* in the *Tires, Wheels and Loading* chapter. If the warning stays on or continues to come on, contact your authorized dealer as soon as possible.

**POWER STEERING ASSIST FAULT** — The power steering system has disabled power steering assist due to a system error; service is required.

**SERVICE POWER STEERING** — The power steering system has detected a condition that requires service.

**SERVICE POWER STEERING NOW** — The power steering system has detected a condition that requires service immediately.

## Instrument Cluster

**SERVICE ADVANCETRAC** — Displayed when the AdvanceTrac® system has detected a condition that requires service.

**ENGINE OIL CHANGE SOON** — Displayed when the engine oil life remaining is 10% or less.

**OIL CHANGE REQUIRED** — Displayed when the oil life left reaches 0%.

**TO STOP ALARM START VEHICLE** — Displayed when the perimeter alarm system is armed and the vehicle is entered using the key on the driver's side door. In order to prevent the perimeter alarm system from triggering, the ignition must be turned to start or on before the 12 second chime expires. See *Perimeter alarm system* in the *Locks and Security* chapter.

**SECURITY EVENT OCCURRED (if equipped)** — Displayed when the active anti-theft system (if equipped) was activated since the prior ignition cycle.

**MYKEY ACTIVE DRIVE SAFELY** — Displayed at startup when MyKey® is in use. Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**KEY COULD NOT PROGRAM** — Displayed when an attempt is made to program a spare key using two existing MyKeys. Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**VEHICLE SPEED 80 MPH MAX** — Displayed when a MyKey® is in use and the Admin has enabled the MyKey speed limit and the vehicle speed is 80 mph (130 km/h). Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**SPEED LIMITED TO 80 MPH** — Displayed when starting the vehicle and MyKey® is in use and the MyKey speed limit is on. Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**CHECK SPEED DRIVE SAFELY** — Displayed when a MyKey® is in use and the optional setting is on and the vehicle exceeds a preselected speed. Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**VEHICLE NEAR TOP SPEED** — Displayed when a MyKey® is in use and the MyKey speed limit is on and the vehicle speed is approaching 80 mph (130 km/h). Refer to *MyKey®* in the *Locks and Security* chapter for more information.

## Instrument Cluster

**TOP SPEED MYKEY SETTING** — Displayed when a MyKey® is in use and the MyKey speed limit is on and the vehicle speed is 80 mph (130 km/h). Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**BUCKLE UP TO UNMUTE AUDIO** — Displayed when a MyKey® is in use and Belt-Minder® is activated. Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**ADVTRAC ON MYKEY SETTING** — Displayed when a MyKey® is in use when trying to disable the AdvanceTrac® system and the optional setting is on. Refer to *MyKey®* in the *Locks and Security* chapter for more information.

**TRACKEY ACTIVE TRACK USE ONLY (Boss® 302 only)** — Displayed when a trackey is in use. Refer to the *Boss® 302* supplement for more information.

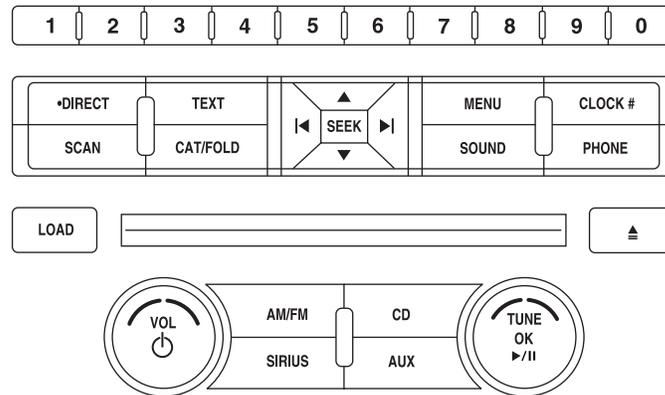
**TRACKEY IDLE ENABLED (Boss® 302 only)** — Displayed when a trackey is in use. Refer to the *Boss® 302* supplement for more information.

**1→4 SHIFT FOR FUEL ECONOMY** — Displayed on manual transmission vehicles when the vehicle determines that shifting directly to 4th gear from 1st gear will improve fuel economy. Refer to *Manual transmission operation* in the *Driving* chapter for more information.

## Entertainment Systems

### AUDIO SYSTEMS

#### AM/FM Single CD/MP3 satellite-compatible sound system



**!** **WARNING:** Driving while distracted can result in loss of vehicle control, accident and injury. Ford strongly recommends that drivers use extreme caution when using any device or feature that may take their focus off the road. Your primary responsibility is the safe operation of the vehicle. We recommend against the use of any handheld device while driving, encourage the use of voice-operated systems when possible and that you become aware of applicable state and local laws that may affect use of electronic devices while driving.

**Accessory delay:** Your vehicle is equipped with accessory delay. With this feature, the radio and other electrical accessories may be used for up to 10 minutes after the ignition is turned off or until either front door is opened.

#### Setting the clock

To set the time, press **CLOCK**. The display will read **SET TIME**. Use the memory preset numbers (0–9) to enter in the desired time—hours and minutes and press **OK**. The clock will then begin from that time.

CLOCK # /

**Note:** If your vehicle is equipped with a navigation system, refer to *Setting the clock* in your *Navigation supplement*.

## Entertainment Systems

### AM/FM radio

**⏻ / VOL (Power/Volume):** Press to turn the radio on/off. Turn the knob to increase/decrease volume.



If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a nominal listening level when the ignition switch is turned back on.

**AM/FM:** Press repeatedly to select AM/FM1/FM2 frequency band.



**TUNE:** Turn the knob to go up/down the frequency band in individual increments.



**DIRECT:** Press DIRECT and then select the desired radio frequency (i.e. 93.9) using the memory preset numbers (0–9).



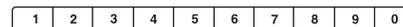
**SEEK:** Press ◀ SEEK ▶ to access the previous/next strong radio station.



**SCAN:** Press for a brief sampling of all strong radio stations.



**MEMORY PRESETS (0–9):** When tuned to any station, press and hold a preset button until sound returns and PRESET # SAVED appears in the display. You can save up to 30 stations, 10 in AM, 10 in FM1 and FM2.



*Saving presets automatically:* Autoset allows you to set the strongest local radio stations without losing your original manually set preset stations for AM/FM1/FM2.

*To activate the autoset feature:* Press MENU repeatedly until AUTO PRESET ON/OFF appears in the display. Use ◀ SEEK ▶ to turn AUTO PRESET to ON, and either wait five seconds for the search to 30

## Entertainment Systems

initiate or press OK to immediately initiate the search. If you press another control within those five seconds, the search will not initiate. The 10 strongest stations will be filled and the station stored in preset 1 will begin playing.

If there are fewer than 10 strong stations, the system will store the last one in the remaining presets.

**Note:** In order to re-run the autoseed features, you must first select AUTO PRESET OFF and press OK. Then, select AUTO PRESET ON and press OK.

### **RDS radio**

Available only in FM mode. This feature allows you to search RDS-equipped stations for a certain category of music format: CLASSIC, COUNTRY, JAZZ/RB, ROCK, etc.

*To activate:* Press MENU repeatedly until RDS (ON/OFF) appears in the display. Use **◀ SEEK ▶** to switch RDS ON and OFF. When RDS is OFF, you will not be able to search for RDS equipped stations or view the station name or type.

### **CAT (Category) / FOLD**

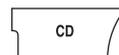
**(Folder):** This feature allows you to select from various music categories.



*To change RDS categories:* Press MENU repeatedly until RDS ON/OFF appears in the display. Use **◀ SEEK ▶** to toggle RDS between ON/OFF. Press CAT. PRESS UP OR DOWN TO CHANGE RDS CATEGORY will appear in the display. Press **▲ SEEK ▼** to scroll through all possible categories. When the desired category appears in the display, press **◀ SEEK ▶** to find the next station playing that selection or press SCAN for a brief sampling of all stations playing that category of music.

### **CD/MP3 player**

**CD:** Press to enter CD/MP3 mode. If a disc is already loaded into the system, CD/MP3 play will begin where it ended last. If no CD is loaded, NO DISC will appear in the display.



## Entertainment Systems

**LOAD:** This control is not operational. To load a CD, simply insert the disc, label side up, into the CD slot.



**▶ / || Play/Pause:** Press to play/pause a track when playing a CD.



**EJECT:** Press to eject the CD.



**SEEK:** Press ◀ SEEK ▶ to access the previous/next track.



**CAT (Category) / FOLD (Folder):**



*In MP3 mode only*– Press CAT/FOLD and then press ◀ SEEK ▶ to access the previous/next folder.

**SCAN:** Press for a brief sampling of all tracks on the current disc or MP3 folder.



**DIRECT:**

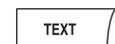
*In CD mode*– Press DIRECT. The display will read DIRECT TRACK MODE SELECT TRACK. Enter the desired track number using the memory preset buttons (0–9). The system will then begin playing that track.



*In MP3 folder mode*– Press DIRECT and the memory preset buttons (0–9) of the desired folder. The system will advance to that specific folder.

**TEXT:**

*In MP3 mode only*– Press TEXT repeatedly to view Album (AL), Folder (FL), Song (SO) and Artist (AR) in the display, if available.



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## Entertainment Systems

*In TEXT MODE:* Sometimes the display requires additional text to be displayed. When the < / > indicator is active, press TEXT and then press ◀ SEEK ▶ to view the additional display text.

**COMPRESSION:** Press MENU repeatedly until COMPRESSION ON/OFF appears in the display. Use ◀ SEEK ▶ to switch between ON/OFF. When COMPRESSION is ON, the system will bring the soft and loud CD passages together for a more consistent listening level.

**SHUFFLE:** Press MENU repeatedly until SHUFFLE ON/OFF appears in the display. Use ◀ SEEK ▶ to switch between ON/OFF. If you wish to engage shuffle mode right away, press ◀ SEEK ▶ to begin random play. Otherwise, random play will begin when the current track is finished playing. The system will only shuffle the disc currently playing.

### **Satellite radio (if equipped)**

*Satellite radio is available only with a valid SIRIUS® radio subscription. Check with your authorized dealer for availability.*

**SIRIUS:** Press repeatedly to access satellite radio mode, if equipped. Press repeatedly to cycle through SAT1, SAT2 and SAT3 modes.



**TUNE:** Turn to go to the next / previous available SIRIUS® satellite station.



**DIRECT:** Press DIRECT then enter the desired channel (i.e. 002) using the memory preset buttons (0–9). If you only enter one digit, press OK and the system will go to that satellite channel. If you enter three digits, the system will automatically go to that channel, if available. You may cancel your entry by pressing DIRECT. If an invalid station number is entered, INVALID CHANNEL will appear in the display and the system will continue playing the current station.



## Entertainment Systems

**SEEK:** Press  to seek to the previous/next channel. If a specific category is selected, (Jazz, Rock, News, etc.),

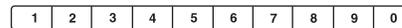


press  to seek to the previous/next channel in the selected category. Press and hold  to fast seek through the previous/next channels.

**SCAN:** Press SCAN for a brief sampling of all available SIRIUS® satellite channels. If a specific category is selected, (Jazz, Rock, News, etc.) press SCAN for a brief sampling of all available SIRIUS® satellite channels within the selected category.



**MEMORY PRESETS (0-9):** There are 30 available presets, 10 each for SAT1, SAT2 and SAT3. To save satellite channels in your memory presets, tune to the desired channel then press and hold a memory preset number (0-9) until sound returns.



**TEXT:** Press and release to display the artist and song title. While in TEXT MODE, press again to scroll through the Artist (AR), Song (SO), Channel (CH) and Category (CA).



*In TEXT MODE:* Sometimes the display requires additional text to be displayed. When the < / > indicator is active, press TEXT and then press  to view the additional display text.

### **CAT (Category) / FOLD**

**(Folder):** Press to switch between turning the most recently selected satellite radio category on or off. The category icon (CAT) will illuminate in the display when a specific category is selected (the icon will not illuminate during CATEGORY ALL). If no category has ever been selected, NO CATEGORY SELECTED will display.



**Note:** Separate categories can be set for SAT1, SAT2 or SAT3. Refer to *Satellite radio menu* for further information on selecting a satellite radio category.

## Entertainment Systems

**SATELLITE RADIO MENU:** Press MENU when satellite radio mode is active to access. Press OK to enter into the satellite radio menu. Press ▲ SEEK ▼ to cycle through the following options:



- **CATEGORY MENU-** Press OK to enter category mode. Press ▲ SEEK ▼ to scroll through the list of available SIRIUS® channel Categories (Pop, Rock, News, etc.) Press OK when the desired category appears in the display. After a category is selected, press ▲ SEEK ▼ to search for that specific category of channels only (i.e. ROCK). You may also select CATEGORY ALL to seek all available SIRIUS® categories and channels. Press OK to close and return to the main menu.
- **SONG SEEK MENU-** Press OK to enter song seek menu. Press ▲ SEEK ▼ to scroll through the following options:
  - a. SAVE THIS SONG?:** Press OK to save the currently playing song's title in the system's memory. (If you try to save something other than a song, CANT SAVE will appear in the display.) When the chosen song is playing on any satellite radio channel, the system will alert you with an audible prompt. Press OK while SONG ALERT is in the display and the system will take you to the channel playing the desired song. You can save up to 20 song titles. If you attempt to save more than 20 titles, the display will read REPLACE SONG? Press OK to access the saved titles and press ▲ SEEK ▼ to cycle through the saved titles. When the song title appears in the display that you would like to replace, press OK. SONG REPLACED will appear in the display.
  - b. DELETE A SONG?:** Press OK to delete a song from the system's memory. Press ▲ SEEK ▼ to cycle through the saved songs. When the song appears in the display that you would like to delete, press OK. The song will appear in the display for confirmation. Press OK again and the display will read SONG DELETED. If you do not want to delete the currently listed song, press ▲ SEEK ▼ to select either RETURN or CANCEL.

**Note:** If there are no songs presently saved, the display will read NO SONGS.

## Entertainment Systems

**c. DELETE ALL SONGS?:** Press OK to delete all song's from the system's memory. The display will read ARE YOU SURE? Press OK to confirm deletion of all saved songs and the display will read ALL DELETED.

**Note:** If there are no songs presently saved, the display will read NO SONGS.

**d. DISABLE ALERTS/ENABLE ALERTS?:** Press OK to enable/disable the satellite alert status which alerts you when your selected songs are playing on a satellite radio channel. (The system default is disabled.) SONG ALERTS ENABLED/DISABLED will appear in the display. The menu listing will display the opposite state. For example, if you have chosen to enable the song alerts, the menu listing will read DISABLE as the alerts are currently on, so your other option is to turn them off.

**e. RETURN:** Press OK when RETURN is displayed to exit back to the satellite radio menu.

- **CHANNEL LOCKOUT MENU-** Press OK to enter the Channel Lockout menu. Press the ▲ SEEK ▼ to scroll through the following options:

**a. LOCK/UNLOCK THIS CHANNEL:** Press OK when LOCK/UNLOCK THIS CHANNEL is displayed and the display will read ENTER PIN. Enter your four-digit PIN number (initial PIN is 1234) and the system will lock/unlock the channel and CHANNEL LOCKED or UNLOCKED will be displayed.

**Note:** you must be tuned to the specific channel you want to lock/unlock when using this feature.

**b. CHANGE PIN:** Press OK when CHANGE PIN is displayed. The display will read ENTER OLD PIN. Enter your current (old) PIN number and when the system accepts your entry it will display ENTER NEW PIN. Enter your new four-digit PIN and the system will save the new PIN and PIN SAVED will display.

**c. UNLOCK ALL CHANNELS:** Press OK when UNLOCK ALL CHANNELS is displayed and the display will read ENTER PIN. Enter your four-digit PIN and the system will unlock all channels and the display will read CHANNEL UNLOCKED.

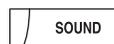
## Entertainment Systems

**d. RESET PIN:** Press OK when RESET PIN is displayed. The display will read ARE YOUR SURE. Press OK again to automatically reset the PIN to its initial password setting (1234). PIN RESET TO DEFAULT PIN will be displayed.

**e. RETURN:** Press OK when RETURN is displayed and the system will exit back to the satellite radio menu.

### Sound adjustments

Press SOUND repeatedly to cycle through the following features:



- **Shaker mode (if equipped):** Press ◀ SEEK ▶ to turn Shaker mode on/off.
- **BASS:** Press ◀ SEEK ▶ to adjust the level of bass or turn the TUNE knob.
- **TREBLE:** Press ◀ SEEK ▶ to adjust the level of treble, or turn the TUNE knob.
- **BALANCE:** Press ◀ SEEK ▶ to adjust the audio between the left (L) and right (R) speakers or turn the TUNE knob.
- **FADE:** Press ◀ SEEK ▶ to adjust the audio between the back (B) and front (F) speakers or turn the TUNE knob.
- **SPEED COMPENSATED VOLUME:** With this feature on, radio volume automatically gets louder with increasing vehicle speed to compensate for road and wind noise. The default setting is *off*. Use ◀ SEEK ▶ to adjust between SPEED OFF and levels 1–7. Recommended level is 1–3; SPEED OFF turns the feature off and level 7 is the maximum setting.
- **ALL SEATS (Occupancy Mode, if equipped):** Press ◀ SEEK ▶ to select and optimize sound for ALL SEATS, DRIVERS SEAT or REAR SEATS.
- **DSP MODE (if equipped):** Press ◀ SEEK ▶ to choose between STEREO SURROUND mode and STEREO mode.

## Entertainment Systems

### Extra features

**AUX:** Press repeatedly to cycle through LINE (auxiliary audio mode) and SYNC® (if equipped).



For auxiliary jack location and further information on auxiliary audio mode, refer to *Auxiliary input jack* later in this chapter.

If your vehicle is equipped with SYNC®, please refer to the SYNC® information included with your vehicle for further information.

**▶ / || Play/Pause:** Press this control to play or pause the current CD.



**OK:** Your vehicle may be equipped with special phone and media features which will require you to confirm commands by pressing OK. For further information, refer to the SYNC® information included with your vehicle.

**PHONE:** If your vehicle is equipped with SYNC®, press to access SYNC PHONE features. For further information, please refer to the SYNC® information included with your vehicle. If your vehicle is not equipped with SYNC®, the display will read NO PHONE.

### Auxiliary input jack (Line in)

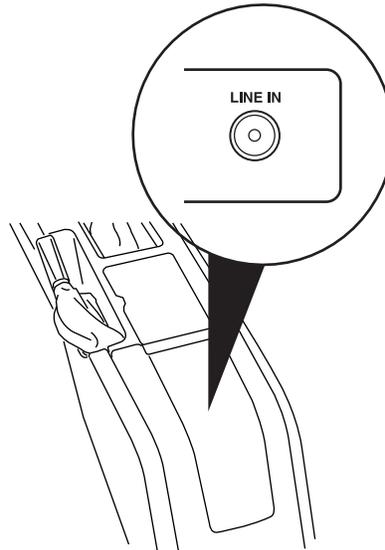


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## Entertainment Systems

Your vehicle is equipped with an auxiliary input jack (AIJ) located in the center console. The auxiliary input jack provides a way to connect your portable music player to the in-vehicle audio system. This allows the audio from a portable music player to be played through the vehicle speakers with high fidelity. To achieve optimal performance, please observe the following instructions when attaching your portable music device to the audio system.

If your vehicle is equipped with a navigation system, refer to *Auxiliary input jack* section in the *Audio features* chapter of your *Navigation System* supplement.



### **Required equipment:**

1. Any portable music player designed to be used with headphones
2. An audio extension cable with stereo male 1/8 in. (3.5 mm) connectors at each end

### **To play your portable music player using the auxiliary input jack:**

1. Begin with the vehicle parked and the radio turned off.
2. Ensure that the battery in your portable music player is new or fully charged and that the device is turned off.
3. Attach one end of the audio extension cable to the headphone output of your player and the other end of the audio extension cable to the AIJ in your vehicle.
4. Turn the radio on, using either a tuned FM station or a CD loaded into the system. Adjust the volume to a comfortable listening level.
5. Turn the portable music player on and adjust the volume to 1/2 the volume.
6. Press AUX on the vehicle radio repeatedly until LINE, LINE IN or SYNC LINE IN appears in the display. You should hear audio from your portable music player although it may be low.

## Entertainment Systems

7. Adjust the sound on your portable music player until it reaches the level of the FM station or CD by switching back and forth between the AUX and FM or CD controls.

### Troubleshooting:

1. Do not connect the audio input jack to a line level output. Line level outputs are intended for connection to a home stereo and are not compatible with the AIJ. The AIJ will only work correctly with devices that have a headphone output with a volume control.
2. Do not set the portable music player's volume level higher than is necessary to match the volume of the CD or FM radio in your audio system as this will cause distortion and will reduce sound quality. Many portable music players have different output levels, so not all players should be set at the same levels. Some players will sound best at full volume and others will need to be set at a lower volume.
3. If the music sounds distorted at lower listening levels, turn the portable music player volume down. If the problems persists, replace or recharge the batteries in the portable music player.
4. The portable music player must be controlled in the same manner when it is used with headphones as the AIJ does not provide control (play, pause, etc.) over the attached portable music player.
5. For safety reasons, connecting or adjusting the settings on your portable music player should not be attempted while the vehicle is moving. Also, the portable music player should be stored in a secure location, such as the center console or the glove box, when the vehicle is in motion. The audio extension cable must be long enough to allow the portable music player to be safely stored while the vehicle is in motion.

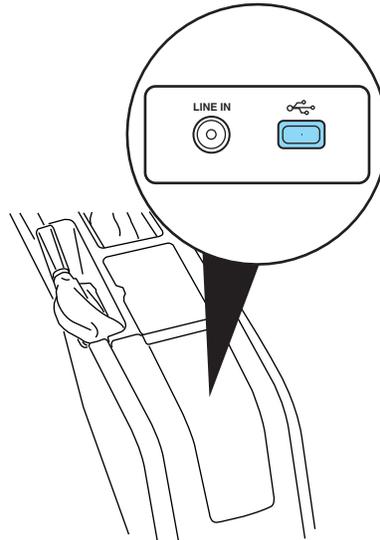
### USB port (if equipped)



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## Entertainment Systems

Your vehicle may be equipped with a USB port inside your center console. This feature allows you to plug in media playing devices, memory sticks, and also to charge devices if they support this feature. For further information on this feature, refer to *Accessing and using your USB port* in the SYNC® supplement or *Navigation System* supplement.



### GENERAL AUDIO INFORMATION

#### Radio frequencies:

AM and FM frequencies are established by the Federal Communications Commission (FCC) and the Canadian Radio and Telecommunications Commission (CRTC). Those frequencies are:

AM: 530, 540–1700, 1710 kHz

FM: 87.7, 87.9–107.7, 107.9 MHz

#### Radio reception factors:

There are three factors that can affect radio reception:

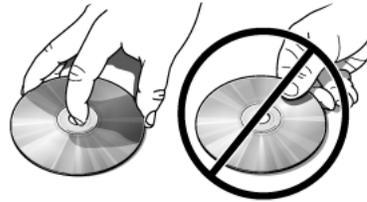
- Distance/strength: The further you travel from an FM station, the weaker the signal and the weaker the reception.
- Terrain: Hills, mountains, tall buildings, power lines, electric fences, traffic lights and thunderstorms can interfere with your reception.
- Station overload: When you pass a broadcast tower, a stronger signal may overtake a weaker one and play while the weak station frequency is displayed.

## Entertainment Systems

### CD/CD player care

Do:

- Handle discs by their edges only. (Never touch the playing surface).
- Inspect discs before playing.
- Clean only with an approved CD cleaner.
- Wipe discs from the center out.

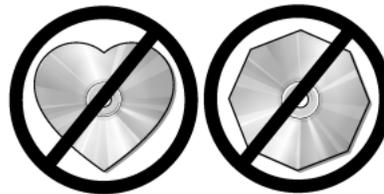


Don't:

- Expose discs to direct sunlight or heat sources for extended periods of time.
- Clean using a circular motion.

**CD units are designed to play commercially pressed 4.75 in (12 cm) audio compact discs only. Due to technical incompatibility, certain recordable and re-recordable compact discs may not function correctly when used in Ford CD players.**

**Do not use any irregular shaped CDs or discs with a scratch protection film attached.**



## Entertainment Systems

**CDs with homemade paper (adhesive) labels should not be inserted into the CD player as the label may peel and cause the CD to become jammed. It is recommended that homemade CDs be identified with permanent felt tip marker rather than adhesive labels. Ballpoint pens may damage CDs. Please contact your authorized dealer for further information.**



### **Audio system warranty and service**

Refer to the *Warranty Guide* for audio system warranty information. If service is necessary, see your dealer or qualified technician.

### **MP3 track and folder structure**

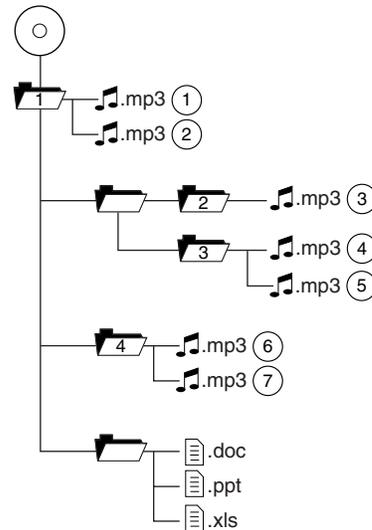
Your MP3 system recognizes MP3 individual tracks and folder structure as follows:

- There are two different modes for MP3 disc playback: MP3 track mode (system default) and MP3 folder mode. For more information on track and folder mode, refer to *Sample MP3 structure* in the following section.
- MP3 track mode ignores any folder structure on the MP3 disc. The player numbers each MP3 track on the disc (noted by the .mp3 file extension) from T001 to a maximum of T255.  
**Note:** The maximum number of playable MP3 files may be less depending on the structure of the CD and exact model of radio present.
- MP3 folder mode represents a folder structure consisting of one level of folders. The CD player numbers all MP3 tracks on the disc (noted by the .mp3 file extension) and all folders containing MP3 files, from F001 (folder) T001 (track) to F253 T255.
- Creating discs with only one level of folders will help with navigation through the disc files.

## Entertainment Systems

### Sample MP3 structure

If you are burning your own MP3 discs, it is important to understand how the system will read the structures you create. While various files may be present, (files with extensions other than mp3), only files with the .mp3 extension will be played. Other files will be ignored by the system. This enables you to use the same MP3 disc for a variety of tasks on your work computer, home computer and your in-vehicle system.



In track mode, the system will display and play the structure as if it were only one level deep (all .mp3 files will be played, regardless of being in a specific folder). In folder mode, the system will only play the .mp3 files in the current folder.

### Satellite radio information (if equipped)

**Satellite radio channels:** SIRIUS® broadcasts a variety of music, news, sports, weather, traffic and entertainment satellite radio channels. For more information and a complete list of SIRIUS® satellite radio channels, visit [www.sirius.com](http://www.sirius.com) in the United States, [www.siriuscanada.ca](http://www.siriuscanada.ca) in Canada, or call SIRIUS® at 1-888-539-7474.

**Satellite radio reception factors:** To receive the satellite signal, your vehicle has been equipped with a satellite radio antenna. Like AM/FM, there are several factors that can affect satellite radio reception performance:

- **Antenna Obstructions:** For optimal reception performance, keep the antenna clear of snow and ice build-up and keep luggage and any material as far away from the antenna as possible.

## Entertainment Systems

- **Terrain:** Hills, mountains, tall buildings, bridges, tunnels, freeway overpasses, parking garages, dense tree foliage and thunderstorms can interfere with your reception.
- **Station overload:** When you pass a ground based broadcast repeating tower, a stronger signal may overtake a weaker one and result in an audio mute.

Unlike AM/FM audible static, you will hear an audio mute when there is a satellite radio signal interference. Your radio display may display NO SIGNAL to indicate the interference.

**SIRIUS® satellite radio service:** SIRIUS® satellite radio is a subscription based satellite radio service that broadcasts music, sports, news and entertainment programming. A service fee is required in order to receive SIRIUS® service. Vehicles that are equipped with a factory installed SIRIUS® satellite radio system include:

- Hardware and limited subscription term, which begins on the date of sale or lease of the vehicle.

For information on extended subscription terms, the online media player and other SIRIUS® features, please contact SIRIUS® at 1-888-539-7474.

**Note:** SIRIUS® reserves the unrestricted right to change, rearrange, add or delete programming including canceling, moving or adding particular channels, and its prices, at any time, with or without notice to you. Ford Motor Company shall not be responsible for any such programming changes.

**Satellite Radio Electronic Serial Number (ESN):** This 12-digit Satellite Serial Number is needed to activate, modify or track your satellite radio account. You will need this number when communicating with SIRIUS®. While in satellite radio mode, you can view this number on the radio display by pressing SIRIUS and the preset 1 control simultaneously.

## Entertainment Systems

Radio Display	Condition	Action Required
ACQUIRING	Radio requires more than two seconds to produce audio for the selected channel.	No action required. This message should disappear shortly.
SAT FAULT	Internal module or system failure present.	If this message does not clear within a short period of time, or with an ignition key cycle, your receiver may have a fault. See your authorized dealer for service.
INVALID CHNL	Channel no longer available.	This previously available channel is no longer available. Tune to another channel. If the channel was one of your presets, you may choose another channel for that preset button.
UNSUBSCRIBED	Subscription not available for this channel.	Contact SIRIUS® at 1-888-539-7474 to subscribe to the channel, or tune to another channel.
NO TEXT	Artist information not available.	Artist information not available at this time on this channel. The system is working properly.
NO TEXT	Song title information not available.	Song title information not available at this time on this channel. The system is working properly.
NO TEXT	Category information not available.	Category information not available at this time on this channel. The system is working properly.

## Entertainment Systems

Radio Display	Condition	Action Required
NO SIGNAL	Loss of signal from the SIRIUS® satellite or SIRIUS® tower to the vehicle antenna.	You are in a location that is blocking the SIRIUS® signal (i.e., tunnel, under an overpass, dense foliage, etc). The system is working properly. When you move into an open area, the signal should return.
UPDATING	Update of channel programming in progress.	No action required. The process could take up to three minutes.
CALL SIRIUS® 1-888-539-7474	Satellite service has been deactivated by SIRIUS® satellite radio.	Call SIRIUS® at 1-888-539-7474 to re-activate or resolve subscription issues.

### NAVIGATION SYSTEM (IF EQUIPPED)

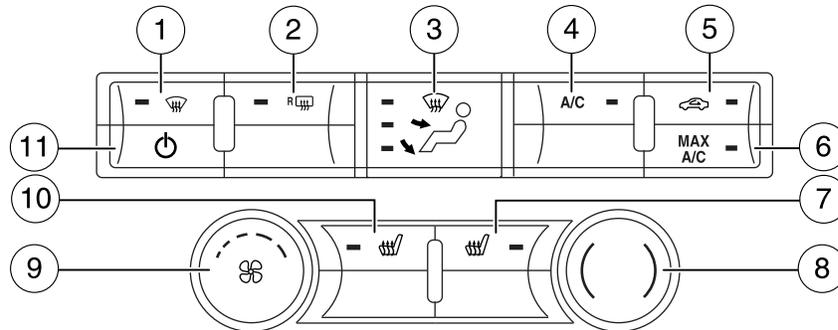
Your vehicle may be equipped with a navigation system. Refer to the *Navigation System* supplement for further information.

### SYNC® (IF EQUIPPED)

Your vehicle may be equipped with SYNC®, a hands-free communications and entertainment system with special phone and media features. For more information, please refer to the *SYNC®* supplement or to the *SYNC®* section in the *Navigation System* supplement (if equipped).

## Climate Controls

### MANUAL HEATING AND AIR CONDITIONING SYSTEM (IF EQUIPPED)



**Temperature conversion:** To switch between Fahrenheit and Celsius, refer to *Message center* in the *Instrument Cluster* chapter.

1. **Defrost:** Distributes outside air through the windshield defroster vents and de-mister vents. Can be used to clear the windshield of fog and thin ice. The system will automatically provide outside air to reduce window fogging. Press this button again to return to the previous air flow selection.

2. **Rear defroster:** Press to activate/deactivate the rear window defroster. Refer to *Rear window defroster* later in this chapter for more information.

3. **Multifunction control:** Press repeatedly to cycle through the settings to choose:

- : Distributes air through the windshield defroster vents, de-mister vents and floor vents. The system will automatically provide outside air to reduce window fogging.
- : Distributes air through the instrument panel vents.
- : Distributes air through the instrument panel vents, floor vents, and de-mister vents.
- : Distributes air through the floor vents.

4. **A/C:** Press to activate/deactivate air conditioning. Use with recirculated air to improve cooling performance and efficiency. A/C engages automatically in MAX A/C, (defrost) and (floor/defrost).

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## Climate Controls

5.  **Recirculated air:** Press to activate/deactivate air recirculation in the vehicle. Recirculated air may reduce the amount of time needed to cool down the interior of the vehicle and may also help reduce undesired odors from reaching the interior of the vehicle. Recirculated air engages automatically when MAX A/C is selected or can be engaged manually in any airflow mode except  (defrost). When the ignition switch is turned off and back on, the climate system will return to the recirculated air mode only if the A/C button LED is illuminated and the air distribution selection is either  (panel) or  (panel/floor).
6. **MAX A/C:** Distributes recirculated air through the instrument panel vents to cool the vehicle. This re-cooling of the interior air is more economical and efficient. Recirculated air may also help reduce undesirable odors from entering the vehicle. Press the MAX A/C button again for normal A/C operation.
7.  **Passenger heated seat control (if equipped):** Press to control the passenger heated seat. Refer to *Heated seats* in the *Seating and Safety Restraints* chapter for more information.
8. **Temperature control:** Controls the temperature of the airflow in the vehicle.
9.  **Fan speed adjustment:** Turn to select the desired fan speed.
10.  **Driver heated seat control (if equipped):** Press to control the driver seat. Refer to *Heated seats* in the *Seating and Safety Restraints* chapter for more information.
11.  **Power:** Press to activate/deactivate the climate control system. When the system is off, outside air is prevented from entering the vehicle.

### Operating tips

- To reduce fog build-up on the windshield during humid weather, select  (defrost). Temperature and/or fan speed can also be increased to improve clearing.
- To reduce humidity build-up inside the vehicle, do not drive with the system off or with recirculated air engaged.
- Do not put objects under the front seats that will interfere with the airflow to the back seats.
- Remove any snow, ice or leaves from the air intake area at the base of the windshield.

## Climate Controls

- To improve the A/C cool down, drive with the windows slightly open for 2-3 minutes after start up or until the vehicle has been “aired out.”
- A small amount of air may be felt from the floor vent regardless of the air distribution setting that is selected.

During extreme high ambient temperatures when idling stationary for extended periods of time in gear, it is recommended to run the A/C in the MAX A/C mode, adjust the blower fan speed to the lowest setting and put the vehicle's transmission into the P (Park) position (automatic transmission only) to continue to receive cool air from your A/C system.

### **For maximum cooling performance in MAX A/C mode:**

1. Move temperature control to the coolest setting.
2. Set the fan to the highest speed initially, then adjust to maintain comfort.

### **For maximum cooling performance in panel or panel/floor modes:**

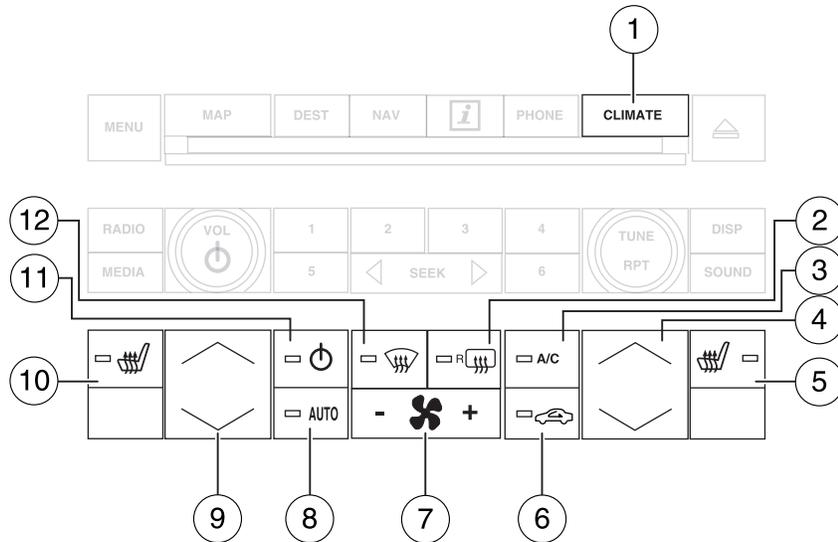
1. Move temperature control to the coolest setting.
2. Select A/C and  (recirculated air) to provide colder airflow.
3. Set the fan to the highest speed initially, then adjust to maintain comfort.

### **To aid in side window defogging/demisting in cold weather:**

1. Select .
2. Select A/C.
3. Adjust the temperature control to maintain comfort.
4. Set the fan speed to the highest setting.
5. Direct the outer instrument panel vents towards the side windows.
6. To increase airflow to the outer instrument panel vents, close the vents located in the middle of the instrument panel.

## Climate Controls

### DUAL ZONE AUTOMATIC TEMPERATURE CONTROL (NAVIGATION-BASED) (IF EQUIPPED)



**Temperature conversion:** To switch between Fahrenheit and Celsius, refer to *Message center* in the *Instrument Cluster* chapter.

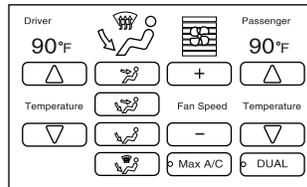
1. **CLIMATE:** Press to control the climate control system through the touch display screen. See *Touchscreen functions* later in this section.
2. **Rear defroster (if equipped):** Press to activate/deactivate the rear window defroster. Refer to *Rear window defroster* later in this chapter for more information. If your vehicle is equipped with both rear defroster and heated mirrors, the same button will activate both.
3. **A/C:** Press to activate/deactivate air conditioning. Use with recirculated air to improve cooling performance and efficiency. A/C engages automatically in **Max A/C**,  (defrost) and  (floor/defrost).
4. **Passenger temperature:** Press to activate separate passenger temperature control to increase/decrease the air temperature on the passenger side of the vehicle.

## Climate Controls

5.  **Passenger heated seat (if equipped):** Press to control the passenger heated seat. Refer to *Heated seats* in the *Seating and Safety Restraints* chapter for more information.
6.  **Recirculated air:** Press to activate/deactivate air recirculation in the vehicle. Recirculated air may reduce the amount of time needed to cool down the interior of the vehicle when used with A/C and may also help reduce undesired odors from reaching the interior of the vehicle. Recirculated air engages automatically when **Max A/C** is selected or can be engaged manually in any airflow mode except  (defrost). Recirculation may turn off automatically in all airflow selections except **Max A/C**.
7. -  + **Fan speed control:** Press to decrease/increase the fan speed.
8. **AUTO:** Press to engage full automatic operation. Select the desired temperature using the temperature control. The system will automatically determine fan speed, airflow location, A/C on or off, and outside or recirculated air, to heat or cool the vehicle to reach the desired temperature.
9. **Driver temperature:** Press to increase/decrease the air temperature for the driver side of the vehicle. This control also adjusts the passenger side temperature when dual zone operation is disengaged.
10.  **Driver heated seat (if equipped):** Press to control the driver heated seat. Refer to *Heated seats* in the *Seating and Safety Restraints* chapter for more information.
11.  **Power:** Press to activate/deactivate the climate control system. When the system is off, outside air is prevented from entering the vehicle. The climate status in the touchscreen will also be turned off. When the power is turned back on, the system defaults to full automatic control.
12.  **Defrost:** Distributes outside air through the windshield defroster vents and de-mister vents. Can be used to clear the windshield of fog and thin ice. The system will automatically provide outside air to reduce window fogging. Press this button again to return to the previous air flow selection. To return to full automatic control, press AUTO.

## Climate Controls

### TOUCHSCREEN FUNCTIONS



**Temperature conversion:** To switch between Fahrenheit and Celsius, refer to *Message center* in the *Instrument Cluster* chapter.

**Temperature:** Press the up and down arrows on the left side of the screen to increase/decrease the airflow temperature for the driver side of the vehicle. This control also adjusts the passenger side temperature when dual zone operation is disengaged. Press the up and down arrows on the right side of the screen to increase/decrease the airflow temperature for the passenger side of the vehicle.

-  : Distributes air through the instrument panel vents.
-  : Distributes air through the instrument panel vents, floor vents, and de-mister vents.
-  : Distributes air through the floor vents.
-  : Distributes air through the windshield defroster vents, de-mister vents, and floor vents. The system will automatically provide outside air to reduce window fogging.

To return to full automatic control, press AUTO on the main bezel.

**Fan Speed:** Press to decrease/increase the fan speed.

**Dual:** Press to activate/deactivate separate driver and passenger temperature controls.

**Max A/C:** Distributes recirculated air through the instrument panel vents to cool the vehicle. This re-cooling of the interior air is more economical and efficient. Recirculated air may also help reduce undesirable odors from entering the vehicle. Press **Max A/C** again for normal operation.

### VOICE COMMANDS IN CLIMATE MODE

Please refer to the *Voice commands in climate mode* section of the *Navigation Supplement* for more information on using voice commands with the climate control system.

## Climate Controls

### Operating tips

- To reduce fog build-up on the windshield during humid weather, select  (defrost). Temperature and/or fan speed can also be increased to improve clearing.
- To reduce humidity build-up inside the vehicle: do not drive with the system off or with  (recirculated air) engaged.
- Do not put objects under the front seats that will interfere with the airflow to the back seats.
- Remove any snow, ice or leaves from the air intake area at the base of the windshield.
- To improve the A/C cool down, drive with the windows slightly open for 2-3 minutes after start up or until the vehicle has been “aired out.”
- A small amount of air may be felt from the floor vent regardless of the air distribution setting that is selected.

If you are driving during extreme high ambient temperatures and idling for extended periods of time in gear, it is recommended to run the A/C in the MAX A/C mode, adjust the blower fan speed to the lowest setting and put the vehicle's transmission in P (Park) to continue to receive cool air from your A/C system.

### For maximum cooling performance MAX A/C in AUTO:

1. Press AUTO control.
2. Set to desired temperature.

### For maximum cooling performance MAX A/C in manual override control

1. Choose  (panel), A/C, and MAX A/C controls.
2. Set the temperature to 60°F (16°C).
3. Set the fan to the highest blower setting.

### To aid in side window defogging/demisting in cold or humid weather:

1. Select  (defrost) or  (floor/defrost) modes. To maximize performance select  (defrost).
2. Select A/C.
3. Adjust the temperature control to maintain comfort.
4. Set the fan speed to the highest setting.

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## Climate Controls

### REAR WINDOW DEFROSTER

Press the control to clear the rear window of thin ice and fog. The LED will illuminate.

The rear window defroster turns off automatically after 15 minutes, or when the ignition is turned off. To manually turn off the defroster before 15 minutes have passed, press the control again.

The vehicle must be running to use this feature.

**Do not use razor blades or other sharp objects to clean the inside of the rear window or to remove decals from the inside of the rear window. This may cause damage to the heated grid lines and will not be covered by your warranty.**

### CABIN AIR FILTER

Your vehicle is equipped with a cabin air filter, which is located just in front of the windshield under the cowl grille on the passenger side of the vehicle.

The particulate air filtration system is designed to reduce the concentration of airborne particles such as dust, spores and pollen in the air being supplied to the interior of the vehicle. The particulate filtration system gives the following benefits to customers:

- Improves the customer's driving comfort by reducing particle concentration
- Improves the interior compartment cleanliness
- Protects the climate control components from particle deposits

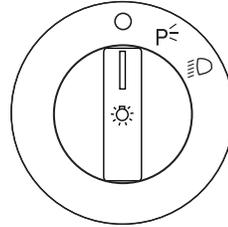
For more information regarding the interval at which you should replace the cabin air filter, refer to your *scheduled maintenance information*.

For additional cabin air filter information, or to replace the filter, see an authorized dealer.

## Lights

### HEADLAMP CONTROL

- Turns the lamps off.
- P≡ Turns on the parking lamps, instrument panel lamps, license plate lamps and tail lamps.
- ≡D Turns the low beam headlamps on.



### Automatic instrumentation illumination

A light sensor in your vehicle monitors the outside lighting conditions and automatically sets the instrument panel illumination to one of the following modes:

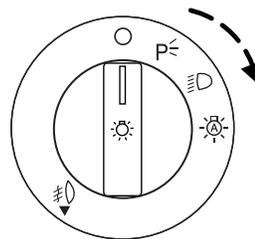
- If the headlamps and parking lamps are off, the vehicle will be in daytime illumination mode.
- If the headlamps or parking lamps are on and daylight is detected, the vehicle will be in daytime illumination mode.
- If the headlamps or parking lamps are on and nighttime conditions are detected, the vehicle will be in nighttime illumination mode.

**Note:** The panel dimmer control works only in nighttime illumination mode. It has no effect in daytime illumination mode. Also, selectable features such as gauge color and halo color will not be available in daytime illumination mode.

### Autolamp control (if equipped)

The autolamp system provides light sensitive automatic on-off control of the exterior lights normally controlled by the headlamp control.

- To turn autolamps on, rotate the control to .
- To turn autolamps off, rotate the control from the autolamp position.



## Lights

The autolamp system also keeps the lights on for a predetermined amount of time after the ignition switch is turned to off. You can change the amount of time the lamps stay on by using the programming procedure that follows:

**Note:** If the vehicle is equipped with autolamps, it will have the *headlamps on with windshield wipers feature*. If the windshield wipers are turned on, the exterior lamps will turn on with the headlamp control in the autolamp position.

### **Autolamps - programmable exit delay**

Programmable exit delay allows the length of the autolamp exit delay to be changed.

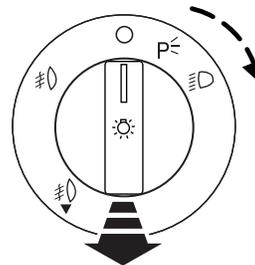
To program the auto lamp exit time delay:

1. Start with the ignition off and the headlamp control in the autolamp position.
2. Turn the headlamp control to off.
3. Turn the ignition on and then back to off.
4. Turn the headlamp control to the autolamp position. The headlamps will turn on.
5. Wait the desired amount of time for the exit delay you want (up to three minutes), then turn the headlamps off.

### **Fog lamp control (if equipped)**

The fog lamps can be turned on when the ignition is in the on position, the headlamp control is in the  $P \leftarrow$  or  $\equiv D$  position and the high beams are not on.

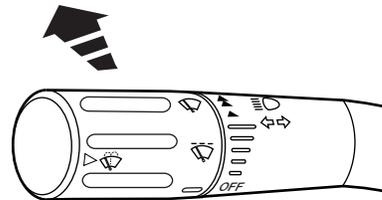
Pull the headlamp control towards you to turn on the fog lamps. The indicator light under the fog lamp symbol will illuminate.



## Lights

### High beams

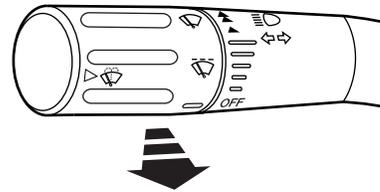
- Push the lever toward the instrument panel to activate.
- Pull the lever toward you to deactivate.



### Flash-to-pass

Pull toward you, to the first detent, to activate and release to deactivate.

**Note:** Vehicles equipped with HID headlamps will hear an audible click when activating this feature.



### Daytime running lamps (DRL) (if equipped)

Turns the headlamps on with a reduced output (vehicles equipped with halogen headlamps) or turns the front fog lamps on (vehicles equipped with HID headlamps).

To activate:

- the ignition must be in the on position,
- the headlamp control is in the off or parking lamp position and
- the parking brake must be disengaged.

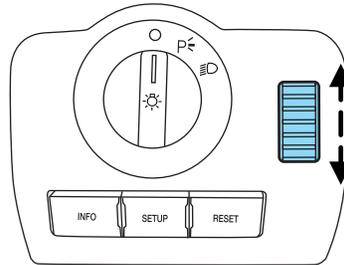
 **WARNING:** Always remember to turn on your headlamps at dusk or during inclement weather. The Daytime Running Lamp (DRL) system does not activate the tail lamps and generally may not provide adequate lighting during these conditions. Failure to activate your headlamps under these conditions may result in a collision.

## Lights

### PANEL DIMMER CONTROL

Use to adjust the brightness of the instrument panel and all applicable switches in the vehicle during headlamp and parking lamp operation.

- Move the control to the full upright position, past detent, to turn on the interior lamps.
- Move the control down, past detent, to turn off the interior lights.
- Move the control to the full downward position, to dim the interior lights to their minimum. The instrument panel/switch lighting will remain lit.



**Note:** If the battery is disconnected, discharged, or a new battery is installed, the dimmer switch requires re-calibration. Rotate the dimmer switch from the full dim position to the full dome/on position to reset. This will ensure that your displays are visible under all lighting conditions.

### AIMING THE HEADLAMPS

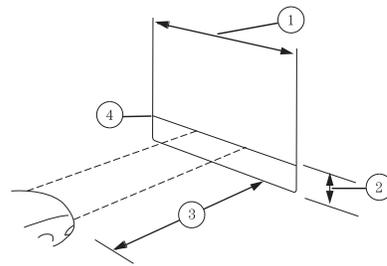
The headlamps on your vehicle are properly aimed at the assembly plant. If your vehicle has been in an accident the alignment of your headlamps should be checked by your authorized dealer.

## Lights

### Vertical aim adjustment

1. Park the vehicle directly in front of a wall or screen on a level surface, approximately 25 feet (7.6 meters) away.

- (1) 8 feet (2.4 meters)
- (2) Center height of lamp to ground
- (3) 25 feet (7.6 meters)
- (4) Horizontal reference line

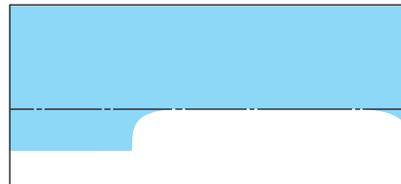


2. Measure the height from the center of your headlamp to the ground and mark an 8 foot (2.4 meter) horizontal reference line on the vertical wall or screen at this height (a piece of masking tape works well). The center of the lamp is marked by a 3 mm circle on the headlamp lens.

3. Turn on the low beam headlamps to illuminate the wall or screen and open the hood. To see a clearer light pattern for adjusting, block the light from one headlamp while adjusting the other.

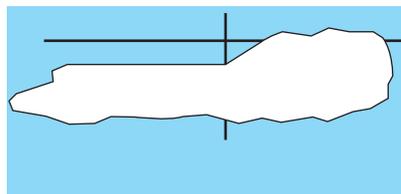
### For vehicles with halogen headlamps:

On the wall or screen you will observe a flat zone of high intensity light located at the top of the right hand portion of the beam pattern. If the top edge of the high intensity light zone is not at the horizontal reference line, the headlamp will need to be adjusted.

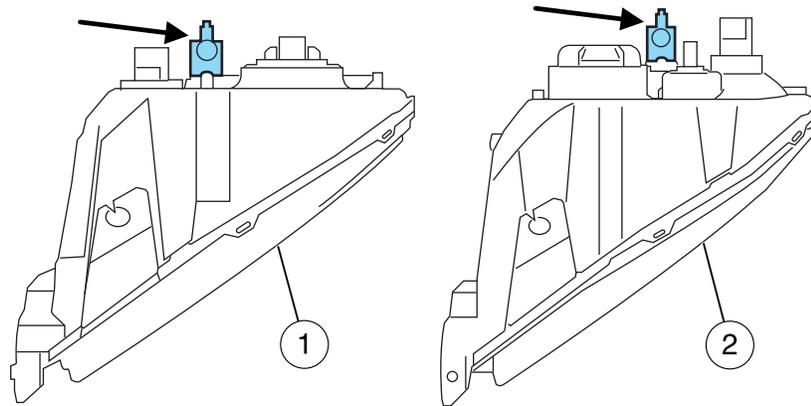


### For vehicles with HID headlamps:

There is a distinct cut-off (change from light to dark) in the left portion of the beam pattern. The top edge of this cut-off should be positioned two inches (50.8 mm) below the horizontal reference line.



## Lights



4. Locate the vertical adjuster on each headlamp.

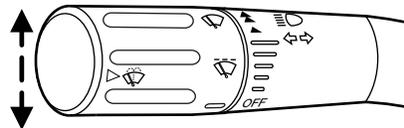
- Halogen headlamp (1)
- HID headlamp (2)

5. Then use a 7 mm Allen wrench or a Phillips screwdriver to adjust the headlamp up or down. HORIZONTAL AIM IS NOT REQUIRED FOR THIS VEHICLE AND IS NON-ADJUSTABLE.

6. Close the hood and turn off the lamps.

### TURN SIGNAL CONTROL

- Push down to activate the left turn signal.
- Push up to activate the right turn signal.



The flash rate of the turn signal indicator will speed up considerably if any of the turn signal lamps are out.

**Note:** For sequential rear turn signal lamps, an outage of the inner most of the three compartments will result in this rapid flash rate.

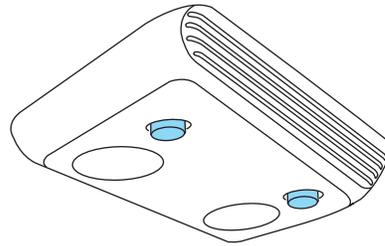
## Lights

### INTERIOR LAMPS

#### Dome/Map lamps

The dome lamp lights when:

- any door is opened.
- any of the remote entry controls are pressed and the ignition is off.
- the instrument panel dimmer switch is rotated up, past the detent, until the courtesy lamps come on.



The map lamps are activated by pressing the controls on either side of the lamp.

### BULB REPLACEMENT

#### Lamp assembly condensation

Exterior lamps are vented to accommodate normal changes in pressure. Condensation can be a natural by-product of this design. When moist air enters the lamp assembly through the vents, there is a possibility that condensation can occur when the temperature is cold. When normal condensation occurs, a thin film of mist can form on the interior of the lens. The thin mist eventually clears and exits through the vents during normal operation. Clearing time may take as long as 48 hours under dry weather conditions.

Examples of acceptable condensation are:

- Presence of thin mist (no streaks, drip marks or droplets)
- Fine mist covers less than 50% of the lens

Examples of unacceptable moisture (usually caused by a lamp water leak) are:

- Water puddle inside the lamp
- Large water droplets, drip marks or streaks present on the interior of the lens

Take your vehicle to a dealer for service if any of the above conditions of unacceptable moisture are present.

## Lights

### BULB SPECIFICATION CHART

Replacement bulbs are specified in the chart below. Headlamp bulbs must be marked with an authorized “D.O.T.” for North America and an “E” for Europe to ensure lamp performance, light brightness and pattern and safe visibility. The correct bulbs will not damage the lamp assembly or void the lamp assembly warranty and will provide quality bulb burn time.

Function	Trade Number
Headlamp (halogen)	H13
* HID (high intensity discharge) headlamp (if equipped)	D3S
Front park lamp, turn lamp (halogen)	3457 or 3457K
Front park, turn lamp (HID)	3457AK (amber)
Sidemarkers (front/rear)	194
Fog lamp	9145-GT or H11-Pony (V6) or GT Cal Special (if equipped)
Tail lamp, brake lamp, turn lamp (LED)	L1230R-3N and L3230R-4CX
* High-mount stoplamp (LED)	Non-replaceable LEDs
Backup lamp	912
License plate lamp	C5WL
Dome/Map lamp	168
All replacement bulbs are clear in color except where noted.	
To replace all instrument panel lights - see your authorized dealer.	
* To replace these lamps - see your authorized dealer.	

#### Replacing interior bulbs

Check the operation of all bulbs frequently.

#### Replacing exterior bulbs

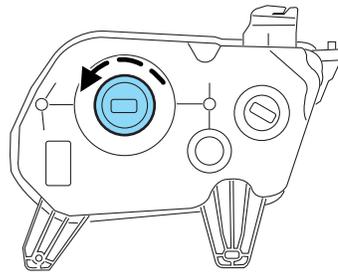
Check the operation of all bulbs frequently.

## Lights

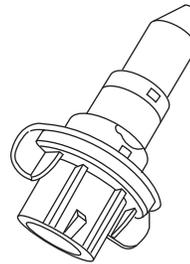
### **Replacing headlamp bulbs**

To remove the headlamp bulb:

1. Make sure headlamp switch is in the off position, then open the hood.
2. Disconnect the electrical connector from the bulb by depressing the retainer clip and pulling rearward.
3. Remove the bulb by rotating it counterclockwise and pulling it straight out.



**WARNING:** Handle a halogen headlamp bulb carefully and keep out of children's reach. Grasp the bulb only by its plastic base and do not touch the glass. The oil from your hand could cause the bulb to break the next time the headlamps are operated.



Install the new bulb in reverse order.

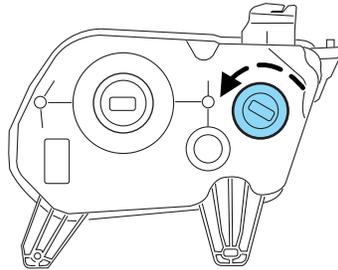
### **Replacing HID headlamp bulbs (if equipped)**

The headlamps on your vehicle use a “high intensity discharge” source. These lamps operate at a high voltage. When the bulb is burned out, the bulb and starter capsule assembly must be replaced by your authorized dealer.

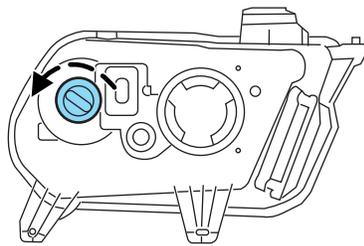
## Lights

### **Replacing front parking lamp/turn signal bulbs**

1. Make sure the headlamp control is in the off position and open the hood.



### **Halogen headlamp**



### **HID headlamp**

2. Remove the hex head screws attaching the underbody forward aeroshield and remove to gain access to the front parking lamp/turn signal assembly.

3. Rotate the socket counterclockwise and remove from the lamp assembly.

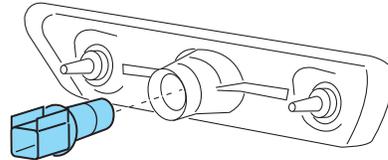
4. Carefully pull the bulb straight out of socket.

Install the new bulb in reverse order.

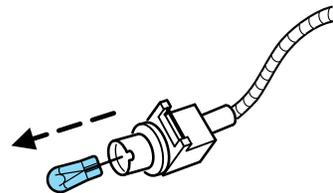
## Lights

### **Replacing front sidemarker bulb**

1. Make sure the headlamp control is in the off position.
2. Remove the hex head screws attaching the underbody forward aeroshield and remove to gain access to the front sidemarker assembly.



3. Rotate the socket counterclockwise and remove from the lamp assembly.
4. Carefully pull the bulb straight out of socket.

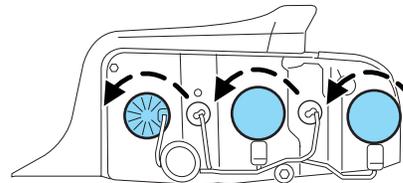


### **Replacing tail lamp/brake/rear turn signal lamps**

See your authorized dealer for replacement LED assembly.

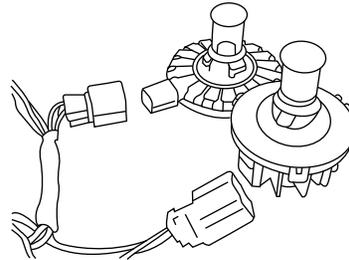
The tail lamp, the brake lamp and the turn signal lamp are located in the tail lamp assembly. Follow the same steps to replace these lamps.

1. Make sure the headlamp switch is in the off position, then open the trunk.
2. Carefully remove the fasteners around the lamp area and then remove the interior trunk trim.



## Lights

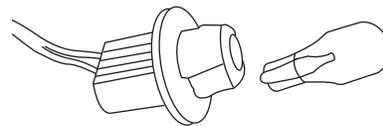
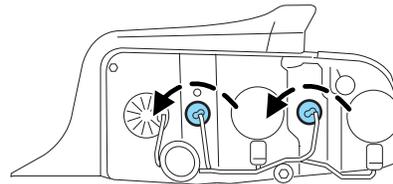
3. Unbolt the three tail lamp attachment nuts and remove the lamp assembly.
4. Rotate the LED assembly counterclockwise and remove it from the lamp assembly.
5. Disconnect the LED assembly from the electrical connector and replace the LED assembly.
6. Install new LED assembly in reverse order.



### **Replacing backup bulbs**

The backup lamps are located in the tail lamp assembly. Follow the same steps to replace either bulb.

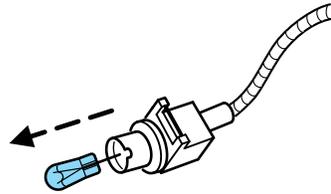
1. Make sure the headlamp switch is in the off position, then open the trunk.
  2. Carefully remove the fasteners around the lamp area, then remove the interior trunk trim.
  3. Unbolt the three tail lamp attachment nuts and remove the lamp assembly.
  4. Rotate the bulb socket counterclockwise and remove it from the lamp assembly.
  5. Pull the bulb straight out from the socket.
- Install the new bulb in reverse order.



## Lights

### **Replacing rear sidemarker lamp bulbs**

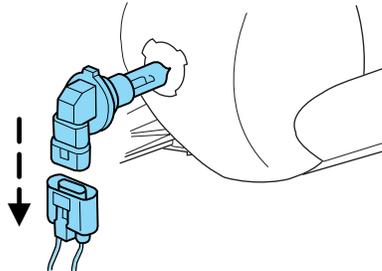
1. Make sure the headlamp switch is in the off position and locate the sidemarker on the rear bumper fascia.
2. Insert a flathead screwdriver between the rear of the sidemarker lens and the bumper fascia.
3. Push the screwdriver to the front of the vehicle and then slide it towards you to pop out the lamp assembly.
4. Carefully pull the bulb straight out of socket.



Install the new bulb in reverse order.

### **Replacing fog lamp bulbs (GT) (if equipped)**

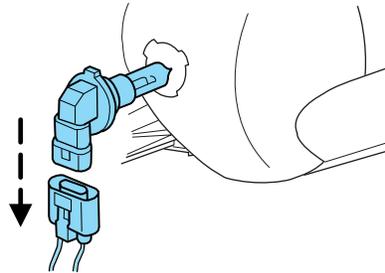
1. Make sure the headlamp control is in the off position and open the hood.
  2. Remove the sight shield by loosening the fasteners with a flathead screwdriver.
  3. Remove the two underhood bolts attaching the bumper cover next to the grill and then pull the cover/grille/fog lamp assembly forward to access the fog lamp bulbs.
  4. Disconnect the electrical connector from the bulb by pulling it straight off.
  5. Rotate the bulb counterclockwise and remove from the lamp assembly.
- Install the new bulb in reverse order.



## Lights

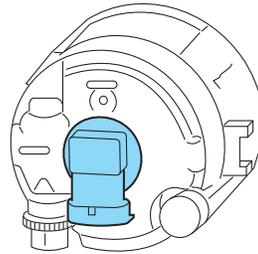
### **Replacing fog lamp bulbs (GT-CS) (if equipped)**

1. Make sure the headlamp control is in the off position and open the hood.
  2. Remove the underbody air deflector panel screws and panel.
  3. Disconnect the electrical connector from the bulb by pulling it straight off.
  4. Rotate the bulb counterclockwise and remove from the lamp assembly.
- Install the new bulb in reverse order.



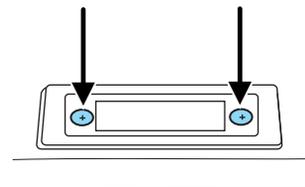
### **Replacing fog lamp bulbs (V6) (if equipped)**

1. Make sure the headlamp control is in the off position and open the hood.
  2. Remove the hex head screws attaching the underbody forward aeroshield and remove to gain access to the fog lamp assembly.
  3. Disconnect the electrical connector from the bulb by pulling it straight off.
  4. Rotate the bulb counterclockwise and remove from the lamp assembly.
- Install the new bulb in reverse order.



### **Replacing license plate lamp bulbs**

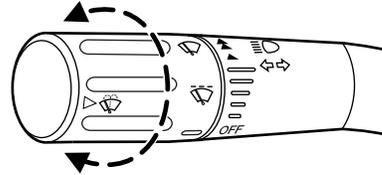
1. Make sure the headlamp switch is in the off position.
  2. Remove the two screws and the lens from the license plate lamp assembly.
  3. Carefully pull the bulb straight out from the lamp assembly.
- Install new bulb(s) in reverse order.



## Driver Controls

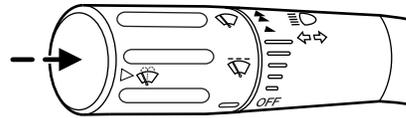
### MULTI-FUNCTION LEVER

**Windshield wiper:** Rotate the end of the control away from you to increase the speed of the wipers; rotate towards you to decrease the speed of the wipers.



**Windshield washer:** Press the end of the stalk:

- briefly: causes a single swipe of the wipers without washer fluid.
- a quick press and hold: the wipers will swipe three times with washer fluid.
- a long press and hold: the wipers and washer fluid will be activated for up to ten seconds.



**Courtesy wiper feature:** One extra wipe will occur a few seconds after washing the front window to clear any excess washer fluid remaining on the windshield.

**Note:** Do not operate the washer when the washer reservoir is empty. This may cause the washer pump to overheat. Check the washer fluid level frequently. Do not operate the wipers when the windshield is dry. This may scratch the glass, damage the wiper blades and cause the wiper motor to burn out. Before operating the wiper on a dry windshield, always use the windshield washer. In freezing weather, be sure the wiper blades are not frozen to the windshield before operating the wipers.

### Windshield wiper rainlamp feature (if equipped with autolamp)

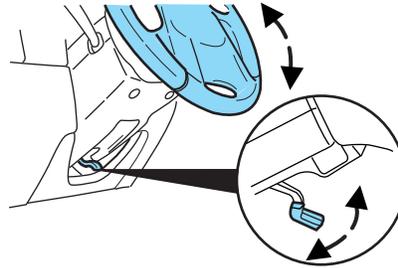
When the windshield wipers are turned on during daylight, and the headlamp control is in the autolamp position, the exterior lamps will turn on after a brief delay and will remain on until the wipers are turned off.

## Driver Controls

### TILT STEERING WHEEL

To adjust the steering wheel:

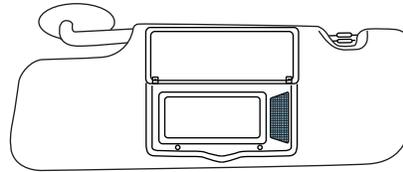
1. Hold the steering wheel with one hand. With the other hand, push the lever down to unlock the steering column.
2. Tilt the steering column to its desired position.
3. While holding the steering wheel, pull the lever up to its original position to lock the steering column.



**WARNING:** Never adjust the steering wheel when the vehicle is moving.

### ILLUMINATED VISOR MIRROR (IF EQUIPPED)

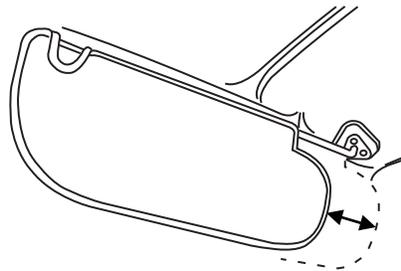
Lift the mirror cover to turn on the visor mirror lamp.



### Slide-on-rod feature

Rotate the visor towards the side window and extend it rearward for additional sunlight coverage.

**Note:** To stow the visor back into the headliner, visor must be retracted before moving it back towards the windshield.



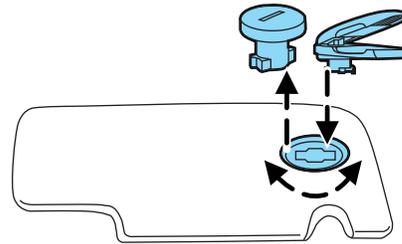
## Driver Controls

### Flexible visor storage system (if equipped)

Visors equipped with the flexible visor storage system can accommodate various storage accessories. A sunglass clip and multi-function clip are provided.

To attach one of the accessories, do the following:

1. Insert the provided removal tool (on the accessory holder) or a coin into the slot on the plug and turn 1/4-turn in either direction to remove. It may be necessary to rotate the visor until the plug drops away from the opening. When not in use, place the plug in the provided holder.



2. Remove the accessory from the holder and insert the end of the storage accessory into the visor opening. Turn 1/4-turn in either direction until the accessory snaps into place. For best results, ensure the open end of the accessory is facing away from the windshield.

3. Reverse the procedure to remove the accessory and replace the cap or change to a different accessory.

Additional accessories are available from your authorized dealer. See the *Accessories* chapter for more information.

### ELECTRONIC COMPASS (IF EQUIPPED)

The compass heading is displayed in the center integrated display (CID).

The compass reading may be affected when you drive near large buildings, bridges, power lines and powerful broadcast antenna. Magnetic or metallic objects placed in, on or near the vehicle may also affect compass accuracy.

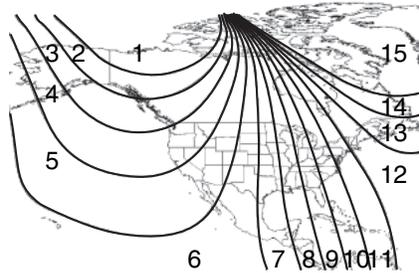
Usually, when something affects the compass readings, the compass will correct itself after a few days of operating your vehicle in normal conditions. If the compass still appears to be inaccurate, a manual calibration may be necessary. Refer to *Compass calibration adjustment*.

Most geographic areas (zones) have a magnetic north compass point that varies slightly from the northerly direction on maps. This variation is four degrees between adjacent zones and will become noticeable as the vehicle crosses multiple zones. A correct zone setting will eliminate this error. Refer to *Compass zone adjustment*.

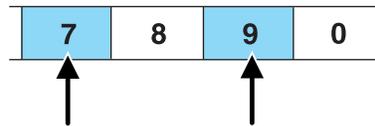
## Driver Controls

### Compass zone adjustment

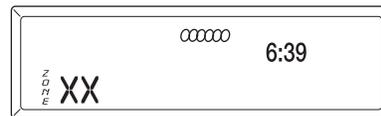
1. Determine which magnetic zone you are in for your geographic location by referring to the zone map.
2. Turn ignition to the on position.



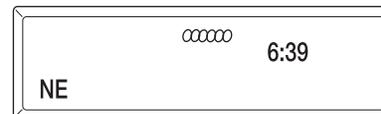
3. Press and hold the 7 and 9 radio preset buttons together for approximately five seconds until ZONE XX appears in the CID.



4. Press and release the 7 and 9 radio preset buttons together, repeatedly until ZONE XX changes to the correct zone (1–15) in the CID.



5. The direction will display after the buttons are released. The zone is now updated.



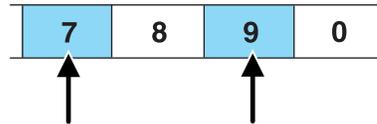
### Compass calibration adjustment

Perform compass calibration in an open area free from steel structures and high voltage lines. For optimum calibration, turn off all electrical accessories (heater/air conditioning, wipers, etc.) and make sure all vehicle doors are shut.

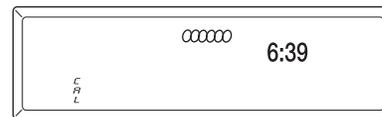
1. Start the vehicle.

## Driver Controls

2. To calibrate, press and hold the 7 and 9 radio preset buttons together for approximately 10 seconds until CAL appears. Release the buttons.



3. Slowly drive the vehicle in a circle (less than 3 mph [5 km/h]) until the CAL display changes to the direction value (N, S, E, W, etc.). It may take up to five circles to complete calibration.

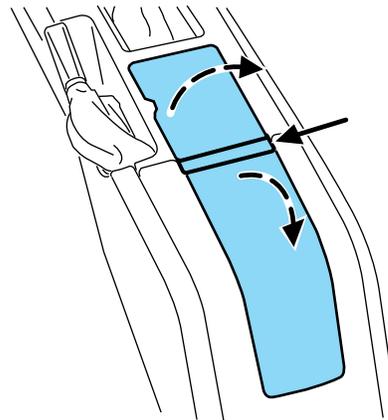


4. The compass is now calibrated.

### CENTER CONSOLE

Your vehicle is equipped with a variety of console features. These include:

- Dual cupholders in front of console (pull door open to access)
- Lockable storage bin (use ignition key to lock/unlock the console bin and press the latch to open the console)
- Auxiliary power point
- Coin holder slots
- Audio input jack
- USB port (if equipped)



**WARNING:** Use only soft cups in the cupholder. Hard objects can injure you in a collision.

## Driver Controls

### AUXILIARY POWER POINT (12V DC)

**Power outlets are designed for accessory plugs only. Do not insert any other object in the power outlet as this will damage the outlet and blow the fuse. Do not hang any type of accessory or accessory bracket from the plug. Improper use of the power outlet can cause damage not covered by your warranty.**

Auxiliary power points can be found in the following locations:

- On the instrument panel
- Inside the center console storage bin

Do not use the power point for operating the cigarette lighter element (if equipped).

**Note:** Do not plug optional electrical accessories into the cigarette lighter socket (if equipped). Improper use of the lighter can cause damage not covered by your warranty, and can result in fire or serious injury.

To prevent the fuse from being blown, do not use the power point(s) over the vehicle capacity of 12VDC/180W/15A. If the power point or cigar lighter socket is not working, a fuse may have blown. Refer to *Fuses and relays* in the *Roadside Emergencies* chapter for information on checking and replacing fuses.

To have full capacity usage of your power point, the engine is required to be running to avoid unintentional discharge of the battery. To prevent the battery from being discharged:

- do not use the power point longer than necessary when the engine is not running,
- do not leave battery chargers, video game adapters, computers and other devices plugged in overnight or when the vehicle is parked for extended periods.

Always keep the power point caps closed when not being used.

### POWER WINDOWS



**WARNING:** Do not leave children unattended in the vehicle and do not let children play with the power windows. They may seriously injure themselves.

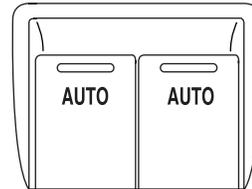
## Driver Controls



**WARNING:** When closing the power windows, you should verify they are free of obstructions and ensure that children and/or pets are not in the proximity of the window openings.

Press and pull the switches to open and close windows.

- Press down (to the first detent) and hold the switch to open.
- Pull up (to the first detent) and hold the switch to close.



### One-touch up or down (front windows only)

This feature allows the driver or passenger's window to open or close fully without holding the control down.

To operate one-touch down, press the switch completely down to the second detent and release quickly. The window will open fully. Momentarily press the switch to any position to stop the window operation.

To operate one-touch up, pull the switch completely up to the second detent and release quickly. The window will close fully. Momentarily press the switch to any position to stop the window operation.

### **Restoring the one-touch up functionality (front windows only)**

Under low battery power conditions, one-touch up only functionality may be lost. To reset this function after restoring full battery power, pull the switch to the one-touch up position, hold the switch until the glass reaches the stall position and continue to hold for two seconds. Press the window switch down and operate the window to the full down position. One-touch up will now be functional. **Perform one-touch up re-calibration with the door closed only. Calibrating with the door open will cause the window to continuously bounce back.**

### **Bounce-back (front windows only)**

When an obstacle has been detected in the window opening as the window is moving upward, the window will automatically move down and stop.

## Driver Controls

### ***Bounce-back override (front windows only)***

To override bounce-back, within two seconds after reaching bounce-back position, if the switch is moved from the neutral to the one-touch up position **the window will travel up with no bounce-back protection.** If the switch is released before the window reaches fully closed position, the window will stop. For example: bounce-back override can be used to overcome the resistance of ice on the window or seals.

### ***Short drop glass (front windows only)***

In order to improve door efforts and sealing, your vehicle is equipped with short drop glass. This feature lowers the glass when either door is opened. The glass returns to its closed position when the door is closed.

Proper operation of the short drop glass requires that the windows be calibrated. **Though your windows will have been calibrated before your vehicle is delivered to you, it is possible for the windows to lose calibration.** If a window loses its calibration, your short drop feature will lower the window, but will not raise it again when the door is closed. To re-calibrate the window, pull the switch up to raise the window until it completes its travel and hold the switch up for two seconds. Another possible effect of lost calibration is that the feature may not lower the window. To re-calibrate the window in this case, lower the window until it completes its travel and hold the switch down for two seconds. Immediately after releasing the window switch, pull the switch up to raise the window until it completes its travel and hold the switch up for two seconds. **Perform short drop re-calibration with doors closed only. Re-calibrating with doors open will cause the window to continuously bounce back.**

### ***Rear power windows (convertible only)***

The rear quarter windows are operated by a single window switch located at the driver door window controls. Press and pull the window switch to open and close the windows.

- Press down and hold the switch to open.
- Pull up and hold the switch to close.

## Driver Controls

### **Rear power windows manual override (convertible only)**

The rear quarter window switch will not operate under the following conditions:

- Convertible top is moving
- Convertible top is not completely up or down

In the event that the rear quarter window switch does not operate when the convertible top is completely up or down, the rear quarter windows can be manually raised up.

### **The following procedure must be performed within two minutes:**

1. Turn the ignition key to the off position, then turn back to the on position.
2. Press the rear window switch down three times.
3. Turn the ignition key to the off position, then turn back to the on position.
4. Pull and hold the rear window switch up and hold for three seconds, the rear windows will begin to start moving up.

### **Accessory delay**

With accessory delay, the window switches, convertible top (if equipped) and radio may be used for up to 10 minutes after the ignition switch is turned to the off position or until either front door is opened.

## **INTERIOR MIRROR**

The interior rearview mirror has two pivot points on the support arm which lets you adjust the mirror up or down and from side to side.



**WARNING:** Do not adjust the mirror while the vehicle is in motion.

### **Automatic dimming interior rear view mirror (if equipped)**

The interior rear view mirror has an auto-dimming function. The electronic day/night mirror will change from the normal (high reflective) state to the non-glare (darkened) state when bright lights (glare) reach the mirror. When the mirror detects bright light from behind the vehicle, it will automatically adjust (darken) to minimize glare.

The mirror will automatically return to the normal state whenever the vehicle is placed in R (Reverse) to ensure a bright clear view when backing up.

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## Driver Controls

**Do not block the sensors on the front and back of the interior rear view mirror since this may impair proper mirror performance.**

**Note:** A rear center passenger and/or raised rear center headrest (if equipped) may also block the light from reaching the sensor.

**Do not clean the housing or glass of any mirror with harsh abrasives, fuel or other petroleum-based cleaning products.**

**Note:** If equipped with a rearview camera system, a video image will display in the mirror or the navigation system display (if equipped) when the vehicle is put in R (Reverse). As you shift into any other gear from R (Reverse), the image will remain for a few seconds and then turn off. Refer to *Rearview camera system* in the *Driving* chapter.

### EXTERIOR MIRRORS

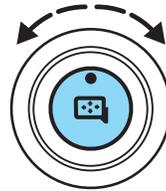
#### Power side view mirrors



**WARNING:** Do not adjust the mirror while the vehicle is in motion.

To adjust your mirrors:

1. Rotate the control clockwise to adjust the right mirror and rotate the control counterclockwise to adjust the left mirror.
2. Move the control in the direction you wish to tilt the mirror.
3. Return to the center position to lock mirrors in place.



#### Blind spot mirrors (if equipped)

Your vehicle may be equipped with blind spot mirrors. Refer to *Blind spot mirrors* in the *Driving* chapter.

### SPEED CONTROL

With speed control set, you can maintain a set speed without keeping your foot on the accelerator pedal.



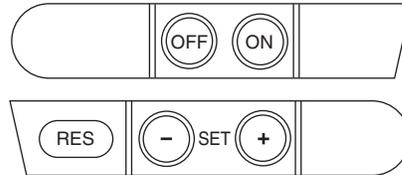
**WARNING:** Do not use the speed control in heavy traffic or on roads that are winding, slippery or unpaved.

## Driver Controls

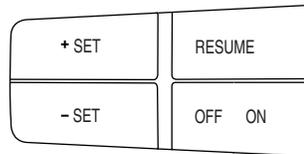
### Using speed controls

The speed controls are located on the steering wheel. The following buttons work with speed control:

#### Base controls



#### Optional controls



**ON/OFF:** Press to turn the system on or off.

**SET (+):** Press to set a speed or to increase a set speed.

**SET (-):** Press to decrease a set speed.

**RES / RESUME:** Press to resume a set speed.

#### Setting speed control

The set speed control:

1. Press and release ON.
2. Accelerate to the desired speed.
3. Press and release SET (+).
4. Take your foot off the accelerator pedal.
5. The indicator  light on the instrument cluster will turn on.

#### Note:

- Vehicle speed may vary momentarily when driving up and down a steep hill.
- If the vehicle speed increases above the set speed on a downhill, you may want to apply the brakes to reduce the speed.
- If the vehicle speed decreases more than 10 mph (16 km/h) below your set speed on an uphill, your speed control will disengage.

## Driver Controls

### ***Disengaging speed control***

To disengage the speed control, tap the brake pedal or clutch pedal (if equipped).

Disengaging the speed control will not erase previous set speed.

### ***Resuming a set speed***

Press and release RES / RESUME. This will automatically return the vehicle to the previously set speed.

### ***Increasing speed while using speed control***

To increase the set speed:

- Press and hold SET (+) until you get to the desired speed, then release. You can also use SET (+) to operate the tap-up function. Press and release SET (+) to increase the vehicle set speed in approximately 1 mph (2 km/h) increments.
- Use the accelerator pedal to get to the desired speed then press and release SET (+).

### ***Reducing speed while using speed control***

To reduce the set speed:

- Press and hold SET (-) until you get to the desired speed, then release. You can also use SET (-) to operate the tap-down function. Press and release SET (-) to decrease the vehicle set speed in approximately 1 mph (2 km/h) increments.
- Press the brake pedal until the desired vehicle speed is reached then press and release SET (+).

### ***Turning off speed control***

To turn off the speed control, press OFF or turn off the ignition.

**Note:** When you turn off the speed control or the ignition, your speed control set speed memory is erased.

## Driver Controls

### STEERING WHEEL CONTROLS (IF EQUIPPED)

#### With navigation system (if equipped)

- Press  to use the voice command features.

For further information on using voice commands with the navigation system, refer to the *Navigation System* supplement.

- Press  to select the entertainment playing media (radio, CD, line in, etc.).
- Press **- VOL +** to adjust the volume in any mode.
- Press  to activate phone mode.

Refer to the *Navigation System* supplement for more information on using phone features.

- Press   to change radio stations/CD tracks.

Refer to the *Navigation System* supplement for more information on using this feature.

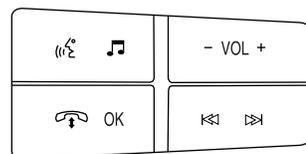
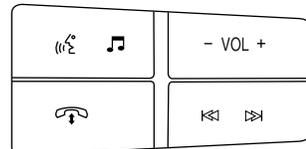
#### With SYNC® system (if equipped)

- Press  to use the voice command features.

For further information on using voice commands with the SYNC® system, refer to the *SYNC®* supplement.

- Press  to select the entertainment playing media (radio, CD, line in, etc.).
- Press **- VOL +** to adjust the volume in any mode.
- Press  to activate phone mode.

Refer to the *SYNC®* supplement for more information on using phone features.



## Driver Controls

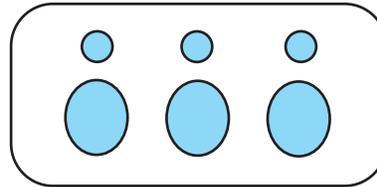
- Press **OK** to confirm selections various audio and SYNC® selections.  
For further information on the SYNC® system, refer to the SYNC® supplement.
- Press **⏮** **⏭** to change radio stations/CD tracks.

### UNIVERSAL GARAGE DOOR OPENER (IF EQUIPPED)

Your vehicle may be equipped with a universal garage door opener which can be used to replace the common hand-held transmitter.

### Car2U® Home Automation System (if equipped)

The Car2U® Home Automation System is a universal transmitter located in the driver's visor that includes two primary features – a garage door opener and a platform for remote activation of devices within the home. The Car2U® system's garage door opener function replaces the common



hand-held garage door opener with a three-button transmitter that is integrated into the interior of your vehicle. After being programmed for garage doors, the Car2U® system transmitter can be programmed to operate security devices and home lighting systems.



**WARNING:** Make sure that people and objects are clear of the garage door or security device you are programming. Do not program the Car2U® system with the vehicle in the garage.

Do not use the Car2U® system with any garage door opener that lacks safety stop and reverse features as required by U.S. Federal Safety Standards (this includes any garage door opener manufactured before April 1, 1982).

Be sure to keep the original remote control transmitter for use in other vehicles as well as for future Car2U® system programming. It is also recommended that upon the sale or lease termination of the vehicle, the programmed Car2U® system buttons should be erased for security reasons. Refer to *Erasing the Car2U® Home Automation System buttons* later in this section.

Read the instructions completely before attempting to program the Car2U® system. Because of the steps involved, it may be helpful to have another person assist you in programming the transmitter.

## Driver Controls

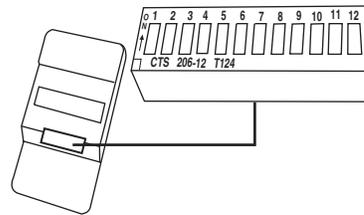
Additional Car2U® system information can be found on-line at [www.learcar2U.com](http://www.learcar2U.com) or by calling the toll-free Car2U® system help line at 1-866-572-2728.

### **Types of garage door openers (rolling code and fixed code)**

The Car2U® Home Automation System may be programmed to operate rolling code and fixed code garage door openers.

- Rolling code garage door openers were produced after 1996 and are code protected. Rolling code means the coded signal is changed every time your remote control garage door opener is used.
- Fixed code garage door openers were produced prior to 1996. Fixed code uses the same coded signal every time. It is manually programmed by setting DIP switches for a unique personal code.

If you do not know if your garage door opener is a rolling code or fixed code device, open your garage door opener's remote control battery cover. If a panel of DIP switches is present your garage door opener is a fixed code device. If not, your garage door opener is a rolling code device.



**Note:** Programming the Car2U® system to a community gate will require a unique set of instructions depending on the gate system model. Contact the Car2U® help line at 1-866-572-2728 to program your Car2U® system.

**Note:** Accidentally entering the program mode may override previously programmed buttons. This can happen by pressing and releasing the outer two buttons, or all three buttons, simultaneously. If this happens, do not press any button until the module times out after approximately 2.5 seconds and resets to normal mode. When time-out occurs, all three LEDs will flash rapidly for a few seconds then turn off. Any settings should remain as previously set.

### **Rolling code programming**

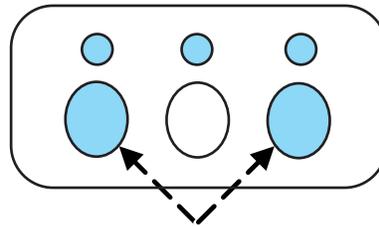
**Note:** Programming the rolling code garage door opener involves time-sensitive actions. Read the entire procedure prior to beginning so you will know which actions are time-sensitive. If you do not follow the time-sensitive actions, the device will time out and you will have to repeat the procedure.

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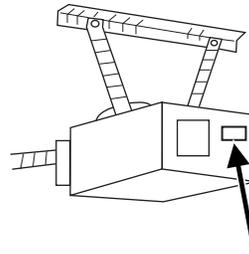
## Driver Controls

**Note:** Do not program the Car2U® system with the vehicle in the garage. Make sure that your key is on and engine off while programming the transmitter.

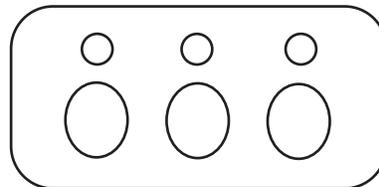
1. Firmly press the two outer Car2U® system buttons for 1–2 seconds, then release.



2. Go to the garage to locate the garage door opener motor and its “learn” button. You may need a ladder to reach the unit and you may need to remove the unit’s cover or light lens to locate the “learn” button. Press the “learn” button, after which you will have 10–30 seconds to return to your vehicle and complete the following steps. If you cannot locate the “learn” button, refer to the Owner’s Guide of your garage door opener or call the toll-free Car2U® system help line at 1-866-57Car2U (1-866-572-2728).



3. Return to your vehicle. Press and hold the Car2U® system button you would like to use to control the garage door. You may need to hold the button from 5–20 seconds, during which time the selected button indicator light will blink slowly. Immediately (within 1 second) release the button once the garage door moves. When the button is released, the indicator light will begin to blink rapidly until programming is complete.



4. Press and release the button again. The garage door should move, confirming that programming is successful. If your garage door does not operate, repeat the previous steps in this section.

## Driver Controls

After successful programming, you will be able to operate your Car2U® system by pressing the button you programmed to activate the opener. The indicator light above the selected button will turn on to confirm that the Car2U® system is responding to the button command.

To program another rolling code device such as an additional garage door opener, a security device or home lighting, repeat Steps 1 through 4 substituting a different function button in Step 3 than what you used for the garage door opener. For example, you could assign the left-most button to the garage door, the center button to a security device, and the right-most button to another garage door opener.

**Note:** The Car2U® system allows for three devices to be programmed. If you need to change or replace any of the three devices after it has been initially programmed, it is necessary to erase the current settings using the *Erasing the Car2U® Home Automation System buttons* procedure and then programming all of the devices being used.

### **Fixed code programming**

**Note:** Do not program the Car2U® system with the vehicle in the garage.

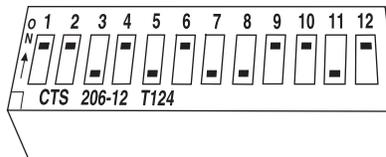
Make sure that your key is on and engine off while programming the transmitter.

1. To program units with fixed code DIP switches, you will need the garage door hand-held transmitter, paper and a pen or pencil.
2. Open the battery cover and record the switch settings from left to right for all 8 to 12 switches. Use the figure below:

When a switch is in the up, on, or + position, circle “L.”

When a switch is in the middle, neutral, or 0 position, circle “M.”

When a switch is in the down, off, or – position, circle “R.”

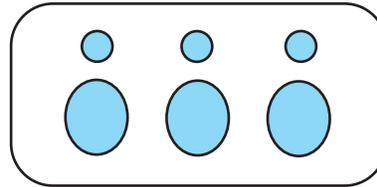


## Driver Controls

Switch position	1	2	3	4	5	6	7	8	9	10	11	12
Up, on or +	L	L	L	L	L	L	L	L	L	L	L	L
Middle, neutral or 0	M	M	M	M	M	M	M	M	M	M	M	M
Down, off or -	R	R	R	R	R	R	R	R	R	R	R	R

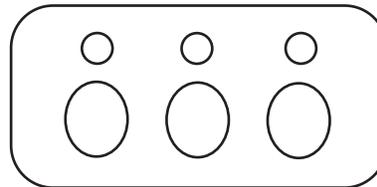
L=left; M=middle; R=right

3. To input these positions into the Car2U® system, simultaneously press all three Car2U® system buttons for a few seconds and then release to put the device into programming mode. The indicator lights will blink slowly. Within 2.5 minutes enter your corresponding DIP switch settings from left to right into your Car2U® system by pressing and releasing the buttons corresponding to the settings you circled.



4. After inputting switch settings, simultaneously press and release all three Car2U® system buttons. The indicator lights will turn on.

5. Press and hold the Car2U® system button you would like to use to control the garage door. Immediately (within 1 second) release the button once the garage door moves. During this time the selected button indicator light will blink slowly. Do not release the button until you see the garage door move. Most garage doors open quickly. You may need to hold the button from 5–55 seconds before observing movement of the garage door.



6. The indicator light will (begin to) blink rapidly until programming is complete. If your garage door opener does not operate following these steps, repeat Steps 2 through 6. Otherwise, call the toll-free Car2U® help line at 1-866-57Car2U (1-866-572-2728).

## Driver Controls

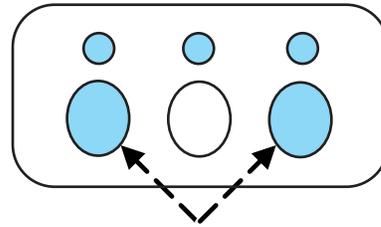
After successful programming, you will be able to operate your Car2U® system by pressing the button you programmed to activate the opener. The indicator light above the selected button will turn on to confirm that the Car2U® system is responding to the button command.

### **Erasing the Car2U® Home Automation System buttons**

**Note:** The system allows for three devices to be programmed. If you need to change or replace any of the three devices after it has been initially programmed, it will be necessary to erase the current settings using the procedure below and then reprogramming all of the devices being used.

To erase programming on the Car2U® system (individual buttons cannot be erased), use the following procedure:

1. Firmly press the two outside Car2U® system buttons simultaneously for approximately 20 seconds until the indicator lights begin to blink rapidly. The indicator lights are located directly above the buttons.



2. Once the indicator lights begin to blink, release your fingers from the buttons. The codes for all buttons are erased.

If you sell your vehicle equipped with the Car2U® system, it is recommended that you erase the programming for security reasons.

### **FCC and RSS-210 Industry Canada Compliance**

The Car2U® system complies with Part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received including interference that may cause undesired operation.

Changes and modifications to the Car2U® system transmitter by other than an authorized service facility could void authorization to use the equipment.

## Driver Controls

### POSITIVE RETENTION FLOOR MAT



 **WARNING:** Always use floor mats that are designed to fit the foot well of your vehicle. Only use floor mats that leave the pedal area unobstructed. Only use floor mats that are firmly secured to retention posts so that they cannot slip out of position and interfere with the pedals or impair safe operation of your vehicle in other ways.

- Pedals that cannot move freely can cause loss of vehicle control and increase the risk of serious personal injury.
- Always make sure that the floor mats are properly attached to the retention posts in the carpet that are supplied with your vehicle. Floor mats must be properly secured to both retention posts to ensure mats do not shift out of position.
- Never place floor mats or any other covering in the vehicle foot well that cannot be properly secured to prevent them from moving and interfering with the pedals or the ability to control the vehicle.
- Never place floor mats or any other covering on top of already installed floor mats. Floor mats should always rest on top of vehicle carpeting surface and not another floor mat or other covering. Additional floor mats or any other covering will reduce the pedal clearance and potentially interfere with pedal operation.
- Check attachment of floor mats on a regular basis. Always properly reinstall and secure floor mats that have been removed for cleaning or replacement.
- Always make sure that objects cannot fall into the driver foot well while the vehicle is moving. Objects that are loose can become trapped under the pedals causing a loss of vehicle control.

## Driver Controls

### WARNING (Continued)

- Failure to properly follow floor mat installation or attachment instructions can potentially cause interference with pedal operation causing loss of control of vehicle.
- To install floor mats, position the floor mat so that the eyelet is over the retention post and press down to lock in.
- To remove the floor mat, reverse the installation procedure.

### CONVERTIBLE (IF EQUIPPED)

Do not store articles behind rear seat. Articles stored in the convertible top stowage compartment may break the rear glass window when the top is lowered.

#### Lowering the convertible top

The convertible top can be lowered with the side windows down. The windows will automatically lower when lowering or raising the top.

The convertible top **will not operate** unless the vehicle is traveling under 3 mph (5 km/h).

**Note:** Lowering the convertible top when the top material is wet may cause mold or mildew.

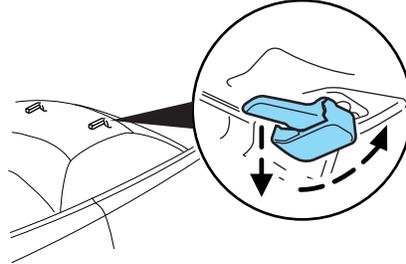
To lower the convertible top:

1. Bring vehicle to a complete stop. Key must be in the on position. It is recommended that the vehicle's engine is running when lowering the top to prevent draining the battery.
2. Check the convertible top stowage compartment behind the rear seat to be sure it is empty and ready to receive the top. Check the convertible top outer surface to be sure it is free of leaves and debris.

## Driver Controls

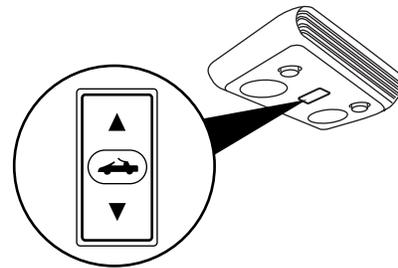
**Note:** The latch handles must be pulled downward fully to allow the latch to fully rotate into the open position.

3. Unclamp the top from the windshield header by pulling each latch handle down and then rotating the latch to the rear until it clears the header.



**Note:** If the top has not been lowered for some time and sticks to the windshield header, push the front of the top up slightly with your hand to loosen it.

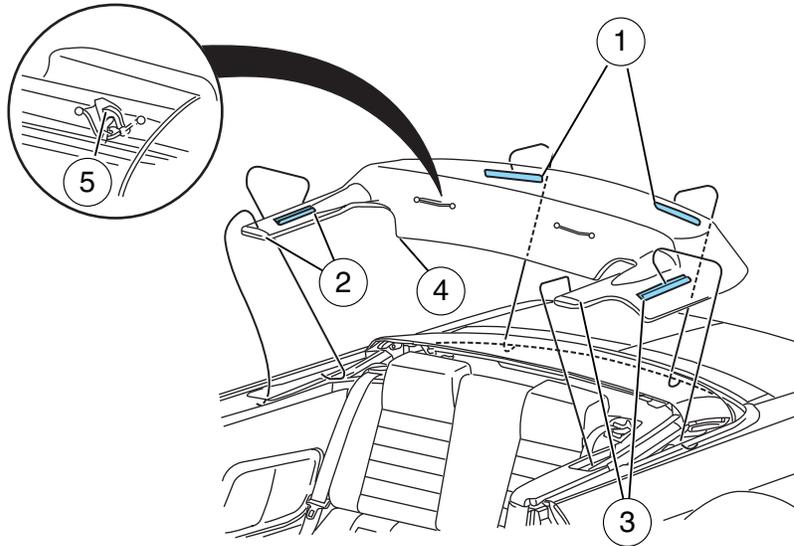
4. Press the convertible top switch on the overhead console and hold until the windows are completely down and the top is completely stored.



## Driver Controls

### Installation of the boot (if equipped)

Be sure the boot is secure on the vehicle before driving.



1. Install the boot on the vehicle by hooking the boot retaining clips on the back panel.
2. Install the boot on the right side tucking in the front part of the boot in the quarter panel and hooking the retaining clip on the side.
3. Install the boot on the left side tucking in the front part of the boot in the quarter panel and hooking the retaining clip on the side.
4. Tuck the boot corners behind the shoulder belts.
5. Secure the boot straps on the rear seat hooks behind the rear seat.

**Note:** Improper installation can result in loss and/or damage of the boot while driving.

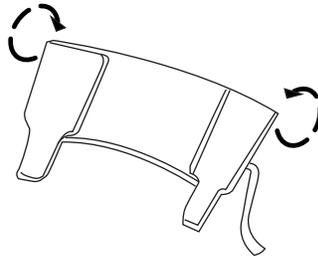


**WARNING:** Always secure the retaining clips and boot straps on the vehicle or the boot may come loose while driving.

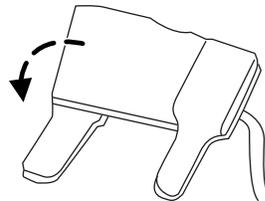
To remove, unhook the boot straps from the rear seat hooks and push the boot down slightly unhooking the boot retaining clips from the vehicle and lift off.

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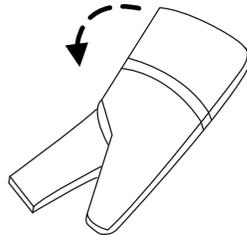
**Storing the boot**



1. Position the boot right-side up and fold each side of the boot inward.



2. Turn the boot upside down and fold the left side of the boot inward.



3. Fold the right side inward and secure the boot with the strap.  
Stow the boot in the trunk.

**Raising the convertible top**

The convertible top **will not operate** unless the vehicle is traveling under 3 mph (5 km/h).

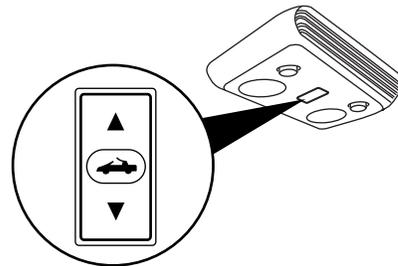
## Driver Controls

To raise the convertible top:

1. Bring the vehicle to a complete stop. Key must be in the on position. It is recommended that the vehicle's engine is running when raising the top to prevent draining the battery.

2. Press the convertible top switch, holding it until the windows lower completely and the top unfolds and moves forward toward the windshield header.

3. You can release the convertible top switch to open both latch handles before the top meets the windshield header. **Note:** Make sure the latch handles are pulled down fully for hand clearance and are swung to the fully open position.



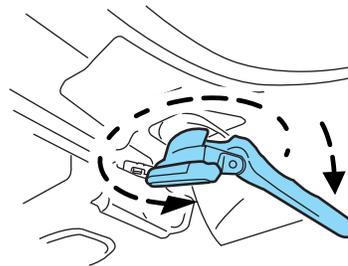
**Note:** If the top has been in the down position for an extended period or if the temperature is low, the top material may shrink a small amount. Pull down on the latch handles and at the center grip in the header to fasten the top.

4. Continue to use the convertible top switch to raise the top until it has reached the fully closed position flush to the header.

**Note:** The two pins under the forward edge of the top should seat themselves in the matching holes in the header.

**Note:** The latch handles must be pulled downwards fully to allow the latch to fully rotate into the closed position.

5. Secure the driver's side latch first, then secure the passenger side. Pull down firmly on the latch handles before rotating them into the windshield header until they reach the full forward position. Pull down on the latch handles and at the center grip in the header to fasten the top. Press the latch handles up into the stowed position once the latch is rotated into the full forward position.



6. Raise the rear windows first and then raise the front windows.

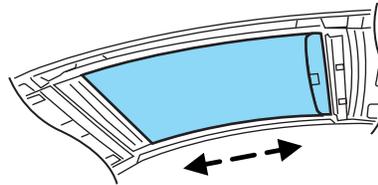
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## Driver Controls

### ROLLER BLIND SUN SHADE (IF EQUIPPED)

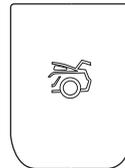
If your vehicle is equipped with a glass roof, the roller blind sun shade will cover the glass roof inside your vehicle.

Use the center-mounted cup handle to slide the shade open or closed.



### INTERIOR TRUNK CONTROL

The remote trunk release button is located on the instrument panel. Press the button to unlatch the trunk.



### Interior trunk control lockout (convertible vehicles only)

This feature helps prevent unauthorized access to the trunk when the convertible top is open, by disabling the interior trunk control.

This is useful when you want to leave the convertible top open, but still prevent access to the trunk.

To operate this feature (the vehicle must be off and accessory power delay not active):

Lock the vehicle using the integrated keyhead transmitter or the power door lock switch. The interior trunk control will now be disabled.

To enable the interior trunk control:

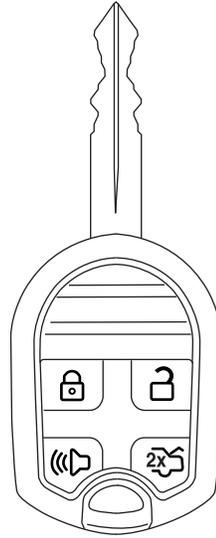
- use the integrated keyhead transmitter to unlock the vehicle,
- or turn the ignition on.

The interior trunk control will now work normally.

## Locks and Security

### KEYS

Your vehicle may be equipped with two integrated keyhead transmitters (IKTs). The key blade functions as a programmed key which starts the vehicle and unlocks/locks all the doors. The transmitter portion functions as the remote entry transmitter.



Your IKTs are programmed to your vehicle; using a non-programmed key will not permit your vehicle to start. If you lose your authorized dealer supplied IKTs, replacement IKTs are available through your authorized dealer. Standard SecuriLock® keys without remote entry transmitter functionality can also be purchased from your authorized dealer if desired.

Always carry a spare key with you in case of an emergency.

For more information regarding programming replacement IKTs, refer to the *SecuriLock® passive anti-theft system* section later in this chapter.

**Note:** Your vehicle's IKTs were issued with a security tag that provides important vehicle key cut information. It is recommended that you keep the tag in a safe place for future reference.



## Locks and Security

### MYKEY®

The MyKey® feature allows you to program a restricted driving mode to promote good driving habits. All but one of the keys programmed to the vehicle can be activated as a MyKey®. The key will remain restricted until MyKey® is cleared. Any remaining keys are referred to as an “administrator key” or admin key. The admin key can be used to create a MyKey®, program optional MyKey® settings, and clear the MyKey® feature. When the MyKey® feature is enabled the user can use system check in the message center to see how many MyKeys® and admin keys are programmed to the vehicle, and see the total distance the vehicle has been driven with the MyKey® active.

#### MyKey® restricted features

##### ***Standard settings – these settings cannot be changed***

- Belt-Minder cannot be disabled. The audio system will be muted whenever Belt-Minder® is activated until the safety belts are buckled. Refer to the *Seating and Safety Restraints* chapter for a detailed description of Belt-Minder® operation.
- Low fuel warnings are displayed in the message center followed by a chime when the distance to empty value reaches 75 miles (120 km).
- The following systems, if equipped, cannot be turned off: reverse sensing system, blind spot information system (BLIS®) with cross traffic alert and collision warning system.

##### ***Optional settings – these settings can be changed***

- Vehicle speed is limited to 80 mph (130 km/h). Visual warnings are displayed followed by a chime when the vehicle speed has reached 80 mph (130 km/h).
- Visual warnings are displayed followed by a chime when a preselected vehicle speed of 45, 55 or 65 mph (75, 90, or 105 km/h) is exceeded.
- The maximum volume of the audio system is limited to 45%. MYKEY VOLUME LIMITED will be displayed in the audio system display when attempting to exceed the limited volume.
- The AdvanceTrac® system cannot be turned off. When this optional setting is on, the MyKey® user will not be able to deactivate the system. **Note:** It may be beneficial to deactivate the AdvanceTrac® system if the vehicle is stuck in snow, mud or sand.

## Locks and Security

### Create a MyKey®

To program MyKey® on one of the keys programmed to the vehicle, insert the key that you want to make a MyKey® into the ignition. For vehicles equipped with push button start, put the intelligent access key in the backup slot; see the *Driving* chapter for the location of the backup slot. Turn the ignition on. Use the message center buttons to do the following:

1. Press SETUP until PRESS RESET TO CREATE MYKEY is displayed.
2. Press and release the RESET button. HOLD RESET TO CONFIRM MYKEY will be displayed.
3. Press and hold the RESET button for two seconds until MARK THIS AS RESTRICTED is displayed.
4. Wait until KEY RESTRICTED AT NEXT START is displayed.

MyKey® is successfully programmed. Make sure you label it so you can distinguish it from the admin keys. **Note:** To program the optional settings go to Step 2 in the *Programming MyKey® Optional Settings* section. If your vehicle is equipped with remote start, see the *Using MyKey® with Remote Start Systems* section.

**Note:** The MyKey® can be cleared within the same key cycle that it was created, otherwise a standard key (administrator key) is required to clear the MyKey® programming. To clear all MyKeys® go to Step 2 in the *Clear MyKey®* section.

### Programming MyKey® Optional Settings

Turn the ignition on using an admin key. To program the optional settings, use the message center buttons to do the following:

1. Press SETUP until RESET FOR MYKEY SETTINGS is displayed.
2. Press and release the RESET button to display MyKey setup menus. The first menu shown is:

MYKEY MAX MPH <80 MPH> OFF

3. If you don't want to change the maximum speed setting, press the SETUP button to display the next menu. The remaining menus appear as follows with the default settings shown:

MYKEY MPH TONES 45 55 65 <OFF>

MYKEY VOLUME LIMIT <ON> OFF

MYKEY ADVTRAC CTRL ON <OFF>.

4. On any of the menus press RESET to highlight your choice with the <...>.

## Locks and Security

5. Press SETUP to enter your choice. The next optional setting will be displayed.

6. Repeat Steps 4 and 5 until you are done changing the optional settings.

### **Clear MyKey®**

To reset all MyKeys® as admin keys, do the following:

1. Turn the vehicle on using the admin key.
2. Press SETUP until PRESS RESET TO CLEAR MYKEY is displayed.
3. Press and release the RESET button. HOLD RESET TO CONFIRM CLEAR is displayed.
4. Press and hold the RESET button for two seconds until ALL MYKEYS CLEARED is displayed.

### **Check MyKey® system status**

The vehicle system check will provide the status of the following MyKey® parameters:

- MYKEY MILES — This odometer only tracks mileage when a MyKey® is used. If mileage does not accumulate as expected, then the MyKey® is not being used by the intended user. The only way to reset this odometer to zero is by clearing MyKey®. If this odometer is lower than the last time you checked, then the MyKey® system has been recently cleared.
- # MYKEY(S) PROGRAMMED — Indicates how many MyKeys® are programmed to the vehicle. Can be used to detect deletion of a MyKey®.
- # ADMIN KEYS PROGRAMMED — Indicates how many admin keys are programmed to the vehicle. Can be used to detect if an additional spare key has been programmed to the vehicle.

Refer to *Message center* in the *Instrument Cluster* chapter for MyKey® system warnings displays.

### **Using MyKey® with remote start systems**

MyKey® is not compatible with non-Ford approved aftermarket remote start systems. If you choose to install a remote start system please see your authorized dealer for a Ford approved remote start system.

## Locks and Security

### ***Vehicles equipped with traditional keys:***

When using a Ford-approved remote start system, the default settings will recognize the remote start system as an additional admin key with its associated privileges. Owners of vehicles equipped with traditional keys should program the remote start system as a MyKey® in addition to the key that they have already programmed as a MyKey®. To program the remote start system as MyKey®, do the following:

1. Enter the vehicle and close all doors.
2. Remote start the vehicle using a remote start fob.
3. Follow Steps 1-4 in the *Create a MyKey®* section.

### ***Vehicles equipped with an intelligent access key (push button start)***

- It is not possible to program the remote start system as a MyKey® on vehicles equipped with intelligent access key (push button start). Therefore, you should treat the remote start fob as you would any other admin key. When the vehicle is started using remote start, the system will stall the engine when you either enter the vehicle or shift the vehicle into gear. Prior to the engine stall, the vehicle will have administrative privileges. When you restart the engine, the vehicle will identify the user as an admin or MyKey® driver depending on the settings of the actual key used to start the vehicle.

**Note:** For all vehicles, the number of MYKEY(S) PROGRAMMED or ADMIN KEYS PROGRAMMED that is displayed in the MyKey® system status menus will include the remote start system as an additional key in the total count. See the *Check MyKey® system status* section.

**Note:** For all vehicles with remote start installed, it is possible to program all 'real' keys as MyKeys®, in which case, you will need to use your remote start system to reset all MyKeys® as admin keys by doing the following:

1. Enter the vehicle, close all doors.
2. Remote start the vehicle using your remote start fob.
3. Follow Steps 1-4 in the *Clear MyKey®* section.

## Locks and Security

### Troubleshooting

Condition	Potential Causes
Can't create a MyKey®	<ul style="list-style-type: none"> <li>• Key in the ignition is already a MyKey®.</li> <li>• Key in the ignition is the last remaining admin key (there always has to be at least one admin key).</li> <li>• Intelligent access key (if equipped) not in the backup slot — for vehicles with push button start.</li> <li>• SecuriLock® Passive Anti-Theft System is disabled or in unlimited mode.</li> <li>• Vehicle has been started using a remote start system that is programmed as MyKey®. Refer to <i>Using MyKey® with remote start systems</i> section.</li> </ul>
Cannot program the MyKey® optional settings	<ul style="list-style-type: none"> <li>• Key in the ignition is a MyKey®</li> <li>• No MyKeys® are programmed to the vehicle. Refer to <i>Create a MyKey®</i> section.</li> <li>• Vehicle has been started using a remote start system that is programmed as a MyKey®. Refer to <i>Using MyKey® with remote start systems</i> section.</li> </ul>
Cannot clear MyKey®	<ul style="list-style-type: none"> <li>• Key in the ignition is a MyKey®</li> <li>• No MyKeys® are programmed to the vehicle. Refer to <i>Create a MyKey®</i> section.</li> <li>• Vehicle has been started using a remote start system that is programmed as a MyKey®. Refer to <i>MyKey® with remote start systems</i> section.</li> </ul>

## Locks and Security

Condition	Potential Causes
Lost the only admin key	<ul style="list-style-type: none"> <li>• Purchase a new key from your authorized dealer.</li> </ul>
Lost any key	<ul style="list-style-type: none"> <li>• For programming spare keys, refer to the <i>Programming spare keys</i> section in this chapter.</li> </ul>
I accidentally programmed all keys as MyKeys®	<ul style="list-style-type: none"> <li>• Vehicle has a remote start system that is recognized as an admin key. Refer to the <i>Using MyKey® with remote start systems</i> section to reset all MyKeys® as admin keys.</li> </ul>
No MyKey® function with intelligent access key (push button start) (if equipped)	<ul style="list-style-type: none"> <li>• An admin key is present at vehicle start</li> <li>• No MyKeys® are programmed to the vehicle. Refer to <i>Create a MyKey®</i> section</li> </ul>
MyKey® programmed total includes one additional key	<ul style="list-style-type: none"> <li>• Unknown key has been programmed to the vehicle as a MyKey®.</li> <li>• Vehicle is equipped with a remote start system. Refer to <i>Using MyKey® with remote start systems</i> section.</li> </ul>
Admin keys programmed total includes one additional key	<ul style="list-style-type: none"> <li>• Unknown key has been programmed to the vehicle as admin key.</li> <li>• Vehicle is equipped with a remote start system. Refer to <i>Using MyKey® with remote start systems</i> section.</li> </ul>
MyKey® miles do not accumulate	<ul style="list-style-type: none"> <li>• MyKey® is not being used by the intended user.</li> <li>• MyKey® system has been recently cleared.</li> </ul>

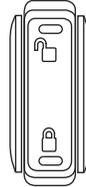
### POWER DOOR LOCKS

The power door lock controls are located on the driver and front passenger door panels.

## Locks and Security

Press the  control to unlock all doors.

Press the  control to lock all doors.



### Locking and unlocking with keys

Your vehicle's keys are designed to lock and unlock the driver's door, as well as open the trunk.

- The driver's door is unlocked when the key is inserted in the driver door key cylinder and turned to the unlock position. The driver's door is locked when the key is inserted in the driver door key cylinder and turned to the lock position.

**Note:** If the vehicle is not equipped with active anti-theft system, locking the driver door with the key does not lock the passenger door. Use the power door lock control or manually lock the passenger door to ensure the vehicle is properly secured.

### Smart locks

This feature helps prevent you from locking yourself out of the vehicle if your key is still in the ignition.

When you open the driver's door and you lock the vehicle with the power door lock control, all the doors will lock, then the driver's door will automatically unlock reminding you that your key is still in the ignition.

The vehicle can still be locked, with the key in the ignition, using the manual lock button on the door, locking the driver's door with a key or using the lock button on the remote entry transmitter.

### Autolock (if equipped)

The autolock feature will automatically lock all vehicle doors when:

- all doors are closed,
- the ignition is in the on position,
- you shift into any gear putting the vehicle in motion, (for manual transmission, the parking brake should not be engaged) and
- the vehicle attains a speed greater than 12 mph (20 km/h).

## Locks and Security

The autolock feature repeats when:

- any door is opened then closed while the ignition is in the on position and the vehicle speed is 9 mph (15 km/h) or lower, and
- the vehicle attains a speed greater than 12 mph (20 km/h).

### **Deactivating/activating autolock**

Your vehicle comes with the autolock feature enabled. There are three methods to enable/disable this feature:

- Through your authorized dealer, or
- performing the power door lock control procedure, or
- performing the message center procedure. Refer to *Message center* in the *Instrument Cluster* chapter.

**Note:** The autolock feature can be activated/deactivated independently of the autounlock feature.

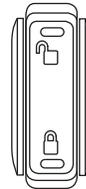
Before following the activation or deactivation procedures, make sure that the active anti-theft system is not armed, ignition is in the off position, and all vehicle doors are closed.

### **Power door unlock/lock procedure**

You must complete Steps 1-5 within 30 seconds or the procedure will have to be repeated. If the procedure needs to be repeated, you must wait 30 seconds.

**Note: All** doors must be closed and remain closed throughout the configuration process.

1. The ignition must be off to begin sequence.
2. Turn the ignition to the on position.
3. Press the power door unlock control three times.
4. Turn the ignition from the on to the off position.
5. Press the power door unlock control three times.
6. Turn the ignition back to the on position. The horn will chirp.
7. Press the unlock control, then press the lock control. The horn will chirp once if autolock was deactivated or twice (one short and one long chirp) if autolock was activated.



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## Locks and Security

8. Turn the ignition to the off position. The horn will chirp once to confirm the procedure is complete.

### **Autounlock (if equipped)**

The autounlock feature will unlock all the doors when:

- the ignition is in the on position, all the doors are closed, and the vehicle has been in motion at a speed greater than 12 mph (20 km/h);
- the vehicle has then come to a stop and the ignition is turned to the off or accessory position; and
- the driver door is opened within 10 minutes of the ignition being turned to the off or accessory position.

**Note:** The doors will not autounlock if the vehicle has been electronically locked before the driver door is opened.

### **Deactivating/activating autounlock**

Your vehicle comes with the autounlock feature activated. There are three methods to enable/disable this feature:

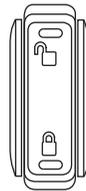
- Through your authorized dealer, or
- by using the power door unlock/lock sequence,
- by using the instrument cluster message center. Refer to *Message center* in the *Instrument Cluster* chapter.

**Note:** The autounlock feature can be activated/deactivated independently of the autolock feature.

### **Power door lock switch autounlock enable/disable procedure**

Before starting, ensure the ignition is in the off position and all vehicle doors are closed. You must complete Steps 1–5 within 30 seconds or the procedure will have to be repeated. If the procedure needs to be repeated, wait a minimum of 30 seconds before beginning again.

1. Place the key in the ignition and turn the ignition to the on position.
2. Press the power door unlock control on the door panel three times.
3. Turn the ignition from the on position to the off position.
4. Press the power door unlock control on the door panel three times.
5. Turn the ignition back to the on position. The horn will chirp one time to confirm programming mode has been entered and is active.



## Locks and Security

6. To enable/disable the autounlock feature, press the lock control, then press the unlock control. The horn will chirp once if autounlock was deactivated or twice (one short and one long chirp) if autounlock was activated.

7. Turn the ignition to the off position. The horn will chirp once to confirm the procedure is complete.

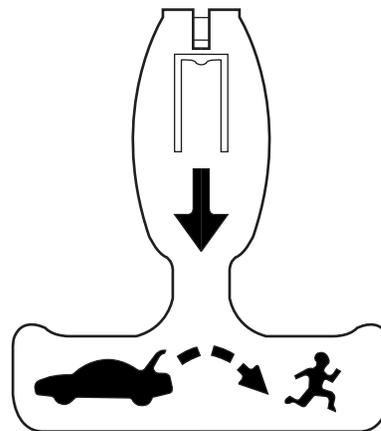
### INTERIOR LUGGAGE COMPARTMENT RELEASE

Your vehicle is equipped with a mechanical interior luggage compartment release handle that provides a means of escape for children and adults in the event they become locked inside the luggage compartment.

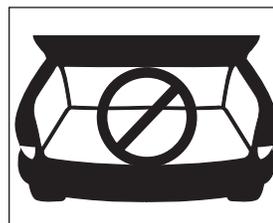
Adults are advised to familiarize themselves with the operation and location of the release handle.

To open the luggage compartment door (lid) from within the luggage compartment, pull the illuminated “T” shaped handle and push up on the trunk lid. The handle is composed of a material that will glow for hours in darkness following brief exposure to ambient light.

The “T” shaped handle will be located either on the luggage compartment door (lid) or inside the luggage compartment near the tail lamps.



**WARNING:** Keep vehicle doors and luggage compartment locked and keep keys and remote transmitters out of a child's reach. Unsupervised children could lock themselves in the trunk and risk injury. Children should be taught not to play in vehicles.



## Locks and Security



**WARNING:** Do not leave children, unreliable adults, or animals unattended in the vehicle. On hot days, the temperature in the trunk or vehicle interior can rise very quickly. Exposure of people or animals to these high temperatures for even a short time can cause death or serious heat-related injuries, including brain damage. Small children are particularly at risk.

### REMOTE ENTRY SYSTEM

The integrated keyhead transmitter (IKT) complies with part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

**Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

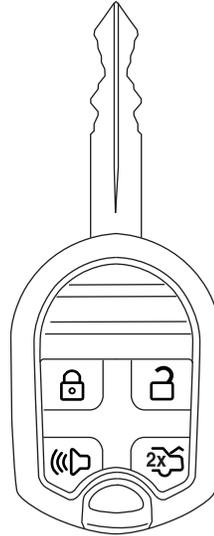
The typical operating range for your IKT is approximately 33 feet (10 meters). A decrease in operating range could be caused by:

- weather conditions,
- nearby radio towers,
- structures around the vehicle, or
- other vehicles parked next to your vehicle.

## Locks and Security

The IKT allows you to:

- remotely unlock the vehicle doors.
- remotely lock all the vehicle doors.
- remotely open the trunk.
- activate the personal alarm.
- arm and disarm the active anti-theft system.
- operate the illuminated entry feature.



The remote entry lock/unlock feature operates in any ignition position except while the key is held in the start position. The panic feature operates with the key in the off position.

If there are problems with the remote entry system, make sure to take **ALL integrated keyhead transmitters** with you to the authorized dealer in order to aid in troubleshooting the problem.

### Unlocking the doors/two-stage unlock

1. Press  and release to unlock the driver's door. **Note:** The interior lamps will illuminate.
2. Press  and release again within five seconds to unlock the passenger door.

The remote entry system activates the illuminated entry feature; this feature turns on the lamps for 25 seconds or until the ignition is turned to the on position.

The inside lights will not turn off if:

- they have been turned on using the dimmer control or
- any door is open.

The battery saver feature will turn off the interior lamps 30 minutes after the ignition is turned to the off position.

## Locks and Security

Two-stage unlocking may be disabled or re-enabled by simultaneously pressing the  and  controls on the IKT for four seconds (disabling two stage unlock allows all vehicle doors to unlock simultaneously). The turn lamps will flash twice to indicate that two-stage unlock was enabled or disabled.

### Locking the doors

1. Press  and release to lock all the doors. The turn signal lamps will illuminate. **Note:** The interior lamps will turn off (unless the dome lamp control is in the full-up position), and the turn signal lamps will flash if all doors, trunk and hood (if equipped with active anti-theft system) are closed. If the vehicle is not equipped with the active anti-theft system, the turn signal lamps will flash if all doors, trunk and hood are closed. The parking lamps will illuminate.

2. Press  and release again within three seconds to confirm that all the doors, trunk and hood are closed. **Note:** The doors will lock again, the horn will chirp once and the turn signal lamps will flash once more.

If any of the doors, trunk or hood (if equipped with active anti-theft system) are not properly closed the horn will make two quick chirps and the turn signal lamps will not flash. If the vehicle is not equipped with the active anti-theft system, the horn will make two quick chirps and the turn signal lamps will not flash if either door or the trunk are not closed.

### Car finder

Press  twice within three seconds. The horn will chirp and the turn lamps will flash. It is recommended that this method be used to locate your vehicle, rather than using the panic alarm.

### Sounding a panic alarm

Press  to activate the alarm. The horn will sound and the turn signal and interior lamps will flash for a maximum of approximately three minutes. Press  again or turn the ignition to the accessory or on position to deactivate, or wait for the alarm to time-out in approximately three minutes.

**Note:** The panic alarm will only operate when the ignition is in the off position.

## Locks and Security

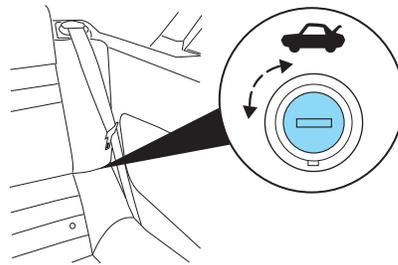
### Opening the trunk

Press  twice to open the trunk.

- Ensure that the trunk is closed and latched before driving your vehicle. Failure to properly latch the trunk may cause objects to fall out or block the driver's rear view.

The remote entry system allows you to open the trunk while the ignition is in any position. However, if the ignition is in the on position and the vehicle is in motion, the trunk will not open if the vehicle is moving 3 mph (5 km/h) or faster.

In the event of battery failure, you can open the trunk on the convertible by using your master key in the key cylinder **between the seat cushion located in the back seat on the driver's side.**



### Replacing the battery

The integrated keyhead transmitter (IKT) or intelligent access key (IA key) uses one coin type three-volt lithium battery CR2032 or equivalent.

#### Integrated keyhead transmitter (IKT)

To replace the battery:

1. Twist a thin coin in the slot near the key ring to remove the battery cover (1).

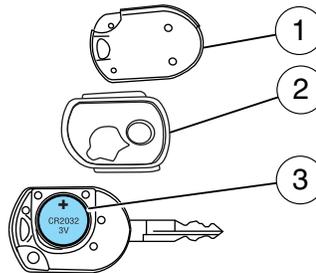
**Note:** Do not wipe off any grease on the battery terminals on the back surface of the circuit board.

2. Carefully peel up the rubber gasket (2) from the transmitter if it does not come off with battery cover.

3. Remove the old battery (3).

**Note:** Please refer to local regulations when disposing of transmitter batteries.

4. Insert the new battery. Refer to the instructions inside the IKT for the correct orientation of the battery. Press the battery down to ensure that the battery is fully seated in the battery housing cavity.



## Locks and Security

5. Snap the battery cover back onto the key.

**Note:** Replacement of the battery will **not** cause the IKT or IA key to become de-programmed from your vehicle. They should operate normally after battery replacement.

### Replacing lost integrated keyhead transmitters (IKTs)

If you would like to have your integrated keyhead transmitters reprogrammed because you lost one, or would like to buy additional IKTs, you can either reprogram them yourself, or take **all IKTs** to your authorized dealer for reprogramming.

### How to reprogram your integrated keyhead transmitters (IKTs)

To program a new integrated keyhead transmitter yourself, refer to *Programming spare keys* in the *SecuriLock® passive anti-theft system* section of this chapter. **Note:** At least two IKTs are required to perform this procedure yourself.

### Illuminated entry

The interior lamps and turn signal lamps illuminate when the integrated keyhead transmitter is used to unlock the door(s).

The illuminated entry system will turn off the interior lights if:

- the ignition switch is turned to the on position, or
- the integrated keyhead transmitter lock control is pressed, or
- after 25 seconds of illumination.

The inside lights will not turn off if:

- they have been turned on with the dimmer control, or
- any door is open.

### Illuminated exit

- When all vehicle doors are closed and the key is removed from the ignition, the interior dome lamp and the turn signal lamps will illuminate.

The lights will turn off if all the doors remain closed and:

- 25 seconds elapse, or
- the key is inserted in the ignition.

## Locks and Security

### **Battery saver**

The battery saver will shut off the interior lamps 10 minutes after the ignition has been turned to the off position and a door is left open, and in 30 minutes if the dome lamp control is left on and the ignition has been turned to the off position. The battery saver will also shut off the trunk lamps in 30 minutes if the trunk is left open.

### **SECURILOCK® PASSIVE ANTI-THEFT SYSTEM**

SecuriLock® passive anti-theft system is an engine immobilization system. This system is designed to help prevent the engine from being started unless a **coded integrated keyhead transmitter (IKT) programmed to your vehicle** is used. The use of the wrong type of coded key may lead to a “no-start” condition.

Your vehicle comes with two coded integrated keyhead transmitters; additional coded IKTs may be purchased from your authorized dealer. Standard SecuriLock® keys without remote entry transmitter functionality can also be purchased from your authorized dealer if desired. The authorized dealer can program your spare IKTs to your vehicle or you can program the IKTs yourself. Refer to *Programming spare keys* for instructions on how to program the coded key.

**Note:** The SecuriLock® passive anti-theft system is not compatible with non-Ford aftermarket remote start systems. Use of these systems may result in vehicle starting problems and a loss of security protection.

**Note:** Large metallic objects, electronic devices that are used to purchase gasoline or similar items, or a second coded key on the same key chain may cause vehicle starting issues. You need to prevent these objects from touching the coded IKT while starting the engine. These objects will not cause damage to the coded IKT, but may cause a momentary issue if they are too close to the IKT when starting the engine. If a problem occurs, turn the ignition off, remove all objects on the key chain away from the coded IKT and restart the engine.

**Note: Do not leave a duplicate coded key in the vehicle. Always take your keys and lock all doors when leaving the vehicle.**

## Locks and Security

### Anti-theft indicator

The anti-theft indicator is located in the instrument cluster.

- When the ignition is in the off position, the indicator will flash once every two seconds to indicate the SecuriLock® system is functioning as a theft deterrent.
- When the ignition is in the on position, the indicator will glow for three seconds, then turn off to indicate normal system functionality.



If a problem occurs with the SecuriLock® system, the indicator will flash rapidly or glow steadily when the ignition is in the on position. If this occurs, turn the ignition off then back to on to make sure there was no electronic interference with the programmed key. If the vehicle doesn't start, try to start it with the 2nd programmed key and if successful contact your authorized dealership for key replacement. If the indicator still flashes rapidly or glows steadily, the vehicle will not start, contact your authorized dealer as soon as possible for service.

### Automatic arming

The vehicle is armed immediately after switching the ignition to the off position.

### Automatic disarming

Switching the ignition to the on position with a **coded key** disarms the vehicle.

- The theft indicator will illuminate for three seconds and then go out.
- If the theft indicator stays on for an extended period of time or flashes rapidly, contact your authorized dealer as soon as possible.

### Replacement of integrated keyhead transmitters (IKT) and coded keys

**Note:** Your vehicle comes equipped with two integrated keyhead transmitters (IKTs). The IKT functions as both a programmed ignition key that operates all the locks and starts the vehicle, as well as a remote keyless entry transmitter. A maximum of eight coded keys can be programmed to your vehicle; only four of these eight keys can be IKTs with remote entry functionality.

If your IKTs or standard SecuriLock® coded keys are lost or stolen and you don't have an extra coded key, you will need to have your vehicle towed to an authorized dealer. The key codes need to be erased from your vehicle and new coded keys will need to be programmed.

## Locks and Security

Replacing coded keys can be very costly. Store an extra programmed key away from the vehicle in a safe place to help prevent any inconveniences. Please visit an authorized dealer to purchase additional spare or replacement keys.

### Programming spare keys

You can program your own integrated keyhead transmitters or standard SecuriLock® coded keys to your vehicle. This procedure will program both the engine immobilizer key code and the remote entry transmitter portion of the IKT to your vehicle. **Note:** A maximum of eight coded keys can be programmed to your vehicle; only four of these eight can be IKTs with remote entry functionality.

#### Tips:

- Only use integrated keyhead transmitters (IKTs) or standard SecuriLock® keys.
- You must have two previously programmed coded keys (keys that already operate your vehicle's engine) and the new unprogrammed key(s) readily accessible.
- If two previously programmed coded keys are not available, you must take your vehicle to your authorized dealer to have the spare key(s) programmed.

Please read and understand the entire procedure before you begin.

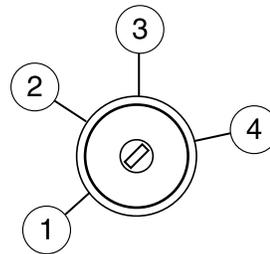
1. Insert the first previously programmed **coded key** into the ignition.

2. Turn the ignition from the 1 (off) position to the 3 (on) position. Keep the ignition in the 3 (on) position for at least three seconds, but no more than 10 seconds.

3. Turn the ignition to the 1 (off) position and remove the first **coded key** from the ignition.

4. After three seconds but within 10 seconds of turning the ignition to the 1 (off) position, insert the second previously **coded key** into the ignition.

5. Turn the ignition from the 1 (off) position to the 3 (on) position. Keep the ignition in the 3 (on) position for at least three seconds, but no more than 10 seconds.



## Locks and Security

6. Turn the ignition to the 1 (off) position and remove the second previously programmed **coded key** from the ignition.
7. After three seconds but within 20 seconds of turning the ignition to the 1 (off) position and removing the previously programmed **coded key**, insert the new unprogrammed key (new key/valet key) into the ignition.
8. Turn the ignition from the 1 (off) position to the 3 (on) position. Keep the ignition in the 3 (on) position for at least six seconds.
9. Remove the newly programmed **coded key** from the ignition.

If the key has been successfully programmed it will start the vehicle's engine and will operate the remote entry system (if the new key is an integrated keyhead transmitter). The theft indicator light will illuminate for three seconds and then go out to indicate successful programming.

If the key was not successfully programmed, it will not start your vehicle's engine and/or will not operate the remote entry features. The theft indicator light may flash on and off. Wait 20 seconds and you may repeat Steps 1 through 8. If failure repeats, bring your vehicle to your authorized dealer to have the new key(s) programmed.

To program additional new unprogrammed key(s), wait 20 seconds and then repeat this procedure from Step 1.

### **ACTIVE ANTI-THEFT SYSTEM (IF EQUIPPED)**

The active anti-theft system is designed to warn you in the event of an unauthorized entry to your vehicle and is also designed to help prevent the unwanted towing of the vehicle.

When the vehicle is locked and armed, the active anti-theft system monitors the following:

- Doors
- Hood
- Trunk
- Movement inside the vehicle
- Change in vehicle inclination

**Note:** The active anti-theft system includes a motion detection system which monitors the passenger cabin and a vehicle incline sensor which detects changes in vehicle attitude.

## Locks and Security

**The interior motion detection and vehicle incline sensing systems will operate only when the vehicle is locked using the remote keyless entry transmitter or when using the power door lock control with the accompanying door open and all doors then become closed. For convertible vehicles, the convertible top must be in the fully closed and latched position for the interior motion sensing system to arm. If you lock the vehicle using the key in the driver door key cylinder, the system will monitor the doors, trunk, and hood but the interior motion sensing and vehicle incline sensing will not arm.**

Do not arm the interior motion detection system if movement within the vehicle is likely to occur. Additionally, do not arm the vehicle incline sensing system when the vehicle is in transport.

For proper operation of the interior motion detection system, ensure all windows are closed prior to arming the system. This will help prevent accidental alarm activation due to external influences and ensure proper interior motion detection. Additionally, the interior motion sensing system will not arm if either door or the trunk is ajar.

If there is any potential perimeter anti-theft problem with your vehicle, ensure **ALL integrated keyhead transmitters** are brought to the authorized dealer to aid in troubleshooting.

### Arming the system

When armed, the active anti-theft system is designed to notify you of an unauthorized entry. When unauthorized entry or towing occurs, the system will flash the turn signal lamps and interior lamps and will sound the horn.

The system is ready to arm whenever the key is out of the ignition. Any of the following actions will arm the alarm system:

- Press the  control on the remote entry transmitter portion of your integrated keyhead transmitter.
- Lock all doors using the interior power lock switch while the driver or passenger door is open and then becomes closed.
- Lock the driver door with the key in the key lock cylinder (this will **not** however arm the interior motion or vehicle incline sensing systems).

There is a 20 second countdown when any of the above actions occur before the vehicle becomes armed.

## Locks and Security

Each door, the hood or the trunk is armed individually, and if any are open, they must be closed for the system to enter the 20 second countdown.

The turn signal lamps will flash once when all doors, the hood and the trunk are closed indicating the vehicle is locked and entering the 20 second countdown. If any closure is not properly closed the turn signal lamps will not flash and that closure will not be armed.

### **Disarming the system**

You can disarm the system by any of the following actions:

- Unlock the doors by using the remote entry transmitter portion of your integrated keyhead transmitter.
- Turn ignition to the on position with a valid programmed SecuriLock® key or integrated keyhead transmitter (IKT).
- Press the panic control on the remote entry transmitter portion of your IKT. This will only shut off the horn and turn lamps when the alarm is sounding. The alarm system will still be armed.
- Use a key in the driver's door to unlock the vehicle.

Pressing the power door unlock control within the 20 second prearmed mode will return the vehicle to a disarmed state.

**Note:** Unlocking the trunk inhibits the motion sensing system but the system continues to monitor the doors, hood and vehicle incline. Once the trunk becomes closed the motion sensing system will rearm.

### **Triggering the anti-theft system**

The armed system will be triggered if:

- Any door, the hood or the trunk is opened without using the remote entry transmitter portion of your IKT or key in driver door cylinder.
- The ignition is turned to the on position with an invalid unprogrammed SecuriLock® key or IKT.
- The vehicle is towed/inclined.
- Motion is detected in the interior passenger compartment.

## Seating and Safety Restraints

### FRONT SEATS

 **WARNING:** Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a collision.

 **WARNING:** Do not pile cargo higher than the seatbacks to reduce the risk of injury in a collision or sudden stop.

 **WARNING:** Before returning the seatback to its original position, make sure that cargo or any objects are not trapped behind the seatback. After returning the seatback to its original position, pull on the seatback to ensure that it has fully latched. An unlatched seat may become dangerous in the event of a sudden stop or collision.

 **WARNING:** Never adjust the driver's seat or seatback when the vehicle is moving.

 **WARNING:** Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

### Head restraints

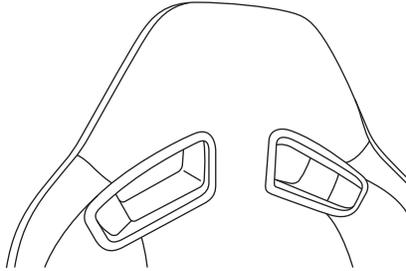
#### ***Non-adjustable head restraints (if equipped)***

Your vehicle may be equipped with front row outboard non-adjustable head restraints.

 **WARNING:** To minimize the risk of neck injury in the event of a crash, the driver and passenger occupants should not sit in and/or operate the vehicle, until the seatback is placed in its proper position. The driver should never adjust the seatback while the vehicle is in motion.

## Seating and Safety Restraints

The non-adjustable head restraints consist of a trimmed foam covering over the upper structure of the seatback.



Properly adjust the seatback to an upright driving/riding position, so that the head restraint is positioned as close as possible to the back of your head.

### **Adjustable head restraints (if equipped)**

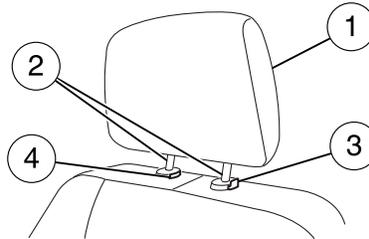
Your vehicle may be equipped with front row outboard head restraints that are vertically adjustable.



**WARNING:** To minimize the risk of neck injury in the event of a crash, the driver and passenger occupants should not sit in and/or operate the vehicle, until the head restraint is placed in its proper position. The driver should never adjust the head restraint while the vehicle is in motion.

The adjustable head restraints consist of:

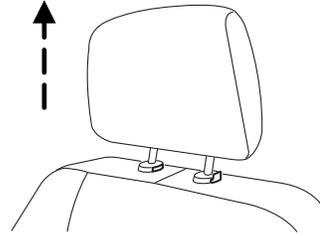
- a trimmed energy absorbing foam and structure (1),
- two steel stems (2),
- a guide sleeve adjust/release button (3),
- and a guide sleeve unlock/remove button (4).



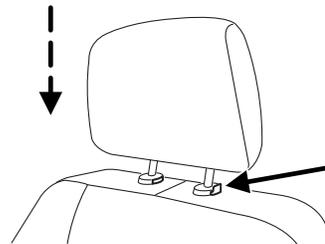
## Seating and Safety Restraints

To adjust the head restraint, do the following:

1. Adjust the seatback to an upright driving/riding position.
2. Raise the head restraint by pulling up on the head restraint.



3. Lower the head restraint by pressing and holding the guide sleeve adjust/release button and pushing down on the head restraint.



Properly adjust the head restraint so that the top of the head restraint is even with the top of your head and positioned as close as possible to the back of your head. For occupants of extremely tall stature, adjust the head restraint to its full up position.

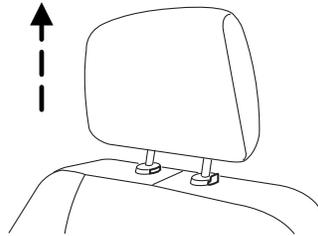


**WARNING:** The adjustable head restraint is a safety device. Whenever possible it should be installed and properly adjusted when the seat is occupied.

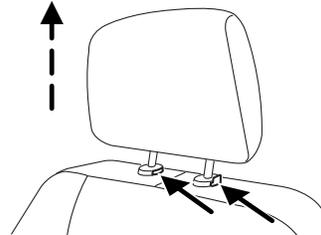
## Seating and Safety Restraints

To remove the adjustable head restraint, do the following:

1. Pull up the head restraint until it reaches the highest adjustment position.

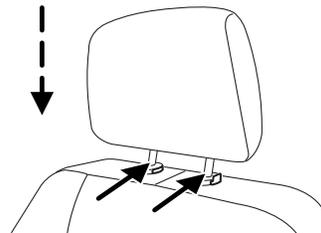


2. Simultaneously press and hold both the adjust/release button and the unlock/remove button, then pull up on the head restraint.



To reinstall the adjustable head restraint, do the following:

1. Insert the two stems into the guide sleeve collars.
2. Push the head restraint down until it locks.



Properly adjust the head restraint so that the top of the head restraint is even with the top of your head and positioned as close as possible to the back of your head. For occupants of extremely tall stature, adjust the head restraint to its full up position.

## Seating and Safety Restraints



**WARNING:** To minimize the risk of neck injury in the event of a crash, head restraints must be installed properly.

### ***Titling head restraints (if equipped)***

The front head restraints may have a tilting feature for extra comfort. To tilt the head restraint, do the following:

1. Adjust the seatback to an upright driving/riding position.
2. Pivot the head restraint forward toward your head to the desired position.



After the head restraint reaches the forward-most tilt position, pivoting it forward again will then release it to the rearward, un-tilted position.

### **Adjusting the manual seats (if equipped)**

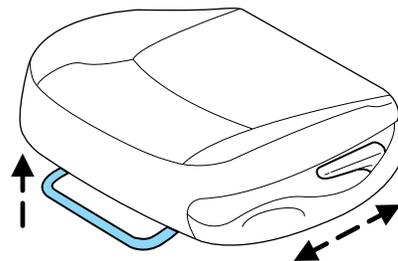


**WARNING:** Never adjust the driver's seat or seatback when the vehicle is moving.



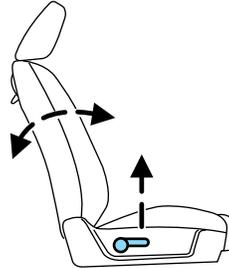
**WARNING:** Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

Lift handle to move seat forward or backward.



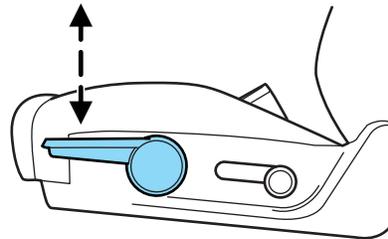
## Seating and Safety Restraints

Pull lever up to adjust the angle of the seatback.



### **Four-way seat adjust (driver side only)**

Pump the handle upwards to raise the cushion and pump downward to lower the cushion to the desired location.



### **Adjusting the power seats (if equipped)**



**WARNING:** Never adjust the driver's seat or seatback when the vehicle is moving.



**WARNING:** Do not pile cargo higher than the seatbacks to avoid injuring people in a collision or sudden stop.



**WARNING:** Always drive and ride with your seatback upright and the lap belt snug and low across the hips.



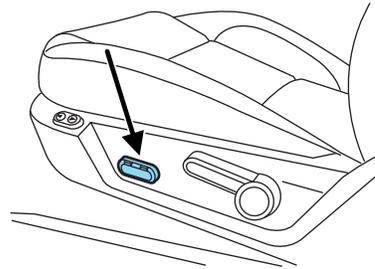
**WARNING:** Reclining the seatback can cause an occupant to slide under the seat's safety belt, resulting in severe personal injuries in the event of a collision.

## Seating and Safety Restraints

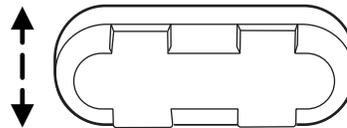
 **WARNING:** Sitting improperly out of position or with the seat back reclined too far can take off weight from the seat cushion and affect the decision of the passenger sensing system, resulting in serious injury or death in a crash. Always sit upright against your seatback, with your feet on the floor.

 **WARNING:** To reduce the risk of possible serious injury: Do not hang objects off seat back or stow objects in the seatback map pocket (if equipped) when a child is in the front passenger seat. Do not place objects underneath the front passenger seat or between the seat and the center console (if equipped). Check the “passenger airbag off” or “pass airbag off” indicator lamp for proper airbag status. Refer to *Front passenger sensing system* section for additional details. Failure to follow these instructions may interfere with the front passenger seat sensing system.

The power seat control is located on the outboard side of the seat (illustration shows the driver’s seat).

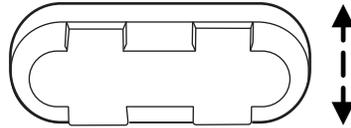


Move the switch in the direction of the arrows to raise or lower the front portion of the seat cushion.

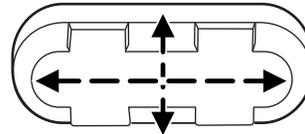


## Seating and Safety Restraints

Move the switch in the direction of the arrows to raise or lower the rear portion of the seat cushion.



Press the switch in the direction of the arrows to move the seat forward, backward, up or down.

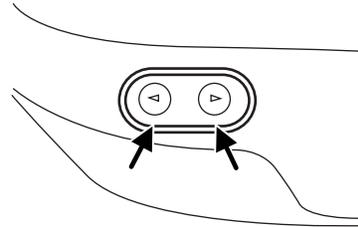


### Using the power lumbar support (if equipped)

The power lumbar control is located on the top of the driver's seat side shield.

Press one side of the control to increase lower back firmness.

Press the other side of the control to decrease lower back firmness.



## Seating and Safety Restraints

### Heated seats (if equipped)

 **WARNING:** Persons who are unable to feel pain to the skin because of advanced age, chronic illness, diabetes, spinal cord injury, medication, alcohol use, exhaustion, or other physical conditions, must exercise care when using the seat heater. The seat heater may cause burns even at low temperatures, especially if used for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket or cushion, because this may cause the seat heater to overheat. Do not puncture the seat with pins, needles, or other pointed objects because this may damage the heating element which may cause the seat heater to overheat. An overheated seat may cause serious personal injury.

The heated seats will only function when the ignition is in the on position.

**Note:** Do not do the following:

- Place heavy objects on the seat
- Operate the seat heater if water or any other liquid is spilled on the seat. Allow the seat to dry thoroughly.

The heated seat control is located in the lower center of the instrument panel.

To operate the heated seats:

- Press control to activate.
- Press again to deactivate.



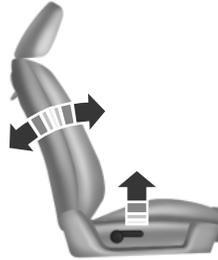
### Rear seat entry/exit

Use the seatback release to fold the back of the front seat forward for rear seat access. This release handle is located on the upper back of the front seat. The seatback locks automatically when returned to the normal position.



## Seating and Safety Restraints

Use the recliner handle to return the seatback to the desired position.



### REAR SEATS (IF EQUIPPED)

#### Non-adjustable head restraints

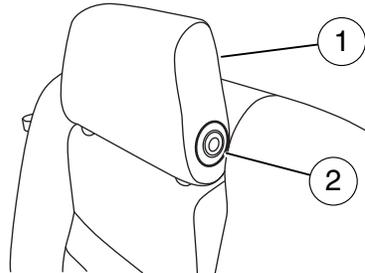
Your vehicle is equipped with second row outboard non-adjustable head restraints. The head restraints can be rotated forward to improve rear vision when there are no rear occupants.



**WARNING:** To minimize the risk of neck injury in the event of a crash, the driver and passenger occupants should not sit in and/or operate the vehicle, until the head restraint is placed in its proper position. The driver should never adjust the head restraint while the vehicle is in motion.

The non-adjustable head restraints consist of :

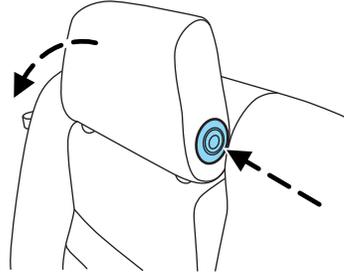
- a trimmed energy absorbing foam and structure (1),
- and a rotation button (2),



Properly adjust the head restraint to an upright driving/riding position by lifting up on the head restraint until it locks into its original position.

## Seating and Safety Restraints

Press the button to rotate the head restraint forward in order to improve rear vision when there are no rear seat occupants.



### 2nd row seat/split-folding rear seat (if equipped)

One or both rear seatbacks (coupe only) can be folded down to provide additional cargo space.

To lower the seatback(s) from inside the vehicle, be sure the head restraint is in the upright position, pull the strap to release the seatback and then fold the seatback down.



When raising the seatback(s), make sure you hear the seat latch into place. Pull down on the seatback to ensure that it has latched.



**WARNING:** Before returning the seatback to its original position, make sure that cargo or any objects are not trapped behind the seatback. After returning the seatback to its original position, pull on the seatback to ensure that it has fully latched. An unlatched seat may become dangerous in the event of a sudden stop or collision.

## Seating and Safety Restraints

### Rear seat delete (if equipped)

 **WARNING:** In a collision, passengers who are unbelted are significantly more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.

This is not a seating position. Persons or child seats cannot be placed in the rear of vehicles with the rear seat delete option.



### PERSONAL SAFETY SYSTEM™

The Personal Safety System provides an improved overall level of frontal crash protection to front seat occupants and is designed to help further reduce the risk of airbag-related injuries. The system is able to analyze different occupant conditions and crash severity before activating the appropriate safety devices to help better protect a range of occupants in a variety of frontal crash situations.

Your vehicle's Personal Safety System consists of:

- Driver and passenger dual-stage airbag supplemental restraints.
- Front safety belts with pretensioners, energy management retractors, and safety belt usage sensors.
- Driver's seat position sensor.
- Front crash severity sensor.
- Front passenger sensing system.
- "Passenger airbag off" or "pass airbag off" indicator lamp.
- Restraints Control Module (RCM) with impact and safing sensors.
- Restraint system warning light and back-up tone.
- The electrical wiring for the airbags, crash sensor(s), safety belt pretensioners, front safety belt usage sensors, driver seat position sensor, front passenger sensing system, and indicator lights.

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## Seating and Safety Restraints

### **How does the Personal Safety System™ work?**

The Personal Safety System can adapt the deployment strategy of your vehicle's safety devices according to crash severity and conditions. A collection of crash sensors provides information to the Restraints Control Module (RCM). During a crash, the RCM may activate the safety belt pretensioners and/or either none, one, or both stages of the dual-stage airbag supplemental restraints based on crash severity and conditions.

The fact that the pretensioners or airbags did not activate for both front seat occupants in a collision does not mean that something is wrong with the system. Rather, it means the Personal Safety System determined the accident conditions (crash severity, belt usage, etc.) were not appropriate to activate these safety devices. Front airbags are designed to activate only in frontal and near-frontal collisions, not rollovers, side-impacts, or rear-impacts unless the collision causes sufficient longitudinal deceleration.

### ***Driver and passenger dual-stage airbag supplemental restraints***

The dual-stage airbags offer the capability to tailor the level of airbag inflation energy. A lower, less forceful energy level is provided for more common, moderate-severity impacts. A higher energy level is used for the most severe impacts. Refer to *Airbag supplemental restraints (SRS)* section in this chapter.

### ***Front crash severity sensor***

The front crash severity sensor enhances the ability to detect the severity of an impact. Positioned up front, it provides valuable information early in the crash event on the severity of the impact. This allows your Personal Safety System to distinguish between different levels of crash severity and modify the deployment strategy of the dual-stage airbags and safety belt pretensioners.

### ***Driver's seat position sensor***

The driver's seat position sensor allows your Personal Safety System to tailor the deployment level of the driver dual-stage airbag based on seat position. The system is designed to help protect smaller drivers sitting close to the driver airbag by providing a lower airbag output level.

### ***Front passenger sensing system***

For airbags to do their job they must inflate with great force, and this force can pose a potentially deadly risk to occupants that are very close to the airbag when it begins to inflate. For some occupants, like infants in rear-facing child seats, this occurs because they are initially sitting

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## Seating and Safety Restraints

very close to the airbag. For other occupants, this occurs when the occupant is not properly restrained by safety belts or child safety seats and they move forward during pre-crash braking. The most effective way to reduce the risk of unnecessary injuries is to make sure all occupants are properly restrained. Accident statistics suggest that children are much safer when properly restrained in the rear seating positions than in the front.



**WARNING:** Air bags can kill or injure a child in a child seat. **NEVER** place a rear-facing child seat in front of an active air bag. If you must use a forward-facing child seat in the front seat, move the seat all the way back.



**WARNING:** When possible, all children 12 years old and under should be properly restrained in a rear seating position.

The front passenger sensing system can automatically turn off the passenger front airbag. The system is designed to help protect small (child size) occupants from airbag deployments when they are improperly seated or restrained in the front passenger seat contrary to proper child-seating or restraint usage recommendations. Even with this technology, parents are **STRONGLY** encouraged to always properly restrain children in the rear seat. The sensor also turns off the passenger front airbag and side airbag when the passenger seat is empty to prevent unnecessary replacement of airbag(s) after a collision.

When the front passenger seat is occupied and the sensing system has turned off the passenger's frontal airbag, the "pass airbag off" indicator will light and stay lit to remind you that the front passenger frontal airbag is off. See *Front passenger sensing system* in the *Airbag supplemental restraints (SRS)* section of this chapter.

### **Front safety belt usage sensors**

The front safety belt usage sensors detect whether or not the driver and front outboard passenger safety belts are fastened. This information allows your Personal Safety System to tailor the airbag deployment and safety belt pretensioner activation depending upon safety belt usage.

### **Front safety belt pretensioners**

The safety belt pretensioners at the front outboard seating positions are designed to tighten the safety belts firmly against the occupant's body during frontal collisions, and in side collisions. This helps increase the

## Seating and Safety Restraints

effectiveness of the safety belts. In frontal collisions, the safety belt pretensioners can be activated alone or, if the collision is of sufficient severity, together with the front airbags.

### **Front safety belt energy management retractors**

The front outboard safety belt energy management retractors allow webbing to be pulled out of the retractor in a gradual and controlled manner in response to the occupant's forward momentum. This helps reduce the risk of force-related injuries to the occupant's chest by limiting the load on the occupant.

### **Determining if the Personal Safety System is operational**

The Personal Safety System uses a warning light in the instrument cluster or a back-up tone to indicate the condition of the system. Refer to the *Warning lights and chimes* section in the *Instrument Cluster* chapter. Routine maintenance of the Personal Safety System is not required.

The Restraints Control Module (RCM) monitors its own internal circuits and the circuits for the airbag supplemental restraints, crash sensor(s), safety belt pretensioners, front safety belt buckle sensors, front passenger sensing system, and the driver seat position sensor. In addition, the RCM also monitors the restraints warning light in the instrument cluster. A difficulty with the system is indicated by one or more of the following.

- The warning light will either flash or stay lit.
- The warning light will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and warning light are repaired.

If any of these things happen, even intermittently, contact your authorized dealer as soon as possible. Unless serviced, the system may not function properly in the event of a collision.

## **SAFETY BELT SYSTEM**



**WARNING:** Always drive and ride with your seatback upright and the lap belt snug and low across the hips.



**WARNING:** To reduce the risk of injury, make sure children sit where they can be properly restrained.

## Seating and Safety Restraints

 **WARNING:** Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

 **WARNING:** All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag supplemental restraint system (SRS) is provided.

 **WARNING:** It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.

 **WARNING:** In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.

 **WARNING:** Each seating position in your vehicle has a specific safety belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair. 1) Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. 2) Never swing the safety belt around your neck over the inside shoulder. 3) Never use a single belt for more than one person.

 **WARNING:** When possible, all children 12 years old and under should be properly restrained in a rear seating position.

 **WARNING:** Safety belts and seats can become hot in a vehicle that has been closed up in sunny weather; they could burn a small child. Check seat covers and buckles before you place a child anywhere near them.

 **WARNING:** Front and rear seat occupants, including pregnant women, should wear safety belts for optimum protection in an accident.

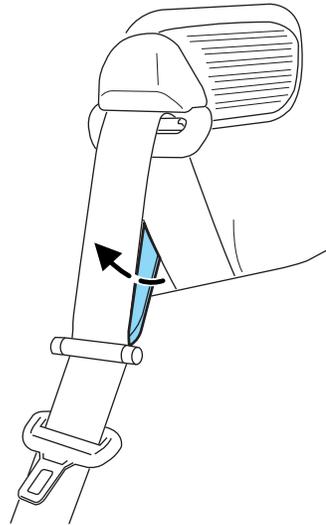
## Seating and Safety Restraints

### Combination lap and shoulder belts

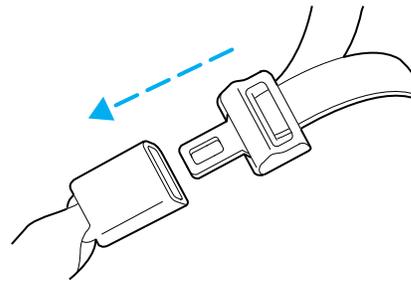
The presenter arm (available on the coupe only) is intended to improve access to the safety belt and to allow access to the rear seat.

Rotate the presenter arm toward the front of the vehicle until it locks into place. This allows easier access to the front safety belt for the front seat occupant.

To access the second row seats, rotate the arm back to its original position against the trim panel.

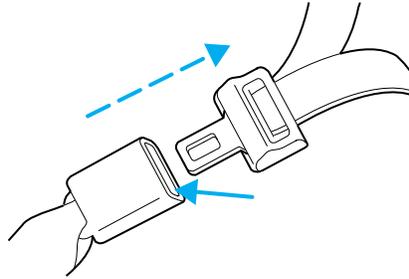


1. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.



## Seating and Safety Restraints

2. To unfasten, press the release button and remove the tongue from the buckle.



**!** **WARNING:** The center of the rear seat is **NOT** designed as a seating position and is not equipped with safety belts. The LATCH anchors were not designed to be used with a child seat in the center position and there is no tether anchor available at the center. Attempted use of the center as a seating position will increase the risk of injury or death in the event of a collision.

### **Restraint of pregnant women**

**!** **WARNING:** Always ride and drive with your seatback upright and the safety belt properly fastened. The lap portion of the safety belt should fit snug and be positioned low across the hips. The shoulder portion of the safety belt should be positioned across the chest. Pregnant women should also follow this practice. See figure below.

Pregnant women should always wear their safety belt. The lap belt portion of a combination lap and shoulder belt should be positioned low across the hips below the belly and worn as tight as comfort will allow. The shoulder belt should be positioned to cross the middle of the shoulder and the center of the chest.



## Seating and Safety Restraints

### Safety belt locking modes

All safety restraints in the vehicle are combination lap and shoulder belts. The driver safety belt has the first locking mode and the front outboard passenger and rear seat safety belts have both types of locking modes described as follows:

#### Vehicle sensitive mode

This is the normal retractor mode, which allows free shoulder belt length adjustment to your movements and locking in response to vehicle movement. For example, if the driver brakes suddenly or turns a corner sharply, or the vehicle receives an impact of approximately 5 mph (8 km/h) or more, the combination safety belts will lock to help reduce forward movement of the driver and passengers.

In addition, the retractor is designed to lock if the webbing is pulled out too quickly. If this occurs, let the belt retract slightly and pull webbing out again in a slow and controlled manner.

#### Automatic locking mode

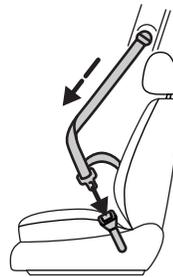
In this mode, the shoulder belt is automatically pre-locked. The belt will still retract to remove any slack in the shoulder belt. The automatic locking mode is not available on the driver safety belt.

#### When to use the automatic locking mode

This mode should be used **any time** a child safety seat, except a booster, is installed in passenger front or rear seating positions. Children 12 years old and under should be properly restrained in a rear seating position whenever possible. Refer to *Safety restraints for children* or *Safety seats for children* later in this chapter.

#### How to use the automatic locking mode

1. Buckle the combination lap and shoulder belt.
2. Grasp the shoulder portion and pull downward until the entire belt is pulled out.



- Allow the belt to retract. As the belt retracts, you will hear a clicking sound. This indicates the safety belt is now in the automatic locking mode.

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## Seating and Safety Restraints

### How to disengage the automatic locking mode

Disconnect the combination lap/shoulder belt and allow it to retract completely to disengage the automatic locking mode and activate the vehicle sensitive (emergency) locking mode.



**WARNING:** After any vehicle collision, the safety belt system at all passenger seating positions must be checked by an authorized dealer to verify that the “automatic locking retractor” feature for child seats is still functioning properly. In addition, all safety belts should be checked for proper function.



**WARNING:** BELT AND RETRACTOR ASSEMBLY MUST BE REPLACED if the safety belt assembly “automatic locking retractor” feature or any other safety belt function is not operating properly when checked by an authorized dealer. Failure to replace the belt and retractor assembly could increase the risk of injury in collisions.

### Energy management feature

- This vehicle has a safety belt system with an energy management feature at the front seating positions to help further reduce the risk of injury in the event of a head-on collision.
- This safety belt system has a retractor assembly that is designed to pay out webbing in a controlled manner. This feature is designed to help reduce the belt force acting on the occupant’s chest.

### Safety belt pretensioner

Your vehicle is equipped with safety belt pretensioners at the driver and front outboard passenger seating positions.

The safety belt pretensioner tightens the safety belts firmly against the occupant’s body at the start of the crash.



**WARNING:** The driver and front passenger safety belt system (including retractors, buckles and height adjusters) must be replaced if the vehicle is involved in a collision that results in deployment of front airbags, side airbags, and safety belt pretensioners.

### Safety belt extension assembly

If the safety belt is too short when fully extended, a safety belt extension assembly can be obtained from an authorized dealer.

## Seating and Safety Restraints

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended.



**WARNING:** Do not use extensions to change the fit of the shoulder belt across the torso.

### Safety belt warning light and indicator chime

The safety belt warning light illuminates in the instrument cluster and a chime sounds to remind the occupants to fasten their safety belts.

#### **Conditions of operation**

If...	Then...
The driver's safety belt is not buckled before the ignition switch is turned to the on position...	The safety belt warning light illuminates 1-2 minutes and the warning chime sounds 4-8 seconds.
The driver's safety belt is buckled while the indicator light is illuminated and the warning chime is sounding...	The safety belt warning light and warning chime turn off.
The driver's safety belt is buckled before the ignition switch is turned to the on position...	The safety belt warning light and indicator chime will remain off.

#### **Belt-Minder®**

The Belt-Minder® feature is a supplemental warning to the safety belt warning function. This feature provides additional reminders by intermittently sounding a chime and illuminating the safety belt warning light in the instrument cluster when the driver's and front passenger's safety belt is unbuckled.

The Belt-Minder® feature uses information from the front passenger sensing system to determine if a front seat passenger is present and therefore potentially in need of a warning. To avoid activating the Belt-Minder® feature for objects placed in the front passenger seat, warnings will only be given to large front seat occupants as determined by the front passenger sensing system.

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## Seating and Safety Restraints

Both the driver's and passenger's safety belt usages are monitored and either may activate the Belt-Minder® feature. The warnings are the same for the driver and the front passenger. If the Belt-Minder® warnings have expired (warnings for approximately five minutes) for one occupant (driver or front passenger), the other occupant can still activate the Belt-Minder® feature.

If...	Then...
The driver's and front passenger's safety belts are buckled before the ignition switch is turned to the on position or less than 1-2 minutes have elapsed since the ignition switch has been turned to on...	The Belt-Minder® feature will not activate.
The driver's or front passenger's safety belt is not buckled when the vehicle has reached at least 3 mph (5 km/h) and 1-2 minutes have elapsed since the ignition switch has been turned to on...	The Belt-Minder® feature is activated - the safety belt warning light illuminates and the warning chime sounds for six seconds every 30 seconds, repeating for approximately five minutes or until the safety belts are buckled.
The driver's or front passenger's safety belt becomes unbuckled for approximately one minute while the vehicle is traveling at least 3 mph (5 km/h) and more than 1-2 minutes have elapsed since the ignition switch has been turned to on...	The Belt-Minder® feature is activated - the safety belt warning light illuminates and the warning chime sounds for six seconds every 30 seconds, repeating for approximately five minutes or until the safety belts are buckled.

## Seating and Safety Restraints

The following are reasons most often given for not wearing safety belts  
(All statistics based on U.S. data):

Reasons given...	Consider...
“Crashes are rare events”	<b>36700 crashes occur every day.</b> The more we drive, the more we are exposed to “rare” events, even for good drivers. <i>1 in 4 of us will be seriously injured in a crash during our lifetime.</i>
“I’m not going far”	<b>3 of 4</b> fatal crashes occur within <b>25</b> miles (40 km) of home.
“Belts are uncomfortable”	We design our safety belts to enhance comfort. If you are uncomfortable - try different positions for the safety belt upper anchorage and seatback which should be as upright as possible; this can improve comfort.
“I was in a hurry”	<b>Prime time for an accident.</b> Belt-Minder® reminds us to take a few seconds to buckle up.
“Safety belts don’t work”	<b>Safety belts</b> , when used properly, <b>reduce risk of death</b> to front seat occupants by <b>45% in cars</b> , and by <b>60% in light trucks</b> .
“Traffic is light”	<b>Nearly 1 of 2 deaths occur in single-vehicle crashes</b> , many when no other vehicles are around.
“Belts wrinkle my clothes”	Possibly, but a serious crash can do much more than wrinkle your clothes, particularly if you are unbelted.
“The people I’m with don’t wear belts”	Set the example, teen deaths occur 4 times more often in vehicles with TWO or MORE people. Children and younger brothers/sisters imitate behavior they see.

## Seating and Safety Restraints

Reasons given...	Consider...
“I have an airbag”	Airbags offer greater protection when used with safety belts. Frontal airbags are not designed to inflate in rear and side crashes or rollovers.
“I’d rather be thrown clear”	Not a good idea. <b>People</b> who are <b>ejected are 40 times more likely to DIE</b> . Safety belts help prevent ejection, WE CAN’T “PICK OUR CRASH”.



**WARNING:** Do not sit on top of a buckled safety belt or insert a latchplate into the buckle to avoid the Belt-Minder® chime. To do so may adversely affect the performance of the vehicle’s airbag system.

### ***Deactivating/activating the Belt-Minder® feature***

**The driver and front passenger Belt-Minder® are deactivated/activated independently. When deactivating/activating one seating position, do not buckle the other position as this will terminate the process.**

*Read Steps 1 - 4 thoroughly before proceeding with the deactivation/activation programming procedure.*

**Note:** The driver and front passenger Belt-Minder® features must be disabled/enabled separately. Both cannot be disabled/enabled during the same key cycle.

**Note:** If you are using MyKey®, the Belt-Minder® cannot be disabled. Also, if the Belt-Minder® has been previously disabled, it will be re-enabled during the use of MyKey®. Refer to *MyKey®* in the *Locks and security* chapter.

The driver and front passenger Belt-Minder® features can be deactivated/activated by performing the following procedure:

Before following the procedure, make sure that:

- The parking brake is set
- The gearshift is in P (Park) (automatic transmission)
- The gearshift is in neutral (manual transmission)
- The ignition switch is in the off position
- The driver and front passenger safety belts are unbuckled

## Seating and Safety Restraints

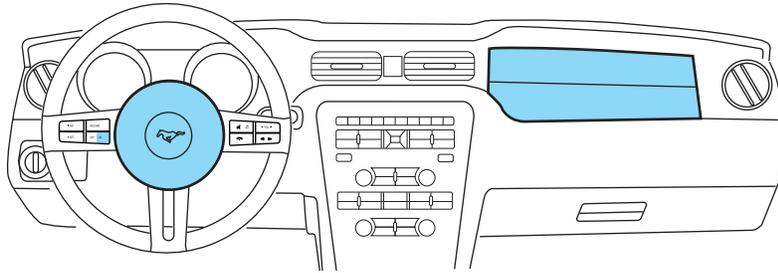


**WARNING:** While the design allows you to deactivate your Belt-Minder®, this system is designed to improve your chances of being safely belted and surviving an accident. We recommend you leave the Belt-Minder® system activated for yourself and others who may use the vehicle. To reduce the risk of injury, do not deactivate/activate the Belt-Minder® feature while driving the vehicle.

1. Turn the ignition switch to the on position. **DO NOT START THE ENGINE.**
2. Wait until the safety belt warning light turns off (approximately one minute).
  - Step 3 must be completed within 30 seconds after the safety belt warning light turns off.
3. For the seating position being disabled, buckle then unbuckle the safety belt three times at a moderate speed, ending in the unbuckled state. Step 3 must be completed within 30 seconds after the safety belt warning light turns off.
  - After Step 3, the restraint system warning light (airbag light) will be turned on for three seconds.
4. Within approximately seven seconds of the light turning off, buckle then unbuckle the safety belt.
  - This will disable the Belt-Minder® feature for that seating position if it is currently enabled. As confirmation, the restraint system warning light will flash four times per second for three seconds.
  - This will enable the Belt-Minder® feature for that seating position if it is currently disabled. As confirmation, the restraint system warning light will flash four times per second for three seconds, followed by three seconds with the light off, then followed by the restraint system warning light flashing four times per second for three seconds again.

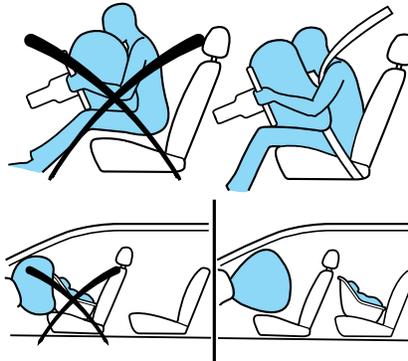
## Seating and Safety Restraints

### AIRBAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



#### Important SRS precautions

The SRS is designed to work with the safety belt to help protect the driver and right front passenger from certain upper body injuries. Airbags DO NOT inflate slowly; there is a risk of injury from a deploying airbag.



**!** **WARNING:** All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag supplemental restraint system (SRS) is provided.

**!** **WARNING:** When possible, all children 12 years old and under should be properly restrained in a rear seating position.

**!** **WARNING:** The National Highway Traffic Safety Administration (NHTSA) recommends a minimum distance of at least 10 inches (25 cm) between an occupant's chest and the driver airbag module.

## Seating and Safety Restraints



**WARNING:** Never place your arm over the airbag module as a deploying airbag can result in serious arm fractures or other injuries.

To properly position yourself away from the airbag:

- Move your seat to the rear as far as you can while still reaching the pedals comfortably.
- Recline the seat slightly one or two degrees from the upright position.



**WARNING:** Do not put anything on or over the airbag module. Placing objects on or over the airbag inflation area may cause those objects to be propelled by the airbag into your face and torso causing serious injury.



**WARNING:** Do not attempt to service, repair, or modify the airbag supplemental restraint systems or its fuses. Contact your authorized dealer as soon as possible.

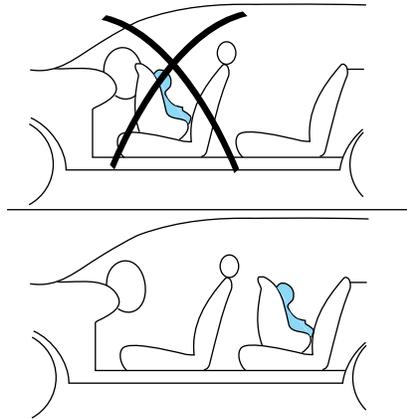


**WARNING:** Modifying or adding equipment to the front end of the vehicle (including frame, bumper, front end body structure and tow hooks) may affect the performance of the airbag system, increasing the risk of injury. Do not modify the front end of the vehicle.

## Seating and Safety Restraints

### Children and airbags

Children must always be properly restrained. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating position. Failure to follow these instructions may increase the risk of injury in a collision.

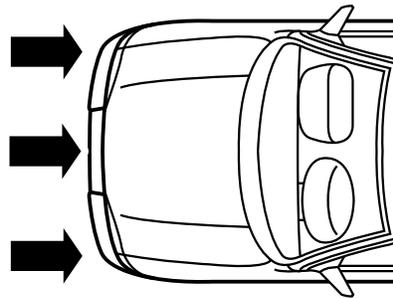


**!** **WARNING:** Airbags can kill or injure a child in a child seat. **NEVER** place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the seat all the way back.

### How does the safety belt pretensioner and airbag supplemental restraint system work?

The safety belt pretensioner and airbag SRS are designed to activate when the vehicle sustains longitudinal deceleration sufficient to cause the sensors to close an electrical circuit that initiates pretensioner activation and airbag inflation.

The fact that the pretensioners and airbags did not activate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Front airbags are designed to activate in frontal and near-frontal collisions, not rollover, side-impact, or rear-impacts unless the collision causes sufficient longitudinal deceleration.



## Seating and Safety Restraints

The airbags inflate and deflate rapidly upon activation. After airbag deployment, it is normal to notice a smoke-like, powdery residue or smell the burnt propellant. This may consist of cornstarch, talcum powder (to lubricate the bag) or sodium compounds (e.g., baking soda) that result from the combustion process that inflates the airbag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.



While the system is designed to help reduce serious injuries, contact with a deploying airbag may also cause abrasions, swelling or temporary hearing loss. Because airbags must inflate rapidly and with considerable force, there is the risk of death or serious injuries such as fractures, facial and eye injuries or internal injuries, particularly to occupants who are not properly restrained or are otherwise out of position at the time of airbag deployment. Thus, it is extremely important that occupants be properly restrained as far away from the airbag module as possible while maintaining vehicle control.



**WARNING:** Several air bag system components get hot after inflation. Do not touch them after inflation.



**WARNING:** If the air bag has deployed, **the air bag will not function again and must be replaced immediately.** If the air bag is not replaced, the unrepaired area will increase the risk of injury in a collision.

The SRS consists of:

- driver and passenger airbag modules (which include the inflators and airbags)
- seat-mounted side airbags. Refer to *Seat-mounted side airbag system* later in this chapter
- safety belt pretensioners
- one or more impact and safing sensors

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## Seating and Safety Restraints

- a readiness light and tone
- and the electrical wiring which connects the components
- Side curtain airbag system. Refer to *Side curtain airbag system* later in this chapter.
- Front passenger sensing system. Refer to *Front passenger sensing system* later in this chapter.
- “Passenger airbag off” or “pass airbag off” indicator lamp. Refer to *Front passenger sensing system* later in this chapter.

The diagnostic module monitors its own internal circuits and the supplemental airbag electrical system wiring (including the impact sensors), the system wiring, the airbag system readiness light, the airbag backup power, the airbag ignitors and safety belt pretensioners.

### Front passenger sensing system

The front passenger sensing system is designed to meet the regulatory requirements of Federal Motor Vehicle Safety Standard (FMVSS) 208 and is designed to disable (will not inflate) the front passenger’s frontal airbag under certain conditions.

The front passenger sensing system works with sensors that are part of the front passenger’s seat and safety belt. The sensors are designed to detect the presence of a properly seated occupant and determine if the front passenger’s frontal airbag should be enabled (may inflate) or disabled (will not inflate).

The front passenger sensing system will disable (will not inflate) the front passenger’s frontal airbag if:

- the front passenger seat is unoccupied, or has small/medium objects in the front seat,
- the system determines that an infant is present in a rear-facing infant seat that is installed according to the manufacturer’s instructions,
- the system determines that a small child is present in a forward-facing child restraint that is installed according to the manufacturer’s instructions,
- the system determines that a small child is present in a booster seat,
- a front passenger takes his/her weight off of the seat for a period of time,
- a child or a small person occupies the front passenger seat.

**Note:** When the passenger airbag off light is illuminated, the passenger (seat mounted) side airbag may be disabled to avoid the risk of airbag deployment injuries.

## Seating and Safety Restraints

The front passenger sensing system uses a "passenger airbag off" or "pass airbag off" indicator which will illuminate and stay lit to remind you that the front passenger frontal airbag is disabled. The indicator lamp is located on the front edge of the map lamps.

A rectangular box containing the text "PASS AIRBAG OFF" in bold, uppercase letters, representing the indicator lamp symbol.

**Note:** The indicator lamp will illuminate for a short period of time when the ignition is turned to the on position to confirm it is functional.

When the front passenger seat is not occupied (empty seat) or in the event that the front passenger frontal airbag is enabled (may inflate), the indicator lamp will be unlit.

The front passenger sensing system is designed to disable (will not inflate) the front passenger's frontal airbag when a rear facing infant seat, a forward-facing child restraint, or a booster seat is detected.

- When the front passenger sensing system disables (will not inflate) the front passenger frontal airbag, the indicator lamp will illuminate and stay lit to remind you that the front passenger frontal airbag is disabled.
- If the child restraint has been installed and the indicator lamp is not lit, then turn the vehicle off, remove the child restraint from the vehicle and reinstall the restraint following the child restraint manufacturer's instructions.

The front passenger sensing system is designed to enable (may inflate) the front passenger's frontal airbag anytime the system senses that a person of adult size is sitting properly in the front passenger seat.

- When the front passenger sensing system enables the front passenger frontal airbag (may inflate), the indicator will be unlit and stay unlit.

If a person of adult size is sitting in the front passenger's seat, but the "passenger airbag off" or "pass airbag off" indicator lamp is lit, it is possible that the person isn't sitting properly in the seat. If this happens:

- Turn the vehicle off and ask the person to place the seatback in the full upright position.
- Have the person sit upright in the seat, centered on the seat cushion, with the person's legs comfortably extended.
- Restart the vehicle and have the person remain in this position for about two minutes. This will allow the system to detect that person and enable the passenger's frontal airbag.

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## Seating and Safety Restraints

- If the indicator lamp remains lit even after this, the person should be advised to ride in the rear seat.

Occupant	Pass Airbag Off Indicator Lamp	Passenger Airbag
Empty seat	Unlit	Disabled
Small child in child safety seat or booster	Lit	Disabled
Small child with safety belt buckled or unbuckled	Lit	Disabled
Adult	Unlit	Enabled



**WARNING:** Even with Advanced Restraints Systems, children 12 and under should be properly restrained in a rear seating position.

After all occupants have adjusted their seats and put on safety belts, it's very important that they continue to sit properly. A properly seated occupant sits upright, leaning against the seat back, and centered on the seat cushion, with their feet comfortably extended on the floor. Sitting improperly can increase the chance of injury in a crash event. For example, if an occupant slouches, lies down, turns sideways, sits forward, leans forward or sideways, or puts one or both feet up, the chance of injury during a crash is greatly increased.



**WARNING:** Sitting improperly out of position or with the seat back reclined too far can take off weight from the seat cushion and affect the decision of the front passenger sensing system, resulting in serious injury or death in a crash. Always sit upright against your seatback, with your feet on the floor.

The front passenger sensing system may detect small or medium objects placed on the seat cushion. For most objects that are in the front passenger seat, the passenger airbag will be disabled. Even though the passenger airbag is disabled, the "pass airbag off" lamp may or may not be illuminated according to the table below.

## Seating and Safety Restraints

Objects	Pass Airbag Off Indicator Lamp	Passenger Airbag
Small (i.e. three-ring binder, small purse, bottled water)	Unlit	Disabled
Medium (i.e. heavy briefcase, fully packed luggage)	Lit	Disabled
Empty seat, or small to medium object with safety belt buckled	Lit	Disabled

If you think that the status of the passenger airbag off indicator lamp is incorrect, check for the following:

- Objects lodged underneath the seat
- Objects between the seat cushion and the center console (if equipped)
- Objects hanging off the seat back
- Objects stowed in the seatback map pocket (if equipped)
- Objects placed on the occupant's lap
- Cargo interference with the seat
- Other passengers pushing or pulling on the seat
- Rear passenger feet and knees resting or pushing on the seat

The conditions listed above may cause the weight of a properly seated occupant to be incorrectly interpreted by the front passenger sensing system. The person in the front passenger seat may appear heavier or lighter due to the conditions described in the list above.



**WARNING:** To reduce the risk of possible serious injury:

Do not stow objects in seat back map pocket (if equipped) or hang objects off seat back if a child is in the front passenger seat. Do not place objects underneath the front passenger seat or between the seat and the center console (if equipped). Check the “passenger airbag off” or “pass airbag off” indicator lamp for proper airbag status. Failure to follow these instructions may interfere with the front passenger seat sensing system.

## Seating and Safety Restraints

In case there is a problem with the front passenger sensing system, the airbag readiness lamp in the instrument cluster will stay lit.



### **If the airbag readiness lamp is lit, do the following:**

The driver and/or adult passengers should check for any objects that may be lodged underneath the front passenger seat or cargo interfering with the seat.

If objects are lodged and/or cargo is interfering with the seat; please take the following steps to remove the obstruction:

- Pull the vehicle over.
- Turn the vehicle off.
- Driver and/or adult passengers should check for any objects lodged underneath the front passenger seat or cargo interfering with the seat.
- Remove the obstruction(s) (if found).
- Restart the vehicle.
- Wait at least two minutes and verify that the airbag readiness light is no longer illuminated
- If the airbag readiness lamp remains illuminated, this may or may/not be a problem due to the front passenger sensing system.

DO NOT attempt to repair or service the system; take your vehicle immediately to an authorized dealer.

If it is necessary to modify an advanced front airbag system to accommodate a person with disabilities, contact the Ford Customer Relationship Center at the phone number shown in the *Customer Assistance* section of this owner's guide.



**WARNING:** Any alteration/modification to the front passenger seat may affect the performance of the front passenger sensing system.

### **Seat-mounted side airbag system**



**WARNING:** Do not place objects or mount equipment on or near the airbag cover on the side of the seatbacks of the front seats or in front seat areas that may come into contact with a deploying airbag. Failure to follow these instructions may increase the risk of personal injury in the event of a collision.

## Seating and Safety Restraints

 **WARNING:** Do not use accessory seat covers. The use of accessory seat covers may prevent the deployment of the side airbags and increase the risk of injury in an accident.

 **WARNING:** Do not lean your head on the door. The side airbag could injure you as it deploys from the side of the seatback.

 **WARNING:** Do not attempt to service, repair, or modify the airbag SRS, its fuses or the seat cover on a seat containing an airbag. Contact your authorized dealer as soon as possible.

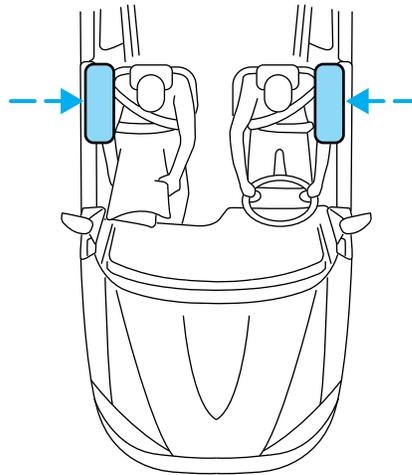
 **WARNING:** All occupants of the vehicle should always wear their safety belts even when an airbag SRS is provided.

### ***How does the side airbag system work?***

The design and development of the side airbag system included recommended testing procedures that were developed by a group of automotive safety experts known as the Side Airbag Technical Working Group. These recommended testing procedures help reduce the risk of injuries related to the deployment of side airbags.

The side airbag system consists of the following:

- An inflatable bag (airbag) with a gas generator concealed behind the outboard bolster of the driver and front passenger seatbacks.
- A special seat cover designed to allow airbag deployment.
- The same warning light, electronic control and diagnostic unit as used for the front airbags.
- Two crash sensors located under the outboard side of the front seats, attached to the floor.



## Seating and Safety Restraints

Side airbags, in combination with safety belts, can help reduce the risk of severe injuries in the event of a significant side impact collision.

The side airbags are fitted on the outboard side of the seatbacks of the front seats. In certain lateral collisions, the airbag on the side affected by the collision will be inflated. The airbag was designed to inflate between the door panel and occupant to further enhance the protection provided to occupants in side impact collisions.

The airbag SRS is designed to activate when the vehicle sustains lateral deceleration sufficient to cause the sensors to initiate airbag inflation.

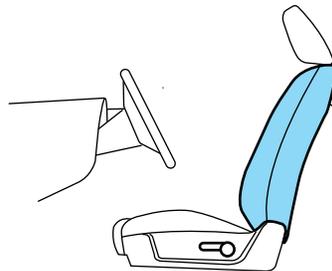
The fact that the airbags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Side airbags are designed to inflate in side-impact collisions, not roll-over, rear-impact, frontal or near-frontal collisions, unless the collision causes sufficient lateral deceleration.



**WARNING:** Several air bag system components get hot after inflation. Do not touch them after inflation.



**WARNING:** If the side airbag has deployed, **the airbag will not function again. The side airbag system (including the seat) must be inspected and serviced by an authorized dealer** . If the airbag is not replaced, the unrepaired area will increase the risk of injury in a collision.



## Seating and Safety Restraints

### Determining if the system is operational

The SRS uses a readiness light in the instrument cluster or a tone to indicate the condition of the system. Refer to the *Warning lights and chimes* section in the *Instrument Cluster* chapter. Routine maintenance of the airbag is not required.

A difficulty with the system is indicated by one or more of the following:

- The readiness light will either flash or stay lit.
- The readiness light will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and/or light are repaired.



If any of these things happen, even intermittently, contact your authorized dealer as soon as possible. Unless serviced, the system may not function properly in the event of a collision.

### SOS Post-Crash Alert System™

The system automatically flashes the turn signal lamps and sounds the horn three times at four second intervals in the event of a serious impact that deploys an airbag (front, side, side curtain [if equipped] or Safety Canopy® [if equipped]) or the safety belt pretensioners.

The system can be turned off when any one of the following actions are taken by the driver or any other person:

- pressing the hazard control button,
- or pressing the panic button on the remote entry transmitter.

The feature will continue to operate until the vehicle runs out of power.

### Disposal of airbags and airbag equipped vehicles

See authorized dealer. Airbags MUST BE disposed of by qualified personnel.

## Seating and Safety Restraints

### SAFETY RESTRAINTS FOR CHILDREN

See the following sections for directions on how to properly use safety restraints for children. Also see *Airbag supplemental restraint system (SRS)* in this chapter for special instructions about using airbags.

#### Important child restraint precautions



**WARNING:** Always make sure your child is secured properly in a device that is appropriate for their height, age and weight. Child safety restraints must be purchased separately from the vehicle. Failure to follow these instructions and guidelines may result in an increased risk of serious injury or death to your child.



**WARNING:** All children are shaped differently. The Recommendations for Safety Restraints are based on probable child height, age and weight thresholds from NHTSA and other safety organizations or are the minimum requirements of law. Ford recommends checking with a NHTSA Certified Child Passenger Safety Technician (CPST) and consult your pediatrician to make sure your child seat is appropriate for your child, and is compatible with and properly installed in the vehicle. To locate a child seat fitting station and CPST contact the NHTSA toll free at 1-888-327-4236 or on the internet at <http://www.nhtsa.dot.gov>. In Canada, check with your local St. John Ambulance office for referral to a CPST or for further information, contact your provincial ministry of transportation, your local St. John Ambulance office at <http://www.sfa.ca>, or Transport Canada at 1-800-333-0371 (<http://www.tc.gc.ca>). Failure to properly restrain children in safety seats made especially for their height, age, and weight may result in an increased risk of serious injury or death to your child.

## Seating and Safety Restraints

Recommendations for Safety Restraints for Children		
	Child size, height, weight, or age	Recommended restraint type
Infants or toddlers	Children weighing 40 lb (18 kg) or less (generally age four or younger)	Use a child safety seat (sometimes called an infant carrier, convertible seat, or toddler seat).
Small children	Children who have outgrown or no longer properly fit in a child safety seat (generally children who are less than 4 feet 9 inches (1.45 meters) tall, are greater than age four (4) and less than age twelve (12), and between 40 lb (18 kg) and 80 lb (36 kg) and upward to 100 lb (45 kg) if recommended by your child restraint manufacturer)	Use a belt-positioning booster seat.
Larger children	Children who have outgrown or no longer properly fit in a belt-positioning booster seat (generally children who are at least 4 feet 9 inches (1.45 meters) tall or greater than 80 lb (36 kg) or 100 lb (45 kg) if recommended by child restraint manufacturer)	Use a vehicle safety belt having the lap belt snug and low across the hips, shoulder belt centered across the shoulder and chest, and seatback upright.

- You are required by law to properly use safety seats for infants and toddlers in the U.S. and Canada.
- Many states and provinces require that small children use approved booster seats until they reach age eight, a height of 4 ft 9 in. (1.45 meters) tall, or 80 lb (36 kg). Check your local and state or provincial laws for specific requirements regarding the safety of children in your vehicle.
- When possible, always properly restrain children twelve (12) years of age and under in a rear seating position of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in a front seating position.

## Seating and Safety Restraints

### **Recommendations for attaching child safety restraints for children**

Restraint Type	Child Weight	Use any attachment method as indicated below by "X"				
		LATCH (lower anchors and top tether anchor)	LATCH (lower anchors only)	Safety belt and top tether anchor	Safety belt and LATCH (lower anchors and top tether anchor)	Safety belt only
Rear facing child seat	Up to 48 lb (21 kg)		X			X
Forward facing child seat	Up to 48 lb (21 kg)	X		X	X	
Forward facing child seat	Over 48 lb (21 kg)			X	X	

 **WARNING:** Airbags can kill or injure a child in a child seat. NEVER place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the vehicle seat all the way back. When possible, all children age 12 and under should be properly restrained in a rear seating position. If all children cannot be seated and restrained properly in a rear seating position, properly restrain the largest child in the front seat.

 **WARNING:** Always carefully follow the instructions and warnings provided by the manufacturer of any child restraint to determine if the restraint device is appropriate for your child's size, height, weight, or age. Follow the child restraint manufacturer's instructions and warnings provided for installation and use in conjunction with the instructions and warnings provided by the vehicle manufacturer. A safety seat that is improperly installed or utilized, is inappropriate for your child's height, age, or weight or does not properly fit the child may increase the risk of serious injury or death.

## Seating and Safety Restraints

 **WARNING:** Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision, which may result in serious injury or death.

 **WARNING:** Never use pillows, books, or towels to boost a child. They can slide around and increase the likelihood of injury or death in a collision.

 **WARNING:** Always restrain an unoccupied child seat or booster seat. These objects may become projectiles in a collision or sudden stop, which may increase the risk of serious injury.

 **WARNING:** Never place, or allow a child to place, the shoulder belt under a child's arm or behind the back because it reduces the protection for the upper part of the body and may increase the risk of injury or death in a collision.

 **WARNING:** Do not leave children, unreliable adults, or pets unattended in your vehicle.

### Transporting children

Always make sure your child is secured properly in a device that is appropriate for their age, height and weight. All children are shaped differently. The child height, age and weight thresholds provided are recommendations or the minimum requirements of law. The National Highway Traffic Safety Administration (NHTSA) provides education and training to ensure that all children ages 0 to 16 are properly restrained in the correct restraint system. Ford recommends checking with a NHTSA Certified Child Passenger Safety Technician (CPST) and your pediatrician to make sure your seat is appropriate for your child and properly installed in the vehicle. To locate a child seat fitting station and CPST contact the NHTSA toll free at **1-888-327-4236** or on the internet at <http://www.nhtsa.dot.gov>. In Canada, check with your local St. John Ambulance office for referral to a CPST or for further information, contact your provincial ministry of transportation, your local St. John Ambulance office at <http://www.sfa.ca>, or Transport Canada at 1-800-333-0371 (<http://www.tc.gc.ca>).

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## Seating and Safety Restraints

Follow all the safety restraint and airbag precautions that apply to adult passengers in your vehicle.

If the child is the proper height, age, and weight (as specified by your child safety seat or booster manufacturer), fits the restraint and can be restrained properly, then restrain the child in the child safety seat or with the belt-positioning booster. Remember that child seats and belt-positioning boosters vary and may be designed to fit children of different heights, ages and weights. Children who are too large for child safety seats or belt-positioning boosters (as specified by your child safety seat manufacturer) should always properly wear safety belts.

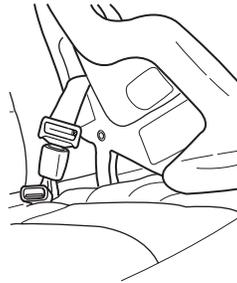
### SAFETY SEATS FOR CHILDREN

#### Infant and/or toddler seats

Use a safety seat that is recommended for the size and weight of the child.

When installing a child safety seat:

- Review and follow the information presented in the *Airbag supplemental restraint system (SRS)* section in this chapter.
- Carefully follow all of the manufacturer's instructions included with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.



Airbags can kill or injure a child in a child seat. NEVER place a rear-facing child seat in front of an active airbag. If you must use a forward-facing child seat in the front seat, move the vehicle seat all the way back.

Children 12 and under should be properly restrained in a rear seating position whenever possible. If all children cannot be seated and restrained properly in a rear seating position, properly restrain the largest child in the front seat.

## Seating and Safety Restraints

### Installing child safety seats with combination lap and shoulder belts

Check to make sure the child seat is properly secured before each use. Children 12 and under should be properly restrained in a rear seating position whenever possible. If all children cannot be seated and restrained properly in a rear seating position, properly restrain the largest child in the front seat.

When installing a child safety seat with combination lap/shoulder belts:

- Use the correct safety belt buckle for that seating position.
- Insert the belt tongue into the proper buckle until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.
- Keep the buckle release button pointing up and away from the safety seat, with the tongue between the child seat and the release button, to prevent accidental unbuckling.
- Place vehicle seat back in upright position.
- Put the safety belt in the automatic locking mode. Refer to Step 5 below. This vehicle does not require the use of a locking clip.



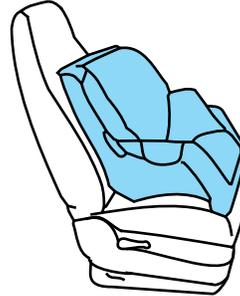
**WARNING:** Depending on where you secure a child restraint, and depending on the child restraint design, you may block access to certain safety belt buckle assemblies and/or LATCH lower anchors, rendering those features potentially unusable. To avoid risk of injury, occupants should only use seating positions where they are able to be properly restrained.

Perform the following steps when installing the child seat with combination lap/shoulder belts:

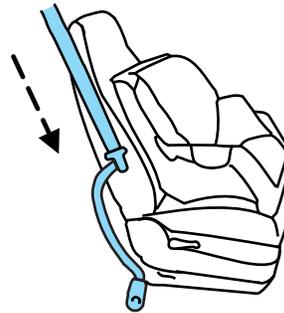
**Note:** Although the child seat illustrated is a forward facing child seat, the steps are the same for installing a rear facing child seat.

## Seating and Safety Restraints

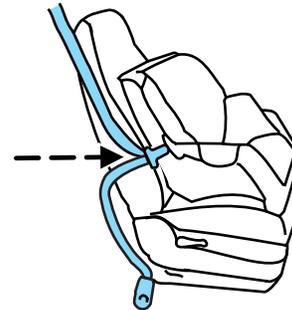
1. Position the child safety seat in a seat with a combination lap and shoulder belt.



2. Pull down on the shoulder belt and then grasp the shoulder belt and lap belt together.



3. While holding the shoulder and lap belt portions together, route the tongue through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.

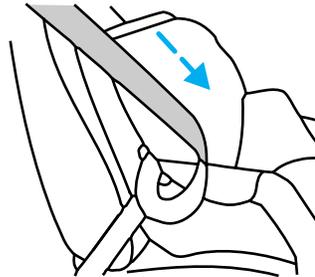


## Seating and Safety Restraints

4. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) for that seating position until you hear a snap and feel the latch engage. Make sure the tongue is latched securely by pulling on it.



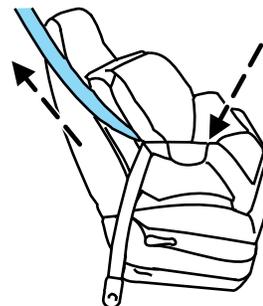
5. To put the retractor in the automatic locking mode, grasp the shoulder portion of the belt and pull downward until all of the belt is pulled out.



6. Allow the belt to retract to remove slack. The belt will click as it retracts to indicate it is in the automatic locking mode.

7. Try to pull the belt out of the retractor to make sure the retractor is in the automatic locking mode (you should not be able to pull more belt out). If the retractor is not locked, repeat Steps 5 and 6.

8. Remove remaining slack from the belt. Force the seat down with extra weight, e.g., by pressing down or kneeling on the child restraint while pulling up on the shoulder belt in order to force slack from the belt. This is necessary to remove the remaining slack that will exist once the additional weight of the child is added to the child restraint. It also helps to achieve the proper snugness of the child seat to the vehicle. Sometimes, a slight lean



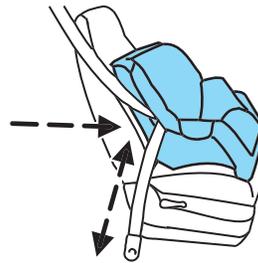
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## Seating and Safety Restraints

towards the buckle will additionally help to remove remaining slack from the belt.

9. Attach the tether strap (if the child seat is equipped). Refer to *Attaching child safety seats with tether straps* later in this chapter.

10. Before placing the child in the seat, forcibly move the seat forward and back to make sure the seat is securely held in place. To check this, grab the seat at the belt path and attempt to move it side to side and forward and back. There should be no more than 1 inch (2.5 cm) of movement for proper installation.



Ford recommends checking with a NHTSA Certified Child Passenger Safety Technician (CPST) to make certain the child restraint is properly installed. In Canada, check with your local St. John Ambulance office for referral to a CPST.

### **Attaching child safety seats with LATCH (Lower Anchors and Tethers for Children) attachments**

The LATCH system is composed of three vehicle anchor points: two (2) lower anchors (if equipped) located where the vehicle seat back and seat cushion meet (called the “seat bight”) and one (1) top tether anchor located behind that seating position.

LATCH compatible child safety seats have two rigid or webbing mounted attachments that connect to the two lower anchors (if equipped) at the LATCH equipped seating positions in your vehicle. This type of attachment method eliminates the need to use safety belts to attach the child seat, however the safety belt can still be used to attach the child seat. For forward-facing child seats, the top tether strap must also be attached to the proper top tether anchor, if a top tether strap has been provided with your child seat. Ford Motor Company recommends the use of a child safety seat having a top tether strap. See *Attaching child safety seats with tether straps* and *Recommendations for attaching child safety restraints for children* in this chapter for more information.

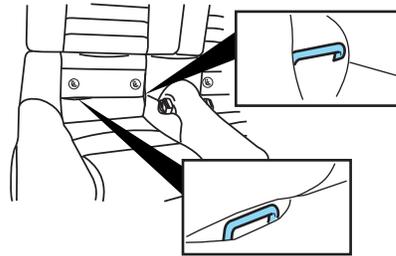
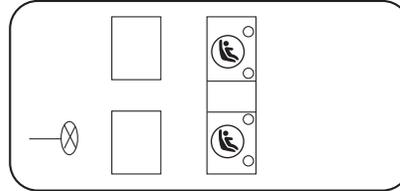
## Seating and Safety Restraints

Your vehicle may have LATCH lower anchors for child seat installation at the seating positions marked with the child seat symbol.

The LATCH anchors (if equipped) are located at the rear section of the rear seat between the cushion and seat back, below the locator symbols on the seat back. Follow the child seat manufacturer's instructions to properly install a child seat with LATCH attachments.

Follow the instructions on attaching child safety seats with tether straps. Refer to *Attaching child safety seats with tether straps* later in this chapter.

Attach LATCH lower attachments of the child seat only to the anchors shown.



**WARNING:** The center of the rear seat is **NOT** designed as a seating position and is not equipped with safety belts. The LATCH anchors were not designed to be used with a child seat in the center position and there is no tether anchor available at the center. Attempted use of the center as a seating position will increase the risk of injury or death in the event of a collision.

**WARNING:** Never attach two child safety seats to the same anchor. In a crash, one anchor may not be strong enough to hold two child safety seat attachments and may break, causing serious injury or death.

Each time you use the safety seat, check that the seat is properly attached to the lower anchors and tether anchor, if applicable. Tug the child seat from side to side and forward and back where it is secured to the vehicle. The seat should move less than one inch when you do this for a proper installation.

If the safety seat is not anchored properly, the risk of a child being injured in a crash greatly increases.

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## Seating and Safety Restraints

### **Combining safety belt and LATCH lower anchors for attaching child safety seats**

When used in combination, either the safety belt or the LATCH lower anchors may be attached first, provided a proper installation is achieved. Attach the tether strap afterward, if included with the child seat. Refer to *Recommendations for attaching child safety restraints for children* in this chapter.

### **Attaching child safety seats with tether straps**

Many forward-facing child safety seats include a tether strap which extends from the back of the child safety seat and hooks to an anchoring point called the top tether anchor. Tether straps are available as an accessory for many older safety seats. Contact the manufacturer of your child seat for information about ordering a tether strap, or to obtain a longer tether strap if the tether strap on your safety seat does not reach the appropriate top tether anchor in the vehicle.

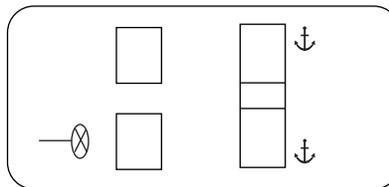
Your vehicle is equipped with built-in tether strap anchor(s) located:

- behind the rear seats and below the rear window behind the speakers (coupe with rear seats)
- in the rear of the vehicle below the rear window (coupe without rear seats)
- or rearward of the seatback in the convertible top sling (convertible)

The tether anchor(s) in your vehicle are either located under a cover marked with the child tether anchor symbol (shown with title) or are under a tag marked with the child tether anchor symbol in the convertible top sling.

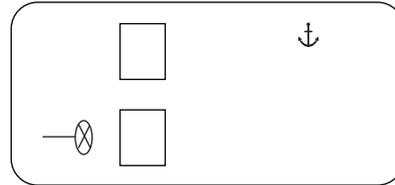
The tether strap anchor(s) in your vehicle are in the following positions (shown from top view):

#### **Vehicles with rear seats**



## Seating and Safety Restraints

### Vehicles without rear seats



Attach the tether strap only to the appropriate tether anchor as shown. The tether strap may not work properly if attached somewhere other than the correct tether anchor.

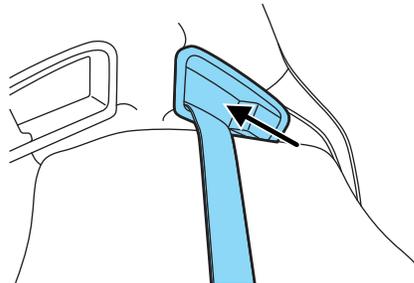
Once the child safety seat has been installed, using either the safety belt, the lower anchors of the LATCH system, or both, you can attach the top tether strap.

If you install a child safety seat with rigid LATCH attachments, and have attached the top tether strap to the proper top tether anchor, do not tighten the tether strap enough to lift the child safety seat off the vehicle seat cushion when the child is seated in it. Keep the tether strap just snug without lifting the front of the child seat. Keeping the child safety seat just touching the vehicle seat gives the best protection in a severe crash.

Perform the following steps to attach a child safety seat to the tether anchor:

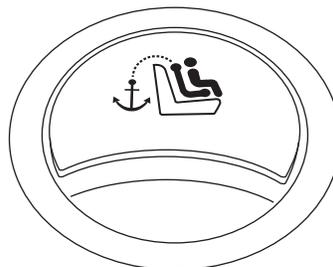
1. Route the tether strap as follows:

- **For coupe with rear seats:** Route the tether strap over the top of the head restraint.
- **For coupe without rear seats:** Route the tether strap through the inboard slot of the front passenger seat back or route the tether strap over the top of the seat. A tether strap extension may be needed to reach the tether anchor.

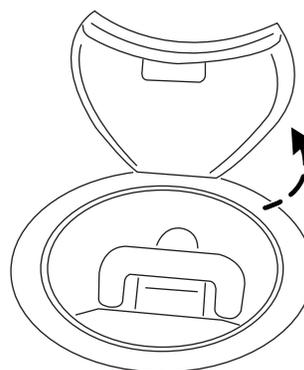


## Seating and Safety Restraints

2. Locate the correct anchor for the selected seating position.



3. Open the tether anchor cover.



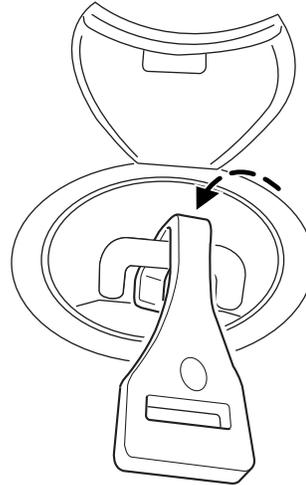
## Seating and Safety Restraints

4. Clip the tether strap to the anchor as shown.

If the tether strap is clipped incorrectly, the child safety seat may not be retained properly in the event of a collision.

5. Tighten the child safety seat tether strap according to the manufacturer's instructions.

If the safety seat is not anchored properly, the risk of a child being injured in a collision greatly increases.

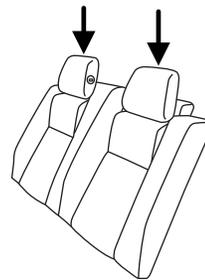


### **For convertible:**

1. Route the child safety seat tether strap over the top of the head restraint.

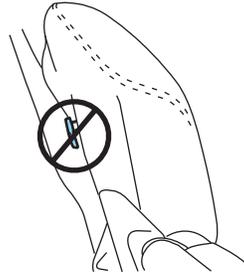
The tether anchors are located rearward of the seatback in the convertible top sling.

**Note:** For easier access, attach the tether with the convertible top up.

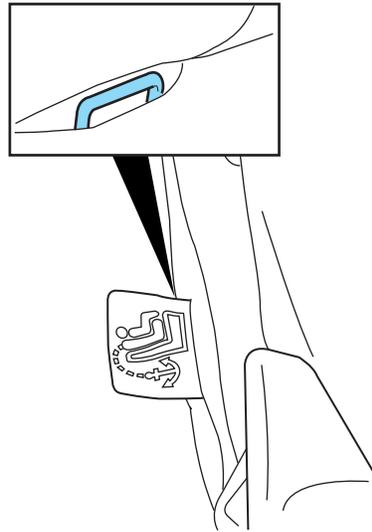


## Seating and Safety Restraints

**Note:** The attachments for the convertible boot located on the back of the head restraints are not tether anchors.



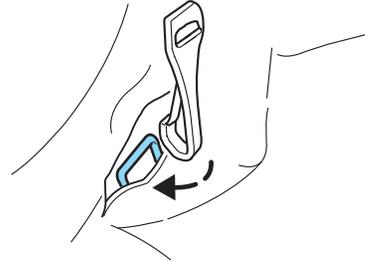
2. Access tether anchors located behind the seatback under the vinyl tag marked with the child tether anchor symbol.



## Seating and Safety Restraints

3. Clip the tether strap to the anchor as shown.

If the tether strap is clipped incorrectly, the child safety seat may not be retained properly in the event of a collision.



4. Tighten the child safety seat tether strap according to the manufacturer's instructions.

If the safety seat is not anchored properly, the risk of a child being injured in a collision greatly increases.

If your child restraint system is equipped with a tether strap, and the child restraint manufacturer recommends its use, Ford also recommends its use.

### Child booster seats

The belt-positioning booster (booster seat) is used to improve the fit of the vehicle safety belt. Children outgrow a typical child seat (e.g., convertible or toddler seat) when they weigh about 40 lb (18 kg) and are around four (4) years of age. Consult your child safety seat owner guide for the weight, height, and age limits specific to your child safety seat. Keep your child in the child safety seat if it properly fits the child, remains appropriate for their weight, height and age AND if properly secured to the vehicle.

Although the lap/shoulder belt will provide some protection, children who have outgrown a typical child seat are still too small for lap/shoulder belts to fit properly, and wearing an improperly fitted vehicle safety belt could increase the risk of serious injury in a crash. To improve the fit of both the lap and shoulder belt on children who have outgrown child safety seats, Ford Motor Company recommends use of a belt-positioning booster.

## Seating and Safety Restraints

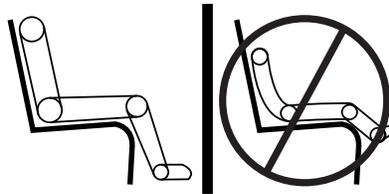
Booster seats position a child so that vehicle lap/shoulder safety belts fit better. They lift the child up so that the lap belt rests low across the hips and the knees bend comfortably at the edge of the cushion, while minimizing slouching. Booster seats may also make the shoulder belt fit better and more comfortably. Try to keep the belt near the middle of the shoulder and across the center of the chest. Moving the child closer (a few centimeters or inches) to the center of the vehicle, but remaining in the same seating position, may help provide a good shoulder belt fit.

### **When children should use booster seats**

Children need to use booster seats from the time they outgrow the toddler seat until they are big enough for the vehicle seat and lap/shoulder belt to fit properly. Generally this is when they reach a height of at least 4 feet 9 inches (1.45 meters) tall (around age eight to age twelve and between 40 lb (18 kg) and 80 lb (36 kg) or upward to 100 lb (45 kg) if recommended by your child restraint manufacturer). Many state and provincial laws require that children use approved booster seats until they reach age eight, a height of 4 feet 9 inches (1.45 meters) tall, or 80 lb (36 kg).

Booster seats should be used until you can answer YES to ALL of these questions when seated without a booster seat:

- Can the child sit all the way back against the vehicle seat back with knees bent comfortably at the edge of the seat cushion?
- Can the child sit without slouching?



- Does the lap belt rest low across the hips?
- Is the shoulder belt centered on the shoulder and chest?
- Can the child stay seated like this for the whole trip?

## Seating and Safety Restraints

### **Types of booster seats**

There are generally two types of belt-positioning booster seats: backless and high back. Always use booster seats in conjunction with the vehicle lap/shoulder belt.

- **Backless booster seats**

If your backless booster seat has a removable shield, remove the shield. If a vehicle seating position has a low seat back or no head restraint, a backless booster seat may place your child's head (as measured at the tops of the ears) above the top of the seat. In this case, move the backless booster to another seating position with a higher seat back or head restraint and lap/shoulder belts, or consider using a high back booster seat.



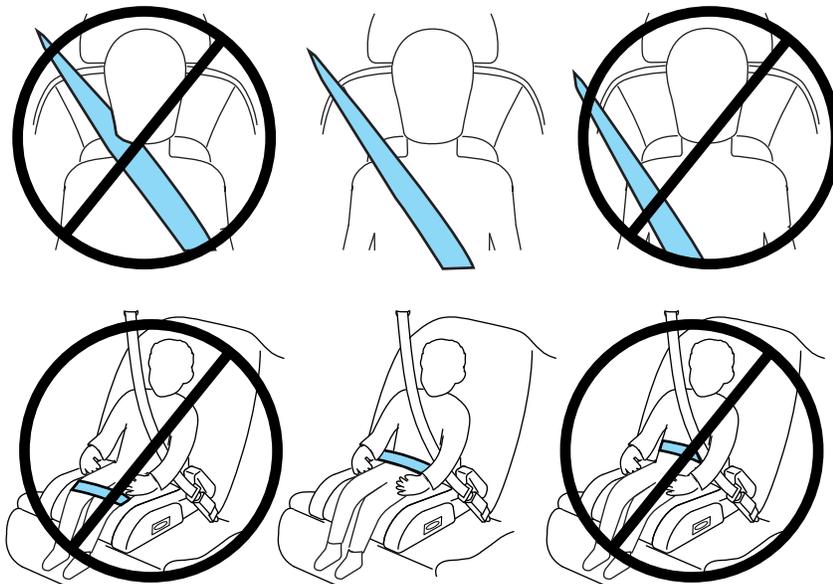
- **High back booster seats**

If, with a backless booster seat, you cannot find a seating position that adequately supports your child's head, a high back booster seat would be a better choice.



## Seating and Safety Restraints

Children and booster seats vary in size and shape. Choose a booster that keeps the lap belt low and snug across the hips, never up across the stomach, and lets you adjust the shoulder belt to cross the chest and rest snugly near the center of the shoulder. The drawings below compare the ideal fit (center) to a shoulder belt uncomfortably close to the neck and a shoulder belt that could slip off the shoulder. The drawings below also show how the lap belt should be low and snug across the child's hips.



If the booster seat slides on the vehicle seat, placing a rubberized mesh sold as shelf or carpet liner under the booster seat may improve this condition. Do not introduce any item thicker than this under the booster seat. Check with the booster seat manufacturer's instructions.

## Seating and Safety Restraints

### ***The importance of shoulder belts***

Using a booster without a shoulder belt increases the risk of a child's head hitting a hard surface in a collision. For this reason, you should never use a booster seat with a lap belt only. It is generally best to use a booster seat with lap/shoulder belts in the back seat.

Move a child to a different seating location if the shoulder belt does not stay positioned on the shoulder during use.

Follow all instructions provided by the manufacturer of the booster seat.



**WARNING:** Never place, or allow a child to place, the shoulder belt under a child's arm or behind the back because it reduces the protection for the upper part of the body and may increase the risk of injury or death in a collision.

### **Child restraint and safety belt maintenance**

Inspect the vehicle safety belts and child safety seat systems periodically to make sure they work properly and are not damaged. Inspect the vehicle and child seat safety belts to make sure there are no nicks, tears or cuts. Replace if necessary. All vehicle safety belt assemblies, including retractors, buckles, front safety belt buckle assemblies, buckle support assemblies (slide bar-if equipped), shoulder belt height adjusters (if equipped), shoulder belt guide on seatback (if equipped), child safety seat LATCH and tether anchors, and attaching hardware, should be inspected after a collision. Refer to the child restraint manufacturer's instructions for additional inspection and maintenance information specific to the child restraint. Ford Motor Company recommends that all safety belt assemblies in use in vehicles involved in a collision be replaced. However, if the collision was minor and an authorized dealer finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

For proper care of soiled safety belts, refer to *Interior* in the *Cleaning* chapter.

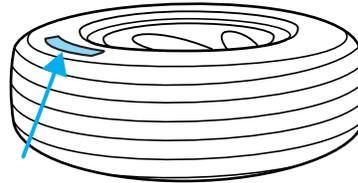


**WARNING:** Failure to inspect and if necessary replace the safety belt assembly or child restraint system under the above conditions could result in severe personal injuries in the event of a collision.

## Tires, Wheels and Loading

### INFORMATION ABOUT UNIFORM TIRE QUALITY GRADING

Tire Quality Grades apply to new pneumatic passenger car tires. The Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:



- **Treadwear 200 Traction AA Temperature A**

These Tire Quality Grades are determined by standards that the United States Department of Transportation has set.

Tire Quality Grades apply to new pneumatic passenger car tires. They do not apply to deep tread, winter-type snow tires, space-saver or temporary use spare tires, light truck or “LT” type tires, tires with nominal rim diameters of 10 to 12 inches or limited production tires as defined in Title 49 Code of Federal Regulations Part 575.104(c)(2).

**U.S. Department of Transportation-Tire quality grades:** The U.S. Department of Transportation requires Ford Motor Company to give you the following information about tire grades exactly as the government has written it.

#### Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

#### Traction AA A B C



**WARNING:** The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning or peak traction characteristics.

The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

## Tires, Wheels and Loading

### Temperature A B C



**WARNING:** The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 139. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

### TIRES

Tires are designed to give many thousands of miles of service, but they must be maintained in order to get the maximum benefit from them.

#### Glossary of Tire Terminology

- **Tire label:** A label showing the OE (Original Equipment) tire sizes, recommended inflation pressure and the maximum weight the vehicle can carry.
- **Tire Identification Number (TIN):** A number on the sidewall of each tire providing information about the tire brand and manufacturing plant, tire size and date of manufacture. Also referred to as DOT code.
- **Inflation pressure:** A measure of the amount of air in a tire.
- **Standard load:** A class of P-metric or Metric tires designed to carry a maximum load at 35 psi [37 psi (2.5 bar) for Metric tires]. Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.
- **Extra load:** A class of P-metric or Metric tires designed to carry a heavier maximum load at 41 psi [43 psi (2.9 bar) for Metric tires]. Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.

## Tires, Wheels and Loading

- **kPa:** Kilopascal, a metric unit of air pressure.
- **PSI:** Pounds per square inch, a standard unit of air pressure.
- **Cold inflation pressure:** The tire pressure when the vehicle has been stationary and out of direct sunlight for an hour or more and prior to the vehicle being driven for 1 mile (1.6 km).
- **Recommended inflation pressure:** The cold inflation pressure found on the Safety Compliance Certification Label or Tire Label located on the B-Pillar or the edge of the driver's door.
- **B-pillar:** The structural member at the side of the vehicle behind the front door.
- **Bead area of the tire:** Area of the tire next to the rim.
- **Sidewall of the tire:** Area between the bead area and the tread.
- **Tread area of the tire:** Area of the perimeter of the tire that contacts the road when mounted on the vehicle.
- **Rim:** The metal support (wheel) for a tire or a tire and tube assembly upon which the tire beads are seated.

### INFLATING YOUR TIRES

Safe operation of your vehicle requires that your tires are properly inflated. Remember that a tire can lose up to half of its air pressure without appearing flat.

Every day before you drive, check your tires. If one looks lower than the others, use a tire gauge to check pressure of all tires and adjust if required.

At least once a month and before long trips, inspect each tire and check the tire pressure with a tire gauge (including spare, if equipped). Inflate all tires to the inflation pressure recommended by Ford Motor Company.

You are strongly urged to buy a reliable tire pressure gauge, as automatic service station gauges may be inaccurate. Ford recommends the use of a digital or dial-type tire pressure gauge rather than a stick-type tire pressure gauge.

Use the recommended cold inflation pressure for optimum tire performance and wear. Under-inflation or over-inflation may cause uneven treadwear patterns.

## Tires, Wheels and Loading



**WARNING:** Under-inflation is the most common cause of tire failures and may result in severe tire cracking, tread separation or “blowout”, with unexpected loss of vehicle control and increased risk of injury. Under-inflation increases sidewall flexing and rolling resistance, resulting in heat buildup and internal damage to the tire. It also may result in unnecessary tire stress, irregular wear, loss of vehicle control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!

Always inflate your tires to the Ford recommended inflation pressure even if it is less than the maximum inflation pressure information found on the tire. The Ford recommended tire inflation pressure is found on the Safety Compliance Certification Label or Tire Label which is located on the B-Pillar or the edge of the driver's door. Failure to follow the tire pressure recommendations can cause uneven treadwear patterns and adversely affect the way your vehicle handles.

**Maximum Permissible Inflation Pressure** is the tire manufacturer's maximum permissible pressure and/or the pressure at which the maximum load can be carried by the tire. This pressure is normally higher than the manufacturer's recommended cold inflation pressure which can be found on the Safety Compliance Certification Label or Tire Label which is located on the B-Pillar or the edge of the driver's door. The cold inflation pressure should never be set lower than the recommended pressure on the Safety Compliance Certification Label or Tire Label.

When weather temperature changes occur, tire inflation pressures also change. A 10°F (6°C) temperature drop can cause a corresponding drop of 1 psi (7 kPa) in inflation pressure. Check your tire pressures frequently and adjust them to the proper pressure which can be found on the Safety Compliance Certification Label or Tire Label.

To check the pressure in your tire(s):

1. Make sure the tires are cool, meaning they are not hot from driving even a mile.

If you are checking tire pressure when the tire is hot, (i.e. driven more than 1 mile [1.6 km]), never “bleed” or reduce air pressure. The tires are hot from driving and it is normal for pressures to increase above recommended cold pressures. A hot tire at or below recommended cold inflation pressure could be significantly under-inflated.

## Tires, Wheels and Loading

**Note:** If you have to drive a distance to get air for your tire(s), check and record the tire pressure first and add the appropriate air pressure when you get to the pump. It is normal for tires to heat up and the air pressure inside to go up as you drive.

2. Remove the cap from the valve on one tire, then firmly press the tire gauge onto the valve and measure the pressure.

3. Add enough air to reach the recommended air pressure.

**Note:** If you overfill the tire, release air by pressing on the metal stem in the center of the valve. Then recheck the pressure with your tire gauge.

4. Replace the valve cap.

5. Repeat this procedure for each tire, including the spare.

**Note:** Some spare tires operate at a higher inflation pressure than the other tires. For T-type/mini-spare tires (see the *Dissimilar spare tire/wheel information* section for description): Store and maintain at 60 psi (4.15 bar). For full-size and dissimilar spare tires (see the *Dissimilar spare tire/wheel information* section for description): Store and maintain at the higher of the front and rear inflation pressure as shown on the Tire Label.

6. Visually inspect the tires to make sure there are no nails or other objects embedded that could poke a hole in the tire and cause an air leak.

7. Check the sidewalls to make sure there are no gouges, cuts or bulges.

### TIRE CARE

#### Inspecting your tires and wheel valve stems

Periodically inspect the tire treads for uneven or excessive wear and remove objects such as stones, nails or glass that may be wedged in the tread grooves. Check the tire and valve stems for holes, cracks, or cuts that may permit air leakage and repair or replace the tire and replace the valve stem. Inspect the tire sidewalls for cracking, cuts, bruises and other signs of damage or excessive wear. If internal damage to the tire is suspected, have the tire demounted and inspected in case it needs to be repaired or replaced. For your safety, tires that are damaged or show signs of excessive wear should not be used because they are more likely to blow out or fail.

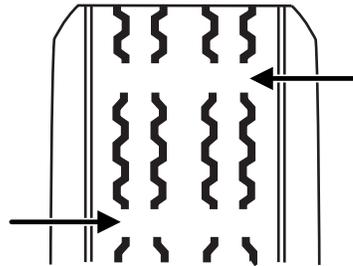
## Tires, Wheels and Loading

Improper or inadequate vehicle maintenance can cause tires to wear abnormally. Inspect all your tires, including the spare, frequently, and replace them if one or more of the following conditions exist:

### Tire wear

When the tread is worn down to 1/16th of an inch (2 mm), tires must be replaced to help prevent your vehicle from skidding and hydroplaning. Built-in treadwear indicators, or “wear bars”, which look like narrow strips of smooth rubber across the tread will appear on the tire when the tread is worn down to 1/16th of an inch (2 mm).

When the tire tread wears down to the same height as these “wear bars”, the tire is worn out and must be replaced.



### Damage

Periodically inspect the tire treads and sidewalls for damage (such as bulges in the tread or sidewalls, cracks in the tread groove and separation in the tread or sidewall). If damage is observed or suspected have the tire inspected by a tire professional. Tires can be damaged during off-road use, so inspection after off-road use is also recommended.



### **WARNING: Age**

Tires degrade over time depending on many factors such as weather, storage conditions, and conditions of use (load, speed, inflation pressure, etc.) the tires experience throughout their lives. In general, tires should be replaced after six years regardless of tread wear. However, heat caused by hot climates or frequent high loading conditions can accelerate the aging process and may require tires to be replaced more frequently.

You should replace your spare tire when you replace the road tires or after six years due to aging even if it has not been used.

## Tires, Wheels and Loading

### U.S. DOT Tire Identification Number (TIN)

Both U.S. and Canada Federal regulations require tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a U.S. DOT Tire Identification Number for safety standard certification and in case of a recall.

This begins with the letters “DOT” and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code designating where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, the numbers 317 mean the 31st week of 1997. After 2000 the numbers go to four digits. For example, 2501 means the 25th week of 2001. The numbers in between are identification codes used for traceability. This information is used to contact customers if a tire defect requires a recall.

### Tire Replacement Requirements

Your vehicle is equipped with tires designed to provide a safe ride and handling capability.



**WARNING:** Only use replacement tires and wheels that are the same size, load index, speed rating and type (such as P-metric versus LT-metric or all-season versus all-terrain) as those originally provided by Ford. The recommended tire and wheel size may be found on either the Safety Compliance Certification Label or the Tire Label which is located on the B-Pillar or edge of the driver's door. If this information is not found on these labels then you should contact your authorized dealer as soon as possible. Use of any tire or wheel not recommended by Ford can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death. Additionally the use of non-recommended tires and wheels could cause steering, suspension, axle or transfer case/power transfer unit failure. If you have questions regarding tire replacement, contact your authorized dealer as soon as possible.

## Tires, Wheels and Loading



**WARNING:** When mounting replacement tires and wheels, you should not exceed the maximum pressure indicated on the sidewall of the tire to set the beads without additional precautions listed below. If the beads do not seat at the maximum pressure indicated, re-lubricate and try again.

When inflating the tire for mounting pressures up to 20 psi (1.38 bar) greater than the maximum pressure on the tire sidewall, the following precautions must be taken to protect the person mounting the tire:

1. Make sure that you have the correct tire and wheel size.
2. Lubricate the tire bead and wheel bead seat area again.
3. Stand at a minimum of 12 ft (3.66 m) away from the tire wheel assembly.
4. Use both eye and ear protection.

For a mounting pressure more than 20 psi (1.38 bar) greater than the maximum pressure, a Ford dealer or other tire service professional should do the mounting.

Always inflate steel carcass tires with a remote air fill with the person inflating standing at a minimum of 12 ft (3.66 m) away from the tire wheel assembly.

**Important:** Remember to replace the wheel valve stems when the road tires are replaced on your vehicle.

It is recommended that the two front tires or two rear tires generally be replaced as a pair.

The tire pressure sensors mounted in the wheels (originally installed on your vehicle) are not designed to be used in aftermarket wheels.

The use of wheels or tires not recommended by Ford Motor Company may affect the operation of your tire pressure monitoring system.

If the TPMS indicator is flashing, your TPMS is malfunctioning. Your replacement tire might be incompatible with your TPMS, or some component of the TPMS may be damaged.

## Tires, Wheels and Loading

### Safety Practices



**WARNING:** If your vehicle is stuck in snow, mud, sand, etc., do not rapidly spin the tires; spinning the tires can tear the tire and cause an explosion. A tire can explode in as little as three to five seconds.



**WARNING:** Do not spin the wheels at over 35 mph (56 km/h). The tires may fail and injure a passenger or bystander.

Driving habits have a great deal to do with your tire mileage and safety.

- Observe posted speed limits
- Avoid fast starts, stops and turns
- Avoid potholes and objects on the road
- Do not run over curbs or hit the tire against a curb when parking

### Highway hazards

No matter how carefully you drive there's always the possibility that you may eventually have a flat tire on the highway. Drive slowly to the closest safe area out of traffic. This may further damage the flat tire, but your safety is more important.

If you feel a sudden vibration or ride disturbance while driving, or you suspect your tire or vehicle has been damaged, immediately reduce your speed. Drive with caution until you can safely pull off the road. Stop and inspect the tires for damage. If a tire is under-inflated or damaged, deflate it, remove wheel and replace it with your spare tire and wheel. If you cannot detect a cause, have the vehicle towed to the nearest repair facility or tire dealer to have the vehicle inspected.

### Tire and Wheel Alignment

A bad jolt from hitting a curb or pothole can cause the front end of your vehicle to become misaligned or cause damage to your tires. If your vehicle seems to pull to one side when you're driving, the wheels may be out of alignment. Have an authorized dealer check the wheel alignment periodically.

Wheel misalignment in the front or the rear can cause uneven and rapid treadwear of your tires and should be corrected by an authorized dealer. Front-wheel drive (FWD) vehicles and those with an independent rear suspension (if equipped) may require alignment of all four wheels.

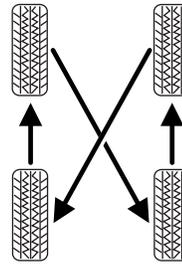
## Tires, Wheels and Loading

The tires should also be balanced periodically. An unbalanced tire and wheel assembly may result in irregular tire wear.

### Tire Rotation

Rotating your tires at the recommended interval (as indicated in the *Scheduled Maintenance* chapter) will help your tires wear more evenly, providing better tire performance and longer tire life.

- Rear-wheel drive (RWD) vehicles  
(front tires at top of diagram)



Sometimes irregular tire wear can be corrected by rotating the tires.

**Note:** If your tires show uneven wear ask an authorized dealer to check for and correct any wheel misalignment, tire imbalance or mechanical problem involved before tire rotation.

**Note:** Your vehicle may be equipped with a dissimilar spare tire/wheel. A dissimilar spare tire/wheel is defined as a spare tire and/or wheel that is different in brand, size or appearance from the road tires and wheels. If you have a dissimilar spare tire/wheel it is intended for temporary use only and should not be used in a tire rotation.

**Note:** After having your tires rotated, inflation pressure must be checked and adjusted to the vehicle requirements.

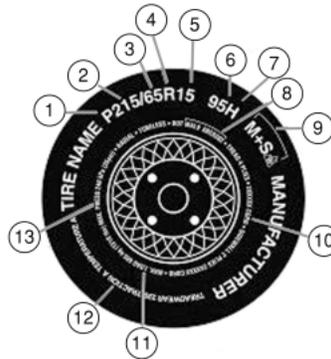
### INFORMATION CONTAINED ON THE TIRE SIDEWALL

Both U.S. and Canada Federal regulations require tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a U.S. DOT Tire Identification Number for safety standard certification and in case of a recall.

## Tires, Wheels and Loading

### Information on “P” type tires

P215/65R15 95H is an example of a tire size, load index and speed rating. The definitions of these items are listed below. (Note that the tire size, load index and speed rating for your vehicle may be different from this example.)



1. **P:** Indicates a tire, designated by the Tire and Rim Association (T&RA), that may be used for service on cars, SUVs, minivans and light trucks.

**Note:** If your tire size does not begin with a letter this may mean it is designated by either ETRTO (European Tire and Rim Technical Organization) or JATMA (Japan Tire Manufacturing Association).

2. **215:** Indicates the nominal width of the tire in millimeters from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

3. **65:** Indicates the aspect ratio which gives the tire's ratio of height to width.

4. **R:** Indicates a “radial” type tire.

5. **15:** Indicates the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

6. **95:** Indicates the tire's load index. It is an index that relates to how much weight a tire can carry. You may find this information in your owner's guide. If not, contact a local tire dealer.

**Note:** You may not find this information on all tires because it is not required by federal law.

## Tires, Wheels and Loading

7. **H:** Indicates the tire's speed rating. The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time under a standard condition of load and inflation pressure. The tires on your vehicle may operate at different conditions for load and inflation pressure. These speed ratings may need to be adjusted for the difference in conditions. The ratings range from 81 mph (130 km/h) to 186 mph (299 km/h). These ratings are listed in the following chart.

**Note:** You may not find this information on all tires because it is not required by federal law.

Letter rating	Speed rating - mph (km/h)
M	81 mph (130 km/h)
N	87 mph (140 km/h)
Q	99 mph (159 km/h)
R	106 mph (171 km/h)
S	112 mph (180 km/h)
T	118 mph (190 km/h)
U	124 mph (200 km/h)
H	130 mph (210 km/h)
V	149 mph (240 km/h)
W	168 mph (270 km/h)
Y	186 mph (299 km/h)

**Note:** For tires with a maximum speed capability over 149 mph (240 km/h), tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 186 mph (299 km/h), tire manufacturers always use the letters ZR.

8. **U.S. DOT Tire Identification Number (TIN):** This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code designating where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, the numbers 317 mean the 31st week of 1997. After 2000 the numbers go to four digits. For example, 2501 means the 25th week of 2001. The numbers in between are identification codes used for traceability. This information is used to contact customers if a tire defect requires a recall.

## Tires, Wheels and Loading

9. **M+S or M/S:** Mud and Snow, or

**AT:** All Terrain, or

**AS:** All Season.

10. **Tire Ply Composition and Material Used:** Indicates the number of plies or the number of layers of rubber-coated fabric in the tire tread and sidewall. Tire manufacturers also must indicate the ply materials in the tire and the sidewall, which include steel, nylon, polyester, and others.

11. **Maximum Load:** Indicates the maximum load in kilograms and pounds that can be carried by the tire. Refer to the Safety Compliance Certification Label, which is located on the B-Pillar or the edge of the driver's door, for the correct tire pressure for your vehicle.

### 12. Treadwear, Traction and Temperature Grades

- **Treadwear:** The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100.
- **Traction:** The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.
- **Temperature:** The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

13. **Maximum Permissible Inflation Pressure:** Indicates the tire manufacturers' maximum permissible pressure and/or the pressure at which the maximum load can be carried by the tire. This pressure is normally higher than the manufacturer's recommended cold inflation pressure which can be found on the Safety Compliance Certification Label or Tire Label which is located on the B-Pillar or the edge of the driver's door. The cold inflation pressure should never be set lower than the recommended pressure on the vehicle label.

The tire suppliers may have additional markings, notes or warnings such as standard load, radial tubeless, etc.

## Tires, Wheels and Loading

### Additional information contained on the tire sidewall for “LT” type tires

“LT” type tires have some additional information beyond those of “P” type tires; these differences are described below.

**Note:** Tire Quality Grades do not apply to this type of tire.

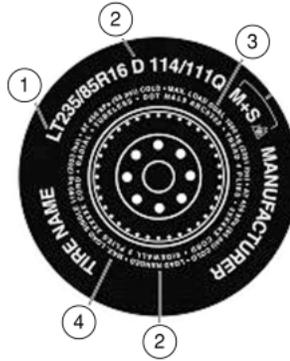
1. **LT:** Indicates a tire, designated by the Tire and Rim Association (T&RA), that is intended for service on light trucks.

#### 2. **Load Range/Load Inflation**

**Limits:** Indicates the tire’s load-carrying capabilities and its inflation limits.

3. **Maximum Load Dual lb (kg) at psi (kPa) cold:** Indicates the maximum load and tire pressure when the tire is used as a dual; defined as four tires on the rear axle (a total of six or more tires on the vehicle).

4. **Maximum Load Single lb (kg) at psi (kPa) cold:** Indicates the maximum load and tire pressure when the tire is used as a single; defined as two tires (total) on the rear axle.



## Tires, Wheels and Loading

### Information on “T” type tires

“T” type tires have some additional information beyond those of “P” type tires; these differences are described below:

T145/80D16 is an example of a tire size.

**Note:** The temporary tire size for your vehicle may be different from this example. Tire Quality Grades do not apply to this type of tire.

1. **T:** Indicates a type of tire, designated by the Tire and Rim Association (T&RA), that is intended for temporary service on cars, SUVs, minivans and light trucks.

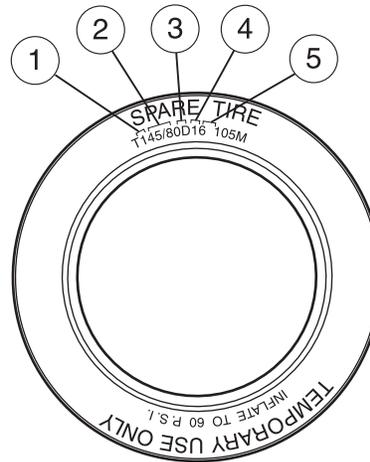
2. **145:** Indicates the nominal width of the tire in millimeters from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

3. **80:** Indicates the aspect ratio which gives the tire’s ratio of height to width. Numbers of 70 or lower indicate a short sidewall.

4. **D:** Indicates a “diagonal” type tire.

**R:** Indicates a “radial” type tire.

5. **16:** Indicates the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.



### Location of the tire label

You will find a Tire Label containing tire inflation pressure by tire size and other important information located on the B-Pillar or the edge of the driver’s door. Refer to the payload description and graphic in the *Vehicle loading – with and without a trailer* section.

## Tires, Wheels and Loading

### TIRE PRESSURE MONITORING SYSTEM (TPMS)

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)



As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

The tire pressure monitoring system complies with part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the 190

## Tires, Wheels and Loading

following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.



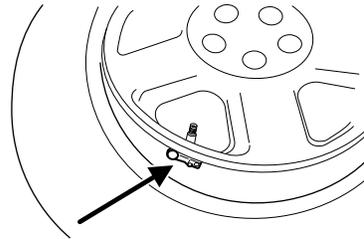
**WARNING:** The tire pressure monitoring system is NOT a substitute for manually checking tire pressure. The tire pressure should be checked periodically (at least monthly) using a tire gauge, see *Inflating your tires* in this chapter. Failure to properly maintain your tire pressure could increase the risk of tire failure, loss of control, vehicle rollover and personal injury.

### Changing Tires with a TPMS

**Note:** Each road tire is equipped with a tire pressure sensor located inside the tire/wheel cavity. The pressure sensor is attached to the valve stem. The pressure sensor is covered by the tire and is not visible unless the tire is removed. Care must be taken when changing the tire to avoid damaging the sensor.

It is recommended that you always have your tires serviced by an authorized dealer.

The tire pressure should be checked periodically (at least monthly) using an accurate tire gauge, refer to *Inflating your tires* in this chapter.



### Understanding your tire pressure monitoring system (TPMS)

The tire pressure monitoring system measures pressure in your four road tires and sends the tire pressure readings to your vehicle. The low tire pressure warning light will turn on if the tire pressure is significantly low. Once the light is illuminated, your tires are under-inflated and need to be inflated to the manufacturer's recommended tire pressure. Even if the light turns on and a short time later turns off, your tire pressure still needs to be checked. Visit [www.checkmytires.org](http://www.checkmytires.org) for additional information.

### When your temporary spare tire is installed

When one of your road tires needs to be replaced with the temporary spare, the TPMS will continue to identify an issue to remind you that the damaged road wheel/tire needs to be repaired and put back on your vehicle.

## Tires, Wheels and Loading

To restore the full functionality of the tire pressure monitoring system, have the damaged road wheel/tire repaired and remounted on your vehicle. For additional information, refer to *Changing tires with a TPMS* in this section.

### **When you believe your system is not operating properly**

The main function of the tire pressure monitoring system is to warn you when your tires need air. It can also warn you in the event the system is no longer capable of functioning as intended. Please refer to the following chart for information concerning your tire pressure monitoring system:

Low tire pressure warning light	Possible cause	Customer action required
Solid warning light	Tire(s) under-inflated	1. Make sure tires are at the proper pressure. See <i>Inflating your tires</i> in this chapter. 2. After inflating your tires to the manufacturer's recommended pressure as shown on the Tire Label (located on the edge of driver's door or the B-Pillar), the vehicle must be driven for at least two minutes over 20 mph (32 km/h) before the light turns off.
	Spare tire in use	Repair the damaged road wheel/tire and reinstall it on the vehicle to restore system functionality. For a description on how the system functions, refer to <i>When your temporary spare tire is installed</i> in this section.
	TPMS malfunction	If the tires are properly inflated and the spare tire is not in use but the light remains on, contact your authorized dealer as soon as possible.

## Tires, Wheels and Loading

Low tire pressure warning light	Possible cause	Customer action required
Flashing warning light	Spare tire in use	Repair the damaged road wheel/tire and reinstall it on the vehicle to restore system functionality. For a description on how the system functions, refer to <i>When your temporary spare tire is installed</i> in this section.
	TPMS malfunction	If the tires are properly inflated and the spare tire is not in use but the light remains on, contact your authorized dealer as soon as possible.

### **When inflating your tires**

When putting air into your tires (such as at a gas station or in your garage), the tire pressure monitoring system may not respond immediately to the air added to your tires.

It may take up to two minutes of driving over 20 mph (32 km/h) for the light to turn off after you have filled your tires to the recommended inflation pressure.

### **How temperature affects your tire pressure**

The tire pressure monitoring system (TPMS) monitors tire pressure in each pneumatic tire. While driving in a normal manner, a typical passenger tire inflation pressure may increase approximately 2 to 4 psi (14 to 28 kPa) from a cold start situation. If the vehicle is stationary overnight with the outside temperature significantly lower than the daytime temperature, the tire pressure may decrease approximately 3 psi (21 kPa) for a drop of 30°F (17°C) in ambient temperature. This lower pressure value may be detected by the TPMS as being significantly lower than the recommended inflation pressure and activate the TPMS warning light for low tire pressure. If the low tire pressure warning light is on, visually check each tire to verify that no tire is flat. (If one or more tires are flat, repair as necessary.) Check air pressure in the road tires. If any tire is under-inflated, carefully drive the vehicle to the nearest location where air can be added to the tires. Inflate all the tires to the recommended inflation pressure.

## Tires, Wheels and Loading

### SNOW TIRES AND CHAINS

 **WARNING:** Driving too fast for conditions creates the possibility of loss of vehicle control. Driving at very high speeds for extended periods of time may result in damage to vehicle components.

 **WARNING:** Snow tires must be the same size, load index, speed rating as those originally provided by Ford. Use of any tire or wheel not recommended by Ford can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death. Additionally, the use of non-recommended tires and wheels could cause steering, suspension, axle or transfer case/power transfer unit failure.

The tires on your vehicle may have all-weather treads to provide traction in rain and snow. However, in some climates, you may need to use snow tires and chains. Use chains on the tires only in an emergency or if the law requires them.

**Note:** The suspension insulation and bumpers will help prevent vehicle damage. Do not remove these components from your vehicle when using snow tires and chains.

Follow these guidelines when using snow tires and chains:

- If possible, avoid fully loading your vehicle.
- Chains may damage aluminum wheels.
- Use only SAE Class S chains with P225/60R17 tires on the rear of the vehicle only.
- Do not use tire chains with any other size tires. Use of SAE Class S chains or other chain types on tires other than a P225/60R17 will damage the vehicle.
- Install chains securely, verifying that the chains do not touch any wiring, brake lines or fuel lines.
- Drive cautiously. If you hear the chains rub or bang against your vehicle, stop and retighten the chains. If this does not work, remove the chains to prevent damage to your vehicle.
- Remove the tire chains when they are no longer needed. Do not use tire chains on dry roads.

## Tires, Wheels and Loading

### SUMMER TIRES

Your Ford vehicle may be equipped with summer tires to provide superior performance on wet and dry roads. Summer tires do not have the Mud and Snow (M+S or M/S) tire traction rating on the tire side wall. Since summer tires do not have the same traction performance as All-season or Snow tires, Ford does not recommend using summer tires when temperatures drop to approximately 40°F (5°C) or below (depending on tire wear and environmental conditions) or in snow/ice conditions. Like any tire, summer tire performance is affected by tire wear and environmental conditions. If you must drive in those conditions, Ford recommends using Mud and Snow (M+S, M/S), All-season or Snow tires.

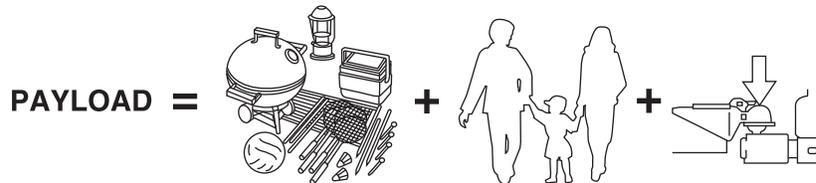
### VEHICLE LOADING – WITH AND WITHOUT A TRAILER

This section will guide you in the proper loading of your vehicle and/or trailer, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Tire Label or Safety Compliance Certification Label:

**Base Curb Weight** – is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

**Vehicle Curb Weight** – is the weight of your new vehicle when you picked it up from your authorized dealer plus any aftermarket equipment.

## Tires, Wheels and Loading



**Payload** – is the combined weight of cargo and passengers that the vehicle is carrying. The maximum payload for your vehicle can be found on the Tire Label on the B-Pillar or the edge of the driver's door (vehicles exported outside the US and Canada may not have a Tire Label). Look for **“THE COMBINED WEIGHT OF OCCUPANTS AND CARGO SHOULD NEVER EXCEED XXX kg OR XXX lb.”** for maximum payload. The payload listed on the Tire Label is the maximum payload for the vehicle as built by the assembly plant. If any aftermarket or authorized-dealer installed equipment has been installed on the vehicle, the weight of the equipment must be subtracted from the payload listed on the Tire Label in order to determine the new payload.

 **WARNING:** The appropriate loading capacity of your vehicle can be limited either by volume capacity (how much space is available) or by payload capacity (how much weight the vehicle should carry). Once you have reached the maximum payload of your vehicle, do not add more cargo, even if there is space available. Overloading or improperly loading your vehicle can contribute to loss of vehicle control and vehicle rollover.

## Tires, Wheels and Loading

Example only:

TIRE AND LOADING INFORMATION				
SEATING CAPACITY		TOTAL 5	FRONT 2	REAR 3
The combined weight of occupants and cargo should never exceed : <b>XXX kg or XXX lbs.</b>				
TIRE	SIZE	COLD TIRE PRESSURE		SEE OWNERS MANUAL FOR ADDITIONAL INFORMATION
FRONT	LT225/75R 16.5E	200 KPA, 29 PSI		
REAR	LT225/75R 16.5E	200 KPA, 29 PSI		
SPARE	T145/80D16 P225/60R17	420 KPA, 60 PSI 200 KPA, 29 PSI		

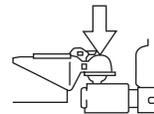
TIRE AND LOADING INFORMATION				
RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT				
SEATING CAPACITY NOMBRE DE PLACES		TOTAL 5	FRONT AVANT 2	REAR ARRIERE 3
The combined weight of occupants and cargo should never exceed 492 kg or 1085 lbs. Le poids total des occupants et du chargement ne doit jamais dépasser 492 kg ou 1085 lb.				
TIRE PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS A FROID		SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION  VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS
FRONT AVANT	P235/70R16	240 KPA, 35 PSI		
REAR ARRIERE	P235/70R16	240 KPA, 35 PSI		
SPARE DE SECOURS	T145/90R17	415 KPA, 60 PSI		

CARGO

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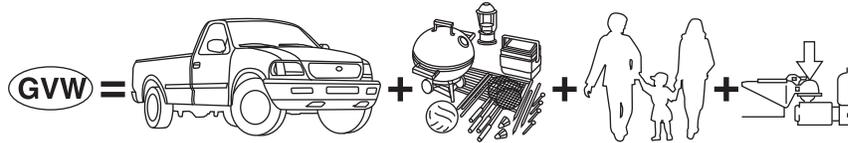
**Cargo Weight** – includes all weight added to the Base Curb Weight, including cargo and optional equipment. When towing, trailer tongue load weight is also part of cargo weight.

## Tires, Wheels and Loading

**GAW (Gross Axle Weight)** – is the total weight placed on each axle (front and rear) – including vehicle curb weight and all payload.

**GAWR (Gross Axle Weight Rating)** – is the maximum allowable weight that can be carried by a single axle (front or rear). **These numbers are shown on the Safety Compliance Certification Label located on the B-Pillar or the edge of the driver's door. The total load on each axle must never exceed its GAWR.**

**Note:** For trailer towing information refer to *Trailer towing* found in this chapter or the *RV and Trailer Towing Guide* provided by your authorized dealer.



**GVW (Gross Vehicle Weight)** – is the Vehicle Curb Weight + cargo + passengers.

**GVWR (Gross Vehicle Weight Rating)** – is the maximum allowable weight of the fully loaded vehicle (including all options, equipment, passengers and cargo). **The GVWR is shown on the Safety Compliance Certification Label located on the B-Pillar or the edge of the driver's door. The GVW must never exceed the GVWR.**

## Tires, Wheels and Loading

- Example only:

**MFD. BY FORD MOTOR CO.**

DATE: XX/XX GVWR: XXXXXLB/ XXXXXKG  
 FRONT GAWR: XXXXL REAR GAWR: XXXXLB  
 XXXXKG WITH XXXXKG WITH  
 XXXX/XXXXXXX TIRES: XXXX/XXXXXXX TIRES  
 XXXX.XX RIMS: XXXX.XX RIMS  
 AT: XXX kPa/XX PSI COLD AT: XXX kPa/XX PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: XXXXXXXXXXXXXXXXXXXX XXXXX  
 TYPE: XXX XXXXX

XXXXXXXXXXXXXXXX XXX XXXX-XXXXXX-XX

EXT PNT: XX RC: XX DSO:  
 WB INT TR TP/PS R AXLE TR SPR XXXXX  
 XXX XX X XX X XX XXX

XXXXXXXXXXXXXXXX XXX XXXX-XXXXXX-XX

**MFD. BY FORD MOTOR CO.**

DATE: XX/XX GVWR/PNBV: XXXX LB/XXXXKG  
 FRONT GAWR/PNBE AV / REAR GAWR/ PNBE AR  
 XXXX/XXXXB / XXXXKG/XXXXLB  
 WITH/AVEC TIRES/PNEUS  
 XXXX/XXXXX RIMS/JANTES XXXX  
 XXXX/XXXXX  
 XXXX

AT/A kPa/PSI/LPC XXX/XX COLD/A FROID XXX/XX /JUMEELES

VIN: XXXXXXXXXXXXXXXXXXXX XXXXX  
 TYPE: XXX/XXXX COMPLIES: XXXX/XXX-XXX XXXXX  
 XXXXX

XXXXXXXXXXXXXXXX XXX XXXX-XXXXXX-XX

EXT PNT: JJ RC: XX DSO:  
 WB INT TR TP/PS R AXLE TR SPR XXXXX  
 XXX XX X XX X XXXX XXX

XXXXXXXXXXXXXXXX XXX XXXX-XXXXXX-XX

 **WARNING:** Exceeding the Safety Compliance Certification Label vehicle weight rating limits could result in substandard vehicle handling or performance, engine, transmission and/or structural damage, serious damage to the vehicle, loss of control and personal injury.

## Tires, Wheels and Loading



**GCW (Gross Combined Weight)** – is the weight of the loaded vehicle (GVW) plus the weight of the fully loaded trailer.

**GCWR (Gross Combined Weight Rating)** – is the maximum allowable weight of the vehicle and the loaded trailer – including all cargo and passengers – that the vehicle can handle without risking damage. (Important: The towing vehicle's braking system is rated for operation at GVWR, not at GCWR. Separate functional brakes should be used for safe control of towed vehicles and for trailers where the GCW of the towing vehicle plus the trailer exceed the GVWR of the towing vehicle. **The GCW must never exceed the GCWR.**

**Maximum Loaded Trailer Weight** – is the highest possible weight of a fully loaded trailer the vehicle can tow. It assumes a vehicle with only mandatory options, no cargo (internal or external), a tongue load of 10–15% (conventional trailer), and driver only (150 lb. [68 kg]). **Consult your authorized dealer (or the *RV and Trailer Towing Guide* provided by your authorized dealer) for more detailed information.**



**WARNING:** Do not exceed the GVWR or the GAWR specified on the Safety Compliance Certification Label.



**WARNING:** Do not use replacement tires with lower load carrying capacities than the original tires because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the original tires do not increase the GVWR and GAWR limitations.



**WARNING:** Exceeding any vehicle weight rating limitation could result in serious damage to the vehicle and/or personal injury.

## Tires, Wheels and Loading

### Steps for determining the correct load limit:

1. Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs.” on your vehicle’s placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1,400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. ( $1400 - 750 (5 \times 150) = 650 \text{ lb.}$ ). In metric units ( $635 - 340 (5 \times 68) = 295 \text{ kg.}$ )
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

The following gives you a few examples on how to calculate the available amount of cargo and luggage load capacity:

- Another example for your vehicle with 1,400 lb. (635 kg) of cargo and luggage capacity. You decide to go golfing. Is there enough load capacity to carry you, 4 of your friends and all the golf bags? You and four friends average 220 lb. (99 kg) each and the golf bags weigh approximately 30 lb. (13.5 kg) each. The calculation would be:  $1,400 - (5 \times 220) - (5 \times 30) = 1,400 - 1,100 - 150 = 150 \text{ lb.}$  Yes, you have enough load capacity in your vehicle to transport four friends and your golf bags. In metric units, the calculation would be:  $635 \text{ kg} - (5 \times 99 \text{ kg}) - (5 \times 13.5 \text{ kg}) = 635 - 495 - 67.5 = 72.5 \text{ kg.}$
- A final example for your vehicle with 1,400 lb. (635 kg) of cargo and luggage capacity. You and one of your friends decide to pick up cement from the local home improvement store to finish that patio you have been planning for the past 2 years. Measuring the inside of the vehicle with the rear seat folded down, you have room for 12-100 lb. (45 kg) bags of cement. Do you have enough load capacity to transport the cement to your home? If you and your friend each weigh 220 lb. (99 kg), the calculation would be:  $1,400 - (2 \times 220) - (12 \times 100) = 1,400 - 440 - 1,200 = -240 \text{ lb.}$  No, you do not have enough cargo capacity to carry that much weight. In metric units, the

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## Tires, Wheels and Loading

calculation would be:  $635 \text{ kg} - (2 \times 99 \text{ kg}) - (12 \times 45 \text{ kg}) = 635 - 198 - 540 = -103 \text{ kg}$ . You will need to reduce the load weight by at least 240 lb. (104 kg). If you remove 3-100 lb. (45 kg) cement bags, then the load calculation would be:

$1,400 - (2 \times 220) - (9 \times 100) = 1,400 - 440 - 900 = 60 \text{ lb}$ . Now you have the load capacity to transport the cement and your friend home. In metric units, the calculation would be:  $635 \text{ kg} - (2 \times 99 \text{ kg}) - (9 \times 45 \text{ kg}) = 635 - 198 - 405 = 32 \text{ kg}$ .

The above calculations also assume that the loads are positioned in your vehicle in a manner that does not overload the Front or the Rear Gross Axle Weight Rating specified for your vehicle on the Safety Compliance Certification Label found on the edge of the driver's door.

### TRAILER TOWING

Trailer towing puts additional loads on your vehicle's engine, transmission, axle, brakes, tires and suspension. For your safety and to maximize vehicle performance, be sure to use the proper equipment while towing.

Your vehicle is capable of towing a trailer up to 1,000 lb (454 kg) gross trailer weight with a maximum tongue load of 100 lb (45 kg). **Do not tow** with the GT Deluxe or Shelby GT500; they are not rated to tow a trailer.

Follow these guidelines to ensure safe towing:

- Do not tow a trailer until your vehicle has been driven at least 500 miles (800 km).
- Consult your local motor vehicle laws for towing a trailer.
- Refer to the instructions included with towing accessories for the proper installation and adjustment specifications.
- Thoroughly prepare your vehicle for towing. Refer to *Preparing to tow* in this chapter.
- Stay within your vehicle's load limits.
- Use extra caution when driving while trailer towing. Refer to *Driving while you tow* in this chapter.
- Service your vehicle more frequently if you tow a trailer. Refer to *Special operating conditions* in your scheduled maintenance.

For load specification terms found on the label and instructions on calculating your vehicle's load, refer to *Vehicle loading - with and without a trailer* in this chapter. Remember to figure in the tongue load of your loaded vehicle when figuring the total weight.

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## Tires, Wheels and Loading



**WARNING:** Do not exceed the GVWR or the GAWR specified on the certification label.



**WARNING:** Towing trailers beyond the maximum recommended gross trailer weight exceeds the limit of the vehicle and could result in engine damage, transmission damage, structural damage, loss of vehicle control, vehicle rollover and personal injury.

### Preparing to tow

Use the proper equipment for towing a trailer and make sure it is properly attached to your vehicle. Contact your authorized dealer or a reliable trailer dealer as soon as possible if you require assistance.

### Hitches

Do not use a hitch that clamps onto the vehicle's bumper; use a load-carrying hitch. You must distribute the load in your trailer so that 10–15% of the total weight of the trailer is on the tongue.

### Safety chains

Always connect the trailer's safety chains to the frame or hook retainers of the vehicle hitch. To connect the trailer's safety chains, cross the chains under the trailer tongue and allow slack for turning corners.

If you use a rental trailer, follow the instructions that the rental agency gives to you.

**Do not attach safety chains to the bumper.**

### Trailer brakes

Electric brakes and manual, automatic or surge-type trailer brakes are safe if installed properly and adjusted to the manufacturer's specifications. The trailer brakes must meet local and Federal regulations.



**WARNING:** Do not connect a trailer's hydraulic brake system directly to your vehicle's brake system. Your vehicle may not have enough braking power and your chances of having a collision greatly increase.

The braking system of the tow vehicle is rated for operation at the GVWR not GCWR.

## Tires, Wheels and Loading

### Trailer lamps

Trailer lamps are required on most towed vehicles. Make sure all running lights, brake lights, turn signals and hazard lights are working.

**Do not splice into the vehicle lamp wiring for trailer lamps. Your vehicle uses an advanced electronic module to control and monitor your vehicle lamps. Splicing into the wiring or attaching wiring to the vehicle bulb, may DISABLE the rear vehicle lamps or cause them not to function properly.**

Contact your authorized dealer as soon as possible for proper instructions and equipment for hooking-up trailer lamps.

### Driving while you tow

When towing a trailer:

- Do not drive faster than 70 mph (113 km/h) during the first 500 miles (800 km) of trailer towing and don't make full-throttle starts.
- Turn off the speed control. The speed control may shut off automatically when you are towing on long, steep grades.
- Use the grade assist feature (automatic transmissions) when towing. This feature provides engine braking and helps eliminate excessive shifting for optimum fuel economy and transmission cooling.
- Allow more distance for stopping with a trailer attached; anticipate stops and brake gradually.

### Trailer towing tips

- Practice turning, stopping and backing-up before starting on a trip to get the feel of the vehicle-trailer combination. When turning, make wider turns so the trailer wheels will clear curbs and other obstacles.
- To aid in engine/transmission cooling and A/C efficiency during hot weather while stopped in traffic, place the gearshift lever in P (Park) (automatic transmission) or neutral (manual transmissions).
- After you have traveled 50 miles (80 km), thoroughly check your hitch, electrical connections and trailer wheel lug nuts.
- If you are driving down a long or steep hill, shift to a lower gear. Do not apply the brakes continuously, as they may overheat and become less effective.
- Vehicles with trailers should not be parked on a grade. If you must park on a grade, place wheel chocks under the trailer's wheels.

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## Tires, Wheels and Loading

### RECREATIONAL TOWING

Follow these guidelines if you have a need for recreational (RV) towing. An example of recreational towing would be towing your vehicle behind a motorhome. These guidelines are designed to ensure that your transmission is not damaged.

Do not tow your vehicle with any wheels on the ground, as vehicle or transmission damage may occur. It is recommended to tow your vehicle with all four (4) wheels off the ground such as when using a car-hauling trailer. Otherwise, no recreational towing is permitted.

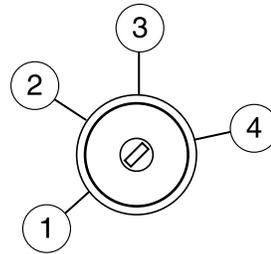
In case of a roadside emergency with a disabled vehicle, see *Wrecker towing* in the *Roadside Emergencies* chapter.

## Driving

### STARTING

#### Positions of the ignition

1. Off — locks the automatic transmission gearshift lever and allows key removal. **Note:** In order to switch off the engine while the vehicle is in motion, shift to neutral and use the brakes to bring the vehicle to a safe stop. After the vehicle has stopped, turn the engine off and shift into park. Then, turn the key to the accessory or off position.



**Note:** The ignition key cannot be removed from the ignition unless the gearshift lever is securely latched in P (Park).

2. Accessory — allows the electrical accessories such as the radio to operate while the engine is not running.

3. On — all electrical circuits operational. Warning lights illuminated. Key position when driving.

4. Start — cranks the engine. Release the key as soon as the engine starts.

**Note:** Do not store the key in the ignition after the vehicle is turned off and you have left the vehicle. This could cause a drain on the battery.

#### Preparing to start your vehicle

Engine starting is controlled by the powertrain control system.

This system meets all Canadian interference-causing equipment standard requirements regulating the impulse electrical field strength of radio noise.

When starting a fuel-injected engine, don't press the accelerator before or during starting. Only use the accelerator when you have difficulty starting the engine. For more information on starting the vehicle, refer to *Starting the engine* in this chapter.



**WARNING:** Extended idling at high engine speeds can produce very high temperatures in the engine and exhaust system, creating the risk of fire or other damage.

## Driving

 **WARNING:** Do not park, idle, or drive your vehicle in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, which can start a fire.

 **WARNING:** Do not start your vehicle in a closed garage or in other enclosed areas. Exhaust fumes can be toxic. Always open the garage door before you start the engine. See *Guarding against exhaust fumes* in this chapter for more instructions.

 **WARNING:** If you smell exhaust fumes inside your vehicle, have your dealer inspect your vehicle immediately. Do not drive if you smell exhaust fumes.

### ***Important safety precautions***

A computer system controls the engine's idle revolutions per minute (RPM). When the engine starts, the idle RPM runs higher than normal in order to warm the engine. If the engine idle speed does not slow down automatically, have the vehicle checked. Do not allow the vehicle to idle for more than 10 minutes at the higher engine RPM.

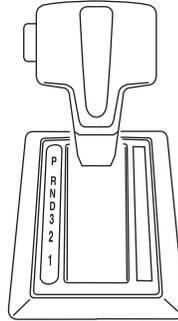
Before starting the vehicle:

1. Make sure all vehicle occupants have buckled their safety belts. For more information on safety belts and their proper usage, refer to the *Seating and Safety Restraints* chapter.
2. Make sure the headlamps and vehicle accessories are off.

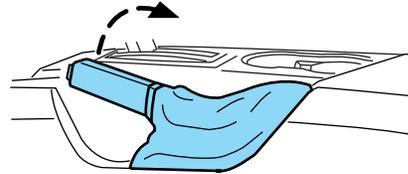
## Driving

If starting a vehicle with an automatic transmission:

- Make sure the gearshift is in P (Park).

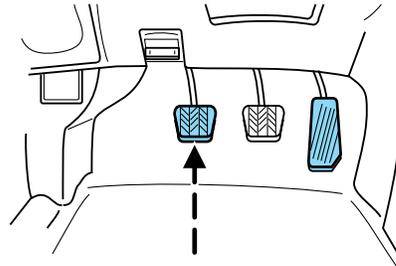


- Make sure the parking brake is set.

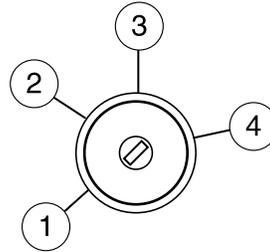


If starting a vehicle with a manual transmission:

- Make sure the parking brake is set.
- Push the clutch pedal to the floor



3. Turn the key to 3 (on) without turning the key to 4 (start).

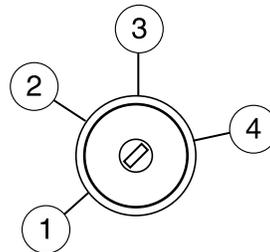


Some warning lights will briefly illuminate. See *Warning lights and chimes* in the *Instrument Cluster* chapter for more information regarding the warning lights.

### Starting the engine

1. Turn the key to 3 (on) without turning the key to 4 (start). If there is difficulty in turning the key, rotate the steering wheel until the key turns freely.

2. Turn the key to 4 (start), then release the key as soon as the engine begins cranking. Your vehicle has a computer assisted cranking system that assists in starting the engine. After releasing the key from the 4 (start) position, the engine may continue cranking for up to 10 seconds or until the vehicle starts.



**Note:** Cranking may be stopped at any time by turning the key to the off position.

**Note:** If the engine does not start within five seconds on the first try, turn the key to off, wait 10 seconds and try again. If the engine still fails to start, press and hold the accelerator to the floor and try again; this will allow the engine to crank with the fuel shut off in case the engine is flooded with fuel.

## Driving

### Guarding Against Exhaust Fumes

 **WARNING:** If you smell exhaust fumes inside your vehicle, have this checked immediately. Do not drive your vehicle if you smell exhaust fumes. Carbon monoxide is present in exhaust fumes. Take precautions to avoid its dangerous effects.

### Important Ventilating Information

If you stop your vehicle and leave the engine idling for long periods of time, we recommend that you do one of the following:

- Open the windows at least 1 inch (2.5 cm).
- Set your climate control to outside air.

### ENGINE BLOCK HEATER (IF EQUIPPED)

 **WARNING:** Failure to follow engine block heater instructions could result in property damage or physical injury.

 **WARNING:** To reduce the risk of electrical shock, do not use your heater with ungrounded electrical systems or two-pronged (cheater) adapters.

An engine block heater warms the engine coolant which aids in starting and allows the heater/defroster system to respond quickly. If your vehicle is equipped with this system, your equipment includes a heater element which is installed in your engine block and a wire harness which allows the user to connect the system to a grounded 120 volt A/C electrical source. The block heater system is most effective when outdoor temperatures reach below 0°F (-18°C).

Prior to using the engine block heater, follow these recommendations for proper and safe operation:

- For your safety, use an outdoor extension cord that is product certified by Underwriter's Laboratory (UL) or Canadian Standards Association (CSA). Use only an extension cord that can be used outdoors, in cold temperatures, and is clearly marked "Suitable for Use with Outdoor Appliances." Never use an indoor extension cord outdoors; it could result in an electric shock or fire hazard.
- Use a 16-gauge outdoor extension cord, minimum.
- Use as short an extension cord as possible.

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## Driving

- Do not use multiple extension cords. Instead, use one extension cord which is long enough to reach from the engine block heater cord to the outlet without stretching.
- Make certain that the extension cord is in excellent condition (not patched or spliced). Store your extension cord indoors at temperatures above 32°F (0°C). Outdoor conditions can deteriorate extension cords over a period of time.
- To reduce the risk of electrical shock, do not use your heater with ungrounded electrical systems or two pronged (cheater) adapters. Also ensure that the block heater, especially the cord, is in good condition before use.
- Make sure that when in operation, the extension cord plug/engine block heater cord plug connection is free and clear of water in order to prevent possible shock or fire.
- Be sure that areas where the vehicle is parked are clean and clear of all combustibles such as petroleum products, dust, rags, paper and similar items.
- Be sure that the engine block heater, heater cord and extension cord are solidly connected. A poor connection can cause the cord to become very hot and may result in an electrical shock or fire. Be sure to check for heat anywhere in the electrical hookup once the system has been operating for approximately a half hour.
- Finally, have the engine block heater system checked during your fall tune-up to be sure it's in good working order.

### **How to use the engine block heater**

Ensure the receptacle terminals are clean and dry prior to use. To clean them, use a dry cloth.

Depending on the type of factory installed equipment, your engine block heater will use .4 to 1.0 kilowatt-hours of energy per hour of use. Your factory installed block heater system does not have a thermostat; however, maximum temperature is attained after approximately three hours of operation. Block heater operation longer than three hours will not improve system performance and will unnecessarily use additional electricity.

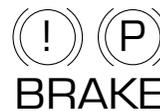
Make sure system is unplugged and properly stowed before driving the vehicle. While not in use, make sure the protective cover seals the prongs of the engine block heater cord plug.

## Driving

### BRAKES

Occasional brake noise is normal. If a metal-to-metal, continuous grinding or continuous squeal sound is present, the brake linings may be worn-out and should be inspected by an authorized dealer. If the vehicle has continuous vibration or shudder in the steering wheel while braking, the vehicle should be inspected by an authorized dealer.

Refer to *Warning lights and chimes* in the *Instrument Cluster* chapter for information on the brake system warning light.



### Four-wheel anti-lock brake system (ABS)

Your vehicle is equipped with an anti-lock braking system (ABS). This system helps you maintain steering control during emergency stops by keeping the brakes from locking. Noise from the ABS pump motor and brake pedal pulsation may be observed during ABS braking; any pulsation or mechanical noise you may feel or hear is normal.

#### Using ABS

When hard braking is required, apply continuous force on the brake pedal. Do not pump the brake pedal since this will reduce the effectiveness of the ABS and will increase your vehicle's stopping distance. The ABS will be activated immediately, allowing you to retain steering control during hard braking and on slippery surfaces. However, the ABS does not decrease stopping distance.

#### ABS warning lamp

The ABS lamp in the instrument cluster momentarily illuminates when the ignition is turned on. If the light does not illuminate during start up, remains on or flashes, the ABS may be disabled and may need to be serviced.



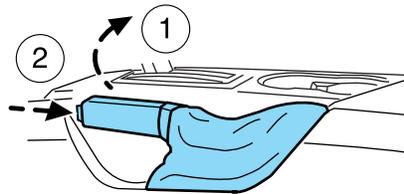
Even when the ABS is disabled, normal braking is still effective. If your BRAKE warning lamp illuminates with the parking brake released, have your brake system serviced immediately.



## Driving

### Parking brake

To set the parking brake (1), pull the parking brake handle up as far as possible.



The BRAKE warning lamp will illuminate and will remain illuminated until the parking brake is released.



To release, press and hold the button (2), pull the handle up slightly, then push the handle down.

**WARNING:** Always set the parking brake fully and make sure that the gearshift is securely latched in P (Park) (automatic transmission) or in 1 (First) (manual transmission).

**WARNING:** If the parking brake is fully released, but the brake warning lamp remains illuminated, the brakes may not be working properly. See your authorized dealer as soon as possible.

### ADVANCETRAC® STABILITY ENHANCEMENT SYSTEM

Your vehicle is equipped with the AdvanceTrac® system. The AdvanceTrac® system provides the following stability enhancement features for certain driving situations:

- Traction control system (TCS), which functions to help avoid drive-wheel spin and loss of traction.
- Electronic stability control (ESC), which functions to help avoid skids or lateral slides

## Driving

 **WARNING:** Vehicle modifications involving braking system, aftermarket roof racks, suspension, steering system, tire construction and/or wheel/tire size may change the handling characteristics of the vehicle and may adversely affect the performance of the AdvanceTrac® system. In addition, installing any stereo loudspeakers may interfere with and adversely affect the AdvanceTrac® system. Install any aftermarket stereo loudspeaker as far as possible from the front center console, the tunnel, and the front seats in order to minimize the risk of interfering with the AdvanceTrac® sensors. Reducing the effectiveness of the AdvanceTrac® system could lead to an increased risk of loss of vehicle control, vehicle rollover, personal injury and death.

 **WARNING:** Remember that even advanced technology cannot defy the laws of physics. It's always possible to lose control of a vehicle due to inappropriate driver input for the conditions. Aggressive driving on any road condition can cause you to lose control of your vehicle increasing the risk of personal injury or property damage. Activation of the AdvanceTrac® system is an indication that at least some of the tires have exceeded their ability to grip the road; this could reduce the operator's ability to control the vehicle potentially resulting in a loss of vehicle control, vehicle rollover, personal injury and death. If your AdvanceTrac® system activates, SLOW DOWN.

 **WARNING:** If a failure has been detected within the AdvanceTrac® system, the stability control light and the stability control off light will illuminate steadily. If the stability control light and the stability control off light illuminate steadily, contact your authorized dealer as soon as possible to have the system serviced immediately. Operating your vehicle with AdvanceTrac® disabled could lead to an increased risk of loss of vehicle control, vehicle rollover, personal injury and death.

The AdvanceTrac® system automatically enables each time the engine is started. All features of the AdvanceTrac® system (TCS and ESC) are active and monitor the vehicle from start-up. However, the system will only intervene if the driving situation requires it.

The AdvanceTrac® system includes a stability control button located on the center console, a stability control light and a stability control off light in the instrument cluster.



Both the stability control light and the stability control off light in the instrument cluster will illuminate temporarily during start-up as part of a normal system self-check. The stability control light may illuminate (flash) during certain driving situations which cause the AdvanceTrac® system to operate. If the stability control light and the stability control off light illuminate steadily, contact your authorized dealer as soon as possible to have the system serviced immediately. If equipped with a message center, the vehicle will also indicate a failure with the AdvanceTrac® system.

When AdvanceTrac® performs a normal system self-check, some drivers may notice a slight movement of the brake, and/or a rumble, grunting, or grinding noise after startup and when driving off.

When an event occurs that activates AdvanceTrac® you may experience the following:

- A slight deceleration of the vehicle
- The stability control light will flash.
- A vibration in the pedal when your foot is on the brake pedal
- If the driving condition is severe and your foot is not on the brake, the brake pedal may move as the systems applies higher brake forces. You may also hear a whoosh of air from under the instrument panel during this severe condition.
- The brake pedal may feel stiffer than usual.

### **Traction control system (TCS)**

Traction control is a driver aid feature that helps your vehicle maintain traction of the wheels, typically when driving on slippery and/or hilly road surfaces, by detecting and controlling wheel spin.

Excessive wheel spin is controlled in two ways, which may work separately or in tandem, engine traction control and brake traction control. Engine traction control works to limit drive-wheel spin by momentarily reducing engine power. Brake traction control works to limit wheel spin by momentarily applying the brakes to the wheel that is slipping. Traction control is most active at low speeds.

During TCS events, the stability control light in the instrument cluster will flash.

## Driving

If the TCS is activated excessively in a short period of time, the braking portion of the system may become temporarily disabled to allow the brakes to cool down. In this situation, the TCS will use only engine power reduction or transfer to help control the wheels from over-spinning. When the brakes have cooled down, the system will regain all features. Anti-lock braking, and ESC are not affected by this condition and will continue to function during the cool-down period.

The engine traction control and brake traction control system may be deactivated in certain situations. See the *Switching off AdvanceTrac®* section below.

If you should become stuck in snow or ice or on a very slippery road surface, try switching the TCS off. This may allow excess wheel spin to “dig” the vehicle out and enable a successful “rocking” maneuver.

### **Electronic stability control (ESC)**

Electronic stability control (ESC) may enhance your vehicle’s directional stability during adverse maneuvers, for example when cornering severely or avoiding objects in the roadway. ESC operates by applying brakes to one or more of the wheels individually and, if necessary, reducing engine power if the system detects that the vehicle is about to skid or slide laterally.

During ESC events, the stability control light in the instrument cluster will flash.

Certain adverse driving maneuvers may activate the ESC system, which include but are not limited to:

- Taking a turn too fast
- Maneuvering quickly to avoid an accident, pedestrian or obstacle
- Driving over a patch of ice or other slippery surfaces
- Changing lanes on a snow-rutted road
- Entering a snow-free road from a snow-covered side street, or vice versa
- Entering a paved road from a gravel road, or vice versa
- Cornering while towing a heavily loaded trailer (refer to *Trailer towing* in the *Tires, Wheels and Loading* chapter).

### **Switching off AdvanceTrac®**

If the vehicle is stuck in snow, mud or sand, and seems to lose engine power, switching off certain features of the AdvanceTrac® system may be beneficial because the wheels are allowed to spin. This will restore full engine power and will enhance momentum through the obstacle.

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## Driving

The stability control button can be used to enable unique AdvanceTrac® modes.



Full features of the AdvanceTrac® system can be restored by pressing the stability control button again or by turning off and restarting the engine.

When features of the AdvanceTrac® system are off, the stability control off light will illuminate steadily. Pressing the stability control button again will turn off the stability control off light.



In R (Reverse), ABS and the engine traction control and brake traction control features will continue to function; however, ESC is disabled.

AdvanceTrac® Features				
Button functions	Mode	 icon status	ESC	TCS
Default at start-up	—	On during bulb check	Enabled	Enabled
Button pressed momentarily	Traction control off	On	Enabled	Disabled
Button pressed twice; brakes applied	Sport mode (if equipped)	On	Enabled	Enabled
Button pressed and held more than 5 seconds; brakes applied; no throttle	AdvanceTrac® Disabled	On	Disabled	Disabled
Button pressed again after deactivation	AdvanceTrac® fully enabled	Off	Enabled	Enabled

## Driving

### **AdvanceTrac® Sport Mode (if equipped)**

The AdvanceTrac® system provides an available sport mode on some models. This can be selected utilizing the stability off button as shown in the table above.

Sport mode is not intended for use on public roadways as this mode provides less AdvanceTrac® system intervention than when the default ESC and traction control systems are on. Sport mode will allow more spirited driving while the AdvanceTrac® system is still enabled.

### **STEERING**

Your vehicle is equipped with an electric power-assisted steering (EPAS) system. There is no fluid reservoir to check or fill.

If your vehicle loses electrical power while you are driving (or if the ignition is turned off), you can steer the vehicle manually, but it takes more effort. Under extreme usage conditions, the steering effort may increase. This occurs to prevent overheating and permanent damage to your steering system. If this should occur, you will neither lose the ability to steer the vehicle manually nor will it cause permanent damage. Typical steering and driving maneuvers will allow the system to cool and steering assist will return to normal.

If the steering wanders or pulls, check for:

- an improperly inflated tire.
- uneven tire wear.
- loose or worn suspension components.
- loose or worn steering components.
- improper steering alignment.

A high crown in the road or high crosswinds may also make the steering seem to wander/pull.

### **Selectable steering**

You can select the desired steering feel through the message center. The settings are:

- Standard: Default factory setting.
- Sport: Slightly higher effort required for steering with more road force felt through the steering wheel.
- Comfort: Slightly less effort required for steering with less road force felt through the steering wheel.

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## Driving

After selecting the desired setting, you may feel a soft feedback bump in the steering wheel when the changeover occurs.

**Note:** If the battery is disconnected or removed, the steering setting will default to standard.

Refer to *Message center* in the *Instrument Cluster* chapter.

### AXLE INFORMATION

#### **Traction-Lok™ axle (if equipped)**

This axle provides added traction on slippery surfaces, particularly when one wheel is on a poor traction surface. Under normal conditions, the Traction-Lok™ axle functions like a standard rear axle.

Extended use of other than the manufacturer's specified size tires on a Traction-Lok™ rear axle could result in a permanent reduction in effectiveness. This loss of effectiveness does not affect normal driving and should not be noticeable to the driver.

#### **Axle with Torsen™ differential (if equipped)**

This axle provides added traction on slippery surfaces, particularly when one wheel is on a poor traction surface. Under normal conditions, the axle equipped with a Torsen™ differential functions like a standard rear axle.

Extended use of other than the manufacturer's specified size tires on a rear axle equipped with a Torsen™ differential could result in a permanent reduction in effectiveness. This loss of effectiveness does not affect normal driving and should not be noticeable to the driver.

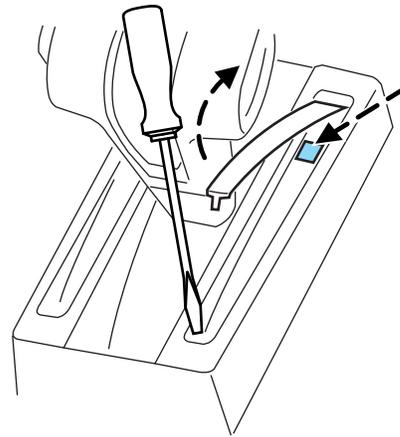
### **BRAKE-SHIFT INTERLOCK**

This vehicle is equipped with a brake-shift interlock feature that prevents the gearshift lever from being moved from P (Park) when the ignition is in the on position unless the brake pedal is pressed.

## Driving

If you cannot move the gearshift lever out of P (Park) with ignition in the on position and the brake pedal pressed:

1. Apply the parking brake.
2. Using a flat head screwdriver or similar tool, remove the cap.
3. Locate the access hole at the front of the area under the cover.
4. Insert the screwdriver or similar tool into the hole and press and hold the lever forward while pulling the gearshift lever out of the P (Park) position and into the N (Neutral) position.
5. Reinstall the cap.
6. Start the vehicle.



If it is necessary to use the above procedure to move the gearshift lever, it is possible that a fuse has blown or the vehicle's brake lamps are not operating properly. Refer to *Fuses and relays* in the *Roadside Emergencies* chapter.



**WARNING:** Do not drive your vehicle until you verify that the brakelamps are working.



**WARNING:** When doing this procedure, you will be taking the vehicle out of park which means the vehicle can roll freely. To avoid unwanted vehicle movement, always fully set the parking brake prior to doing this procedure. Use wheel chocks if appropriate.



**WARNING:** If the parking brake is fully released, but the brake warning lamp remains illuminated, the brakes may not be working properly. Contact your authorized dealer as soon as possible to have the system serviced immediately.

### AUTOMATIC TRANSMISSION (IF EQUIPPED)

#### Driving with a 6-speed automatic transmission

Your vehicle has been designed to improve fuel economy by reducing fuel usage while coasting or decelerating. When you take your foot off the accelerator pedal and the vehicle begins to slow down the torque converter clutch locks up and aggressively shuts off fuel flow to the engine while decelerating. This fuel economy benefit may be perceived as a light to medium braking sensation when removing your foot from the accelerator pedal.

This vehicle is equipped with an adaptive transmission shift strategy. The adaptive transmission shift strategy offers the optimal transmission operation and shift quality. When the engine is turned off, the shift data which includes the adaptive information will be stored automatically in the powertrain control module (PCM). If the battery is disconnected for any reason, the stored information from the last time the key was turned to off will be read. This way, no information will be lost with any battery removal or battery disconnect.

#### **P (Park)**

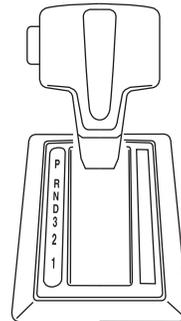
This position locks the transmission and prevents the rear wheels from turning.

To put your vehicle in gear:

1. Start the engine.
2. Press the brake pedal.
3. Move the gearshift lever into the desired gear.

To put your vehicle in P (Park):

1. Come to a complete stop.
2. Move the gearshift lever and securely latch it in P (Park).



**WARNING:** Always set the parking brake fully and make sure the gearshift is latched in P (Park). Turn the ignition to the off position and remove the key whenever you leave your vehicle.

#### **R (Reverse)**

With the gearshift lever in R (Reverse), the vehicle will move backward. Always come to a complete stop before shifting into and out of R (Reverse).

## Driving

### **N (Neutral)**

With the gearshift lever in N (Neutral), the vehicle can be started and is free to roll. Hold the brake pedal down while in this position.

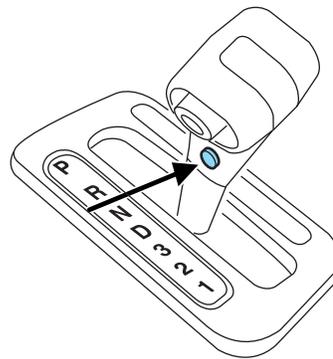
### **D (Drive) standard mode**

The normal driving position for the best fuel economy. Transmission operates in gears one through six.

### **D (Drive) with grade assist**

Press the transmission control switch on the side of the shift handle to activate grade assist.

- This position allows for gears 1–5 and provides increased engine braking.



- Grade assist lamp is illuminated.
- Use with driving conditions such as hilly terrain, heavy loads, trailer towing and when engine braking is required.
- To return to standard mode, press the transmission control switch. The grade assist lamp will not be illuminated.
- Standard mode is automatically returned each time the key is turned off.



### **3 (Third)**

Transmission operates in third gear only.

- Used for improved traction on slippery roads.
- To return to D (Drive), move the transmission shift lever into the D (Drive) position.

### **2 (Second)**

Transmission operates in second gear only.

- Use to start-up on slippery roads.

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## Driving

- To return to D (Drive) standard mode or 3 (Third), move the transmission shift lever into the D (Drive) or 3 (Third) position.
- Selecting 2 (Second) at higher speeds will cause the transmission to downshift to second gear at the appropriate vehicle speed.

### **1 (First)**

This position allows for first gear only.

- Provides maximum engine braking.
- Will not downshift into first gear at high speeds; will cause the transmission to downshift to a lower gear, then allows for first gear when the vehicle reaches slower speeds.

### **Forced downshifts**

- Allowed in D (Drive).
- Press the accelerator to the floor.
- Allows transmission to select an appropriate gear.

### **If your vehicle gets stuck in mud or snow**

**Note:** Do not rock the vehicle if the engine is not at normal operating temperature or damage to the transmission may occur.

**Note:** Do not rock the vehicle for more than a minute or damage to the transmission and tires may occur, or the engine may overheat.

If your vehicle gets stuck in mud or snow, it may be rocked out by shifting between forward and reverse gears, stopping between shifts in a steady pattern. Press lightly on the accelerator in each gear.

## **MANUAL TRANSMISSION OPERATION (IF EQUIPPED)**

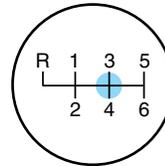
### **Using the clutch**

Manual transmission vehicles have a starter interlock that prevents cranking the engine unless the clutch pedal is fully pressed.

## Driving

To start the vehicle:

1. Make sure the parking brake is fully set.
2. Press the clutch pedal to the floor, then put the gearshift lever in the neutral position.
3. Start the engine.



4. Press the brake pedal and move the gearshift lever to the desired gear; 1 (First) or R (Reverse).
5. Release the parking brake, then slowly release the clutch pedal while slowly pressing on the accelerator.

During each shift, the clutch pedal must be fully pressed to the floor. Make sure the floor mat is properly positioned so it doesn't interfere with the full extension of the clutch pedal.

**Failure to fully press the clutch pedal to the floor may cause increased shift efforts, prematurely wear transmission components or damage the transmission.**

**Do not drive with your foot resting on the clutch pedal or use the clutch pedal to hold your vehicle at a standstill while waiting on a hill. These actions will severely reduce the life of the clutch and could nullify a clutch warranty claim.**

### Recommended shift speeds

**Do not downshift into 1 (First) when your vehicle is moving faster than 15 mph (24 km/h). This may damage the clutch and/or transmission.**

Upshift according to the following charts.

For the 3.7L V6 with 2.73 axle ratio, shift according to the following chart:

Upshifts when accelerating (recommended for best fuel economy)	
Shift from:	
1 - 2	15 mph (24 km/h)
2 - 3	25 mph (40 km/h)
3 - 4	40 mph (64 km/h)
4 - 5	45 mph (72 km/h)
5 - 6	50 mph (80 km/h)

## Driving

For the 3.7L V6 with 3.31 axle ratio, shift according to the following chart:

<b>Upshifts when accelerating (recommended for best fuel economy)</b>	
Shift from:	
1 - 2	13 mph (21 km/h)
2 - 3	26 mph (42 km/h)
3 - 4	37 mph (59 km/h)
4 - 5	43 mph (69 km/h)
5 - 6	59 mph (95 km/h)

For the 5.0L V8, shift according to the following chart:

<b>Upshifts when accelerating (recommended for best fuel economy)</b>	
Shift from (When not in skip shift mode):	
1 - 2	17 mph (27 km/h)
2 - 3	25 mph (40 km/h)
3 - 4	40 mph (64 km/h)
4 - 5	45 mph (72 km/h)
5 - 6	50 mph (80 km/h)
Shift from (When skip shift mode active):	
1-4	17 mph (27 km/h)
4-5	25 mph (40 km/h)
5-6	40 mph (64 km/h)

### **Skip Shift (if equipped) (V8 engines only)**

This feature locks out 2 (Second) and 3 (Third) gears for improved fuel economy. If the message center displays 1-> 4 SHIFT, shift the transmission directly from 1 (First) to 4 (Fourth), otherwise you can shift normally. Refer to *Message center* in the *Instrument Cluster* chapter.

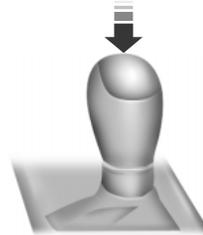
### **Reverse**

**Note:** The gearshift lever can only be moved to R (Reverse) by pushing the knob down before shifting to reverse. This is a lockout feature which protects the transmission from accidentally engaging R (Reverse) when intending to select 1 (First).

1. Make sure that your vehicle is at a complete stop before you shift into R (Reverse). Failure to do so may damage the transmission.

## Driving

2. Press the clutch pedal to the floor to disengage clutch.
3. Shift into R (Reverse) by pushing the gearshift knob down, then moving the lever fully to the left, then forward.



If R (Reverse) is not fully engaged, press the clutch pedal down and return the gearshift to the neutral position. Release the clutch pedal for a moment, then press it down and shift to R (Reverse) again.

### Parking your vehicle

1. Apply the brake and shift into the neutral position.
2. Fully apply the parking brake, hold the clutch pedal down, then shift into 1 (First).
3. Turn the ignition off.



**WARNING:** Do not park your vehicle in Neutral, it may move unexpectedly and injure someone. Use 1 (First) gear and set the parking brake fully.

### REVERSE SENSING SYSTEM (IF EQUIPPED)

The reverse sensing system (RSS) sounds a tone to warn the driver of obstacles near the rear bumper when the R (Reverse) is selected and the vehicle is moving at speeds less than 3 mph (5 km/h). The system is not effective at speeds above 3 mph (5 km/h) and may not detect certain angular or moving objects.



**WARNING:** To help avoid personal injury, please read and understand the limitations of the reverse sensing system as contained in this section. Reverse sensing is only an aid for some (generally large and fixed) objects when moving in reverse on a flat surface at “parking speeds”. Inclement weather may also affect the function of the RSS; this may include reduced performance or a false activation.

## Driving

 **WARNING:** To help avoid personal injury, always use caution when in R (Reverse) and when using the RSS.

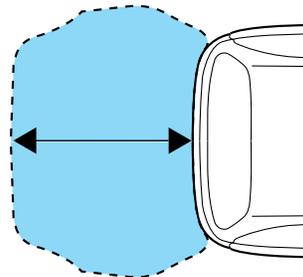
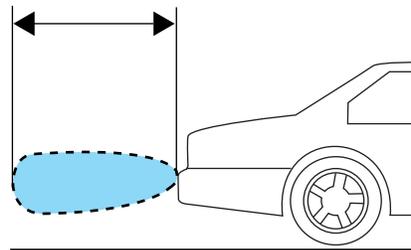
 **WARNING:** This system is not designed to prevent contact with small or moving objects. The system is designed to provide a warning to assist the driver in detecting large stationary objects to avoid damaging the vehicle. The system may not detect smaller objects, particularly those close to the ground.

 **WARNING:** Certain add-on devices such as large trailer hitches, bike or surfboard racks and any device that may block the normal detection zone of the RSS system may create false beeps.

The RSS detects obstacles up to six feet (two meters) from the rear bumper with a decreased coverage area at the outer corners of the bumper, (refer to the figures for approximate zone coverage areas). As you move closer to the obstacle, the rate of the tone increases. When the obstacle is less than 10 inches (25.0 cm) away, the tone will sound continuously. If the RSS detects a stationary or receding object further than 10 inches (25.0 cm) from the side of the vehicle, the tone will sound for only three seconds. Once the system detects an object approaching, the tone will sound again.

While receiving a warning the radio volume will be reduced to a predetermined level. After the warning goes away, the radio will return to the previous value.

The RSS automatically turns on when the gearshift lever is placed in R (Reverse) and the ignition is on. A control in the message center allows the driver to disable the system, refer to *Message center* in the *Instrument Cluster* chapter for more information.



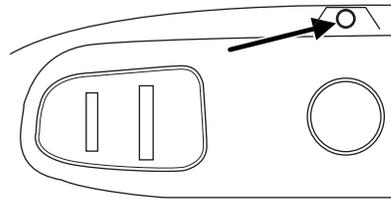
## Driving

**Keep the RSS sensors (located on the rear bumper/fascia) free from snow, ice and large accumulations of dirt (do not clean the sensors with sharp objects). If the sensors are covered, it will affect the accuracy of the RSS.**

**If your vehicle sustains damage to the rear bumper/fascia, leaving it misaligned or bent, the sensing zone may be altered causing inaccurate measurement of obstacles or false alarms.**

### REARVIEW CAMERA SYSTEM (IF EQUIPPED)

The rearview camera system, located on the trunk, provides a video image which appears in the rearview mirror or on the navigation screen (if equipped), of the area behind the vehicle. It adds assistance to the driver while reversing or reverse parking the vehicle.

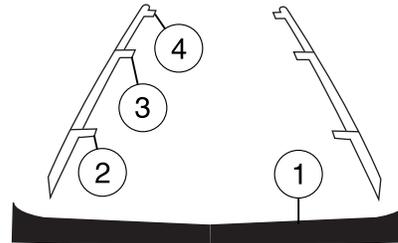


To use the camera system, place the transmission in R (Reverse); an image will display in the rearview mirror or on the navigation screen (if equipped). The area displayed on the screen may vary according to the vehicle orientation and/or road condition.

- (1) Rear bumper
- (2) Red zone
- (3) Yellow zone
- (4) Green zone

Always use caution while backing.

Objects in the red zone are closest to your vehicle and objects in the green zone are further away. Objects are getting closer to your vehicle as they move from the green zone to the yellow or red zones.



Use the side mirrors and rearview mirror to get better coverage on both sides and rear of the vehicle.

#### **Image delay if displayed through the rearview mirror:**

When shifting out of R (Reverse) and into any other gear, the image in the rearview mirror will remain on for a few seconds before it shuts off to assist in parking or trailer hookup.

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## Driving

### **Image delay if displayed through the navigation screen:**

After shifting out of R (Reverse) and into any gear other than P (Park), the image in the navigation screen will remain until the vehicle speed reaches 5 mph (8 km/h), only if the rear camera delay feature is on, or until any navigation radio button is pressed.

**Note:** The default setting for the rear camera delay is off. Press the “Settings” button found on the navigation screen to set the rear camera delay feature to on or off. Refer to the *Navigation System* supplement for more information.

The camera lens for the camera is located on the trunk. Keep the lens clean so that the video image remains clear and undistorted. Clean the lens with a soft, lint-free cloth and non-abrasive cleaner.

**Note:** If the camera system image is not clear or seems distorted, it may be covered with water droplets, snow, mud or any other substance. If this occurs, clean the camera lens before using the camera system.



**WARNING:** The camera system is a reverse aid supplement device that still requires the driver to use it in conjunction with the rearview mirror and the side mirrors for maximum coverage.



**WARNING:** Objects that are close to either corner of the bumper or under the bumper, might not be seen on the screen due to the limited coverage of the camera system.



**WARNING:** Backup as slow as possible since higher speeds might limit your reaction time to stop the vehicle.



**WARNING:** Do not use the camera system with the trunk open.

If the back end of the vehicle is hit or damaged, then check with your authorized dealer to have your rear video system checked for proper coverage and operation.

### **Night time and dark area use**

At night time or in dark areas, the camera system relies on the reverse lamp lighting to produce an image. Therefore it is necessary that both reverse lamps are operating in order to get a clear image in the dark. If either of the lamps are not operating, stop using the camera system, at least in the dark, until the lamp(s) are replaced and functioning.

## Driving

### Servicing

- If the image comes on while the vehicle is not in R (Reverse), have the system inspected by your authorized dealer.
- If the image is not clear, then check if there is anything covering the lens such as dirt, mud, ice, snow, etc. If the image is still not clear after cleaning, have your system inspected by your authorized dealer.

### BLIND SPOT MIRRORS (IF EQUIPPED)

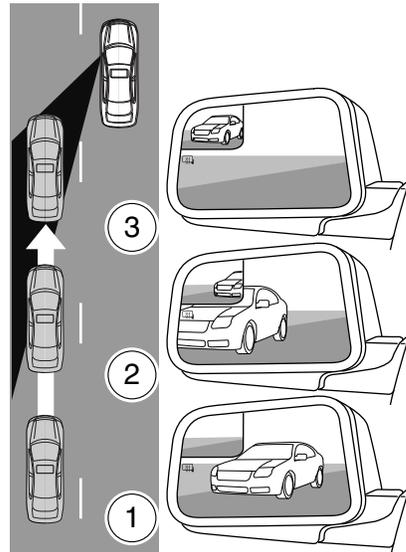
Blind spot mirrors have a convex spotter mirror built into the upper outboard corner of the outside mirrors. They are designed to assist the driver by increasing visibility along the side of the vehicle.

#### Driving with blind spot mirrors

Before a lane change, check the main mirror first, then check the blind spot mirror. If no vehicles are present in the blind spot mirror and the traffic in the adjacent lane is at a safe distance, signal that you are going to change lanes. Glance over your shoulder to verify traffic is clear, and carefully change lanes.

When the approaching vehicle is at a distance, its image is small and near the inboard edge of the main mirror. As the vehicle approaches, the image becomes larger and begins to move outboard across the main mirror (1). As the vehicle approaches its image will transition from the main mirror and begin to appear in the blind spot mirror (2).

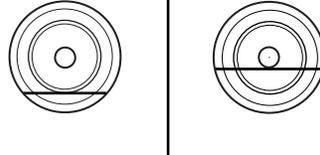
As the vehicle leaves the blind spot mirror it will transition to the driver's peripheral field of view (3).



**WARNING:** Objects in the blind spot mirror are closer than they appear.

### DRIVING THROUGH WATER

If driving through deep or standing water is unavoidable, proceed very slowly. Never drive through water that is higher than the bottom of the wheel rims (for cars) or the bottom of the hubs (for trucks).



When driving through water, traction or brake capability may be limited. Also, water may enter your engine's air intake and severely damage your engine or your vehicle may stall. **Driving through deep water where the transmission vent tube is submerged may allow water into the transmission and cause internal transmission damage.**

**Once through the water, always dry the brakes by moving your vehicle slowly while applying light pressure on the brake pedal.** Wet brakes do not stop the vehicle as quickly as dry brakes.

## Roadside Emergencies

### ROADSIDE ASSISTANCE

#### Vehicles sold in the U.S. : Getting roadside assistance

To fully assist you should you have a vehicle concern, Ford Motor Company offers a complimentary roadside assistance program. This program is separate from the New Vehicle Limited Warranty. The service is available:

- 24-hours, seven days a week
- for the coverage period listed on the Roadside Assistance Card included in your Owner Guide portfolio.

Roadside assistance will cover:

- a flat tire change with a good spare (except vehicles that have been supplied with a tire inflation kit)
- battery jump start
- lock-out assistance (key replacement cost is the customer's responsibility)
- fuel delivery – Independent Service Contractors, if not prohibited by state, local or municipal law shall deliver up to 2.0 gallons (7.5L) of gasoline or 5.0 gallons (18.9L) of diesel fuel to a disabled vehicle. Fuel delivery service is limited to two no-charge occurrences within a 12-month period.
- winch out – available within 100 feet (30.5 meters) of a paved or county maintained road, no recoveries.
- towing – Ford and Lincoln eligible vehicles towed to an authorized dealer within 35 miles (56 km) of the disablement location or to the nearest authorized dealer. If a member requests to be towed to an authorized dealer more than 35 miles (56 km) from the disablement location, the member shall be responsible for any mileage costs in excess of 35 miles (56 km).

Trailers shall be covered up to \$200 if the disabled eligible vehicle requires service at the nearest authorized dealer. If the trailer is disabled, but the towing vehicle is operational, the trailer does not qualify for any roadside services.

## Roadside Emergencies

### Vehicles sold in the U.S. : Using roadside assistance

Complete the roadside assistance identification card and place it in your wallet for quick reference. This card is found in the Owner's Guide portfolio in the glove compartment.

U.S. Ford vehicle customers who require Roadside Assistance, call 1-800-241-3673.

If you need to arrange roadside assistance for yourself, Ford Motor Company will reimburse a reasonable amount for towing to the nearest dealership within 35 miles (56 km). To obtain reimbursement information, U.S. Ford vehicle customers call 1-800-241-3673. Customers will be asked to submit their original receipts.

### Vehicles sold in Canada : Getting roadside assistance

Canadian customers who require roadside assistance, call 1-800-665-2006.

### Vehicles sold in Canada : Using roadside assistance

Complete the roadside assistance identification card and place it in your wallet for quick reference. In Canada, the card is found in the Warranty Guide in the glove box.

Canadian Roadside coverage and benefits may differ from the U.S. coverage. Please refer to your Warranty Guide or visit our website at [www.ford.ca](http://www.ford.ca) for information on Canadian services and benefits.

Canadian customers who need to obtain roadside information, call 1-800-665-2006 or visit our website at [www.ford.ca](http://www.ford.ca).

### HAZARD FLASHER CONTROL

The hazard flasher control is located on the center console next to the gearshift lever. The hazard flashers will operate when the ignition is in any position or if the key is not in the ignition.



Press the flasher control and all front and rear direction signals will flash. Press the flasher control again to turn them off. Use it when your vehicle is disabled and is creating a safety hazard for other motorists.

**Note:** With extended use, the flasher may run down your battery.

## Roadside Emergencies

### FUEL PUMP SHUT-OFF

In the event of a moderate to severe collision, this vehicle is equipped with a fuel pump shut-off feature that stops the flow of fuel to the engine. Not every impact will cause a shut-off.

Should your vehicle shut off after a collision due to this feature, you may restart your vehicle by doing the following:

1. Turn the ignition switch to the off position.
2. Turn the ignition switch to the on position.

In some instances the vehicle may not restart the first time you try to restart and may take one additional attempt.

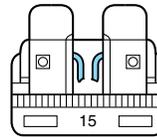


**WARNING:** Failure to inspect and if necessary repair fuel leaks after a collision may increase the risk of fire and serious injury. Ford Motor Company recommends that the fuel system be inspected by an authorized dealer after any collision.

### FUSES AND RELAYS

#### Fuses

If electrical components in the vehicle are not working, a fuse may have blown. Blown fuses are identified by a broken wire within the fuse. Check the appropriate fuses before replacing any electrical components.



**Note:** Always replace a fuse with one that has the specified amperage rating. Using a fuse with a higher amperage rating can cause severe wire damage and could start a fire.

## Roadside Emergencies

### *Standard fuse amperage rating and color*

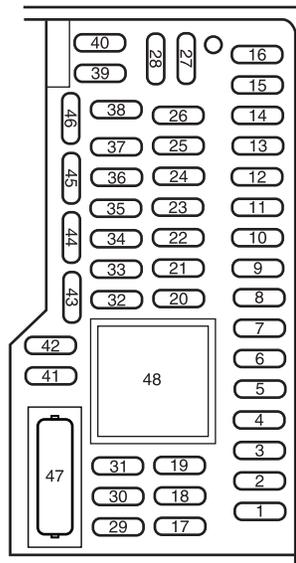
COLOR					
Fuse rating	Mini fuses	Standard fuses	Maxi fuses	Cartridge maxi fuses	Fuse link cartridge
2A	Grey	Grey	—	—	—
3A	Violet	Violet	—	—	—
4A	Pink	Pink	—	—	—
5A	Tan	Tan	—	—	—
7.5A	Brown	Brown	—	—	—
10A	Red	Red	—	—	—
15A	Blue	Blue	—	—	—
20A	Yellow	Yellow	Yellow	Blue	Blue
25A	Natural	Natural	—	Natural	Natural
30A	Green	Green	Green	Pink	Pink
40A	—	—	Orange	Green	Green
50A	—	—	Red	Red	Red
60A	—	—	Blue	Yellow	Yellow
70A	—	—	Tan	—	Brown
80A	—	—	Natural	Black	Black

## Roadside Emergencies

### Passenger compartment fuse panel

The fuse panel is located in the lower passenger side area behind the kick panel. Open the trim panel door and remove the fuse cover to access the fuses.

To remove a fuse, use the fuse puller tool provided to the left of the fuses and relays.



The fuses are coded as follows:

Fuse/Relay Location	Fuse Amp Rating	Protected Circuits
1	30A	Driver rear window (convertible only)
2	15A	Not used (spare)
3	15A	SYNC®
4	30A	Passenger rear window (convertible only)
5	10A	Brake transmission shift interlock (BTSI)

## Roadside Emergencies

Fuse/Relay Location	Fuse Amp Rating	Protected Circuits
6	20A	Turn signals, Hazard flashers
7	10A	Left low beam headlamp
8	10A	Right low beam headlamp
9	15A	Courtesy lamps
10	15A	Switch illumination
11	10A	Security module
12	7.5A	Power mirrors
13	5A	Not used (spare)
14	10A	Center information display, Electronic finish panel, GPS
15	10A	Climate control
16	15A	Not used (spare)
17	20A	Power door locks, Trunk release
18	20A	Not used (spare)
19	25A	Navigation amp
20	15A	Diagnostic connector
21	15A	Fog lamps
22	15A	Park lamps, License lamps
23	15A	High beam headlamps
24	20A	Horn
25	10A	Demand lighting (battery saver), Gauge pack, Visor vanity lamps
26	10A	Cluster (battery)
27	20A	Ignition switch feed
28	5A	Audio mute (start)
29	5A	Camera (run/start)
30	5A	Temperature sensor motor
31	10A	Restraints control module (RCM)
32	10A	Reverse parking aid
33	10A	Not used (spare)
34	5A	Electronic stability control

## Roadside Emergencies

Fuse/Relay Location	Fuse Amp Rating	Protected Circuits
35	10A	Auxiliary body module (ABM) run/start
36	5A	Passive anti-theft system (PATS)
37	10A	Not used (spare)
38	20A	Not used (spare)
39	20A	Radio/Navigation
40	20A	Not used (spare)
41	15A	Accessory delay (windows, automatic dimming rear view mirror [including microphone and compass] and door switch III)
42	10A	Not used (spare)
43	10A	Heated seat relay coils
44	10A	Not used (spare)
45	5A	Wiper relay and module, Blower relay
46	7.5A	Passenger airbag deactivation indicator (PADI), Occupant classification sensor (OCS)
47	30A Circuit Breaker	Not used (spare)
48	Relay	Accessory delay relay (windows, automatic dimming rear view mirror [including microphone and compass] and door switch III)

### Power distribution box

The power distribution box is located in the engine compartment. The power distribution box contains high-current fuses that protect your vehicle's main electrical systems from overloads.

**Do not probe the contacts for the fuses and relays in the power distribution box as damage will occur, causing improper, or loss of, electrical functionality.**

## Roadside Emergencies

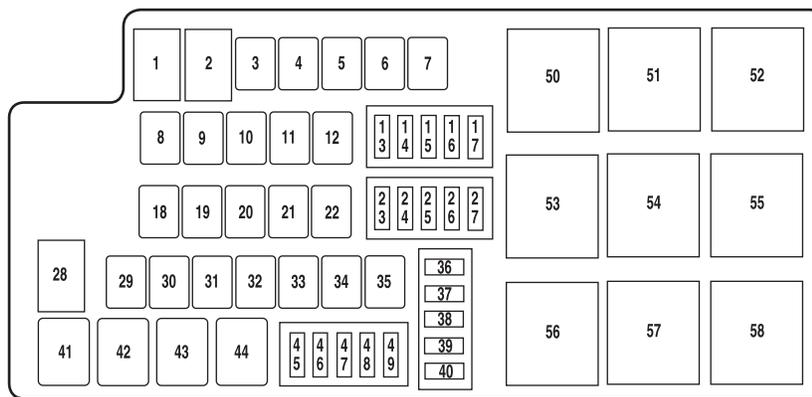


**WARNING:** Always disconnect the battery before servicing high current fuses.



**WARNING:** To reduce risk of electrical shock, always replace the cover to the Power Distribution Box before reconnecting the battery or refilling fluid reservoirs.

If the battery has been disconnected and reconnected, refer to the *Battery* section of the *Maintenance and Specifications* chapter.



The high-current fuses are coded as follows.

Fuse/Relay Location	Fuse Amp Rating	Protected Circuits
1	80A*	Passenger compartment fuse panel
2	—	Not used
3	—	Not used
4	30A*	Blower motor relay
5	20A*	Powerpoint (body)
6	40A*	Rear defroster
7	40A*	Cooling fan relay
8	40A*	Anti-lock brake system (ABS) pump

## Roadside Emergencies

Fuse/Relay Location	Fuse Amp Rating	Protected Circuits
9	30A*	Wipers
10	30A*	ABS valve
11	—	Not used
12	—	Not used
13	20A**	Fuel pump relay (non-Shelby)
	25A**	Fuel pump relay (Shelby only)
14	—	Not used
15	10A**	Intercooler pump relay (Shelby only)
16	20A**	Heated seats
17	10A**	Alternator sense
18	20A*	Auxiliary body module (ABM)
19	30A*	Starter relay
20	30A*	Rear amplifier (Shaker 1000 radio)
21	30A*	Powertrain relay
22	20A*	Powerpoint (instrument panel)
23	10A**	Powertrain control module (PCM) keep-alive power
24	10A**	Brake on/off (BOO) power
25	10A**	A/C compressor relay
26	20A**	Left high intensity discharge headlamp relay
27	20A**	Right high intensity discharge headlamp relay
28	—	Not used
29	30A*	Passenger front window
30	—	Not used
31	30A*	Passenger power seat
32	30A*	Driver power seat
33	30A*	Front amplifier (Shaker 500 radio)
34	30A*	Driver front window motor
35	40A*	Convertible top motor

## Roadside Emergencies

Fuse/Relay Location	Fuse Amp Rating	Protected Circuits
36	Diode	Fuel diode
37	—	Not used
38	15A**	Fuel injectors (Shelby only)
39	5A**	Rear defroster coil (run/start)
40	15A**	PCM vehicle power 4 – ignition coil
41	G8VA relay	Fuel pump relay
42	G8VA relay	Intercooler pump relay (Shelby only)
43	G8VA relay	A/C compressor relay
44	—	Not used (spare)
45	5A**	PCM run/start
46	5A**	PCM vehicle power 3 – general powertrain components
47	15A**	PCM vehicle power 1
48	15A**	Mass air flow sensor
49	15A**	PCM vehicle power 2 – emissions related powertrain components
50	Full ISO relay	Cooling fan relay (high)
51	Full ISO relay	Blower motor relay
52	Full ISO relay	Starter relay
53	Full ISO relay	Rear defroster relay
54	Full ISO relay	Front wiper relay
55	Full ISO relay	Cooling fan relay (low)
56	High current relay	Fuel pump sensor (Shelby only)
57	Full ISO relay	PCM relay
58	High current relay	Not used (Spare)

\* Cartridge Fuses \*\* Mini Fuses

## Roadside Emergencies

### Auxiliary relay with heated seats (if equipped)

On heated seat equipped vehicles, there is a relay box located under the driver seat containing two relays for the driver and passenger heated seats.

### CHANGING THE TIRES

If you get a flat tire while driving, do not apply the brake heavily. Instead, gradually decrease your speed. Hold the steering wheel firmly and slowly move to a safe place on the side of the road.

**Note:** The tire pressure monitoring system (TPMS) indicator light will illuminate when the spare tire is in use. To restore the full functionality of the monitoring system, all road wheels equipped with tire pressure monitoring sensors must be mounted on the vehicle.

Have a flat serviced by an authorized dealer in order to prevent damage to the TPMS sensors, refer to *Tire pressure monitoring system (TPMS)* in the *Tires, Wheels and Loading* chapter. Replace the spare tire with a road tire as soon as possible. During repairing or replacing of the flat tire, have the authorized dealer inspect the TPMS sensor for damage.



**WARNING:** The use of tire sealants may damage your tire pressure monitoring system (TPMS) and should not be used. However, if you must use a sealant, the TPMS sensor and valve stem on the wheel must be replaced by an authorized Ford dealer.



**WARNING:** Refer to *Tire pressure monitoring system (TPMS)* in the *Tires, Wheels and Loading* chapter for important information. If the tire pressure monitor sensor becomes damaged, it will no longer function.

### Dissimilar spare tire/wheel information



**WARNING:** Failure to follow these guidelines could result in an increased risk of loss of vehicle control, injury or death.

If you have a dissimilar spare tire/wheel, then it is intended for temporary use only. This means that if you need to use it, you should replace it as soon as possible with a road tire/wheel that is the same size and type as the road tires and wheels that were originally provided by Ford. If the dissimilar spare tire or wheel is damaged, it should be replaced rather than repaired.

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## Roadside Emergencies

A dissimilar spare tire/wheel is defined as a spare tire and/or wheel that is different in brand, size or appearance from the road tires and wheels and can be one of three types:

1. **T-type mini-spare:** This spare tire begins with the letter “T” for tire size and may have “Temporary Use Only” molded in the sidewall
2. **Full-size dissimilar spare with label on wheel:** This spare tire has a label on the wheel that states: “THIS TIRE AND WHEEL FOR TEMPORARY USE ONLY”

When driving with one of the dissimilar spare tires listed above, **do not:**

- Exceed 50 mph (80 km/h)
- Load the vehicle beyond maximum vehicle load rating listed on the Safety Compliance Label
- Tow a trailer
- Use snow chains on the end of the vehicle with the dissimilar spare tire
- Use more than one dissimilar spare tire at a time
- Use commercial car washing equipment
- Try to repair the dissimilar spare tire

Use of one of the dissimilar spare tires listed above at any one wheel location can lead to impairment of the following:

- Handling, stability and braking performance
- Comfort and noise
- Ground clearance and parking at curbs
- Winter weather driving capability
- Wet weather driving capability
- All-wheel driving capability (if applicable)

### 3. **Full-size dissimilar spare without label on wheel**

When driving with the full-size dissimilar spare tire/wheel, **do not:**

- Exceed 70 mph (113 km/h)
- Use more than one dissimilar spare tire/wheel at a time
- Use commercial car washing equipment
- Use snow chains on the end of the vehicle with the dissimilar spare tire/wheel

## Roadside Emergencies

The usage of a full-size dissimilar spare tire/wheel can lead to impairment of the following:

- Handling, stability and braking performance
- Comfort and noise
- Ground clearance and parking at curbs
- Winter weather driving capability
- Wet weather driving capability
- All-wheel driving capability (if applicable)
- Load leveling adjustment (if applicable)

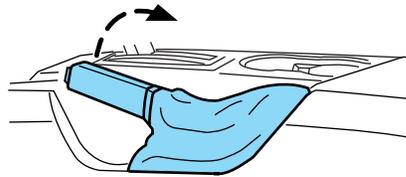
When driving with the full-size dissimilar spare tire/wheel additional caution should be given to:

- Towing a trailer
- Driving vehicles equipped with a camper body
- Driving vehicles with a load on the cargo rack

Drive cautiously when using a full-size dissimilar spare tire/wheel and seek service as soon as possible.

### Stopping and securing the vehicle

1. Park on a level surface, set the parking brake and activate the hazard flashers.
2. Place the gearshift lever in P (Park) (automatic transmission) or R (Reverse) (manual transmission) and turn the engine off.



### Tire change procedure



**WARNING:** When one of the front wheels is off the ground, the transmission alone will not prevent the vehicle from moving or slipping off the jack, even if the vehicle is in P (Park) (automatic transmission) or R (Reverse) (manual transmission).



**WARNING:** To help prevent the vehicle from moving when you change a tire, be sure the parking brake is set, then block (in both directions) the wheel that is diagonally opposite (other side and end of the vehicle) to the tire being changed.

## Roadside Emergencies



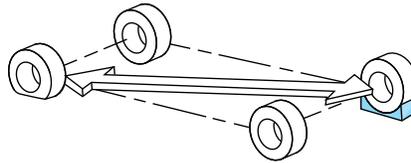
**WARNING:** If the vehicle slips off the jack, you or someone else could be seriously injured.



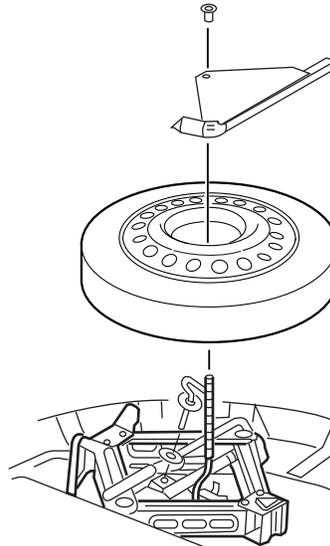
**WARNING:** Do not attempt to change a tire on the side of the vehicle close to moving traffic. Pull far enough off the road to avoid the danger of being hit when operating the jack or changing the wheel.

**Note:** Passengers should not remain in the vehicle when the vehicle is being jacked.

1. Block both the front and rear of the wheel diagonally opposite the flat tire. For example, if the left front tire is flat, block the right rear wheel.

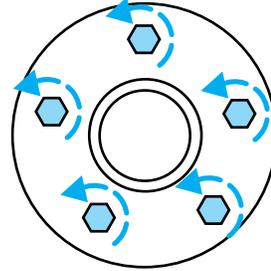


2. Remove the lug wrench, spare tire and jack.

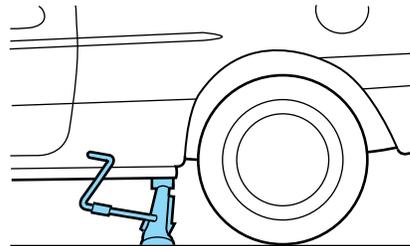


## Roadside Emergencies

3. Remove the center ornament (if equipped) from the wheel. Loosen each wheel lug nut one-half turn counterclockwise but do not remove them until the wheel is raised off the ground.

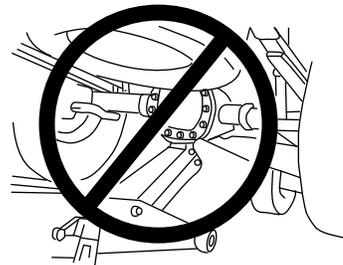


4. Put the jack in the jack notch next to the tire you are changing. Turn the jack handle clockwise until the wheel is completely off the ground.



**Never use the rear differential as a jacking point.**

 **WARNING:** To lessen the risk of personal injury, do not put any part of your body under the vehicle while changing a tire. Do not start the engine when your vehicle is on the jack. The jack is only meant for changing the tire.



5. Remove the lug nuts with the lug wrench.

## Roadside Emergencies

6. Replace the flat tire with the spare tire, making sure the valve stem is facing outward. Reinstall lug nuts until the wheel is snug against the hub. Do not fully tighten the lug nuts until the wheel has been lowered.

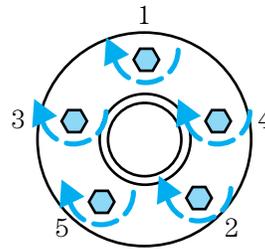
If you are using the temporary tire, the lug nut washers will not appear to be flush with the rim. This is normal only when using the temporary spare tire.

7. Lower the wheel by turning the jack handle counterclockwise.

8. Remove the jack and fully tighten the lug nuts in the order shown. Refer to *Wheel lug nut torque specifications* later in this chapter for the proper lug nut torque specification.

9. Put flat tire, wheel ornament (if equipped), jack and lug wrench away. Make sure the jack is fastened so it does not rattle when you drive.

10. Unblock the wheel.



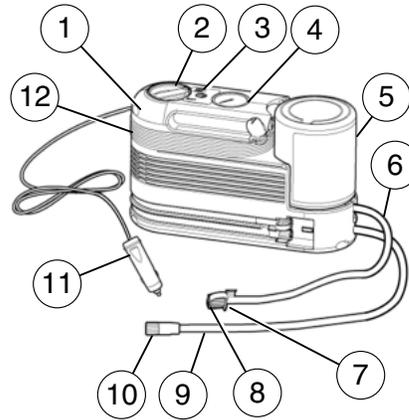
### TEMPORARY MOBILITY KIT (IF EQUIPPED)

Your vehicle may be equipped with a temporary mobility kit (located in the spare tire well in the trunk). The temporary mobility kit consists of an air compressor to reinflate the tire and a sealing compound in a canister that will effectively seal most punctures caused by nails or similar objects. This kit will provide a temporary seal allowing you to drive your vehicle up to 120 miles (200 km) at a maximum speed of 50 mph (80 km/h).

**Note:** The temporary mobility kit sealant compound in the canister is to be used for one tire only. See your Ford authorized dealer for additional replacement sealant canisters.

## Roadside Emergencies

1. Air compressor (inside)
2. Diverter knob
3. On/Off button
4. Air pressure gauge
5. Sealant bottle/canister
6. Sealant filling clear tube
7. Sealant tube — tire valve connector
8. Yellow cap tool
9. Air compressor hose
10. Air hose — tire valve connector
11. Accessory power plug
12. Casing/housing



### General information



**WARNING:** Failure to follow these guidelines could result in an increased risk of loss of vehicle control, injury or death.

Do not attempt to repair punctures larger than ¼ inch (6.4 mm) or damage to the tire's sidewall. The tire may not completely seal.

**Note:** Do not use the temporary mobility kit if a tire has become severely damaged by driving the vehicle with a tire that has insufficient air pressure. Only punctured areas located within the tire tread can be sealed with the temporary mobility kit.

Loss of air pressure may adversely affect tire performance. For this reason:

- **Do not** drive the vehicle above 50 mph (80 km/h).
- **Do not** drive further than 120 miles (200 km). Drive only to the closest Ford Motor Company authorized dealer or tire repair shop to have your tire inspected.

## Roadside Emergencies

- Drive carefully and avoid abrupt steering maneuvers.
- Periodically monitor tire inflation pressure in the affected tire; if the tire is losing pressure, have the vehicle towed.
- Read the information in the *Tips for use of the temporary mobility kit* section to ensure safe operation of the temporary mobility kit and your vehicle.

### Tips for use of the temporary mobility kit

Read the following list of tips to ensure safe operation of the temporary mobility kit:

- Before operating the temporary mobility kit, make sure your vehicle is safely off the road and away from moving traffic. Turn on the hazard lights.
- Always set the parking brake to ensure the vehicle doesn't move unexpectedly.
- Do not remove any foreign objects, such as nails or screws, from the tire.
- When using the temporary mobility kit, leave the engine running **(only if the vehicle is outdoors or in a well-ventilated area)** so the compressor doesn't drain the vehicle's battery.
- Do not allow the compressor to operate continuously for more than 15 minutes; this will help prevent the compressor from overheating.
- Never leave the temporary mobility kit unattended when it is operating.
- Sealant compound contains latex. Make sure that you use the non-latex gloves provided to avoid an allergic reaction.
- Keep the temporary mobility kit away from children.
- Only use the temporary mobility kit when the ambient temperature is between -22°F (-30°C) and 158°F (70°C).
- Only use the sealing compound before the use by date. The use by date is on the lower right hand corner of the label located on the sealant canister (bottle). **Check the use by date regularly and replace the canister after four years.**
- Do not store the temporary mobility kit unsecured inside the passenger compartment of the vehicle as it may cause injury during a sudden stop or collision. Always store the kit in its original location.
- After sealant use, the TPMS sensor and valve stem on the wheel must be replaced by an authorized Ford dealer.

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## Roadside Emergencies

- When inflating a tire or other objects, use the black air hose only. Do not use the transparent hose which is designed for sealant application only.
- Operating the temporary mobility kit could cause an electrical disturbance in radio, CD, and DVD player operation (if equipped).

### What to do when a Tire Is Punctured

A tire puncture within the tire's tread area can be repaired in two stages with the temporary mobility kit:

- In the first stage, the tire will be reinflated with a sealing compound and air. After the tire has been reinflated, you will need to drive the vehicle a short distance (approximately 4 miles [6 km]) to distribute the sealant in the tire.
- In the second stage, you will need to check the tire pressure and adjust, if necessary, to the vehicle's tire inflation pressure.

### First stage: Reinflating the tire with sealing compound and air

#### Preparation

Park the vehicle in a safe, level and secure area, away from moving traffic. Turn the hazard lights on. Apply the parking brake and turn the engine off. Inspect the flat tire for visible damage.

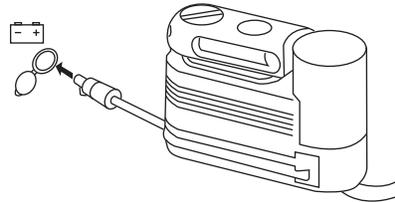
Sealant compound contains latex. To avoid any allergic reactions, use the non-latex gloves located in the accessory box on the underside of the temporary mobility kit housing.

Do not remove any foreign object that has pierced the tire. If a puncture is located in the tire sidewall, stop and call roadside assistance.

1. Remove the valve cap from the tire valve.
2. Unwrap the clear tube from the compressor housing.
3. Remove the tube cap and fasten the metal connector of the tube to the tire valve, turning clockwise. Make sure the connection is tightly fastened.

## Roadside Emergencies

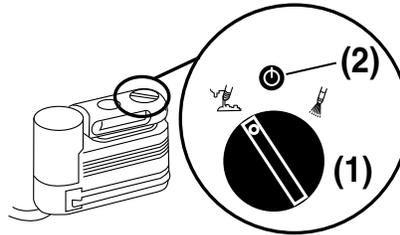
4. Plug the power cable into the 12V power point in the vehicle.



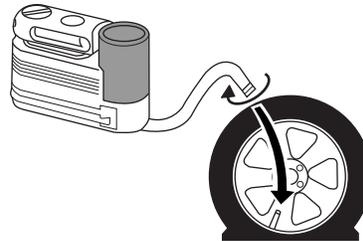
5. Remove the warning sticker found on the canister and place it on the top of the instrument panel or the center of the dash.

6. Start the engine (**only if the vehicle is outdoors or in a well-ventilated area**).

7. Turn dial (1) counterclockwise to the sealant position. Turn on the kit by pressing the on/off button (2).



8. Inflate the tire to the pressure listed on the tire label located on the driver's door or the door jamb area.



## Roadside Emergencies

**Note:** When the sealing compound is first added into the tire, the air pressure gauge reading on the compressor unit may indicate a higher value; this is normal and should be no reason for concern. The pressure will drop after about 30 seconds of operation. The tire pressure has to be checked with the compressor in the OFF position to get the correct tire pressure reading.

 **WARNING:** Do not stand directly over the temporary mobility kit while inflating the tire. If you notice any unusual bulges or deformations in the tire's sidewall during inflation, stop and call roadside assistance.

 **WARNING:** If the tire doesn't inflate to the recommended tire pressure within 15 minutes, stop and call roadside assistance.

9. When the recommended tire pressure is reached, turn off the kit by pressing the on/off button; disconnect the kit from the tire valve and the power point. Re-install the valve cap on the tire valve, place the tube cap on the metal connector, and return the kit to the stowage area.

10. **Immediately and cautiously, drive the vehicle 4 miles (6 km) to distribute the sealant evenly inside the tire. Do not exceed 50 mph (80 km/h).**

**Note:** If you experience any unusual vibration, ride disturbance or noise while driving, reduce your speed until you can safely pull off to the side of the road to call for roadside assistance. **Do not proceed to the second stage of this operation.**

11. After 4 miles (6 km), stop and check the tire pressure. See *Second stage: Checking tire pressure*.

### Second stage: Checking tire pressure

Check the air pressure of your tires as follows:

1. Remove the valve cap from the tire valve.
2. Unhook the black hose from the side of the compressor and fasten firmly on the valve stem by turning clockwise.

 **WARNING:** If you are proceeding from the *First stage: Reinflating the tire with sealing compound and air* section and have injected sealant in the tire and the pressure is below 20 psi (1.4 bar), **stop and call roadside assistance**. If tire pressure is above 20 psi (1.4 bar), continue to the next step.

## Roadside Emergencies

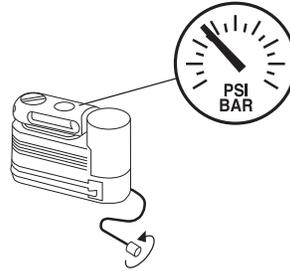
3. Turn the dial clockwise to the air position. Turn on the kit by pressing the on/off button.

4. Adjust the tire to the recommended inflation pressure from the tire label located on the driver's door or door jamb area.

**Note:** The tire pressure has to be checked with the compressor in the OFF position to get the correct tire pressure reading.

5. Turn the compressor off by pressing the on/off button.

6. Unplug the hoses, re-install the valve cap on the tire and return the kit to the stowage area.



**WARNING:** The power plug may get hot after use and should be handled carefully while unplugging.

### What to do after the tire has been sealed

After using the temporary mobility kit to seal your tire, you will need to replace the sealant canister and clear tube (hose). Sealing compound and spare parts can be obtained and replaced at an authorized Ford Motor Company dealership or tire dealer. Empty sealant bottles may be disposed of at home; however, liquid residue from the sealing compound should be disposed by your local Ford Motor Company dealership or tire dealer, or in accordance with local waste disposal regulations.

**Note:** After the sealing compound has been used, the maximum vehicle speed is 50 mph (80 km/h) and the maximum driving distance is 120 miles (200 km). The sealed tire should be inspected immediately.

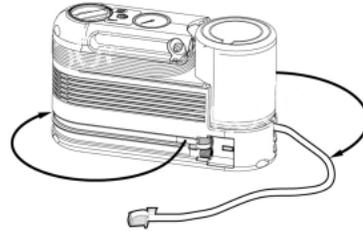
**Note:** After sealant use, the TPMS sensor and valve stem on the wheel must be replaced by an authorized Ford dealer.

You can check the tire pressure any time within the 120 miles (200 km) by performing the procedure from *Second stage: Checking tire pressure* listed previously.

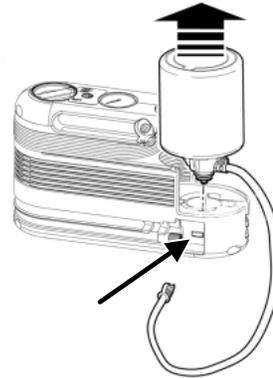
## Roadside Emergencies

### Removal of the sealant canister from the temporary mobility kit

1. Unwrap the clear tube from the compressor housing.

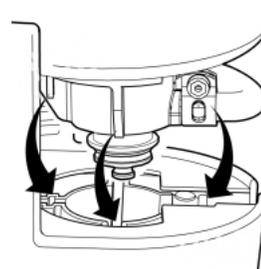


2. Press the button located on the temporary mobility kit compressor housing below the canister while pulling up on the sealant canister.



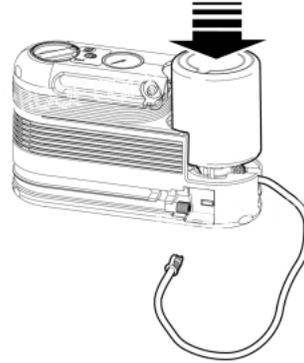
### Installation of the sealant canister to the temporary mobility kit

1. Align the sealant canister with the temporary mobility kit housing.

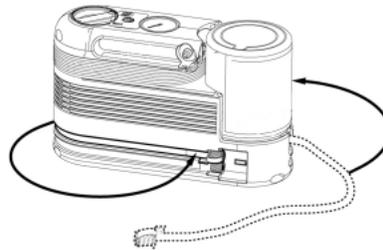


## Roadside Emergencies

2. Once aligned, seat the sealant canister by lightly pushing down until you hear an audible click.



3. Wrap the clear tube around the compressor housing.



**Note:** If you experience any difficulties with the removal or installation of the sealant canister, consult your Ford Motor Company authorized dealer for assistance.

Be sure to check the sealant compound's "use by" date regularly. The "use by" date is on the lower right hand corner of the label located on the sealant canister (bottle). The sealant canister should be replaced after four years.

**Use By / Utiliser avant:**

## Roadside Emergencies

### WHEEL LUG NUT TORQUE SPECIFICATIONS

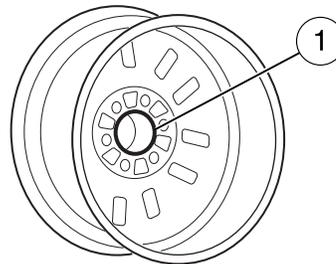
Retighten the lug nuts to the specified torque within 100 miles (160 km) after any wheel disturbance (rotation, flat tire, wheel removal, etc.).

Lug nut socket size/Bolt size	Wheel lug nut torque*	
	ft-lb	N•m
½ x 20	100	135

\* Torque specifications are for nut and bolt threads free of dirt and rust. Use only Ford recommended replacement fasteners.

 **WARNING:** When a wheel is installed, always remove any corrosion, dirt or foreign materials present on the mounting surfaces of the wheel or the surface of the wheel hub, brake drum or brake disc that contacts the wheel. Ensure that any fasteners that attach the rotor to the hub are secured so they do not interfere with the mounting surfaces of the wheel. Installing wheels without correct metal-to-metal contact at the wheel mounting surfaces can cause the wheel nuts to loosen and the wheel to come off while the vehicle is in motion, resulting in loss of control.

**Note:** Inspect the wheel pilot hole (1) and mounting surface prior to installation. Remove any visible corrosion or loose particles.



### RUNNING OUT OF FUEL

If you have run out of fuel and need to refill the vehicle with a portable fuel container, see *Running out of fuel* in the *Maintenance and Specifications* chapter for proper fuel filling method using a portable fuel container and the included fuel filler funnel. **Do not** insert the nozzle of portable fuel containers or any type of aftermarket funnels into the Easy Fuel® “no cap” fuel system as it can be damaged. You must use the included funnel in such circumstances.

## Roadside Emergencies

 **WARNING:** Do not insert the nozzle of portable fuel containers or aftermarket funnels into the Easy Fuel® system. This could damage the fuel system and its seal, and may cause fuel to run onto the ground instead of filling the tank, all of which could result in serious personal injury.

### JUMP STARTING

 **WARNING:** The gases around the battery can explode if exposed to flames, sparks, or lit cigarettes. An explosion could result in injury or vehicle damage.

 **WARNING:** Batteries contain sulfuric acid which can burn skin, eyes and clothing, if contacted.

**Do not attempt to push-start your automatic transmission vehicle. Automatic transmissions do not have push-start capability. Attempting to push-start a vehicle with an automatic transmission may cause transmission damage.**

### Preparing your vehicle

When the battery is disconnected or a new battery is installed, the automatic transmission must relearn its shift strategy. As a result, the transmission may have firm and/or soft shifts. This operation is considered normal and will not affect function or durability of the transmission. Over time, the adaptive learning process will fully update transmission operation.

1. **Use only a 12-volt supply to start your vehicle.**
2. Do not disconnect the battery of the disabled vehicle as this could damage the vehicle's electrical system.
3. Park the booster vehicle close to the hood of the disabled vehicle making sure the two vehicles **do not** touch. Set the parking brake on both vehicles and stay clear of the engine cooling fan and other moving parts.
4. Check all battery terminals and remove any excessive corrosion before you attach the battery cables. Ensure that vent caps are tight and level.
5. Turn the heater fan on in both vehicles to protect from any electrical surges. Turn all other accessories off.

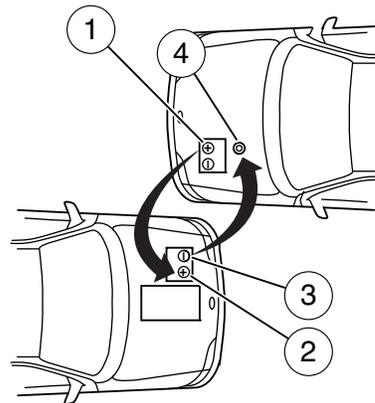
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## Roadside Emergencies

### Connecting the jumper cables

**Note:** In the illustration, the vehicle on the bottom is used to designate the assisting (boosting) battery.

1. Connect the positive (+) jumper cable to the positive (+) terminal of the discharged battery.
2. Connect the other end of the positive (+) cable to the positive (+) terminal of the assisting battery.
3. Connect the negative (-) cable to the negative (-) terminal of the assisting battery.
4. Make the final connection of the negative (-) cable to an exposed metal part of the stalled vehicle's engine, away from the battery and the carburetor/fuel injection system.



**Note:** Do not attach the negative (-) cable to fuel lines, engine rocker covers, the intake manifold or electrical components as grounding points.



**WARNING:** Do not connect the end of the second cable to the negative (-) terminal of the battery to be jumped. A spark may cause an explosion of the gases that surround the battery.

Ensure that the cables are clear of fan blades, belts, moving parts of both engines, or any fuel delivery system parts.

## Roadside Emergencies

### Jump starting

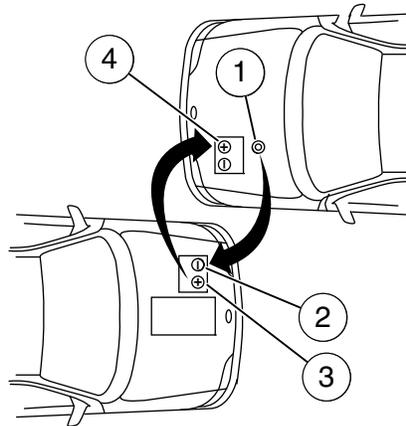
1. Start the engine of the booster vehicle and run the engine at moderately increased speed.
2. Start the engine of the disabled vehicle.
3. Once the disabled vehicle has been started, run both engines for an additional three minutes before disconnecting the jumper cables.

### Removing the jumper cables

Remove the jumper cables in the reverse order that they were connected.

**Note:** In the illustration, the vehicle on the bottom is used to designate the assisting (boosting) battery.

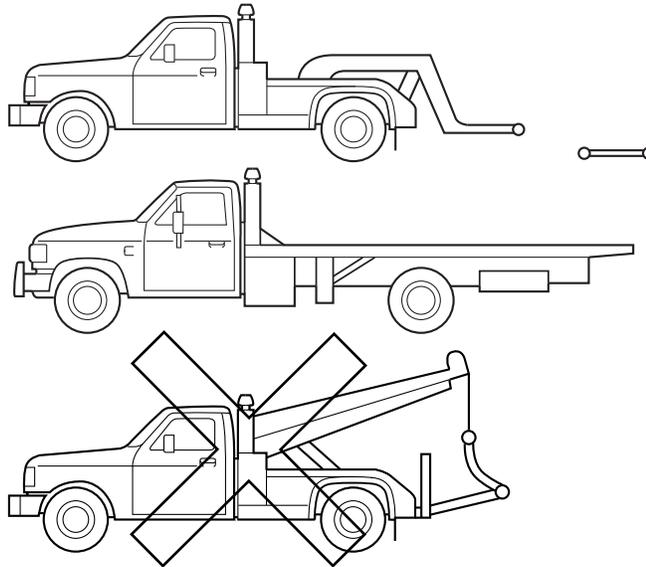
1. Remove the jumper cable from the ground metal surface.
2. Remove the jumper cable on the negative (-) terminal of the booster vehicle's battery.
3. Remove the jumper cable from the positive (+) terminal of the booster vehicle's battery.
4. Remove the jumper cable from the positive (+) terminal of the disabled vehicle's battery.



After the disabled vehicle has been started and the jumper cables removed, allow it to idle for several minutes so the engine computer can relearn its idle conditions.

## Roadside Emergencies

### WRECKER TOWING



If you need to have your vehicle towed, contact a professional towing service or, if you are a member of a roadside assistance program, your roadside assistance service provider.

It is recommended that your vehicle be towed with a wheel lift and dollies or flatbed equipment. Do not tow with a slingbelt. Ford Motor Company has not approved a slingbelt towing procedure.

If your vehicle is to be towed from the front using wheel lift equipment, it is recommended that the rear wheels (drive wheels) be placed on a dolly to prevent damage to the transmission.

If your vehicle is to be towed from the rear using wheel lift equipment, it is recommended that the front wheels be placed on a dolly to prevent damage to the front fascia.

## Roadside Emergencies

### **If the vehicle is towed by other means or incorrectly, vehicle damage may occur.**

Ford Motor Company produces a towing manual for all authorized tow truck operators. Have your tow truck operator refer to this manual for proper hook-up and towing procedures for your vehicle.

### **Emergency towing**

In case of a roadside emergency with a disabled vehicle (without access to wheel dollies, car hauling trailer, or flatbed transport vehicle) your vehicle (regardless of transmission powertrain configuration) can be flat towed (all wheels on the ground) under the following conditions:

- Vehicle is facing forward so that it is being towed in a forward direction.
- Place the transmission in N (Neutral). Refer to *Brake-shift interlock* in the *Driving* chapter for specific instructions if you cannot move the gear shift lever into N (Neutral).
- Maximum speed is not to exceed 35 mph (56 km/h).
- Maximum distance is 50 miles (80 km).

## Customer Assistance

### GETTING THE SERVICES YOU NEED

Warranty repairs to your vehicle must be performed by an authorized dealer. While any authorized dealer handling your vehicle line will provide warranty service, we recommend you return to your selling authorized dealer who wants to ensure your continued satisfaction.

Please note that certain warranty repairs require special training and/or equipment, so not all authorized dealers are authorized to perform all warranty repairs. This means that, depending on the warranty repair needed, you may have to take your vehicle to another authorized dealer.

A reasonable time must be allowed to perform a repair after taking your vehicle to the authorized dealer. Repairs will be made using Ford or Motorcraft® parts, or remanufactured or other parts that are authorized by Ford.

### Away from home

If you are away from home when your vehicle needs service, contact the Ford Customer Relationship Center or use the online resources listed below to find the nearest authorized dealer.

In the United States:

#### Mailing address

Ford Motor Company  
Customer Relationship Center  
P.O. Box 6248  
Dearborn, MI 48121

#### Telephone

1-800-392-3673 (FORD)  
(TDD for the hearing impaired: 1-800-232-5952)

#### Online

Additional information and resources are available online at [fordowner.com](http://fordowner.com)

These are some of the items that can be found online:

- U.S. dealer locator by Dealer Name, City/State, or Zip Code
- Owner Guides
- Maintenance Schedules
- Recalls
- Ford Extended Service Plans
- Ford Genuine Accessories
- Service specials and promotions.

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## Customer Assistance

In Canada:

### **Mailing address**

Customer Relationship Centre  
Ford Motor Company of Canada, Limited  
P.O. Box 2000  
Oakville, Ontario L6J 5E4

### **Telephone**

1-800-565-3673 (FORD)

### **Online**

[www.ford.ca](http://www.ford.ca)

### **Additional assistance**

If you have questions or concerns, or are unsatisfied with the service you are receiving, follow these steps:

1. Contact your Sales Representative or Service Advisor at your selling/servicing authorized dealer.
2. If your inquiry or concern remains unresolved, contact the Sales Manager, Service Manager or Customer Relations Manager.
3. If you require assistance or clarification on Ford Motor Company policies, please contact the Ford Customer Relationship Center

In order to help you serve you better, please have the following information available when contacting a Customer Relationship Center:

- Vehicle Identification Number (VIN)
- Your telephone number (home and business)
- The name of the authorized dealer and city where located
- The vehicle's current odometer reading

In some states, you must directly notify Ford in writing before pursuing remedies under your state's warranty laws. Ford is also allowed a final repair attempt in some states.

In the United States, a warranty dispute must be submitted to the BBB AUTO LINE before taking action under the Magnuson-Moss Warranty Act, or to the extent allowed by state law, before pursuing replacement or repurchase remedies provided by certain state laws. This dispute handling procedure is not required prior to enforcing state created rights or other rights which are independent of the Magnuson-Moss Warranty Act or state replacement or repurchase laws.

## Customer Assistance

### IN CALIFORNIA (U.S. ONLY)

California Civil Code Section 1793.2(d) requires that, if a manufacturer or its representative is unable to repair a motor vehicle to conform to the vehicle's applicable express warranty after a reasonable number of attempts, the manufacturer shall be required to either replace the vehicle with one substantially identical or repurchase the vehicle and reimburse the buyer in an amount equal to the actual price paid or payable by the consumer (less a reasonable allowance for consumer use). The consumer has the right to choose whether to receive a refund or replacement vehicle.

California Civil Code Section 1793.22(b) presumes that the manufacturer has had a reasonable number of attempts to conform the vehicle to its applicable express warranties if, within the first 18 months of ownership of a new vehicle or the first 18,000 miles (29,000 km), whichever occurs first:

1. Two or more repair attempts are made on the same non-conformity likely to cause death or serious bodily injury OR
2. Four or more repair attempts are made on the same nonconformity (a defect or condition that substantially impairs the use, value or safety of the vehicle) OR
3. The vehicle is out of service for repair of nonconformities for a total of more than 30 calendar days (not necessarily all at one time)

In the case of 1 or 2 above, the consumer must also notify the manufacturer of the need for the repair of the nonconformity at the following address:

Ford Motor Company  
16800 Executive Plaza Drive  
Mail Drop 3NE-B  
Dearborn, MI 48126

You are required to submit your warranty dispute to BBB AUTO LINE before asserting in court any rights or remedies conferred by California Civil Code Section 1793.22(b). You are also required to use BBB AUTO LINE before exercising rights or seeking remedies created by the Federal Magnuson-Moss Warranty Act, 15 U.S.C. sec. 2301 et seq. If you choose to seek redress by pursuing rights and remedies not created by California Civil Code Section 1793.22(b) or the Magnuson-Moss Warranty Act, resort to BBB AUTO LINE is not required by those statutes.

## Customer Assistance

### **THE BETTER BUSINESS BUREAU (BBB) AUTO LINE PROGRAM (U.S. ONLY)**

Your satisfaction is important to Ford Motor Company and to your dealer. If a warranty concern has not been resolved using the three-step procedure outlined earlier in this chapter in the *Getting the services you need* section, you may be eligible to participate in the BBB AUTO LINE program.

The BBB AUTO LINE program consists of two parts – mediation and arbitration. During mediation, a representative of the BBB will contact both you and Ford Motor Company to explore options for settlement of the claim. If an agreement is not reached during mediation or you do not want to participate in mediation, and if your claim is eligible, you may participate in the arbitration process. An arbitration hearing will be scheduled so that you can present your case in an informal setting before an impartial person. The arbitrator will consider the testimony provided and make a decision after the hearing.

Disputes submitted to the BBB AUTO LINE program are usually decided within forty days after you file your claim with the BBB. You are not bound by the decision, and may reject the decision and proceed to court where all findings of the BBB Auto Line dispute, and decision, are admissible in the court action. Should you choose to accept the BBB AUTO LINE decision, Ford is then bound by the decision, and must comply with the decision within 30 days of receipt of your acceptance letter.

BBB AUTO LINE Application: Using the information provided below, please call or write to request a program application. You will be asked for your name and address, general information about your new vehicle, information about your warranty concerns, and any steps you have already taken to try to resolve them. A Customer Claim Form will be mailed that will need to be completed, signed and returned to the BBB along with proof of ownership. Upon receipt, the BBB will review the claim for eligibility under the Program Summary Guidelines.

**You can get more information by calling BBB AUTO LINE at 1-800-955-5100, or writing to:**

**BBB AUTO LINE  
4200 Wilson Boulevard, Suite 800  
Arlington, Virginia 22203-1833**

BBB AUTO LINE applications can also be requested by calling the Ford Motor Company Customer Relationship Center at 1-800-392-3673.

**Note:** Ford Motor Company reserves the right to change eligibility limitations, modify procedures, or to discontinue this process at any time without notice and without obligation.

## Customer Assistance

### **UTILIZING THE MEDIATION/ARBITRATION PROGRAM (CANADA ONLY)**

For vehicles delivered to authorized Canadian dealers. In those cases where you continue to feel that the efforts by Ford of Canada and the authorized dealer to resolve a factory-related vehicle service concern have been unsatisfactory, Ford of Canada participates in an impartial third party mediation/arbitration program administered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP).

The CAMVAP program is a straight forward and relatively speedy alternative to resolve a disagreement when all other efforts to produce a settlement have failed. This procedure is without cost to you and is designed to eliminate the need for lengthy and expensive legal proceedings.

In the CAMVAP program, impartial third-party arbitrators conduct hearings at mutually convenient times and places in an informal environment. These impartial arbitrators review the positions of the parties, make decisions and, when appropriate, render awards to resolve disputes. CAMVAP decisions are fast, fair, and final as the arbitrator's award is binding on both you and Ford of Canada.

CAMVAP services are available in all Canadian territories and provinces. For more information, without charge or obligation, call your CAMVAP Provincial Administrator directly at 1-800-207-0685 or visit [www.camvap.ca](http://www.camvap.ca).

### **GETTING ASSISTANCE OUTSIDE THE U.S. AND CANADA**

Before exporting your vehicle to a foreign country, contact the appropriate foreign embassy or consulate. These officials can inform you of local vehicle registration regulations and where to find unleaded fuel.

If you cannot find unleaded fuel or can only get fuel with an anti-knock index lower than is recommended for your vehicle, contact a regional office or owner relations/customer relationship office.

The use of leaded fuel in your vehicle without proper conversion may damage the effectiveness of your emission control system and may cause engine knocking or serious engine damage. Ford Motor Company/Ford of Canada is not responsible for any damage caused by use of improper fuel. Using leaded fuel may also result in difficulty importing your vehicle back into the U.S.

## Customer Assistance

If your vehicle must be serviced while you are traveling or living in Asia-Pacific Region, Sub-Saharan Africa, U.S. Virgin Islands, Central America, the Caribbean, and Israel, contact the nearest authorized dealer. If the authorized dealer cannot help you, contact:

FORD MOTOR COMPANY  
FORD EXPORT OPERATIONS & GLOBAL INITIATIVES  
1555 Fairlane Drive  
Fairlane Business Park #3  
Allen Park, Michigan 48101  
U.S.A.

Telephone: (313) 594-4857

For customers in Guam, the Commonwealth of the Northern Mariana Islands (CNMI), America Samoa, and the U.S. Virgin Islands, please feel free to call our Toll-Free Number: (800) 841-FORD (3673).

FAX: (313) 390-0804

Email: [expcac@ford.com](mailto:expcac@ford.com)

If your vehicle must be serviced while you are traveling or living in Puerto Rico, contact the nearest authorized dealer. If the authorized dealer cannot help you, contact:

Ford International Business Development Inc.

Customer Relationship Center

P.O. Box 11957

Caparra Heights Station

San Juan, Puerto Rico 00922-1957

Telephone: (800) 841-FORD (3673)

FAX: (313) 390-0804

Email: [prcac@ford.com](mailto:prcac@ford.com)

[www.ford.com.pr](http://www.ford.com.pr)

## Customer Assistance

If your vehicle must be serviced while you are traveling or living in the Middle East, contact the nearest authorized dealer. If the authorized dealer cannot help you, contact:

Ford Middle East  
Customer Relationship Center  
P.O. Box 21470  
Dubai, United Arab Emirates  
Telephone: +971 4 3326084  
Toll-Free Number for the Kingdom of Saudi Arabia: 800 8971409  
Local Telephone Number for Kuwait: 24810575  
FAX: +971 4 3327299  
Email: [menacac@ford.com](mailto:menacac@ford.com)  
[www.me.ford.com](http://www.me.ford.com)

If you buy your vehicle in North America and then relocate to any of the above locations, register your vehicle identification number (VIN) and new address with Ford Motor Company Export Operations & Global Growth Initiatives by emailing [expcac@ford.com](mailto:expcac@ford.com).

If you are in another foreign country, contact the nearest authorized dealer. If the authorized dealer employees cannot help you, they can direct you to the nearest Ford affiliate office.

**Customers in the U.S. should call 1-800-392-3673.**

### ORDERING ADDITIONAL OWNER'S LITERATURE

To order the publications in this portfolio, contact Helm, Incorporated at:

HELM, INCORPORATED  
P.O. Box 07150  
Detroit, Michigan 48207

Or to order a free publication catalog, call toll free: 1-800-782-4356

Monday-Friday 8:00 a.m. - 6:00 p.m. EST

Helm, Incorporated can also be reached by their website:  
[www.helminc.com](http://www.helminc.com).

*(Items in this catalog may be purchased by credit card, check or money order.)*

## Customer Assistance

### Obtaining a French Owner's Guide

French Owner's Guides can be obtained from your authorized dealer or by contacting Helm, Incorporated using the contact information listed previously in this section.

### REPORTING SAFETY DEFECTS (U.S. ONLY)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety



Administration (NHTSA) in addition to notifying Ford Motor Company.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Ford Motor Company.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to:

Administrator  
1200 New Jersey Avenue, Southeast  
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

### REPORTING SAFETY DEFECTS (CANADA ONLY)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Transport Canada, using their toll-free number: 1-800-333-0510, or online at: <https://www.apps.tc.gc.ca/Saf-Sec-Sur/7/PCDB-BDPP/Index.aspx>.

## Cleaning

### WASHING THE EXTERIOR

Wash your vehicle regularly with cool or lukewarm water and a neutral pH shampoo, such as Motorcraft® Detail Wash (ZC-3-A), which is available from your authorized dealer.

- Never use strong household detergents or soap, such as dish washing or laundry liquid. These products can discolor and spot painted surfaces.
- Using high pressure water or wand-type car washes may cause damage to tape stripes if the nozzle is positioned closer than 12 inches (30 cm) from the stripe.
- Never wash a vehicle that is “hot to the touch” or during exposure to strong, direct sunlight.
- Always use a clean sponge or car wash mitt with plenty of water for best results.
- Dry the vehicle with a chamois or soft terry cloth towel in order to eliminate water spotting.
- It is especially important to wash the vehicle regularly during the winter months, as dirt and road salt are difficult to remove and cause damage to the vehicle.
- Immediately remove items such as gasoline, diesel fuel, bird droppings and insect deposits because they can cause damage to the vehicle’s paintwork and trim over time. Use Bug and Tar Remover (ZC-42) which is available from your authorized dealer.
- Remove any exterior accessories, such as antennas, before entering a car wash.
- **Suntan lotions and insect repellents can damage any painted surface; if these substances come in contact with your vehicle, wash off as soon as possible.**

### Exterior chrome

- Wash the vehicle first, using cool or lukewarm water and a neutral pH shampoo, such as Motorcraft® Detail Wash (ZC-3-A).
- Use Custom Bright Metal Cleaner (ZC-15), available from your authorized dealer. Apply the product as you would a wax to clean bumpers and other chrome parts; allow the cleaner to dry for a few minutes, then wipe off the haze with a clean, dry rag.
- **Never use abrasive materials such as steel wool or plastic pads as they can scratch the chrome surface.**

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### WAXING

- Wash the vehicle first.
- Use a quality wax that does not contain abrasives.
- Do not allow paint sealant to come in contact with any non-body (low-gloss black) colored trim, such as grained door handles, roof racks, bumpers, side moldings, mirror housings or the windshield cowl area. The paint sealant will “gray” or stain the parts over time.

### PAINT CHIPS

Your authorized dealer has touch-up paint to match your vehicle's color. Take your color code (printed on a sticker in the driver's door jamb) to your authorized dealer to ensure you get the correct color.

- Remove particles such as bird droppings, tree sap, insect deposits, tar spots, road salt and industrial fallout before repairing paint chips.
- Always read the instructions before using the products.

### ALUMINUM WHEELS AND WHEEL COVERS

Aluminum wheels and wheel covers are coated with a clear coat paint finish. In order to maintain their shine:

- Clean weekly with Motorcraft® Wheel and Tire Cleaner, which is available from your authorized dealer. Heavy dirt and brake dust accumulation may require agitation with a sponge. Rinse thoroughly with a strong stream of water.
- Never apply any cleaning chemical to hot or warm wheel rims or covers.
- Some automatic car washes may cause damage to the finish on your wheel rims or covers. Industrial-strength (heavy-duty) cleaners, or cleaning chemicals, in combination with brush agitation to remove brake dust and dirt, could wear away the clear coat finish over time.
- Do not use hydrofluoric acid-based or high caustic-based wheel cleaners, steel wool, fuels or strong household detergent.
- To remove tar and grease, use Motorcraft® Bug and Tar Remover , available from your authorized dealer.

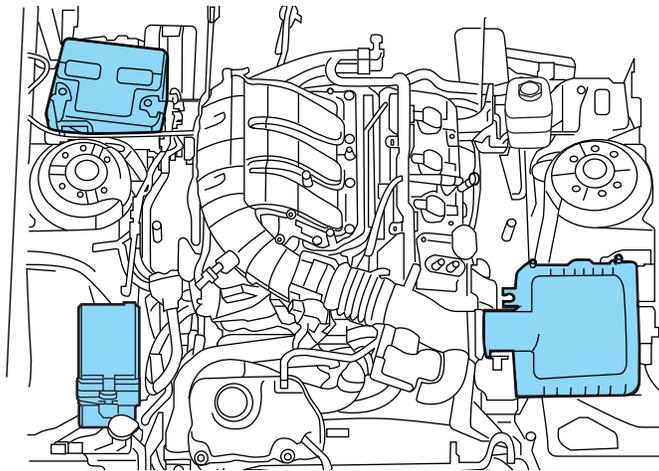
## Cleaning

### ENGINE

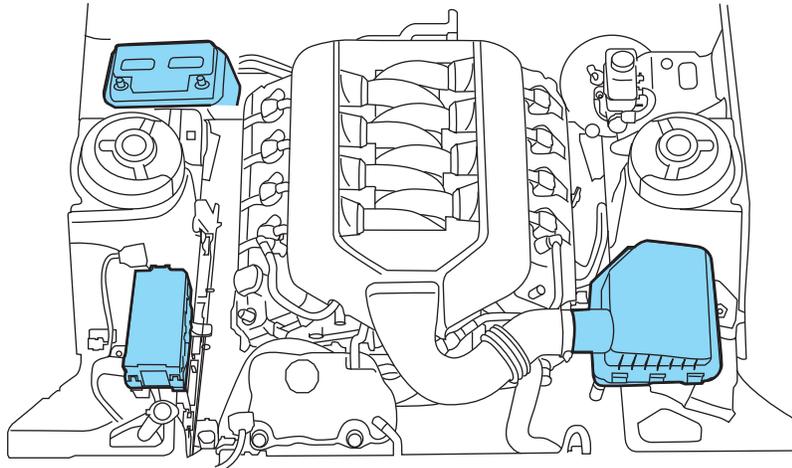
Engines are more efficient when they are clean because grease and dirt buildup keep the engine warmer than normal. When washing:

- Take care when using a power washer to clean the engine. The high-pressure fluid could penetrate the sealed parts and cause damage.
- Do not spray a hot engine with cold water to avoid cracking the engine block or other engine components.
- Spray Motorcraft® Engine Shampoo and Degreaser (ZC-20) on all parts that require cleaning and pressure rinse clean. In Canada, use Motorcraft® Engine Shampoo (CXC-66-A).
- Never wash or rinse the engine while it is hot or running; water in the running engine may cause internal damage.
- Never wash or rinse any ignition coil, spark plug wire or spark plug well, or the area in and around these locations.
- Cover the highlighted areas to prevent water damage when cleaning the engine.

### 3.7L V6 ENGINE



### 5.0L V8 ENGINE



#### PLASTIC (NON-PAINTED) EXTERIOR PARTS

Use only approved products to clean plastic parts. These products are available from your authorized dealer.

- For routine cleaning, use Motorcraft® Detail Wash (ZC-3-A).
- If tar or grease spots are present, use Motorcraft® Bug and Tar Remover (ZC-42).

#### WINDOWS AND WIPER BLADES

The windshield, rear and side windows and the wiper blades should be cleaned regularly. If the wipers do not wipe properly, substances on the vehicle's glass or the wiper blades may be the cause. These may include hot wax treatments used by commercial car washes, water repellent coatings, tree sap, or other organic contamination; these contaminants may cause squeaking or chatter noise from the blades, and streaking and smearing of the windshield. To clean these items, follow these tips:

- The windshield, rear windows and side windows may be cleaned with a non-abrasive cleaner such as Motorcraft® Ultra-Clear Spray Glass Cleaner (ZC-23), available from your authorized dealer.
- The wiper blades can be cleaned with isopropyl (rubbing) alcohol or Motorcraft® Premium Windshield Washer Concentrate (ZC-32-A) in the U.S., or Premium Quality Windshield Washer Fluid [CXC-37-(A, B,

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## Cleaning

D, or F)] in Canada, available from your authorized dealer. This washer fluid contains special solution in addition to alcohol which helps to remove the hot wax deposited on the wiper blade and windshield from automated car wash facilities. Be sure to replace wiper blades when they appear worn or do not function properly.

- Do not use abrasives, as they may cause scratches.
- Do not use fuel, kerosene, or paint thinner to clean any parts.

If you cannot remove those streaks after cleaning with the glass cleaner or if the wipers chatter and move in a jerky motion, clean the outer surface of the windshield and the wiper blades using a sponge or soft cloth with a neutral detergent or mild-abrasive cleaning solution. After cleaning, rinse the windshield and wiper blades with clean water. The windshield is clean if beads do not form when you rinse the windshield with water.

### **CONVERTIBLE TOP AND PADDED MOLDING**

For vinyl tops, wash with Motorcraft® Detail Wash (ZC-3-A), which is available from your authorized dealer.

For cloth tops wash with a high quality convertible top cleaner/protectant.

- Do not use stiff bristle brushes or abrasive materials or cleaners.
- Hot waxes applied by commercial car washes can affect the cleanability of vinyl material.
- Using high water pressure or wand-type car washes against the convertible top and windows may cause water leaks and possible seal damage.

### **INSTRUMENT PANEL/INTERIOR TRIM AND CLUSTER LENS**

Clean the instrument panel, interior trim areas and cluster lens with a clean, damp, white cotton cloth, then use a clean and dry white cotton cloth to dry these areas.

- Avoid cleaners or polishes that increase the gloss of the upper portion of the instrument panel. The dull finish in this area helps protect the driver from undesirable windshield reflection.
- Be certain to wash or wipe your hands clean if you have been in contact with certain products such as insect repellent and suntan lotion in order to avoid possible damage to the interior painted surfaces.
- Do not use household or glass cleaners as these may damage the finish of the instrument panel, interior trim and cluster lens.

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## Cleaning

- Do not allow air fresheners and hand sanitizers to spill on interior surfaces. If a spill occurs, **wipe off immediately**. Damage may not be covered by your warranty.



**WARNING:** Do not use chemical solvents or strong detergents when cleaning the steering wheel or instrument panel to avoid contamination of the airbag system.

If a staining liquid like coffee/juice has been spilled on the instrument panel or on interior trim surfaces, clean as follows:

1. Wipe up spilled liquid using a clean, white, cotton cloth.
2. Wipe the surface with a damp, clean, white cotton cloth. For more thorough cleaning, use a mild soap and water solution. If the spot cannot be completely cleaned by this method, the area may be cleaned using a commercially available cleaning product designed for automotive interiors.
3. If necessary, apply more soap and water solution or cleaning product to a clean, white, cotton cloth and press the cloth onto the soiled area—allow this to set at room temperature for 30 minutes.
4. Remove the soaked cloth, and if it is not soiled badly, use this cloth to clean the area by using a rubbing motion for 60 seconds.
5. Following this, wipe area dry with a clean, white, cotton cloth.

### INTERIOR

For fabric, carpets, cloth seats, safety belts and seats equipped with side airbags:

- Remove dust and loose dirt with a vacuum cleaner.
- Remove light stains and soil with Motorcraft® Professional Strength Carpet & Upholstery Cleaner (ZC-54).
- If grease or tar is present on the material, spot-clean the area first with Motorcraft® Spot and Stain Remover (ZC-14). In Canada, use Motorcraft® Multi-Purpose Cleaner (CXC-101).
- If a ring forms on the fabric after spot cleaning, clean the entire area immediately (but do not oversaturate) or the ring will set.
- Do not use household cleaning products or glass cleaners, which can stain and discolor the fabric and affect the flame retardant abilities of the seat materials.

## Cleaning



**WARNING:** Do not use cleaning solvents, bleach or dye on the vehicle's safety belts, as these actions may weaken the belt webbing.



**WARNING:** On vehicles equipped with seat-mounted airbags, do not use chemical solvents or strong detergents. Such products could contaminate the side-airbag system and affect performance of the side airbag in a collision.

### LEATHER SEATS (IF EQUIPPED)

- Remove dust and loose dirt with a vacuum cleaner.
- Clean spills and stains as quickly as possible.
- For routine cleaning, wipe the surface with a soft, damp cloth. For more thorough cleaning, wipe the surface with a mild soap and water solution. In Canada, use Motorcraft® Vinyl Cleaner (CXC-93). Dry the area with a soft cloth.
- If the leather cannot be completely cleaned using a mild soap and water solution, the leather may be cleaned using a commercially available leather cleaning product designed for automotive interiors.
- To check for compatibility, first test any cleaner or stain remover on an inconspicuous part of the leather.
- Do not use household cleaning products, alcohol solutions, solvents or cleaners intended for rubber, vinyl and plastics, or oil/petroleum-based leather conditioners. These products may cause premature wearing or damage to the leather.

### UNDERBODY

Flush the complete underside of your vehicle frequently. Keep body and door drain holes free from packed dirt.

### FORD AND LINCOLN CAR CARE PRODUCTS

Your Ford or Lincoln authorized dealer has many quality products available to clean your vehicle and protect its finishes. These quality products have been specifically engineered to fulfill your automotive needs; they are custom designed to complement the style and appearance of your vehicle. Each product is made from high quality materials that meet or exceed rigid specifications. For best results, use the following products or products of equivalent quality:

- Motorcraft® Bug and Tar Remover (ZC-42)
- Motorcraft® Custom Bright Metal Cleaner (ZC-15)
- Motorcraft® Detail Wash (ZC-3-A)
- Motorcraft® Dusting Cloth (ZC-24)
- Motorcraft® Engine Shampoo and Degreaser (U.S. only) (ZC-20)
- Motorcraft® Engine Shampoo (Canada only) (CXC-66-A)
- Motorcraft® Multi-Purpose Cleaner (Canada only) (CXC-101)
- Motorcraft® Premium Glass Cleaner (Canada only) (CXC-100)
- Motorcraft® Premium Quality Windshield Washer Fluid (Canada only) [CXC-37-(A, B, D or F)]
- Motorcraft® Premium Windshield Washer Concentrate (U.S. only) (ZC-32-A)
- Motorcraft® Professional Strength Carpet & Upholstery Cleaner (ZC-54)
- Motorcraft® Spot and Stain Remover (U.S. only) (ZC-14)
- Motorcraft® Ultra-Clear Spray Glass Cleaner (ZC-23)
- Motorcraft® Vinyl Cleaner (Canada only) (CXC-93)
- Motorcraft® Wheel and Tire Cleaner (ZC-37-A)

## Maintenance and Specifications

### SERVICE RECOMMENDATIONS

To help you service your vehicle, we provide *scheduled maintenance information* which makes tracking routine service easy.

If your vehicle requires professional service, your authorized dealer can provide the necessary parts and service. Check your *Warranty Guide* to find out which parts and services are covered.

Use only recommended fuels, lubricants, fluids and service parts conforming to specifications. Motorcraft® parts are designed and built to provide the best performance in your vehicle.

### PRECAUTIONS WHEN SERVICING YOUR VEHICLE

- Do not work on a hot engine.
- Make sure that nothing gets caught in moving parts.
- Do not work on a vehicle with the engine running in an enclosed space, unless you are sure you have enough ventilation.
- Keep all open flames and other burning material (such as cigarettes) away from the battery and all fuel related parts.

### Working with the engine off

1. For vehicles equipped with an automatic transmission, set the parking brake and shift to P (Park). For vehicles equipped with a manual transmission, set the parking brake, press and hold the clutch pedal, place the gearshift in 1 (First), and release the clutch pedal.
2. Turn off the engine and remove the key.
3. Block the wheels.

### Working with the engine on

1. For vehicles equipped with an automatic transmission, set the parking brake and shift to P (Park). For vehicles equipped with a manual transmission, set the parking brake, press and hold the clutch pedal, place the gearshift in N (Neutral), and release the clutch pedal.
2. Block the wheels.

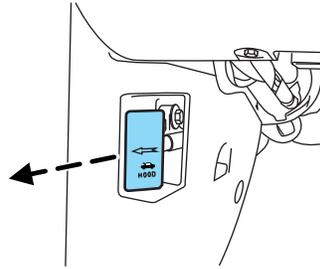


**WARNING:** To reduce the risk of vehicle damage and/or personal burn injuries, do not start your engine with the air cleaner removed and do not remove it while the engine is running.

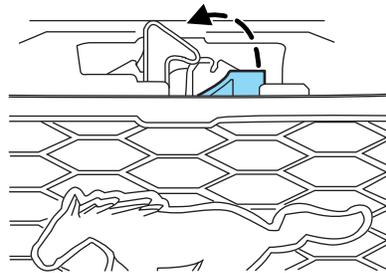
## Maintenance and Specifications

### OPENING THE HOOD

1. Inside the vehicle, pull the hood release handle located on the driver's side kick panel.



2. Go to the front of the vehicle and release the auxiliary latch that is located under the front center of the hood.

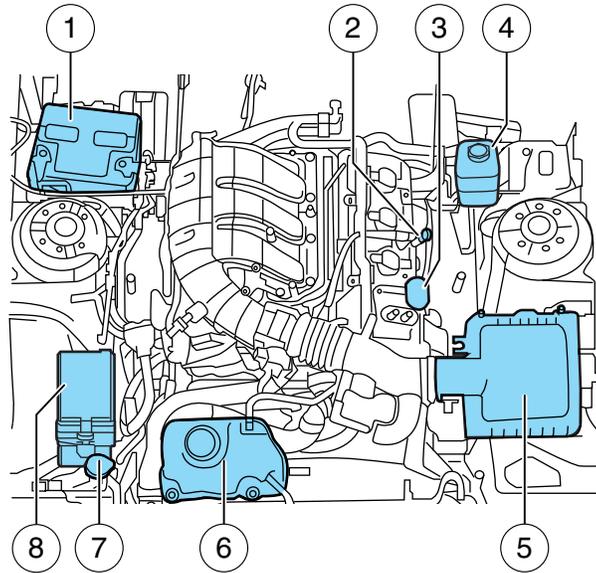


3. Lift the hood and secure it with the prop rod.

## Maintenance and Specifications

### IDENTIFYING COMPONENTS IN THE ENGINE COMPARTMENT

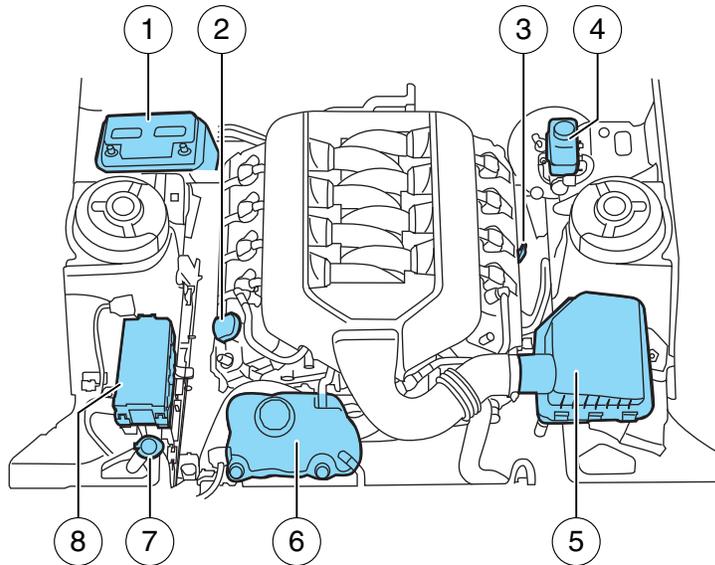
#### 3.7L V6 engine



1. Battery
2. Engine oil dipstick
3. Engine oil filler cap
4. Brake fluid reservoir
5. Air filter assembly
6. Engine coolant reservoir
7. Windshield washer fluid reservoir
8. Power distribution box

## Maintenance and Specifications

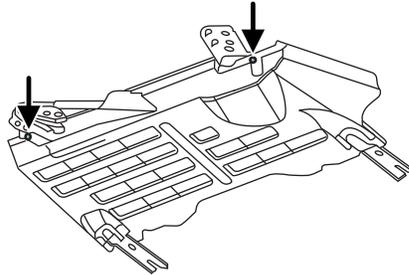
### 5.0L V8 engine



1. Battery
2. Engine oil filler cap
3. Engine oil dipstick
4. Brake fluid reservoir
5. Air filter assembly
6. Engine coolant reservoir
7. Windshield washer fluid reservoir
8. Power distribution box

## Maintenance and Specifications

### Engine shield



Some vehicles may be equipped with an aero-shield under the engine. Remove the front fasteners of the shield to gain access for service. This includes oil and filter changes.

### WINDSHIELD WASHER FLUID

Add fluid to fill the reservoir if the level is low. In very cold weather, do not fill the reservoir completely.

Only use a washer fluid that meets Ford specifications. Do not use any special washer fluid such as windshield water repellent type fluid or bug wash. They may cause squeaking, chatter noise, streaking and smearing. Refer to *Maintenance product specifications and capacities* in this chapter.



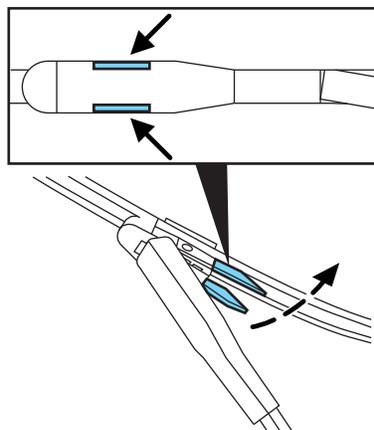
State or local regulations on volatile organic compounds may restrict the use of methanol, a common windshield washer antifreeze additive. Washer fluids containing non-methanol antifreeze agents should be used only if they provide cold weather protection without damaging the vehicle's paint finish, wiper blades or washer system.

 **WARNING:** If you operate your vehicle in temperatures below 40°F (5°C), use washer fluid with antifreeze protection. Failure to use washer fluid with antifreeze protection in cold weather could result in impaired windshield vision and increase the risk of injury or accident.

## Maintenance and Specifications

### CHANGING THE WIPER BLADES

1. Pull the wiper blade and arm away from the glass.
2. Squeeze the locking tabs to release the blade from the arm and pull the blade away from the arm to remove it.



3. Attach the new blade to the arm and snap it into place.

Replace wiper blades at least once per year for optimum performance.

Poor wiper quality can be improved by cleaning the wiper blades and the windshield. Refer to *Windows and wiper blades* in the *Cleaning* chapter.

To prolong the life of the wiper blades, it is highly recommended to scrape off the ice on the windshield before turning on the wipers. The layer of ice has many sharp edges and can damage the micro edge of the wiper rubber element.

### ENGINE OIL

#### Checking the engine oil

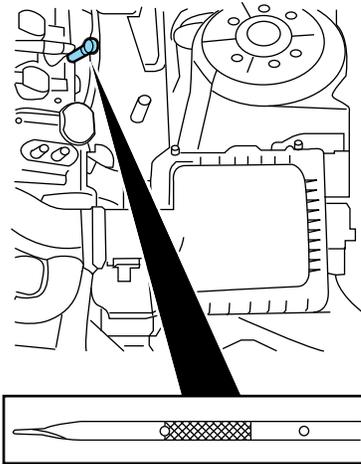
Refer to the *scheduled maintenance information* for the appropriate intervals for checking the engine oil.

1. Make sure the vehicle is on level ground.
2. Turn the engine off and wait 15 minutes for the oil to drain into the oil pan.
3. Set the parking brake and ensure the gearshift is securely latched in P (Park) (automatic transmissions) or 1 (First) (manual transmissions).
4. Open the hood. Protect yourself from engine heat.

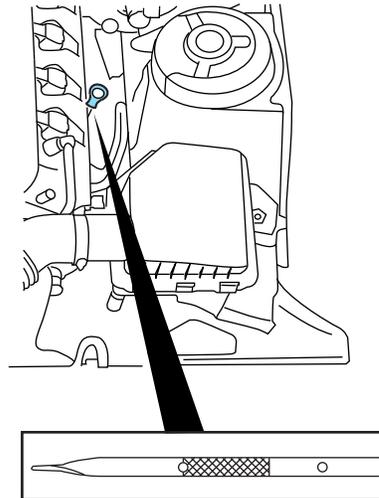
## Maintenance and Specifications

5. Locate and carefully remove the engine oil level dipstick.

- 3.7L V6 engine



- 5.0L V8 engine - Locate the engine oil dipstick by reaching between the strut tower brace (if equipped) and the hood hinge area.



## Maintenance and Specifications

- Wipe the dipstick clean. Insert the dipstick fully, then remove it again.
  - If the oil level is **between the lower and upper holes**, the oil level is acceptable. **DO NOT ADD OIL.**
  - If the oil level is below the lower hole, add enough oil to raise the level within the lower and upper holes.
  - Oil levels above the upper hole may cause engine damage. Some oil must be removed from the engine by an authorized dealer.
- Put the dipstick back in and ensure it is fully seated.

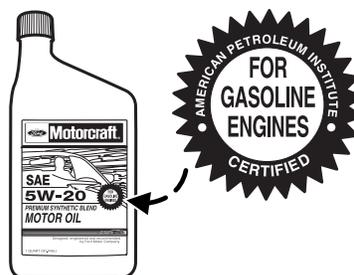
### Adding engine oil

- Check the engine oil. For instructions, refer to *Checking the engine oil* in this chapter.
- If the engine oil level is not within the normal range, add only certified engine oil of the recommended viscosity. Remove the engine oil filler cap and use a funnel to pour the engine oil into the opening.
- Recheck the engine oil level. Make sure the oil level is not above the normal operating range on the engine oil level dipstick.
- Install the dipstick and ensure it is fully seated.
- Fully install the engine oil filler cap by turning the filler cap clockwise 1/4 of a turn until three clicks are heard or until the cap is fully seated.

**To avoid possible oil loss, DO NOT operate the vehicle with the engine oil level dipstick and/or the engine oil filler cap removed.**

### Engine oil and filter recommendations

Look for this certification trademark.



## Maintenance and Specifications

### ***Use SAE 5W-20 engine oil***

Only use oils certified for gasoline engines by the American Petroleum Institute (API). An oil with this trademark symbol conforms to the current engine and emission system protection standards and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), comprised of U.S. and Japanese automobile manufacturers.

To protect your engine and engine's warranty, use Motorcraft® SAE 5W-20 or an equivalent SAE 5W-20 oil meeting Ford specification WSS-M2C945-A. **SAE 5W-20 oil provides optimum fuel economy and durability performance meeting all requirements for your vehicle's engine.** Refer to *Maintenance product specifications and capacities* later in this chapter for more information.

Do not use supplemental engine oil additives, cleaners or other engine treatments. They are unnecessary and could lead to engine damage that is not covered by Ford warranty.

Change your engine oil and filter according to the appropriate schedule listed in the *scheduled maintenance information*.

Ford production and Motorcraft® replacement oil filters are designed for added engine protection and long life. If a replacement oil filter is used that does not meet Ford material and design specifications, start-up engine noises or knock may be experienced.

It is recommended you use the appropriate Motorcraft® oil filter or another with equivalent performance for your engine application.

## Maintenance and Specifications

### BATTERY

Your vehicle is equipped with a Motorcraft® maintenance-free battery which normally does not require additional water during its life of service.

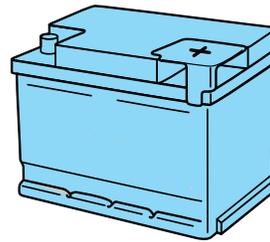
**Note:** If your battery has a cover/shield, make sure it is reinstalled after the battery has been cleaned or replaced.

For longer, trouble-free operation, keep the top of the battery clean and dry. Also, make certain the battery cables are always tightly fastened to the battery terminals.

If you see any corrosion on the battery or terminals, remove the cables from the terminals and clean with a wire brush. You can neutralize the acid with a solution of baking soda and water.

It is recommended that the negative battery cable terminal be disconnected from the battery if you plan to store your vehicle for an extended period of time. This will minimize the discharge of your battery during storage.

**Note:** Electrical or electronic accessories or components added to the vehicle by the dealer or the owner may adversely affect battery performance and durability.



**WARNING:** Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks or lighted substances to come near the battery. When working near the battery, always shield your face and protect your eyes. Always provide proper ventilation.



**WARNING:** When lifting a plastic-cased battery, excessive pressure on the end walls could cause acid to flow through the vent caps, resulting in personal injury and/or damage to the vehicle or battery. Lift the battery with a battery carrier or with your hands on opposite corners.

## Maintenance and Specifications



**WARNING:** Keep batteries out of reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Shield your eyes when working near the battery to protect against possible splashing of acid solution. In case of acid contact with skin or eyes, flush immediately with water for a minimum of 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately.



**WARNING:** Battery posts, terminals and related accessories contain lead and lead compounds. **Note:** Wash hands after handling.

Because your vehicle's engine is electronically controlled by a computer, some control conditions are maintained by power from the battery. When the battery is disconnected or a new battery is installed, the engine must relearn its idle and fuel trim strategy for optimum driveability and performance. To begin this process:

1. With the vehicle at a complete stop, set the parking brake.
2. Put the gearshift in P (Park) (automatic transmission) or the neutral position (manual transmission), turn off all accessories and start the engine.
3. Run the engine until it reaches normal operating temperature.
4. Allow the engine to idle for at least one minute.
5. Turn the A/C on and allow the engine to idle for at least one minute.
6. Drive the vehicle to complete the relearning process.
  - The vehicle may need to be driven 10 miles (16 km) or more to relearn the idle and fuel trim strategy.
  - **If you do not allow the engine to relearn its idle trim, the idle quality of your vehicle may be adversely affected until the idle trim is eventually relearned.**

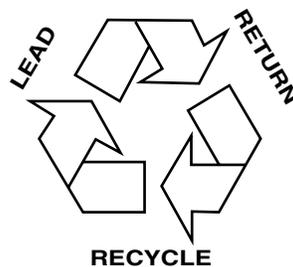
When the battery is disconnected or a new battery installed, the transmission must relearn its adaptive strategy. As a result of this, the transmission may shift firmly. This operation is considered normal and will not affect function or durability of the transmission. Over time the adaptive learning process will fully update transmission operation to its optimum shift feel.

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## Maintenance and Specifications

If the battery has been disconnected or a new battery has been installed, the clock and the preset radio stations must be reset once the battery is reconnected.

- Always dispose of automotive batteries in a responsible manner. Follow your local authorized standards for disposal. Call your local authorized recycling center to find out more about recycling automotive batteries.



### ENGINE COOLANT

#### Checking engine coolant

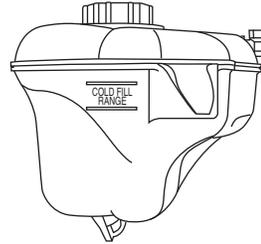
The concentration and level of engine coolant should be checked at the intervals listed in *scheduled maintenance information*. The coolant concentration should be maintained at 50/50 coolant and distilled water. For best results, coolant concentration should be tested with a refractometer such as Rotunda tool 300-ROB75240E available from your dealer. Ford does not recommend the use of hydrometers or coolant test strips for measuring coolant concentration. The level of coolant should be maintained at the FULL COLD level or within the COLD FILL RANGE in the coolant reservoir. If the level falls below, add coolant per the instructions in the *Adding engine coolant* section.

Your vehicle was factory-filled with a 50/50 engine coolant and water concentration. If the concentration of coolant falls below 40% or above 60%, the engine parts could become damaged or not work properly. **A 50/50 mixture of coolant and water provides the following:**

- **Improved freeze protection.**
- **Improved boiling protection.**
- **Protection against rust and other forms of corrosion.**
- **Proper function of calibrated gauges.**

## Maintenance and Specifications

When the engine is cold, check the level of the engine coolant in the reservoir.



- The engine coolant should be at the FULL COLD level, or within the COLD FILL or MIN / MAX range as listed on the engine coolant reservoir (depending upon application).
- Refer to *scheduled maintenance information* for service interval schedules.

If the engine coolant has not been checked at the recommended interval, the engine coolant reservoir may become low or empty. If the reservoir is low or empty, add engine coolant to the reservoir. Refer to *Adding engine coolant* in this chapter.

**Note:** Automotive fluids are not interchangeable; do not use engine coolant/antifreeze or windshield washer fluid outside of its specified function and vehicle location.

### Adding engine coolant

When adding coolant, make sure it is a 50/50 mixture of engine coolant and distilled water. Add the mixture to the coolant reservoir, **when the engine is cool**, until the appropriate fill level is obtained. If coolant is filled to the COLD FILL RANGE or FULL COLD level when the engine is not cool, the system will remain underfilled.

 **WARNING:** Do not add engine coolant when the engine is hot. Steam and scalding liquids released from a hot cooling system can burn you badly. Also, you can be burned if you spill coolant on hot engine parts.

 **WARNING:** Do not put engine coolant in the windshield washer fluid container. If sprayed on the windshield, engine coolant could make it difficult to see through the windshield.

## Maintenance and Specifications

- **DO NOT MIX** different colors or types of coolant in your vehicle. Make sure the correct coolant is used. Mixing of engine coolants may harm your engine's cooling system. The use of an improper coolant may harm engine and cooling system components and may void the warranty. Refer to *Maintenance product specifications and capacities* in this chapter.

**Note:** Do not use stop leak pellets or cooling system sealants/additives as they can cause damage to the engine cooling and/or heating systems. This damage would not be covered under your vehicle's warranty.

- A large amount of water without engine coolant may be added, in case of emergency, to reach a vehicle service location. In this instance, the cooling system must be drained, chemically cleaned with Motorcraft® Premium Cooling System Flush, and refilled with a 50/50 mixture of engine coolant and distilled water as soon as possible. Water alone (without engine coolant) can cause engine damage from corrosion, overheating or freezing.
- **Do not use alcohol, methanol, brine or any engine coolants mixed with alcohol or methanol antifreeze (coolant).** Alcohol and other liquids can cause engine damage from overheating or freezing.
- **Do not add extra inhibitors or additives to the coolant.** These can be harmful and compromise the corrosion protection of the engine coolant.

For vehicles with overflow coolant systems with a non-pressurized cap on the coolant recovery system, add coolant to the coolant recovery reservoir when the engine is cool. Add the proper mixture of coolant and distilled water to the FULL COLD level. For all other vehicles which have a coolant degas system with a pressurized cap, or if it is necessary to remove the coolant pressure relief cap on the radiator of a vehicle with an overflow system, follow these steps to add engine coolant.



**WARNING:** To reduce the risk of personal injury, make sure the engine is cool before unscrewing the coolant pressure relief cap. The cooling system is under pressure; steam and hot liquid can come out forcefully when the cap is loosened slightly.

Add the proper mixture of coolant and water to the cooling system by following these steps:

1. Before you begin, turn the engine off and let it cool.
2. When the engine is cool, wrap a thick cloth around the coolant pressure relief cap on the coolant reservoir (a translucent plastic bottle). Slowly turn cap counterclockwise (left) until pressure begins to release.

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## Maintenance and Specifications

3. Step back while the pressure releases.
4. When you are sure that all the pressure has been released, use the cloth to turn it counterclockwise and remove the cap.
5. Fill the coolant reservoir slowly with the proper coolant mixture, to within the COLD FILL RANGE or the FULL COLD level on the reservoir. If you removed the radiator cap in an overflow system, fill the radiator until the coolant is visible and radiator is almost full.
6. Replace the cap. Turn until tightly installed. Cap must be tightly installed to prevent coolant loss.

After any coolant has been added, check the coolant concentration (refer to *Checking engine coolant*). If the concentration is not 50/50, drain some coolant and adjust the concentration. It may take several drains and additions to obtain a 50/50 coolant concentration.

Whenever coolant has been added, the coolant level in the coolant reservoir should be checked the next few times you drive the vehicle. If necessary, add enough 50/50 concentration of engine coolant and distilled water to bring the liquid level to the proper level.

If you have to add more than 1.0 quart (1.0 liter) of engine coolant per month, have your authorized dealer check the engine cooling system. Your cooling system may have a leak. Operating an engine with a low level of coolant can result in engine overheating and possible engine damage.

### Recycled engine coolant

Ford Motor Company does NOT recommend the use of recycled engine coolant since a Ford-approved recycling process is not yet available.



Used engine coolant should be disposed of in an appropriate manner. Follow your community's regulations and standards for recycling and disposing of automotive fluids.

### Coolant refill capacity

To find out how much fluid your vehicle's cooling system can hold, refer to *Maintenance product specifications and capacities* in this chapter.

Fill your engine coolant reservoir as outlined previously in the *Adding engine coolant* section.

## Maintenance and Specifications

### Severe climates

If you drive in extremely cold climates:

- **It may be necessary to increase the coolant concentration above 50%.**
- **NEVER increase the coolant concentration above 60%.**
- **A coolant concentration of 60% will provide improved freeze point protection. Increased engine coolant concentrations above 60% will decrease the overheat protection characteristics of the engine coolant and may cause engine damage.**
- **If available, refer to the chart on the coolant container to ensure the coolant concentration in your vehicle will provide adequate freeze protection at the temperatures in which you drive in the winter months.**

If you drive in extremely hot climates:

- **It is still necessary to maintain the coolant concentration above 40%.**
- **NEVER decrease the coolant concentration below 40%.**
- **Decreased engine coolant concentrations below 40% will decrease the corrosion/freeze protection characteristics of the engine coolant and may cause engine damage.**
- **If available, refer to the chart on the coolant container to ensure the coolant concentration in your vehicle will provide adequate protection at the temperatures in which you drive.**

Vehicles driven year-round in non-extreme climates should use a 50/50 mixture of engine coolant and distilled water for optimum cooling system and engine protection.

### What you should know about fail-safe cooling

If the engine coolant supply is depleted, this feature allows the vehicle to be driven temporarily before incremental component damage is incurred. The “fail-safe” distance depends on ambient temperatures, vehicle load and terrain.

#### ***How fail-safe cooling works***

If the engine begins to overheat:

- The engine coolant temperature gauge  will move to the red (hot) area.
- The engine coolant temperature indicator will illuminate.
- The service engine soon indicator light will illuminate.

## Maintenance and Specifications

If the engine reaches a preset over-temperature condition, the engine will automatically switch to alternating cylinder operation. Each disabled cylinder acts as an air pump and cools the engine.

When this occurs the vehicle will still operate. However:

- The engine power will be limited.
- The air conditioning system will be disabled.

Continued operation will increase the engine temperature:

- The engine will completely shut down.
- Steering and braking effort will increase.

Once the engine temperature cools, the engine can be re-started. Take your vehicle to an authorized dealer as soon as possible to minimize engine damage.

### ***When fail-safe mode is activated***

You have limited engine power when in the fail-safe mode, so drive the vehicle with caution. The vehicle will not be able to maintain high speed operation and the engine will run rough. Remember that the engine is capable of completely shutting down automatically to prevent engine damage, therefore:

1. Pull off the road as soon as safely possible and turn off the engine.
2. Arrange for the vehicle to be taken to an authorized dealer.
3. If this is not possible, wait a short period for the engine to cool.
4. Check the coolant level and replenish if low.



**WARNING:** Fail-safe mode is for use during emergencies only.

Operate the vehicle in fail-safe mode only as long as necessary to bring the vehicle to rest in a safe location and seek immediate repairs. When in fail-safe mode, the vehicle will have limited power, will not be able to maintain high-speed operation, and may completely shut down without warning, potentially losing engine power, power steering assist, and power brake assist, which may increase the possibility of a crash resulting in serious injury.



**WARNING:** Never remove the coolant reservoir cap while the engine is running or hot.

5. Restart the engine and take your vehicle to an authorized dealer.

**Driving the vehicle without repairing the engine problem increases the chance of engine damage. Take your vehicle to an authorized dealer as soon as possible.**

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## Maintenance and Specifications

### FUEL FILTER

Your vehicle is equipped with a lifetime fuel filter that is integrated with the fuel tank. Regular maintenance or replacement is not needed.

For Shelby fuel filter requirements, see the *Shelby GT500 Supplement*.

### WHAT YOU SHOULD KNOW ABOUT AUTOMOTIVE FUELS

#### Important safety precautions



**WARNING:** Do not overfill the fuel tank. The pressure in an overfilled tank may cause leakage and lead to fuel spray and fire.



**WARNING:** The fuel system may be under pressure. If you hear a hissing sound near the fuel filler door, do not refuel until the sound stops. Otherwise, fuel may spray out, which could cause serious personal injury.



**WARNING:** Automotive fuels can cause serious injury or death if misused or mishandled.



**WARNING:** Gasoline may contain benzene, which is a cancer-causing agent.

Observe the following guidelines when handling automotive fuel:

- Extinguish all smoking materials and any open flames before refueling your vehicle.
- Always turn off the vehicle before refueling.
- Automotive fuels can be harmful or fatal if swallowed. Fuel such as gasoline is highly toxic and if swallowed can cause death or permanent injury. If fuel is swallowed, call a physician immediately, even if no symptoms are immediately apparent. The toxic effects of fuel may not be visible for hours.
- Avoid inhaling fuel vapors. Inhaling too much fuel vapor of any kind can lead to eye and respiratory tract irritation. In severe cases, excessive or prolonged breathing of fuel vapor can cause serious illness and permanent injury.



## Maintenance and Specifications

- Avoid getting fuel liquid in your eyes. If fuel is splashed in the eyes, remove contact lenses (if worn), flush with water for 15 minutes and seek medical attention. Failure to seek proper medical attention could lead to permanent injury.
- Fuels can also be harmful if absorbed through the skin. If fuel is splashed on the skin and/or clothing, promptly remove contaminated clothing and wash skin thoroughly with soap and water. Repeated or prolonged skin contact with fuel liquid or vapor causes skin irritation.
- Be particularly careful if you are taking “Antabuse” or other forms of disulfiram for the treatment of alcoholism. Breathing gasoline vapors, or skin contact could cause an adverse reaction. In sensitive individuals, serious personal injury or sickness may result. If fuel is splashed on the skin, promptly wash skin thoroughly with soap and water. Consult a physician immediately if you experience an adverse reaction.



**WARNING:** When refueling always shut the engine off and never allow sparks or open flames near the filler neck. Never smoke while refueling. Fuel vapor is extremely hazardous under certain conditions. Care should be taken to avoid inhaling excess fumes.



**WARNING:** The flow of fuel through a fuel pump nozzle can produce static electricity, which can cause a fire if fuel is pumped into an ungrounded fuel container.

### Refueling



**WARNING:** Fuel vapor burns violently and a fuel fire can cause severe injuries. To help avoid injuries to you and others:

- Read and follow all the instructions on the pump island;
- Turn off your engine when you are refueling;
- Do not smoke if you are near fuel or refueling your vehicle;
- Keep sparks, flames and smoking materials away from fuel;
- Stay outside your vehicle and do not leave the fuel pump unattended when refueling your vehicle — this is against the law in some places;
- Keep children away from the fuel pump; never let children pump fuel.
- Do not use personal electronic devices while refueling. It can ignite fuel vapors.

## Maintenance and Specifications

Use the following guidelines to avoid electrostatic charge build-up when filling an ungrounded fuel container:

- Place approved fuel container on the ground.
- DO NOT fill a fuel container while it is in the vehicle (including the cargo area).
- Keep the fuel pump nozzle in contact with the fuel container while filling.
- DO NOT use a device that would hold the fuel pump handle in the fill position.

### Easy Fuel® “no cap” fuel system

Your fuel tank is equipped with an Easy Fuel® “no cap” fuel filler system. This allows you to simply open the fuel filler door and insert the fuel filler nozzle into the fuel system. The Easy Fuel® system is self-sealing and protected against dust, dirt, water and snow/ice.

When fueling your vehicle:

1. Turn the engine off.
2. Open the fuel filler door by pressing the center of the door about one inch from the door’s rear edge.
3. Slowly insert the fuel filler nozzle fully into the fuel system, and leave the nozzle fully inserted until you are done pumping. Pump fuel as normal.
4. After you are done pumping fuel, slowly remove the fuel filler nozzle—allow about five seconds after pumping fuel before removing the fuel filler nozzle. This allows residual fuel to drain back into the fuel tank and not spill onto the vehicle.

**Note:** A fuel spillage concern may occur if overfilling the fuel tank. Do not overfill the tank to the point that the fuel is able to bypass the fuel filler nozzle. The overfilled fuel may run down the drain located within the fuel filler housing and to the ground.

If the check fuel fill inlet lamp or CHECK FUEL FILL INLET message comes on, the fuel fill inlet may not have properly closed. The inlet may have stuck open or debris may be preventing the inlet from fully closing.

## Maintenance and Specifications

At the next opportunity, safely pull off the road, turn off the engine, open the fuel filler door and remove any visible debris from the fuel fill opening. Insert either the fuel fill nozzle or the fuel fill funnel (see *Refilling with a portable fuel container* for funnel location) provided with the vehicle several times to dislodge any debris and/or allow the inlet to close properly. If this action corrects the problem, the check fuel fill inlet lamp or CHECK FUEL FILL INLET message may not reset immediately. It may take several driving cycles for the check fuel fill inlet lamp or CHECK FUEL FILL INLET message to turn off. A driving cycle consists of an engine start-up (after four or more hours with the engine off) followed by city/highway driving. Continuing to drive with the check fuel fill inlet lamp or CHECK FUEL FILL INLET message on may cause the service engine soon lamp to turn on as well.



**WARNING:** The fuel system may be under pressure. If you hear a hissing sound near the fuel filler door (Easy Fuel® “no cap” fuel system), do not refuel until the sound stops. Otherwise, fuel may spray out, which could cause serious personal injury.

### Choosing the right fuel

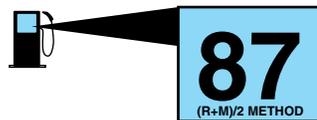
Use only UNLEADED fuel or UNLEADED fuel blended with a maximum of 10% ethanol. Do not use fuel ethanol (E85), diesel, methanol, leaded fuel or any other fuel. The use of leaded fuel is prohibited by law and could damage your vehicle.

Your vehicle was not designed to use fuel or fuel additives with metallic compounds, including manganese-based additives.

**Note:** Use of any fuel other than those recommended may cause powertrain damage, a loss of vehicle performance, and repairs may not be covered under warranty.

### Octane recommendations

“Regular” unleaded gasoline with a pump (R+M)/2 octane rating of 87 is recommended. Some stations offer fuels posted as “Regular” with an octane rating below 87, particularly in high altitude areas. Fuels with octane levels below 87 are not recommended.



## Maintenance and Specifications

Do not be concerned if your engine sometimes knocks lightly. However, if it knocks heavily under most driving conditions while you are using fuel with the recommended octane rating, see your authorized dealer to prevent any engine damage.

### **Octane recommendations (5.0L V8 engine)**

"Regular" unleaded gasoline with a pump (R+M)/2 octane rating of 87 is recommended. Some stations offer fuels posted as "Regular" with an octane rating below 87, particularly in high altitude areas. Fuels with octane levels below 87 are not recommended. Premium fuel will provide improved performance and is recommended for severe duty usage such as trailer tow.

For Shelby GT500 octane requirements, see the *Shelby GT500 Supplement*.

### **Fuel quality**

If you are experiencing starting, rough idle or hesitation driveability problems during a cold start, try a different brand of "Regular" unleaded gasoline.

Do not add aftermarket fuel additive products to your fuel tank. It should not be necessary to add any aftermarket products to your fuel tank if you continue to use high quality fuel of the recommended octane rating. These products have not been approved for your engine and could cause damage to the fuel system. Repairs to correct the effects of using an aftermarket product in your fuel may not be covered by your warranty.

Many of the world's automakers approved the World-Wide Fuel Charter that recommends gasoline specifications to provide improved performance and emission control system protection for your vehicle. Gasolines that meet the World-Wide Fuel Charter should be used when available. Ask your fuel supplier about gasolines that meet the World-Wide Fuel Charter.

### **Cleaner air**

Ford endorses the use of reformulated "cleaner-burning" gasolines to improve air quality, per the recommendations in the *Choosing the right fuel* section.

### **Running out of fuel**

Avoid running out of fuel because this situation may have an adverse effect on powertrain components.

## Maintenance and Specifications

If you have run out of fuel:

- You may need to cycle the ignition from off to on several times after refueling to allow the fuel system to pump the fuel from the tank to the engine. On restarting, cranking time will take a few seconds longer than normal.
- Normally, adding 1 gallon (3.8L) of fuel is enough to restart the engine. If the vehicle is out of fuel and on a steep grade, more than 1 gallon (3.8L) may be required.
- The service engine soon  indicator may come on. For more information on the service engine soon indicator, refer to *Warning lights and chimes* in the *Instrument Cluster* chapter.

### Refilling with a portable fuel container

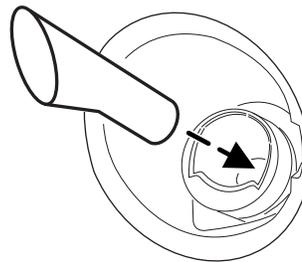
With the Easy Fuel® “no cap” fuel system, use the following directions when filling from a portable fuel container:

 **WARNING:** Do not insert the nozzle of portable fuel containers or aftermarket funnels into the Easy Fuel® system. This could damage the fuel system and its seal, and may cause fuel to run onto the ground instead of filling the tank, which could result in serious personal injury.

 **WARNING:** Do not try to pry open or push open the Easy Fuel® system with foreign objects. This could damage the fuel system and its seal and cause injury to you or others.

When filling the vehicle’s fuel tank from a portable fuel container, use the funnel included with the vehicle.

1. Locate the white plastic funnel. It is included with the tire changing tools. (For vehicles equipped with the temporary mobility kit, the funnel is located in the spare tire well in the trunk).



2. Slowly insert the funnel into the Easy Fuel® system.

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## Maintenance and Specifications

3. Fill the vehicle with fuel from the portable fuel container.
4. When done, clean the funnel or properly dispose of it. Extra funnels can be purchased from your authorized dealer if you choose to dispose of the funnel. **Do not** use aftermarket funnels; they will not work with the Easy Fuel® system and can damage it. The included funnel has been specially designed to work safely with your vehicle.

### ESSENTIALS OF GOOD FUEL ECONOMY

#### Measuring techniques

Your best source of information about actual fuel economy is you, the driver. You must gather information as accurately and consistently as possible. Fuel expense, frequency of fill-ups or fuel gauge readings are NOT accurate as a measure of fuel economy. We do not recommend taking fuel economy measurements during the first 1,000 miles (1,600 km) of driving (engine break-in period). You will get a more accurate measurement after 2,000 miles–3,000 miles (3,000 km–5,000 km).

#### Filling the tank

The advertised fuel capacity of the fuel tank on your vehicle is equal to the rated refill capacity of the fuel tank as listed in the *Maintenance product specifications and capacities* section of this chapter.

The advertised capacity is the amount of the indicated capacity and the empty reserve combined. Indicated capacity is the difference in the amount of fuel in a full tank and a tank when the fuel gauge indicates empty. Empty reserve is the small amount of fuel remaining in the fuel tank after the fuel gauge indicates empty.

**The amount of usable fuel in the empty reserve varies and should not be relied upon to increase driving range. When refueling your vehicle after the fuel gauge indicates empty, you might not be able to refuel the full amount of the advertised capacity of the fuel tank due to the empty reserve still present in the tank.**

For consistent results when filling the fuel tank:

- Turn the engine/ignition switch to the off prior to refueling, an error in the reading will result if the engine is left running.
- Use the same filling rate setting (low — medium — high) each time the tank is filled.
- Allow no more than two automatic click-offs when filling.
- Always use fuel with the recommended octane rating.

## Maintenance and Specifications

- Use a known quality gasoline, preferably a national brand.
  - Have the vehicle loading and distribution the same every time.
- Your results will be most accurate if your filling method is consistent.

### Calculating fuel economy

1. Fill the fuel tank completely and record the initial odometer reading (in miles or kilometers).
2. Each time you fill the tank, record the amount of fuel added (in gallons or liters).
3. After at least three to five tank fill-ups, fill the fuel tank and record the current odometer reading.
4. Subtract your initial odometer reading from the current odometer reading.
5. Follow one of the simple calculations in order to determine fuel economy:

Calculation 1: **Divide total miles traveled by total gallons used.**

Calculation 2: **Multiply liters used by 100, then divide by total kilometers traveled.**

Keep a record for at least one month and record the type of driving (city or highway). This will provide an accurate estimate of the vehicle's fuel economy under current driving conditions. Additionally, keeping records during summer and winter will show how temperature impacts fuel economy. In general, lower temperatures give lower fuel economy.

### Driving style — good driving and fuel economy habits

Give consideration to the lists that follow and you may be able to change a number of variables and improve your fuel economy.

#### **Habits**

- Smooth, moderate operation can yield up to 10% savings in fuel.
- Steady speeds without stopping will usually give the best fuel economy.
- Idling for long periods of time (greater than one minute) may waste fuel.
- Anticipate stopping; slowing down may eliminate the need to stop.
- Sudden or hard accelerations may reduce fuel economy.
- Slow down gradually.

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## Maintenance and Specifications

- Driving at reasonable speeds (traveling at 55 mph [88 km/h] uses 15% less fuel than traveling at 65 mph [105 km/h]).
- Revving the engine before turning it off may reduce fuel economy.
- Using the air conditioner or defroster may reduce fuel economy.
- You may want to turn off the speed control in hilly terrain if unnecessary shifting between the top gears occurs. Unnecessary shifting of this type could result in reduced fuel economy.
- Warming up a vehicle on cold mornings is not required and may reduce fuel economy.
- Resting your foot on the brake pedal while driving may reduce fuel economy.
- Combine errands and minimize stop-and-go driving.

### **Maintenance**

- Keep tires properly inflated and use only recommended size.
- Operating a vehicle with the wheels out of alignment will reduce fuel economy.
- Use recommended engine oil. Refer to *Maintenance product specifications and capacities* in this chapter.
- Perform all regularly scheduled maintenance items. Follow the recommended maintenance schedule and owner maintenance checks found in *scheduled maintenance information*.

### **Conditions**

- Heavily loading a vehicle or towing a trailer may reduce fuel economy at any speed.
- Carrying unnecessary weight may reduce fuel economy (approximately 1 mpg [0.4 km/L] is lost for every 400 lb [180 kg] of weight carried).
- Adding certain accessories to your vehicle (for example bug deflectors, rollbars/light bars, running boards, ski racks) may reduce fuel economy.
- Using fuel blended with alcohol may lower fuel economy.
- Fuel economy may decrease with lower temperatures during the first 8–10 miles (12–16 km) of driving.
- Driving on flat terrain offers improved fuel economy as compared to driving on hilly terrain.
- Transmissions give their best fuel economy when operated in the top cruise gear and with steady pressure on the gas pedal.

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## Maintenance and Specifications

- Close windows for high speed driving.

### EMISSION CONTROL SYSTEM



**WARNING:** Do not park, idle, or drive your vehicle in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, which can start a fire.



**WARNING:** Exhaust leaks may result in entry of harmful and potentially lethal fumes into the passenger compartment. If you smell exhaust fumes inside your vehicle, have your dealer inspect your vehicle immediately. Do not drive if you smell exhaust fumes.

Your vehicle is equipped with various emission control components and a catalytic converter which will enable your vehicle to comply with applicable exhaust emission standards. To make sure that the catalytic converter and other emission control components continue to work properly:

- Use only the specified fuel listed.
- Avoid running out of fuel.
- Do not turn off the ignition while your vehicle is moving, especially at high speeds.
- Have the items listed in *scheduled maintenance information* performed according to the specified schedule.

The scheduled maintenance items listed in *scheduled maintenance information* are essential to the life and performance of your vehicle and to its emissions system.

If other than Ford, Motorcraft® or Ford-authorized parts are used for maintenance replacements or for service of components affecting emission control, such non-Ford parts should be equivalent to genuine Ford Motor Company parts in performance and durability.

Illumination of the service engine soon indicator, charging system warning light or the temperature warning light, fluid leaks, strange odors, smoke or loss of engine power could indicate that the emission control system is not working properly.

An improperly operating or damaged exhaust system may allow exhaust to enter the vehicle. Have a damaged or improperly operating exhaust system inspected and repaired immediately.

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## Maintenance and Specifications

Do not make any unauthorized changes to your vehicle or engine. By law, vehicle owners and anyone who manufactures, repairs, services, sells, leases, trades vehicles, or supervises a fleet of vehicles are not permitted to intentionally remove an emission control device or prevent it from working. Information about your vehicle's emission system is on the Vehicle Emission Control Information Decal located on or near the engine. This decal also lists engine displacement.

Please consult your *Warranty Guide* for complete emission warranty information.

### On-board diagnostics (OBD-II)

Your vehicle is equipped with a computer that monitors the engine's emission control system. This system is commonly known as the on-board diagnostics system (OBD-II). The OBD-II system protects the environment by ensuring that your vehicle continues to meet government emission standards. The OBD-II system also assists your authorized dealer in properly servicing your vehicle. When the service engine soon  indicator illuminates, the OBD-II system has detected a malfunction. Temporary malfunctions may cause the service engine soon  indicator to illuminate. Examples are:

1. The vehicle has run out of fuel—the engine may misfire or run poorly.
2. Poor fuel quality or water in the fuel—the engine may misfire or run poorly.
3. The fuel fill inlet may not have been properly closed. See *Easy Fuel*® “no cap” fuel system in this chapter.
4. Driving through deep water—the electrical system may be wet.

These temporary malfunctions can be corrected by filling the fuel tank with good quality fuel, properly closing the fuel fill inlet or letting the electrical system dry out. After three driving cycles without these or any other temporary malfunctions present, the service engine soon  indicator should stay off the next time the engine is started. A driving cycle consists of a cold engine startup followed by mixed city/highway driving. No additional vehicle service is required.

If the service engine soon  indicator remains on, have your vehicle serviced at the first available opportunity. Although some malfunctions detected by the OBD-II may not have symptoms that are apparent, continued driving with the service engine soon  indicator on can result in increased emissions, lower fuel economy, reduced engine and transmission smoothness, and lead to more costly repairs.

## Maintenance and Specifications

### Readiness for Inspection/Maintenance (I/M) testing

Some state/provincial and local governments may have Inspection/Maintenance (I/M) programs to inspect the emission control equipment on your vehicle. Failure to pass this inspection could prevent you from getting a vehicle registration. Your vehicle may not pass the I/M test if the service engine soon  indicator is on or not working properly (bulb is burned out), or if the OBD-II system has determined that some of the emission control systems have not been properly checked. In this case, the vehicle is considered not ready for I/M testing.

If the service engine soon  indicator is on or the bulb does not work, the vehicle may need to be serviced. Refer to *On-board diagnostics (OBD-II)* in this chapter.

If the vehicle's engine or transmission has just been serviced, or the battery has recently run down or been replaced, the OBD-II system may indicate that the vehicle is not ready for I/M testing. To determine if the vehicle is ready for I/M testing, turn the ignition key to the on position for 15 seconds without cranking the engine. If the service engine soon  indicator blinks eight times, it means that the vehicle is not ready for I/M testing; if the service engine soon  indicator stays on solid, it means that the vehicle is ready for I/M testing.

The OBD-II system is designed to check the emission control system during normal driving. A complete check may take several days. If the vehicle is not ready for I/M testing, the following driving cycle consisting of mixed city and highway driving may be performed:

15 minutes of steady driving on an expressway/highway followed by 20 minutes of stop-and-go driving with at least four 30-second idle periods.

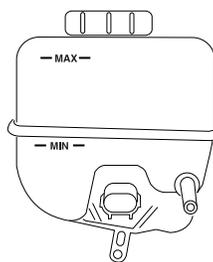
Allow the vehicle to sit for at least eight hours without starting the engine. Then, start the engine and complete the above driving cycle. The engine must warm up to its normal operating temperature. Once started, do not turn off the engine until the above driving cycle is complete. If the vehicle is still not ready for I/M testing, the above driving cycle will have to be repeated.

## Maintenance and Specifications

### BRAKE/CLUTCH FLUID

Brake and clutch (if equipped) systems are supplied from the same reservoir.

The fluid level will drop slowly as the brakes wear, and will rise when the brake components are replaced. Fluid levels between the MIN and MAX lines are within the normal operating range; there is no need to add fluid. If the fluid levels are outside of the normal operating range, the performance of the system could be compromised; seek service from your authorized dealer immediately.



### TRANSMISSION FLUID

#### Checking automatic transmission fluid

The automatic transmission does not have an underhood transmission fluid dipstick.

Refer to your *scheduled maintenance information* for scheduled intervals for fluid checks and changes. Your transmission does not consume fluid. However, the fluid level should be checked if the transmission is not working properly, (i.e., if the transmission slips or shifts slowly) or if you notice some sign of fluid leakage.

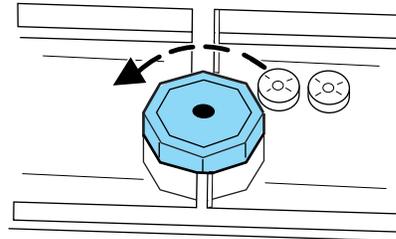
**Transmission fluid should be checked and, if required, added by an authorized dealer.**

Do not use supplemental transmission fluid additives, treatments or cleaning agents. The use of these materials may affect transmission operation and result in damage to internal transmission components.

## Maintenance and Specifications

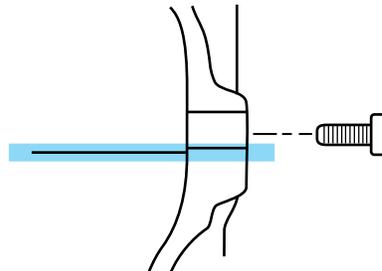
### Checking and adding manual transmission fluid (if equipped)

1. Clean the filler plug. It is located on the passenger side of the transmission.
2. Remove the filler plug and inspect the fluid level.

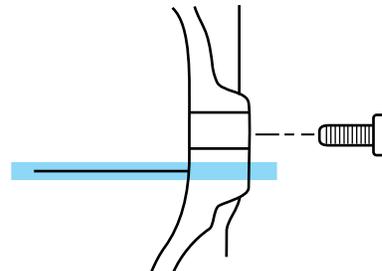


3. **Note:** For vehicles equipped with a V6 engine, the correct manual transmission fill level is at the lower edge of the filler hole. For vehicles equipped with a V8 engine, the correct manual transmission fill level is 1/2 inch (1.3 cm) below the edge of the filler hole.

- Fill level for V6



- Fill level for V8



4. Add enough fluid through the filler opening to bring the fluid up to the recommended levels.
5. Install and tighten the fill plug securely.

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## Maintenance and Specifications

Use only fluid that meets Ford specifications. Refer to *Maintenance product specifications and capacities* in this chapter.

### AIR FILTER

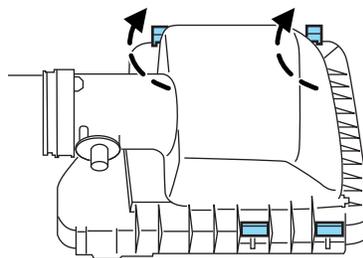
Refer to *scheduled maintenance information* for the appropriate intervals for changing the air filter element.

When changing the air filter element, use only the air filter element listed. Refer to *Motorcraft® part numbers* in this chapter.

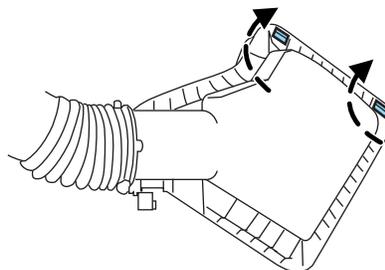
 **WARNING:** To reduce the risk of vehicle damage and/or personal burn injuries do not start your engine with the air cleaner removed and do not remove it while the engine is running.

### Changing the air filter element

V6 engine



V8 engine



1. Release the clamps that secure the air filter housing cover.
2. Remove the air filter element from the air filter housing.
3. Wipe the air filter housing and cover clean to remove any dirt or debris and to ensure good sealing.

## Maintenance and Specifications

4. Install a new air filter element. Be careful not to crimp the filter element edges between the air filter housing and cover. This could cause filter damage and allow unfiltered air to enter the engine if not properly seated.

5. Replace the air filter housing cover and secure the clamps. Be sure that the air cleaner cover tabs are engaged into the slots of the air cleaner housing.

**Note:** Failure to use the correct air filter element may result in severe engine damage. The customer warranty may be void for any damage to the engine if the correct air filter element is not used.

### VEHICLE STORAGE

If you plan on storing your vehicle for an extended period of time (30 days or more), refer to the following maintenance recommendations to ensure your vehicle stays in good operating condition.

All motor vehicles and their components were engineered and tested for reliable, regular driving. Long term storage under various conditions may lead to component degradation or failure unless specific precautions are taken to preserve the components.

#### *General*

- Store all vehicles in a dry, ventilated place.
- Protect from sunlight, if possible.
- If vehicles are stored outside, they require regular maintenance to protect against rust and damage.

#### *Body*

- Wash vehicle thoroughly to remove dirt, grease, oil, tar or mud from exterior surfaces, rear-wheel housing and underside of front fenders. See the *Cleaning* chapter for more information.
- Periodically wash vehicles stored in exposed locations.
- Touch-up raw or primed metal to prevent rust.
- Cover chrome and stainless steel parts with a thick coat of auto wax to prevent discoloration. Re-wax as necessary when the vehicle is washed. See the *Cleaning* chapter for more information.
- Lubricate all hood, door and trunk lid hinges, and latches with a light grade oil. See the *Cleaning* chapter for more information.
- Cover interior trim to prevent fading.
- Keep all rubber parts free from oil and solvents.

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## Maintenance and Specifications

### *Engine*

- The engine oil and filter should be changed prior to storage, as used engine oil contain contaminants that may cause engine damage.
- Start the engine every 15 days. Run at fast idle until it reaches normal operating temperature.
- With your foot on the brake, shift through all the gears while the engine is running.

### *Fuel system*

- Fill the fuel tank with high-quality fuel until the first automatic shutoff of the fuel pump nozzle.

**Note:** During extended periods of vehicle storage (30 days or more), fuel may deteriorate due to oxidation. Add a quality gas stabilizer product to the vehicle fuel system whenever actual or expected storage periods exceed 30 days. Follow the instructions on the additive label. The vehicle should then be operated at idle speed to circulate the additive throughout the fuel system.

### *Cooling system*

- Protect against freezing temperatures.
- When removing vehicle from storage, check coolant fluid level. Confirm there are no cooling system leaks, and fluid is at the recommended level.

### *Battery*

- Check and recharge as necessary. Keep connections clean.
- If storing your vehicle for more than 30 days without recharging the battery, it may be advisable to disconnect the battery cables to ensure battery charge is maintained for quick starting.

**Note:** If battery cables are disconnected, it will be necessary to reset memory features.

### *Brakes*

- Make sure brakes and parking brake are fully released.

### *Tires*

- Maintain recommended air pressure.

### *Miscellaneous*

- Make sure all linkages, cables, levers and pins under vehicle are covered with grease to prevent rust.

## Maintenance and Specifications

- Move vehicles at least 25 feet (8 m) every 15 days to lubricate working parts and prevent corrosion.

### *Removing vehicle from storage*

When your vehicle is ready to come out of storage, do the following:

- Wash your vehicle to remove any dirt or grease film build-up on window surfaces.
- Check windshield wipers for any deterioration.
- Check under the hood for any foreign material that may have collected during storage (mice/squirrel nests).
- Check the exhaust for any foreign material that may have collected during storage.
- Check tire pressures and set tire inflation per the Tire Label.
- Check brake pedal operation. Drive the vehicle 15 ft (4.5 meters) back and forth to remove rust build-up.
- Check fluid levels (including coolant, oil and gas) to make sure there are no leaks, and fluids are at recommended levels.
- If the battery was removed, clean the battery cable ends and inspect.

Contact your authorized dealer if you have any concerns or issues.

### MOTORCRAFT PART NUMBERS

Component	3.7L V6 engine	5.0L V8 engine
Air filter element	FA-1897	FA-1897
Battery <sup>2</sup>	BXT-96R-590	BXT-96R-590
Oil filter	FL-500-S	FL-500-S
Spark plugs	<sup>1</sup>	
Cabin air filter	FP53	FP53
Windshield wiper blade	WW-2201-PF (driver side) WW-2001-PF (passenger side)	

<sup>1</sup>For spark plug replacement, see your authorized dealer. Refer to *scheduled maintenance information* for the appropriate intervals for changing the spark plugs.

**Replace the spark plugs with ones that meet Ford material and design specifications for your vehicle, such as Motorcraft® or equivalent replacement parts. The customer warranty may be void for any damage to the engine if such spark plugs are not used.**

<sup>2</sup>For battery replacement of the Mustang Boss 302, use Motorcraft® battery BXT-96R-500.

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## Maintenance and Specifications

### MAINTENANCE PRODUCT SPECIFICATIONS AND CAPACITIES

Item	Capacity	Ford part name or equivalent	Ford part number / Ford Specification
Brake fluid and (clutch fluid-if equipped)	Between MIN and MAX lines on reservoir	Motorcraft® High Performance DOT 3 Motor Vehicle Brake Fluid	PM-1-C / WSS-M6C62-A or WSS-M6C65-A1
Door weatherstrips	—	Silicone Lubricant	XL-6 / ESR-M13P4-A
Door latch, hood latch, auxiliary hood latch, striker plates, seat tracks and fuel filler door hinge	—	Multi-Purpose Grease (Lithium grease)	XG-4 or XL-5 or equivalent / ESB-M1C93-B
Engine coolant (3.7L engine)	12.4 quarts (11.7L)	Motorcraft® Specialty Orange Engine Coolant <sup>3</sup>	VC-3-B (US) CVC-3-B (Canada) / WSS-M97B44-D
Engine coolant (5.0L engine)	13.0 quarts (12.3L)		

## Maintenance and Specifications

Item	Capacity	Ford part name or equivalent	Ford part number / Ford Specification
Engine oil (3.7L engine)	6.0 quarts (5.7L)	<ul style="list-style-type: none"> <li>Motorcraft® SAE 5W-20 Premium Synthetic Blend Motor Oil (US)</li> <li>Motorcraft® SAE 5W-20 Full Synthetic Motor Oil (US)</li> </ul>	<ul style="list-style-type: none"> <li>XO-5W20-QSP (US)</li> <li>XO-5W20-QFS (US)</li> <li>CXO-5W20-LSP12 (Canada)</li> <li>CXO-5W20-LFS12 (Canada) / WSS-M2C945-A with API Certification Mark</li> </ul>
		<ul style="list-style-type: none"> <li>Motorcraft® SAE 5W-20 Super Premium Motor Oil (Canada)</li> <li>Motorcraft® SAE 5W-20 Synthetic Motor Oil (Canada)<sup>6</sup></li> </ul>	
Engine oil (5.0L engine)	8.0 quarts (7.6L)		
Lock cylinders	—	Motorcraft® Penetrating and Lock Lubricant	XL-1 / None
Rear axle fluid	5.0 pints (2.4L) <sup>1</sup>	Motorcraft® SAE 75W-140 Synthetic Rear Axle Lubricant <sup>1</sup>	XY-75W140-QL / WSP-M2C192-A
Automatic transmission fluid	1 1.9 quarts (1.2L) <sup>4</sup>	Motorcraft® MERCON® LV ATF <sup>2</sup>	XT-10-QLV / MERCON® LV
Manual transmission fluid (3.7L engine)	2.7 quarts (2.6L) <sup>5</sup>	Motorcraft® Full Synthetic Manual Transmission Fluid	XT-M5-QS / WSD-M2C200-C
Manual transmission fluid (5.0L engine)			

## Maintenance and Specifications

Item	Capacity	Ford part name or equivalent	Ford part number / Ford Specification
Windshield washer fluid	Fill as required	Motorcraft® Premium Windshield Washer Concentrate (US) Premium Quality Windshield Washer Fluid (Canada)	ZC-32-A (US) CXC-37-(A, B, D and F) (Canada) / WSB-M8B16-A2/- -
Fuel tank	16.0 gallons (60.6L)	—	—

<sup>1</sup>Add 4 oz. (118 ml) of Additive Friction Modifier XL-3 or equivalent meeting Ford specification EST-M2C118-A for complete refill of Traction-Lok axles.

Ford design rear axles contain a synthetic lubricant that does not require changing unless the axle has been submerged in water.

<sup>2</sup>Automatic transmissions that require MERCON® LV should only use MERCON® LV fluid. Refer to *scheduled maintenance information* to determine the correct service interval. Use of any fluid other than the recommended fluid may cause transmission damage.

<sup>3</sup>Add the coolant type originally equipped in your vehicle.

<sup>4</sup>Approximate dry capacity, including cooler and tubes. Fluid level should be checked by an authorized dealer.

<sup>5</sup>Service refill capacity is covered under *Checking and adding manual transmission fluid* in this chapter.

<sup>6</sup>Use of synthetic or synthetic blend motor oil is not mandatory. Engine oil need only meet the requirements of Ford specification WSS-M2C945-A and the API Certification mark.

## Maintenance and Specifications

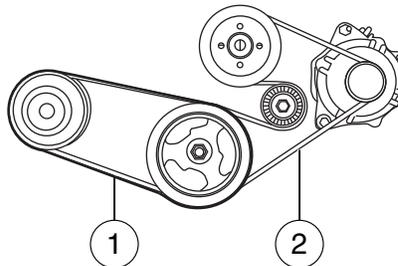
### ENGINE DATA

Engine	3.7L V6 Engine	5.0L V8 Engine
Cubic inches	227	302
Required fuel	Minimum 87 octane	Minimum 87 octane
Firing order	1-4-2-5-3-6	1-5-4-8-6-3-7-2
Ignition system	Coil on plug	Coil on plug
Spark plug gap	0.049–0.053 inch (1.25–1.35 mm)	0.049–0.053 inch (1.25–1.35 mm)
Compression ratio	10.5:1	11.0:1

For Shelby GT500 octane requirements, see the *Shelby GT500 Supplement*.

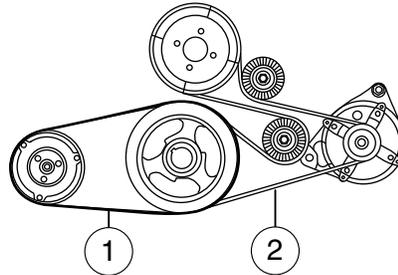
### Engine drivebelt routing

1. Short drivebelt is on first pulley groove closest to engine.
2. Long drivebelt is on second pulley groove farthest from engine.



- 3.7L V6 engine

## Maintenance and Specifications



- 5.0L V8 engine

### IDENTIFYING YOUR VEHICLE

#### Safety Compliance Certification Label

The National Highway Traffic Safety Administration Regulations require that a Safety Compliance Certification Label be affixed to a vehicle and prescribe where the Safety Compliance Certification Label may be located. The Safety Compliance Certification Label is located on the structure (B-Pillar) by the trailing edge of the driver's door or the edge of the driver's door.

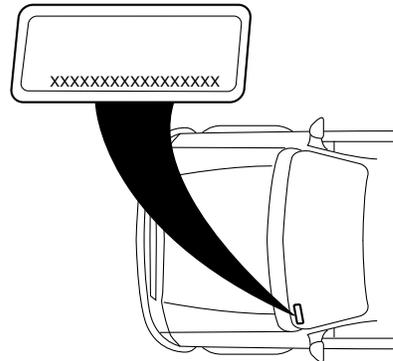
MFD. BY FORD MOTOR CO.					
DATE: XX/XX	GVWR: XXXXLB/ XXXXKKG				
FRONT GAWR: XXXXL	WITH	REAR GAWR: XXXLB	WITH		
XXXXKKG		XXXXKKG			
XXXX/XXXXXX	TIRES	XXXX/XXXXXX	TIRES		
XXXX XX	RIMS	XXXX XX	RIMS		
AT XXX kPa/XX	PSI COLD	AT XXX kPa/XX	PSI COLD		
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.					
VIN: XXXXXXXXXXXXXXXXX			XXXXX		
TYPE: XXX			XXXXX		
EXT PNT: XX	RC: XX	DSO:			
WB <sup>1</sup>	INT TR	TRIPS	TR	AXLE	TR SPR
XXX	XX	X	XX	X XX	XXXXX
XXXXXXXXXXXX XXX XXXX-XXXXXX-XX					

## Maintenance and Specifications

### Vehicle identification number (VIN)

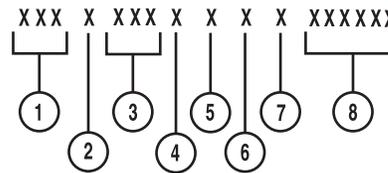
The vehicle identification number is located on the driver side instrument panel.

Please note that in the graphic, XXXX is representative of your vehicle identification number.



The Vehicle Identification Number (VIN) contains the following information:

1. World manufacturer identifier
2. Brake system / Gross Vehicle Weight Rating (GVWR) / Restraint Devices and their location
3. Make, vehicle line, series, body type
4. Engine type
5. Check digit
6. Model year
7. Assembly plant
8. Production sequence number



## Maintenance and Specifications

### TRANSMISSION CODE DESIGNATIONS

You can find a transmission code on the Safety Compliance Certification Label. The following table tells you which transmission each code represents.

<b>MFD. BY FORD MOTOR CO.</b>	
DATE: XX/XX	GVWR: XXXXXLB/ XXXXXKG
FRONT GAWR: XXXXL	REAR GAWR: XXXXLB
XXXXKG	WITH XXXXKG
XXXX/XXXXXX	TIRES XXX/XXXXXX
XXXX.XX	RIMS XXXX.XX
AT XXX kPa/XX	PSI COLD AT XXX kPa/XX
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.	
VIN: XXXXXXXXXXXXXXXX	XXXXX
TYPE: XXX	XXXXX
	
EXT PNT: XX	RC: XX
WB INT TR TRIPS TR AXLE TR SPR XXX	DSO: XXXX
XXX XX X XX X XX	XXX XXX
XXXXXXXXXX XX XXXX-XXXXXX-XX	

Description	Code
Six-speed manual transmission (MT82)	X
Six-speed automatic transmission (6R80)	3

## Accessories

### FORD CUSTOM ACCESSORIES FOR YOUR VEHICLE

A wide selection of Ford Custom Accessories are available for your vehicle through your local Ford or Ford of Canada dealer. These quality accessories have been specifically engineered to fulfill your automotive needs; they are custom designed to complement the style and aerodynamic appearance of your vehicle. In addition, each accessory is made from high quality materials and meets or exceeds Ford's rigorous engineering and safety specifications. Ford Motor Company will repair or replace any properly dealer-installed Ford Custom Accessories found to be defective in factory-supplied materials or workmanship during the warranty period, as well as any component damaged by the defective accessories. The accessories will be warranted for whichever provides you the greatest benefit:

- 12 months or 12,000 miles (20,000 km) (whichever occurs first), or
- the remainder of your new vehicle limited warranty.

Contact your dealer for details and a copy of the warranty.

The following is a list of several Ford Custom Accessories. Not all accessories are available for all models. For a complete listing of the accessories that are available for your vehicle, please contact your dealer or visit our online store at: [www.fordaccessories.com](http://www.fordaccessories.com) (U.S. only).

#### Exterior style

- Quarter window louvers
- Front end covers
- Grille inserts
- Hood scoop
- Graphic stripes
- Rear spoilers
- Hood deflectors
- Splash guards
- Side window deflectors
- Wheels
- Custom graphics\*
- Convertible tonneau cover\*
- Side scoops

## Accessories

### Interior style

- Floor mats
- Sport pedals
- Flexible visor storage system (tissue dispenser, organizer, CD holder)
- Auto dimming rearview mirror with compass and temperature
- Illuminated gear shift knob\*
- Illuminated door sill plates

### Lifestyle

- Ash cup / smoker's package
- Soft cargo organizers
- Portable navigation system by Garmin\*
- Cargo net

### Peace of mind

- Full vehicle covers
- Remote start
- Vehicle security systems
- Wheel locks
- Bumper mounted parking assist system\*
- GPS tracking and recovery\*
- Wiper de-icer and debris cleaner\*
- Keyless entry keypad
- Locking fuel plug

\*Ford Licensed Accessories (FLA) are warranted by the accessory manufacturer's warranty. Ford Licensed Accessories are fully designed and developed by the accessory manufacturer and have not been designed or tested to Ford Motor Company engineering requirements. Contact your Ford dealer for details regarding the manufacturer's limited warranty and/or a copy of the FLA product limited warranty offered by the accessory manufacturer.

For maximum vehicle performance, keep the following information in mind when adding accessories or equipment to your vehicle:

- When adding accessories, equipment, passengers and luggage to your vehicle, do not exceed the total weight capacity of the vehicle or of the front or rear axle (GVWR or GAWR as indicated on the Safety Compliance Certification label). Consult your authorized dealer for specific weight information.

## Accessories

- The Federal Communications Commission (FCC) and Canadian Radio Telecommunications Commission (CRTC) regulate the use of mobile communications systems — such as two-way radios, telephones and theft alarms - that are equipped with radio transmitters. Any such equipment installed in your vehicle should comply with FCC or CRTC regulations and should be installed only by a qualified service technician.
- Mobile communications systems may harm the operation of your vehicle, particularly if they are not properly designed for automotive use.
- To avoid interference with other vehicle functions, such as anti-lock braking systems, amateur radio users who install radios and antennas onto their vehicle should not locate the amateur radio antennas in the area of the driver's side hood.
- Any non-Ford custom electrical or electronic accessories or components that are added to the vehicle by the authorized dealer or the owner, may adversely affect battery performance and durability, and may also adversely affect the performance of other electrical systems in the vehicle.

## Ford Extended Service Plan

### **FORD ESP EXTENDED SERVICE PLANS (U.S. ONLY)**

More than 32 million Ford and Lincoln owners have discovered the powerful protection of Ford ESP. It is the only extended service plan backed by Ford Motor Company, and provides “peace of mind” protection beyond the New Vehicle Limited Warranty coverage.

#### ***Up to 500+ Covered Vehicle Components***

There are four, new-vehicle Extended Service Plans with different levels of coverage. Ask your dealer for details.

**PremiumCare** – Our most comprehensive coverage. With over 500 covered components, this plan is so complete that we generally only discuss what’s not covered!

**ExtraCare** – Covers 113 components, and includes many high-tech items.

**BaseCare** – Covers 84 components.

**PowertrainCare** – Covers 29 critical components.

**Ford ESP is honored by all Ford and Lincoln Dealers in the U.S. and Canada** It’s the only extended service plan authorized and backed by Ford Motor Company. That means you get:

- Reliable, quality service anywhere you go.
- **Factory-trained technicians.**
- **Ford Authorized Parts used with every covered repair.**

#### ***Rental car reimbursement***

**If your vehicle is kept overnight for covered repairs**, you are eligible for rental car coverage, including Bumper-to-Bumper warranty repairs, or manufacturer’s recalls.

#### ***Transferable coverage***

If you sell your vehicle before your Ford ESP coverage expires, you can transfer any remaining coverage to the new owner. Whenever you’re ready to sell your car, prospective buyers may feel better about taking a risk on your used vehicle. Ford ESP may add resale value!

Plus, **exclusive 24/7 roadside assistance**, including:

- Towing, flat-tire change and battery jump starts.
- Out-of-fuel and lock-out assistance.
- Travel expense reimbursement for lodging, meals and rental car.
- Destination assistance for taxi, shuttle, rental car coverage and emergency transportation.

## Ford Extended Service Plan

### ***Ford ESP Can Quickly Pay for Itself***

One service bill – the cost of parts and labor – can easily exceed the price of your Ford ESP Service Contract. With Ford ESP, you minimize your risk for unexpected repair bills and rising repair costs.

### ***Avoid the rising cost of properly maintaining your vehicle!***

Ford ESP also offers a Premium Maintenance Plan that covers items that **routinely wear out**.

The coverage is prepaid, so you never have to worry about affording your vehicle maintenance. It covers regular checkups, routine inspections, preventive care and replacement of items that require periodic attention for **normal “wear”**:

- **Wiper blades**
- **Spark plugs (except California)**
- **Clutch disc**
- **Brake pads and linings**
- **Shock absorbers**
- **Belts and hoses**

Contact your selling Ford or Lincoln dealership today so they can customize a Ford Extended Service Plan that fits your driving lifestyle and budget.

### ***Interest free finance options available***

Take advantage of our installment payment plan, just a 10% down payment will provide you with an affordable no interest, no-fee payment opportunity.

Ford Extended Service Plan

***Get Genuine Peace of Mind with Ford ESP!***

To learn more, complete the information below and mail this to:

**Ford ESP  
P.O. Box 8072  
Royal Oak, MI 48068-9933**

NAME (PLEASE PRINT) \_\_\_\_\_

ADDRESS \_\_\_\_\_ APT.NO. \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

E-MAIL: \_\_\_\_\_

## Ford Extended Service Plan

### **FORD ESP EXTENDED SERVICE PLANS (CANADA ONLY)**

You can get more protection for your vehicle by purchasing a Ford Extended Service Plan (ESP). Ford ESP is the only service contract backed by Ford Motor Company of Canada, Limited. Depending on the plan you purchase, Ford ESP provides benefits such as:

- Rental reimbursement
- Coverage for certain maintenance and wear items
- Protection against repair costs after your New Vehicle Limited Warranty Coverage expires
- Roadside Assistance benefits

There are several Ford ESP plans available in various time, distance and deductible combinations. Each plan is tailored to fit your own driving needs, including reimbursement for towing and rental.

When you purchase Ford ESP, you receive added peace-of-mind protection throughout Canada and the United States, provided by a network of participating Ford Motor Company dealers.

For more information, visit your local Ford of Canada dealer or [www.ford.ca](http://www.ford.ca) to find the Ford Extended Service Plan that is right for you.

**Note:** Repairs performed outside of Canada and the United States are not eligible for Ford ESP coverage.

## Scheduled Maintenance

### GENERAL MAINTENANCE INFORMATION

#### Why maintain your vehicle?

Carefully following this schedule helps protect against major repair expenses resulting from neglect or inadequate maintenance and may also help to increase the value of your vehicle when you sell or trade it.

It is your responsibility to see that all scheduled maintenance is performed and that the materials used meet Ford engineering specifications as identified in the *Maintenance and Specifications* chapter. Failure to perform scheduled maintenance specific in this guide will invalidate warranty coverage on parts affected by the lack of maintenance. Be sure receipts for completed maintenance are kept with the vehicle and confirmation of the work performed is always recorded in this guide.

Your dealer has factory-trained technicians who can perform the required maintenance using genuine Ford parts. They are committed to meeting your service needs and to assuring your continuing satisfaction.

#### Protecting your investment

Maintenance is an investment that will pay dividends in the form of improved reliability, durability and resale value. To ensure the proper performance of your vehicle and its emission control systems, it is imperative that scheduled maintenance be completed at the designated intervals.

Your vehicle is equipped with the Intelligent Oil Life Monitor™ (IOLM) system which displays a message in the message center at the proper oil change service interval; this interval may be up to one year or 10,000 miles (16,000 km). When ENGINE OIL CHANGE DUE or OIL CHANGE REQUIRED appears in the message center display, it's time for an oil change; the oil change must be done within two weeks or 500 miles (800 km) of the ENGINE OIL CHANGE DUE or OIL CHANGE REQUIRED message appearing. The Intelligent Oil Life Monitor™ must be reset after each oil change; refer to the *Instrument Cluster* chapter.

If your message center is prematurely reset or becomes inoperative, you should perform the oil change interval at six months or 5,000 miles (8,000 km) from your last oil change.

**Note:** The Shelby® GT500® does not have an IOLM system; refer to your *Shelby GT500* supplement for oil change service intervals.

## Scheduled Maintenance

Your vehicle is very sophisticated and built with multiple complex performance systems. Every manufacturer develops these systems using different specifications and performance features. That's why it's important to rely upon your dealership to properly diagnose and repair your vehicle.

Ford Motor Company has recommended maintenance intervals for various parts and component systems based upon engineering testing. Ford Motor Company relies upon this testing to determine the most appropriate mileage for replacement of oils and fluids to protect your vehicle at the lowest overall cost to you and recommends against maintenance schedules that deviate from the scheduled maintenance information.

Ford strongly recommends the use of genuine Ford replacement parts. Parts other than Ford, Motorcraft® or Ford-authorized remanufactured parts that are used for maintenance replacement or for the service of components affecting emission control must be equivalent to genuine Ford Motor Company parts in performance and durability. It is the owner's responsibility to determine the equivalency of such parts. Please consult your *Warranty Guide* for complete warranty information.

Chemicals or additives not approved by Ford are not required for factory recommended maintenance. In fact, Ford Motor Company recommends against the use of such additive products unless specifically recommended by Ford for a particular application.

### ***Oils, fluids and flushing***

In many cases, fluid discoloration is a normal operating characteristic and, by itself, does not necessarily indicate a concern or that the fluid needs to be changed. However, discolored fluids that also show signs of overheating and/or foreign material contamination should be inspected immediately by a qualified expert such as the factory-trained technicians at your dealership. Your vehicle's oils and fluids should be changed at the specified intervals or in conjunction with a repair. Flushing is a viable way to change fluid for many vehicle sub-systems during scheduled maintenance. It is critical that systems are flushed only with new fluid that is the same as that required to fill and operate the system, or using a Ford-approved flushing chemical.

## Scheduled Maintenance

### **Genuine Ford parts and service**

When planning your maintenance services, consider your dealership for all your vehicle's needs.

There are a lot of reasons why visiting your dealership for all your service needs is a great way to help keep your vehicle running great.

#### ***Convenience***

Many dealerships have extended evening and Saturday hours to make your service visit more convenient. How's that for quality service?

#### ***Factory-trained technicians***

Service technicians participate in extensive factory-sponsored certification training to help them become experts on the operation of your vehicle. Ask your dealership about the training and certification their technicians have received.

#### ***Genuine Ford and Motorcraft® replacement parts***

Dealerships stock Ford and Motorcraft® branded replacement parts. These parts meet or exceed Ford Motor Company's specifications, and we stand behind them. Parts installed at your dealership carry a nationwide, 12 month/12,000 mile (20,000 km) parts and labor limited warranty. Your dealer can give you details.

#### ***Value shopping for your vehicle's maintenance needs***

Your dealership recognizes the competitive landscape of maintenance and light repair automotive services. With factory-trained technicians, and one-stop service from routine maintenance like oil changes and tire rotations to repairs like brake service, check out the value your dealers can offer.

### **Owner checks and services**

Certain basic maintenance checks and inspections should be performed by the owner or a service technician at the intervals indicated. Service information and supporting specifications are provided in this owner's guide.

## Scheduled Maintenance

Any adverse condition should be brought to the attention of your dealer or qualified service technician as soon as possible for the proper service advice. The owner maintenance service checks are generally not covered by warranties so you may be charged for labor, parts or fluids used.

<b>Engine oil/coolant change intervals – 3.7L and 5.0L engines*</b>	
<b>Engine oil</b>	As indicated by the message center: do not exceed one year or 10,000 miles (16,000 km)
<b>Engine coolant, initial change</b>	6 years or 100,000 miles (160,000 km) (whichever comes first)
<b>Engine coolant, after initial change</b>	Every 3 years or 50,000 miles (80,000 km)
*Shelby GT500 owners: Refer to the <i>Shelby GT500</i> supplement	
<b>Check every month</b>	
Engine oil level	
Function of all interior and exterior lights	
Tires for wear and proper pressure, including spare	
Windshield washer fluid level	
<b>Check every six months</b>	
Battery connections; clean if necessary	
Body and door drain holes for obstructions; clean if necessary	
Cooling system fluid level and coolant strength	
Door weatherstrips for wear; lubricate if necessary	
Hinges/latches/outside locks for proper operation; lubricate if necessary	
Parking brake for proper operation	
Safety belts and seat latches for wear and function	
Safety warning lamps (brake, ABS, airbag, safety belt) for operation	
Washer spray/wiper operation; clean or replace blades as necessary	

## Scheduled Maintenance

### Multi-point inspection

In order to keep your vehicle running right, it is important to have the systems on your vehicle checked regularly. This can help identify potential issues and prevent major problems. Ford Motor Company recommends the following multi-point inspection be performed at every scheduled maintenance interval to help ensure your vehicle keeps running great.

<b>Multi-point inspection – Recommended each visit</b>	
Accessory drive belt(s)	Half-shaft dust boots (if equipped)
Battery performance	Horn operation
Clutch operation (if equipped)	Radiator, cooler, heater and A/C hoses
Engine air filter	Suspension component for leaks or damage
Exhaust system	Steering and linkage
Exterior lamps and hazard warning system operation	Tires for wear and proper pressure, including spare
Fluid levels*; fill if necessary	Windshield for cracks, chips or pits
For oil and fluid leaks	Washer spray and wiper operation
*Brake, coolant recovery reservoir, manual and automatic transmission (with an underhood dipstick), power steering (if equipped) and window washer	

Be sure to ask your dealership service advisor or technician about the multi-point vehicle inspection. It's a comprehensive way to perform a thorough inspection of your vehicle. It's your checklist that gives you immediate feedback on the overall condition of your vehicle. You'll know what's been checked, what's okay, as well as those things that may require future or immediate attention. The multi-point vehicle inspection is one more way to keep your vehicle running great!

# Scheduled Maintenance

GENUINE  
 PARTS & SERVICE

Owner's Member #: \_\_\_\_\_  
 Owner's Service Balance: \_\_\_\_\_

Multi-Point Inspection Report Card as Recommended by Ford Motor Company

Make: \_\_\_\_\_ Model/Year: \_\_\_\_\_ Mileage: \_\_\_\_\_

Days: \_\_\_\_\_ Mile: \_\_\_\_\_ Static Inspection Month: \_\_\_\_\_

**SCHEDULED MAINTENANCE ITEMS DUE FOR SERVICES ON THIS VEHICLE**

ITEM	STATUS	ITEM	STATUS
Oil Change	<input type="checkbox"/>	Oil Filter	<input type="checkbox"/>
Engine Air Filter	<input type="checkbox"/>	Spark Plugs	<input type="checkbox"/>
Engine Coolant	<input type="checkbox"/>	Tire Rotation	<input type="checkbox"/>
Blind Spot Assist	<input type="checkbox"/>	Transmission Fluid	<input type="checkbox"/>
Wash/Wax	<input type="checkbox"/>	Transmission Filter	<input type="checkbox"/>

\*This is only a partial list of vehicle maintenance items and is NOT all-inclusive. Please consult your Owner's Manual or visit [www.genuineford.com](http://www.genuineford.com) for vehicle specific maintenance requirements.

**CHECK FLUID LEVELS AND FILL**

FLUID	LEVEL	FLUID	LEVEL
Oil	<input type="checkbox"/>	Power Steering	<input type="checkbox"/>
Brake	<input type="checkbox"/>	Windshield Washer	<input type="checkbox"/>
Wash/Wax	<input type="checkbox"/>	Coolant	<input type="checkbox"/>

**BATTERY**

State of Health: \_\_\_\_\_ Condition of Cell: \_\_\_\_\_

Factory spec cold cranking amps: \_\_\_\_\_ Amperes (at 70°F)

**EXTERIOR BODY**

Note any existing exterior body damage or defects:

**TIRES/ BRAKE WEAR**

TIRES	WEAR	TIRES	WEAR
Front Left	<input type="checkbox"/>	Front Right	<input type="checkbox"/>
Back Left	<input type="checkbox"/>	Back Right	<input type="checkbox"/>

**TIRES**

TIRES	WEAR	TIRES	WEAR
Front Left	<input type="checkbox"/>	Front Right	<input type="checkbox"/>
Back Left	<input type="checkbox"/>	Back Right	<input type="checkbox"/>

**SYNC VEHICLE HEALTH REPORT (VHR)**

Check and OK if this item: \_\_\_\_\_

**CHECK FOLLOWING SYSTEMS**

Brake system (braking lines, hoses, including brake) \_\_\_\_\_

Exhaust system (leaks, damage, loose parts) \_\_\_\_\_

Transmission and Drive Axle (leaks, damage, loose parts) \_\_\_\_\_

Lighting (headlights, taillights, fog lights, turn signals, hazard and brake lamps) \_\_\_\_\_

Wipers and Windshield Washers (wiper blades, washer fluid) \_\_\_\_\_

Engine Cooling system, radiator, hoses and belts \_\_\_\_\_

Accessory drive belts \_\_\_\_\_

Comments: \_\_\_\_\_

Service Advisor: \_\_\_\_\_ Customer Signature: \_\_\_\_\_

Technician: \_\_\_\_\_ Customer Copy

12-XXXXXXX

## Scheduled Maintenance

### NORMAL SCHEDULED MAINTENANCE AND LOG

#### Intelligent Oil Life Monitor™ – 3.7L and 5.0L Engines

Your vehicle is equipped with an Intelligent Oil Life Monitor™ that determines when the engine oil should be changed based on how your vehicle is used. By using several important factors in its calculations, the monitor helps reduce the cost of owning your vehicle and reduce environmental waste at the same time. This means you won't have to remember to change the oil on a mileage-based schedule; the vehicle lets you know when an oil change is due by displaying OIL CHANGE REQUIRED in the message center. The following table is intended to provide examples of vehicle use and its impact on engine oil change intervals; it is provided as a guideline only. Actual engine oil change intervals will depend on several factors and will generally decrease with severity of use.

**Note:** The Shelby® GT500® message center is NOT equipped with this feature; refer to your *Shelby GT500* supplement for oil change service intervals.

When to expect the OIL CHANGE REQUIRED message	
Miles (km)	Vehicle use and examples
7500-10000 (12000-16000)	<b>Normal</b>
	<ul style="list-style-type: none"> <li>- Normal commuting with highway driving</li> <li>- No, or moderate, load/towing</li> <li>- Flat to moderately hilly roads</li> <li>- No extended idling</li> </ul>
5000-7499 (8000-11999)	<b>Severe</b>
	<ul style="list-style-type: none"> <li>- Moderate to heavy load/towing</li> <li>- Mountainous or off-road conditions</li> <li>- Extended idling</li> <li>- Extended hot or cold operation</li> </ul>
3000-4999 (4000-7999)	<b>Extreme</b>
	<ul style="list-style-type: none"> <li>- Maximum load/towing</li> <li>- Extreme hot or cold operation</li> </ul>

## Scheduled Maintenance

Normal Scheduled Maintenance	
At every oil change interval as indicated by the message center	Change engine oil and filter
	Rotate tires, inspect tire wear and measure tread depth
	Perform multi-point inspection (recommended)
	Inspect automatic transmission fluid level (if equipped with dipstick); consult dealer for requirements
	Inspect brake pads, shoes, rotors, drums, brake linings, hoses and parking brake
	Inspect cabin air filter (if equipped)
	Inspect engine cooling system strength and hoses
	Inspect exhaust system and heat shields
	Inspect rear axle and U-joints; lubricate if equipped with grease fittings (AWD vehicles)
	Inspect half-shaft boots (if equipped)
	Inspect steering linkage, ball joints, suspension, tie-rod ends, driveshaft and U-joints; lubricate if equipped with grease fittings
	Inspect wheels and related components for abnormal noise, wear, looseness or drag
Reset your Intelligent Oil Life Monitor™ after each engine oil and filter change; refer to the <i>Instrument Cluster</i> chapter	
<b>Do not exceed one year or 10,000 miles (16,000 km) between service intervals</b>	

## Scheduled Maintenance

Additional maintenance items <sup>1</sup>													
Miles (x 1,000)	20	30	40	60	80	90	100	120	140	150			
Kilometers (x 1,000)	32	48	64	96	128	144	160	192	225	240			
Replace cabin air filter (if equipped)	•		•	•	•			•	•	•			
Replace climate-controlled seat filter (if equipped)		•		•		•		•					•
Replace engine air filter		•		•		•		•					•
Change engine coolant <sup>2</sup>										•			
Replace spark plugs										•			
Inspect accessory drive belt(s)										•			
Change automatic transmission fluid and filter													•
Change manual transmission fluid													•
Replace accessory drive belt(s) if not replaced within the last 100,000 miles (160,000 km)													•

<sup>1</sup> Additional maintenance items can be performed within 3,000 miles (4,800 km) of the last oil change. Do not exceed the designated distance for the interval.

<sup>2</sup> Initial replacement at 6 years or 100,000 miles (160,000 km), then every 3 years or 50,000 miles (80,000 km)

## Scheduled Maintenance

### Maintenance schedule log

<p style="text-align: center;">DEALER VALIDATION:</p>  <p style="text-align: center;">P&amp;A CODE:</p> <p>RO#:            HOURS:</p> <p>DATE:           MILEAGE:</p>	<p style="text-align: center;">DEALER VALIDATION:</p>  <p style="text-align: center;">P&amp;A CODE:</p> <p>RO#:            HOURS:</p> <p>DATE:           MILEAGE:</p>
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## Scheduled Maintenance

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## Scheduled Maintenance

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## Scheduled Maintenance

### SPECIAL OPERATING CONDITIONS – 3.7L AND 5.0L ENGINES

If you operate your vehicle **primarily** in any of the following conditions, you need to perform additional maintenance as indicated. If you **occasionally** operate your vehicle under any of these conditions, it is not necessary to perform the additional maintenance. For specific recommendations, see your dealership service advisor or technician.

<b>Towing a trailer or using a camper or car-top carrier</b>	
As required	Change engine oil and filter as indicated by message center and perform services listed in Normal Scheduled Maintenance chart
Inspect frequently, service as required	Inspect and lubricate U-joints
	See axle maintenance items under <i>Exceptions</i>
Every 60,000 miles (96,000 km)	Change manual transmission fluid

Perform the services in the preceding table when specified or within 3,000 miles (4,800 km) of the OIL CHANGE REQUIRED message appearing in the message center.

**Example #1:** The OIL CHANGE REQUIRED message comes on at 28,751 miles (46,270 km); perform the 30,000 mile (48,000 km) automatic transmission fluid replacement.

**Example #2:** The OIL CHANGE REQUIRED message has **not** come on but the odometer reads 30,000 miles (48,000 km); perform the engine air filter replacement. (i.e., Intelligent Oil Life Monitor™ was reset at 25,000 miles [40,000 km].)

<b>Extensive idling and/or low-speed driving for long distances as in heavy commercial use (i.e. delivery, taxi, patrol car or livery)</b>	
As required	Change engine oil and filter as indicated by message center and perform services listed in Normal Scheduled Maintenance chart
Inspect frequently, service as required	Replace cabin air filter (if equipped)
	Replace engine air filter
Every 60,000 miles (96,000 km)	Replace spark plugs

Perform the services in the preceding table when specified or within 3,000 miles (4,800 km) of the OIL CHANGE REQUIRED message appearing in the message center.

## Scheduled Maintenance

**Example #1:** The OIL CHANGE REQUIRED message comes on at 28,751 miles (46,270 km); perform the 30,000 mile (48,000 km) automatic transmission fluid replacement.

**Example #2:** The OIL CHANGE REQUIRED message has **not** come on but the odometer reads 30,000 miles (48,000 km); perform the engine air filter replacement. (i.e., Intelligent Oil Life Monitor™ was reset at 25,000 miles [40,000 km].)

<b>Operating in dusty conditions such as unpaved or dusty roads</b>	
Inspect frequently, service as required	Replace cabin air filter (if equipped)
	Replace engine air filter
Every 5,000 miles (8,000 km)	Inspect the wheels and related components for abnormal noise, wear, looseness or drag
	Rotate tires, inspect tires for wear and measure tread depth
Every 5,000 miles (8,000 km) or 6 months	Change engine oil and filter
Every 50,000 miles (80,000 km)	Change manual transmission fluid
Reset your Intelligent Oil Life Monitor™ after each engine oil and filter change; refer to the <i>Instrument Cluster</i> chapter	
<b>Exclusive use of E85 (Flex Fuel Vehicles only)</b>	
Every oil change	If ran exclusively on E85, fill the fuel tank full with regular unleaded fuel

## Scheduled Maintenance

### Special operating condition log

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## Scheduled Maintenance

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## Scheduled Maintenance

### EXCEPTIONS

There are several exceptions to the Normal Schedule. They are listed below:

**Normal vehicle axle maintenance:** Rear axles and power take-off (PTO) units with synthetic fluid and light-duty trucks equipped with Ford-design axles are lubricated for life; do not check or change fluid unless a leak is suspected, service is required or the assembly has been submerged in water. During long periods of trailer towing with outside temperatures above 70°F (21°C) and at wide-open throttle for long periods above 45 mph (72 km/h), non-synthetic rear axle fluids should be changed every 3,000 miles (4,800 km) or three months, whichever comes first. This interval can be waived if the axle is filled with 75W140 synthetic gear fluid meeting Ford specification WSL-M2C192-A, part number FITZ-19580-B or equivalent. Add friction modifier XL-3 (EST-M2C118-A) or equivalent for complete refill of Traction-Lok rear axles (refer to *Maintenance product specifications and capacities* in the *Maintenance and Specifications* chapter for details).

**Police/Taxi/Livery vehicle axle maintenance:** Change rear axle fluid every 100,000 miles (160,000 km). Rear axle fluid change may be waived if the axle was filled with 75W140 synthetic gear fluid meeting Ford specification WSL-M2C192-A, part number FITZ-19580-B or equivalent. Add four ounces (118 mL) of additive friction modifier XL-3 (EST-M2C118-A) or equivalent for complete refill of Traction-Lok rear axles. The axle fluid should be changed anytime the axle has been submerged in water.

**California fuel filter replacement:** If the vehicle is registered in California, the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of the vehicle's useful life. Ford Motor Company, however, urges you to have all recommended maintenance services performed at the specified intervals and to record all vehicle service.

**Class A Motorhome:** Change brake fluid every two years.

**Hot climate oil change intervals:** Vehicles operating in the Middle East, North Africa, Sub-Saharan Africa or locations with similar climates using an American Petroleum Institute (API) Certified for Gasoline Engines (Certification mark) oil or SM or greater, the normal oil change interval is 5,000 miles (8,000 km). If using an oil that is less than the API SM (i.e. SL) category, then the oil change service interval is 3,000 mile (4,800 km).

## Scheduled Maintenance

**Edge/MKX AWD only** – vehicles operating off-road in sand during high ambient temperatures must replace the AWD PTU (All-wheel drive Power Transfer Unit) lube every 20,000 miles (32,000 km).

**Engine air filter & cabin air filter replacement:** Engine air filter and cabin air filter life is dependent on exposure to dusty and dirty conditions. Vehicles operated in these conditions will require frequent inspection and replacement of the engine air filter and cabin air filter.

### ENGINE COOLANT CHANGE RECORD

3.7L and 5.0L engines*	
Initial change	6 years or 100,000 miles (160,000 km) (whichever comes first)
After initial change	Every 3 years or 50,000 miles (80,000 km)
*Shelby GT500 owners: Refer to the <i>Shelby GT500</i> supplement	

### Engine coolant change log

<p>DEALER VALIDATION:</p> <p>P&amp;A CODE:</p> <p>RO#: HOURS:</p> <p>DATE: MILEAGE:</p>	<p>DEALER VALIDATION:</p> <p>P&amp;A CODE:</p> <p>RO#: HOURS:</p> <p>DATE: MILEAGE:</p>
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