

2006 Pontiac G6 GT

2006 ENGINE Engine Mechanical - 2.4L - G6

2006 ENGINE**Engine Mechanical - 2.4L - G6****SPECIFICATIONS****FASTENER TIGHTENING SPECIFICATIONS****Fastener Tightening Specifications**

Application	Specification	
	Metric	English
A/C Compressor to Block Bolt	20 N.m	15 lb ft
Balance Shaft Adjustable Chain Guide Bolt	10 N.m	89 lb in
Balance Shaft Bearing Carrier to Block Bolt	10 N.m	89 lb in
Balance Shaft Fixed Chain Guide Bolt	10 N.m	89 lb in
Balance Shaft Sprocket Bolt	50 N.m	37 lb ft
Block Core Plug	40 N.m	30 lb ft
Block Heater Bolt	10 N.m	89 lb in
Cam Cover to Cylinder Head Bolt	10 N.m	89 lb in
Cam Cover to Ground Cable Bolt	10 N.m	89 lb in
Cam Cover to Ground Cable Stud	10 N.m	89 lb in
Camshaft Cap Bolt	10 N.m	89 lb in
Camshaft Position Actuator Solenoid Valve Bolt	10 N.m	89 lb in
Camshaft Position Sensor Bolt	10 N.m	89 lb in
Camshaft Timing Chain Tensioner	75 N.m	55 lb ft
Chain Guide Plug	90 N.m	59 lb ft
Connecting Rod Bolt		
• First Pass	25 N.m	18 lb ft
• Final Pass	100 degrees	
Crankshaft Bearings - Lower Crankcase to Block - Bedplate		
• First Pass	20 N.m	15 lb ft
• Final Pass	70 degrees	
Crankshaft Position Sensor Bolt	10 N.m	89 lb in
Crankshaft Balancer Bolt		
• First Pass	100 N.m	74 lb ft
• Final Pass	125 degrees	
Cylinder Head Bolt		
• First Pass	30 N.m	22 lb ft

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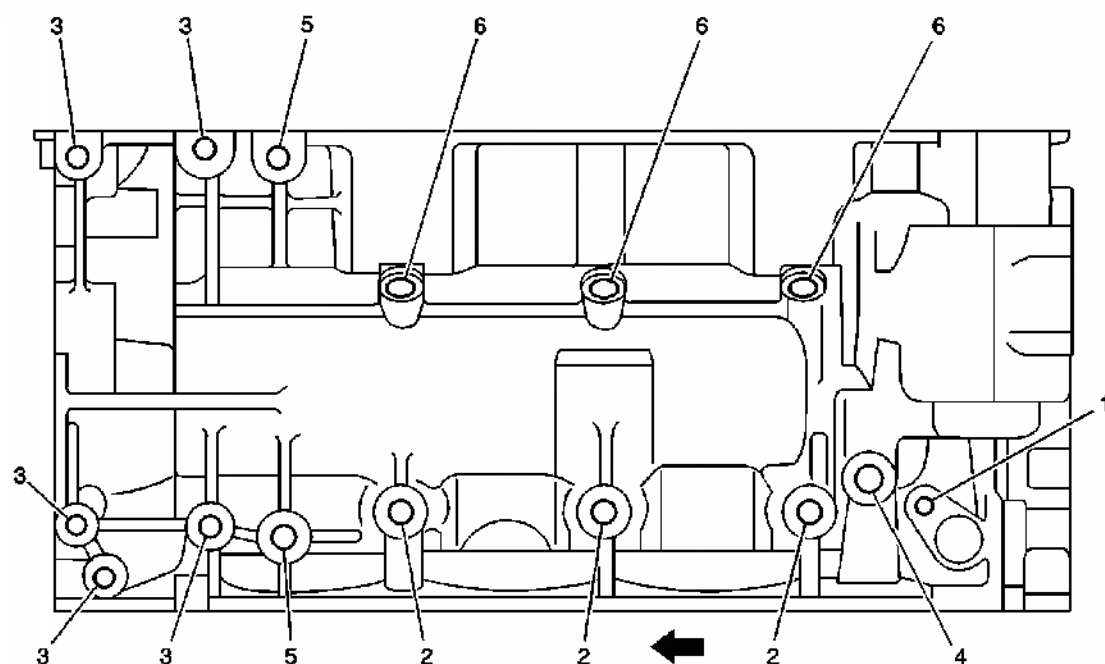


Fig. 5: Identifying Bolt Size & Locations On Engine Block - Right Side
Courtesy of GENERAL MOTORS CORP.

Engine Block - Right Side View

Service Call Out	Thread Size	Insert	Drill	Counterbore Tool	Tap	Driver	Drill Depth (Maximum)		Tap Depth (Maximum)	
J 42385-850							MM	(IN)	MM	(IN)
1	M6 x 1	205	201	202	203	204	20.5	0.807	16.5	0.65
2	M8 x 1.25	210	206	207	208	209	23.5	0.925	18	0.71
3	M8 x 1.25	210	206	207	208	209	30.5	1.201	22.5	0.89
4	M12 x 1.75	865	856	857	858	859	15.5	0.61	12.5	0.49
5	M12 x 1.75	855	856	857	858	859	33.5	1.319	26.5	1.04
6	M12 x 1.75	865	856	857	858	859	19.5	0.778	12.5	0.49

Engine Block - Top View

the insert to the base material threads.

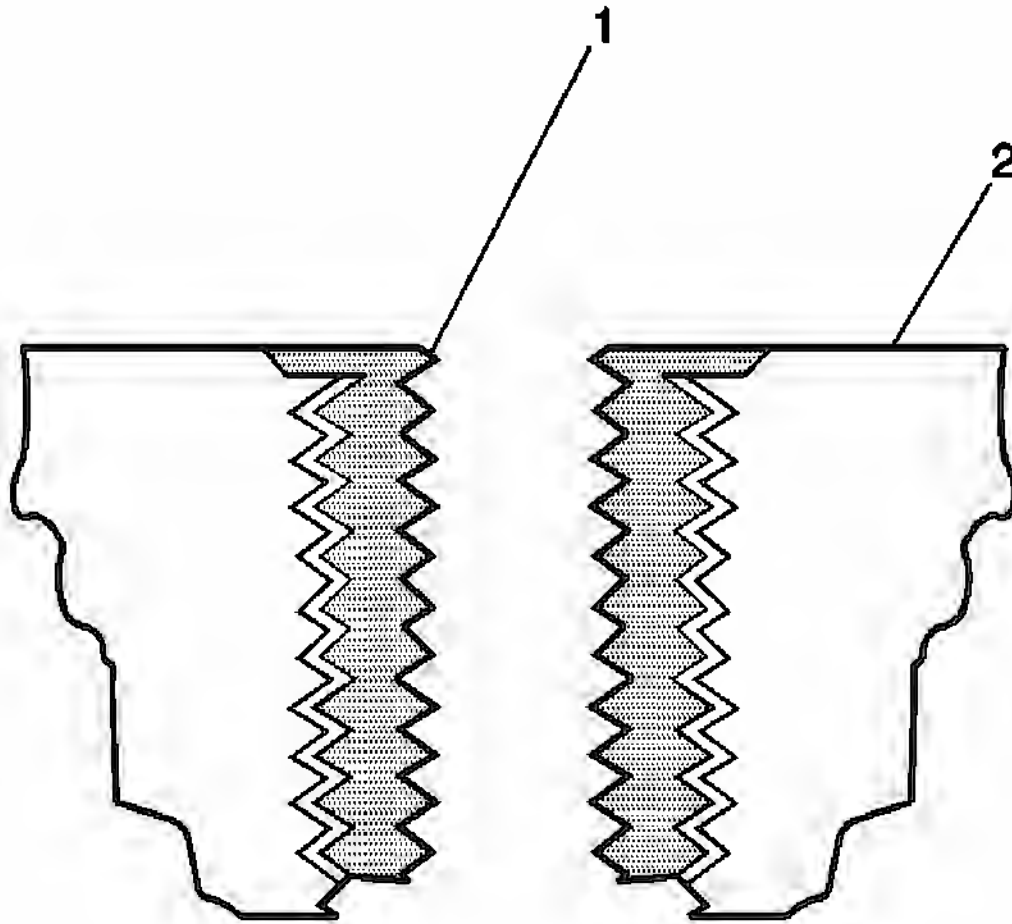
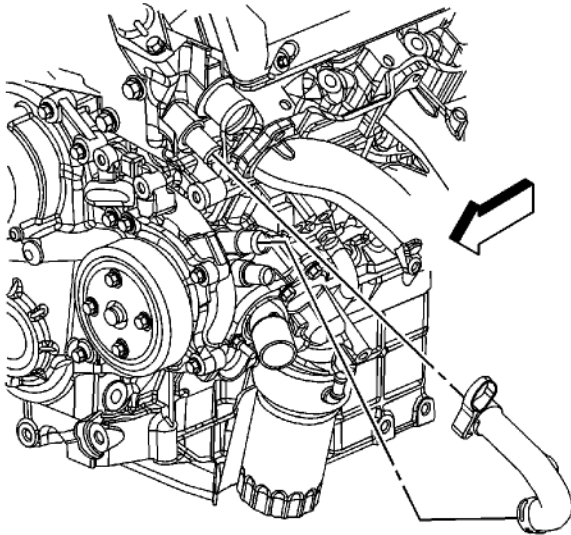


Fig. 441: View Of Bushing Type Insert & Base Material
Courtesy of GENERAL MOTORS CORP.

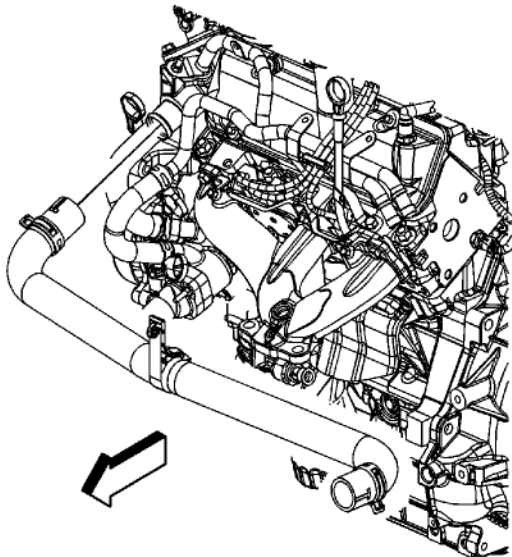
13. Inspect the insert for proper installation into the hole.

A properly installed insert (1) will be either flush or slightly below flush with the surface of the base material (2).

Tighten the bolts to 50 N·m (37 lb ft).



3. Install the thermal bypass hose to the crossover pipe.
4. Position the thermal bypass hose clamp at the crossover pipe.



5. Install the radiator inlet hose to the crossover pipe.
6. Position the radiator inlet hose clamp at the crossover pipe.

Ignition Coil Bolt	10 N·m	89 lb in
Intake Manifold		
┆ Upper-to-Cylinder Head Bolt - Long	23 N·m	17 lb ft
┆ Upper-to-Cylinder Head Bolt - Short	23 N·m	17 lb ft
┆ Upper-to-Lower Intake Manifold Bolt	23 N·m	17 lb ft
┆ Tuning Valve Bolt	10 N·m	89 lb in
Knock Sensor Bolt	23 N·m	17 lb ft
Manifold Absolute Pressure (MAP) Sensor Bolt	10 N·m	89 lb in
Oil Drain Plug	25 N·m	18 lb ft
Oil Filter	25 N·m	18 lb ft
Oil Filter Housing Adapter Bolt	23 N·m	17 lb ft
Oil Gallery Plug	31 N·m	23 lb ft
Oil Level Indicator Tube Bolt	10 N·m	89 lb in
Oil Pan		
┆ Bolt - Block M8	23 N·m	17 lb ft
┆ Bolt - Crankshaft Rear Oil Seal Housing M6	10 N·m	89 lb in
┆ Windage Tray Bolt	10 N·m	89 lb in
Oil Pressure Sender	20 N·m	15 lb ft
Oil Pump		
┆ Bolt	23 N·m	17 lb ft
┆ Cover Bolt	13 N·m	115 lb in
Oxygen Sensor		
┆ Pump Converter Pipe	40 N·m	30 lb ft
Piston Oil Cooling Nozzle Bolt	10 N·m	89 lb in
Primary Camshaft Drive Chain		
┆ Left Lower Guide Bolt - Oil Pump - Second Design	23 N·m	17 lb ft
┆ Tensioner Bolt	23 N·m	17 lb ft
┆ Upper Guide Bolt	23 N·m	17 lb ft
Secondary Camshaft Drive Chain		
┆ Guide Bolt	23 N·m	17 lb ft
┆ Shoe Bolt	23 N·m	17 lb ft
┆ Tensioner Bolt	23 N·m	17 lb ft
Spark Plug	18 N·m	13 lb ft
Starter Motor Bolt	50 N·m	37 lb ft
Suction Tube Bolt	10 N·m	89 lb in
Suction Screen Bolt	10 N·m	89 lb in
Thermostat Housing Bolt	10 N·m	89 lb in
Throttle Body Bolt	10 N·m	89 lb in
Transmission		
┆ Brace to Oil Pan Bolt	50 N·m	37 lb ft

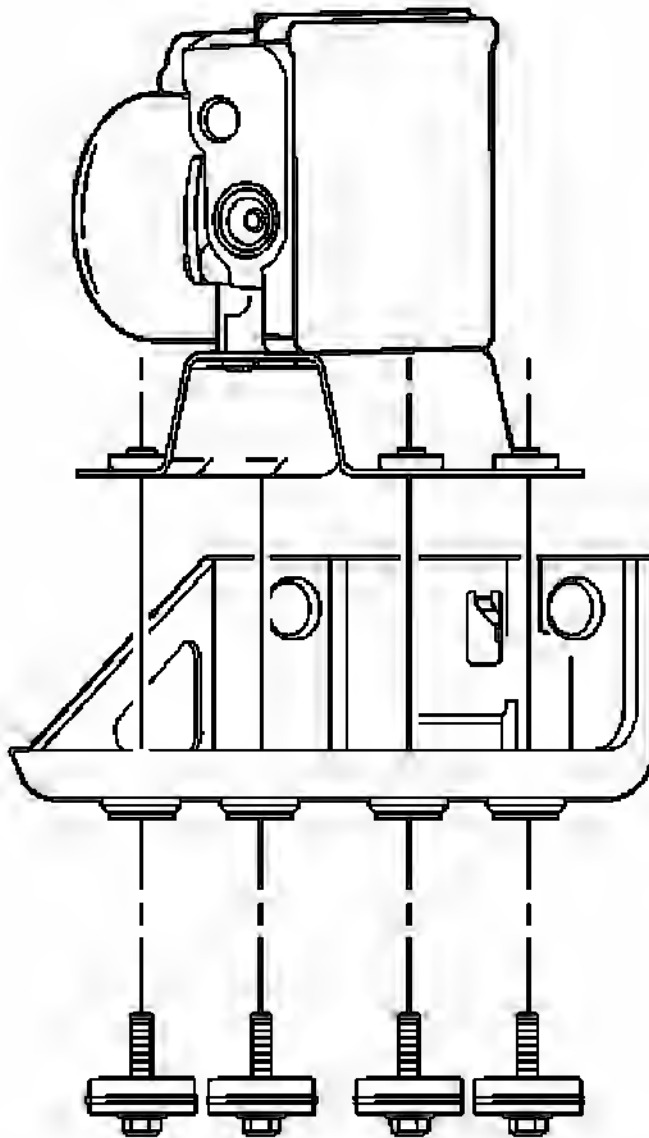


Fig. 17: View Of 4 Insulator Bolts On Brake Pressure Modulator Valve Bracket
Courtesy of GENERAL MOTORS CORP.

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** in General Information.
2. Remove the left front tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** in Tires and Wheels.
3. Turn the ignition switch to the OFF position.

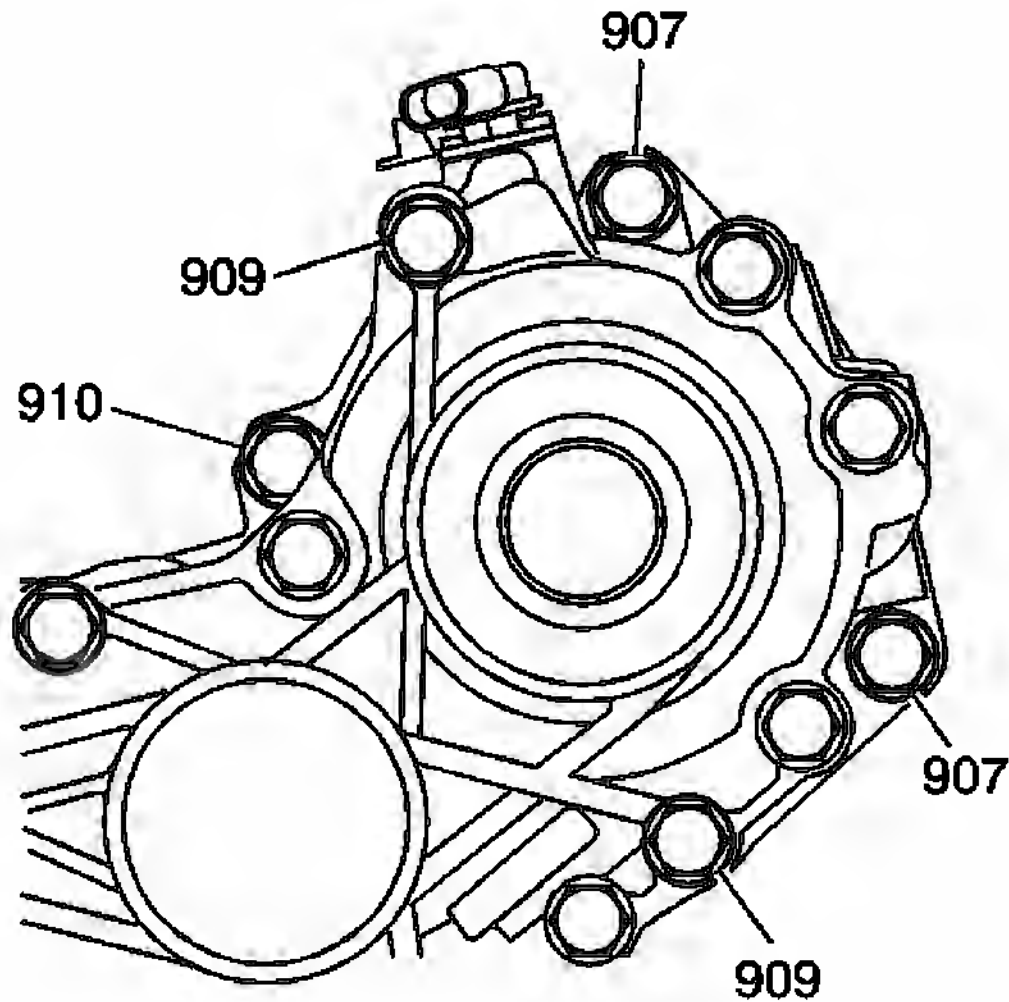


Fig. 34: View Of Transfer Case To Case Bolts
Courtesy of GENERAL MOTORS CORP.

6. Remove the transfer case to case bolts (907, 909, 910).

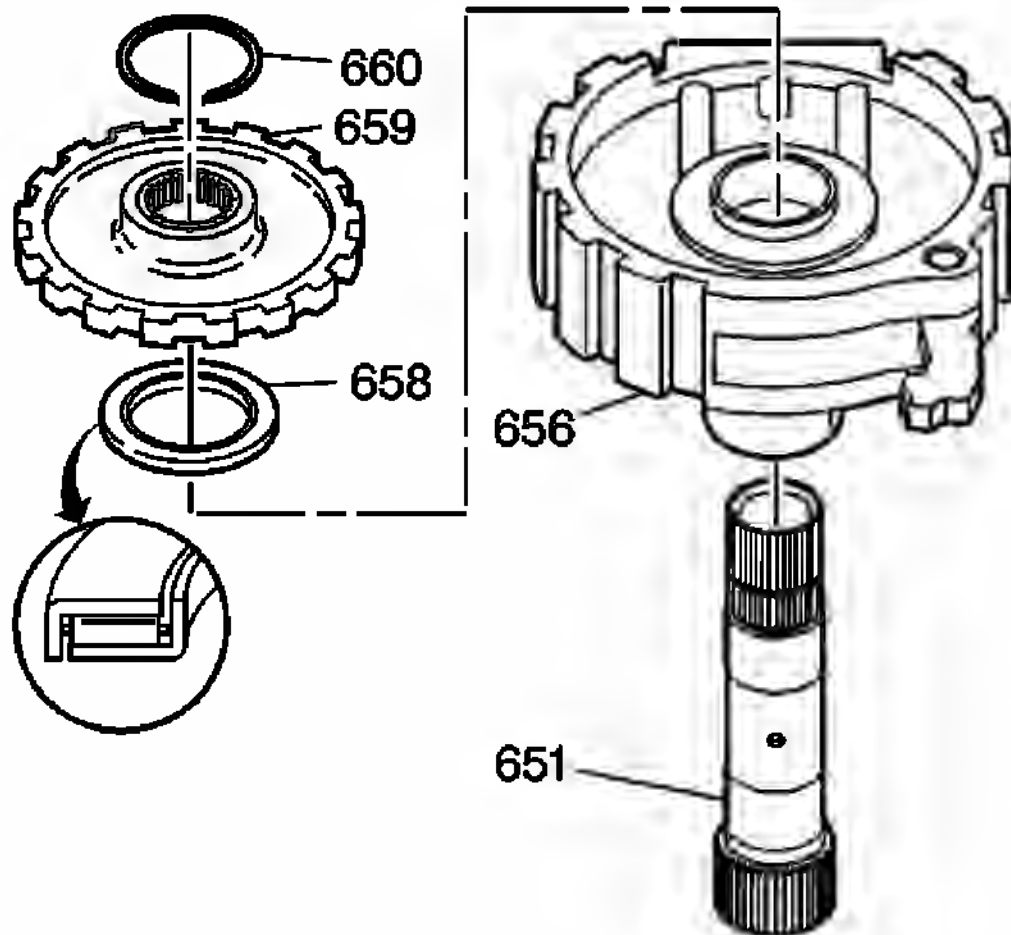
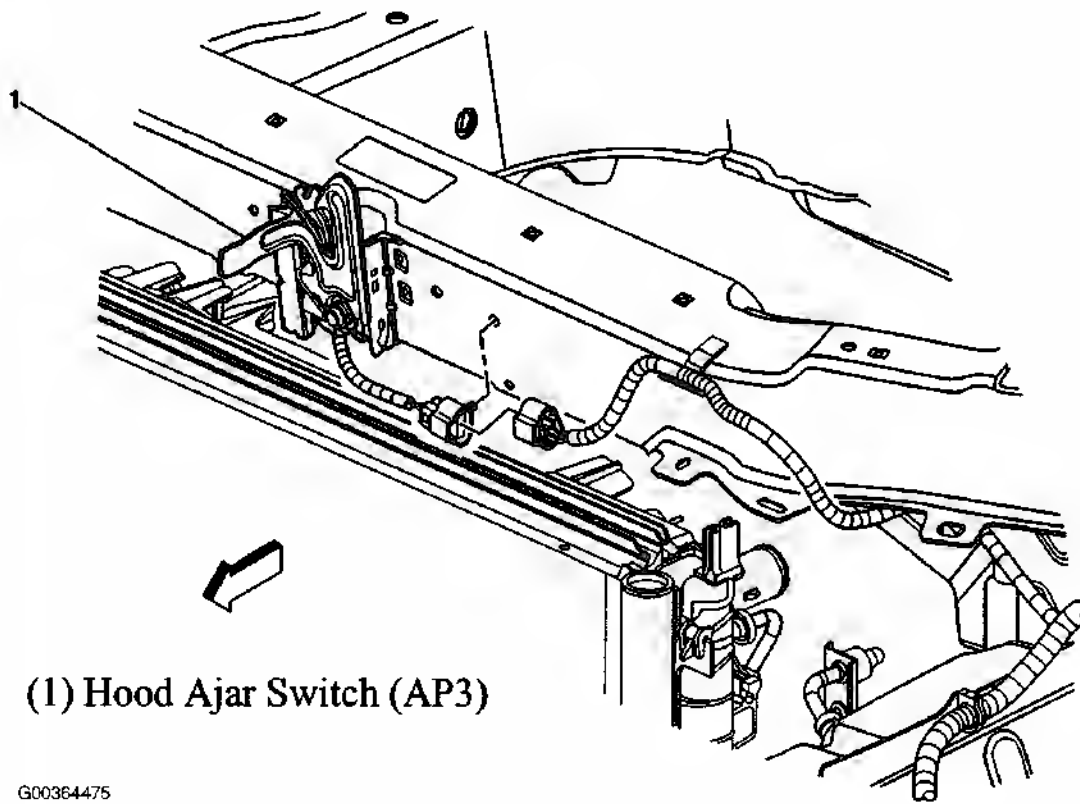


Fig. 95: View Of Forward Clutch Support, Final Drive Sun Gear Shaft & Components
Courtesy of GENERAL MOTORS CORP.

2. Assemble the forward clutch support (656) onto the final drive sun gear shaft (651).
3. Assemble the roller bearing (658) onto the forward clutch support (656).
4. Assemble the parking pawl gear (659) onto the final drive sun gear shaft (651) with the raised inner boss facing up, so that the parking pawl properly engages the teeth on the parking pawl gear.

IMPORTANT: The space between the parking pawl gear (659) and the snap ring (660) is approximately 3 mm (0.12 in).

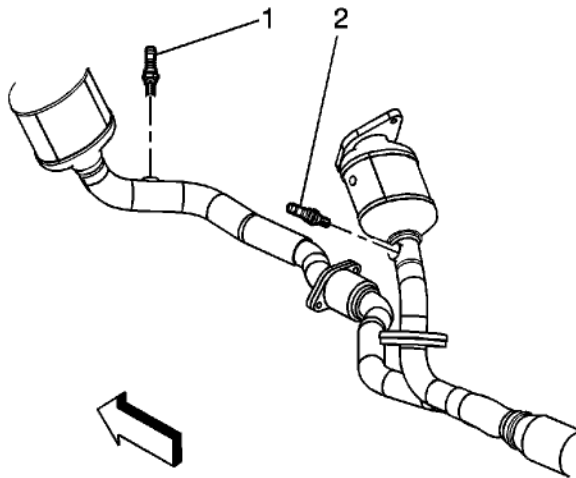
5. Assemble the snap ring (660) to the final drive sun gear shaft (651) in order to retain the parking pawl gear (659).



(1) Hood Ajar Switch (AP3)

G00364475

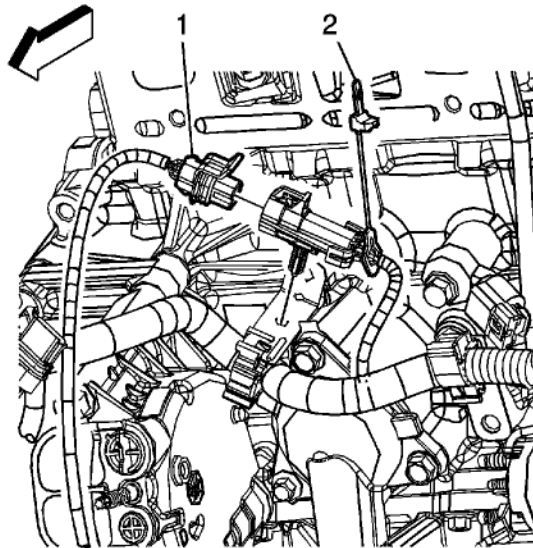
Fig. 31: Radiator Support
Courtesy of GENERAL MOTORS CORP.



7. Install the front and rear HO2S (1, 2) using the [J 39194-B](#).

Tighten

Tighten the sensor to 42 N·m (31 lb ft).



8. Connect the front HO2S electrical connector (1).
9. Install the front HO2S CPA retainer (2).

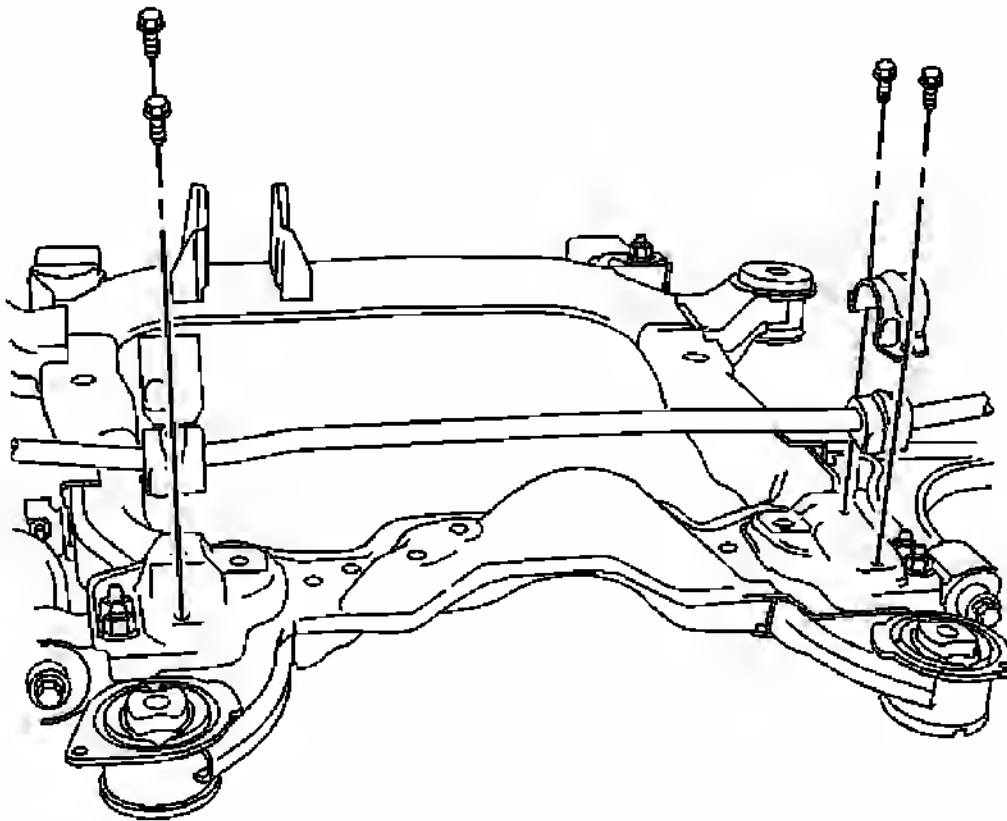


Fig. 2: Removing Frame Support To Body Bolts
Courtesy of GENERAL MOTORS CORP.

8. Remove the stabilizer bar clamps and insulators. Refer to **Stabilizer Shaft Insulator Replacement**.
9. Remove the stabilizer shaft through the opening between the frame and body.

Installation Procedure

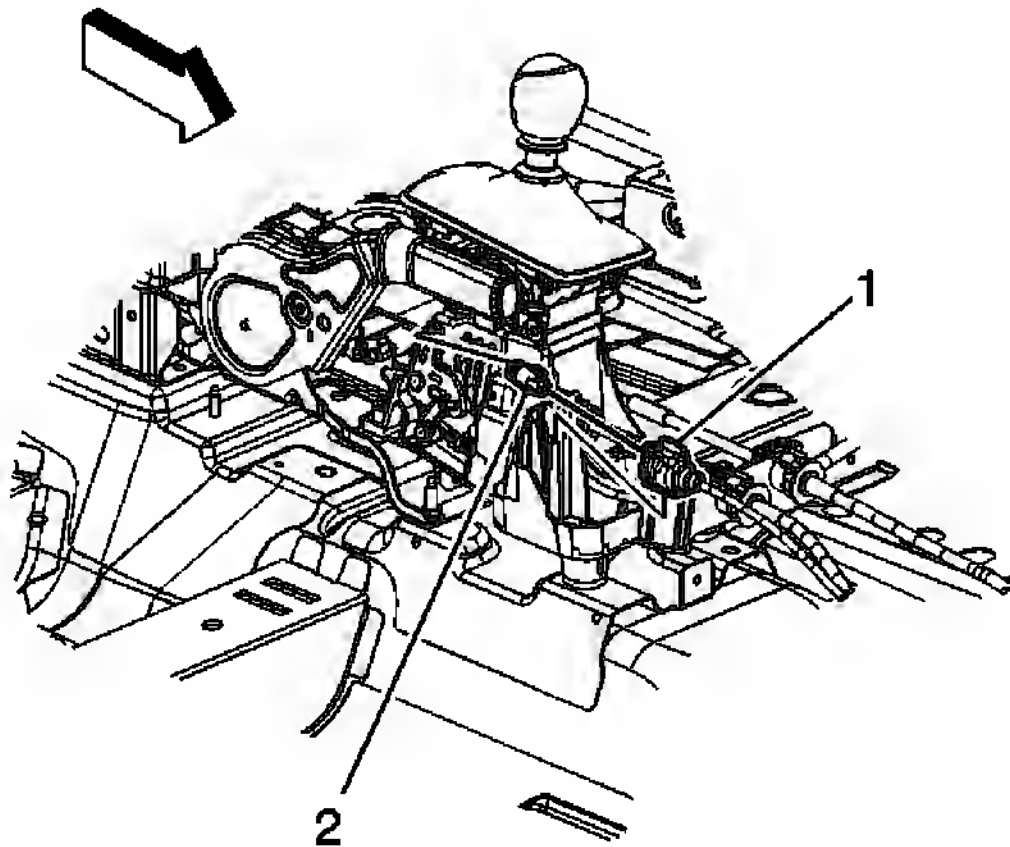


Fig. 27: Identifying Park Lock Cable & Retainer
Courtesy of GENERAL MOTORS CORP.

4. Attach the park lock cable to the shift control base. Ensure the park lock cable retainer (1) is fully secured to the shift control base.
5. Install the park lock cable on the park lock lever by sliding the cable end (2) over the park lock lever pin.
6. Inspect the functional operation of the park/lock cable. Refer to **Park Lock Cable Adjustment**.
7. Install the knee bolster. Refer to **KNEE BOLSTER REPLACEMENT**.
8. Install console. Refer to **Console Replacement** in Instrument Panel, Gages and Console.

TRANSMISSION FLUID REPLACEMENT

IMPORTANT: To ensure that all sediment within the transaxle is suspended in the fluid, the fluid should only be drained

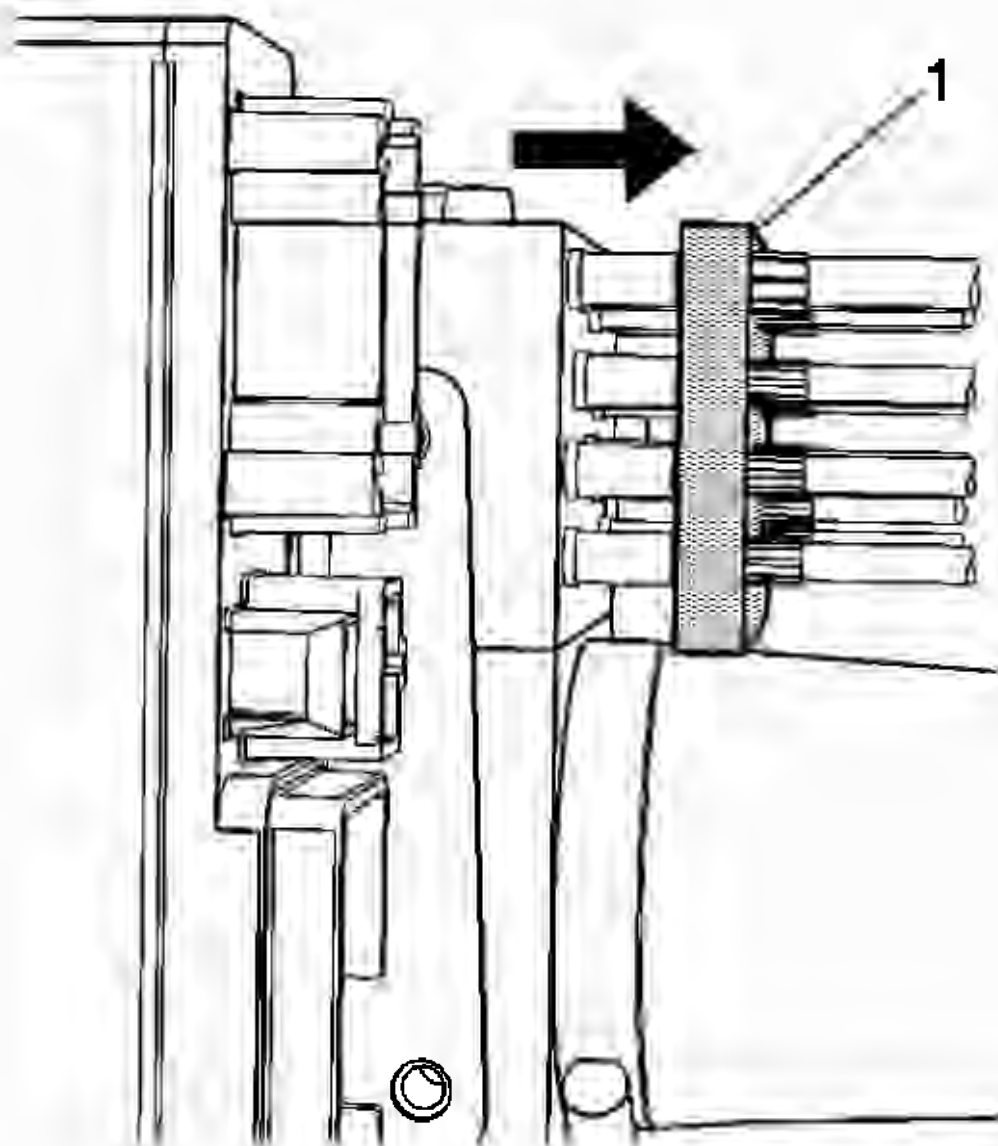


Fig. 67: View Of Manifold Plate
Courtesy of GENERAL MOTORS CORP.

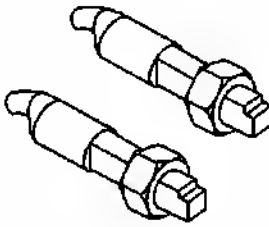
6. Push down on the manifold plate (1) and verify that all of the cylinder hoses are seated properly.

Tighten: Tighten the bolts to 10 N.m (89 lb in)

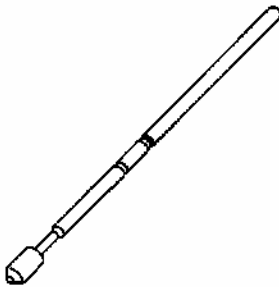
Apply Loctite® Blue, GM P/N 12345382 (Canadian P/N 10953489) or equivalent to the bolts.

2005 Pontiac G6

2005 STEERING Steering Wheel and Column - G6



J 42578
Steering Wheel Puller Legs



J 42640
Steering Column Anti-Rotation Pin

2006 Pontiac G6 GT

2006 ACCESSORIES & EQUIPMENT Wipers/Washer Systems - G6

the wipers are in mid-cycle, the wipers will stop immediately where they are. The BCM will park the wipers the next time the ignition is turned ON.

The wipers will not park when they are commanded ON and OFF with a scan tool. The BCM will park the wipers the next time the wiper switch is turned ON and OFF.

The BCM provides stall protection for the wiper motor by monitoring the park switch. If the park switch does not transition for 3 seconds while the wipers are operating, the BCM will assume that the wiper motor is stalled, and will de-energize the wiper relay until the wiper switch is cycled OFF and ON again.

Windshield Wiper/Washer System Power and Ground

With the ignition in the ON position, accessory voltage is supplied through the WIPER/SW 10A fuse in the underhood fuse block to the wiper/washer switch. Refer to **Wiper/Washer System Schematics**.

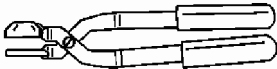
Diagnostic Trouble Codes (DTCs)

The body control module (BCM) monitors the voltage on the windshield wiper switch signal 2 circuit for diagnostic purposes. If the circuit is shorted to voltage while the driver is commanded OFF, the BCM will store DTC B3715. If the circuit is shorted to ground while the driver is commanded ON, the BCM will store DTC B3715. Refer to **DTC B3715**.

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

Special Tools

Illustration	Tool Number/Description
	J 39232 Wiper Linkage Separator
	J 39529 Wiper Linkage Installer