

BODY ELECTRICAL

LIGHTING

■ DESCRIPTION

The new Toyota Tundra has the following systems:

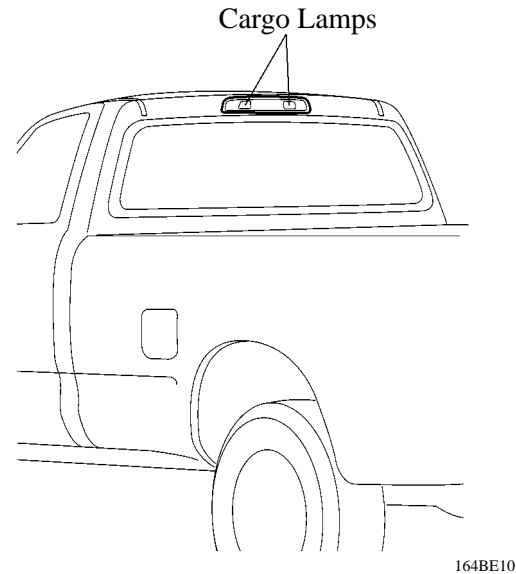
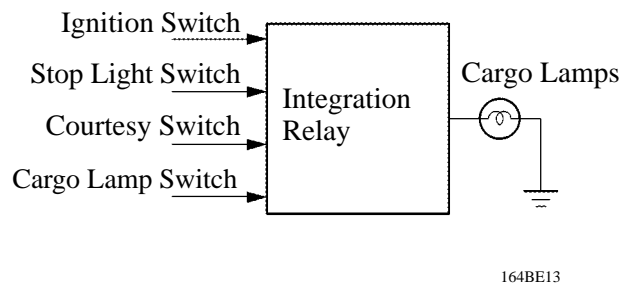
| System | Outline |
|------------------------------|---|
| Headlights | The new Toyota Tundra has newly adopted the 2-light multi-reflector type headlights. |
| Front Turn Signal Lights | The new Toyota Tundra has newly adopted the multi-reflector type front turn signal lights. |
| Front Fog Lights | The new Toyota Tundra has newly adopted the multi-reflector type front fog lights that are enclosed in the front bumper. |
| Daytime Running Light System | This system is designed to automatically activate the headlights during the daytime to keep the car highly visible to other vehicles. As in the previous Canada model, the headlights are activated at reduced low-beam brightness. The basic construction and operation are the same as in the Canada model of previous. |
| Light Auto Turn-Off System | When the ignition key is turned from ON or ACC to LOCK position and the driver's door is opened with the taillights and headlights on, this system automatically turns them off. The basic operation of this system is the same as in the previous model. |
| Cargo Lamps | The new Toyota Tundra has newly adopted the cargo lamps. For details, see the next page. |
| Service Connector for Towing | The new Toyota Tundra has newly adopted the service connector for towing. |

■ CARGO LAMPS

1. General

To facilitate the loading and unloading of cargo when it is dark, the new Toyota Tundra has cargo lamps enclosed in the high-mounted stop light. The cargo lamps control is effected by the integration relay which is built into the driver's side junction block.

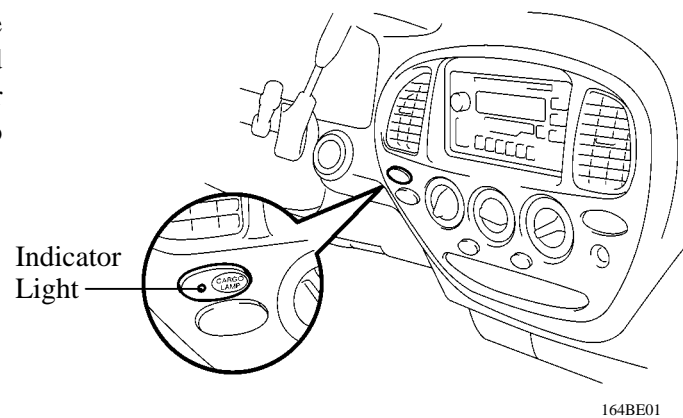
► System Diagram ◀



2. Construction and Operation

Cargo Lamp Switch

The cargo lamps switch is a momentary type switch. This switch turns on upon pressing and turn off upon pressing it again. The indicator light turns ON simultaneously with the cargo lamps.



System Operation

The cargo lamps operate under the conditions given in the table below.

► Cargo Lamps Operating Conditions ◀

| Vehicle Speed Signal | Ignition Switch Position | Door | | Cargo Lamp Switch | |
|----------------------|--------------------------|------------------|-------------------------------------|-------------------|------------|
| | | Close*1 → Open*2 | Open*2 → Close*1 | ON*3 | OFF*3 |
| None | ACC or LOCK | Illuminate | Extinguish approx. 20 seconds later | Illuminate*4 | Extinguish |
| | ON | Illuminate | Extinguish | Illuminate | Extinguish |
| Yes*5 | ON | Extinguish | Extinguish | Extinguish | Extinguish |

*1: All doors are closed.

*2: Any door is open.

*3: The cargo lamp switch is pushed once.

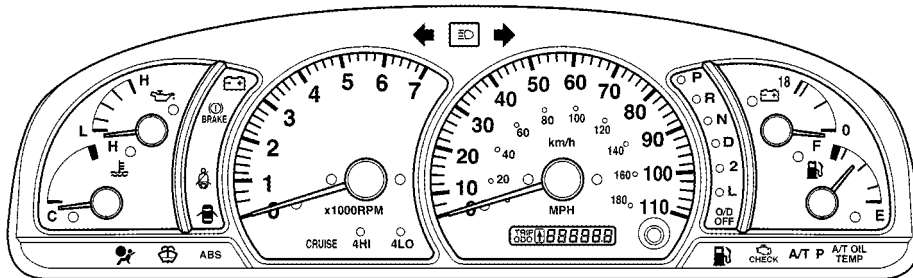
*4: Extinguish approx. one hour later

*5: Over 4 puls/second (3.5 mph)

METER

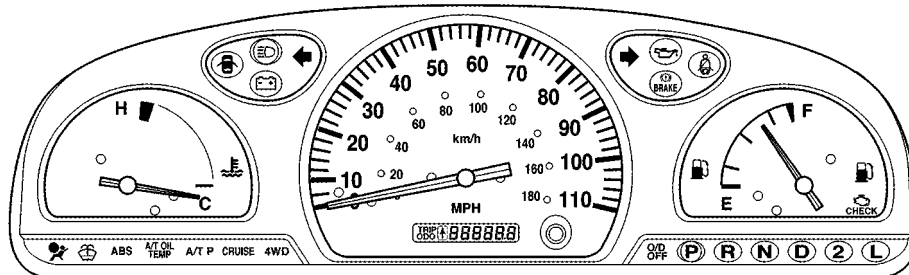
■ COMBINATION METER

- The speedometer of the new Toyota Tundra is the cableless and electrical analog type.
- An odometer and trip meter which used LCD (Liquid Crystal Display) have been adopted.



With Tachometer

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Without Tachometer

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BODY CONTROL SYSTEM

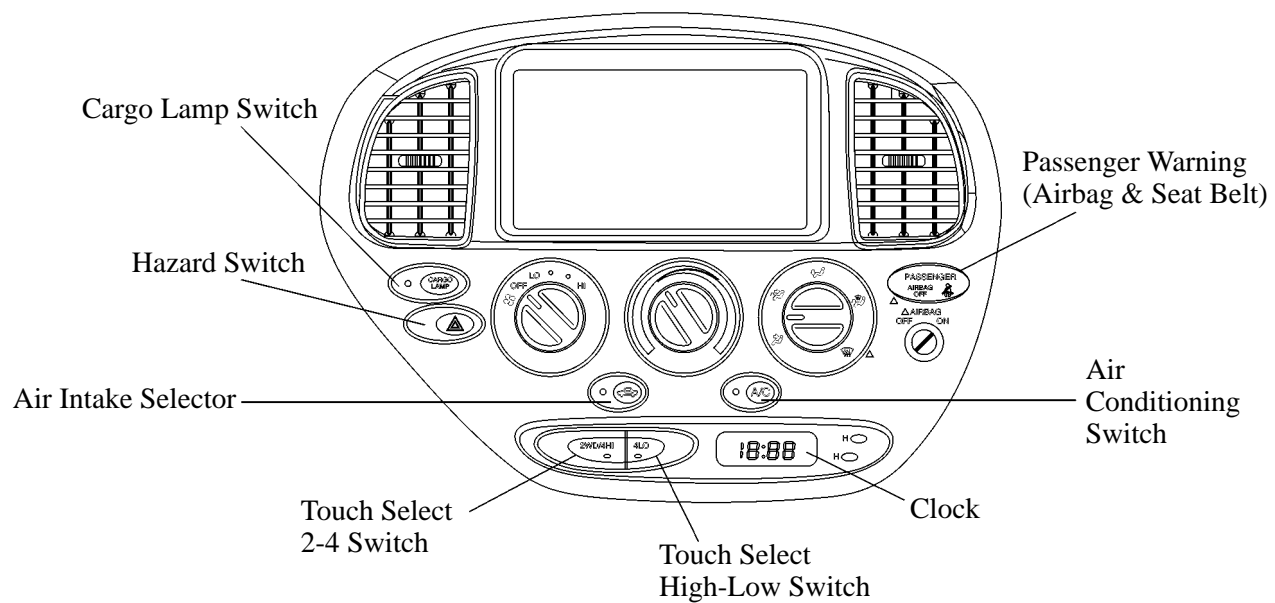
■ INTEGRATION RELAY

In the new Toyota Tundra, the integration relay and the driver's side junction block have been integrated. The integration relay performs the functions and controls the systems as indicated below.

- Door Lock Operation
- Power Window Key-Off Operation
- Horn Relay
- Tail light Relay
- Cargo Lamp Control
- Light Auto Turn Off System

■ INTEGRATION CONTROL AND PANEL

To improve its design, the new Toyota Tundra has adopted a center cluster integration system in which various types of control switches such as the cargo lamp switch, and hazard switch, as well as the constituent parts such as the clock and the air conditioning amplifier have been integrated.



AIR CONDITIONING

■ DESCRIPTION

1. General

The air conditioning system in the Toyota Tundra has the following features:

- The rotary switch type heater control panel is used on all models.
- A 3-flow level type heater unit which features lower air flow resistance is used on all models. In addition, a max. cool damper has been provided to reduce the ventilation resistance when the temperature selector is in the max. cool position and to increase the outlet air volume.
- An aluminum heater core has been adopted on all models.
- A drawn cup type evaporator which has a large passage area for refrigerant and high heat exchanging efficiency is used on all models.
- A multi-flow type condenser that provides excellent heat-exchanging efficiency is used.
- A warm-air jet duct which directs warm air to the rear seats has been provided at the foot duct for the front seats.
- The defroster nozzle inner wall is modified into a radial configuration for smoother air flow.
- In the defroster mode, the air conditioning compressor operates automatically to improve the defrost performance.
- A quick-joint type construction that joins the air conditioning tubes with clamps has been adopted.

► Performance ◀

| Model Item | | | New | Previous |
|--------------------|-------------------|-------------------|-------------|-------------|
| Heater | Heat Output | W(Kcal/h) | 5150 (4429) | 4850 (4171) |
| | Air Flow Volum | m ³ /h | 330 | 320 |
| | Power Consumption | W | 180 | 180 |
| Air Conditioner | Heat Output | W(Kcal/h) | 5400 (4644) | 4370 (3758) |
| | Air Flow Volume | m ³ /h | 480 | 400 |
| | Power Consumption | W | 220 | 210 |

► Specifications ◀

| Model Item | | | New | Previous |
|---------------------------|-------------|-----------------------------------|--|---|
| Ventilation and Heater | Heater Core | Type | Aluminum-Corrugate Fin | Copper-Corrugate Fin |
| | | Size W x H x L mm (in.) | 155.7 x 220 x 27 (6.1 x 8.7 x 1.1) | 140 x 220 x 32 (5.5 x 8.7 x 1.3) |
| | | Fin Pitch mm (in.) | 1.6 (0.06) | 2.0 (0.08) |
| | Blower | Motor Type | S70F14T | S70F12T |
| | | Fan Size Dia x H mm (in.) | 150 x 75 (5.9 x 3.0) | 140 x 65 (5.5 x 2.6) |
| | | | | |
| Air Conditioning | Condenser | Type | Multi Flow Type | Single Flow Type |
| | | Size W x H x L mm (in.) | 690 x 321 x 16 (27.2 x 12.6 x 0.6) | 686 x 296.4 x 22 (27.0 x 11.7 x 0.9) |
| | | Fin Pitch mm (in.) | 3.2 (0.13) | 3.4 (0.13) |
| | Evaporator | Type | Drawn Cup Type | Serpentine Type |
| | | Size W x H x L mm (in.) | 264 x 210 x 90 (10.4 x 8.3 x 3.5) | 240 x 196 x 85.3 (9.4 x 7.7 x 3.4) |
| | | Fin Pitch mm (in.) | 3.5 (0.14) | 3.4 (0.13) |
| | Compressor | Type | 10S17* ¹ 10PA15* ² | 10PA15 |

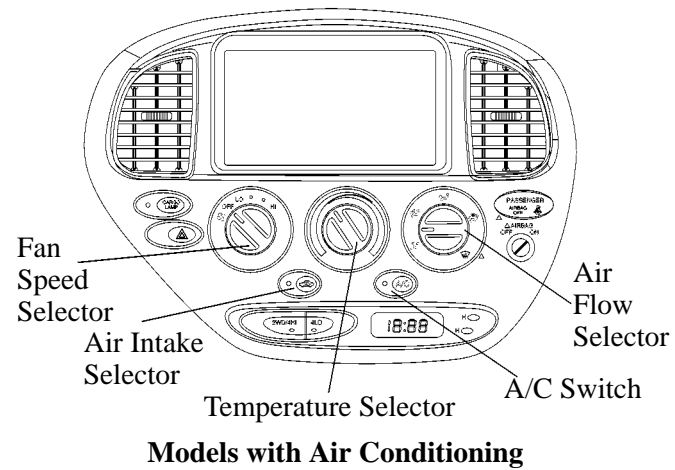
*1: 2UZ-FE Engine Model

*2: 5VZ-FE Engine Model

■ CONSTRUCTION AND OPERATION

1. Heater Control Panel

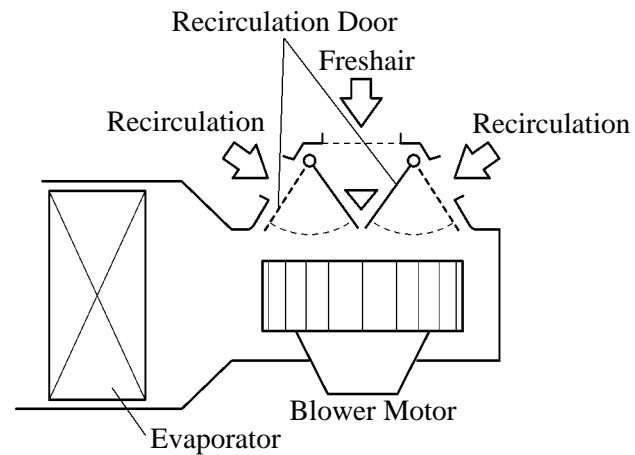
A rotary switch type heater control panel, which features superior ease of use, is provided on all models.



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2. Blower Unit

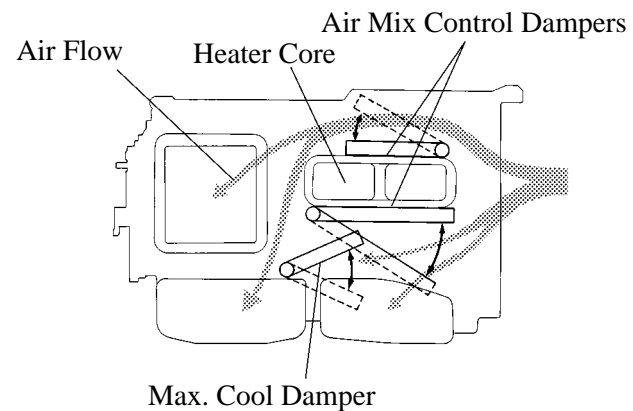
The recirculation door of the blower unit has been changed from the single-sheet door of the previous model to the double-sheet door. This enables the blower to draw in the recirculation air from both sides of the blower, thus decreasing the blower noise. The switching between recirculation and freshair is carried out by the motor.



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3. Heater Unit

- A 3-flow level, full air mix type heater unit has a pair of air mix control dampers. The heater core is located at the center of the heater unit to minimize ventilation resistance.
- The heater unit is equipped with a max. cool damper to reduce ventilation resistance.
- A lightweight aluminum heater core is used on all models.

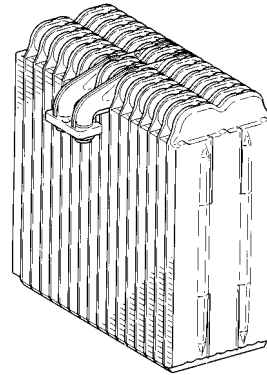


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4. Cooler Unit

Drawn Cup Type Evaporator

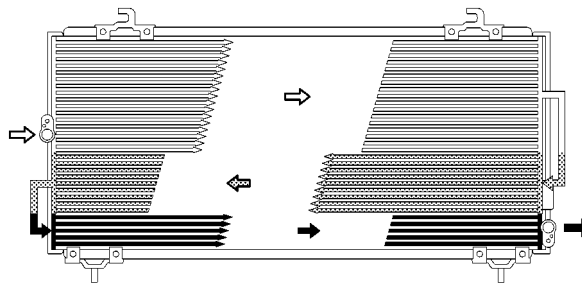
A drawn cup type evaporator is used in the cooler unit. This type of evaporator has superior heat exchange characteristics.



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5. Condenser

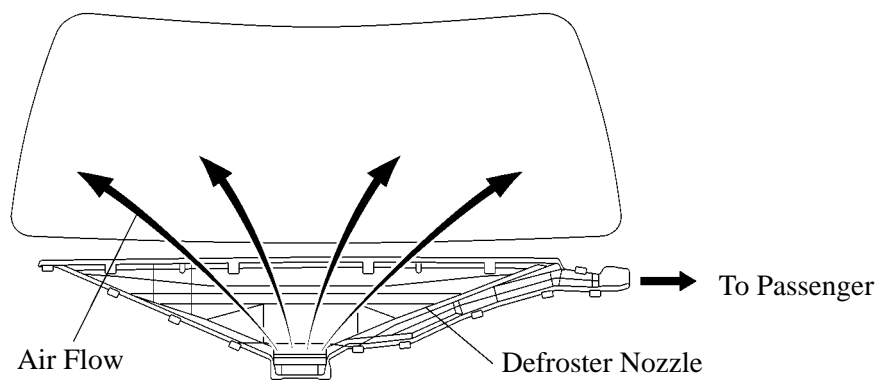
A multi-flow type condenser that provides a wider heat dissipation area and offers excellent heat-exchanging efficiency has been adopted.



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6. Defroster Nozzle

The inner wall of the front and passenger defroster nozzle has adopted a radial shape in order to provide a smoother air flow out of the vents. As a result, the noise level of the blower during the defroster mode has been reduced.



164BE06

7. Warm-Air Jet Duct

A warm-air jet duct is provided in the foot duct for the front seats. This duct directs warm air to the foot area of the rear seat to improve the heating comfort of the rear seat passengers.

ACCESSORIES

■ DESCRIPTION

The Toyota Tundra includes the accessory systems shown in the following table.

| System | Outline |
|--|---|
| Power Window System | <p>The power window system includes one-touch auto down and key-off operation functions. The one-touch auto down function automatically opens the driver's door window fully. The key-off operation function makes it possible to operate the power windows for approximately 43 seconds after the ignition key is turned to the ACC to LOCK position, if the front doors are not opened.</p> <p>The basic construction and operation of this system are the same as in the '99 Sienna.</p> |
| Door Lock Control System | <p>This system has a "key-linked lock and unlock" and "lock and unlock controlled by door lock switch" function. All doors can be locked and unlocked simultaneously by operation of the driver's door key and door lock switch.</p> |
| Power Seat (Only for driver leather seat) | <p>A power seat is newly provided to adjust the seat position (fore-and-aft sliding, front and rear vertical heights and reclining) by a simple switch operation.</p> |
| SRS Airbag | <p>The SRS (Supplement Restraint System) airbag is provided for the driver and front passenger. The SRS airbag has been designed to lessen the shock to the head and chest of the driver and front passenger in the event of a frontal impact collision as a supplement to the seat belt.</p> <p>A 3-sensor type airbag system is used in which the detection of deceleration during a collision as well as control of the airbag system is accomplished by the airbag sensor assembly and front airbag sensor.</p> <p>The basic construction and operation are the same as in the '99 Land Cruiser. However, On Toyota Tundra, ON-OFF system has been provided to enable the SRS airbag for the front passenger to be used or not to be used in accordance with the vehicle's use conditions. For details, see page next page.</p> |
| Cruise Control System | <p>Once it has been set at desired vehicle speed, this system automatically adjusts the engine throttle position to maintain the vehicle speed at the desired speed without operating the acceleration pedal.</p> <p>On the 2UZ-FE engine model, in conjunction with the adoption of the ETCS-i in the engine, a cruise control system that uses the throttle control motor, which is a part of the ETCS-i, has been adopted. Also, the cruise control ECU has been integrated with the ECM. The basic construction and operation of this system are the same as in the '99 Land Cruiser.</p> <p>On the 5VZ-FE engine model, the basic construction and operation of this system are the same as in the previous model.</p> |
| Key Reminder System | <p>When the driver's door is opened with the ignition key in the ACC or LOCK position, this system sounds a buzzer to warn the driver that the ignition key has not been removed.</p> |
| Seat Belt Warning System | <p>If the driver or the front passenger has not buckled the respective seat belt when the ignition switch is turned ON, the seat belt warning system flashes the warning light inform the driver and the front passenger that their seat belts have not been buckled and the buzzer sounds only when the driver has not been buckled. The basic construction and operation of this system are the same as in the '99 Land Cruiser.</p> |

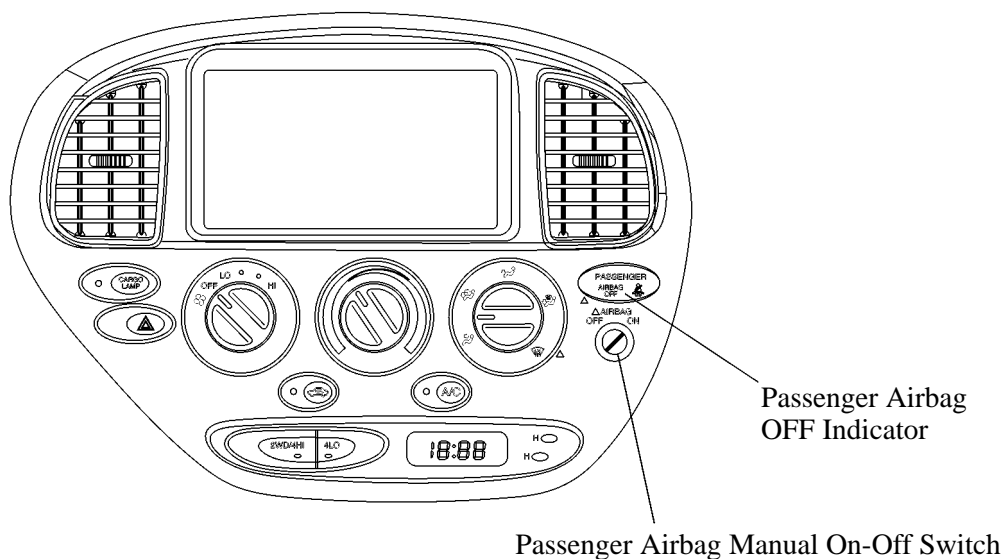
■ SRS AIRBAG

1. General

A ON-OFF system has been newly adopted to disable the deployment of the SRS airbag for the front passenger in case that a child seat is installed on the front passenger seat.

2. ON-OFF System

When the passenger airbag manual on-off switch provided in the center cluster panel is turned from ON to OFF by using the ignition key, the on-off system separates the circuits of the inflator for the front passenger SRS airbag and the airbag sensor assembly. This prevents the airbag from deploying. At this time, the passenger airbag OFF indicator light located above the passenger airbag manual on-off switch illuminates informing the driver and passenger that the front passenger SRS is inactive.



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