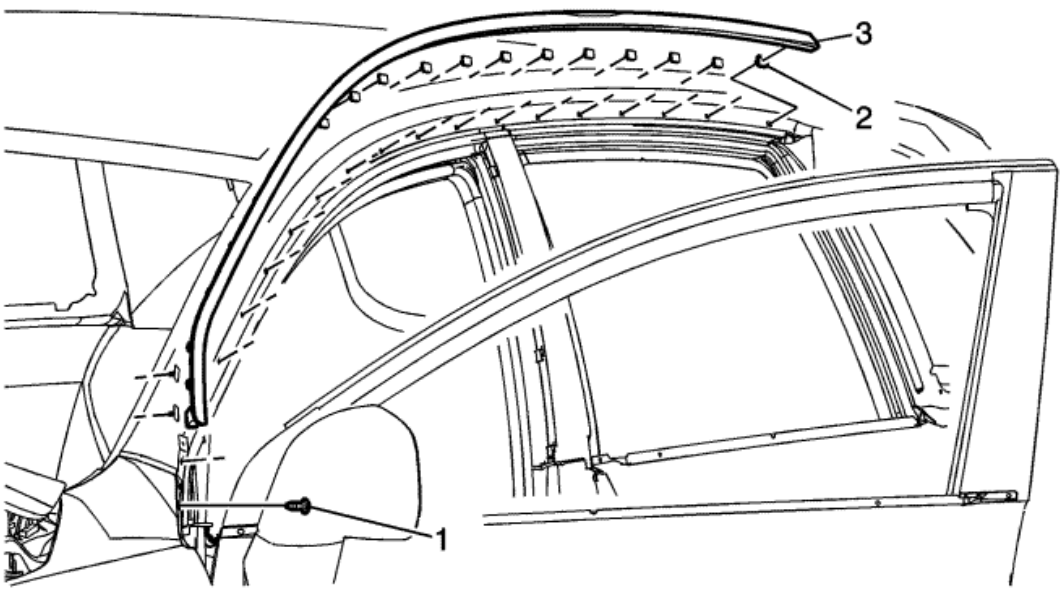
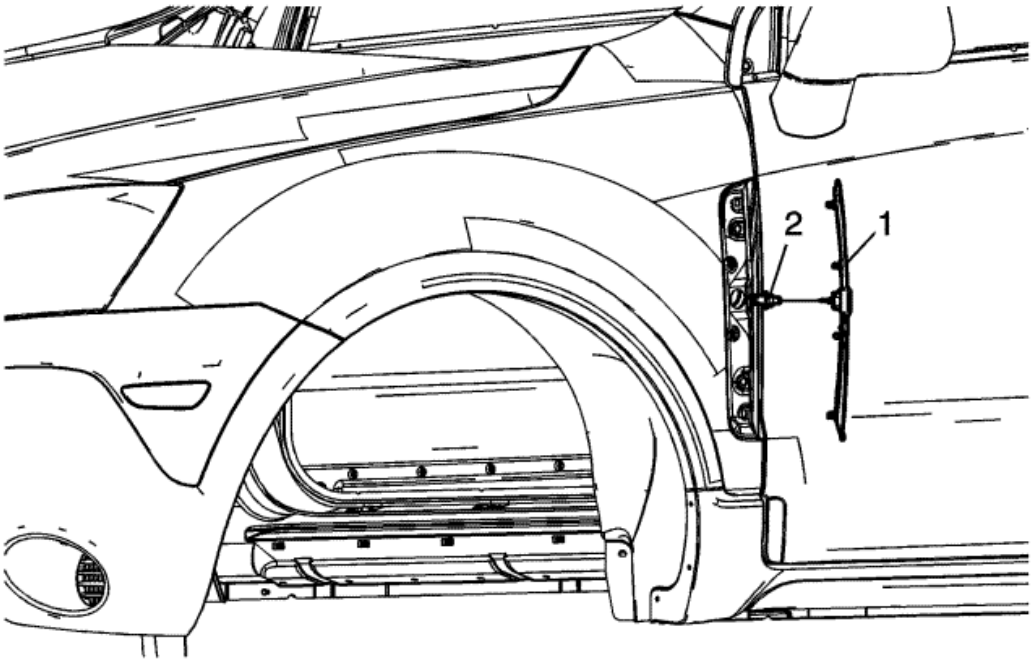
Front and Rear Side Door Opening Frame Reveal Moulding Replacement



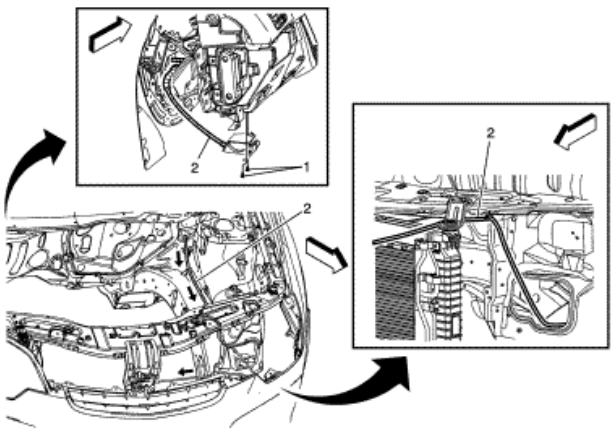
Callout	Component Name
Preliminary Procedures 1. Open the front door on the side the front and rear side door opening frame reveal moulding assembly is being removed from. 2. Remove the front and rear side door opening frame reveal moulding lower screw. 3. Working from front to rear, release the integral retainers securing the reveal moulding to the body.	
1	Front and Rear Side Door Opening Frame Reveal Moulding Screw **Caution:** Refer to Fastener Caution in the Preface section. **Tighten** 1.5 N·m (13 lb in)
2	Front and Rear Side Door Opening Frame Reveal Moulding Retainer (Qty: 19) **Tip** Inspect and replace any plastic retainers nuts that are damaged.
3	Front and Rear Side Door Opening Frame Reveal Moulding Assembly **Procedure** 1. Upon assembly of the front and rear side door opening frame reveal moulding to the body, insert the locating boss at the rear edge of the moulding to the front top side of the body, near the rear quarterlight. 2. Align the retainers from the rear edge working towards the front. 3. Apply palm pressure from the rear retainer to the front retainer up to the front wing screw location. 4. Install the screw.

Front Wing Centre Moulding Replacement - Short Body



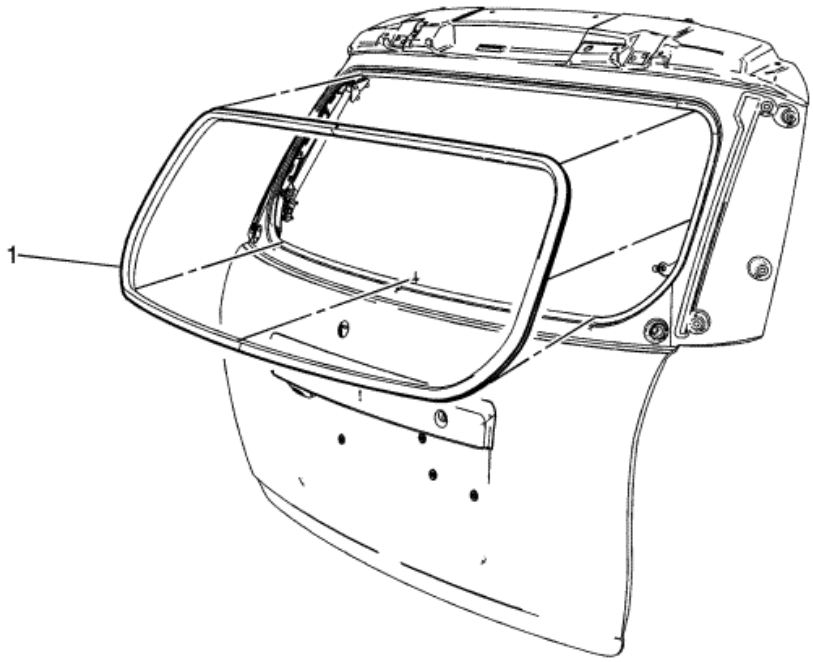
Callout	Component Name
1	Front Wing Centre Moulding Assembly **Procedure** 1. Open the door on the side the front wing moulding is being serviced from. 2. Working from inside the hinge pillar area, insert a small 8 mm socket on a ratchet over the plastic retainer clips to release the pressure. 3. Begin releasing the retainers at the bottom of the moulding and work towards the top. 4. When the first lower retainer clip is released, insert a small plastic flat-bladed tool between the exterior body panel and the moulding assembly to prevent the retainer from re-engaging back into the wing panel hole. 5. Disconnect the electrical harness connector from the lamp housing. 6. Connect the electrical harness lamp socket to the lamp housing. 7. Position the moulding retainers to the wing holes. 8. Using the palm portion of the hand, secure the retainers to the wing holes. 9. An light audible click will be heard when each retainer is secure to the wing panel.
2	Front Side Indicator Lamp Assembly **Tip** Disconnect the electrical connector prior to removing the centre moulding assembly from the wing.

Bonnet Primary Catch Release Cable Replacement



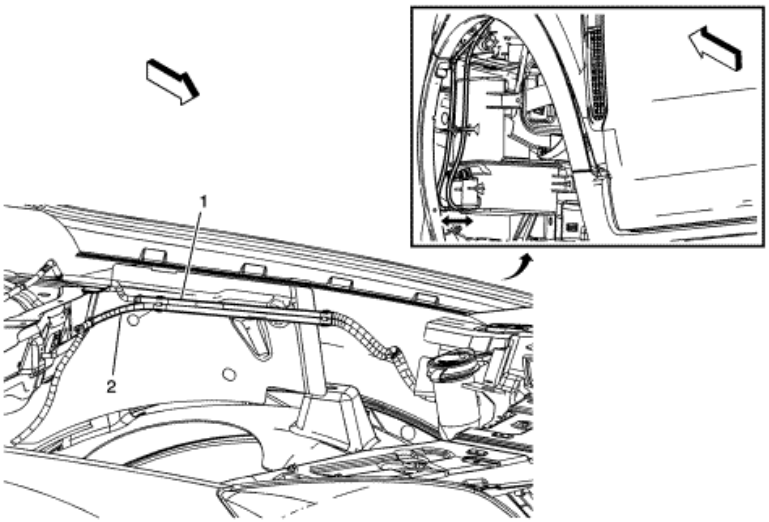
Callout	Component Name
Preliminary Procedures 1. Remove the headlamps. Refer to Headlamp Replacement . 2. Remove the hood release handle. Refer to Bonnet Primary Catch Release Cable Handle Replacement . 3. Remove the radiator opening upper cover. Refer to Radiator Opening Upper Cover Replacement .	
1	Bonnet Latch Release Cable Bolt (Qty: 2) **Caution :** Refer to Fastener Caution in the Preface section. **Tighten** 9 N·m (80 lb in)
2	Bonnet Latch Release Cable **Procedure** 1. Disconnect the bonnet release cable from the bonnet latch by squeezing the bonnet release cable retainer. 2. Attach mechanic's wire to the existing cable to ease installation of the new cable. 3. Release the cable from the latch assembly and pull through the dash panel.

Tailgate Window Weatherstrip Replacement



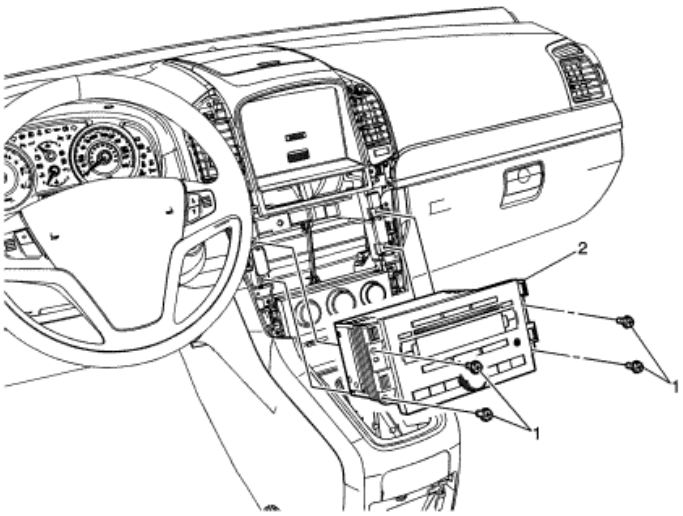
Callout	Component Name
Preliminary Procedure Remove the liftgate window. Refer to Liftgate Window Replacement .	
1	Liftgate Weatherstrip **Procedure** 1. Clean the area where the seal will be mounted. Use a suitable solvent with a mixture of 50 percent isopropyl alcohol and 50 percent water by volume, or high-flash naptha. 2. Install the tailgate window weatherstrip starting at the top centre of the tailgate window opening. Position the tailgate window weatherstrip to the pinch-weld flange and working down the right and left sides towards the bottom centre, being careful not to stretch the tailgate window weatherstrip while installing. 3. Install the butt joint seam at the centre of the bottom pinch-weld flange. 4. Use a rubber mallet to ensure full engagement of the tailgate window weatherstrip to the pinch-weld flange. 5. Spooning of the tailgate window weatherstrip is required to complete the installation of the tailgate window weatherstrip.

Windscreen Washer Solvent Container Hose Replacement - Short Body



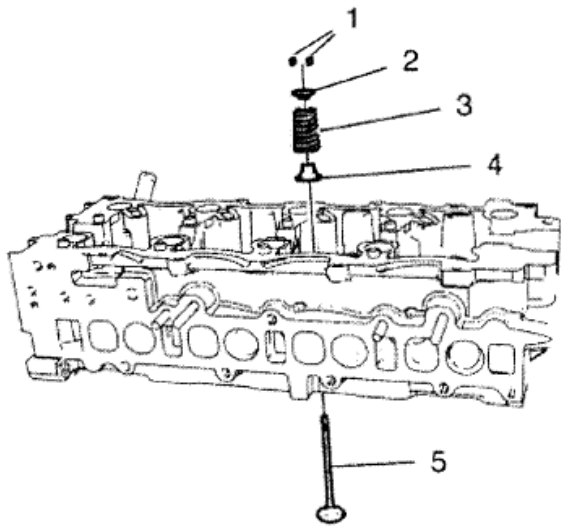
Callout	Component Name
Preliminary Procedure 1. Remove the front left side wheelhouse liner. Refer to Front Wheelhouse Liner Replacement . 2. Drain the windscreen washer solvent into a clean suitable container. 3. Disconnect both front and rear windscreen washer solvent container hoses from the washer pump spouts. 4. Disengage both hoses from the windscreen washer container brackets.	
1	Windscreen Washer Solvent Container Hose Front **Procedure** 1. Disengage the forward portion of the hoses from the clips securing the hoses to the front wheelhouse panel upper outer LH rail. 2. Disconnect the front washer pump hose from the windscreen washer nozzle hose assembly. **Tip** Use clean windscreen washer solvent at the connections when securing the washer hoses to the appropriate connections.
2	Windscreen Washer Solvent Container Hose Rear **Procedure** 1. Disengage the rearward portion of the hoses from the clips securing the hoses to the front wheelhouse upper outer rear LH side rail reinforcement. 2. Disconnect the rear washer pump hose from the rear window washer nozzle hose assembly. **Tip** Use clean windscreen washer solvent at the connections when securing the washer hoses to the appropriate connections.

Radio Replacement - Long Body



Callout	Component Name
Preliminary Procedure Remove the front floor console accessory trim plate. Refer to Front Floor Console Accessory Trim Plate Replacement .	
1	Radio Screw (Qty: 4) **Caution:** Refer to Fastener Caution in the Preface section. **Tighten** 2.5 N·m (22 lb in)
2	Radio Assembly **Procedure** 1. Disconnect the electrical connector. 2. Disconnect the antenna cable. 3. Reprogramme the radio after replacement. Refer to Control Module References .

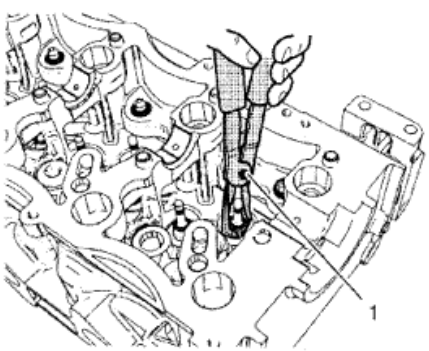
Cylinder Head Assemble



Note:

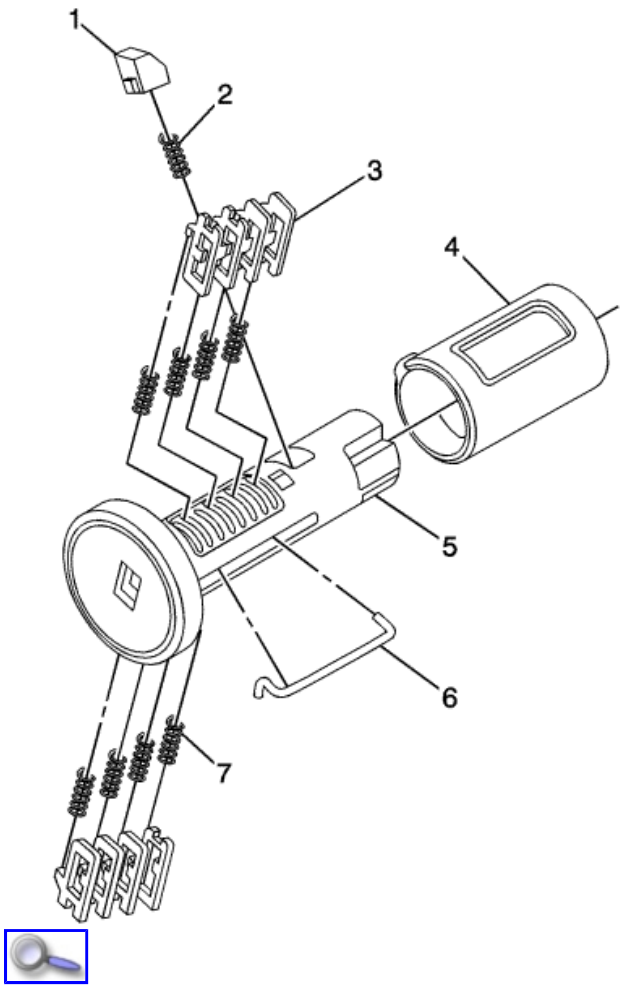
- If the valves have been used in a running engine, you must clean the valve seats before reassembly.
- Coat the valve shafts with NEW engine oil.
- Take extreme care to prevent damage to the valve guides.

1. Install the valves (5).



2. Install NEW valve stem oil seals using the *EN-46116* installer (1).

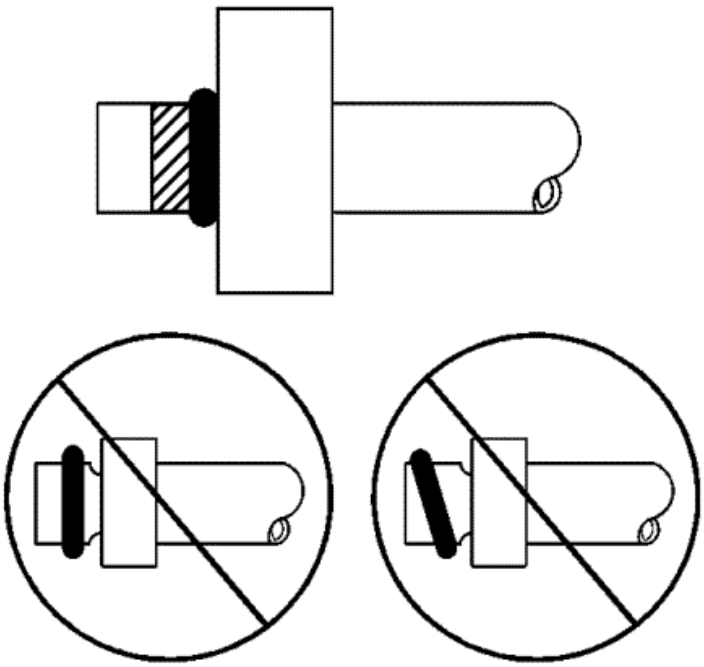
Lock Cylinder Coding — Ignition



The ignition lock cylinder uses 8 key cut positions, 1-8. The ignition cylinder tumblers (3) are located on alternate sides of the cylinder (5). They are not snap-in and are not self-retaining. It follows the key code with the first tumbler being the first depth of the key code, closest to the head of the key.

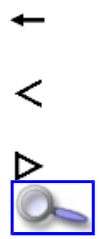
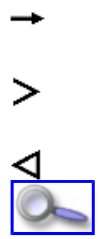
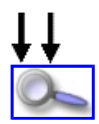
> **Note:** All lock cylinders for side milled keys have right and left tumblers. The location of the tooth of the tumbler determines whether it is right of left. Illustrations in this procedure show the right tumblers on the top and the left tumblers on the bottom. All tumblers are marked 1R, 1L, 2R, or 2L. The number being cut depth and the letter meaning right or left.

1. Hold the ignition cylinder assembly (5) so the side with the tumbler spring pocket located closest to the head of the cylinder is facing up.
2. Insert the tumbler spring (7) into each of the 4 spring pockets of the cylinder assembly. This side of the cylinder used left tumblers.
3. The first tumbler (3) to be loaded will be the first key cut position, which is the first number in the key code. Install the tumbler in the slot over the spring. Install the remaining right tumblers following the key code and same process, pressing the tumblers in place until they are secure.
4. Rotate the cylinder assembly. Insert the tumbler spring into each of the spring pockets of the cylinder assembly. This side of the cylinder used right tumblers.
5. The first tumbler (3) to be loaded will be the second key cut position, the second number in the key code. Install the first tumbler in the slot over the spring. Install the remaining left tumblers following the key code and same process, pressing the tumblers in place until they are secure.
6. Inspect for correct loading of the tumblers by inserting the key into the cylinder. All tumblers should drop flush with the



6. The O-ring seal must be fully seated.
7. Assemble the A/C components.

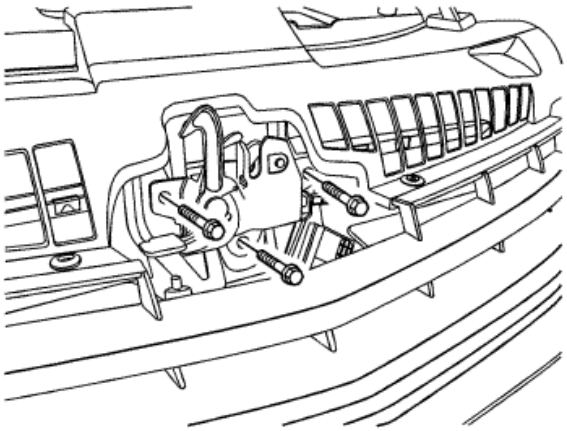
   Refer to the appropriate repair procedure.

	Generic Up Arrows
	Generic Down Arrows
	Generic Left Arrows
	Generic Right Arrows
	Generic Express Down Arrows
	On/Off Icon
	Generic Lock Icon

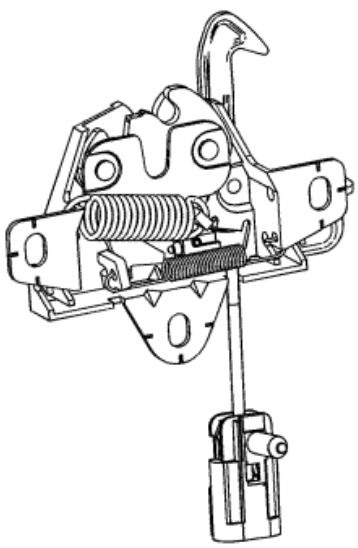
Bonnet Ajar Indicator Switch Replacement - C105/Short Body

Removal Procedure

Warning: Refer to Battery Disconnect Warning in the Preface section.



1. Disconnect the negative battery cable.
2. Remove the bolts and the bonnet latch.



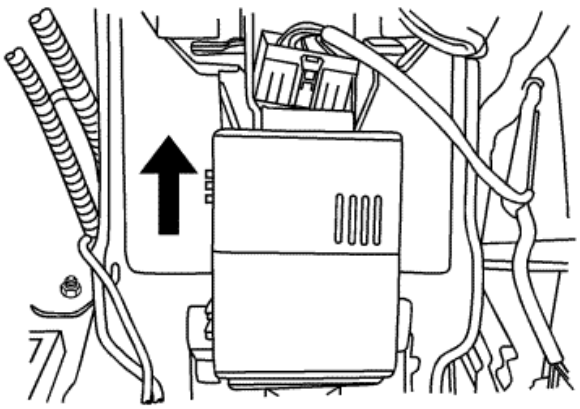
3. Disconnect the electrical connector from the bonnet safety switch.
4. Remove the bonnet safety switch from the bonnet latch.

Installation Procedure

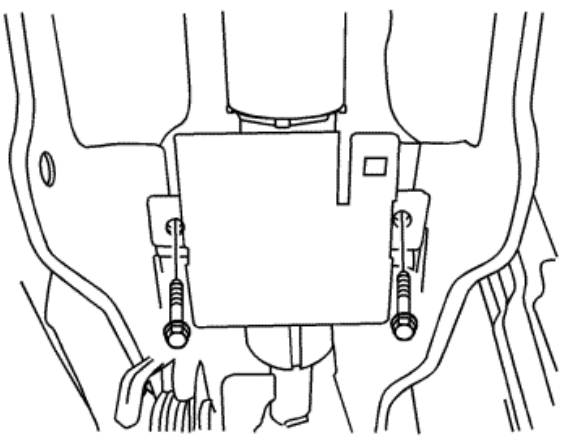
Power Steering Control Module Replacement

Removal Procedure

1. Disconnect negative battery cable. Refer to Battery Negative Cable Disconnection and Connection .
2. Remove the driver knee bolster. Refer to Driver Knee Bolster Replacement .
3. Disconnect the connector from the power steering control module.



4. Remove the power steering control module from the bracket by sliding the control module upward.



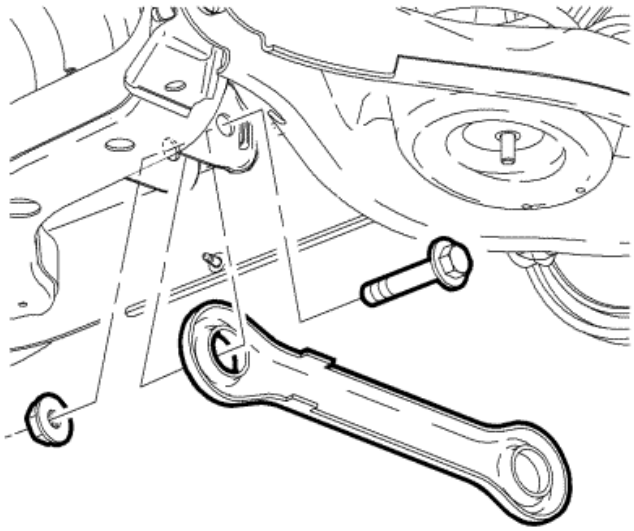
5. Remove the bracket and the bolts.

Installation Procedure

Caution: Refer to Fastener Caution in the Preface section.

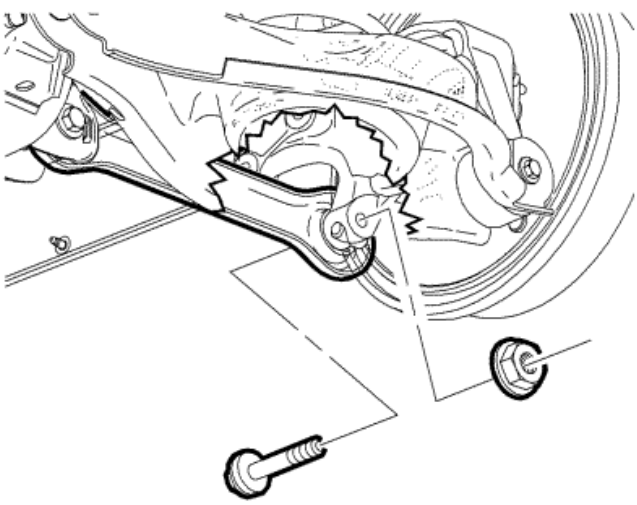
3. Remove the toe link to support nut and bolt.
4. Remove the toe link from the vehicle.

Installation Procedure



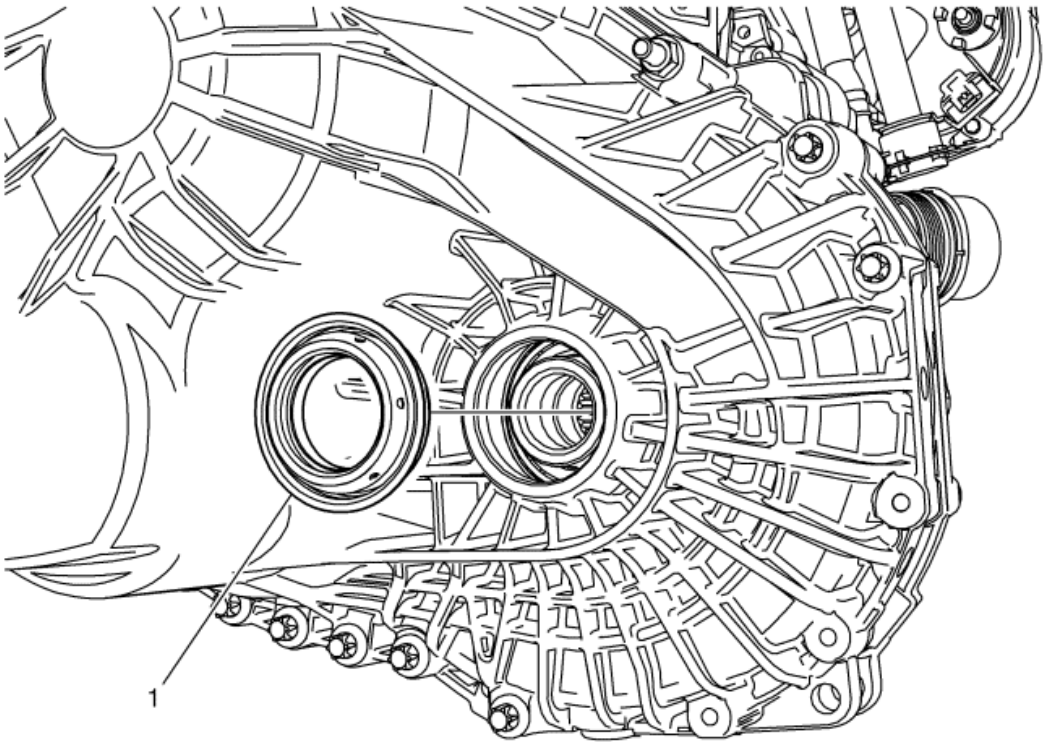
1. Install the toe link to the support assembly.
2. Install the toe link to support nut and bolt.

   Caution: Refer to Fastener Caution in the Preface section.



3. Install the toe link to the knuckle and tighten to **160 N·m (118 lb ft)** .

Front Wheel Drive Shaft Seal Replacement - Left Side



Callout	Component Name
Preliminary Procedures 1. Raise and suitably support the vehicle. Refer to Lifting and Jacking the Vehicle . 2. Remove the engine shield. Refer to Engine Shield Replacement . 3. Remove the left front wheel drive shaft. Refer to Front Wheel Drive Shaft Replacement .	
1	Left Front Wheel Drive Shaft Seal **Procedure** 1. Remove the drive shaft oil seal with *DT-23129* universal seal remover and *DT-7004* slide hammer . 2. Coat the NEW drive shaft oil seal with transmission fluid. 3. Install the drive shaft oil seal using the *DT-519* seal installer and hammer . **Note:** Do not reuse the wheel drive shaft oil seal. **Special Tools** • *DT-519* Seal Installer . • *DT-23129* Universal Seal Remover . • *DT-7004* Slide Hammer . For equivalent regional tools, refer to Special Tools .

			during acceleration.
Reduced Engine Power	-	Inactive	The scan tool displays Active or Inactive. The scan tool displays Active when the ECM receives a signal from the TAC module that a throttle actuator control system fault is occurring. The ECM limits the engine power.
Reduced Engine Power History	-	Throttle Malfunction/Cooling Fan Malfunction/Engine Over-temperature Protection Active	This parameter Displays the last reason that Powertrain has illuminated the Reduced Engine Power (REP) indication.
Remaining Fuel in Tank	-	%	This parameter displays the total fuel level as a percentage of the rated capacity of the fuel tank.
Remaining Fuel in Tank	-	Litres	This parameter displays the actual total fuel volume contained in the fuel tank.
Short Term Fuel Trim	-	-10 to +10 %	The Short Term FT values change rapidly in response to the HO2S signal voltages. These changes fine tune the engine fueling. The Long Term FT values change in response to the trends in the Short Term FT. The Long Term FT makes coarse adjustments to the fueling in order to re-center and restore control to the Short Term FT. The Short Term FT and the Long Term FT can be monitored with a scan tool. A positive fuel trim value indicates that the ECM is adding fuel in order to compensate for a lean condition. A negative fuel trim value indicates that the ECM is reducing the amount of fuel in order to compensate for a rich condition.
Short Term Fuel Trim Test Average	-	0.98-1.00 %	This parameter is calculated by the control module based on an intrusive test by the control module. The Short Term FT Test Average used for the short term correction of the fuel delivery. The scan tool will display a high value for a large amount of short term fuel correction, and 0 % for no short term fuel trim correction. The scan tool will display a negative value when fuel system is running too rich and fuel is being removed from the combustion event. The scan tool will display a positive value if the fuel system is running lean and fuel is being added to the combustion event.
Spark	-	18-24 Degrees	The scan tool displays a range of -64 to +64°. The scan tool displays the amount of degrees the ECM commands. The ECM computes the desired spark advance using the following: (1) ECT, (2) engine speed (RPM), (3) load, (4) vehicle speed. The ECM adjusts the timing. A negative (-) value indicates degrees before top dead center (BTDC) or spark advance; a positive value indicates degrees after top dead center (ATDC) or spark retard.
Starter Relay Command	- Ignition switch in the crank position	OFF ON	The scan tool displays ON or OFF. This displays the commanded state of the starter relay by the ECM.
Starter Relay Control Circuit High Voltage Test Status	-	OK	This parameter displays the status of the output driver for the starter relay control circuit. The scan tool will display OK if the circuit is operating correctly or Not Run if a diagnosis has not been made. The scan tool will display Fault if there is a