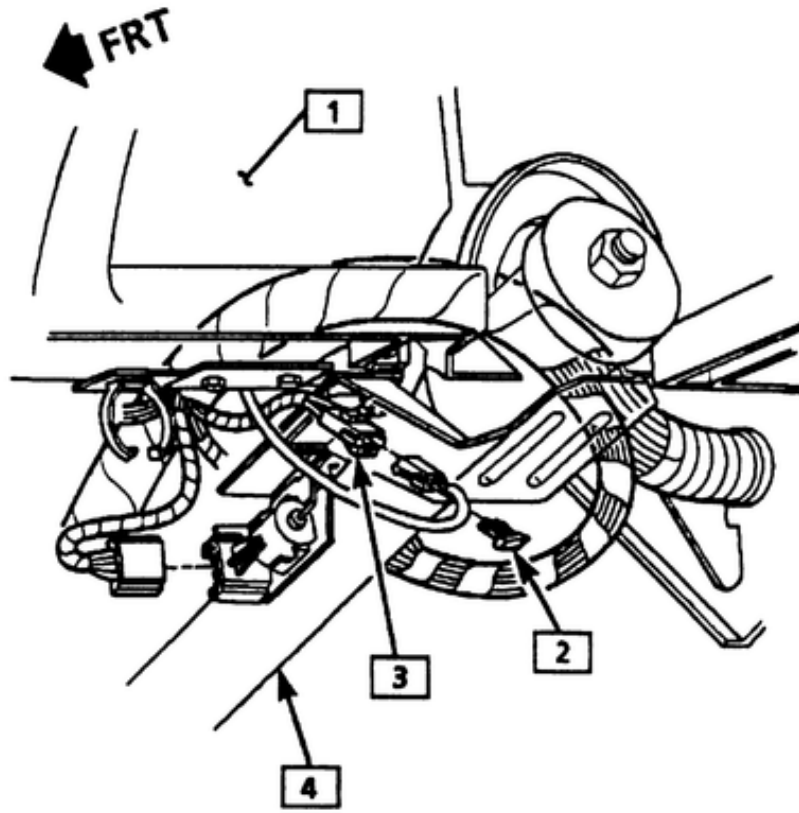
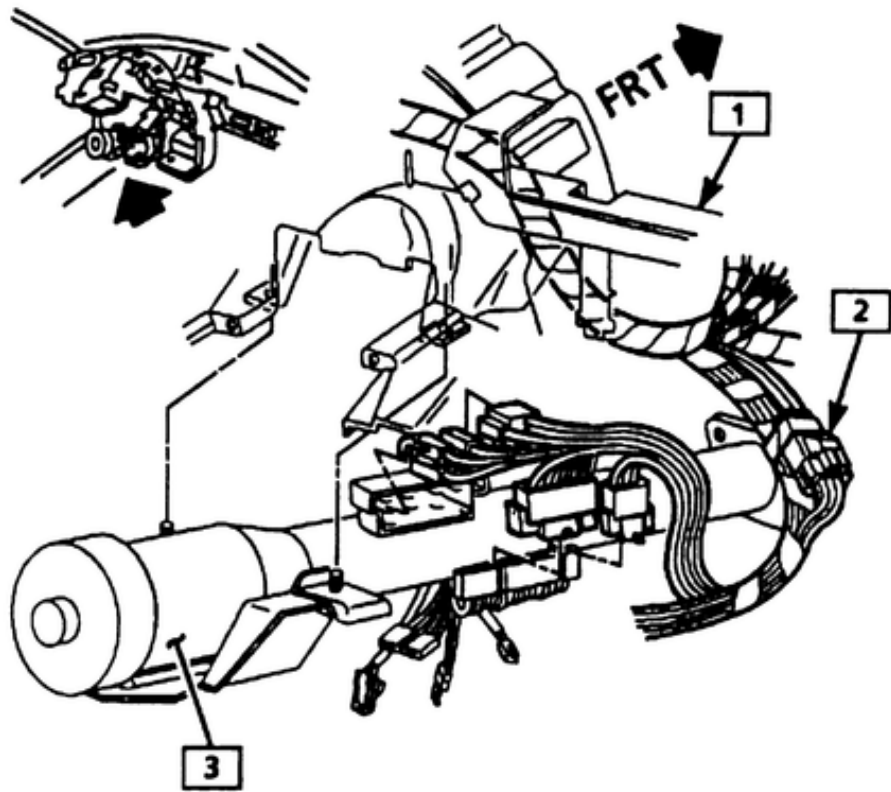




-
- 1** INSTRUMENT PANEL
 - 2** CPA
 - 3** YELLOW SIR CONNECTOR
 - 4** STEERING COLUMN



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- 1** INSTRUMENT PANEL
 - 2** YELLOW SIR CONNECTOR
 - 3** STEERING COLUMN

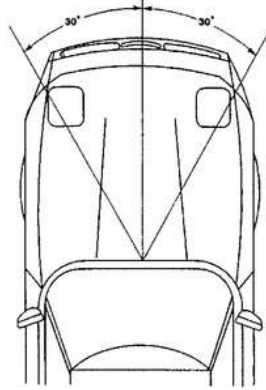
1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

All 1990–96 vehicles are equipped with an airbag system. Vehicles through 1993 were equipped with a driver's side airbag only, but a passenger side airbag became standard in 1994. The Supplemental Inflatable Restraint (SIR) system helps supplement the protection offered by the seat belts by deploying an air bag from the center of the steering wheel and from the top of the right side of the instrument panel. The air bag deploys when the vehicle is involved in a frontal crash of sufficient force up to 30 degrees off the centerline of the vehicle. To further absorb the crash energy, there is a knee bolster located beneath the instrument panel and the steering column is collapsible.

Fig. 1: SIR system deployment window



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

[1990 Vehicles](#)

1. Turn the ignition switch to the **LOCK** position.
2. Disconnect and remove the load tool.
3. Attach the yellow 2-way SIR connector at the base of the steering column, then install the Connector Position Assurance (CPA).
4. If removed, install the left side lower trim panel.
5. Turn the ignition switch to the **RUN** position, and make sure the "INFL REST" indicator comes on for about 5 seconds, and then goes out and stays out for the next minute and a half. If it does not operate as described, have the system repaired by a qualified technician.

[1991–96 Vehicles](#)

1. Turn the ignition switch to the **LOCK** position.
2. Engage the yellow 2-way connector and the CPA device at the base of the steering column. On 1994–96 vehicles, make sure to attach both yellow connectors, then install the CPA device.
3. Install the left side lower trim panel, then install the SIR fuse to the fuse block.
4. Insert the key, then turn the ignition switch to the **RUN** position.
5. Make sure that the SIR dash "AIR BAG" indicator light flashes 7 times and then turns OFF. If it does not operate as described, have the system repaired by a qualified technician.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

1990 Vehicles

1. Turn the steering wheel so that the vehicle's wheels are pointing straight ahead.
2. Turn the ignition key to the **LOCK** position and remove the key.
3. Remove the left side lower trim panel, remove the Connector Position Assurance (CPA) device then unplug the yellow 2-way SIR harness wire connector at the base of the steering column.
4. Install a suitable load tool, such as Load Tool J 37808, or equivalent by connecting the "Base of Column" lead of the tool to the DERM-to-SIR coil connector.

1991–96 Vehicles

NOTE: With the fuse removed and the ignition switch **ON**, the air bag warning lamp will be on. This is normal and does not indicate a SIR system malfunction.

1. Turn the steering wheel so that the vehicle's wheels are pointing straight ahead.
2. Turn the ignition key to the **LOCK** position and remove the key.
3. Remove the AIR BAG fuse from the fuse block.
4. Remove the left side lower trim panel, then unplug the Connector Position Assurance (CPA) device and the yellow 2-way SIR harness wire connector at the base of the steering column. On 1994–96 vehicles, which are equipped with dual air bags, there are 2 yellow SIR connectors to unplug.

Fig. 1: Location of the driver's side yellow 2-way SIR connector

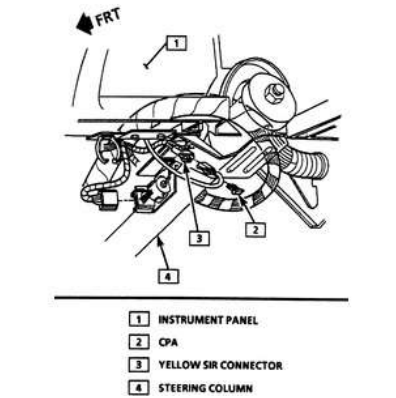
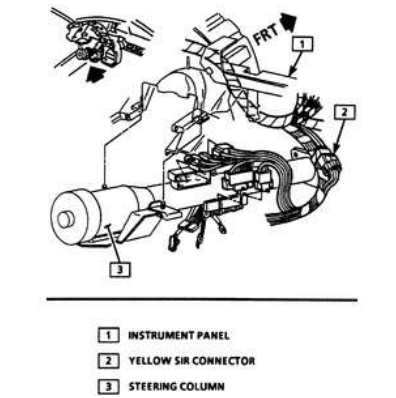


Fig. 2: Location of the passenger yellow 2-way SIR connector



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The DERM can maintain sufficient voltage to cause a deployment for up to 10 minutes after the ignition switch is turned OFF or the battery is disconnected. **Always disable the system when performing service procedures ON OR NEAR the system and it's components.**

CAUTION
The disarming and arming procedures must be followed in the order listed to temporarily disable the SIR system. Failure to do so could result in possible air bag deployment, personal injury or otherwise unneeded SIR system repairs.

1990 Chevrolet CORVETTE

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Fuel Delivery: FI | Fuel: GAS

Diagnostic Energy Reserve Module (DERM)

The DERM is designed to perform the following functions in the SIR system:

- Energy Reserve — Maintains a 36 volt energy reserve(s) to provide deployment energy when the vehicle voltage is low or lost in a frontal impact
- Malfunction Detection — Performs diagnostic monitoring of the SIR system electrical components
- Malfunction Recording — Provides diagnostic trouble code information
- Frontal Crash Recording — Records the SIR system status during a frontal crash

Warning Lamp

The "INFL REST" or "AIR BAG" warning lamp is used to do the following:

- Verify lamp and DERM operation by flashing seven to nine times when the ignition key is first turned ON
- Warn the driver of SIR electrical system faults which could potentially affect the operation of the SIR system
- Provide diagnostic information by flashing the fault codes when the diagnostic mode is enabled

Arming Sensor

The arming sensor is a protective switch located in the power feed side of the deployment loop. It is calibrated to close at low level velocity changes (lower than the discriminating sensors). This assures that the inflator module is connected directly to the volt output of the DERM or battery voltage feed when either of the discriminating sensors close.

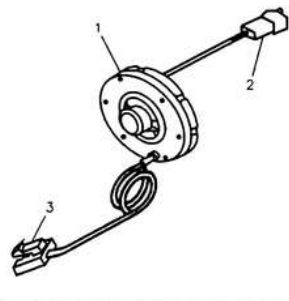
Discriminating Sensors

The discriminating sensors are wired in parallel on the ground side of the deployment loop. These sensors are calibrated to close with velocity changes which are severe enough to warrant deployment.

SIR Coil Assembly

The SIR coil assembly consists of two current carrying coils. They are attached to the steering column and allow rotation of the steering wheel while maintaining continuous contact of the deployment loop to the inflator module.

Fig. 1: The SIR coil attaches to the inflator module and steering column



- 1 SIR COIL ASSEMBLY
- 2 INFLATOR MODULE CONNECTOR
- 3 STEERING COLUMN CONNECTOR

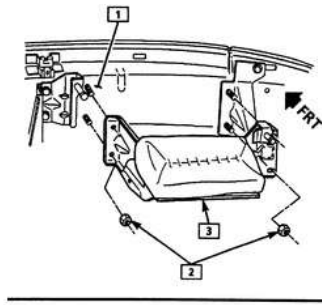
Passenger Inflator Module Jumper

The passenger inflator module jumper consists of two current carrying wires attached to the passenger inflator module pigtail and also to the SIR wiring harness behind the instrument panel compartment door assembly.

Inflator Modules

Each inflator module consists of an inflatable bag and an inflator (a canister of gas-generating material with an initiating device). When the vehicle is in a frontal crash of sufficient force, current flows through the deployment loops. Current flowing through the initiator ignites the material in the inflator module. The gas produced from this reaction rapidly inflates the air bag.

Fig. 2: Passenger inflator module mounting—a passenger side airbag is found on 1994–96 vehicles



- 1 DASH PANEL ASSEMBLY
- 2 FASTENER
- 3 PASSENGER INFLATOR MODULE

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

The main portions of the SIR system are the deployment loops and the Diagnostic Energy Reserve Module (DERM). The main function of the deployment loops is to supply current through the inflator module(s), which will cause deployment of the air bag(s) in the event of a frontal crash of sufficient force. The arming sensor, SIR coil assembly (driver side only), passenger inflator module jumper (passenger side only), inflator module(s), passenger compartment discriminating sensor and forward discriminating sensor make up the deployment loops.

The DERM has two functions. One to supply the deployment loops with a 36 volt reserve to ensure sufficient energy is available to deploy the airbag(s) if the battery voltage feed to the arming sensor is lost during a frontal crash. Another function is SIR electrical system diagnostics.

The arming sensor switches power to the inflator module(s) on the high side (power side) of the deployment loops. Either of the discriminating sensors can supply ground to the inflator module(s) on the low side (ground side) of the loop. The inflator module(s) are only supplied sufficient current to deploy when the arming sensor and at least one of the two discriminating sensors are closed simultaneously.