2007 ACCESSORIES & EQUIPMENT

Adjustable Pedals - Avalanche, Escalade, Suburban, Tahoe & Yukon

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Accelerator Actuator Screws	2.5 N.m	22 lb in
Accelerator Pedal Bracket Nuts	9 N.m	80 lb in
Brake Pedal Position Sensor Bolts	9 N.m	80 lb in
EAP Bracket Nuts	25 N.m	18 lb ft
Electronic Adjustable Pedal (EAP) Bracket Bolt	25 N.m	18 lb ft
Master Cylinder Nuts	33 N.m	24 lb ft
Transmission Range Selector Cable Support Bolt	10 N.m	89 lb in

SCHEMATIC AND ROUTING DIAGRAMS

ADJUSTABLE PEDAL SCHEMATICS

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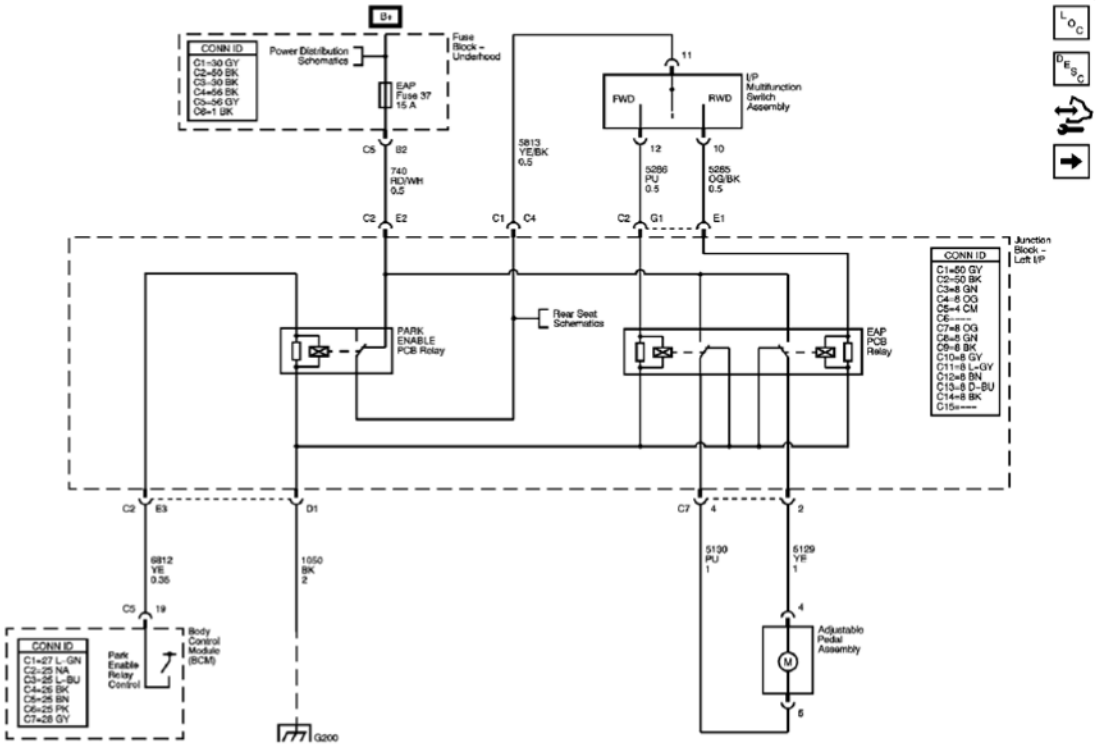

Fig. 1: Except AN3 Schematic
Courtesy of GENERAL MOTORS CORP.

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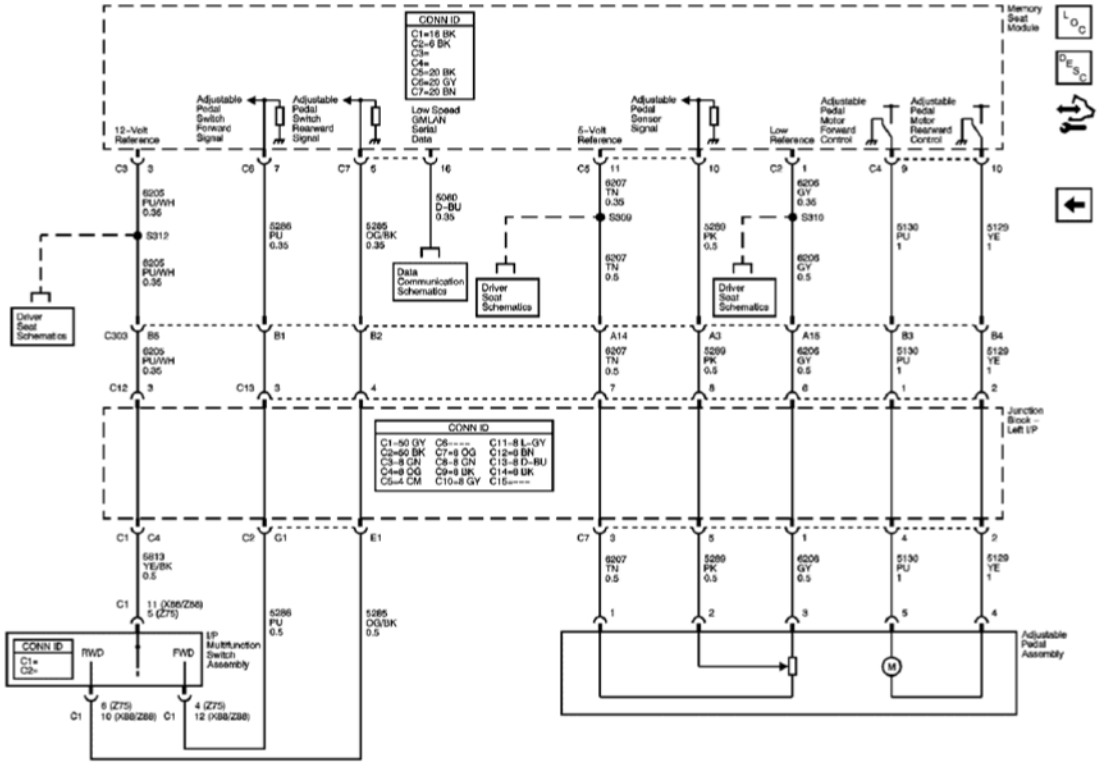

Fig. 2: AN3 Schematic
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COMPONENT LOCATOR

ADJUSTABLE PEDAL COMPONENT VIEWS

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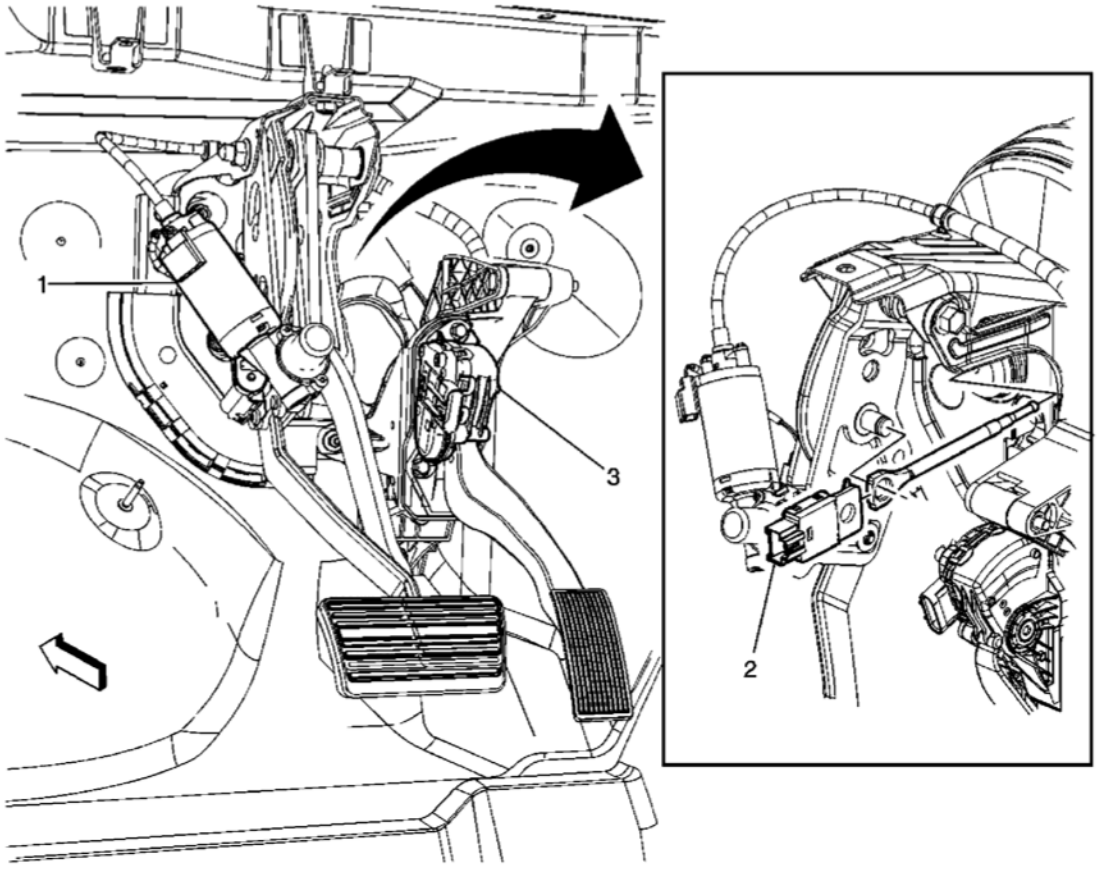

Fig. 3: Pedal Assemblies
Courtesy of GENERAL MOTORS CORP.

Callouts For Fig. 3

Callout	Component Name
1	Adjustable Pedal Assembly (JF4)
2	Accelerator Pedal Position (APP) Sensor

ADJUSTABLE PEDAL CONNECTOR END VIEWS

Electronic Adjustable Pedal Assembly

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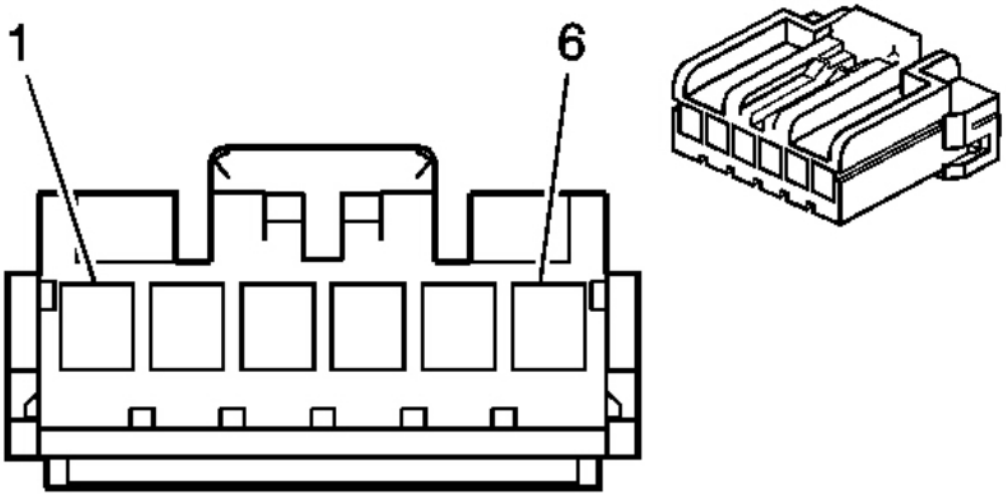

Fig. 4: Electronic Adjustable Pedal Assembly Connector End View
Courtesy of GENERAL MOTORS CORP.

Electronic Adjustable Pedal Assembly Connector Parts Information

Connector Part Information

- OEM: 15477860
- Service: See Catalog
- Description: 6-Way F BFC 180 Series (BK)

Terminal Part Information

- Terminal/Tray: 173630-7/7
- Core/Insulation Crimp: Pins 1-3: E/4
- Core/Insulation Crimp: Pins 4-5: E/A
- Release Tool/Test Probe: 15315247/J-35616-33 (YE)

Electronic Adjustable Pedal Assembly Connector Terminal Identification

Pin	Wire Color	Circuit No.	Function
1	TN	6207	5-Volt Reference (AN3)
2	PK	5289	Adjustable Pedal Sensor Signal (AN3)
3	GY	6206	Low Reference (AN3)
4	YE	5129	Adjustable Pedal Motor Rearward Control
5	PU	5130	Adjustable Pedal Motor Forward Control
6			

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6	-	-	Not Used

DIAGNOSTIC INFORMATION AND PROCEDURES

DIAGNOSTIC CODE INDEX

DIAGNOSTIC CODE INDEX

DTC	Description
DTC B3604 or B3605	DTC B3604 Adjustable Foot Pedal Forward Switch Circuit Short to Battery DTC B3605 Adjustable Foot Pedal Rearward Switch Circuit Short to Battery
DTC B3606	DTC B3606 Adjustable Foot Pedal Position Sensor Circuit Short to Battery

DIAGNOSTIC STARTING POINT - ADJUSTABLE PEDALS

Begin adjustable pedal system diagnosis with the **Diagnostic System Check - Vehicle** . The Diagnostic System Check will provide the following information:

- The identification of the control modules which command the system.
- The ability of the control modules to communicate through the serial data circuit.
- The identification of any stored DTCs and their status.

The use of the Diagnostic System Check will identify the correct procedure for diagnosing the system and where the procedure is located.

SCAN TOOL OUTPUT CONTROLS

Driver Position Module (DPM)

Scan Tool Output Control	Additional Menu Selection(s)	Description
Pedals Forward/Rearward	Driver Position Module/Special Functions/Pedals	The driver position module (DPM) activates the adjustable pedal motor when you select Forward or Rearward. The motor should move the pedals in the forward or rearward direction until the it reaches it's end of travel.

SCAN TOOL DATA LIST

Driver Position Module

Scan Tool Parameter	Data List	Units Displayed	Typical Data Value
Operating Conditions: Ignition ON/Engine OFF			
Battery Voltage Signal	Inputs	Volts	Varies
Current	Inputs	amps	Varies

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Pedals Horizontal Sensor	Pedals	Volts	0.0-5.0 Volts
Pedals Motor Forward	Pedals	Active/Inactive	Inactive
Pedals Motor Rearward	Pedals	Active/Inactive	Inactive
Pedals Forward Switch	Pedals	Active/Inactive	Inactive
Pedals Rearward Switch	Pedals	Active/Inactive	Inactive

SCAN TOOL DATA DEFINITIONS

8 Digit GM Part Number

The scan tool displays the part number of the module.

Battery Voltage

The scan tool displays 0-16 volts. The level of battery voltage at the module.

Calibration ID

The scan tool displays a 4 digit number. This number designates the calibration or program level used in the PROM.

Current

The scan tool displays 0-127.5 amps. The current measured during adjustable pedals or seat operation.

Hardware Level

The scan tool displays a 4 digit number representing the level of hardware incorporated into the module.

Julian Date of Build

The scan tool displays a 3 digit number. This number is the day of the year that the module was built.

PROM ID

The scan tool displays a 4 digit number. This is the identification number of the PROM that is incorporated into the module.

Pedals Position Sensor

The scan tool displays 0-5.0 volts or 0-255 A/D. The sensor potentiometer provides an analog voltage which varies directly with the adjustable pedals position. High scan tool values (volts or A/D) indicate that the pedals are in the froward position and low values indicate that the pedals are in the rearward position.

Pedals Forward - Input

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The scan tool displays Inactive/Active. When the adjustable pedals forward switch is activated, the scan tool will momentarily display switch input to the driver position module as Active.

Pedals Forward - Output

The scan tool displays Inactive/Active. When the adjustable pedals forward switch is activated or when a memory recall occurs, the scan tool will momentarily display Active while the output from the driver position module is commanding the adjustable pedals motor in the forward direction.

Pedals Rearward - Input

The scan tool displays Inactive/Active. When the adjustable pedals rearward switch is activated, the scan tool will momentarily display the switch input to the driver position module as Active.

Pedals Rearward - Output

The scan tool displays Inactive/Active. When the adjustable pedals rearward switch is activated or when a memory recall occurs, the scan tool will momentarily display Active while the output from the driver position module is commanding the adjustable pedals motor in the rearward direction.

Software Level

The scan tool displays the 4 digit number of the software incorporated into the module.

Year Module Built

The scan tool displays a 4 digit number. This number represents the year the module was built.

DTC B3604 OR B3605

DTC Descriptors

DTC B3604 01

Adjustable Foot Pedal Forward Switch Circuit Short to Battery

DTC B3605 01

Adjustable Foot Pedal Rearward Switch Circuit Short to Battery

Diagnostic Fault Information

Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.

DTC B3604 or B3605

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance

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Switch Reference Voltage	1	1	-	-
Forward Switch Signal	2	2	B3604 01	-
Rearward Switch Signal	3	3	B3605 01	-
1. Adjustable Pedals Inoperative 2. Adjustable Pedals Forward Inoperative 3. Adjustable Pedals Rearward Inoperative				

Circuit/System Description

The adjustable pedals forward and rearward switches are inputs to the memory seat module. The memory seat module supplies the switch assembly with a battery positive reference voltage. When the switch is operated to the forward or rearward direction, battery positive voltage is applied to the forward or rearward switch signal inputs.

Conditions for Running the DTC

System voltage to the memory seat module must be 9-16 volts.

Conditions for Setting the DTC

The forward and rearward switch signal circuits are active at the same time.

Action Taken When the DTC Sets

The adjustable pedals will be disabled.

Conditions for Clearing the DTC

The fault is no longer present.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

Adjustable Pedal Connector End Views

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

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Scan Tool Reference

Scan Tool Data List

Circuit/System Testing

1. Disconnect the adjustable pedal switch connector.
2. Ignition ON, verify that both adjustable pedal switch parameters to the memory seat module are Inactive.
   - If 1 of the switch parameters is always Active test the affected switch signal circuit for a short to voltage. If the signal circuit tests normal replace the memory seat module.
3. If the circuit tests normal replace the adjustable pedal switch.

Repair Procedures

Perform the Diagnostic Repair Verification **Diagnostic Repair Verification** after completing the diagnostic procedure.

Control Module References for the memory seat module replacement and setup procedures

DTC B3606

DTC Descriptors

DTC B3606 01

Adjustable Foot Pedal Position Sensor Circuit Short to Battery

DTC B3606 06

Adjustable Foot Pedal Position Sensor Circuit Short to Ground or Open

Diagnostic Fault Information

Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.

Circuit/System Description

The memory seat module monitors the location of the adjustable pedals using the adjustable pedals position sensor. The adjustable pedals position sensor is supplied with 5-volt reference and ground circuits from the memory seat module. The position sensor signal circuit is referenced from ground within the memory seat module. The signal voltage monitored by the memory seat module ranges from 0.45-4.55 volts and is determined by the wiper location on the resistor within the position sensor.

Conditions for Running the DTC

System voltage to the memory seat module must be 9-16 volts.

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Conditions for Setting the DTC

The position sensor input to the memory seat module is not within the 0.45-4.55 volt range.

Action Taken When the DTC Sets

Memory recall functions will be suspended.

Conditions for Clearing the DTC

The fault is no longer present.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

Adjustable Pedal Connector End Views

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Scan Tool Data List

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the adjustable pedal motor.
2. Ignition OFF, test for less than 1.0 ohm of resistance between the low reference circuit terminal 3 and ground.
    - If greater than the specified range, test the low reference circuit for an open/high resistance. If the circuit tests normal, replace the memory seat module.
3. Ignition ON, test for 4.8-5.2 volts between the 5-volt reference circuit terminal 1 and ground.
    - If less than the specified range, test the 5-volt reference circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the memory seat module.
    - If greater than the specified range, test the 5-volt reference circuit for a short to voltage. If the circuit tests normal, replace the memory seat module.
4. Verify the scan tool pedal position parameter is less than 0.45 volt.

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- If greater than the specified range, test the signal circuit terminal 2 for a short to voltage. If the circuit tests normal, replace the memory seat module.

5. Install a 3-amp fused jumper wire between the signal circuit terminal 2 and the 5-volt reference circuit terminal 1. Verify the scan tool pedal position parameter is greater than 4.55 volts.
   - If less than the specified range, test the signal circuit for short to ground or an open/high resistance. If the circuit tests normal, replace the memory seat module.
6. If all circuits test normal, test or replace the adjustable pedal motor.

Repair Procedures

Perform the**Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Brake Pedal Assembly Replacement**
- **Control Module References** for the memory seat module replacement and setup procedures

SYMPTOMS - ADJUSTABLE PEDALS

IMPORTANT: The following steps must be completed before using the symptom table.

1. If the vehicle is equipped with AAB (Memory Driver Convenience Package) perform the **Diagnostic System Check - Vehicle** , before using the symptom table in order to verify that all of the following are true:
   - There are no DTCs set.
   - The control modules can communicate via the serial data link.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to **Adjustable Pedals Description and Operation (w/o Memory)** or **Adjustable Pedals Description and Operation (with Memory)**.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the adjustable pedal system. Refer to **Checking Aftermarket Accessories** .
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to **Testing for Intermittent Conditions and Poor Connections** .

Symptom List

Refer to **Adjustable Pedals Inoperative (w/o Memory)** or **Adjustable Pedals Inoperative (with Memory)**.

ADJUSTABLE PEDALS INOPERATIVE (W/O MEMORY)

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Diagnostic Fault Information

Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.

Circuit/System Description

Voltage to the adjustable pedal switch is supplied through the park enable relay while in a de-energized state. The park enable relay is controlled by the body control module (BCM) through a high side drive control circuit and will be energized whenever the ignition is in the accessory, run, or crank positions and the transmission is in reverse or the cruise control is engaged. The adjustable pedals switch controls the adjustable pedals relay by applying battery voltage to one of the coils. In an inactive state both of the relay switch contacts are closed to ground and when one of the relay coils is energized its switch contact is closed to battery voltage.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

- **Adjustable Pedal Component Views**
- **Power and Grounding Connector End Views**

Electrical Information Reference

- **Circuit Testing**
- **Connector Repairs**
- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Circuit/System Testing

1. Disconnect the left instrument panel (I/P) junction block connector C2.
2. Verify that a test lamp illuminates when connected from the park enable relay supply circuit terminal E2 in the harness connector to ground.
    - If the test lamp does not illuminate repair the park enable relay supply circuit for an open or short to ground. If the circuit tests normal and the EAP fuse #73 is open, test the following circuits for a short to ground:
    - Switch supply circuit
    - Switch signal circuits
    - Motor control circuits
3. Disconnect the left I/P junction block connector C1.
4. Connect a DMM from the adjustable pedal switch supply circuit terminal C4 to the forward switch signal circuit in connector C2 terminal G1.

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5. Verify less than 1 ohm of resistance while pressing the adjustable pedal forward switch.
    - If greater than 1 ohm of resistance test the switch supply and signal circuits for an open or high resistance. If the circuits test normal replace the adjustable pedal switch.
6. Connect a DMM from the adjustable pedal switch supply circuit terminal C4 to the rearward switch signal circuit in connector C2 terminal E1.
7. Verify less than 1 ohm of resistance while pressing the adjustable pedal rearward switch.
    - If greater than 1 ohm of resistance test the switch signal circuit for an open or high resistance. If the circuit tests normal replace the adjustable pedal switch.
8. Connect the I/P junction block connectors.
9. Disconnect the adjustable pedal motor connector and connect a test lamp across the control circuit terminals in the harness connector.
10. Verify that the test lamp illuminates when the adjustable pedal switch is pressed in both directions.
    - If the test lamp does not illuminate while the switch is pressed in both directions, test the control circuits for an open or high resistance. If the control circuits test normal replace the left I/P junction block.
11. If the circuit tests are normal replace the adjustable pedal motor.

Repair Procedures

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Brake Pedal Assembly Replacement**
- **Instrument Panel Electrical Center or Junction Block Replacement - Left Side**

ADJUSTABLE PEDALS INOPERATIVE (WITH MEMORY)

Adjustable Pedals Inoperative (with Memory)

Step	Action	Yes	No
Schematic Reference: Adjustable Pedal Schematics **Connector End View Reference: Adjustable Pedal Connector End Views** DEFINITION: All of the seat adjuster motors are inoperative, the lumbar and bolster motors may also be inoperative.			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to **Step 2**	Go to **Diagnostic System Check - Vehicle**
2	Verify the fault is present. Does the system operate normally?	Go to **Testing for Intermittent Conditions and Poor Connections**	Go to **Step 3**
3	1. Install a scan tool. 2. Observe the Adjustable Pedal Switch parameters in the driver position module data list.		

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	Do any of the Seat Adjuster Switch parameters display Active?	Go to **Step 7**	Go to **Step 4**
4	Operate the adjuster switch in both directions. Does the scan tool display the correct switch status parameters in relation to the actual switch positions?	Go to **Step 9**	Go to **Step 5**
5	1. Disconnect the adjuster switch connector. 2. Using a DMM test for battery voltage at the switch supply voltage circuit terminal in the harness connector. Is battery voltage present on the switch supply voltage circuit?	Go to **Step 8**	Go to **Step 6**
6	Test the switch supply voltage circuit for an open or high resistance. Refer to **Circuit Testing** and to **Wiring Repairs** . Did you find and correct the condition?	Go to **Step 12**	Go to **Step 9**
7	1. Disconnect the adjuster switch connector. 2. Test the active switch signal circuit for a short to voltage. Refer to **Circuit Testing** and to **Wiring Repairs** . Did you find and correct the condition?	Go to **Step 12**	Go to **Step 9**
8	Inspect for poor connections at the adjuster switch connector. Refer to **Testing for Intermittent Conditions and Poor Connections** and to **Connector Repairs** . Did you find and correct the condition?	Go to **Step 12**	Go to **Step 10**
9	Inspect for poor connections at the driver position module connectors. Refer to **Testing for Intermittent Conditions and Poor Connections** and to **Connector Repairs** . Did you find and correct the condition?	Go to **Step 12**	Go to **Step 11**
10	Replace the adjustable pedal switch. Is the repair complete?	Go to **Step 12**	-
11	Replace the driver position module. Refer to **Control Module References** for replacement, setup, and programming. Is the repair complete?	Go to **Step 12**	-
12	Operate the system to verify the repair. Did you correct the condition?	System OK	Go to **Step 3**

REPAIR INSTRUCTIONS

BRAKE PEDAL ASSEMBLY REPLACEMENT

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Removal Procedure

1. Remove the 2 master cylinder nuts.

IMPORTANT: DO NOT disconnect the hydraulic brake pipes from the master cylinder.

2. Position the master cylinder aside and support with heavy mechanics wire or equivalent.
3. Remove the steering column from the vehicle. Refer to **Steering Column Replacement** .

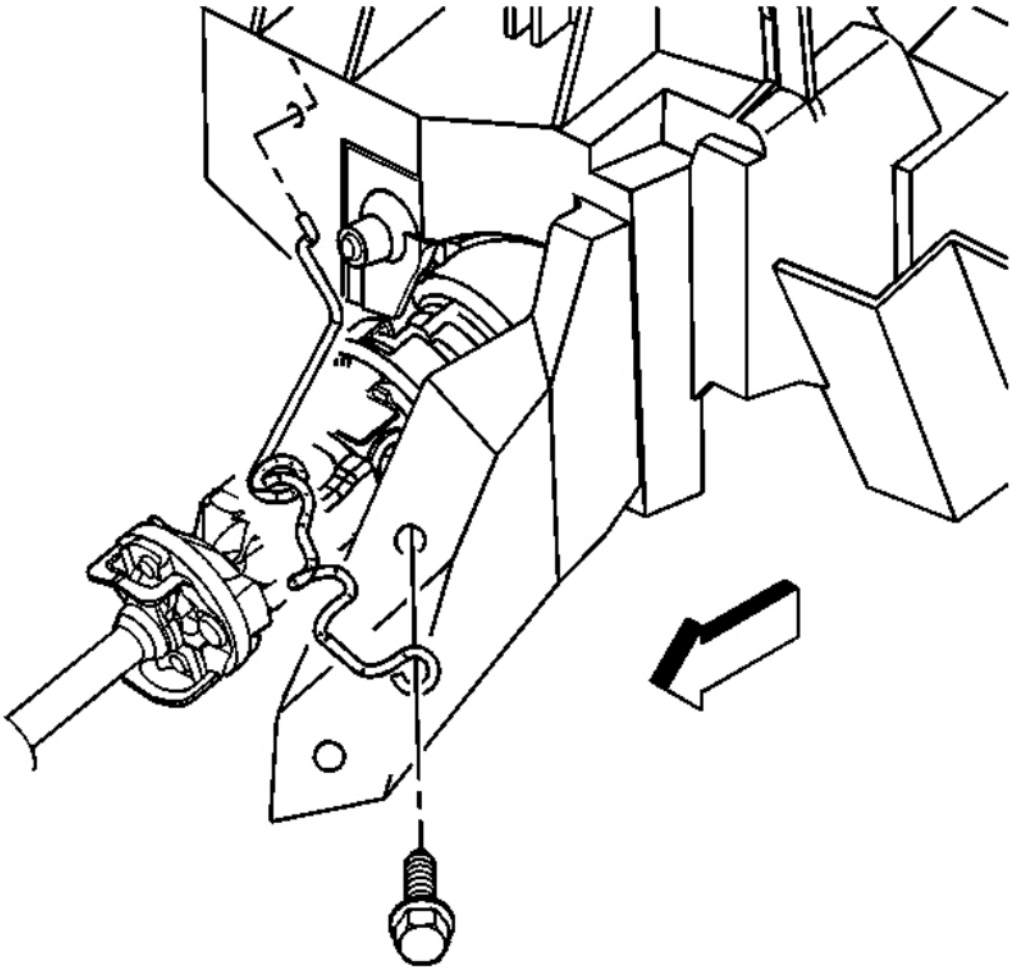

Fig. 5: View Of Bolt Securing Selector Cable To Brace
Courtesy of GENERAL MOTORS CORP.

4. Remove the transmission range selector cable support bolt from the instrument panel (I/P) reinforcement

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brace.

5. Disconnect the electrical connectors from the following components:
   - The adjustable pedals motor assembly
   - The memory sensor connector, if equipped
   - The pedal position sensor
   - The accelerator wiring harness connector

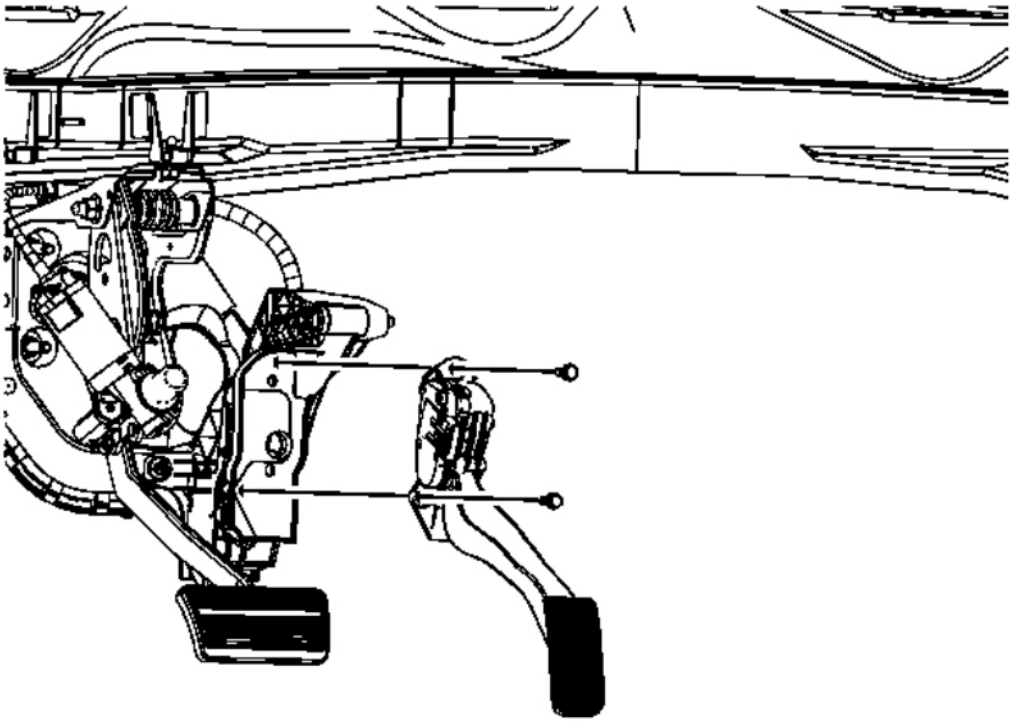

Fig. 6: View Of Accelerator Pedal Position Sensor Assembly
Courtesy of GENERAL MOTORS CORP.

6. Remove the accelerator pedal position sensor assembly. Refer to **Accelerator Pedal Position Sensor Replacement** .
7. Remove the left side floor air outlet duct. Refer to **Floor Air Outlet Duct Replacement - Left Side** .

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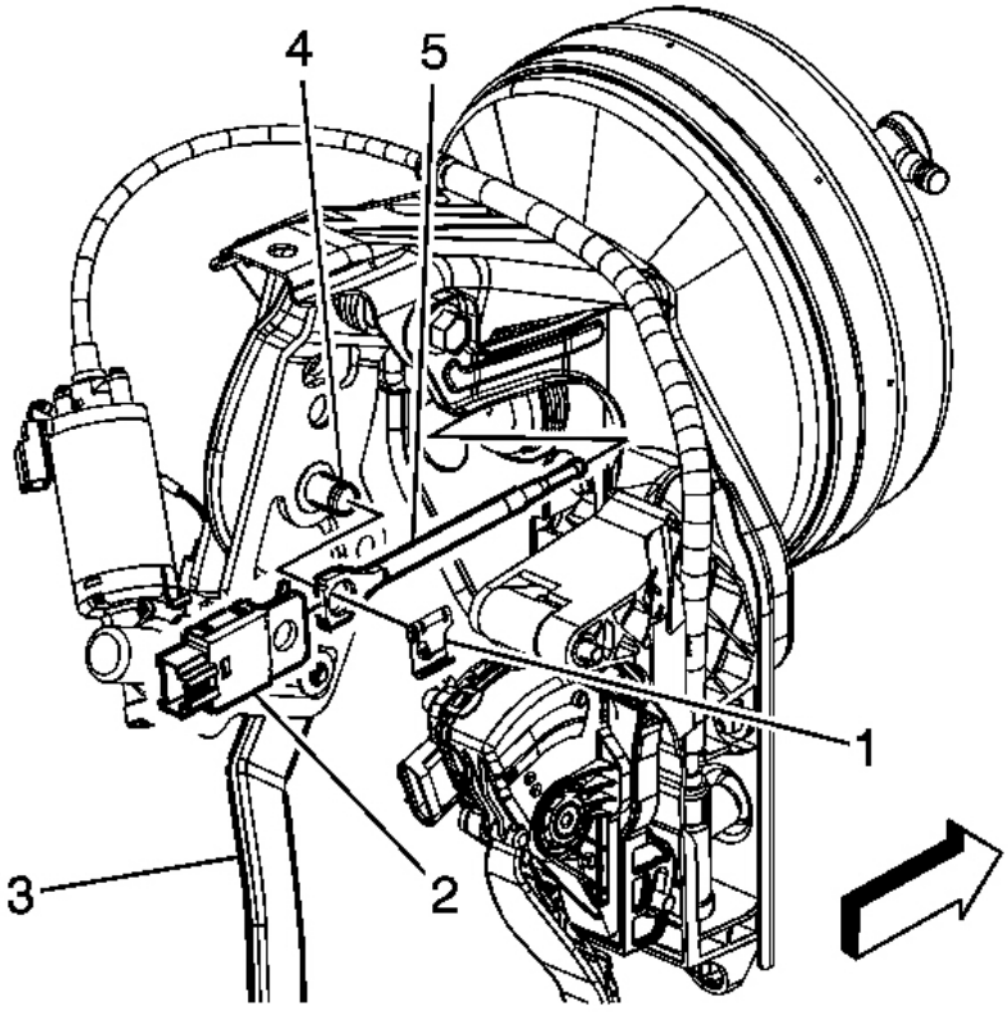

Fig. 7: View Of Brake Pedal Components
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8. Remove the pushrod retaining clip (1) from the brake pedal pin (4).
9. Remove the brake pedal pushrod (5) and the stop lamp switch (2) from the brake pedal (3).

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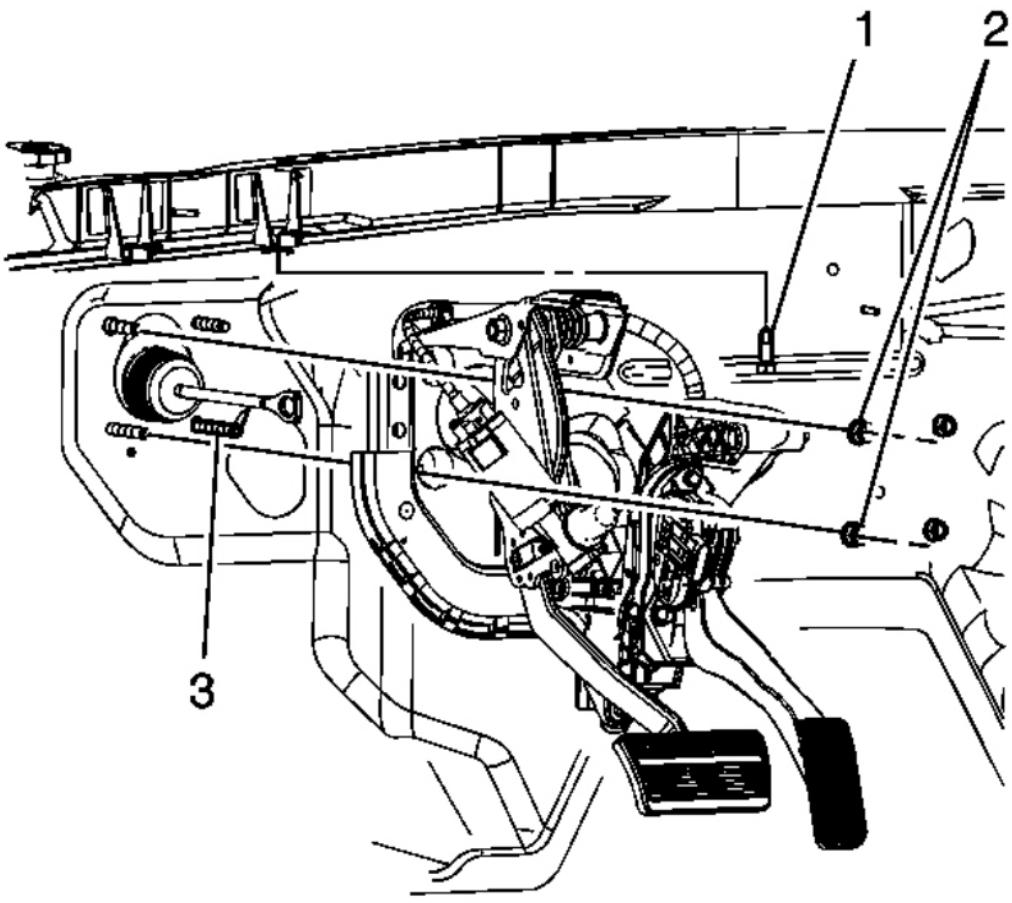

Fig. 8: View Of EAP Bracket Nuts, Booster Studs & Bracket Bolt
Courtesy of GENERAL MOTORS CORP.

10. Remove the electronic adjustable pedal (EAP) bracket nuts (2) from the brake booster studs (3).
11. Remove the top EAP bracket bolt (1).
12. Move the brake booster forward until the studs are past the EAP bracket holes.
13. Remove the EAP assembly from the vehicle.

Installation Procedure

1. With the aid of an assistant, position the brake booster to the vehicle.

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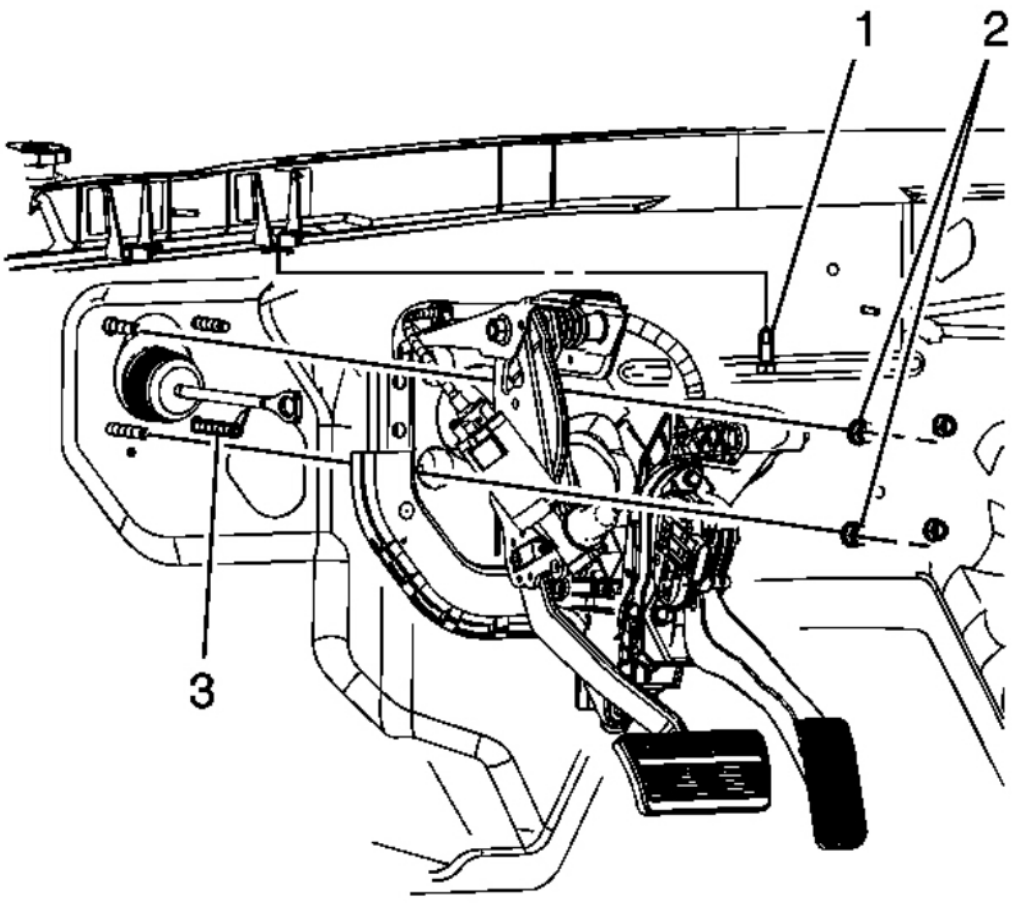

Fig. 9: View Of EAP Bracket Nuts, Booster Studs & Bracket Bolt
Courtesy of GENERAL MOTORS CORP.

2. Install the EAP assembly to the vehicle.

NOTE: **Refer to Fastener Notice .**

IMPORTANT: Tighten the EAP bracket nuts (2) before tightening the top EAP bracket bolt (1).

3. Install the EAP bracket nuts (2) to the brake booster studs (3).

Tighten: Tighten the nuts to 25 N.m (18 lb ft).

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4. Install the top EAP bracket bolt (1).

   Tighten: Tighten the bolt to 25 N.m (18 lb ft).

5. Install the accelerator pedal position sensor assembly. Refer to **Accelerator Pedal Position Sensor Replacement** .
6. Connect the electrical connectors to the following components:
   - The adjustable pedals motor assembly
   - The memory sensor connector, if equipped
   - The pedal position sensor
   - The accelerator wiring harness connector

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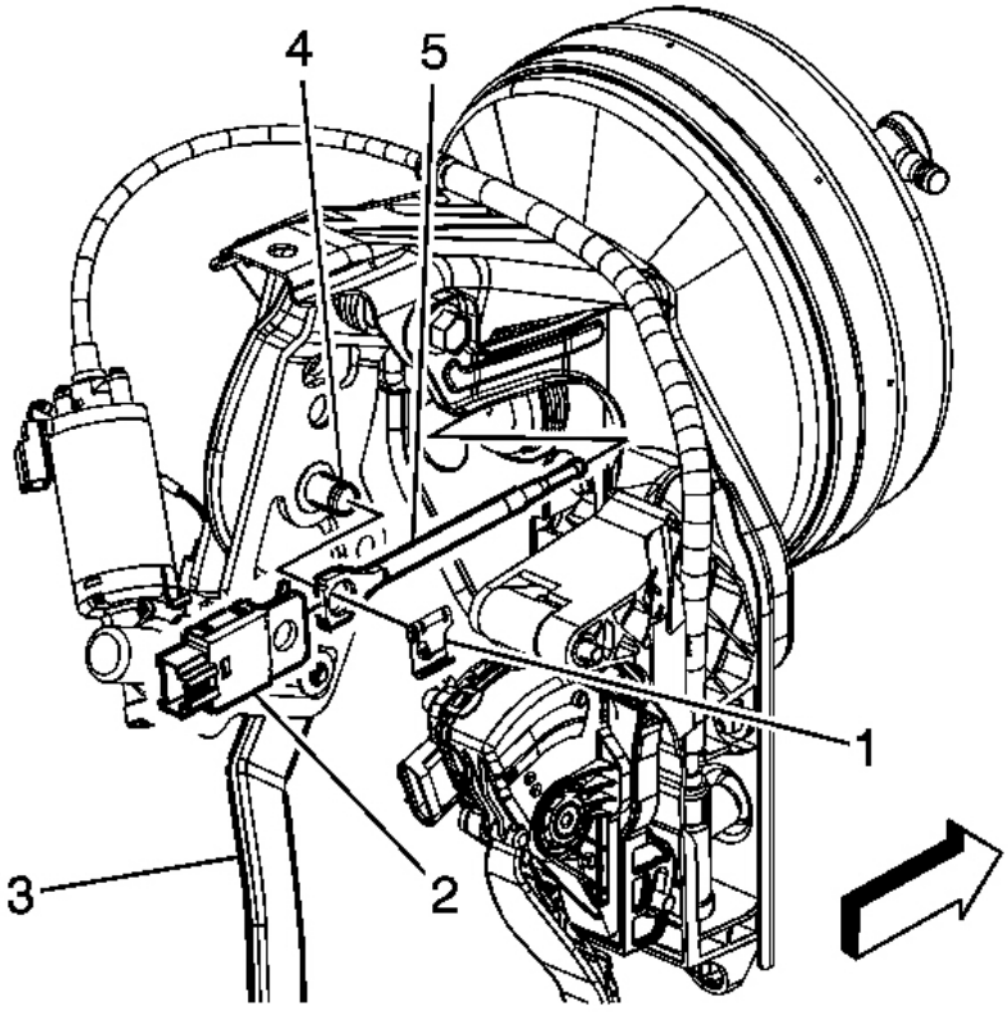

Fig. 10: View Of Brake Pedal Components
Courtesy of GENERAL MOTORS CORP.

7. Install the pushrod retaining clip (1) to the brake pedal pin (4).
8. Install the brake pedal pushrod (5) and the stop lamp switch (2) to the brake pedal (3).

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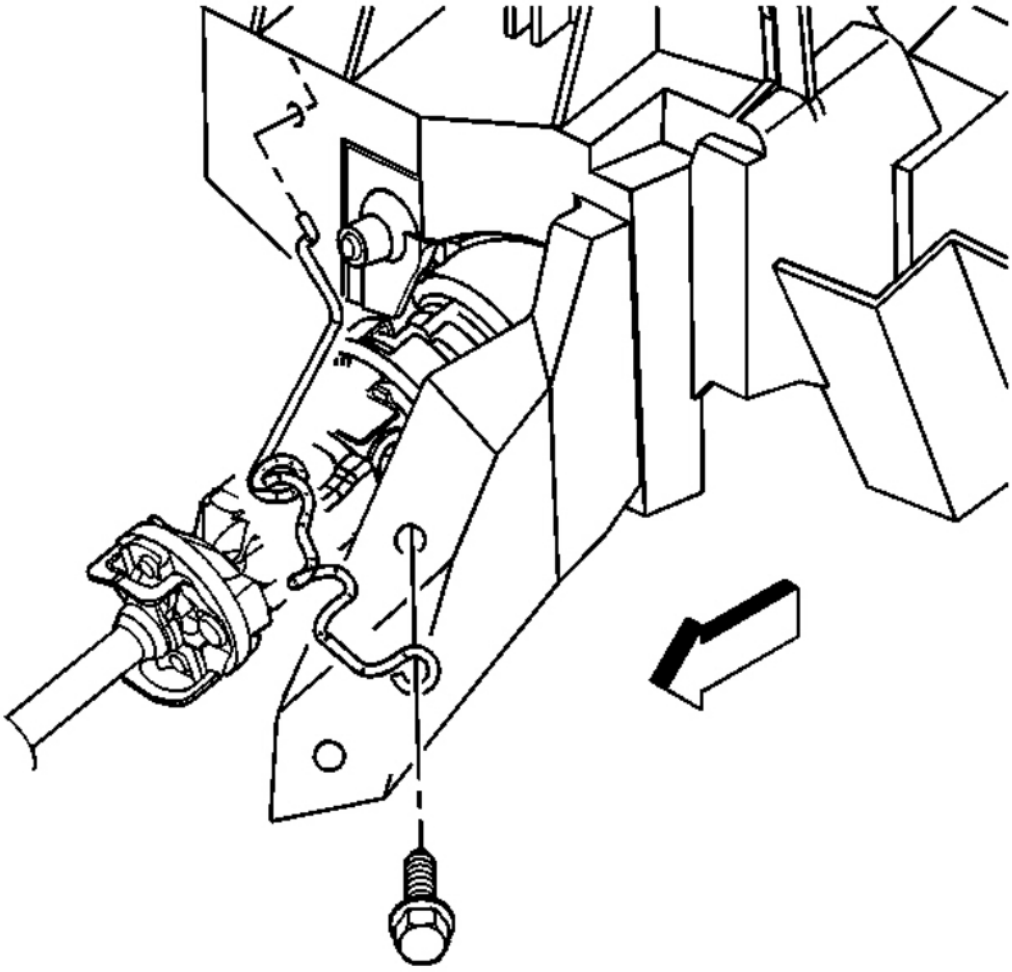

Fig. 11: View Of Bolt Securing Selector Cable To Brace
Courtesy of GENERAL MOTORS CORP.

9. Install the transmission range selector cable support bolt to the I/P reinforcement brace.

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

10. Install the steering column to the vehicle. Refer to **Steering Column Replacement** .
11. Install the left side floor air outlet duct. Refer to **Floor Air Outlet Duct Replacement - Left Side** .
12. Install the master cylinder to the brake booster.
13. Install the 2 master cylinder nuts.

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Tighten: Tighten the nuts to 33 N.m (24 lb ft).

14. Verify the operation of the adjustable pedals.

ACCELERATOR PEDAL BRACKET REPLACEMENT

Removal Procedure

IMPORTANT: Ensure the brake pedal assembly is adjusted to the lowest position farthest from the drivers seat prior to removal of the accelerator assembly. Failure to do so could result in incorrect step-over height between the brake and accelerator pedals and improper function of the adjustable pedal system.

1. Remove the driver knee bolster. Refer to **Knee Bolster Replacement (Cadillac)** or **Knee Bolster Replacement (Except Cadillac)** .
2. Remove the accelerator pedal position sensor assembly. Refer to **Accelerator Pedal Position Sensor Replacement** .
3. Remove the accelerator pedal bracket nuts.

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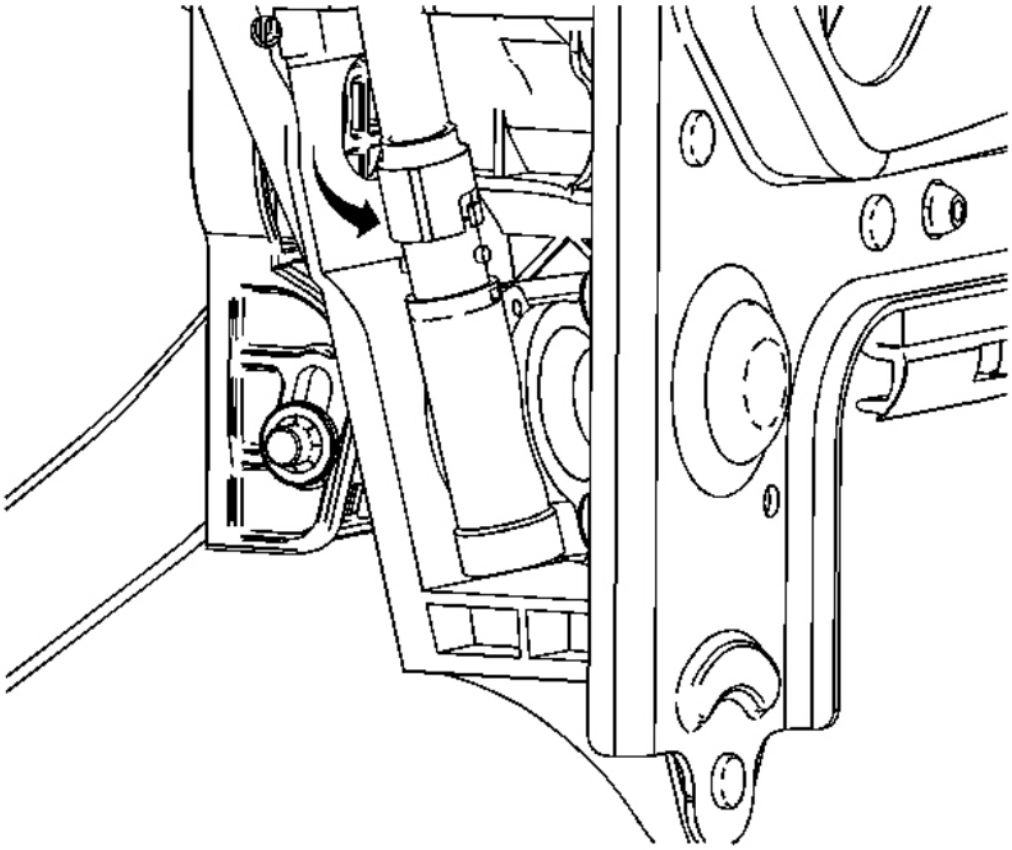

Fig. 12: View Of Accelerator Pedal Actuator Cable Housing
Courtesy of GENERAL MOTORS CORP.

4. Remove the adjustable pedal drive cable from the accelerator pedal actuator using the following procedure:
    1. Twist the cable housing counterclockwise.
    2. Compress the secondary locking tabs located below the twist and lock tabs with a pointed tool and remove the cable from the pedal actuator.

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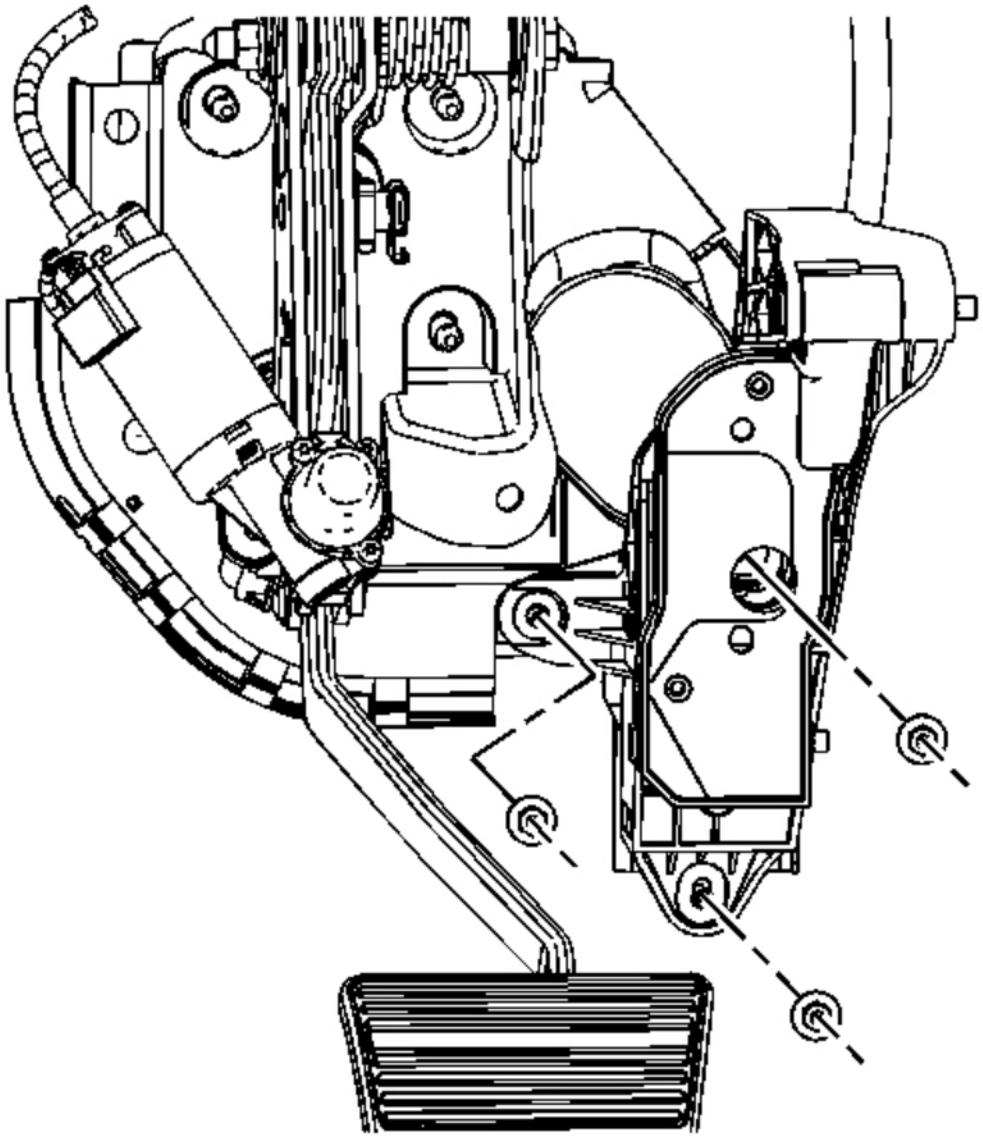

Fig. 13: View Of Accelerator Pedal Bracket Nuts
Courtesy of GENERAL MOTORS CORP.

5. Remove the accelerator pedal bracket nuts from the accelerator pedal bracket.

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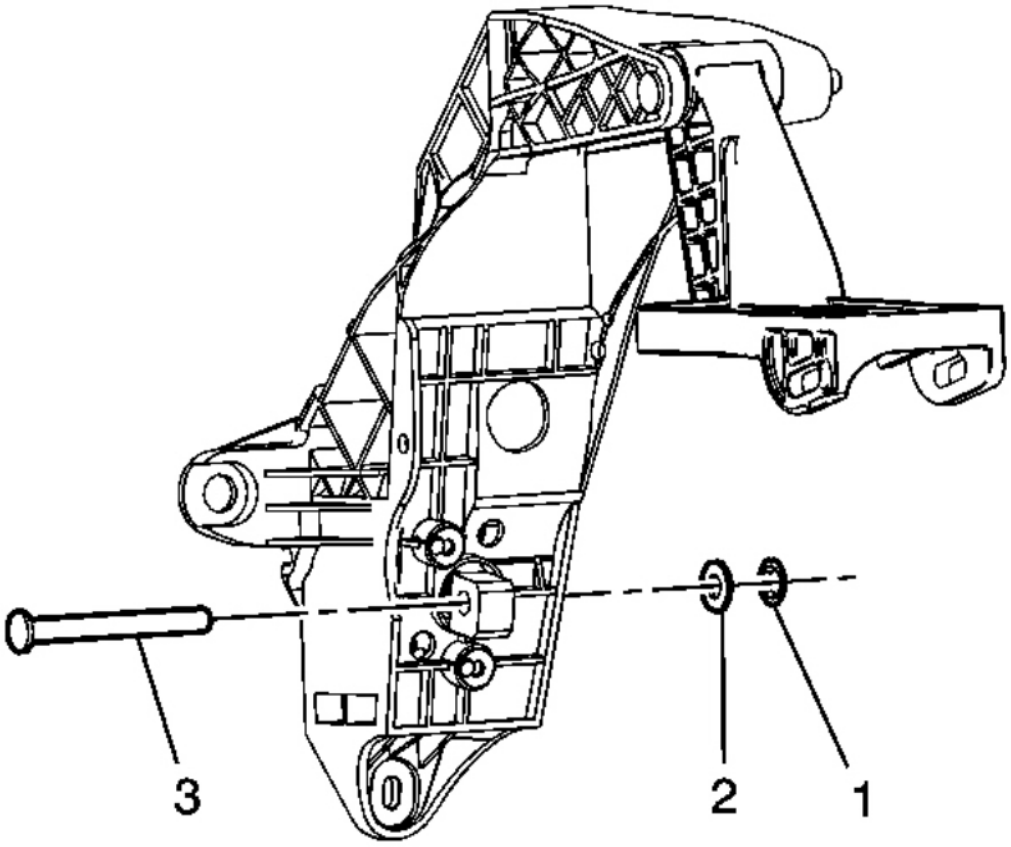

Fig. 14: View Of Accelerator Actuator Lower Pivot Pin Push Nut, Pivot Pin & Washer
Courtesy of GENERAL MOTORS CORP.

6. Remove the accelerator actuator lower pivot pin push nut (1) and washer (2).
7. Remove the accelerator actuator lower pivot pin (3).

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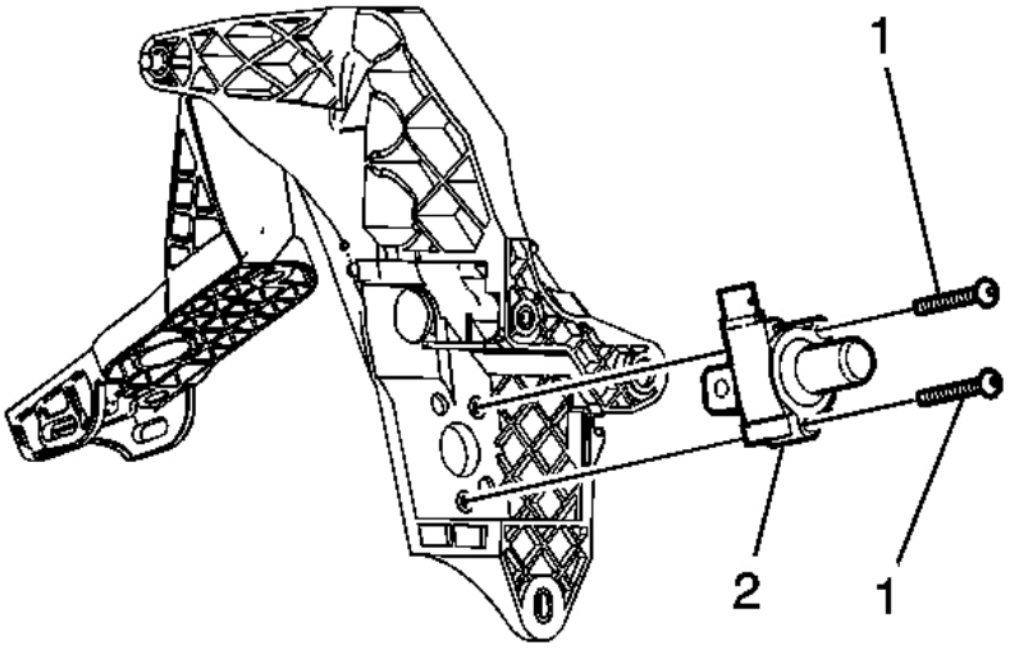

Fig. 15: View Of Accelerator Actuator & Actuator Mounting Screws
Courtesy of GENERAL MOTORS CORP.

8. Remove the accelerator actuator mounting screws (1).
9. Remove the accelerator actuator (2).

Installation Procedure

IMPORTANT: Accurate measurement and adjustment during following steps is critical to ensure the proper step-over distance between the brake and accelerator pedals.

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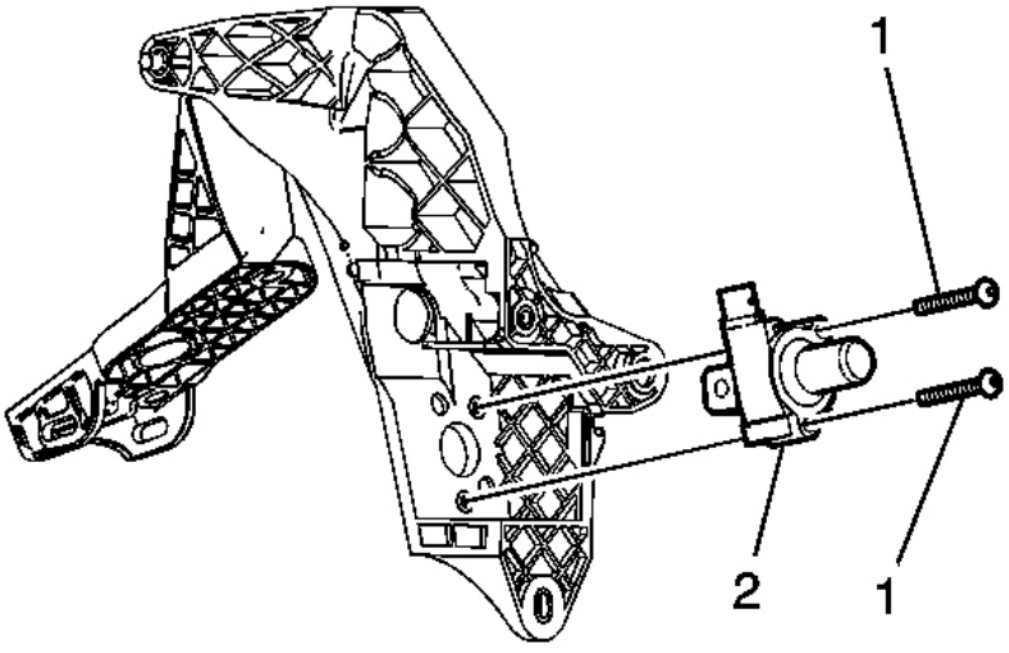

Fig. 16: View Of Accelerator Actuator & Actuator Mounting Screws
Courtesy of GENERAL MOTORS CORP.

1. Install the accelerator actuator (2) to the accelerator pedal bracket.

   NOTE: **Refer to Fastener Notice .**

2. Install the accelerator actuator screws (1).

   Tighten: Tighten the screws to 2.5 N.m (22 lb in).

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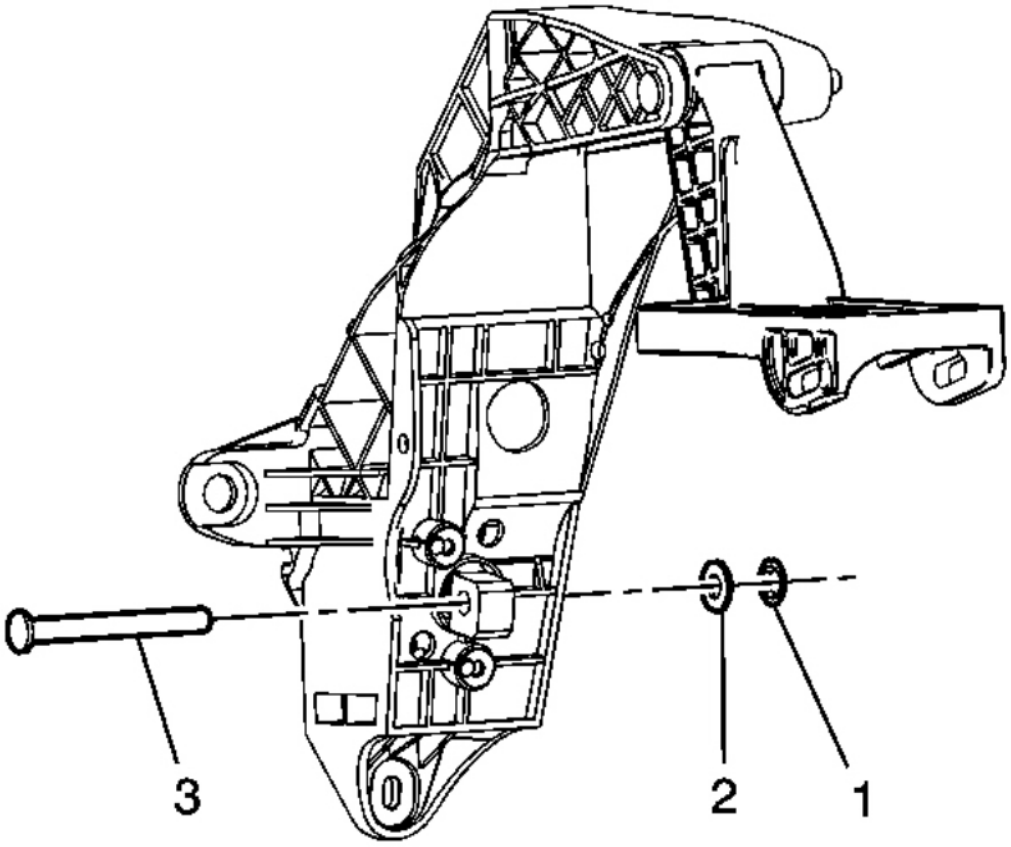

Fig. 17: View Of Accelerator Actuator Lower Pivot Pin Push Nut, Pivot Pin & Washer
Courtesy of GENERAL MOTORS CORP.

3. Install the accelerator actuator lower pivot pin (3).
4. Install the accelerator actuator lower pivot pin washer (2) and push nut (1).

In order to allow proper actuation of the adjustable bracket, the push nut must allow some free play of the pivot pin. The distance between the bracket side wall and the push nut should be 1.7 mm (0.07 in).

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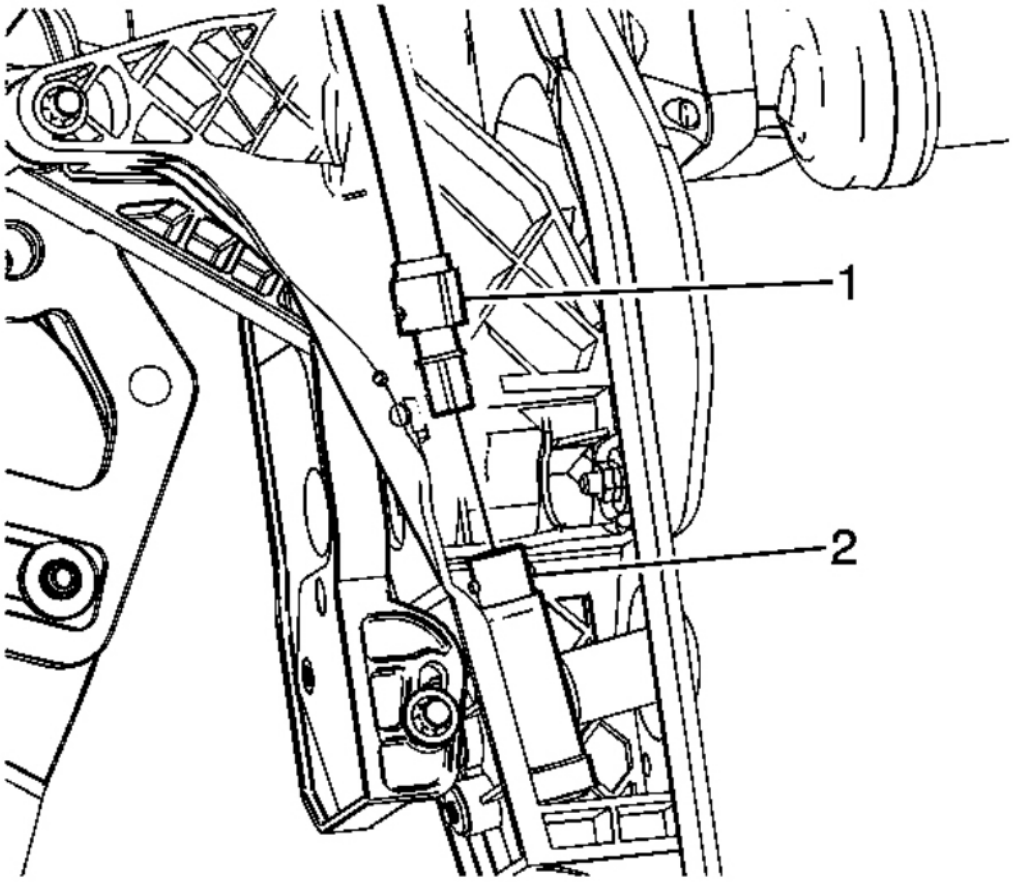

Fig. 18: View Of Accelerator Actuator & Drive Cable
Courtesy of GENERAL MOTORS CORP.

5. Install the drive cable (1) into the accelerator actuator (2) until secured by the secondary locking tabs.

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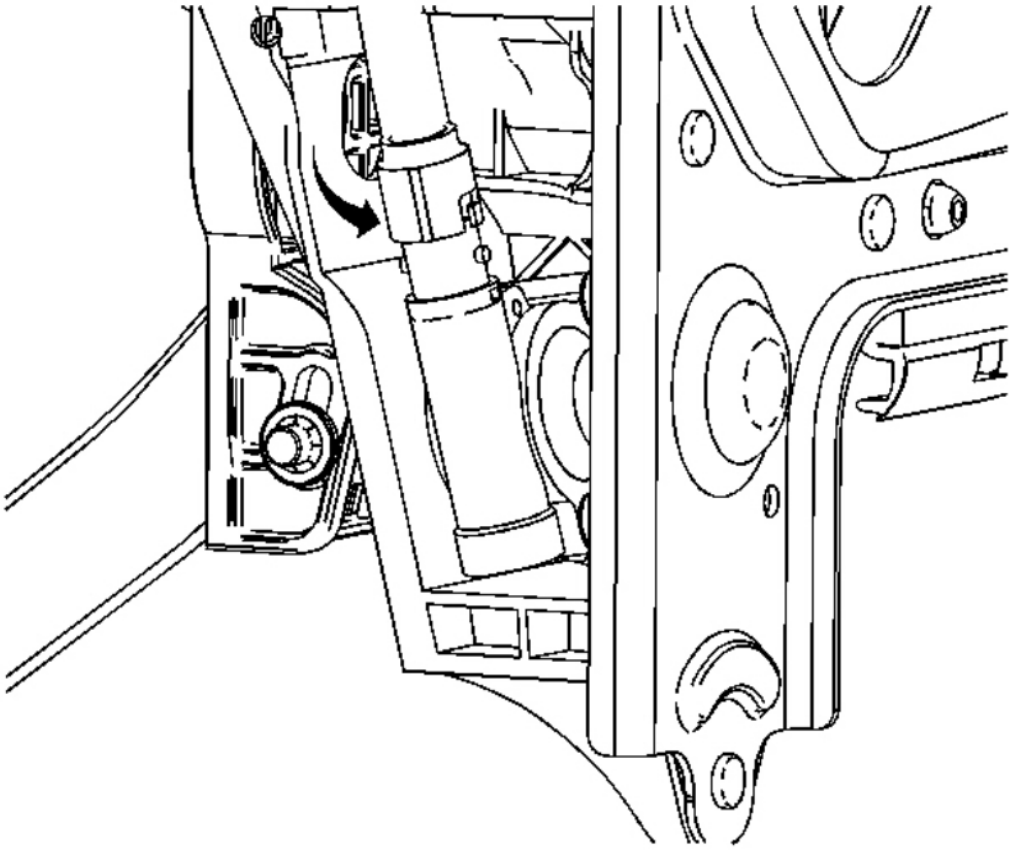

Fig. 19: View Of Accelerator Pedal Actuator Cable Housing
Courtesy of GENERAL MOTORS CORP.

6. Install and twist the cable housing to secure to the accelerator pedal assembly.

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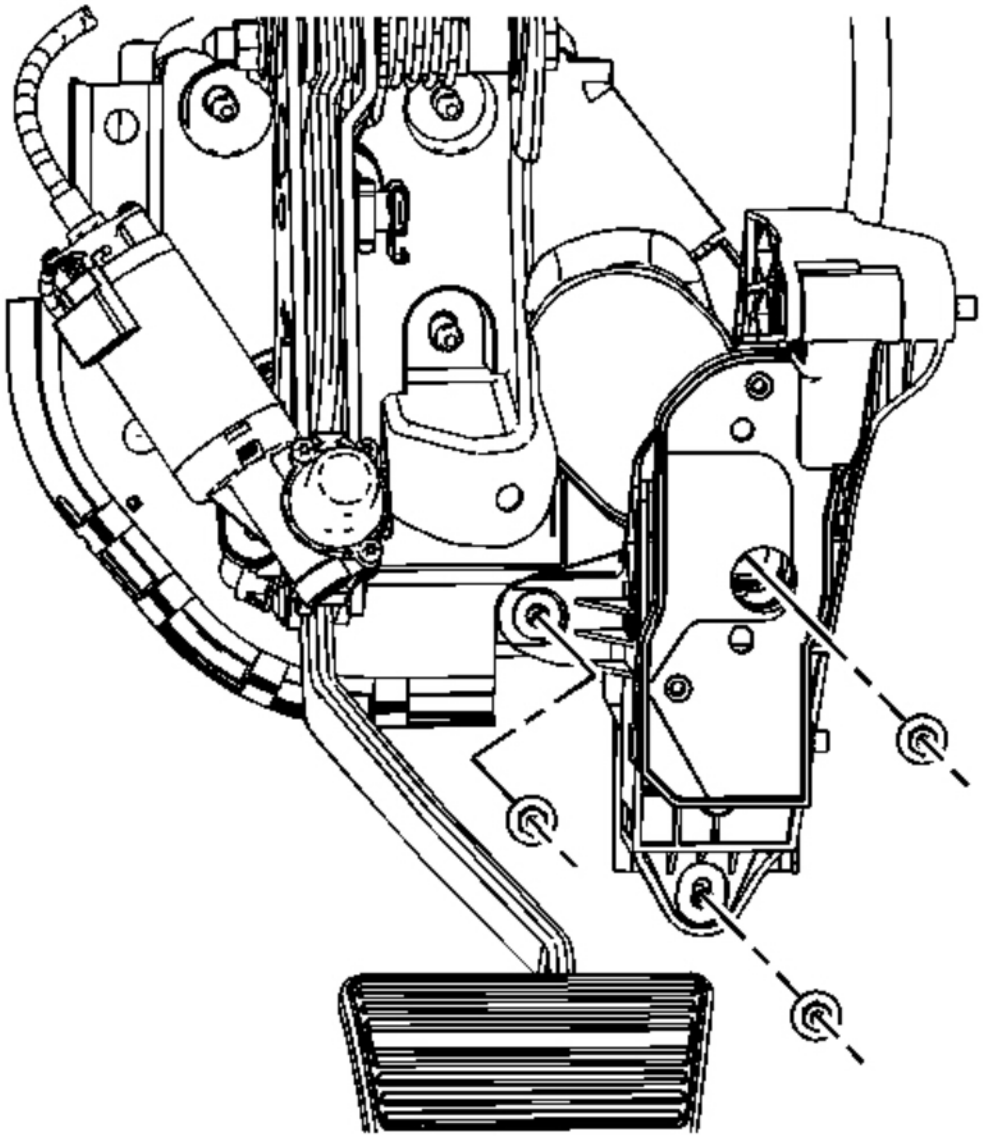

Fig. 20: View Of Accelerator Pedal Bracket Nuts
Courtesy of GENERAL MOTORS CORP.

7. Install the accelerator pedal bracket mounting nuts.

   Tighten: Tighten the nuts to 9 N.m (80 lb in).

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8. Adjust the accelerator pedal mounting bracket using the following procedure:
    1. Remove the screws from the cable housing at the top of the adjustable pedal motor.
    2. Twist the cable housing to unlock the cable from the motor.
    3. Remove the cable from the adjustable pedal motor.
    4. Attach a drill motor or equivalent to the adjustable pedal cable.
    5. Spin the cable until there is a distance of 6.14 mm (0.24 in) between the arrows on the inboard side of the adjustable pedal bracket.
9. Install the accelerator pedal position sensor assembly. Refer to **Accelerator Pedal Position Sensor Replacement** .
10. Install the driver knee bolster. Refer to **Knee Bolster Replacement (Cadillac)** or **Knee Bolster Replacement (Except Cadillac)** .
11. Verify operation of the adjustable pedals.

DESCRIPTION AND OPERATION

ADJUSTABLE PEDALS DESCRIPTION AND OPERATION (W/O MEMORY)

The adjustable pedals system is controlled by the adjustable pedals switch and the adjustable pedals relay and operation can occur only while the transmission selector lever is in the park position. The adjustable pedals assembly is moved forward or rearward by a motor which is fixed to the brake pedal actuator with a drive cable to the accelerator pedal actuator. In an inactive state both of the outputs to the motor are closed to ground. The adjustable pedals switch controls the adjustable pedals relay by applying battery voltage to one of the coils. The adjustable pedals motor is bidirectional and the direction of the pedal assembly travel is determined by which of the relay output circuits is switched to battery positive voltage while the other remains grounded. The adjustable pedals system uses the same motor and sensor assembly even when it is not equipped with the memory seats. The adjustable pedals position sensor is not used and does not have any circuits connected. The adjustable pedals position manually controlled by activating the switch in the forward or rearward direction until the desired position is reached.

ADJUSTABLE PEDALS DESCRIPTION AND OPERATION (WITH MEMORY)

The adjustable pedals system is controlled by the adjustable pedal switch and the driver position module and operation can occur only while the transmission selector lever is in the park position. The adjustable pedals assembly is moved forward or backward by a motor which is fixed to the brake pedal actuator with a drive cable to the accelerator pedal actuator. The adjustable pedals motor is controlled directly by an h-bridge driver circuit within the driver position module. In an inactive state both of the outputs to the motor are closed to ground. The driver position module controls the adjustable pedals motor by applying battery voltage to one of the outputs. The adjustable pedals motor is bidirectional and the direction of the pedal assembly travel is determined by which of the motor control circuits is switched to battery positive voltage while the other remains grounded. The adjustable pedals forward and rearward switches are inputs to the driver position module. The driver position module supplies the switch assembly with a battery positive reference voltage. When the switch is operated to the forward or rearward direction, battery positive voltage is applied to the forward or rearward switch signal inputs. The adjustable pedals system is capable of operating in conjunction with the memory seat system. The driver position module monitors the location of the adjustable pedals using the adjustable pedals position sensor. The adjustable pedals position sensor is supplied with 5-volt reference and ground circuits from

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the driver position module. The position sensor signal circuit is referenced from ground within the driver seat module. The signal voltage monitored by the driver seat module ranges from 0.39-4.58 volts and is determined by the wiper location on the resistor within the position sensor. The position sensor signal circuit voltage level is used by the driver seat module to determine the position of the adjustable pedals when storing or recalling memory position settings. The memory 1 and 2 switches are an inputs to the driver door module and when a memory recall function is activated, the driver door module relays information through the GMLAN Serial Data circuit to the driver position module in order to operate the adjustable pedals assembly in the appropriate direction until the stored memory position is reached.

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