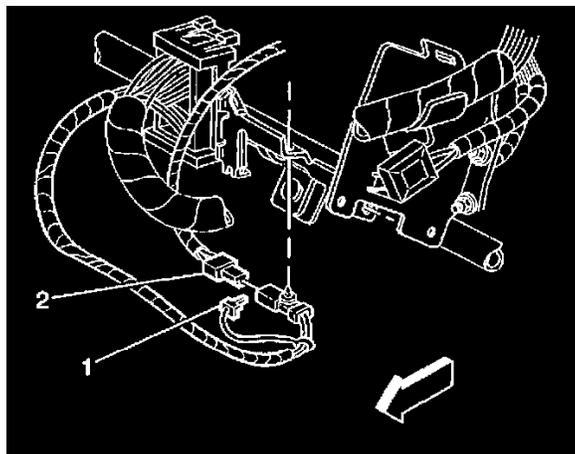


## Air Bag(s) Arming and Disarming: Service and Repair Disabling

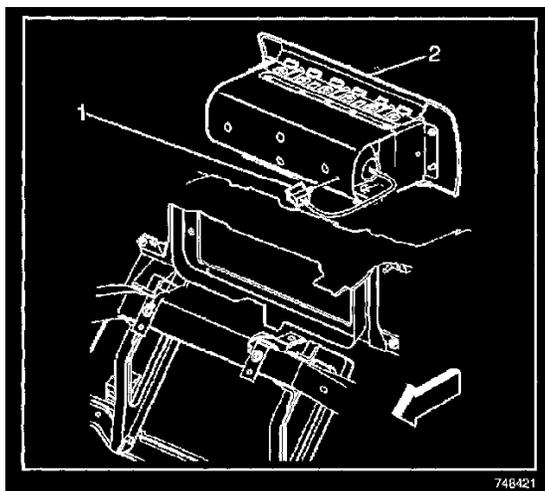
**IMPORTANT:** Refer to SIR Service Precautions before disabling the SIR system.



1. Turn the steering wheel until the vehicle's wheels are pointing straight ahead.
2. Turn OFF the ignition.
3. Remove the key from the ignition.

**IMPORTANT:** With the AIR BAG Fuse removed and the ignition ON, the AIR BAG indicator illuminates. This is normal operation and does not indicate an SIR system malfunction.

4. Remove the AIR BAG Fuse from the fuse block.
5. Remove the connector position assurance (CPA) (1) from the steering wheel module yellow 2-way connector (2) located at the base of the steering column.
6. Disconnect the steering wheel module yellow 2-way connector (2) located at the base of the steering column.



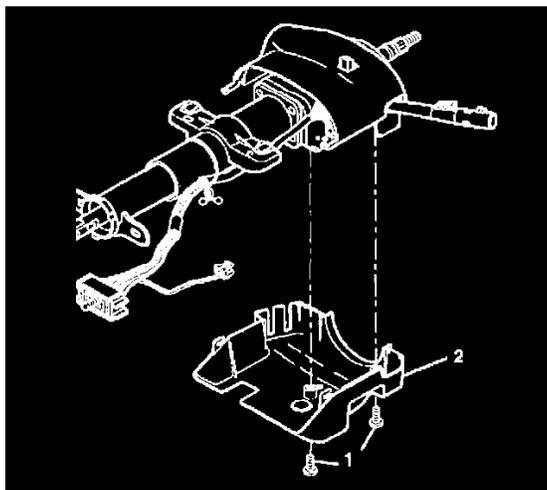
7. Access the IP module yellow 2-way connector (1) located behind the IP module (2) by removing the upper IP trim panel. Refer to Trim Pad Replacement - IP Upper in Instrument Panel, Gauges and Warning Indicators.
8. Remove the CPA from the IP module yellow 2-way connector (1) located behind the IP module (2).
9. Disconnect the IP module yellow 2-way connector (1) located behind the IP module (2).

## Steering Column: Service and Repair

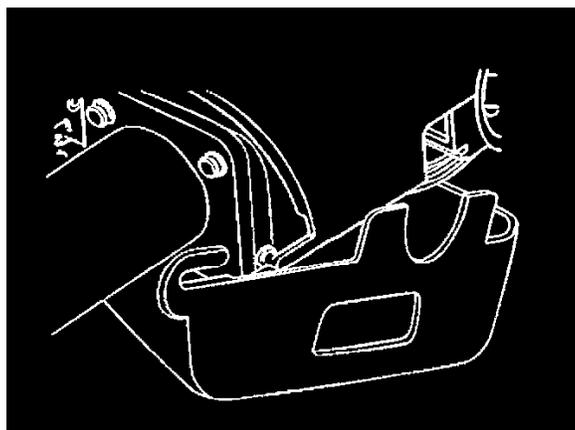
### Steering Column Trim Covers

#### Removal Procedure

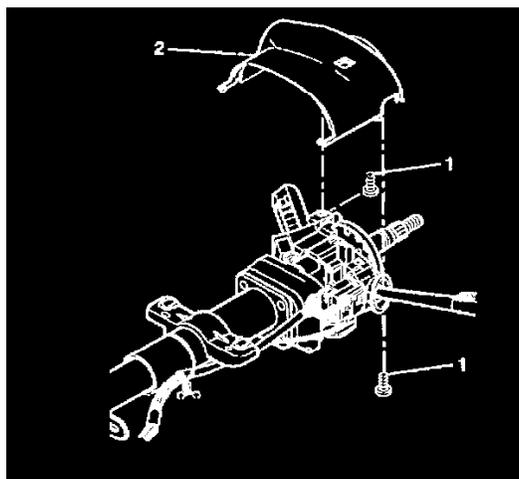
**Caution:** Refer to SIR Caution in Service Precautions.



1. Disable the SIR system. Refer to Disabling the SIR System in Restraint Systems.
2. Remove the steering wheel. Refer to Steering Wheel Replacement.
3. Remove the screws (1) that retain the lower steering column trim cover to the steering column.
4. Slide the shift lever seal up the shift lever.

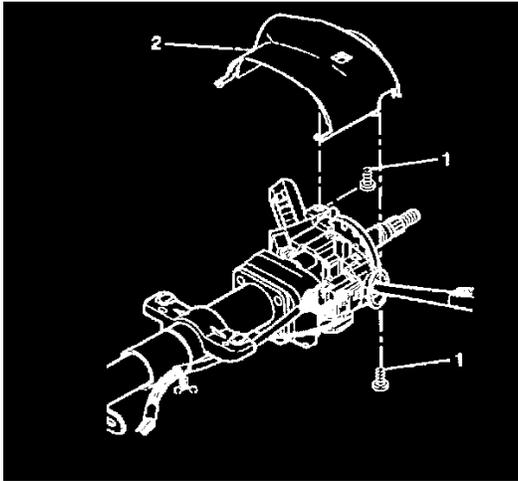


5. Remove the lower steering column trim cover.
6. Tilt the trim cover down and slide it back in order to disengage the locking tabs.



7. Remove the screws (1) that retain the upper steering column trim cover to the steering column.
8. Remove the upper steering column trim cover.

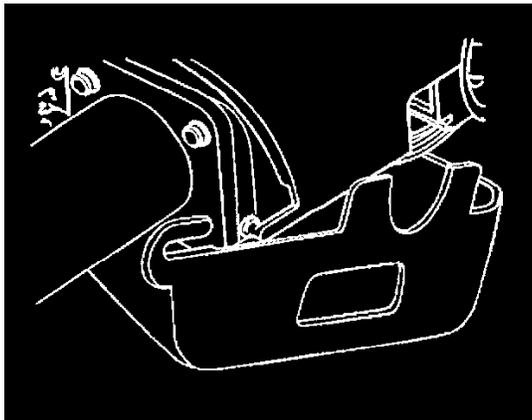
### Installation Procedure



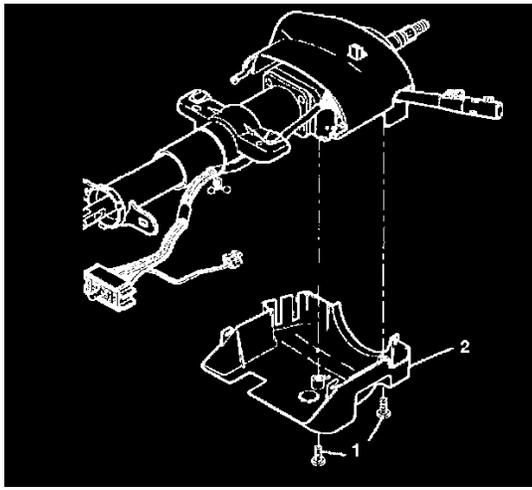
1. Install the upper steering column trim cover (2).

**Notice:** Refer to Fastener Notice in Service Precautions.

2. Install the screws that retain the upper steering column trim cover to the steering column.
  - Tighten the upper steering column trim cover retaining screws to **1.5 Nm (13 inch lbs.)**.



3. Install the lower steering column trim cover.
4. Match the tabs slots onto the lower shroud with the locking tabs on the upper shroud.
5. Tilt the lower shroud up.
6. Align the shift lever seal into the shrouds.
7. Slide the lower shroud forward until the locking tabs snap into the tab slots.



8. Install the screws (1) that retain the lower steering column trim cover to the steering column.
  - Tighten the lower steering column trim cover retaining screws to **3.5 Nm (31 inch lbs.)**.
9. Install the steering wheel. Refer to Steering Wheel Replacement.
10. Enable the SIR system. Refer to Enabling the SIR System in Restraint Systems.

## Steering Column: Service and Repair

### Ignition Lock Cylinder

This article updated with TSB 02-02-35-001.

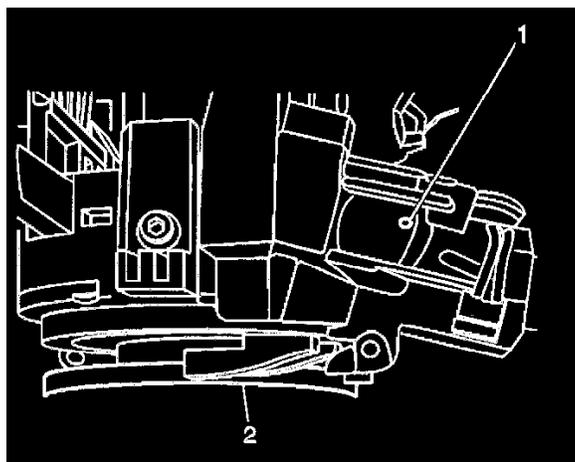
#### IGNITION LOCK CYLINDER REPLACEMENT - ON VEHICLE

##### REMOVAL PROCEDURE

**Caution:** Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the negative battery cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components.

**For Vehicles equipped with OnStar (UE1) with Back Up Battery:**

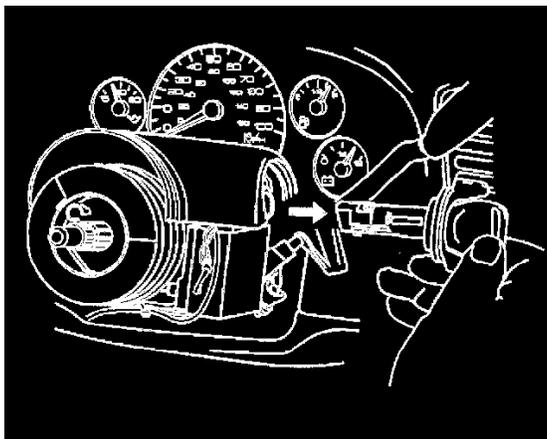
The Back Up Battery is a redundant power supply to allow limited OnStar functionality in the event of a main vehicle battery power disruption to the VCIM (OnStar module). Do not disconnect the main vehicle battery or remove the OnStar fuse with the ignition key in any position other than OFF. Retained accessory power (RAP) should be allowed to time out or be disabled (simply opening the driver door should disable RAP) before disconnecting power. Disconnecting power to the OnStar module in any way while the ignition is On or with RAP activated may cause activation of the OnStar Back-Up Battery (BUB) system and will discharge and permanently damage the back-up battery. Once the Back-Up Battery is activated it will stay on until it has completely discharged. The BUB is not rechargeable and once activated the BUB must be replaced.



1. Disconnect the battery negative cable.

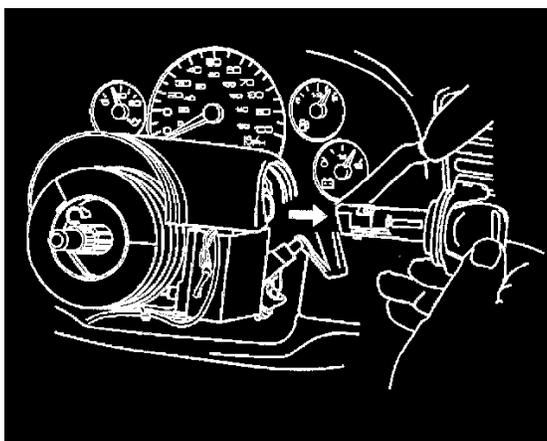
**Caution:** When you are performing service on or near the SIR components or the SIR wiring, you must disable the SIR system. Refer to Disabling the SIR System. Failure to follow the correct procedure could cause air bag deployment, personal injury, or unnecessary SIR system repairs.

2. Disable the Supplemental Inflatable Restraint (SIR) system. See: Air Bag(s) Arming and Disarming/Service and Repair/Disabling
3. Remove the steering column trim covers. See: Steering Column Trim Covers
4. Turn the ignition lock cylinder to the START position.
5. Using an awl, insert the tip into the ignition lock cylinder access hole (1).
6. Push down and hold the ignition lock cylinder retaining pin.



7. Release the ignition lock cylinder to the RUN position.
8. Remove the ignition lock cylinder by pulling the ignition lock cylinder away from the steering column.

### Installation Procedure



1. Install the ignition lock cylinder into the steering column using the following procedure:
  - 1.1. Align the positioning locking tab slot on the lock module assembly to the positioning tab on the ignition lock cylinder.
  - 1.2. Push the lock cylinder in until the locking tab locks in the lock module assembly.
2. Install the steering column trim covers.
3. Connect the negative battery cable.
4. Enable the SIR system. See: Air Bag(s) Arming and Disarming/Service and Repair/Enabling
5. Perform the Passlock learn procedure. See: Testing and Inspection/Programming and Relearning/Theft Deterrent - Programming Components

## Vehicle: Programming and Relearning Theft Deterrent - Programming Components

### PROGRAMMING REPLACEMENT PASSLOCK SENSOR, BCM, OR PCM

#### IMPORTANT:

- ^ The Body Control Module (**BCM**) must be programmed with the proper PRO configurations before performing learn procedures. See BCM Programming/RPO Configuration.
- ^ If replacing the BCM with a GM Service Parts Operations (**SPO**) replacement part, the module will learn Passlock sensor data code immediately. The existing PCM however, must learn the new fuel continue password when the BCM is replaced.
- ^ If replacing a PCM with a GM Service Parts Operations (SPO) replacement part, after programming, these modules will learn the incoming fuel continue password immediately upon receipt of a password message. Once a password message is received, and a password is learned, a learn procedure must be performed to change this password again. A PCM which has been previously installed in another vehicle will have learned the other vehicle's fuel continue password and will require a learn procedure after programming to learn the current vehicle's password.

#### CONDITIONS

Use this procedure after replacing:

- ^ Passlock Sensor
- ^ BCM
- ^ PCM

#### LEARN PROCEDURES

There are two available methods to perform the programming procedure:

- ^ A **10 minutes** procedure which requires a Tech 2 and a techline terminal.
- ^ A **30 minutes** procedure which does not require the use of any tools.

#### 10 MINUTE LEARN PROCEDURE

##### TOOLS REQUIRED

- ^ Tech 2
- ^ Techline terminal with current Service Programming System (**SPS**) software

1. Connect the Tech 2 to the vehicle.
2. Select "Request Information" under "Service Programming".
3. Disconnect the Tech 2 from the vehicle and connect it to a techline terminal.
4. On the techline terminal, select "Theft Module Re-Learn" under "Service Programming".
5. Disconnect the Tech 2 from the techline terminal and connect it to the vehicle.
6. Turn ON the ignition, with the engine OFF.
7. Select "VTD Re-Learn" under "Service Programming".
8. Attempt to start the engine, then release the key to ON (vehicle will not start).
9. Observe the SECURITY telltale, after approximately **10 minutes** the telltale will turn OFF (the vehicle is now ready to relearn the Passlock Sensor Data Code and/or password on the next ignition switch transition from OFF to CRANK).
10. Turn OFF the ignition, and wait **5 seconds**.
11. Start the engine (the vehicle has now learned the password).
12. With the Tech 2 (scan tool), clear any DTCs.

#### 30 MINUTE LEARN PROCEDURE

1. Turn ON the ignition, with the engine OFF.
2. Attempt to start the engine, then release the key to ON (vehicle will not start).
3. Observe the SECURITY telltale, after approximately **10 minutes** the telltale will turn OFF.
4. Turn OFF the ignition, and wait **5 seconds**.
5. Repeat steps 1 through 4 two more times for a total of **3 cycles/30 minutes** (the vehicle is now ready to relearn the Passlock Sensor Data Code and/or passwords on the next ignition switch transition from OFF to CRANK).

**IMPORTANT:** The vehicle learns the Passlock Sensor Data Code and/or password on the next ignition switch transition from OFF to CRANK. You must turn the ignition OFF before attempting to start the vehicle.

6. Start the engine. The vehicle has now learned the Passlock Sensor Data Code and/or password.
7. With a scan tool, clear any DTCs if needed. History DTCs will self clear after 100 ignition cycles.