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Severe service conditions

SEVERE SERVICE CONDITIONS

USING THE SEVERE DUTY SUPPLEMENT

This supplement is intended to aid the operators of special service or fleet vehicles used in severe duty or high mileage operations.

Failure to maintain your special service vehicle properly may restrict warranty coverage, reduce vehicle performance and operation and adversely affect vehicle safety.

For a detailed list of severe duty maintenance intervals, refer to the "Service Guide".



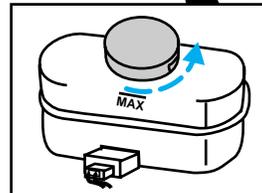
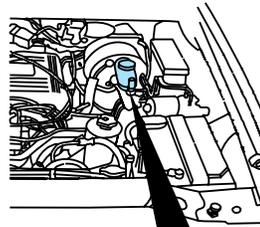
Information about this guide

The information found in this guide was in effect at the time of printing. Ford may change the contents without notice and without incurring obligation.

Engine maintenance

Replace engine oil and filter every three months or 5,000 km (3,000 miles) if your vehicle operates under any of the following conditions:

- Short trips of less than 16 km (10 miles) when outside temperatures remain below -18°C (0°F).
- Operating during hot weather (above 32°C [90°F])
- Towing a trailer or carrying a heavy load.



Severe service conditions

- Continuously driving above normal highway speeds.
- Driving in stop-and-go traffic.
- Operating in extremely dusty conditions. If operating under these conditions, the air cleaner and emission filters must be replaced at more frequent intervals than normal.
- Extensive idling (such as delivery use).

Automatic transmission maintenance

The automatic transmission fluid should be changed every 35,000 km (21,000 miles).

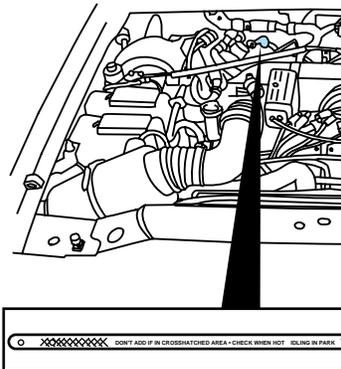
The 5R55E automatic transmission fluid should be changed every 80,000 km (50,000 miles).

If in addition to the specified severe duty operating conditions, your automatic transmission may need to be checked more frequently if your driving habits frequently include any of the following:

- Using your vehicle as a snowplow.
- Off road and 4x4 operation.

Rear axle maintenance¹

All rear axle lube quantities must be replaced every 160,000 km (100,000 miles)² or anytime that the axle has been submerged in water. Excepting these conditions, the lube should not require



Maintenance recommendations

checking or changing unless a leak is suspected or repair required.

¹Limited slip axles have synthetic lubrication and do not require changing.

² For non-limited slip axles, the “Service Guide” states 165,000 km (99,000 miles)

PRIORITY MAINTENANCE CHECKS

The following list of *Priority maintenance checks* should be performed according to the frequencies indicated. Continue to read the “Severe Duty Supplement” for more detailed information on these important maintenance checks.

Refer to the “Service Guide” for additional information on owner maintenance checks.

Maintenance checks	Frequency
Engine oil recommendations	Check daily (when refueling)
Windshield washer fluid	Check daily (when refueling)
Worn or underinflated tires	Check daily (when refueling)
Automatic transmission fluid	5,000 km (3,000 miles) or once per month
Engine coolant level	5,000 km (3,000 miles) or once per month
Power steering fluid level	5,000 km (3,000 miles) or every three months

Maintenance recommendations

Battery cables and connections	5,000 km (3,000 miles) or every three months
Fluid leaks	5,000 km (3,000 miles) or every three months
Brake fluid level	5,000 km (3,000 miles) or every three months
Front disc brake pads	5,000 km (3,000 miles) or every three months
Rear disc brake pads	10,000 km (6,000 miles) or every six months

IMPORTANT MAINTENANCE PRECAUTIONS

For more information on maintenance procedures and precautions for your vehicle, refer to the *Maintenance and care* chapter of your "Owner Guide".

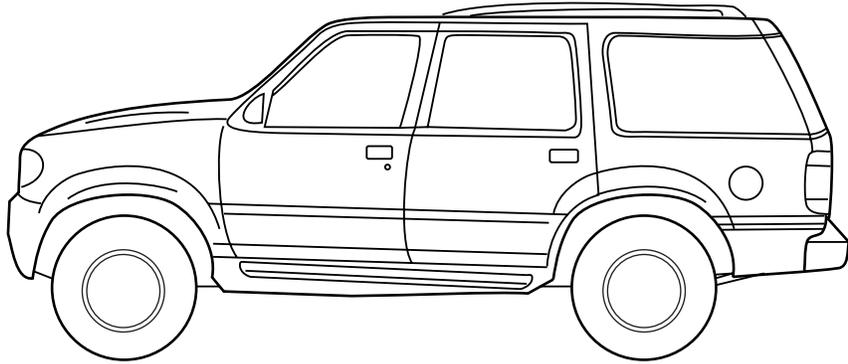
To determine the lubricant specifications required for each component, refer to the *Capacities and specifications* chapter of the "Owner Guide".

Storing your vehicle

During extended periods of vehicle storage (60 days or more), oxidation may cause gasoline to deteriorate. Such deterioration could be detrimental to your vehicle's systems and performance. A commercial fuel stabilizer (Ford Gas Stabilizer E8AZ-19C544-A [ESE-M99C112-A] or equivalent should be added to vehicles when

Maintenance recommendations

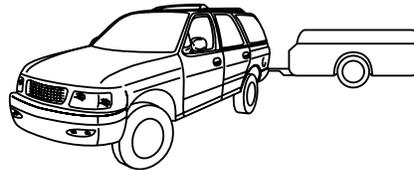
ever storage exceeds 60 days.
Follow the instructions provided
with the stabilizer for proper use.



Towing your vehicle

Vehicles may be towed with a maximum speed of 80 km/h (50 mph) on smooth roads or 56 km/h (35 mph) on rough roads. No matter what the road conditions, vehicles should not be towed further than 80 km (50 miles).

For more information on towing procedures and guidelines, refer to the *Driving* chapter of the "Owner Guide".



IMPORTANT SAFETY NOTICE

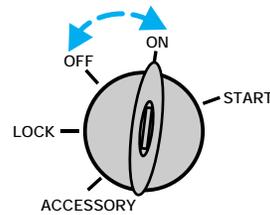
Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all vehicles as well as the personal safety of the individual performing the



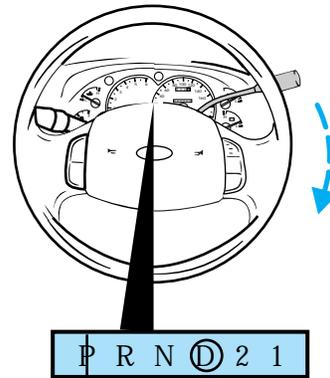
Maintenance recommendations

maintenance. Follow these general safety precautions:

- Wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires you to work under the vehicle.
- Be sure that the ignition switch is always in the OFF position unless otherwise specified.



- Be sure that the gearshift is in the P (Park) position for automatic transmissions or the 1 (First) position for manual transmissions and engage the parking brake.
- Block the opposite diagonal wheels to prevent the vehicle from moving.
- Operate the engine only in well ventilated areas.
- Keep yourself and loose clothing away from moving parts while the engine is running.
- Protect yourself from engine heat.
- Keep smoking materials and other lit objects away from the vehicle.



Maintenance recommendations

TRANSMISSION MAINTENANCE

Automatic transmission fluid (if equipped)

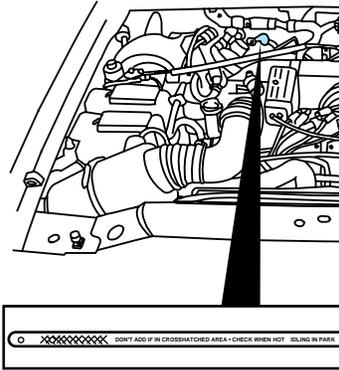
The automatic transmission fluid should be checked at least once per month or every 5,000 km (3,000 miles), whichever occurs first. The correct fluid level is crucial to proper vehicle functioning. If the transmission is not functioning properly (if the transmission slips, shifts slowly or if fluid leakage occurs), the fluid level should be checked and the leakage problem corrected.

Vehicles frequently operated in extreme temperatures or under fleet conditions may require more frequent maintenance.

A burnt or rotten odor and dark color in the transmission fluid indicates a high temperature or severe vehicle usage. If such an odor or discoloration should develop, the transmission should be serviced immediately.

For 4R70W transmissions, use only MERCON® fluid. For 5R55E transmissions, use only MERCON® V (XT-5-QM). Use of other transmission fluid may result in transmission damage, malfunction or failure.

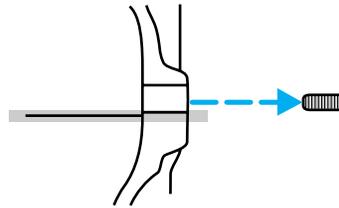
for more information on transmission maintenance, refer to *Checking and adding automatic transmission fluid* in the *Maintenance and care* chapter of the "Owner Guide".



Maintenance recommendations

Manual transmission and differential fluid (if equipped)

Clean and remove the filler plug. The fluid level should be up to the bottom of the filler plug hole. For more information on differential fluid maintenance, refer to *Checking and adding differential fluid* in the *Maintenance and care* chapter of the "Owner Guide".



Clutch fluid (if equipped)

The clutch fluid for your vehicle is self-adjusting and should not require any routine service.

During normal operation, the fluid level in the clutch fluid reservoir will slowly rise. If the fluid level drops, add fluid to maintain the level at the step in the reservoir body.

If it is necessary to remove the fluid reservoir cap, thoroughly clean the cap before removal to prevent contaminants from entering the reservoir. Remove the internal diaphragm and add only Ford High Performance DOT 3 Brake Fluid C6AZ-19542-AA or an equivalent DOT 3 fluid that meets Ford specification ESA-M6C25-A.

Maintenance recommendations

ENGINE MAINTENANCE

Engine oil recommendations

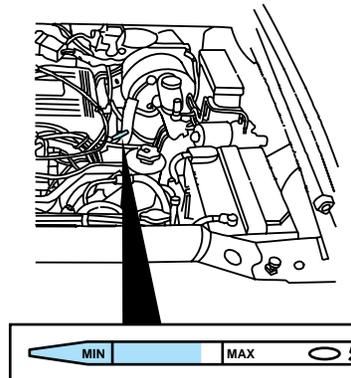
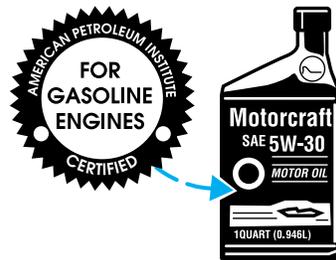
Ford recommends that you use Motorcraft oil or an equivalent oil meeting Ford specification ESE-M2C153-E and **certified by the American Petroleum Institute for gasoline engines**. Look for the American Petroleum Institute's certification mark.

Do not use:

- non-detergent oils
- oils labeled API SA, SB, SC, SD, SE or SF
- oil additives, oil treatments or engine treatments

SAE 5W-30 oil is preferred for all temperatures. SAE 10W-30 is acceptable for moderate to hot temperatures.

Check and add engine oil according to the intervals listed in the "Service Guide". For information on engine oil maintenance, refer to *Checking and adding engine oil* in the *Maintenance and care* chapter of the "Owner Guide".



Maintenance recommendations

Oil change interval

The engine oil should be changed every three months or 5,000 km (3,000 miles), whichever occurs first.

If the engine oil is not changed as recommended, inaccurate oil readings and engine damage may occur.

Oil filter change

Use only an approved engine oil filter such as the Motorcraft Long Life type or an equivalent filter meeting Ford specification ES-E4EE-6714AA. Install a new oil filter at each oil change.

Fuel filter

To prolong the life of the fuel pump and ensure dependable fuel system performance, the fuel filter should be changed every 96,000 km (60,000 miles). This operation is not required, but is recommended for California certified vehicles.

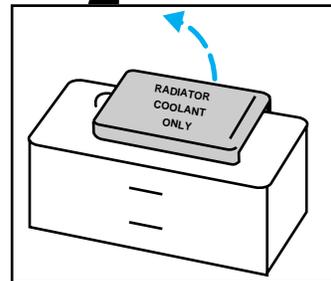
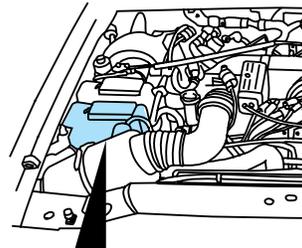
Maintenance recommendations

COOLING SYSTEM MAINTENANCE

Engine coolant

Check the coolant level in the coolant recovery reservoir daily. It is not necessary to remove the radiator cap to check the engine coolant level daily.

 Never remove the coolant recovery cap while the engine is running or hot.



If coolant must be added more than once per month or if more than one liter (or one quart) at a time is needed, check the cooling system for leaks and correct as necessary. Check the freezing protection rating of the coolant at least once per year.

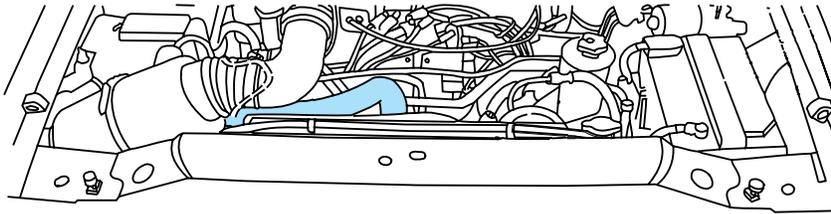
When adding engine coolant, use equal parts of water and Ford Premium Cooling System Fluid or an equivalent that meets Ford specification ESE-M97B44-A. Do not use alcohol or methanol antifreeze or an engine coolant that has been mixed with alcohol or methanol antifreeze.

For instructions on engine coolant maintenance, refer to *Checking and adding engine coolant* in the *Maintenance and care* chapter of the "Owner Guide".

Refer to the *Severe duty* maintenance schedule of the "Service Guide" for information on proper maintenance intervals.

Maintenance recommendations

Maintaining the system



Inspect all cooling system and heater hoses for deterioration, leaks and loose clamps. Service and replace as necessary.

Cooling slots are provided in the front grille. Do not block airflow by placing any objects in front or behind these slots.

Check air flow paths of the radiator for any foreign material. Clean these areas as necessary to maintain maximum cooling efficiency. When cleaning the radiator, always clean from the engine side of the engine compartment to ensure that foreign material is not jammed into the radiator fins.

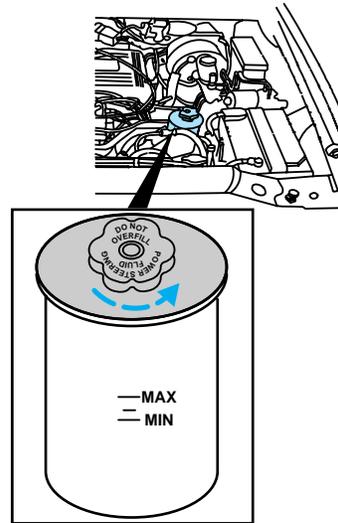
Maintenance recommendations

POWER STEERING FLUID

Check the level of the power steering fluid at least twice per year. The fluid level may be checked when the fluid is either HOT or COLD.

Use only Ford Premium Power Steering Fluid E6AZ-19582-AA or an equivalent Type F fluid that meets Ford specification ESW-M2C33-F and has a Ford registration number (an eight digit number beginning with 2P) printed on the fluid container.

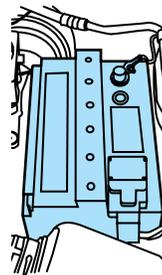
For more information on power steering maintenance, refer to *Checking and adding power steering fluid* in the *Maintenance and care* chapter of the "Owner Guide".



ELECTRICAL SYSTEM AND IGNITION MAINTENANCE

Battery and cables

Visually inspect the battery and battery cables every three months or 5,000 km (3,000 miles), whichever occurs first. Any signs of corrosion on the cable-to-battery post connections, battery case or carrier should be removed with a baking soda and water solution. Be sure that none of the cleaning solution enters the battery through the vent openings. Rinse with clean water and dry thoroughly. Apply a small quantity of Ford Silicone Lubricant or an



Maintenance recommendations

equivalent that meets Ford specification ESR-M13P4-A to the terminal surfaces to help prevent corrosion from forming.

Check the tightness of the cables to the battery post by hand. It may be necessary to tighten the clamp with a suitable wrench.

Ignition system

Visually inspect the plug wires and ignition coil pack. Any oily dirt should be removed and the area cleaned with a damp cloth. Ensure that all high voltage wires are firmly attached to the coil pack and that the other ends are firmly seated over each spark plug.

Other electrical systems

Wiring, lighting and aftermarket electrical equipment should be checked monthly for proper routing, deterioration or chafing on other components.

UNDER VEHICLE MAINTENANCE

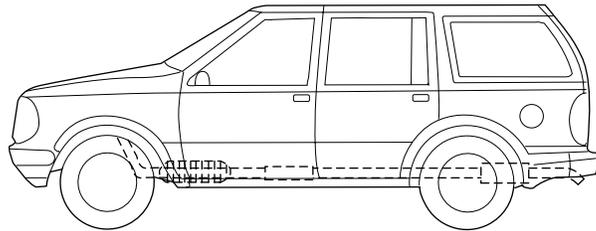
Catalytic converters

During normal engine operation, the catalytic converter surface temperature can reach up to 816°C (1500°F). To avoid injury, ensure that the converter has cooled before attempting maintenance.

Ford recommends that an under vehicle inspection be performed at *Severe Duty* intervals listed in the "Service Guide". With the vehicle

Maintenance recommendations

supported on a jack or jack stands, inspect the converter and exhaust system. Be sure that no foreign materials are caught in the exhaust system shielding. Any underbody sealant or foreign material should be removed and all possible contaminants cleaned off of the shell surfaces.



Visual inspections

Inspect the radiator, engine, transmission and power steering for fluid leaks and deterioration every 24,000 km (15,000 miles) or three months, whichever comes first. Any leakage should be corrected immediately. It is normal for minor seepage to occur at gasketed surfaces.

Check the routing of the speedometer cable and cable housing. Be sure that it flows smoothly over its entire area (routed away from the exhaust system components) and is free of kinks or crushed areas.

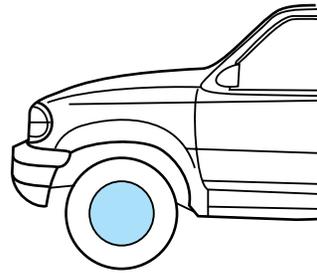
Maintenance recommendations

Chassis lubrication intervals

Chassis lubrication should be performed every 5,000 km (3,000 miles).

Wheel bearings

No wheel bearing adjustment is required for either front or rear wheels.



Severe duty equipment

SPECIAL SERVICE EQUIPMENT

The Explorer is not designed nor intended to be used as a pursuit vehicle or an ambulance.

The following optional equipment is designed to meet Ford Corporate Product Standards; however, the equipment does not meet corporate guidelines relative to police packages. therefore, the optional equipment is intended for use in limited law enforcement services only. Use of DSO special service options does not imply nor allow use as a pursuit vehicle.

Components that are part of some available options are listed below and on the following pages, along with a brief outline of their major features.

ELECTRICAL

Heavy-duty alternator

Handling the high electrical loads imposed on special service vehicles by the broad range of necessary equipment requires a high ampere output alternator.

The 4.0 L SOHC or 5.0 L Explorer engine, when equipped with a 130 ampere alternator, has the voltage regulator integral with the alternator. No external voltage regulator is required.

Severe duty equipment

Heavy-duty battery special service

Special service vehicles are equipped with a maintenance-free battery which does not require the addition of water or other regular service.

Installing aftermarket equipment

When installing aftermarket equipment, avoid using fasteners that are too long for the application or are in an area that might damage other vehicle components (i.e., wiring, brake lines, fuel tank and lines, powertrain components exhaust system, suspension, etc.).

Do not make electrical connections to vehicle electrical systems not specifically designed for aftermarket equipment installation.

Do not install and components into the Powertrain control module (PCM) harness. Connecting into this system may affect engine and transmission operation. As an example, connection of aftermarket electrical equipment into the brake light circuit or any other circuit which is connected to the PCM, anti-lock brake computer, air bag system, transmission or any other vehicle system may cause vehicle malfunction.

Severe duty equipment



Do not place objects or mount equipment on or near the air bag covers that may come into contact with an inflating air bag.

Mobile communication systems

Note: The Federal Communication Commission (FCC) regulates the use of mobile communication systems such as two-way radios, telephones and anti-theft alarms that are equipped with radio transmitters. If you install this equipment in your vehicle, you should comply with those rules. Ford Motor Company vehicles are in compliance with FCC regulations (CFR 47 Part 15) and SAE J551d for radiated electromagnetic emissions.

Note: Mobile communication systems may harm the operation of your vehicle, particularly if they are not properly designed for automotive use or are not properly installed. For example: when operated, such systems may cause the engine to stumble or stall and may affect electronically controlled transmission operation. In addition, such systems may themselves be damaged or their operation affected by operating your vehicle. (Citizen Band [CB] transceivers, garage door openers, and other transmitters whose power output is 5 watts or less will not ordinarily affect your vehicle's operation.)

Severe duty equipment

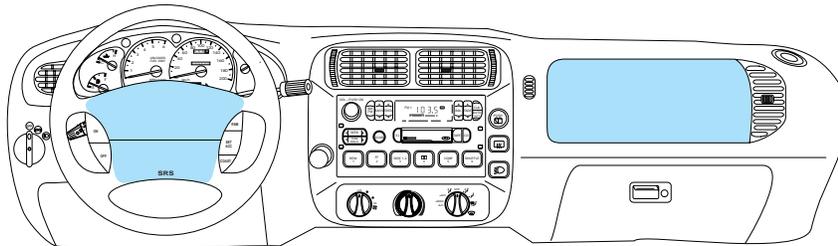
Note: Because Ford has no control over the installation, design or manufacture of such systems, Ford cannot assume responsibility for any adverse effects or damage that may result if this equipment is used.

Malfunction of aftermarket electronic equipment should be resolved by the equipment manufacturer.

Roof Wiring Preparation Package

Be sure to locate wires in the roof before drilling. This will prevent damage to the wire harness or interior headliner and ensure proper wire routing when installing aftermarket accessories.

AIR BAGS



The Explorer incorporates dual standard (driver and passenger) air bag supplemental restraint systems.

Severe duty equipment

Dual driver/passenger air bags will affect the way aftermarket accessories can be mounted in Explorer vehicles.

Sharp edges, corners or protrusions that come in contact with a deploying air bag could damage the nylon air bag material and reduce the effectiveness of the air bag.

Take care to keep zones around the air bags free of aftermarket accessories and other equipment.



Do not place objects or mount equipment on or near the air bag covers that may come into contact with an inflating air bag.

Air bag deployment zones

Keep the air bag deployment zones free of all aftermarket accessories or other obstructions. Failure to do so may inhibit the functioning of the supplemental restraint system in the event of a collision.

Air bags must be allowed to deploy fully without restriction. The deployment of air bags is not compatible with any configuration of aftermarket equipment mounting that places objects in the air bag deployment path.

Equipment mounted or placed in the deployment area of an air bag will reduce the effectiveness of the air bag, damage the air bag and

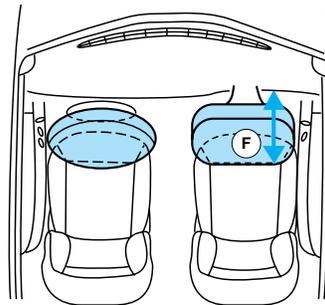
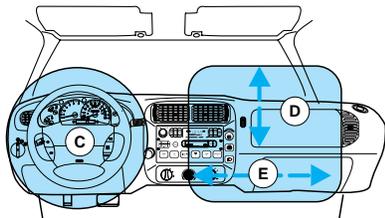
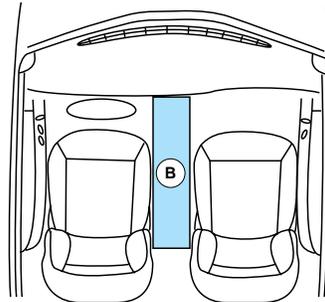
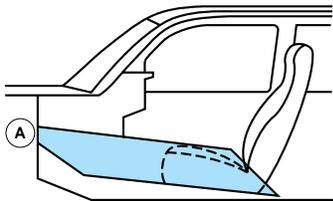
Severe duty equipment

potentially damage or dislodge the equipment.

Refer to the following chart before adding aftermarket accessories or mounting any equipment to your vehicle for approximate mounting zones:

Severe duty equipment

Vehicle area	Equipment mounting zone
Area on tunnel between seats	A Do not exceed height of 254 mm (10 inches) B Do not exceed width of 203 mm (8 inches)
Driver side air bag (deployed)	C 330 mm (13 inches) radius from center of air bag door.
Passenger air bag (deployed)	D 330 mm (13 inches) radius from center of air bag door. E 889 mm (35 inches) width.
Passenger air bag (deployed)	F 335 mm (14 inches) depth. G 660 mm (26 inches) height.



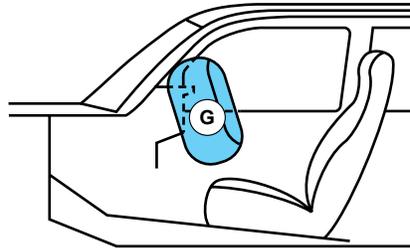
Severe duty equipment

 Do not place objects or mount equipment on or near the air bag covers that may come into contact with an inflating air bag.

Important safety precautions

 Do not attempt to service, repair, or modify the Air Bag Supplemental Restraint System or its fuses. See your Ford or Lincoln-Mercury dealer.

 All occupants of the vehicle, including the driver, should always wear their safety belts.



Special air bag concerns

- This vehicle cannot be special ordered without the supplement restraint system (SRS).
- The installation of some types of push bumpers could affect the timing of air bag deployment.
- When transporting a passenger whose hands are restrained, it is recommended that he should be sitting upright as possible and properly restrained with the safety belt, seated in the rear of the vehicle. If it is necessary to transport the individual in the front seat, the seat should be adjusted as far rearward as possible with the seat belt fastened.

Severe duty equipment

- This vehicle is not designed nor intended for use as an ambulance or pursuit vehicle. However, high speed braking or uneven road surfaces will not cause inadvertent air bag inflation.

Air Bag Do's and Don'ts

Do not attempt to tamper with, disconnect or deactivate the air bag system.

Tampering with the air bag system could cause the bag to inflate or become inoperative. Disconnecting or deactivating an air bag system could result in liability exposure to the vehicle owner.

Do not mount or place any objects in the deployment path of an air bag.

Air bags must be allowed to fully deploy without restriction. The deployment of air bags is not compatible with any configuration of aftermarket equipment mounting that places objects in the air bag deployment path. Equipment mounted or placed in the deployment area of an air bag will reduce the effectiveness of the air bag, damage the air bag, and potentially damage or dislodge the equipment.

Severe duty equipment

Do always use safety belts with the air bag supplemental restraint system.

There are four very important reasons to always use safety belts with the air bag system. Safety belts:

- Help restrain the occupant to increase the effectiveness of the air bag when it inflates.
- Reduce the risk of injury in rollover, side or rear impact accidents for which air bags are not designed to inflate.
- Reduce the risk of injury in frontal collisions that are not severe enough to activate the air bag.
- Reduce the risk of being thrown from the vehicle.

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