

ACCESSORIES & EQUIPMENT**Adjustable Pedals - Escalade, Suburban, Tahoe, Yukon****SPECIFICATIONS****FASTENER SPECIFICATIONS**

Application	Specification	
	Metric	English
Accelerator Pedal Adjuster Actuator Nut	9 N.m	80 lb in
Accelerator Pedal Position Sensor Bolt	9 N.m	80 lb in

SCHEMATIC WIRING DIAGRAMS**ADJUSTABLE PEDAL WIRING SCHEMATICS****Adjustable Pedals (JF4 without A45)**



Adjustable Pedals (X88 or Z88 with JF4 and A45)



Adjustable Pedals (Z75)

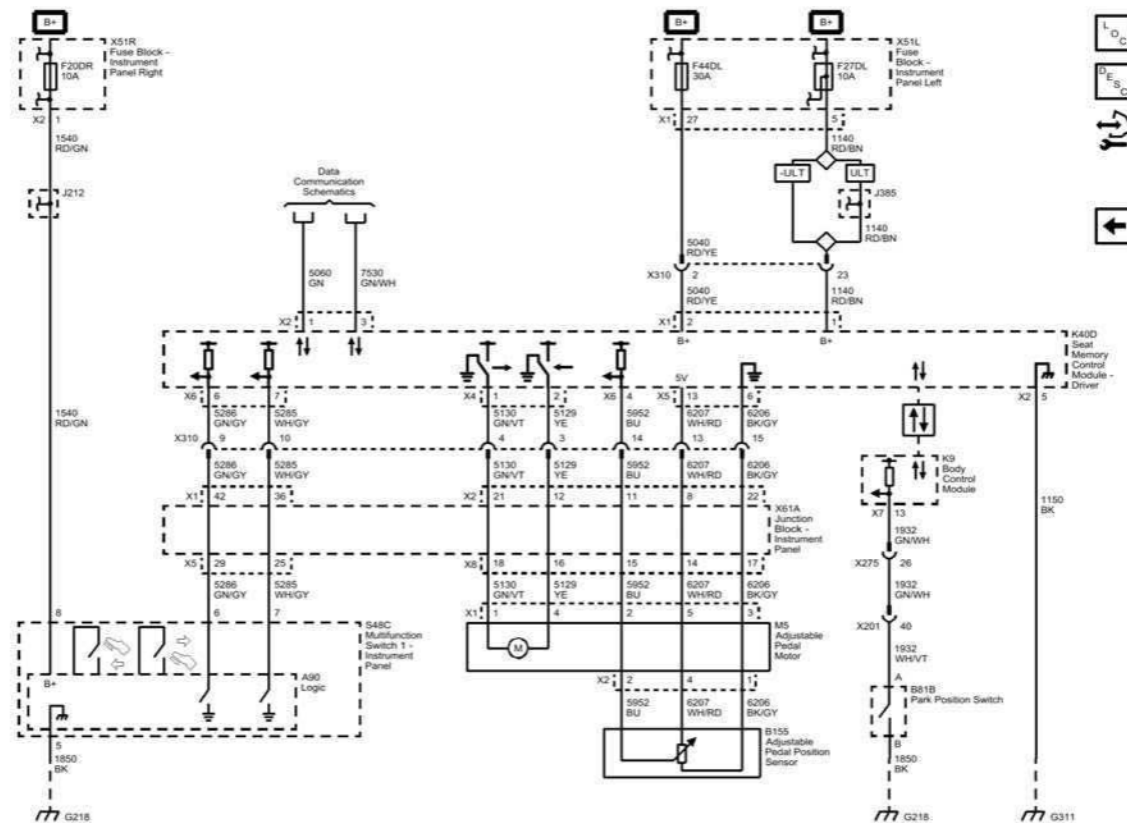


Fig. 3: Adjustable Pedals (Z75)

Courtesy of GENERAL MOTORS COMPANY

DIAGNOSTIC INFORMATION AND PROCEDURES

DTC B3604 OR B3605: ADJUSTABLE PEDAL SWITCH CIRCUIT PROTECTION TIME-OUT (Z75)

Diagnostic Instructions

- Perform the **Diagnostic System Check - Vehicle** prior to using this diagnostic procedure.
- Review **Strategy Based Diagnosis** for an overview of the diagnostic approach.
- Refer to **Diagnostic Procedure Instructions** to provide an overview of each diagnostic category.

DTC Descriptors

DTC B3604 59

Adjustable Pedal Forward Switch Circuit Protection Time-Out

DTC B3605 59

Adjustable Pedal Rearward Switch Circuit Protection Time-Out

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Adjustable Pedals Forward Switch Signal	B3604 59	1	-	-
Adjustable Pedals Rearward Switch Signal	B3605 59	1	-	-
Ground	-	1	-	-
1. Adjustable Pedals Malfunction				

Circuit/System Description

Ground is supplied at all times to the adjustable pedal switch. The adjustable pedal forward and rearward switches are inputs to the driver seat memory control module. When the switch is operated to the forward or rearward direction, it supplies a ground path for the signal inputs from the driver seat memory control module. The driver seat memory control module will detect the voltage drop in the signal circuit and will command the adjustable pedals motor to move in direction requested.

Conditions for Running the DTC

The seat memory control module must be powered.

Conditions for Setting the DTC

The driver seat memory control module has detected a short to ground in the adjustable pedals switch signal circuit for greater than 60 s.

Action Taken When the DTC Sets

The driver seat memory control module will ignore the signal and the adjustable pedal functions will be disabled

Conditions for Clearing the DTC

- The current DTC will clear and set the code to history 3 s after the fault is no longer present and the power mode changes to OFF then back to ACC or RUN.
- The history DTC will clear after 50 consecutive fault-free ignition cycles have occurred.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Adjustable Pedals Description and Operation (Without A45) Adjustable Pedals Description and Operation (With A45)

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON, vehicle in P (Park).
2. Verify the scan tool Adjustable Pedal Control Switch parameter changes while when pushing the appropriate switch on the S48C Multifunction Switch 1-Instrument Panel.
 - **If the parameter does not change**

Refer to Circuit/System Testing.

- **If the parameter changes**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S48C Multifunction Switch 1-Instrument Panel. It may take up to 2 minutes for all vehicle systems to power down.

2. Test for less than 10 Ω between the ground circuit terminal 5 and ground.

- **If 10 Ω or greater**

1. Ignition OFF.

2. Test for less than 2 Ω in the ground circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , repair the open/high resistance in the ground connection.

- **If less than 10 Ω**

3. Ignition ON.

4. Verify the scan tool Adjustable Pedal Control Switch parameter is Inactive.

- **If not Inactive**

1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver.

2. Test for infinite resistance between the signal circuit terminal 6 and ground.

- If less than infinite resistance, repair the short to ground on the circuit.

3. Test for infinite resistance between the signal circuit terminal 7 and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the K40D Seat Memory Control Module-Driver.

- **If Inactive**

5. Install a 3 A fused jumper wire between the signal circuit terminal 6 and the ground circuit terminal 5.

6. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.

- **If not Active**

1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.

2. Test for less than 1 V between the signal circuit and ground.

- If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If Active**
7. Install a 3 A fused jumper wire between the signal circuit terminal 7 and the ground circuit terminal 5.
 8. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If Active**
 9. Test or replace the S48C Multifunction Switch 1-Instrument Panel.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S48C Multifunction Switch 1-Instrument Panel.
2. Test for infinite resistance between the signal terminal 6 and ground terminal 5 with the switch in the center position.
 - **If less than infinite resistance**

Replace the S48C Multifunction Switch 1-Instrument Panel.
 - **If infinite resistance**
3. Test for infinite resistance between the signal terminal 7 and ground terminal 5 with the switch in the center position.
 - **If less than infinite resistance**

Replace the S48C Multifunction Switch 1-Instrument Panel.

- **If infinite resistance**

4. Test for less than 2 Ω between the signal circuit terminal 6 and ground terminal 5 while pressing the switch in the Forward position.

- **If 2 Ω or greater**

Replace the S48C Multifunction Switch 1-Instrument Panel.

- **If less than 2 Ω**

5. Test for less than 2 Ω between the signal circuit terminal 7 and ground terminal 5 while pressing the switch in the Rearward position.

- **If 2 Ω or greater**

Replace the S48C Multifunction Switch 1-Instrument Panel.

- **If less than 2 Ω**

6. All OK.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- Refer to [Brake and Accelerator Pedal Adjuster Switch Replacement \(Cadillac\)Brake and Accelerator Pedal Adjuster Switch Replacement \(Chevrolet, GMC\)](#)
- Refer to [Control Module References](#) for driver seat memory control module replacement, programming and setup

DTC B3604 OR B3605: ADJUSTABLE PEDAL SWITCH CIRCUIT PROTECTION TIME-OUT (X88 OR Z88)

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

DTC Descriptors

DTC B3604 59

Adjustable Pedal Forward Switch Circuit Protection Time-Out

DTC B3605 59

Adjustable Pedal Rearward Switch Circuit Protection Time-Out

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Adjustable Pedals Forward Switch Signal	B3604 59	1	-	-
Adjustable Pedals Rearward Switch Signal	B3605 59	1	-	-
Ground	-	1	-	-
1. Adjustable Pedals Malfunction				

Circuit/System Description

Ground is supplied at all times to the adjustable pedal switch. The adjustable pedal forward and rearward switches are inputs to the driver seat memory control module. When the switch is operated to the forward or rearward direction, it supplies a ground path for the signal inputs from the driver seat memory control module. The driver seat memory control module will detect the voltage drop in the signal circuit and will command the adjustable pedals motor to move in direction requested.

Conditions for Running the DTC

The seat memory control module must be powered.

Conditions for Setting the DTC

The driver seat memory control module has detected a short to ground in the adjustable pedals switch signal circuit for greater than 60 sec.

Action Taken When the DTC Sets

The driver seat memory control module will ignore the signal and the adjustable pedal functions will be disabled

Conditions for Clearing the DTC

- The current DTC will clear and set the code to history 3 s after the fault is no longer present and the power mode changes to OFF then back to ACC or RUN.

- The history DTC will clear after 50 consecutive fault-free ignition cycles have occurred.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Adjustable Pedals Description and Operation (Without A45)Adjustable Pedals Description and Operation (With A45)

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON, vehicle in P (Park).
2. Verify the scan tool Adjustable Pedal Control Switch parameter changes while when pushing the appropriate switch on the S48A Multifunction Switch-Instrument Panel.
 - **If the parameter does not change**
Refer to Circuit/System Testing.
 - **If the parameter changes**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S48A Multifunction Switch-Instrument Panel. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 8 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , repair the open/high resistance in the ground connection.
 - **If less than 10 Ω**
3. Ignition ON.
4. Verify the scan tool Adjustable Pedal Control Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver.
 2. Test for infinite resistance between the signal circuit terminal 6 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 3. Test for infinite resistance between the signal circuit terminal 7 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K40D Seat Memory Control Module-Driver.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal circuit terminal 11 and the ground circuit terminal 8.
6. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.

- If less than 1 V

3. Test for less than 2 Ω in the signal circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.

- **If Active**

7. Install a 3 A fused jumper wire between the signal circuit terminal 12 and the ground circuit terminal 8.

8. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.

- **If not Active**

1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.

2. Test for less than 1 V between the signal circuit and ground.

- If 1 V or greater, repair the short to voltage on the circuit.
- If less than 1 V

3. Test for less than 2 Ω in the signal circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.

- **If Active**

9. Test or replace the S48A Multifunction Switch-Instrument Panel.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch-Instrument Panel.

2. Test for infinite resistance between the signal terminal 11 and ground terminal 8 with the switch in the center position.

- **If less than infinite resistance**

Replace the S48A Multifunction Switch-Instrument Panel

- **If infinite resistance**

3. Test for infinite resistance between the signal terminal 12 and ground terminal 8 with the switch in the center position.

- **If less than infinite resistance**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If infinite resistance**

4. Test for less than 2 Ω between the signal circuit terminal 11 and ground terminal 8 while pressing the switch in the Forward position.

- **If 2 Ω or greater**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If less than 2 Ω**

5. Test for less than 2 Ω between the signal circuit terminal 12 and ground terminal 8 while pressing the switch in the Rearward position.

- **If 2 Ω or greater**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If less than 2 Ω**

6. All OK.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- Refer to [Brake and Accelerator Pedal Adjuster Switch Replacement \(Cadillac\)Brake and Accelerator Pedal Adjuster Switch Replacement \(Chevrolet, GMC\)](#)
- Refer to [Control Module References](#) for driver seat memory control module replacement, programming and setup

DTC B3606: ADJUSTABLE PEDAL POSITION SENSOR CIRCUIT

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

DTC Descriptors

DTC B3606 01

Adjustable Pedal Position Sensor Circuit Short to Battery

DTC B3606 06

Adjustable Pedal Position Sensor Circuit Low Voltage/Open

DTC B3606 5A

Adjustable Pedal Position Sensor Circuit Not Plausible

DTC B3606 61

Adjustable Pedal Position Sensor Circuit Stuck

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
5-Volt Reference	B3606 06	B3606 06	B3601 01	B3601 5A
Signal	B3606 06	B3606 06	B3601 01	B3601 5A
Low Reference	-	B3606 06	-	-

Circuit/System Description

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

Conditions for Running the DTC

System voltage to the driver seat memory control module must be 9-16 V.

Conditions for Setting the DTC**B3606 01**

The driver seat memory control module has detected a short to battery on the position sensor signal circuit

B3606 06

The driver seat memory control module has detected an open/high resistance on the position sensor signal circuit

B3606 5A

The driver seat memory control module has detected erratic voltage or voltage beyond the expected range on the position sensor signal circuit

B3606 61

The driver seat memory control module has commanded the adjustable pedals but does not detect a voltage change in the position sensor signal circuit

Action Taken When the DTC Sets

The driver seat memory control module will suspended memory recall functions for the adjustable pedals for as long as the fault is present

Conditions for Clearing the DTC

- The DTC becomes history when the conditions for setting the DTC are no longer present.
- The history DTC clears after 100 malfunction-free ignition cycles.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Adjustable Pedals Description and Operation (Without A45)Adjustable Pedals Description and Operation (With A45)

Electrical Information Reference

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

- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON
2. Verify the scan tool Adjustable Pedals Horizontal Position parameter is between 0.45-4.55 V and varies while commanding the pedals FORWARD and BACKWARD with the adjustable pedal switch.

- **If not between 0.45-4.55 V or does not change**

Refer to Circuit/System Testing.

- **If between 0.45-4.55 V and changes**

3. All OK.

Circuit/System Testing

1. Ignition OFF, disconnect the X5 and X6 harness connectors at the K40D Seat Memory Control Module-Driver.
2. Test for infinite resistance between the circuit terminals listed below and ground:

- Signal circuit terminal 4 X6
- 5 V reference circuit terminal 13 X5
- Low reference circuit terminal 6 X5

- **If less than infinite resistance**

1. Ignition OFF, disconnect the X2 harness connector at the M5 Adjustable Pedal Motor.
2. Test for infinite resistance between each control circuit and ground.

- If less than Infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the B155 Adjustable Pedal Position Sensor.

- **If infinite resistance**

3. Ignition ON
4. Test for less than 1 V between the circuit terminals listed below and ground:

- Signal circuit terminal 4 X6
- 5 V reference circuit terminal 13 X5
- Low reference circuit terminal 6 X5

- **If 1 V or greater**

1. Ignition OFF, disconnect the X2 harness connector at the M5 Adjustable Pedal Motor.
2. Test for less than 1 V between each control circuit and ground.
 - If greater than 1 V, repair the short to voltage on the circuit.
 - If less than 1 V, replace the B155 Adjustable Pedal Position Sensor.

- **If less than 1 V**

5. Ignition OFF

6. Disconnect the X1 harness connector at the M5 Adjustable Pedal Motor.

7. Test for less than 2 Ω between the circuit terminals listed below:

- K40D Seat Memory Control Module-Driver signal circuit terminal 4 X6 and the M5 Adjustable Pedal Motor 2 X1
- K40D Seat Memory Control Module-Driver 5 V reference circuit terminal 13 X5 and the M5 Adjustable Pedal Motor 5 X1
- K40D Seat Memory Control Module-Driver low reference circuit terminal 6 X5 and the M5 Adjustable Pedal Motor 3 X1
- **If 2 Ω or greater**

Repair the open/high resistance in the circuit.

- **If less than 2 Ω**

8. Replace the K40D Seat Memory Control Module-Driver.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- Refer to [Brake and Accelerator Pedal Adjuster Position Sensor Replacement](#)
- Refer to [Control Module References](#) for driver seat memory control module replacement, programming and setup

DTC B3631: ADJUSTABLE FOOT PEDAL INHIBIT CIRCUIT

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

DTC Descriptor

DTC B3631 00

Adjustable Foot Pedal Inhibit Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Park Enable Relay Control	B3631 00	1	2	-
1. Adjustable Pedal Inhibit Inoperative 2. Adjustable Pedals Inoperative				

Circuit/System Description

Voltage to the adjustable pedal switch is supplied through the park enable relay while in a de-energized state. The transmission park relay is controlled by the body control module (BCM) through a low side drive control circuit and will be energized whenever the ignition is in the accessory, run, or crank positions and the transmission is in the P (park) position.

Conditions for Running the DTC

- The ignition is ON.
- The BCM attempts to energize the transmission park relay.

Conditions for Setting the DTC

The BCM detects a short to ground on the transmission park relay control circuit while attempting to activate the output.

Action Taken When the DTC Sets

The adjustable pedal functions will be disable for as long as the fault is current

Conditions for Clearing the DTC

- The DTC becomes history when the conditions for setting the DTC are no longer present.
- The history DTC clears after 100 malfunction-free ignition cycles.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Adjustable Pedals Description and Operation (Without A45)Adjustable Pedals Description and Operation (With A45)

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the scan tool In Park Switch Status parameter changes from Off to On while moving the transmission shift selector from the P (park) position.
 - **If the parameter does not change**

Refer to **Ignition Can/Cannot Be Turned Off with Transmission in Any Gear**

- **If the parameter changes**

3. Transmission shift selector in the P (park) position.
4. Verify the brake and accelerator pedals move while pressing the adjustable pedal switch in both directions.

- **If the brake and accelerator pedals do not move**

Refer to Circuit/System Testing

- **If the brake and accelerator pedals move**

5. All OK.

Circuit/System Testing

1. Ignition OFF, disconnect the X1 harness connector at the X51L Fuse Block-Instrument Panel Left. Ignition ON
2. Connect a test lamp between the control circuit terminal 27 and B+.
3. Verify the test lamp turns ON and OFF when moving the transmission selector between P (park) and R (reverse).

- **If the test lamp is always OFF**

1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module, ignition ON.
2. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V

3. Ignition OFF.

4. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K9 Body Control Module.

- **If the test lamp is always ON**

1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K9 Body Control Module.

- **If the test lamp turns ON and OFF**

4. Replace the X51L Fuse Block - Instrument Panel Left

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- Refer to [Instrument Panel Wiring Harness Junction Block Replacement](#)
- Refer to [Control Module References](#) for BCM replacement, programming and setup

SYMPTOMS - ADJUSTABLE PEDALS

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

1. 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 \(Without A45\)Adjustable Pedals Description and Operation \(With A45\)](#).

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the adjustable pedal system. Refer to [Checking Aftermarket Accessories](#) .
- Inspect the adjuster cables for proper connections or damage.
- Inspect the adjuster screws and slides for damage or conditions which may obstruct movement.

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 Malfunction \(JF4 Without A45\)Adjustable Pedals Malfunction \(X88 or Z88 With JF4, A45\)Adjustable Pedals Malfunction \(Z75 With JF4, A45\)](#) in order to diagnose the symptom.

ADJUSTABLE PEDALS MALFUNCTION (JF4 WITHOUT A45)

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Transmission Park Position Relay B+	2	2	-	-
Adjustable Pedal Forward Relay Control	2	2	2	-
Adjustable Pedal Rearward Relay Control	2	2	2	-
Adjustable Pedal Motor Control Terminal 1	2	2	2	-
Adjustable Pedal Motor Control Terminal 2	2	2	2	-
Transmission Park Position Relay Control	B3631 00	1	2	-
Adjustable Pedal Switch Ground	-	2	-	-
1. Adjustable Pedal Inhibit Inoperative 2. Adjustable Pedals Inoperative				

Circuit/System Description

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

Reference Information

Schematic Reference

[Adjustable Pedal Schematics](#)

Connector End View Reference

[COMPONENT CONNECTOR END VIEWS - INDEX](#)

Description and Operation

Adjustable Pedals Description and Operation (Without A45)

Electrical Information Reference

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

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON
2. Verify the scan tool In Park Switch Status parameter changes from Off to On while moving the transmission shift from the P (park) position.
 - **If the parameter does not change**

Refer to Ignition Can/Cannot Be Turned Off with Transmission in Any Gear
 - **If the parameter changes**
3. Verify the adjustable pedals move forward and rearward when using the appropriate switch on the S48A Multifunction Switch - Instrument Panel.
 - **If the adjustable pedals do not move as commanded**

Refer to Circuit/System Testing
 - **If the adjustable pedals move as commanded**
4. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S48A Multifunction Switch - Instrument Panel. It may take

up to 2 min for all vehicle systems to power down.

2. Test for less than 10 Ω between the ground circuit terminal 8 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , repair the open/high resistance in the ground connection.
 - **If less than 10 Ω**
3. Connect the harness connector at the S48A Multifunction Switch - Instrument Panel and disconnect the X1 and X2 harness connector at the X51L Fuse Block- Instrument Panel Left.
4. Test for less than 10 Ω between the ground circuit terminal 44 X2 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , repair the open/high resistance in the ground connection.
 - **If less than 10 Ω**
5. Connect a test lamp between the control circuit terminal 43 X2 and B+.
6. Verify the test lamp turns ON and OFF when moving the transmission selector between P (park) and R (reverse).
 - **If the test lamp is always OFF**
 1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module, ignition ON.
 2. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Ignition OFF.
 4. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K9 Body Control Module.
 - **If the test lamp is always ON**

1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.
2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K9 Body Control Module.
- **If the test lamp turns ON and OFF**
7. Connect a test lamp between the control circuit terminal 15 X1 and B+.
8. Verify the test lamp turns ON and OFF pressing the Forward switch on the S48A Multifunction Switch - Instrument Panel.
 - **If the test lamp is always OFF**
 1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch - Instrument Panel, ignition ON.
 2. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Ignition OFF.
 4. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , test or replace the S48A Multifunction Switch - Instrument Panel.
 - **If the test lamp is always ON**
 1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch - Instrument Panel.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, test or replace the S48A Multifunction Switch - Instrument Panel.
 - **If the test lamp turns ON and OFF**
9. Connect a test lamp between the control circuit terminal 33 X1 and B+.
10. Verify the test lamp turns ON and OFF pressing the Rearward switch on the S48A Multifunction Switch - Instrument Panel.
 - **If the test lamp is always OFF**
 1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch - Instrument Panel, ignition ON.
 2. Test for less than 1 V between the control circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V

3. Ignition OFF.
4. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , test or replace the S48A Multifunction Switch - Instrument Panel.
- **If the test lamp is always ON**
 1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch - Instrument Panel.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, test or replace the S48A Multifunction Switch - Instrument Panel.
- **If the test lamp turns ON and OFF**
11. Ignition OFF, connect the X1 and X2 harness connector at the X51L Fuse Block- Instrument Panel Left and disconnect the harness connector at the M5 Adjustable Pedal Motor.
12. Test for less than 10 Ω between the control circuit terminal 1 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF, disconnect the harness connector at the X51L Fuse Block- Instrument Panel Left.
 2. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the X51L Fuse Block- Instrument Panel Left.
 - **If less than 10 Ω**
13. Test for less than 10 Ω between the control circuit terminal 4 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF, disconnect the harness connector at the X51L Fuse Block- Instrument Panel Left.
 2. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the X51L Fuse Block- Instrument Panel Left.
 - **If less than 10 Ω**
14. Connect a test lamp between control circuit terminal 1 and control circuit terminal 4, ignition ON.
15. Verify the test lamp turns ON when commanding the Forward and Reverse states when pressing the appropriate switch on the S48A Multifunction Switch - Instrument Panel

- **If the test lamp remains OFF during either of the commands**

1. Ignition OFF, remove the test lamp, disconnect the harness connector at the X51L Fuse Block- Instrument Panel Left.
2. Test for infinite resistance between each control circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the X51L Fuse Block- Instrument Panel Left.

- **If the test lamp turns ON during each of the commands**

16. Test or replace the M5 Adjustable Pedal Motor.

Component Testing

Multifunction Switch

1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch-Instrument Panel.
2. Test for infinite resistance between the signal terminal 15 and the ground terminal 8 with the switch in the center position.

- **If less than infinite resistance**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If infinite resistance**

3. Test for infinite resistance between the signal terminal 16 and the ground terminal 8 with the switch in the center position.

- **If less than infinite resistance**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If infinite resistance**

4. Test for less than 2 Ω between the signal terminal 16 and the ground terminal 8 with the switch in the Forward position.

- **If 2 Ω or greater**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If less than 2 Ω**

5. Test for less than 2 Ω between the signal terminal 15 and the ground terminal 8 with the switch in the Rearward position.

- **If 2 Ω or greater**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If less than 2 Ω**

6. All OK

Adjustable Pedal Motor

1. Ignition OFF, disconnect the harness connector at the M5 Adjustable Pedal Motor.
2. Install a 15 A fused jumper wire between one of the control terminals and 12 V. Momentarily install a jumper wire between the other control terminal and ground. Reverse the jumper wires at least two times, the M5 Adjustable Pedal Motor should perform the Forward and Rearward functions.

- **If the M5 Adjustable Pedal Motor does not perform the Forward and Rearward functions**

Replace the M5 Adjustable Pedal Motor.

- **If the M5 Adjustable Pedal Motor performs the Forward and Rearward functions**

3. All OK

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- Refer to [Brake Pedal Assembly Replacement \(With JF4\)](#)
- Refer to [Brake and Accelerator Pedal Adjuster Switch Replacement \(Cadillac\)Brake and Accelerator Pedal Adjuster Switch Replacement \(Chevrolet, GMC\)](#)
- Refer to [Control Module References](#) for BCM replacement, programming and setup

ADJUSTABLE PEDALS MALFUNCTION (X88 OR Z88 WITH JF4, A45)

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Position Sensor 5 V Reference	B3606 01	B3606 06	B3606 06	-
Position Sensor Signal	B3606 06	B3606 06	B3606 06	-
Forward Switch Signal	B3604 59	2	-	-
Rearward Switch Signal	B3605 59	2	-	-
Adjustable Pedal Motor Control 1 X1	B3920 02	1	B3920 01	-
Adjustable Pedal Motor Control 4 X1	B3920 02	1	B3920 01	-
Position Sensor Low Reference	-	B3606 06	-	-
Instrument Panel Multifunction Switch Ground	-	1	-	-
1. Adjustable Pedals Motor Inoperative 2. Adjustable Pedals Switch Malfunction				

Circuit/System Description

The adjustable pedal assembly is moved forward or backward by a motor which is fixed to the accelerator pedal actuator with a drive cable to the brake pedal. The seat memory control module controls the adjustable pedal motor by applying battery voltage to one of the outputs and ground to the other. The adjustable pedal 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 is grounded. The adjustable pedal forward and rearward switches are inputs to the seat memory control module. When the switch is operated to the forward or rearward direction, it supplies a ground path for the signal inputs from the seat memory control module.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Adjustable Pedals Description and Operation (With A45)

Electrical Information Reference

- [Circuit Testing](#)
- [Connector Repairs](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

Scan Tool Reference

[Control Module References](#) for scan tool information

Circuit/System Verification

1. Ignition ON
2. Verify the scan tool In Park Switch Status parameter changes from Off to On while moving the transmission shift selector from the P (park) position.
 - **If the parameter does not change**

Refer to [Ignition Can/Cannot Be Turned Off with Transmission in Any Gear](#)
 - **If the parameter changes**
3. Verify the scan tool Adjustable Pedal Control Switch parameter changes from Inactive to Active while pressing the adjustable pedal switch in both directions.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Adjustable Pedal Control Switch Malfunction.
 - **If the parameter changes**
4. Command the Adjustable Pedals Forward/Rearward with a scan tool. The brake and accelerator pedals should move in the commanded direction.
 - **If the pedals do not move in the commanded direction**

Refer to Circuit/System Testing - Adjustable Pedal Motor Malfunction.
 - **If the pedals move in the commanded direction**

5. Verify the scan tool Adjustable Pedals Horizontal Position parameter is between 0.45-4.55 V and changes while pressing the adjustable pedal switch in both directions.

- **If not between 0.45-4.55 V or does not change**

Refer to Circuit/System Testing - Adjustable Pedal Position Sensor Circuit Malfunction

- **If between 0.45-4.55 V and changes**

6. All OK.

Circuit/System Testing

Adjustable Pedal Control Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S48A Multifunction Switch-Instrument Panel. It may take up to 2 minutes for all vehicle systems to power down.

2. Test for less than 10 Ω between the ground circuit terminal 8 and ground.

- **If 10 Ω or greater**

1. Ignition OFF.

2. Test for less than 2 Ω in the ground circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , repair the open/high resistance in the ground connection.

- **If less than 10 Ω**

3. Ignition ON.

4. Verify the scan tool Adjustable Pedal Control Switch parameter is Inactive.

- **If not Inactive**

1. Ignition OFF, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver.

2. Test for infinite resistance between the signal circuit terminal 6 and ground.

- If less than infinite resistance, repair the short to ground on the circuit.

3. Test for infinite resistance between the signal circuit terminal 7 and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the K40D Seat Memory Control Module-Driver.

- **If Inactive**

5. Install a 3 A fused jumper wire between the signal circuit terminal 11 and the ground circuit terminal 8.
6. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If Active**
7. Install a 3 A fused jumper wire between the signal circuit terminal 12 and the ground circuit terminal 8.
8. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.
 - **If not Active**
 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If Active**
9. Test or replace the S48A Multifunction Switch-Instrument Panel.

Adjustable Pedal Motor Malfunction

1. Ignition OFF, disconnect the X1 harness connector at the M5 Adjustable Pedal Motor.
2. Connect a test lamp between the control circuit terminal 1 and control circuit terminal 4. Ignition ON.

3. Verify the test lamp illuminates while commanding the Adjustable Pedals Forward/Rearward with a scan tool.

- **If the test lamp does not illuminate**

1. Ignition OFF, remove the test lamp, disconnect the X4 harness connector at the K40D Seat Memory Control Module-Driver.

2. Test for infinite resistance between each control circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance

3. Test for less than 2 Ω between each control circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , test or replace the K40D Seat Memory Control Module-Driver.

- **If the test lamp illuminates**

4. Test or replace the M5 Adjustable Pedal Motor.

Adjustable Pedal Position Sensor Malfunction

1. Ignition OFF, disconnect the X5 and X6 harness connectors at the K40D Seat Memory Control Module-Driver.

2. Test for infinite resistance between the circuit terminals listed below and ground:

- Signal circuit terminal 4 X6
- 5 V reference circuit terminal 13 X5
- Low reference circuit terminal 6 X5

- **If less than infinite resistance**

1. Ignition OFF, disconnect the X2 harness connector at the M5 Adjustable Pedal Motor.

2. Test for infinite resistance between each control circuit and ground.

- If less than Infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the B155 Adjustable Pedal Position Sensor.

- **If infinite resistance**

3. Ignition ON

4. Test for less than 1 V between the circuit terminals listed below and ground:

- Signal circuit terminal 4 X6
- 5 V reference circuit terminal 13 X5
- Low reference circuit terminal 6 X5

- **If 1 V or greater**

1. Ignition OFF, disconnect the X2 harness connector at the M5 Adjustable Pedal Motor.
2. Test for less than 1 V between each control circuit and ground.

- If greater than 1 V, repair the short to voltage on the circuit.
- If less than 1 V, replace the B155 Adjustable Pedal Position Sensor.

- **If less than 1 V**

5. Ignition OFF

6. Disconnect the X1 harness connector at the M5 Adjustable Pedal Motor.

7. Test for less than 2 Ω between the circuit terminals listed below:

- K40D Seat Memory Control Module-Driver signal circuit terminal 4 X6 and the M5 Adjustable Pedal Motor 2 X1
- K40D Seat Memory Control Module-Driver 5 V reference circuit terminal 13 X5 and the M5 Adjustable Pedal Motor 5 X1
- K40D Seat Memory Control Module-Driver low reference circuit terminal 6 X5 and the M5 Adjustable Pedal Motor 3 X1

- **If 2 Ω or greater**

Repair the open/high resistance in the circuit.

- **If less than 2 Ω**

8. Replace the K40D Seat Memory Control Module-Driver.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S48A Multifunction Switch-Instrument Panel.
2. Test for infinite resistance between the signal terminal 11 and the ground terminal 8 with the switch in the center position.

- **If less than infinite resistance**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If infinite resistance**

3. Test for infinite resistance between the signal terminal 12 and the ground terminal 8 with the switch in the center position.

- **If less than infinite resistance**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If infinite resistance**

4. Test for less than 2 Ω between the signal terminal 11 and the ground terminal 8 with the switch in the Forward position.

- **If 2 Ω or greater**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If less than 2 Ω**

5. Test for less than 2 Ω between the signal terminal 12 and the ground terminal 8 with the switch in the Rearward position.

- **If 2 Ω or greater**

Replace the S48A Multifunction Switch-Instrument Panel.

- **If less than 2 Ω**

6. All OK

Repair Instructions

Perform [Diagnostic Repair Verification](#) after completing the repair.

- Refer to [Brake and Accelerator Pedal Adjuster Switch Replacement \(Cadillac\)](#)[Brake and Accelerator Pedal Adjuster Switch Replacement \(Chevrolet, GMC\)](#)
- Refer to [Brake and Accelerator Pedal Adjuster Position Sensor Replacement](#)
- Refer to [Accelerator Pedal Adjuster Actuator Replacement](#)
- Refer to [Control Module References](#) for seat memory control module replacement, programming and setup.

ADJUSTABLE PEDALS MALFUNCTION (Z75 WITH JF4, A45)

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- Refer to [Diagnostic Procedure Instructions](#) to provide an overview of each diagnostic category.

Diagnostic Fault Information

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

		Resistance		
Position Sensor 5 V Reference	B3606 01	B3606 06	B3606 06	-
Position Sensor Signal	B3606 06	B3606 06	B3606 06	-
Forward Switch Signal	B3604 02	2	-	B3604 05, B3605 05
Rearward Switch Signal	B3605 02	2	-	B3604 05, B3605 05
Adjustable Pedal Motor Control	1	1	1	-
Park Position Signal	1	1	1	-
Position Sensor Low Reference	-	B3606 06	-	-
Instrument Panel Multifunction Switch Ground	-	1	-	-
1. Adjustable Pedals Movement Inoperative 2. Adjustable Pedal Control Switch Malfunction				

Circuit/System Description

The adjustable pedal 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 seat memory control module controls the adjustable pedal motor by applying battery voltage to one of the outputs and ground to the other. The adjustable pedal 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 is grounded. The adjustable pedal forward and rearward switches are inputs to the seat memory control module. When the switch is operated to the forward or rearward direction, it supplies a ground path for the signal inputs from the seat memory control module.

Reference Information

Schematic Reference

Adjustable Pedal Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Adjustable Pedals Description and Operation (With A45)

Electrical Information Reference

- [Circuit Testing](#)
- [Connector Repairs](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

Scan Tool Reference

[Control Module References](#) for scan tool information

Circuit/System Verification

1. Ignition ON
2. Verify the scan tool In Park Switch Status parameter changes from Off to On while moving the transmission shift selector from the P (park) position.
 - **If the parameter does not change**
 Refer to [Ignition Can/Cannot Be Turned Off with Transmission in Any Gear](#)
 - **If the parameter changes**
3. Verify the scan tool Adjustable Pedal Control Switch parameter changes from Inactive to Active while pressing the adjustable pedal switch in both directions.
 - **If the parameter does not change**
 Refer to Circuit/System Testing - Adjustable Pedal Control Switch Malfunction.
 - **If the parameter changes**
4. Verify the brake and accelerator pedals move while commanding the Adjustable Pedals Forward/Rearward with a scan tool.
 - **If the pedals do not move**
 Refer to Circuit/System Testing - Adjustable Pedal Motor Circuit Malfunction.
 - **If the pedals move in the commanded direction**
5. Verify the scan tool Adjustable Pedals Horizontal Position parameter is between 0.45-4.55 V and changes while pressing the adjustable pedal switch in both directions.
 - **If not between 0.45-4.55 V or does not change**

Refer to Circuit/System Testing.

- **If between 0.45-4.55 V and changes**

6. All OK.

Circuit/System Testing

Adjustable Pedal Control Switch Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the S48C Multifunction Switch 1-Instrument Panel. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 5 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , repair the open/high resistance in the ground connection.
 - **If less than 10 Ω**
3. Ignition ON.
4. Verify the scan tool Adjustable Pedal Control Switch parameter is Inactive.
 - **If not Inactive**
 1. Ignition OFF, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver.
 2. Test for infinite resistance between the signal circuit terminal 6 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 3. Test for infinite resistance between the signal circuit terminal 7 and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the K40D Seat Memory Control Module-Driver.
 - **If Inactive**
5. Install a 3 A fused jumper wire between the signal circuit terminal 6 and the ground circuit terminal 5.
6. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.
 - **If not Active**

1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
- **If Active**
7. Install a 3 A fused jumper wire between the signal circuit terminal 7 and the ground circuit terminal 5.
8. Verify the scan tool Adjustable Pedal Control Switch parameter is Active.
 - **If not Active**
 - 1. Ignition OFF, remove the 3 A fused jumper wire, disconnect the X6 harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 - 2. Test for less than 1 V between the signal circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V
 - 3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If Active**
9. Test or replace the S48C Multifunction Switch 1-Instrument Panel.

Adjustable Pedal Motor Circuit Malfunction

1. Ignition OFF, disconnect the X1 harness connector at the M5 Adjustable Pedal Motor.
2. Test for less than 5 Ω between the control circuit terminal 1 and ground.
 - **If 5 Ω or greater**
 - 1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver.
 - 2. Test for less than 2 Ω in the control circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.

- **If less than 5 Ω**

3. Test for less than 5 Ω between the control circuit terminal 4 and ground.

- **If 5 Ω or greater**

1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver.

2. Test for less than 2 Ω in the control circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.

- **If less than 5 Ω**

4. Connect a test lamp between the control circuit terminal 1 and control circuit terminal 4, ignition ON.

5. Verify the test lamp turns ON when commanding the Adjustable Pedals Forward/Rearward with a scan tool.

- **If the test lamp is always OFF**

1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K40D Seat Memory Control Module-Driver.

2. Test for infinite resistance between each control circuit and ground.

- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance

3. Test for less than 2 Ω in each control circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.

- **If the test lamp is always ON**

1. Ignition OFF, remove the test lamp, disconnect the harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.

2. Test for less than 1 V between each control circuit and ground.

- If 1 V or greater, repair the short to voltage on the circuit.
- If less than 1 V, replace the K40D Seat Memory Control Module-Driver.

- **If the test lamp turns ON and OFF**

6. Test or replace the M5 Adjustable Pedal Motor.

Adjustable Pedal Position Sensor Circuit Malfunction

1. Ignition OFF and all vehicle systems OFF, disconnect the X1 harness connectors at the M5 Adjustable Pedal Motor. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the low reference circuit terminal 3 and ground.
 - **If 10 Ω or greater**
 1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver.
 2. Test for less than 2 Ω in the low reference circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If less than 10 Ω**
3. Ignition ON.
4. Test for 4.8-5.2 V between the 5 V reference circuit terminal 5 and ground.
 - **If 4.8 V or less**
 1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver.
 2. Test for infinite resistance between the 5 V reference circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 Ω in the 5 V reference circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If greater than 5.2 V**
 1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 1 V between the 5 V reference circuit and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the K40D Seat Memory Control Module-Driver.
5. Verify the scan tool Adjustable Pedals Horizontal Position parameter is less than 0.45 V.
 - **If 0.45 V or greater**
 1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 1 V between the signal circuit terminal 2 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.

- If less than 1 V, replace the K40D Seat Memory Control Module-Driver.
 - **If less than 0.45 V**
6. Install a 3 A fused jumper wire between the signal circuit terminal 2 and the 5 V reference circuit terminal 5.
 7. Verify the scan tool Adjustable Pedals Horizontal Position parameter is greater than 4.75 V.
 - **If 4.75 V or less**
 1. Ignition OFF, disconnect the harness connector at the K40D Seat Memory Control Module-Driver, ignition ON.
 2. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K40D Seat Memory Control Module-Driver.
 - **If greater than 4.75 V**
 8. Replace the B155 Adjustable Pedal Position Sensor.

Component Testing

1. Ignition OFF, disconnect the harness connector at the S48C Multifunction Switch 1-Instrument Panel.
2. Test for infinite resistance between the signal terminal 6 and the ground terminal 5 with the switch in the center position.
 - **If less than infinite resistance**
Replace the S48C Multifunction Switch 1-Instrument Panel.
 - **If infinite resistance**
3. Test for infinite resistance between the signal terminal 7 and the ground terminal 5 with the switch in the center position.
 - **If less than infinite resistance**
Replace the S48C Multifunction Switch 1-Instrument Panel.
 - **If infinite resistance**
4. Test for less than 2 Ω between the signal terminal 6 and the ground terminal 5 with the switch in the Forward position.
 - **If 2 Ω or greater**
Replace the S48C Multifunction Switch 1-Instrument Panel.
 - **If less than 2 Ω**

5. Test for less than 2 Ω between the signal terminal 7 and the ground terminal 5 with the switch in the Rearward position.

- **If 2 Ω or greater**

Replace the S48C Multifunction Switch 1-Instrument Panel

- **If less than 2 Ω**

6. All OK

Repair Instructions

Perform Diagnostic Repair Verification after completing the repair.

- Refer to Brake and Accelerator Pedal Adjuster Switch Replacement (Cadillac)Brake and Accelerator Pedal Adjuster Switch Replacement (Chevrolet, GMC)
- Refer to Brake and Accelerator Pedal Adjuster Position Sensor Replacement
- Refer to Brake Pedal Assembly Replacement (With JF4)
- Refer to Control Module References for seat memory control module replacement, programming and setup.

REPAIR INSTRUCTIONS

BRAKE AND ACCELERATOR PEDAL ADJUSTER SWITCH REPLACEMENT (CADILLAC)

Removal Procedure

1. Remove the instrument panel lower trim plate applique. Refer to Instrument Panel Lower Trim Plate Applique Replacement (Cadillac) .

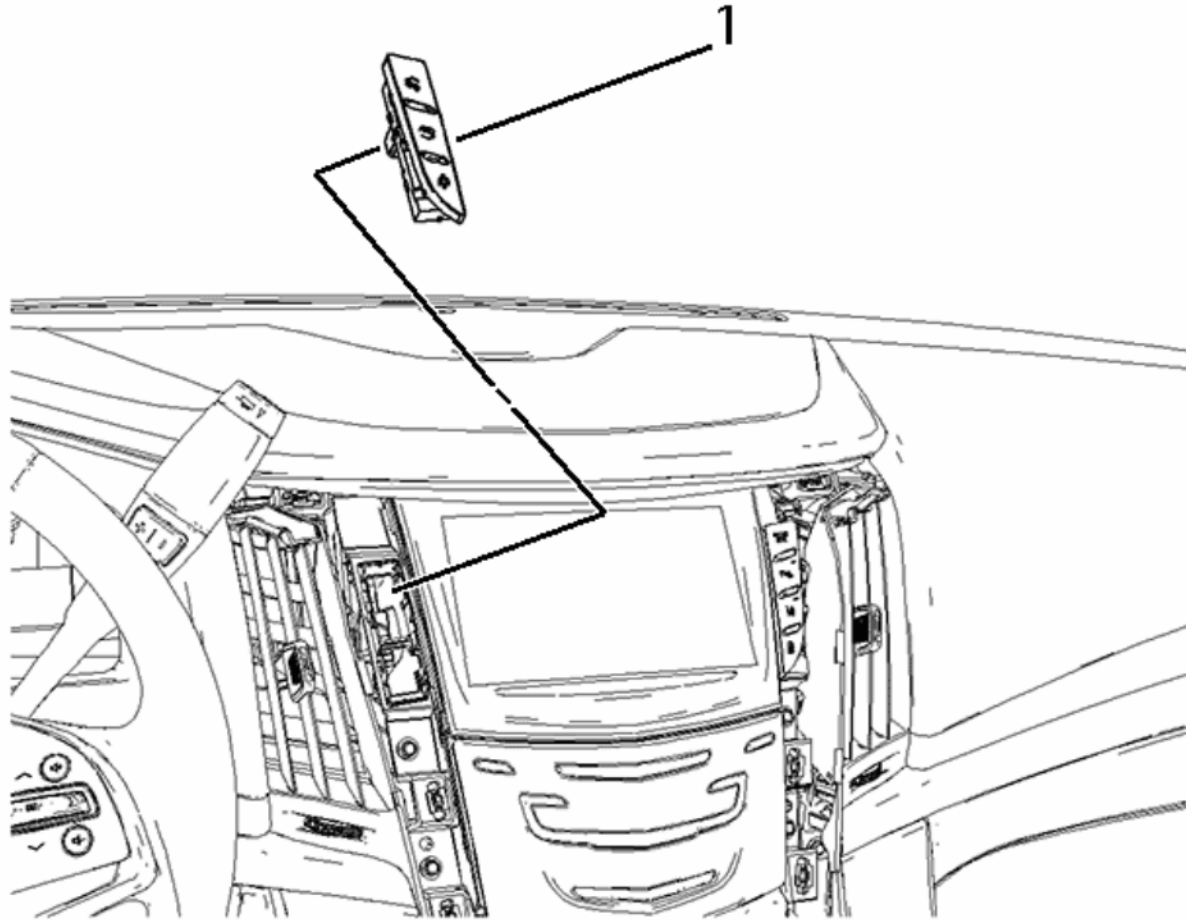


Fig. 4: Accelerator Pedal Adjuster Switch

Courtesy of GENERAL MOTORS COMPANY

2. Using a flat bladed tool, release the 2 locking tabs on the left and right sides of the brake and accelerator pedal adjuster switch (1).
3. Lift the brake and accelerator pedal adjuster switch from the instrument panel.
4. Disconnect the electrical connector and remove the brake and accelerator pedal adjuster switch.

Installation Procedure

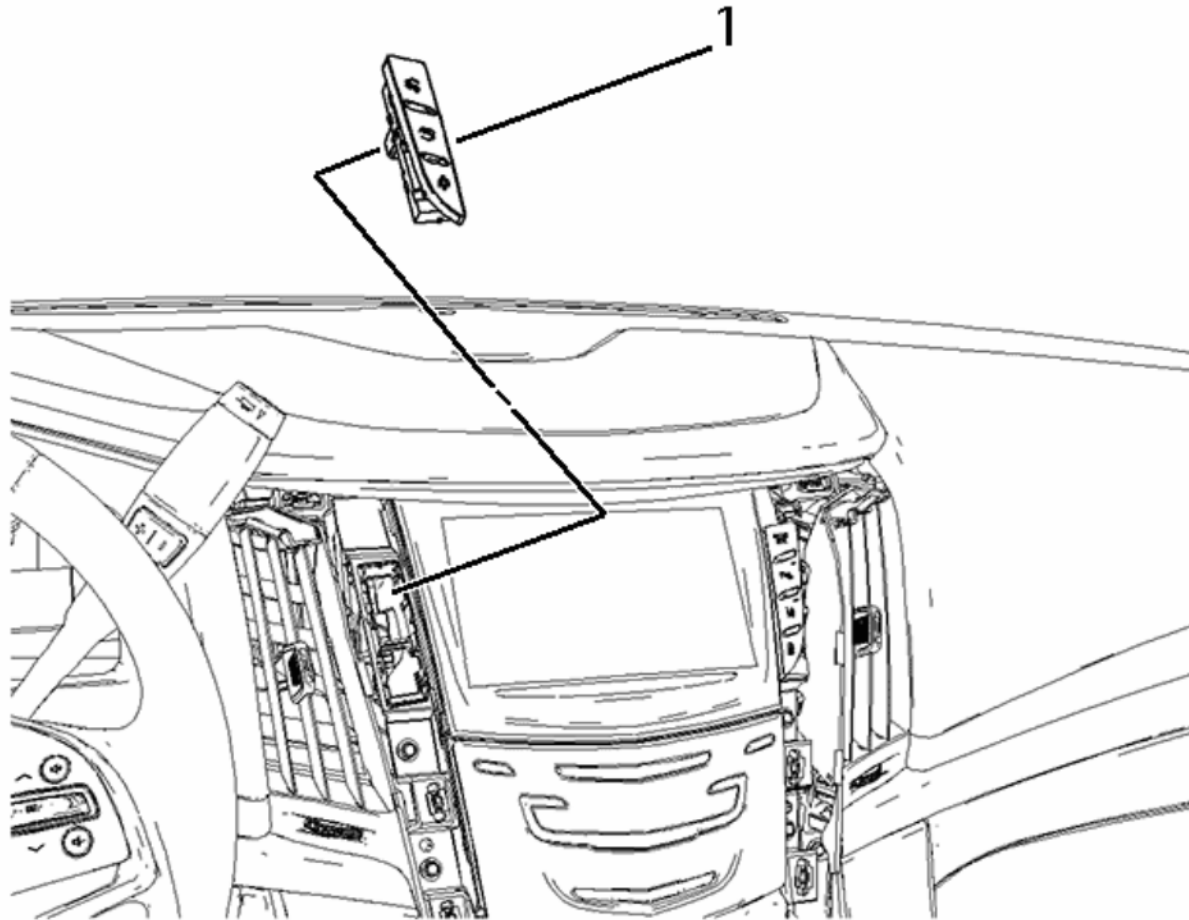


Fig. 5: Accelerator Pedal Adjuster Switch

Courtesy of GENERAL MOTORS COMPANY

NOTE: Ensure the brake and accelerator pedal adjuster switch locking tabs are fully engaged in the instrument

panel.

1. Connect the electrical connector and install the brake and accelerator pedal adjuster switch (1).
2. Install the instrument panel lower trim plate applique. Refer to [Instrument Panel Lower Trim Plate Applique Replacement \(Cadillac\)](#) .

BRAKE AND ACCELERATOR PEDAL ADJUSTER SWITCH REPLACEMENT (CHEVROLET, GMC)

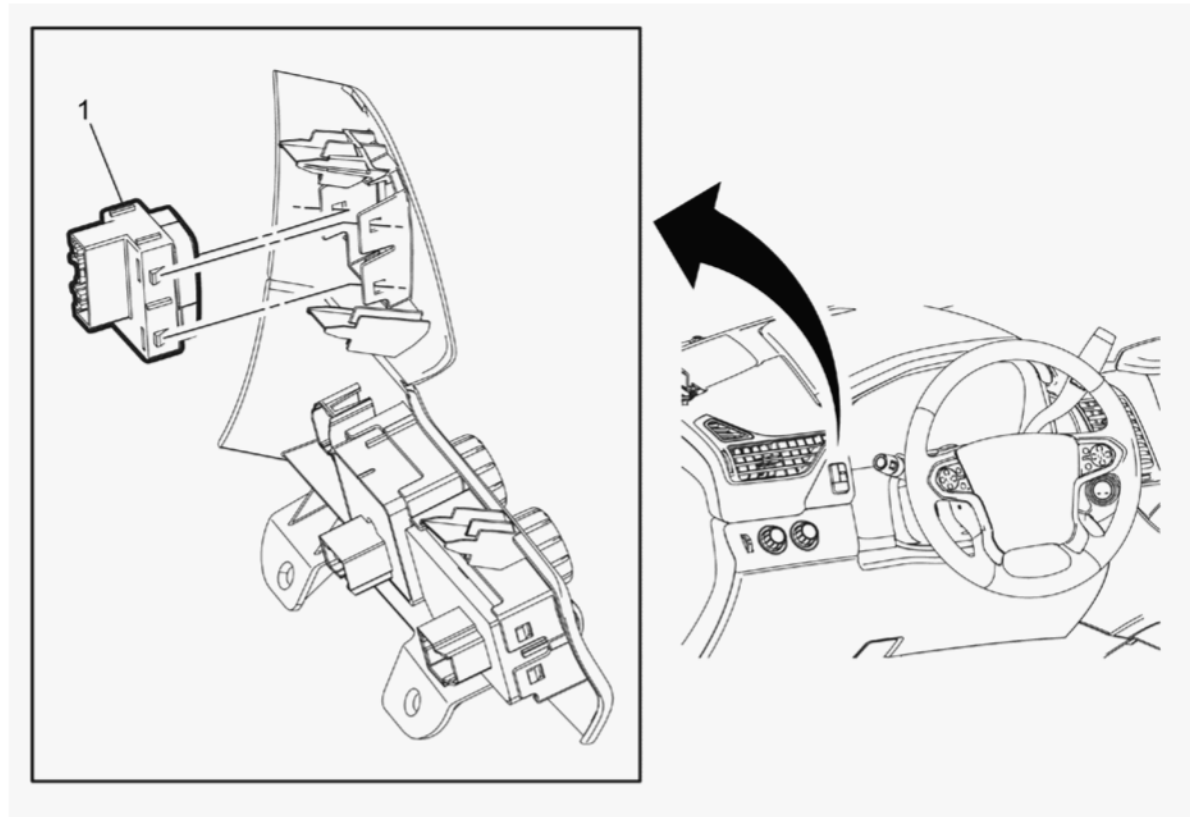


Fig. 6: Brake and Accelerator Pedal Adjuster Switch (Chevrolet, GMC)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
NOTE:	

Callout	Component Name
The brake and accelerator pedal adjuster switch is integral to the vehicle stability control system switch.	
Remove the instrument panel accessory bezel. Refer to Instrument Panel Accessory Bezel Replacement (Chevrolet / GMC) .	
1	Vehicle Stability Control System Switch Procedure Using the appropriate tool, gently depress the tabs securing the switch to the bezel.

ACCELERATOR PEDAL ADJUSTER ACTUATOR REPLACEMENT

Removal Procedure

NOTE: Position the adjustable pedal assembly to the full forward, front of vehicle position prior to removing components. Failure to place the adjustable pedal assembly in the full forward position may result in incorrect accelerator and brake pedal step-over height and improper adjustable pedal function.

1. Position the adjustable pedal assembly to the full forward, front of vehicle position.
2. Disconnect the accelerator pedal adjuster actuator motor electrical connector.

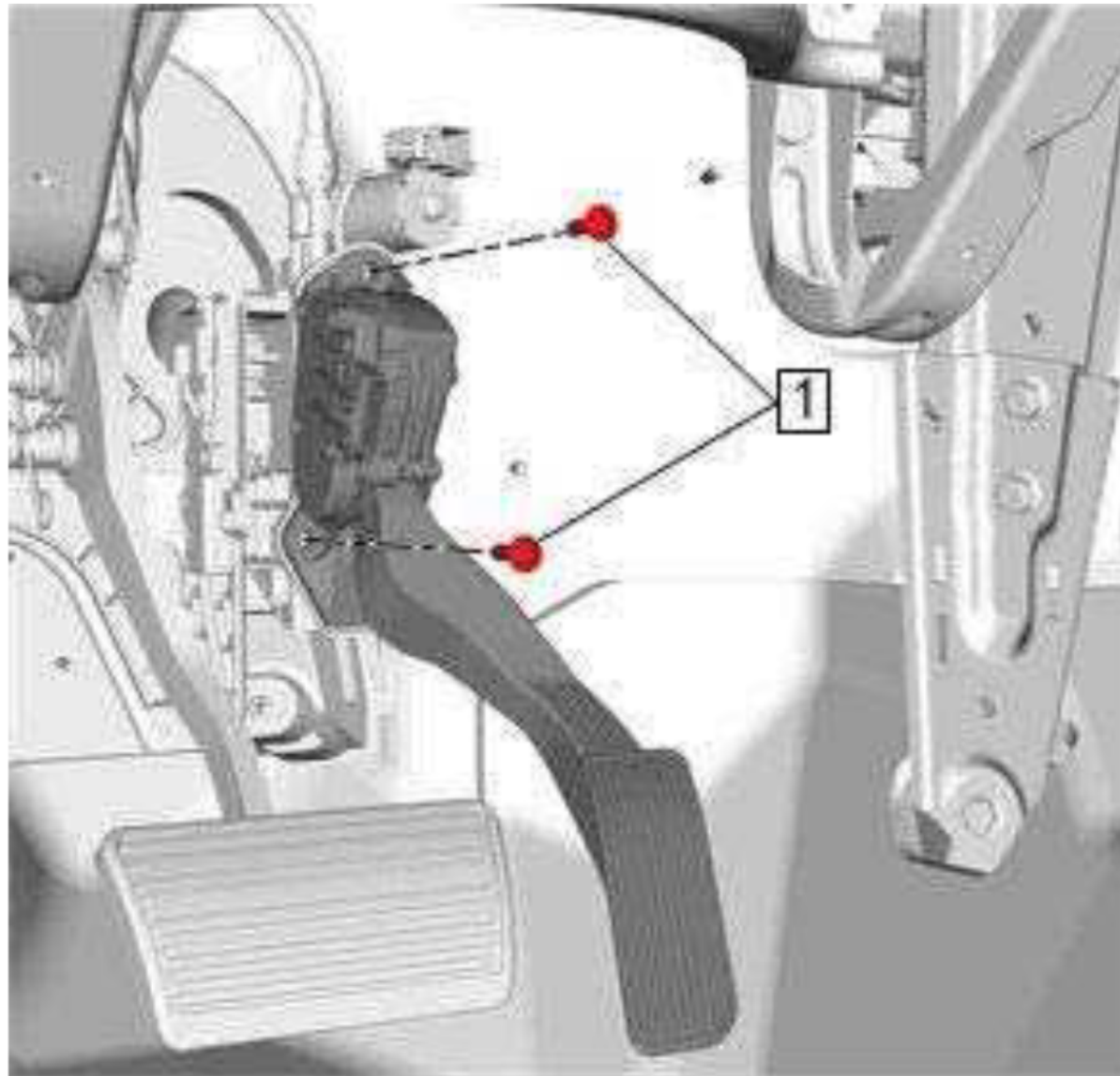


Fig. 7: Accelerator Pedal Position Sensor Bolts

Courtesy of GENERAL MOTORS COMPANY

3. Remove Accelerator Pedal Position Sensor Bolt (1) (Qty: 2)

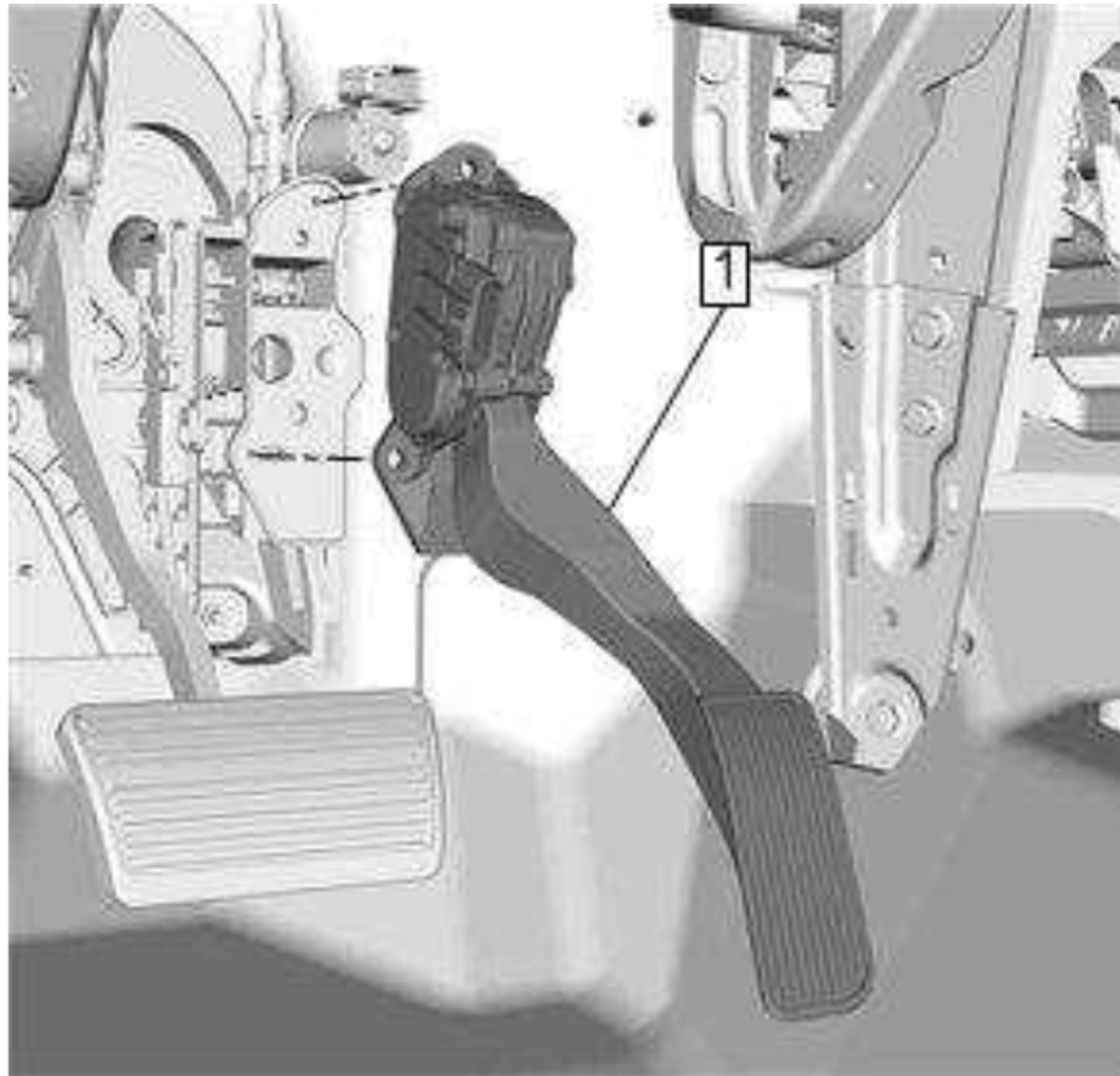


Fig. 8: Accelerator Pedal Position Sensor

Courtesy of GENERAL MOTORS COMPANY

4. Accelerator Pedal Position Sensor (1)

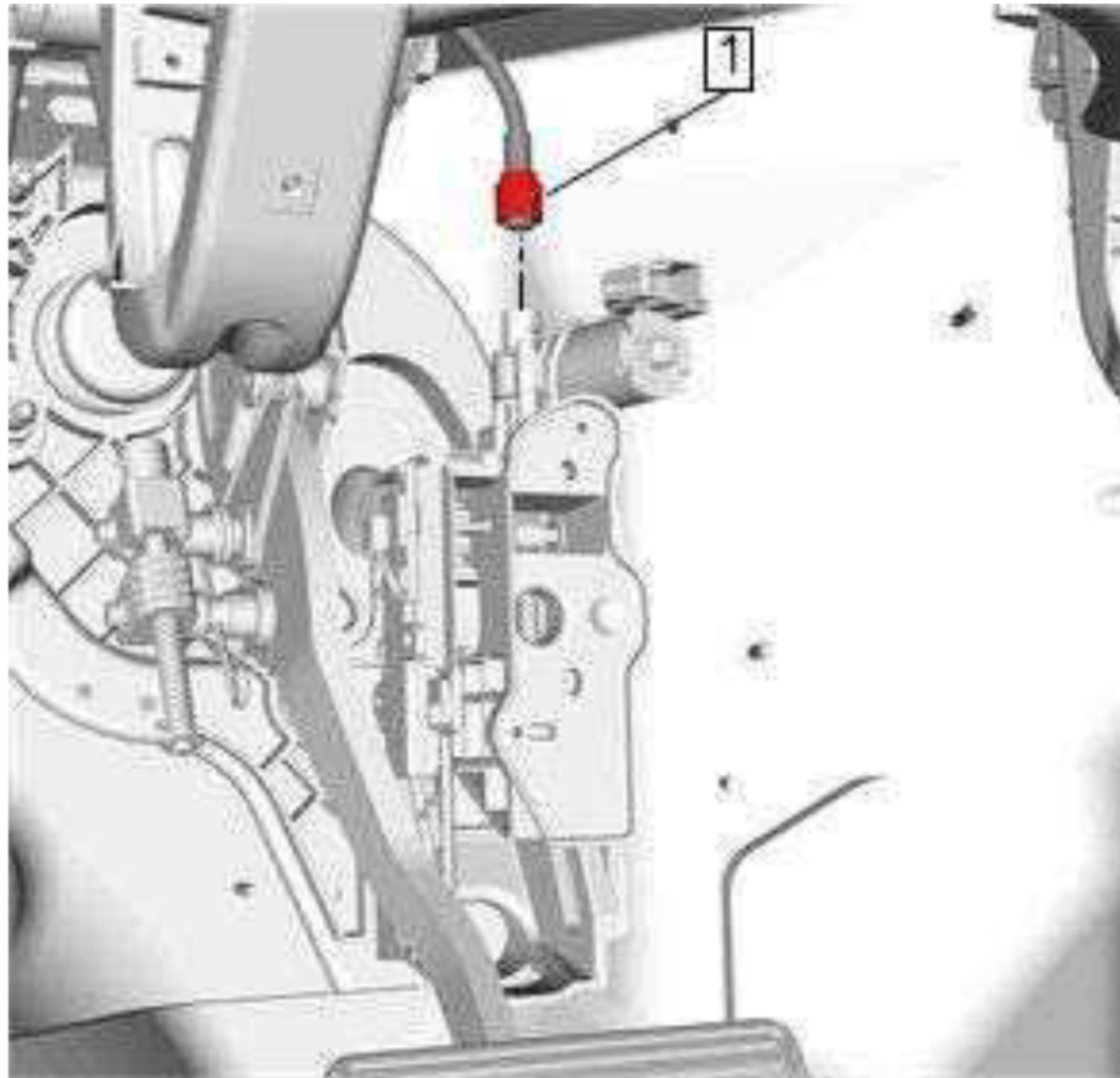


Fig. 9: Brake Pedal Adjuster Actuator Cable Fitting

Courtesy of GENERAL MOTORS COMPANY

5. Disconnect Brake Pedal Adjuster Actuator Cable Fitting (1)
6. Disconnect the brake and accelerator pedal adjuster position sensor harness electrical connector.

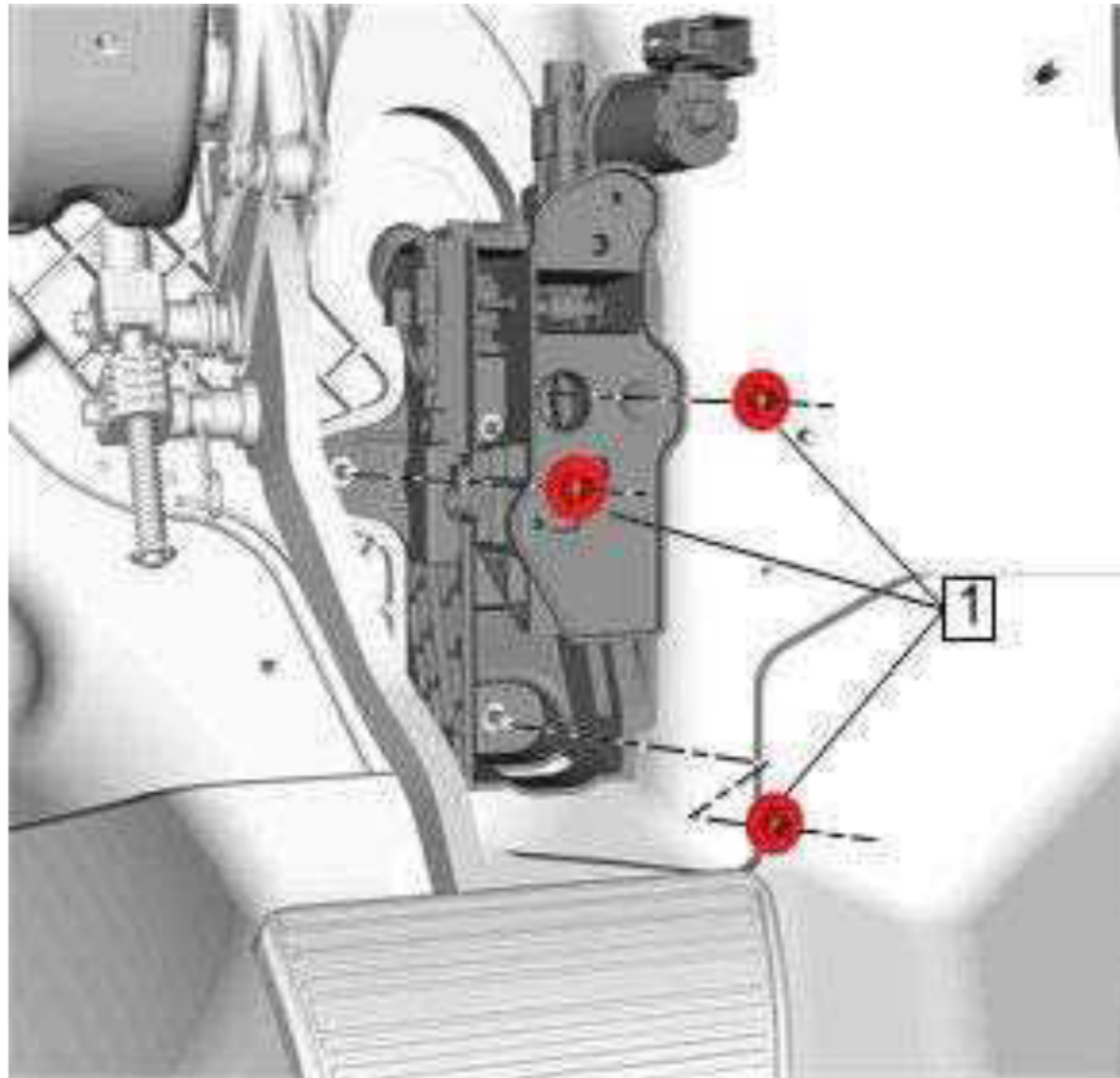


Fig. 10: Accelerator Pedal Adjuster Actuator Nuts

Courtesy of GENERAL MOTORS COMPANY

7. Remove Accelerator Pedal Adjuster Actuator Nut (1) (Qty: 3)

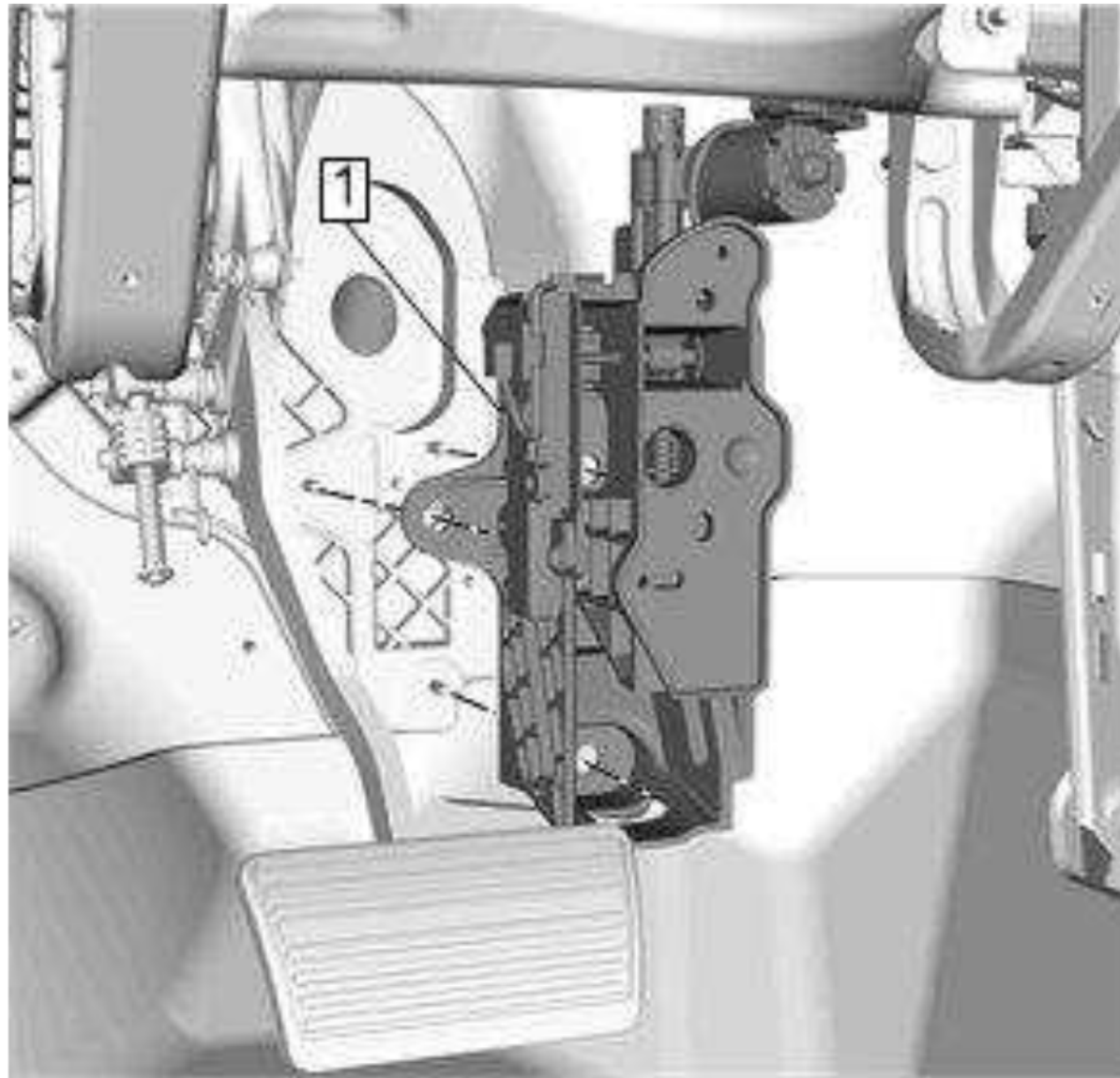


Fig. 11: Accelerator Pedal Adjuster Actuator
Courtesy of GENERAL MOTORS COMPANY

8. Remove Accelerator Pedal Adjuster Actuator (1)
9. Remove **Brake and Accelerator Pedal Adjuster Position Sensor Replacement**

Installation Procedure

1. Install Brake and Accelerator Pedal Adjuster Position Sensor Replacement

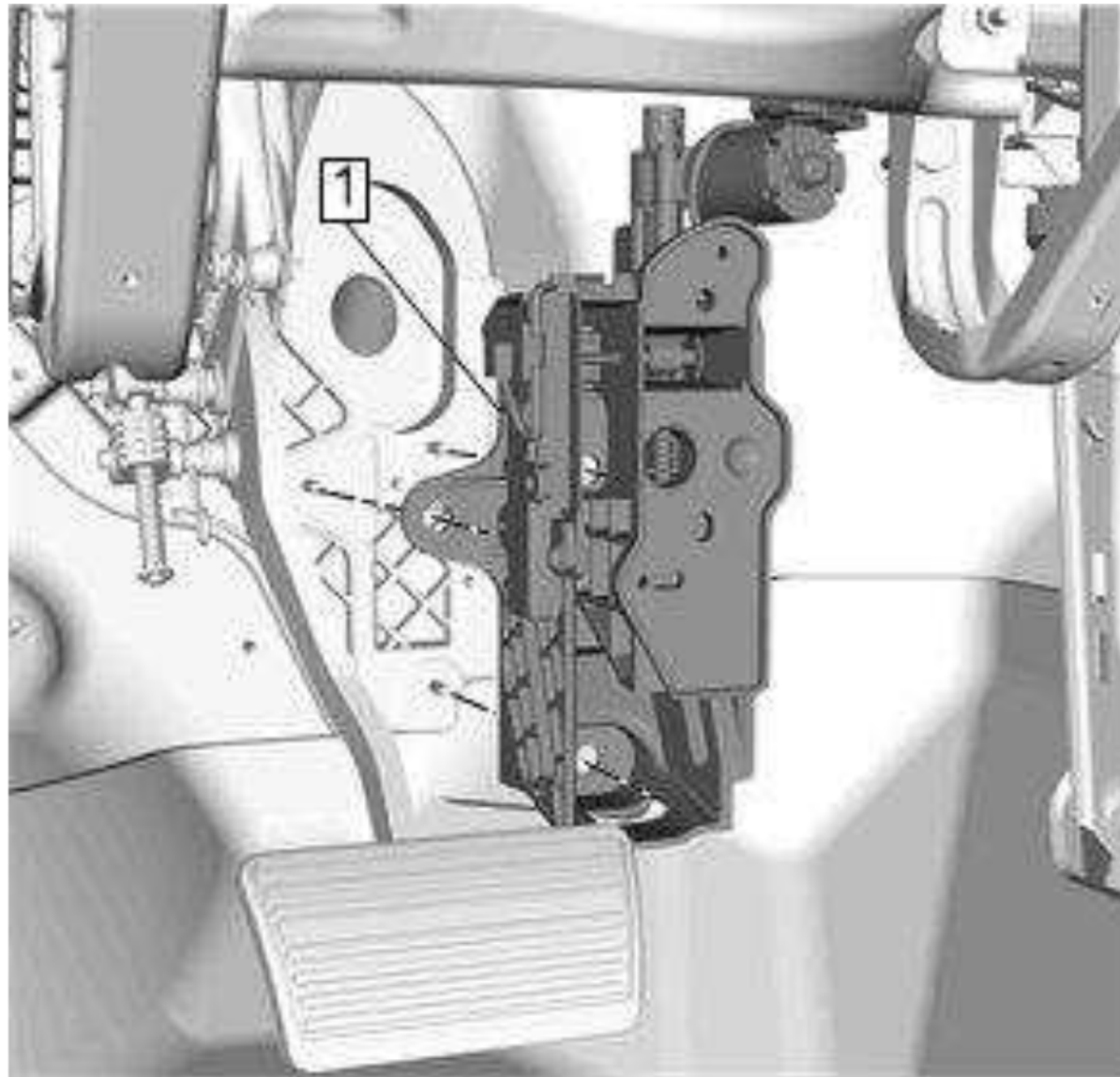


Fig. 12: Accelerator Pedal Adjuster Actuator
Courtesy of GENERAL MOTORS COMPANY

2. Install Accelerator Pedal Adjuster Actuator (1)

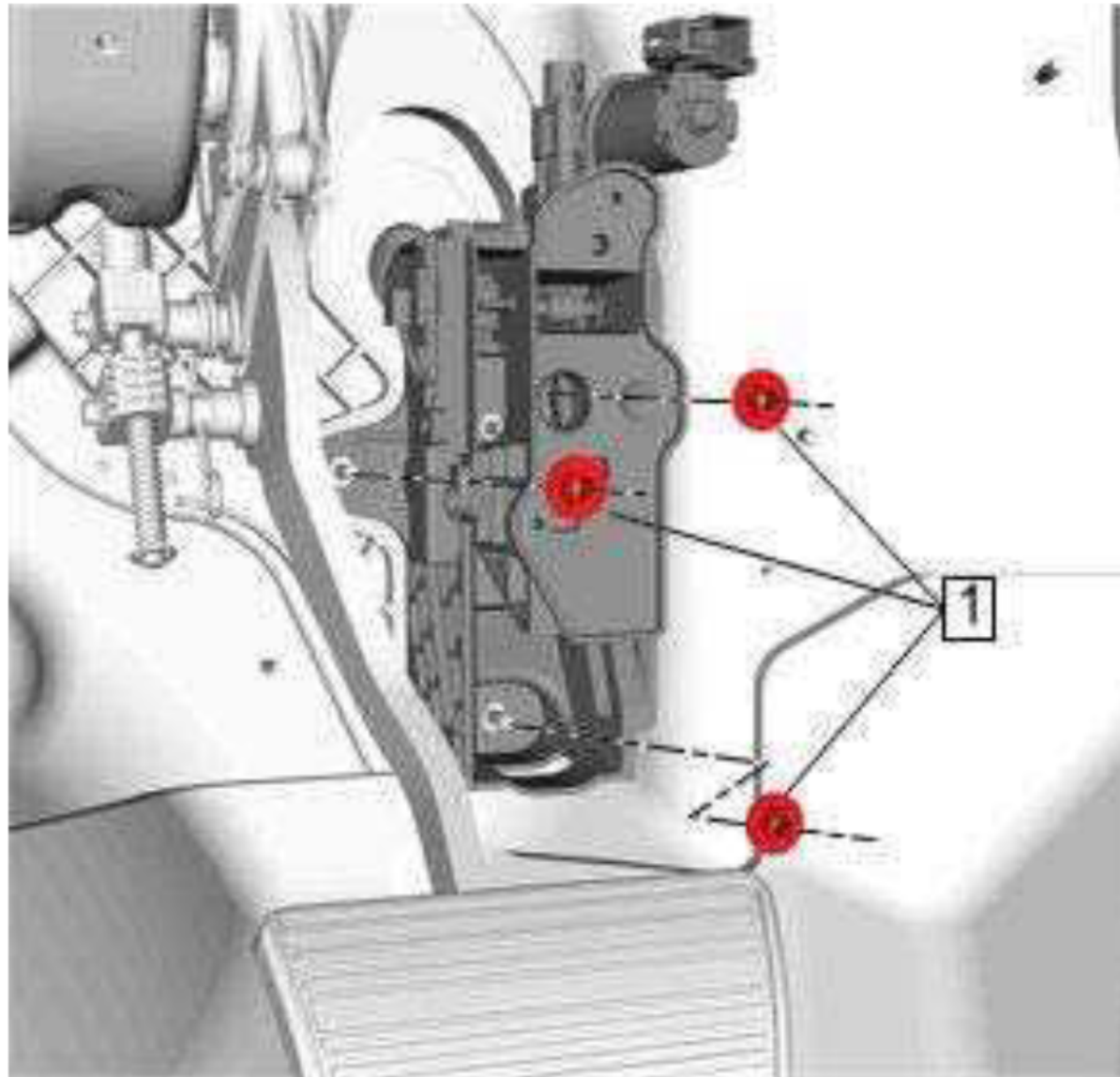


Fig. 13: Accelerator Pedal Adjuster Actuator Nuts

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to [Fastener Caution](#)

3. Install and tighten Accelerator Pedal Adjuster Actuator Nut (1) 9 N.m (80 lb in) (Qty: 3)
4. Connect the brake and accelerator pedal adjuster position sensor harness electrical connector.

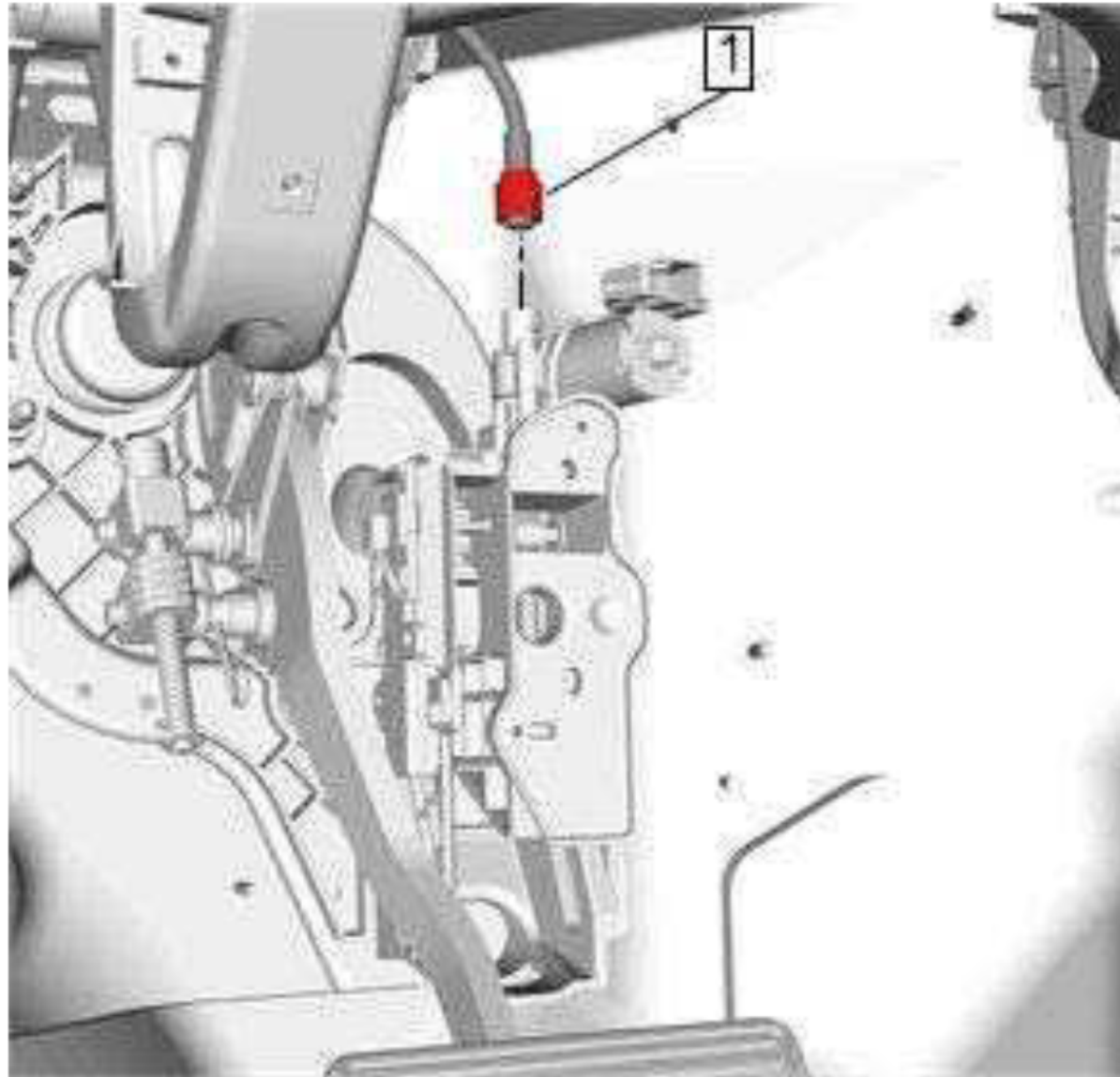


Fig. 14: Brake Pedal Adjuster Actuator Cable Fitting

Courtesy of GENERAL MOTORS COMPANY

5. Connect Brake Pedal Adjuster Actuator Cable Fitting (1)

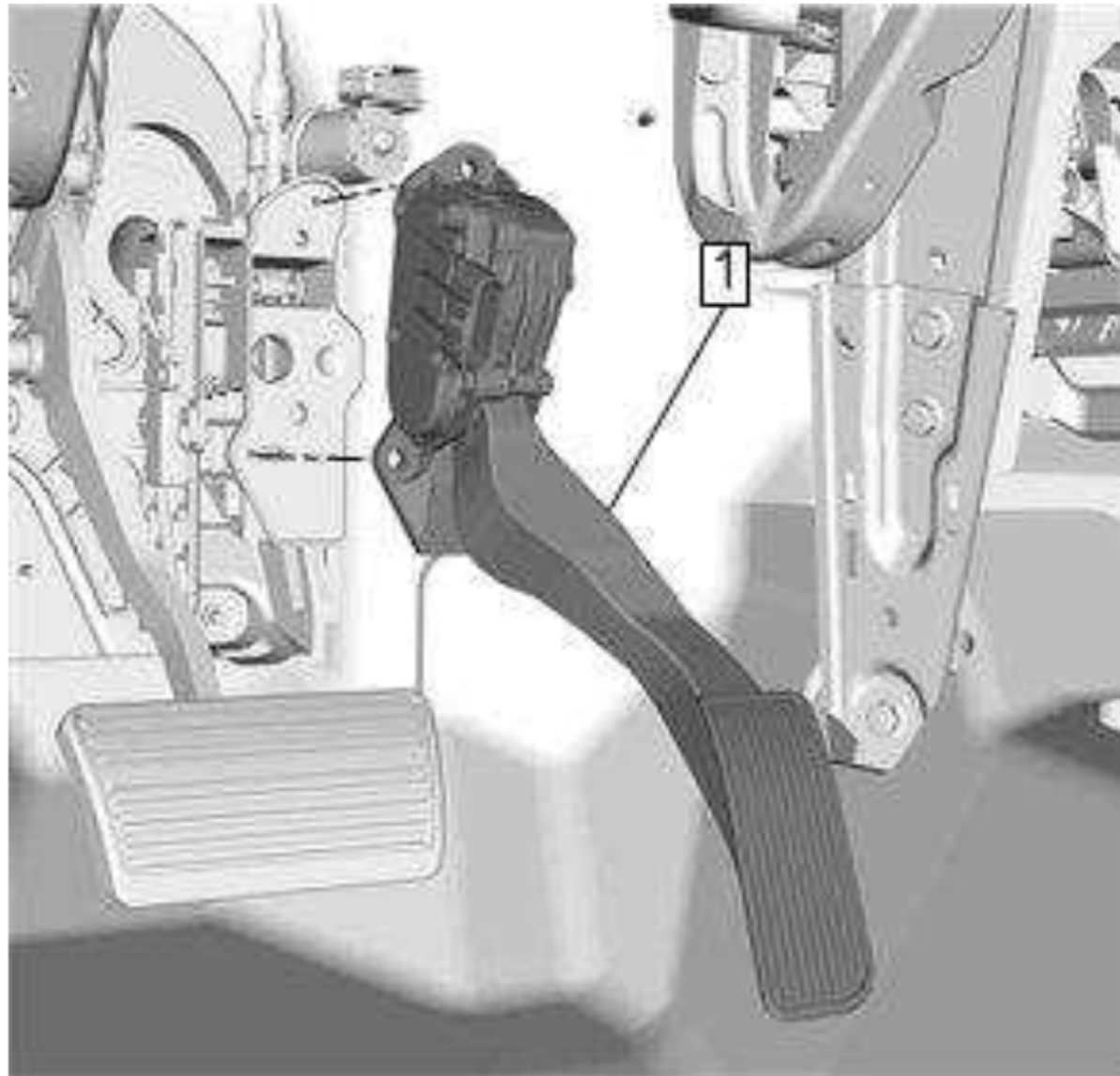


Fig. 15: Accelerator Pedal Position Sensor
Courtesy of GENERAL MOTORS COMPANY

6. Install Accelerator Pedal Position Sensor (1)

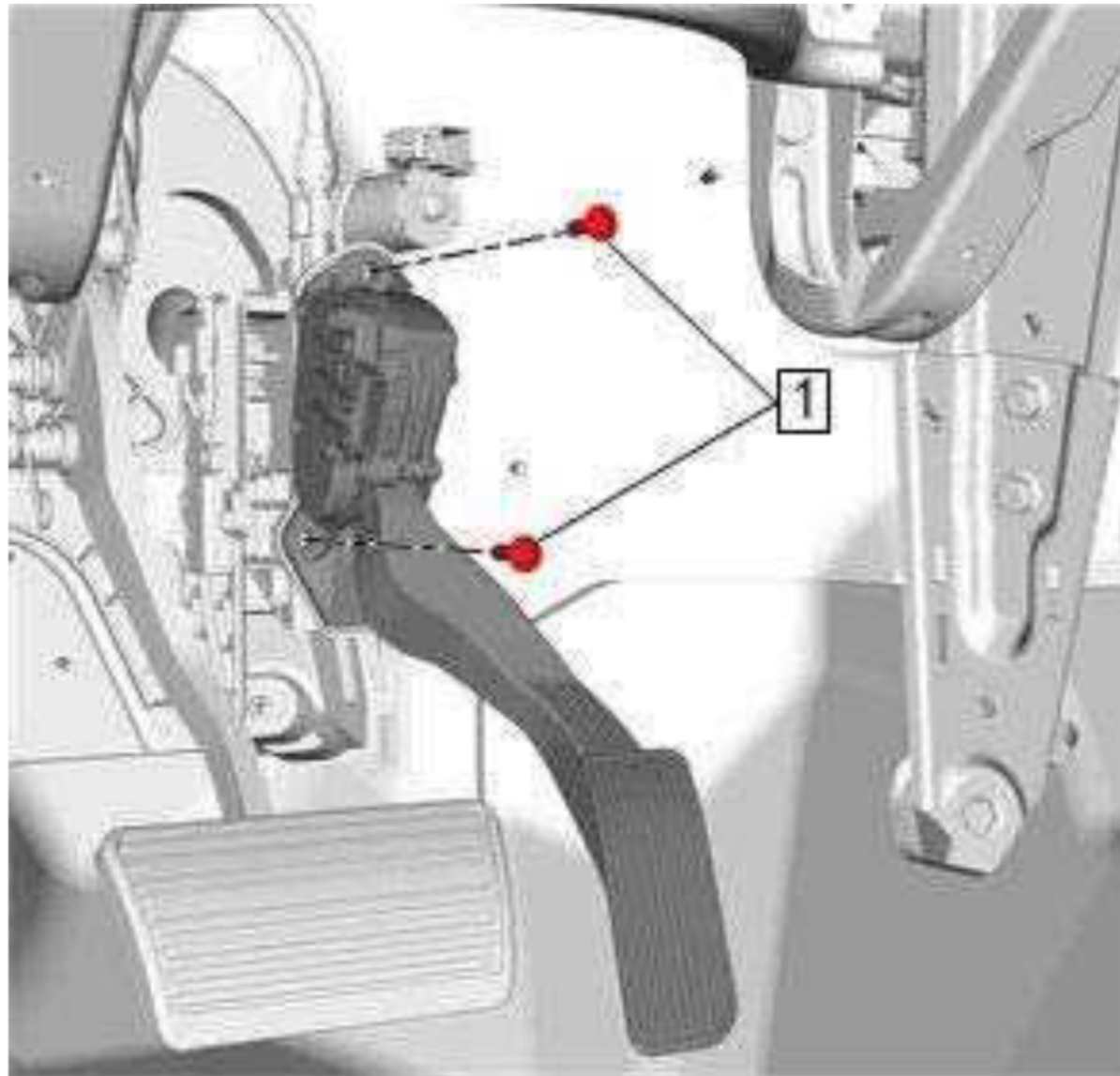


Fig. 16: Accelerator Pedal Position Sensor Bolts

Courtesy of GENERAL MOTORS COMPANY

7. Install and tighten Accelerator Pedal Position Sensor Bolt (1) 9 N.m (80 lb in) (Qty: 2)
8. Connect the accelerator pedal adjuster actuator motor electrical connector.

BRAKE PEDAL ADJUSTER ACTUATOR CABLE REPLACEMENT

Removal Procedure

1. Turn the ignition switch to the OFF position.

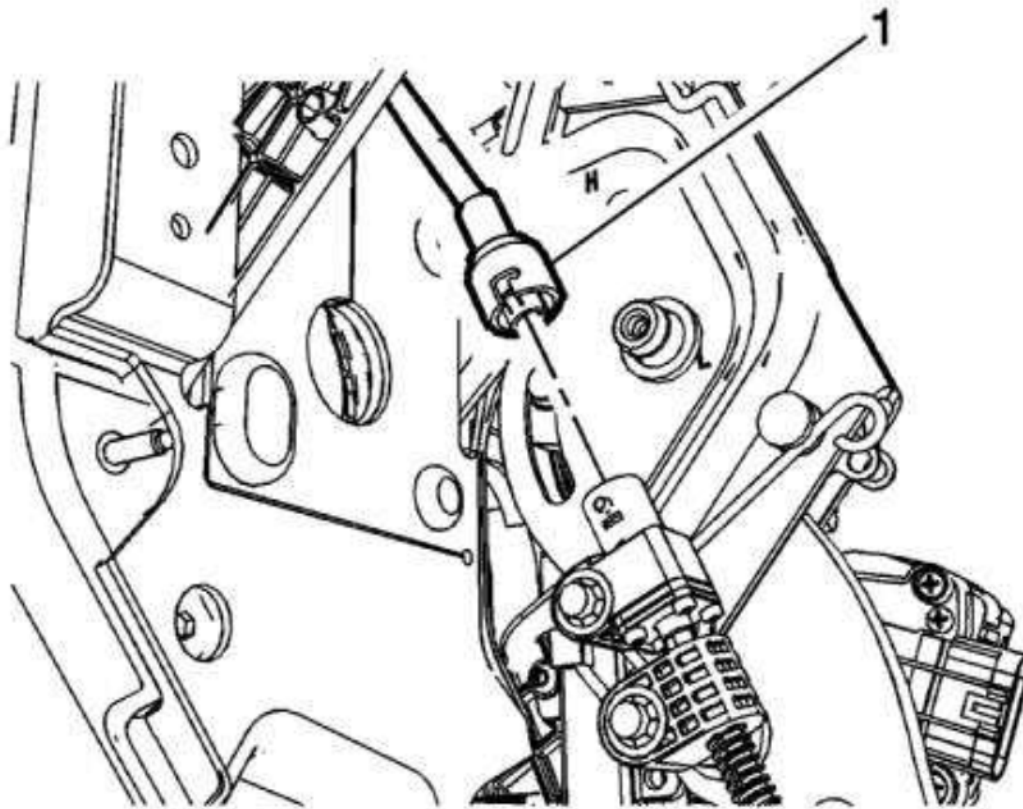


Fig. 17: Brake Pedal Adjuster Actuator Cable
Courtesy of GENERAL MOTORS COMPANY

2. Remove the brake pedal adjuster actuator cable (1) from the brake pedal adjuster actuator.
 1. Rotate the brake pedal adjuster actuator cable collar counter clockwise.
 2. Compress the secondary locking tabs located below the cable collar alignment pins with a pointed tool.
 3. Pull the brake pedal adjuster actuator cable upward.

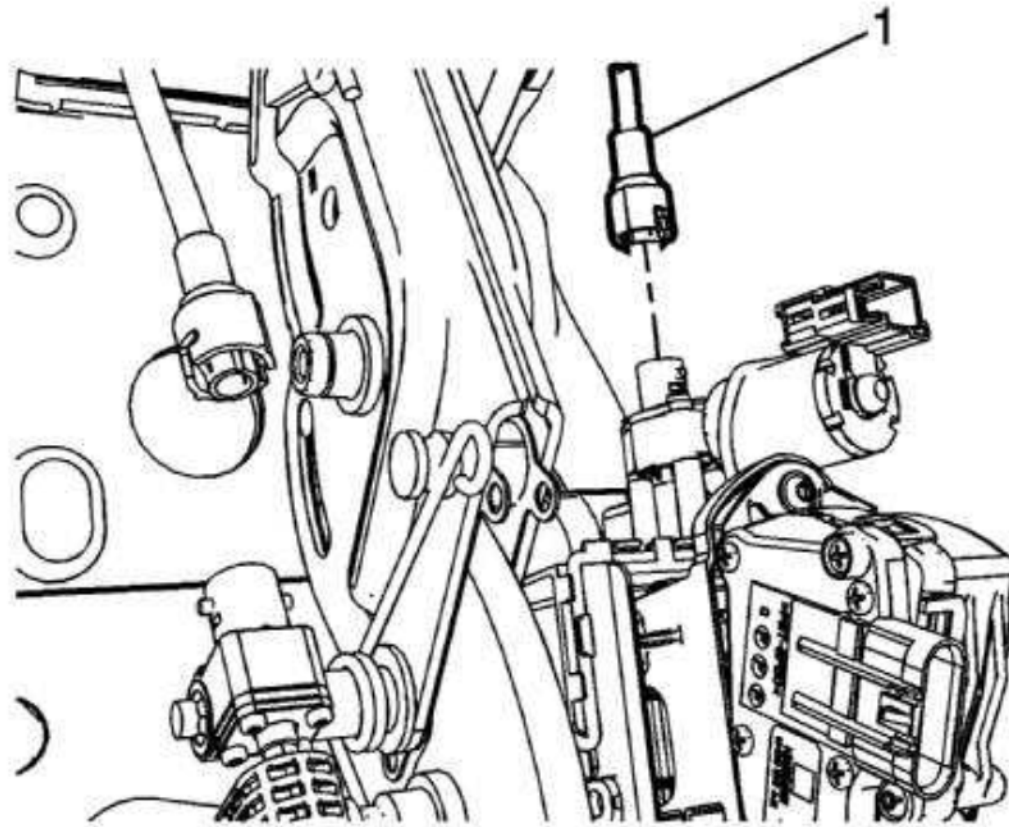


Fig. 18: Brake Pedal Adjuster Actuator Cable
Courtesy of GENERAL MOTORS COMPANY

3. Remove the brake pedal adjuster actuator cable (1) from the accelerator pedal actuator drive motor.
 1. Rotate the brake pedal adjuster actuator cable collar counter clockwise.
 2. Compress the secondary locking tabs located below the cable collar alignment pins with a pointed tool.
 3. Pull the brake pedal adjuster actuator cable upward.
4. Feed the brake pedal adjuster actuator cable through the top of the brake pedal assembly bracket.
5. Remove the brake pedal adjuster actuator cable from the brake pedal assembly.

Installation Procedure

1. Install the brake pedal adjuster actuator cable to the brake pedal assembly.
2. Feed the brake pedal adjuster actuator cable through the top of the brake pedal assembly bracket.

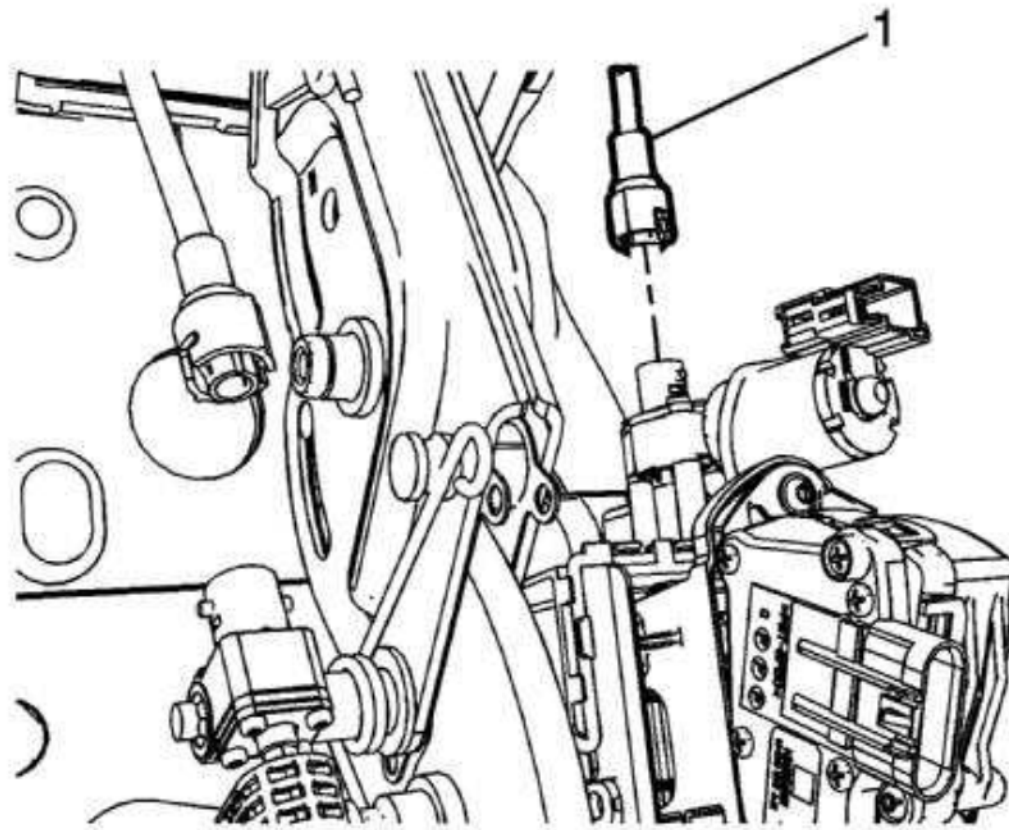


Fig. 19: Brake Pedal Adjuster Actuator Cable

Courtesy of GENERAL MOTORS COMPANY

3. Install the brake pedal adjuster actuator cable (1) to the accelerator pedal actuator drive motor.
 1. Push the brake pedal adjuster actuator cable downward until the locking tabs are fully engaged in the accelerator pedal actuator drive motor.
 2. Rotate the brake pedal adjuster actuator cable collar clockwise.

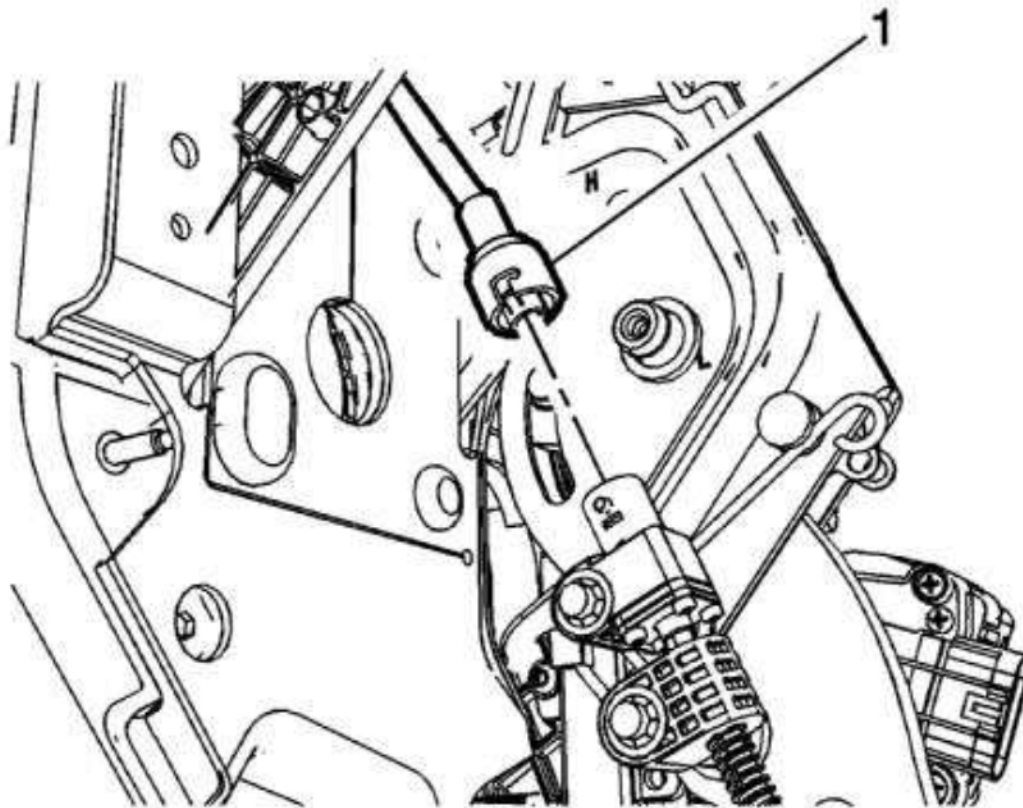


Fig. 20: Brake Pedal Adjuster Actuator Cable

Courtesy of GENERAL MOTORS COMPANY

4. Install the brake pedal adjuster actuator cable (1) to the brake pedal adjuster actuator.
 1. Push the brake pedal adjuster actuator cable downward until the locking tabs are fully engaged in the brake pedal adjuster actuator.
 2. Rotate the brake pedal adjuster actuator cable collar clockwise.

BRAKE AND ACCELERATOR PEDAL ADJUSTER POSITION SENSOR REPLACEMENT

cardiagn.com

Removal Procedure

1. Turn the ignition switch to the OFF position.
2. Disconnect the brake and accelerator pedal adjuster position sensor jumper harness electrical connector.
3. Release the jumper harness from the accelerator pedal routing clips.

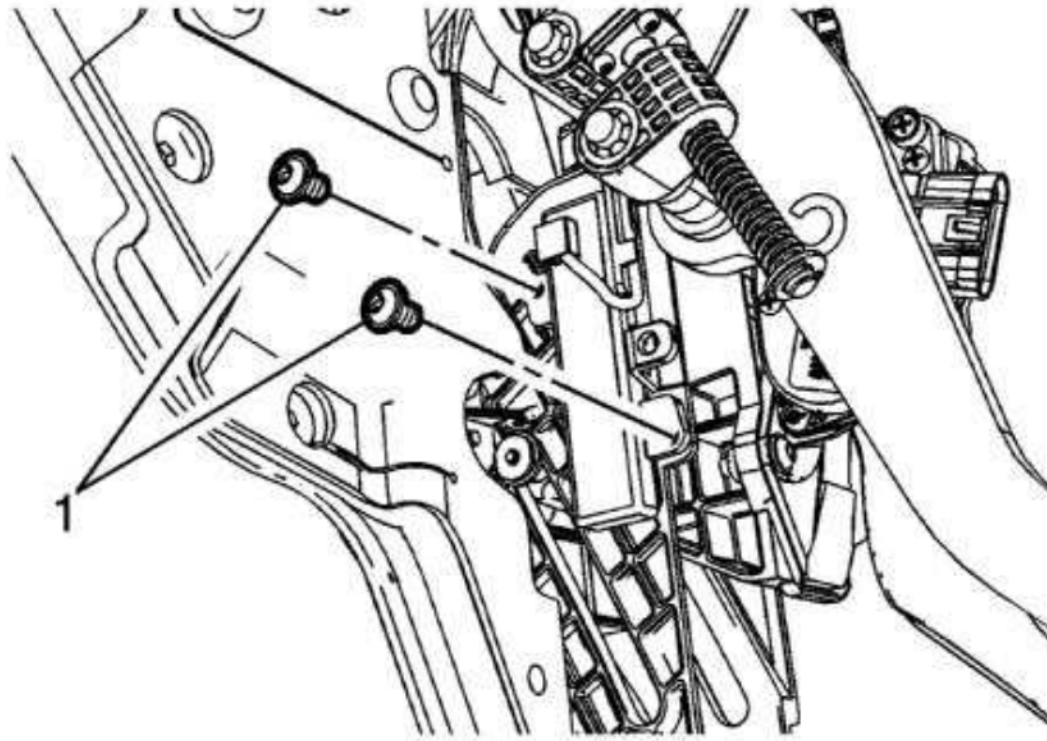


Fig. 21: Brake And Accelerator Pedal Adjuster Position Sensor Bolts

Courtesy of GENERAL MOTORS COMPANY

4. Remove the brake and accelerator pedal adjuster position sensor bolts (1).

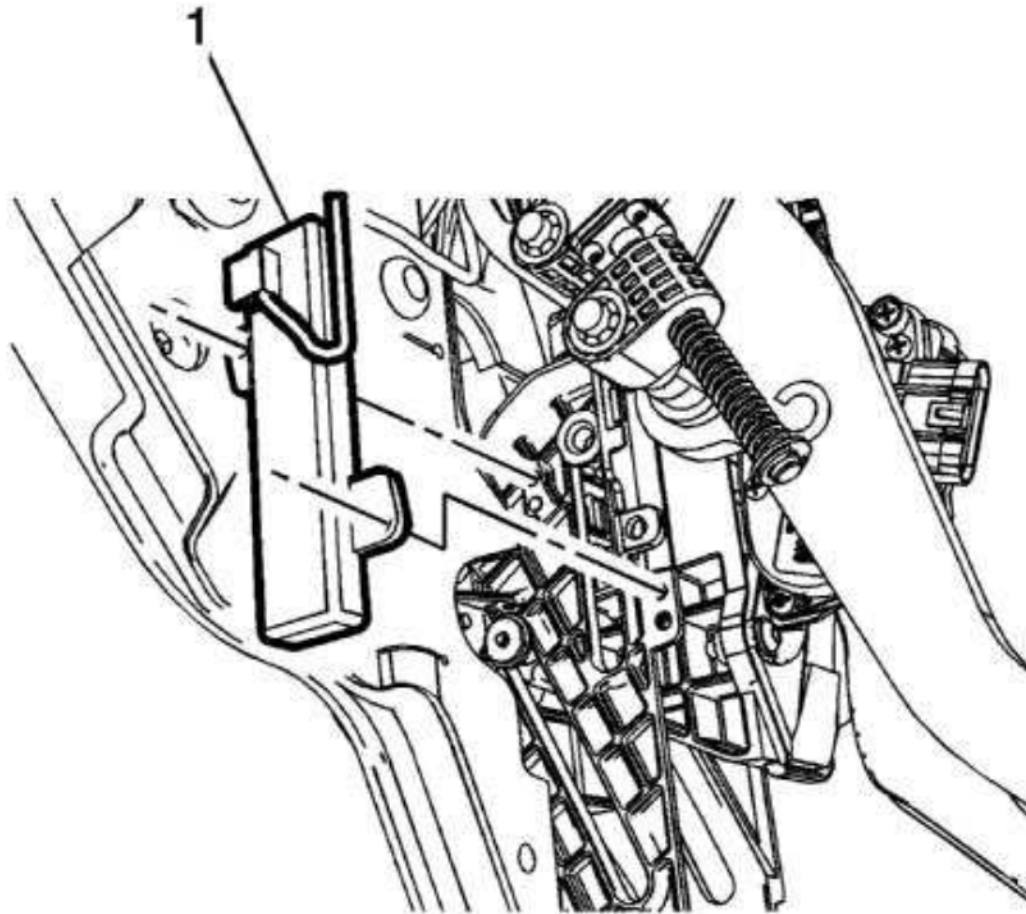


Fig. 22: Brake And Accelerator Pedal Adjuster Position Sensor
Courtesy of GENERAL MOTORS COMPANY

5. Remove the brake and accelerator pedal adjuster position sensor (1).

Installation Procedure

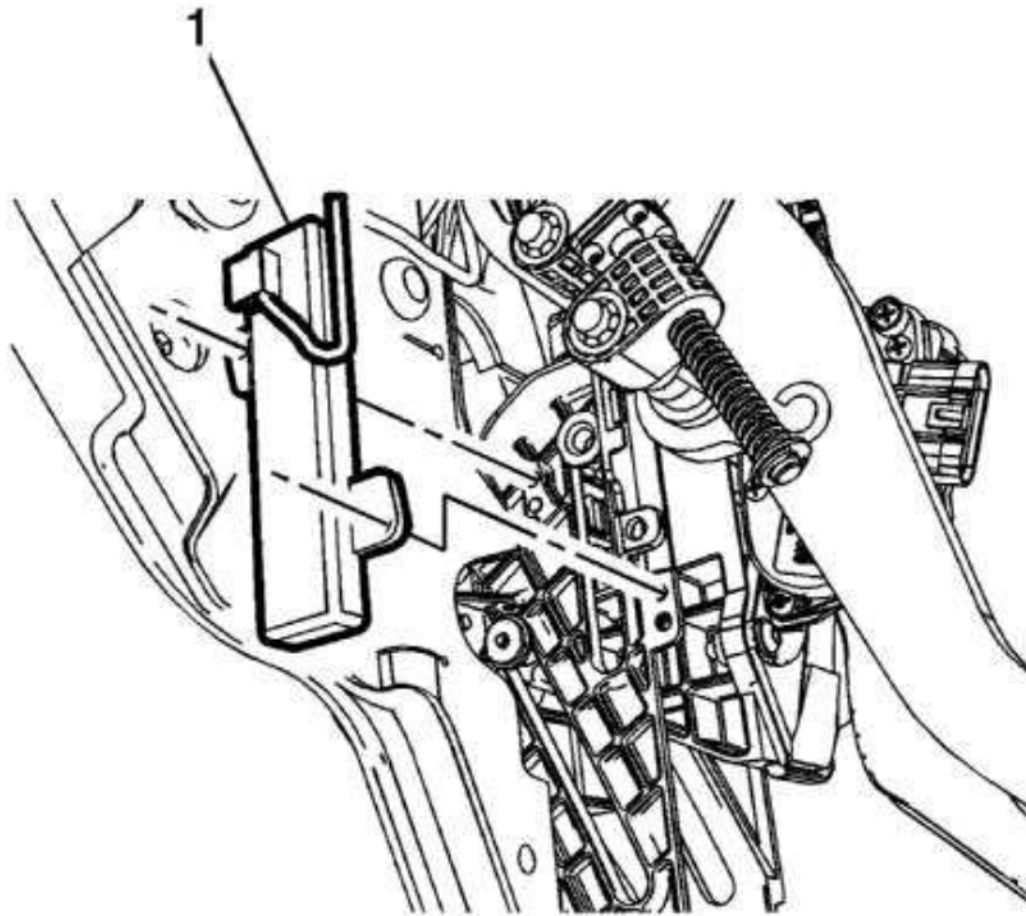


Fig. 23: Brake And Accelerator Pedal Adjuster Position Sensor

Courtesy of GENERAL MOTORS COMPANY

1. Install the brake and accelerator pedal adjuster position sensor (1).

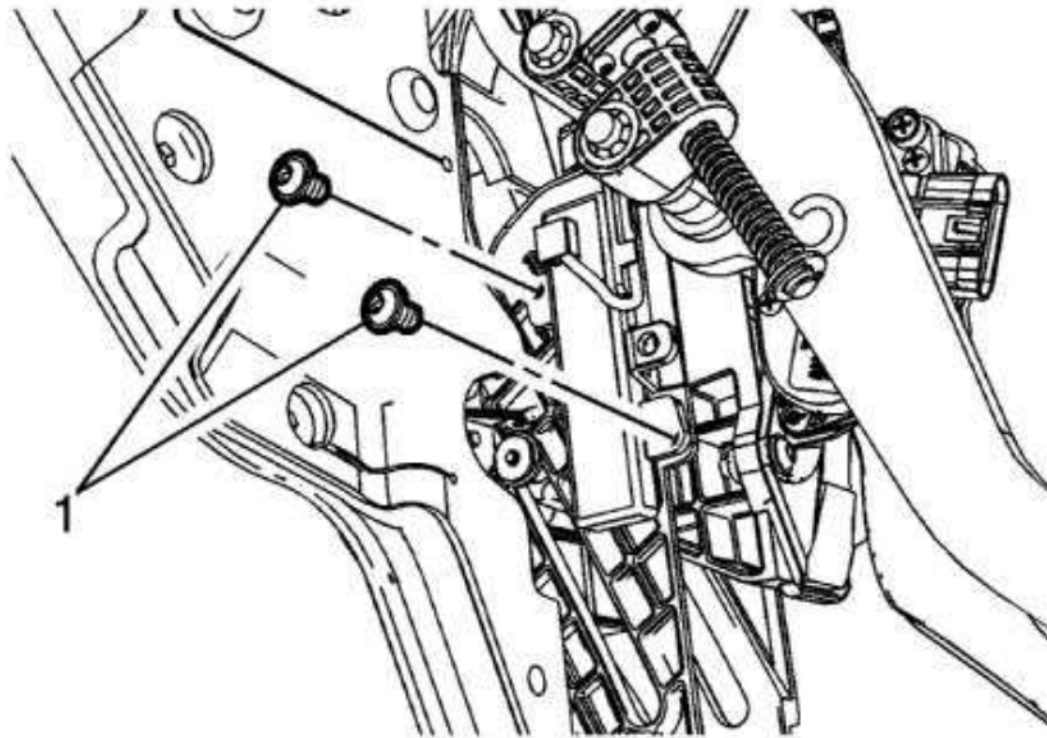


Fig. 24: Brake And Accelerator Pedal Adjuster Position Sensor Bolts

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to [Fastener Caution](#) .

2. Install the brake and accelerator pedal adjuster position sensor bolts (1).
3. Install the jumper to from the accelerator pedal routing clips.

4. Connect the brake and accelerator pedal adjuster position sensor jumper harness electrical connector.

DESCRIPTION AND OPERATION

ADJUSTABLE PEDALS DESCRIPTION AND OPERATION (WITHOUT A45)

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 A45)

Adjustable Pedals System Components

The adjustable pedals system consists of the following components:

- The multifunction switch - instrument panel
- The seat memory control module
- The adjustable pedal motor
- The adjustable pedal position sensor

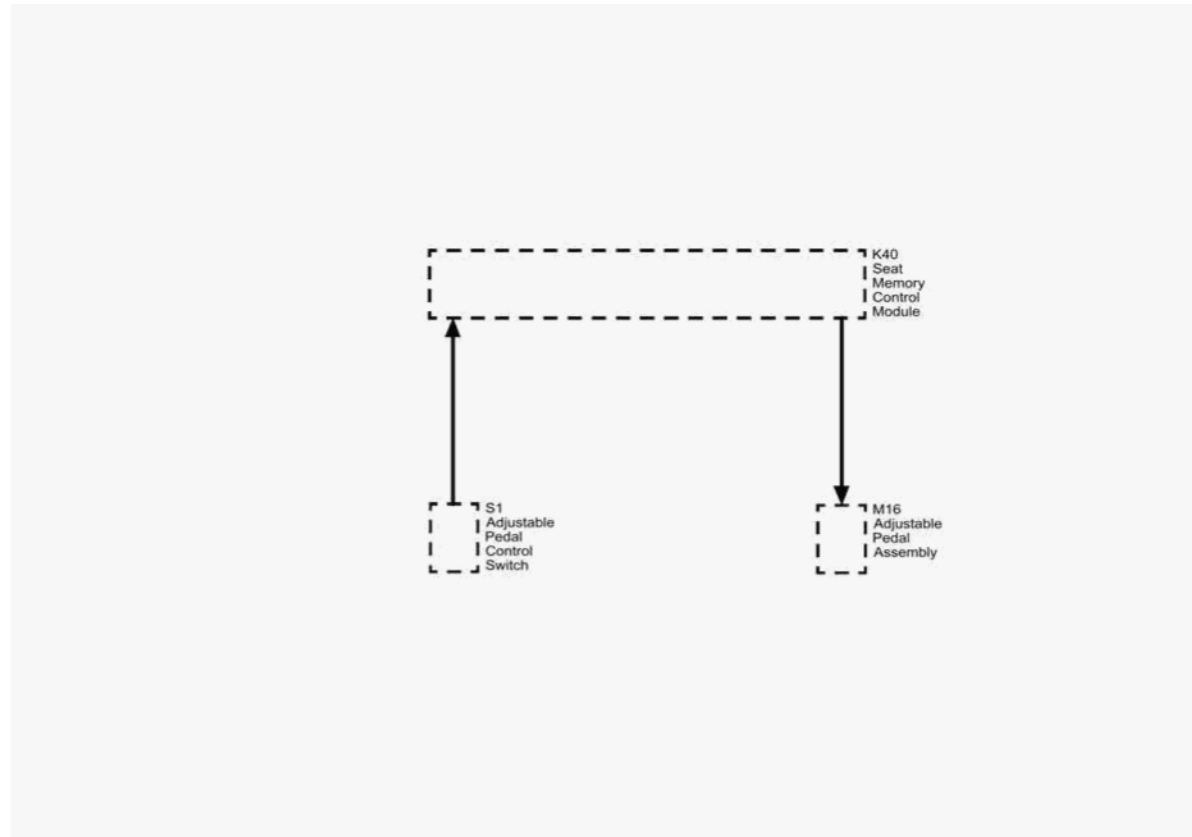


Fig. 25: Adjustable Pedals System Block Diagram

Courtesy of GENERAL MOTORS COMPANY

Adjustable Pedals System Operation

The adjustable pedals are not operable when the cruise control is engaged.

The adjustable pedal system is controlled by the seat memory control module. The adjustable pedals are moved forward or backward by a motor which is fastened to the brake pedal assembly with drive cables to the brake and accelerator pedal actuators.

The adjustable pedal motor is controlled by the seat memory control module through two motor control circuits. In an inactive state both control circuits are closed to ground within the module. The seat memory control module drives the adjustable pedal motor in the forward or rearward direction by closing the appropriate control circuit to battery voltage. The adjustable pedal motor is bidirectional and the direction of the pedal assembly travel is determined by which of the motor control circuits is switched to battery voltage while the other remains grounded.

The adjustable pedal forward and rearward switches are inputs to the module. Battery voltage is supplied to the switch from the seat memory control module. When the switch is operated to the forward or rearward direction the forward or rearward switch signal circuit is closed to the battery voltage circuit. Battery voltage on a switch signal circuit indicates to the seat memory control module that the switch is active.

The seat memory control module monitors the locations of the adjustable pedals using the adjustable pedal position sensor. The position sensor is supplied with a 5 V reference and ground circuit from the seat memory control module. The position sensor signal circuit is referenced from ground within the module. The position sensor signal circuit voltage levels are used by the seat memory control module to determine the positions of the adjustable pedals when storing or recalling memory position settings.
