

Cruise Control

Specifications

Fastener Tightening Specifications

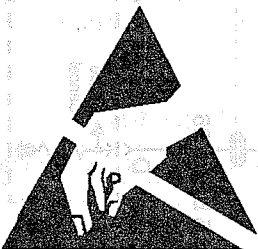
Application	Specification	
	Metric	English
Cruise Control Module Bolt	5 N·m	44 lb in
Cruise Control Module Bracket Bolt	2 N·m	18 lb in
Cruise Control Module Bracket Bolt (To Rail)	10 N·m	89 lb in
Cruise Control Module Shield Bolt	6 N·m	53 lb in
Cruise Control Module Shield Nut	27 N·m	20 lb ft

GM SPO Group Numbers

Application	GM SPO Group Number
Cruise Control Module	3.000
Cruise Control Module Bracket	3.000
Cruise Control Module Shield	3.000
Cruise Control Release Switch	3.000
Cruise Control Servo Cable	3.000
Cruise Control Servo Cover	3.000

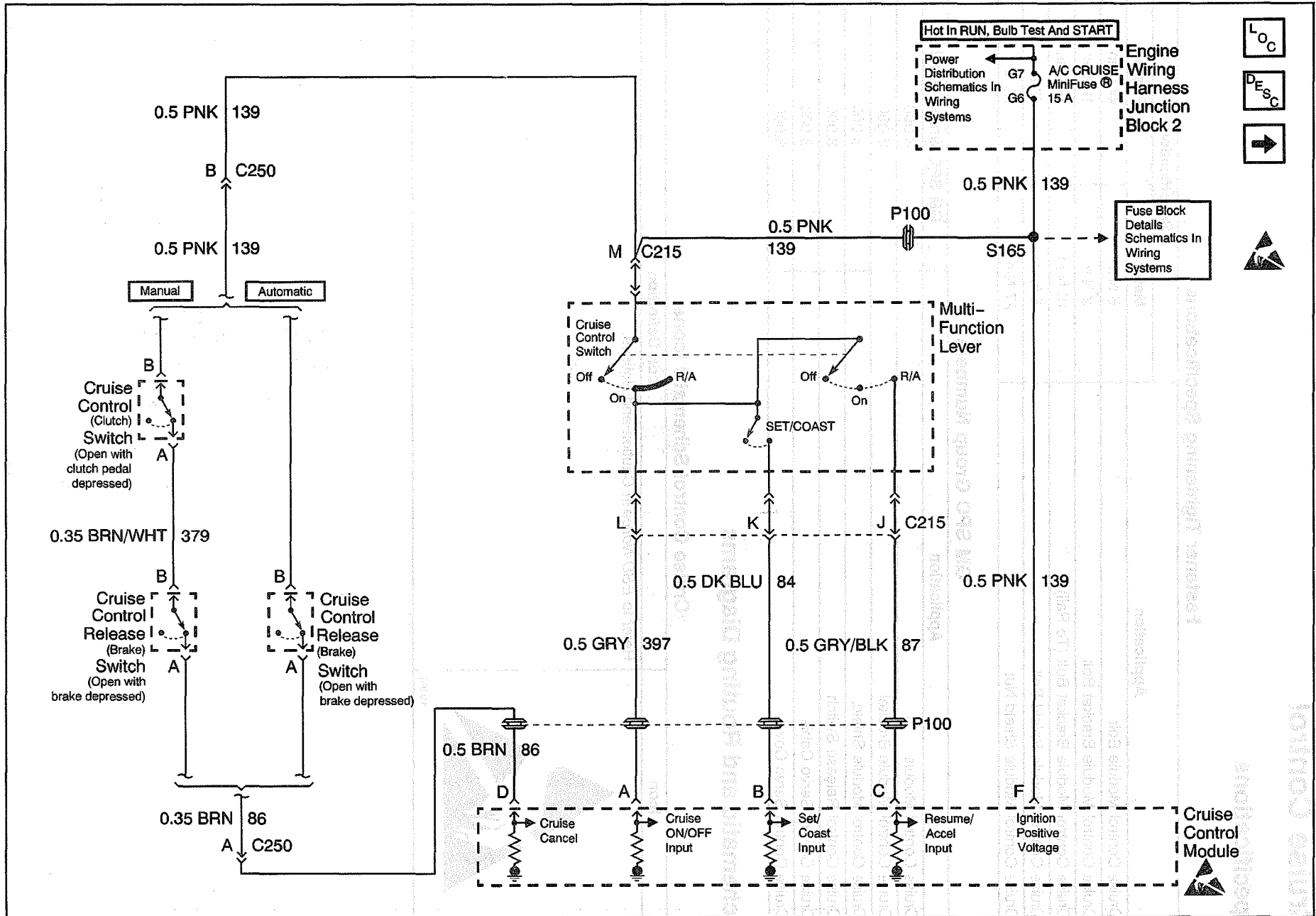
Schematic and Routing Diagrams

Cruise Control Schematic Icons

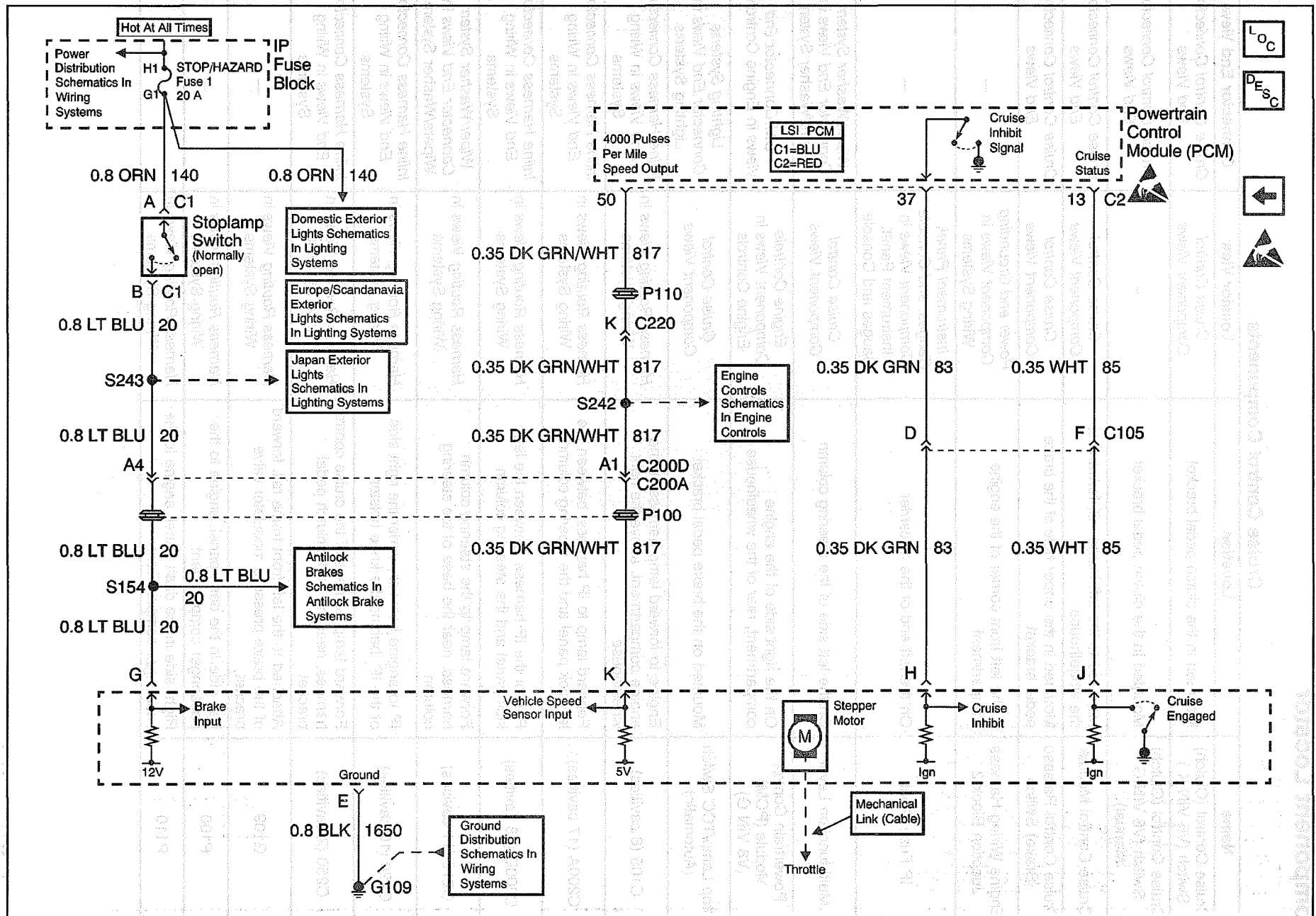
Icon	Icon Definition
 19384	Refer to <i>ESD Notice</i> in Caution and Notices.



Cruise Control Schematics (Cruise Control Module and Cruise Release Switches)



Cruise Control Schematics (Cruise Control Module and Powertrain Control Module)



Component Locator

Cruise Control Components

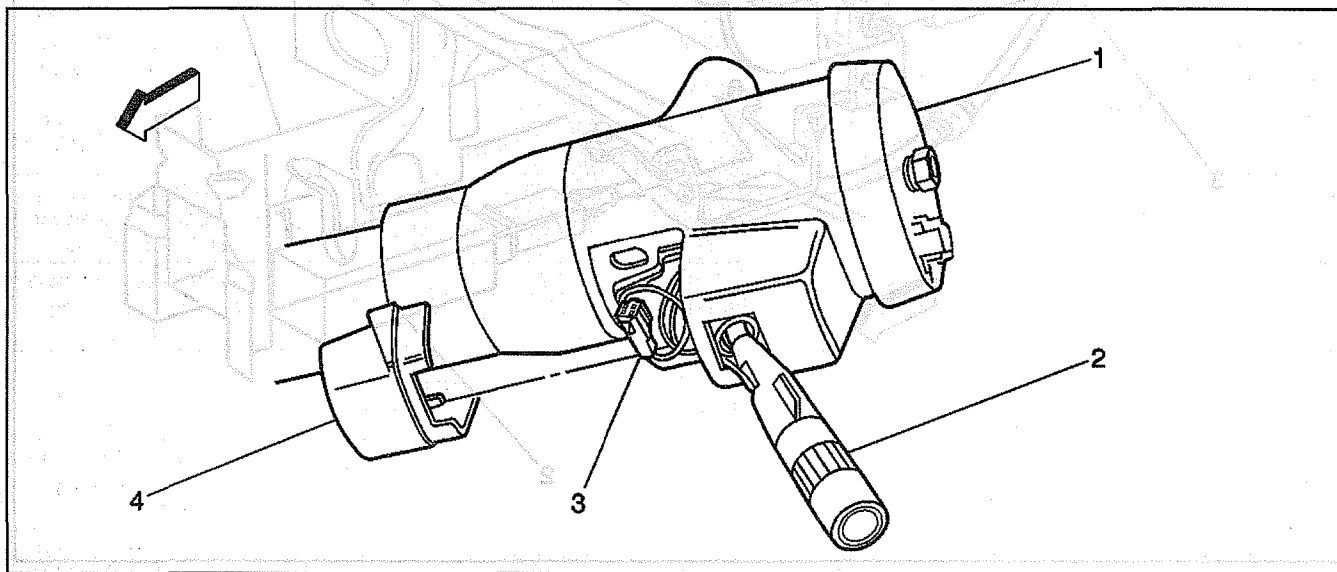
Name	Location	Locator View	Connector End View
Cruise Control (Clutch) Switch (V6 VIN K)	Mounted in the clutch pedal bracket	<i>Cruise Control Component Views</i>	<i>Cruise Control Connector End Views</i>
Cruise Control (Clutch) Switch (V8 VIN G Manual)	Mounted in the clutch pedal bracket	—	<i>Cruise Control Connector End Views</i>
Cruise Control Module	Mounted to the left frame rail, forward of the wheelhouse	<i>Cruise Control Component Views</i>	<i>Cruise Control Connector End Views</i>
Cruise Control Release (Brake) Switch	Mounted in the upper hole of the brake pedal bracket	<i>Cruise Control Component Views</i>	<i>Cruise Control Connector End Views</i>
Engine Wiring Harness Junction Block 2	In the left front corner of the engine compartment	<i>Power and Grounding Component Views in Wiring Systems</i>	—
IP Fuse Block	On the left end of the IP carrier	<i>Instrument Panel, Gauges, and Console Component Views in Instrument Panel, Gauges and Console</i>	—
Multi-function Lever	On the left side of the steering column	<i>Cruise Control Component Views</i>	<i>Wiper/Washer System Connector End Views in Wipers/Washer System</i>
Powertrain Control Module (PCM) (V8 VIN G)	On the right side of the engine compartment, rear of the wheelhouse	<i>Engine Controls Component Views in Engine Controls</i>	<i>PCM Connector End Views in Engine Controls</i>
Stop Lamp/TCC Switch (Automatic)	Mounted on the brake pedal bracket	<i>Cruise Control Component Views</i>	<i>Lighting Systems Connector End Views in Lighting Systems</i>
C105 (8 cavities)	Engine to forward lamp harness, in the engine compartment, above the right wheelhouse	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C200A (17 cavities)	Forward lamp to IP harness, between the left kick panel and the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C200D (48 cavities)	Part of the IP harness, between the left kick panel and the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C215 (11 cavities)	Forward lamp to the steering column harness, near the base of the steering column	<i>Harness Routing Views in Wiring Systems</i>	<i>Wiper/Washer System Connector End Views in Wipers/Washer System</i>
C220 (10 cavities)	IP to engine harness, under the right side of the IP, behind the knee bolster	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
C250 (2 cavities)	Forward lamp harness of the cruise control harness, near the brake/clutch pedal bracket	<i>Harness Routing Views in Wiring Systems</i>	<i>Inline Harness Connector End Views in Wiring Systems</i>
G109	Attached to the left front frame rail, forward of the brake pressure modulator valve bracket	<i>Harness Routing Views in Wiring Systems</i>	—
P100	Left side in the dash panel, engine to the passenger compartment	<i>Harness Routing Views in Wiring Systems</i>	—
P110	Right side in the dash panel, engine to the passenger compartment	<i>Harness Routing Views in Wiring Systems</i>	—

Cruise Control Components (cont'd)

Name	Location	Locator View	Connector End View
S154 (Chevrolet)	In the forward lamp harness, approximately 7 cm (2.8 in) from the C120 (left front wheel speed sensor) breakout	—	—
S154 (Pontiac)	In the forward lamp harness, approximately 13 cm (5.1 in) from the C120 (left front wheel speed sensor) breakout	—	—
S165	In the forward lamp harness, approximately 7 cm (2.8 in) from the main branch into the engine wiring harness junction block 2 breakout	—	—
S242	In the IP harness, approximately 4 cm (1.6 in) from the data link connector (DLC) breakout	—	—
S243	In the IP harness, approximately 9 cm (3.5 in) from G200 breakout	—	—

Cruise Control Component Views

Steering Column

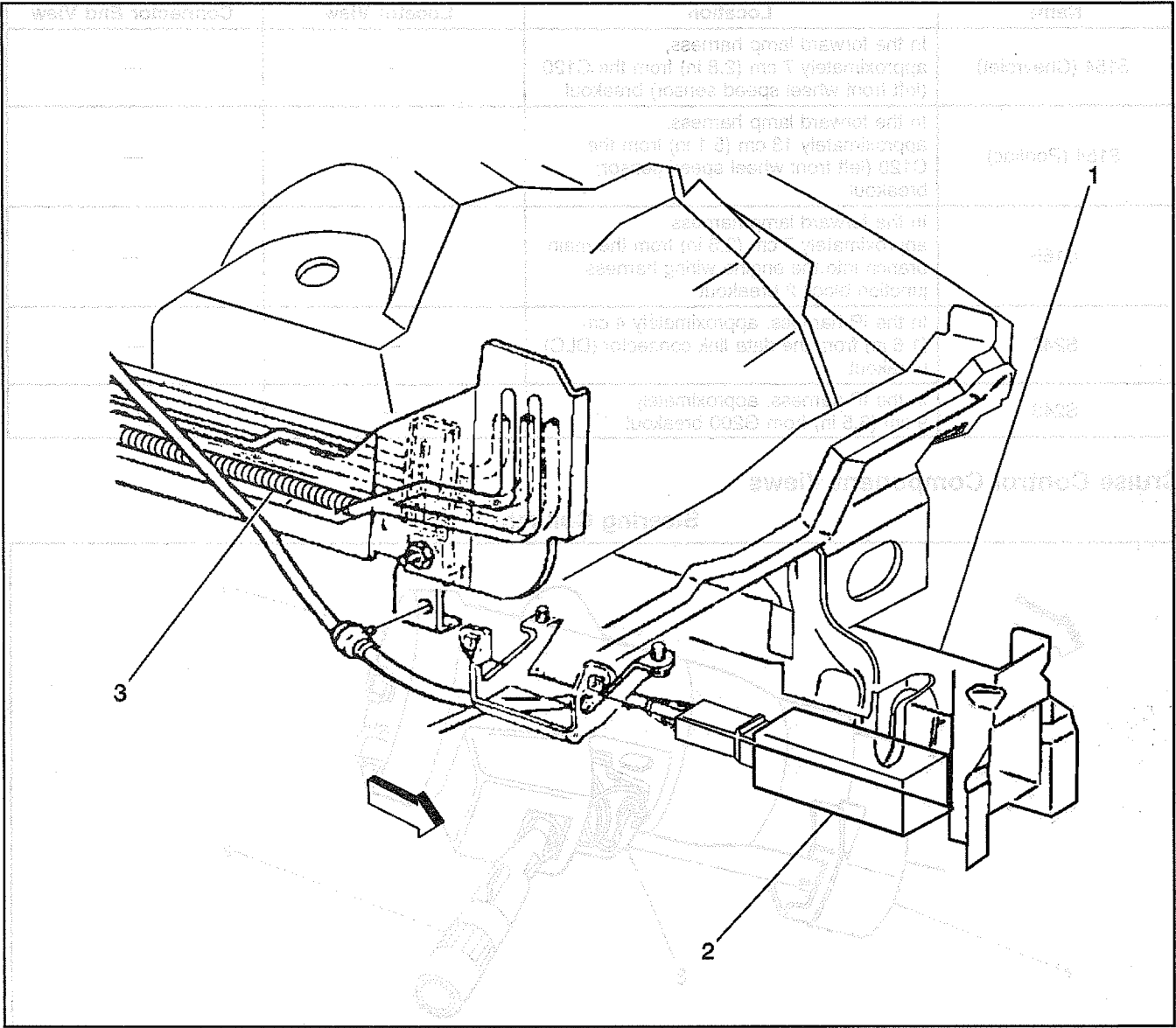


374304

Legend

- | | |
|--------------------------|---------------------------------------|
| (1) Steering Column | (3) Cruise Control Switches Connector |
| (2) Multi-function Lever | (4) Access Cover |

Cruise Control Left Frame Rail

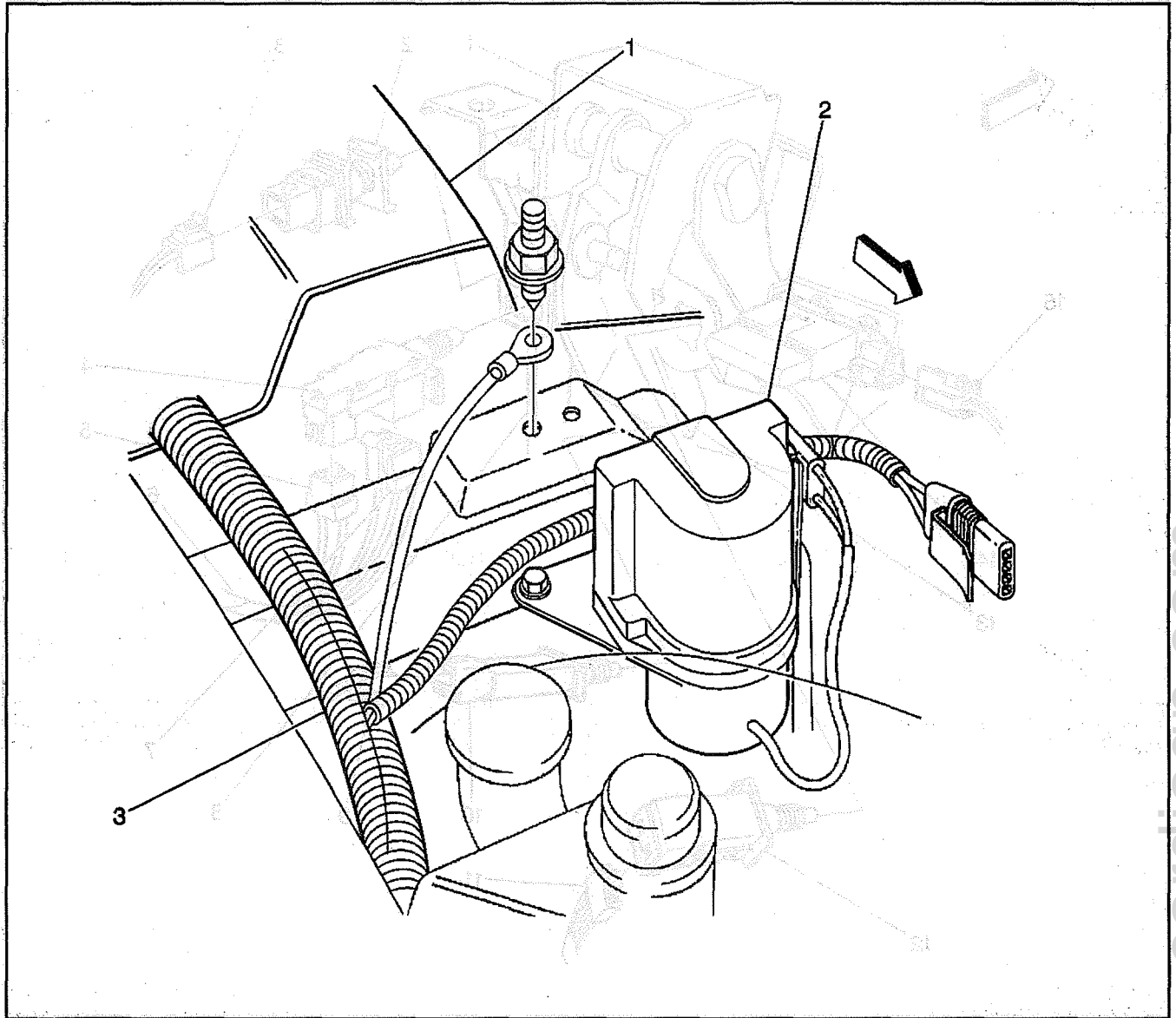


374357

Legend

- (1) Left Frame Rail
- (2) Cruise Control Module
- (3) Forward Lamp Harness

Right Front Engine Compartment



374355

Legend

- (1) Right Front Wheelhouse
 (2) Accelerator Control and Adjuster

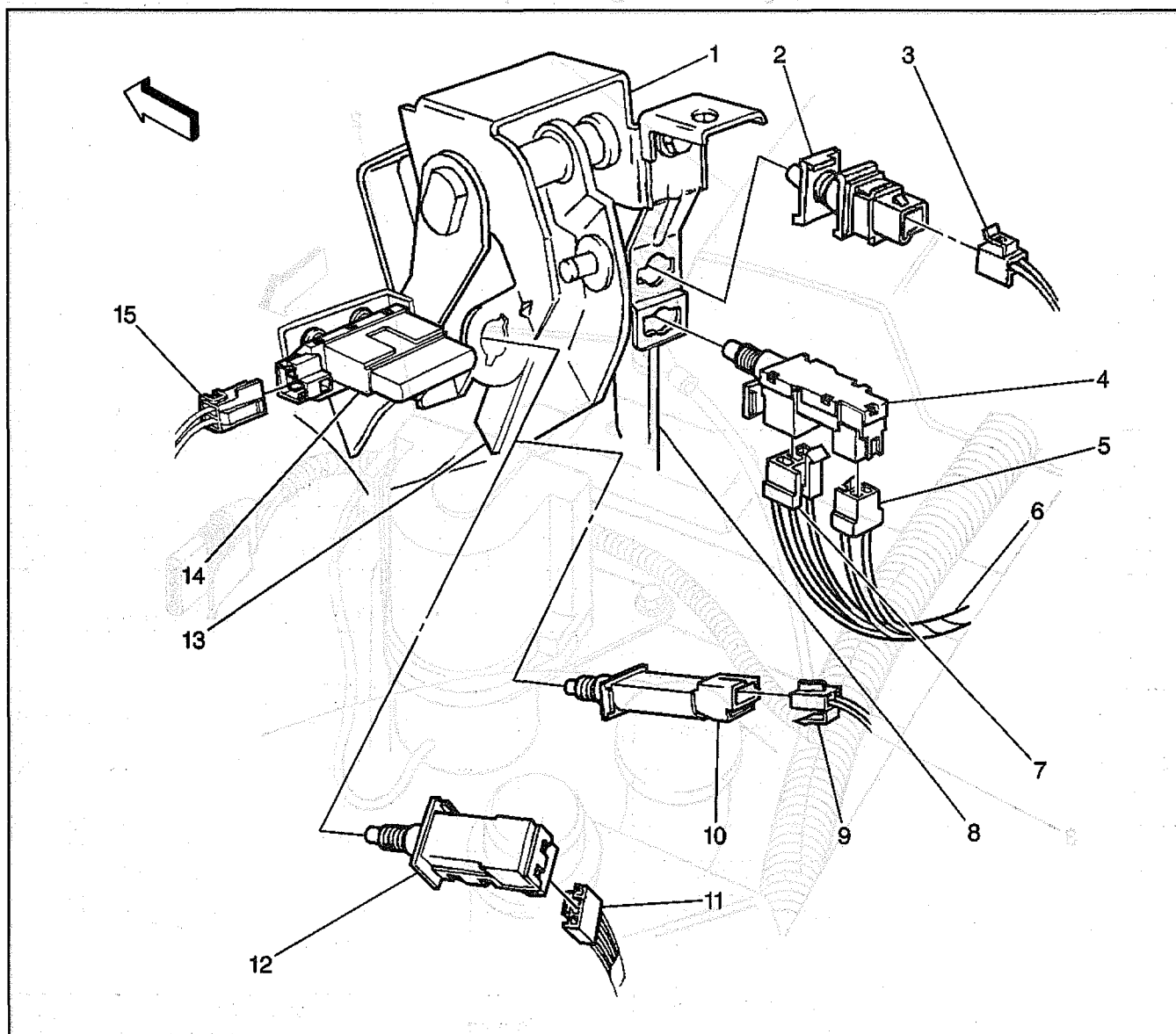
- (3) Forward Lamp Harness

Legend

- (9) Cruise Control Anticipator Switch
 (10) Cruise Control Anticipator Switch (V6 VIN 10)
 (11) Clutch Pedal
 (12) Clutch Pedal Position Switch
 (13) IP Wiring Harness

- (1) Brake/Clutch Switch
 (2) Cruise Control Release (Brake) Switch
 (3) Cruise Control Release (Brake) Switch (Automatic Transmission only)
 (4) Stoplamp Switch
 (5) Stoplamp Switch Connector C2
 (6) IP Wiring Harness
 (7) Stoplamp Switch Connector C1
 (8) Brake Pedal

Under Left Side of the Instrument Panel



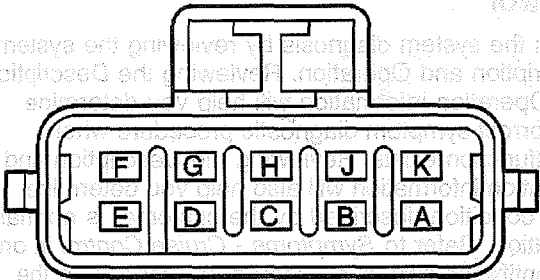
374428

Legend

- | | |
|--|---|
| (1) Brake/Clutch Pedal Bracket | (9) Cruise Control Harness |
| (2) Cruise Control Release (Brake) Switch | (10) Cruise Control (Clutch) Switch (V6 VIN K) |
| (3) Cruise Control Harness | (11) Cruise Control Harness |
| (4) Stoplamp Switch | (12) Cruise Control/Clutch Anticipate Switch (V6 VIN K) |
| (5) Stoplamp Switch Connector C2 (Automatic Transmission only) | (13) Clutch Pedal |
| (6) IP Wiring Harness | (14) Clutch Pedal Position Switch |
| (7) Stoplamp Switch Connector C1 | (15) IP Wiring Harness |
| (8) Brake Pedal | |

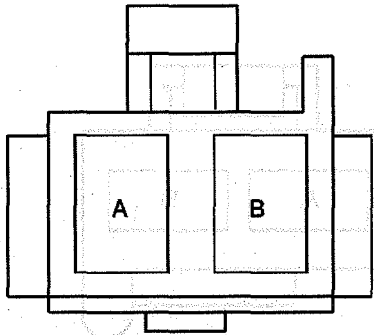
Cruise Control Connector End Views

Cruise Control Module



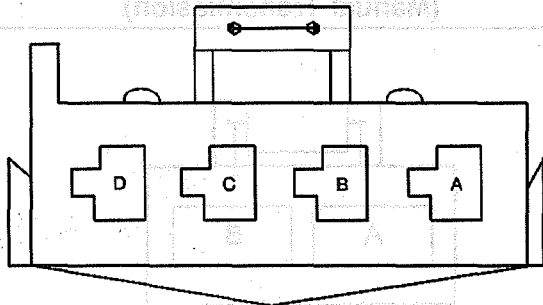
Connector Part Information		• 1206-5425 • 10-Way F Metri-Pack 150 Series (BLK)	
Pin	Wire Color	Circuit No.	Function
A	GRY	397	Cruise Control On/Off Switch Signal
B	DK BLU	84	Cruise Control Set/Coast Switch Signal
C	GRY/BLK	87	Cruise Control Resume/Accel Switch Signal
D	BRN	86	Cruise Control Brake Switch Input
E	BLK	1650	Ground
F	PNK	139	Fused Ignition Feed
G	LT BLU	20	Stop Lamp Switch Input
H	DK GRN	83	Cruise Control Inhibit Signal Input
J	WHT	85	Cruise Control Status Signal
K	DK GRN/ WHT	817	Vehicle Speed Sensor Input

Stoplamp Switch (C1)



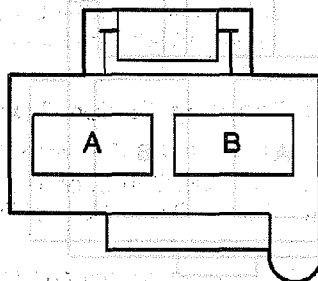
Connector Part Information		• 1203-3701 • 2 Way F Metri-Pack 480 Series (GRY)	
Pin	Wire Color	Circuit No.	Function
A	ORN	140	Fused Battery Feed
B	LT BLU	20	Stoplamp Switch Output

Cruise Control (Clutch) Switch



Connector Part Information		• 1203-3704 • 4 Way F Metri-Pack 280 Series (BLK)	
Pin	Wire Color	Circuit No.	Function
A	BRN/WHT	379	Cruise Control (Clutch) Switch Output to the Cruise Control Module
B	PNK	139	Fused Ignition Feed
C	GRY	48	Cruise Control (Clutch) Switch Output to the PCM
D	BLK/WHT	451	Ground

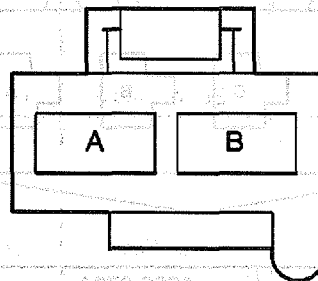
Cruise Control Release (Brake) Switch (Automatic Transmission)



287957

Connector Part Information		• 1204-1433 • 2 Way F Metri-Pack 280 Series (BLK)	
Pin	Wire Color	Circuit No.	Function
A	BRN	86	Cruise Control Release (Brake) Switch Output
B	PNK	139	Fused Ignition Feed

Cruise Control Release (Brake) Switch (Manual Transmission)



287957

Connector Part Information		• 1204-1433 • 2 Way F Metri-Pack 280 Series (BLK)	
Pin	Wire Color	Circuit No.	Function
A	BRN	86	Cruise Control Release (Brake) Switch Output
B	BRN/WHT	379	Cruise Control (Clutch) Switch Output

Diagnostic Information and Procedures

A Diagnostic Starting Point - Cruise Control

Begin the system diagnosis by reviewing the system Description and Operation. Reviewing the Description and Operation information will help you determine the correct symptom diagnostic procedure when a malfunction exists. Reviewing the Description and Operation information will also help you determine if the condition described by the customer is normal operation. Refer to *Symptoms - Cruise Control* in order to identify the correct procedure for diagnosing the system and where the procedure is located.

Symptoms - Cruise Control

Important: Review the system operation in order to familiarize yourself with the system functions. Refer to *Cruise Control System Operation*.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the Cruise Control System. Refer to *Checking Aftermarket Accessories in Wiring Systems*.
- 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 and Poor Connections in Wiring Systems*.

Symptom List

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

- *Cruise Control Inoperative/Malfunctioning*
- *Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester*

Cruise Control Inoperative/Malfunctioning**Diagnostic Aids**

Important: Perform the following in order to avoid misdiagnosis:

- Inspect for proper operation of the brake lamps.
- Inspect the throttle linkage for mechanical binding which could cause the system to malfunction.
- Inspect the cruise control adjustment for minimum slack.
- Inspect for stored Diagnostic Trouble Codes DTC's in the PCM. Refer to *A Powertrain On Board Diagnostic (OBD) System Check — 3.8L* or *A Powertrain On Board Diagnostic (OBD) System Check — 5.7L* in Engine Controls.
- EMI on the speed sensor signal circuit may cause erratic cruise control operation.

Alternative Diagnosis

The J 42958 Cruise Control Tester may be used if desired. See Service Bulletin 83-90-08A or refer to *Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester*

Conditions for Enabling Cruise Control

- The vehicle speed is more than 40 km/h (25 mph)
- PARK, REVERSE, NEUTRAL, or 1st gear IS NOT indicated by the Park / Neutral Position Switch.
- An over / undercharged battery condition DOES NOT exist.
- Normal engine RPM is present.
- High engine RPM (fuel cut-off) is not present. Refer to *Fuel Metering Modes of Operation — 3.8L* or *Fuel Metering Modes of Operation — 5.7L* in Engine Controls.

Cruise Control Inoperative/Malfunctioning

Step	Action	Value(s)	Yes	No
1	Did you review the system operation and perform the necessary inspections?	—	Go to Step 2	Go to Symptoms - Cruise Control
2	1. Turn OFF the ignition. 2. Disconnect the cruise control module. 3. Turn ON the ignition with the engine OFF. 4. Probe the ignition positive voltage circuit of the cruise control module with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 3	Go to Step 36
3	Probe the ignition positive voltage circuit of the cruise control module with a test lamp that is connected to the ground circuit of the cruise control module. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 4	Go to Step 37
4	1. Turn ON the ignition with the engine OFF. 2. Turn OFF the cruise control. 3. Probe the on/off, the set/coast, and the resume/accelerate circuits with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate on any of the circuits?	—	Go to Step 16	Go to Step 5
5	1. Turn ON the ignition with the engine OFF. 2. Turn ON the cruise control. 3. Probe the on/off circuit with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 6	Go to Step 17
6	1. Probe the set/coast circuit with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. 2. Press and hold the SET/COAST switch. Does the test lamp illuminate?	—	Go to Step 7	Go to Step 19

Cruise Control Inoperative/Malfunctioning (cont'd)

Step	Action	Value(s)	Yes	No
7	1. Probe the resume/accelerate circuit with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. 2. Press and hold the RESUME/ACCEL switch. Does the test lamp illuminate?	—	Go to Step 8	Go to Step 20
8	Probe the cruise cancel circuit with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 9	Go to Step 21
9	Depress the brake pedal while monitoring the test lamp. Does the test lamp illuminate?	—	Go to Step 22	Go to Step 10
10	Probe the brake input circuit with a test lamp that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 23	Go to Step 11
11	Depress the brake pedal while monitoring the test lamp. Does the test lamp illuminate?	—	Go to Step 12	Go to Step 24
12	Probe the cruise disable/enable circuit with a test lamp that is connected to battery voltage. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the test lamp illuminate?	—	Go to Step 25	Go to Step 13
13	Use a scan tool in order to command the cruise inhibit/enable OFF. Does the test lamp illuminate?	—	Go to Step 14	Go to Step 26
14	Probe the cruise engaged output circuit with a DMM that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. Does the voltage measure near the specified value?	B+	Go to Step 15	Go to Step 27
15	1. Raise and suitably support the vehicle. 2. Block one of the drive wheels. 3. Place the Transaxle/Transmission Selector in drive. 4. Set the DMM to the AC scale. 5. Probe the VSS signal circuit with a DMM that is connected to a good ground. Refer to <i>Circuit Testing</i> in Wiring Systems. 6. Rotate one of the drive wheels. 7. Observe the DMM. Does the voltage displayed on the scan tool vary?	—	Go to Step 35	Go to Step 28
16	Test the circuit that illuminated the test lamp for a short to voltage. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 34
17	Test the on/off circuit for an open or a high resistance. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 18
18	Test the ignition positive voltage circuit for an open or high resistance between the cruise control module and the cruise control switch. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 34

Cruise Control Inoperative/Malfunctioning (cont'd)

Step	Action	Value(s)	Yes	No
19	Test the set/coast circuit for an open or a high resistance. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 34
20	Test the resume/accelerate circuit for an open or a high resistance. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 34
21	Test the cruise cancel circuit for an open or a high resistance. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 29
22	Test the cruise cancel circuit for a short to voltage. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 29
23	Test the brake input circuit for a short to voltage. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 30
24	Test the brake input circuit for an open or a high resistance. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 30
25	Test the cruise disable/enable circuit for a short to ground. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 33
26	Test the cruise disable/enable circuit for an open, a high resistance, or a short to voltage. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 33
27	Test the cruise engaged output circuit for an open, a high resistance, or a short to voltage. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 33
28	Test the speed sensor circuit for an open or a high resistance. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 33
29	Inspect the cruise control release (brake) switch and cruise control clutch switch for proper adjustment. Did you find and correct the condition?	—	Go to Step 43	Go to Step 31
30	Inspect the stoplamp switch for proper adjustment. Refer to <i>Stoplamp Switch Adjustment</i> in Hydraulic Brakes. Did you find and correct the condition?	—	Go to Step 43	Go to Step 32
31	Inspect for poor connections at the harness connector of the cruise control release (brake) switch and the cruise control (clutch) switch. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 38

Cruise Control Inoperative/Malfunctioning (cont'd)

Step	Action	Value(s)	Yes	No
32	Inspect for poor connections at the harness connector of the stoplamp switch. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 39
33	Inspect for poor connections at the harness connector of the PCM. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 40
34	Inspect for poor connections at the harness connector of the cruise control switch. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 41
35	Inspect for poor connections at the harness connector of the cruise control module. Refer to <i>Testing for Intermittent and Poor Connections and Connector Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 43	Go to Step 42
36	Repair the ignition positive voltage circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 43	—
37	Repair the ground circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you complete the repair?	—	Go to Step 43	—
38	Replace the cruise control release (brake) switch or the cruise control (clutch) switch. Refer to <i>Cruise Release Switch Replacement</i> . Did you complete the replacement?	—	Go to Step 43	—
39	Replace the stoplamp switch. Refer to <i>Stoplamp Switch Replacement</i> in Hydraulic Brakes. Did you complete the replacement?	—	Go to Step 43	—
40	Replace the PCM. Refer to <i>PCM Replacement/Programming - 3.8L or PCM Replacement/Programming - 5.7L</i> in Engine Controls. Did you complete the replacement?	—	Go to Step 43	—
41	Replace the cruise control switch. Refer to <i>Multifunction Turn Signal Lever Replacement - On Vehicle</i> in Steering Wheel and Column - Tilt. Did you complete the replacement?	—	Go to Step 43	—
42	Replace the cruise control module. Refer to <i>Cruise Control Module Replacement</i> . Did you complete the replacement?	—	Go to Step 43	—
43	Operate the vehicle within the conditions for cruise control operation. Does the cruise control system operate correctly?	—	System OK	Go to Step 2

Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester**Diagnostic Aids**

In order to avoid misdiagnosis:

- Inspect for proper operation of the brake lamps.
- Visually inspect all fuses relative to the cruise control system.
- Inspect all of the connectors for poor terminal retention, corrosion or damage.
- Inspect the throttle linkage/cable for mechanical binding.
- Inspect the cruise control cable adjustment.
- EMI on the speed sensor signal circuit may cause erratic operation.

PCM Inhibit

The PCM will inhibit (not allow) cruise control if one or more of the following has occurred:

- Park, reverse, neutral, or first gear is indicated by the Park/Neutral switch.
- Certain Diagnostic Trouble Codes (DTC) are stored in the powertrain control module (PCM).
- An over/undercharged battery condition exists.
- Low engine RPM is present.
- High engine RPM (Fuel Cut-Off) is present

The Cruise Control Tester

It has been found that when this Tester is used on some vehicles with high resistance or an open in the cruise control module ground circuit, the Tester's LED(s) will light abnormally. For example, the Brake/Clutch and VSS LED(s) will light normally but the Ignition LED will be dim with the ON/OFF switch in the OFF position. However, with the ON/OFF switch in the ON position only the VSS LED will light. If you come upon the above situation, please check the ground circuit prior to going on with your diagnosis.

Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester

Step	Action	Value(s)	Yes	No
1	Did you review the system operation and perform the necessary inspections?	—	Go to Step 2	Go to Symptoms - Cruise Control
2	1. Connect the J 42958 Cruise Control Tester between the harness connector of the cruise control module and the cruise control module. 2. Place the cruise control ON/OFF switch in the OFF position. 3. Turn ON the ignition, with the engine OFF. Is the IGNITION LED on the J 42958 illuminated?	—	Go to Step 3	Go to Step 20
3	Is the BRAKE/TCC LED on the J 42958 Cruise Control Tester illuminated?	—	Go to Step 4	Go to Step 22
4	Is the BRAKE LIGHTS LED on the J 42958 Cruise Control OFF?	—	Go to Step 5	Go to Step 23
5	1. Press and release the brake pedal. 2. Press and release the clutch pedal. Did the BRAKE/TCC LED turn OFF on the J 42958 Cruise Control Tester when each step was performed?	—	Go to Step 6	Go to Step 25
6	Place the cruise control On/Off switch in the ON position. (Leave this switch on until instructed to turn it off.) Did the ON/OFF and the INHIBIT/ENABLE LED on the J 42958 Cruise Control Tester illuminate?	—	Go to Step 7	Go to Step 27
7	Is the CRUISE LAMP LED on the J 42958 Cruise Control Tester illuminated?	—	Go to Step 8	Go to Step 28
8	Press and release the Set/Coast switch. Did the SET/COAST LED on the J 42958 Cruise Control Tester illuminate when the Set/Coast switch was pressed, and turn off when the Set/Coast switch was released?	—	Go to Step 9	Go to Step 30

Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester (cont'd)

Step	Action	Value(s)	Yes	No
9	Press and release the Resume/Accel switch. Did the RESUME/ACC LED on the J 42958 Cruise Control Tester illuminate when the Resume/Accel switch was pressed, and turn off when the Resume/Accel switch was released?	—	Go to Step 10	Go to Step 31
10	Perform the following sequence: 1. Press and release the INHIBIT OVERRIDE button on the J 42958 Cruise Control Tester. 2. Press and release the BRAKE button on the tester. 3. Press and release the S/C button on the tester. Did the CRUISE ENGAGE LED illuminate continually after the S/C button was pressed and released?	—	Go to Step 11	Go to Step 20
11	1. Observe the throttle lever at the throttle body. 2. Press and hold the R/A button on the J 42958 Cruise Control Tester for five seconds, and then release it. Did the throttle move to near wide open, and then return approximately to half throttle when the R/A button on the J 42958 Cruise Control Tester was released?	—	Go to Step 12	Go to Step 35
12	1. Observe the throttle lever at the throttle body. 2. Press and hold the S/C button on the J 42958 Cruise Control Tester for five seconds, and then release it. Did the throttle move toward closed throttle, and then return to approximately half throttle when the S/C button on the J 42958 Cruise Control Tester was released?	—	Go to Step 13	Go to Step 35
13	1. Press and release (tap) the R/A button the J 42958 Cruise Control Tester three times. 2. Press and release the BRAKE button on the J 42958 Cruise Control Tester. Did the CRUISE ENGAGE LED on the J 42958 Cruise Control Tester turn off and the throttle return to the closed position?	—	Go to Step 14	Go to Step 35
14	1. Raise and support vehicle. 2. Block one of the drive wheels. 3. Turn ON the ignition, with the engine OFF. 4. Place the transaxle/transmission selector in Drive. 5. Observe the VSS LED on J 42958 Cruise Control Tester while rotating the drive wheel that is not blocked, by hand. 6. Place the transaxle/transmission selector in park. Did the VSS LED flash while the one drive wheel was rotated?	—	Go to Step 15	Go to Step 33
15	Does the connector harness of the cruise control module have a wire connected to terminal H?	—	Go to Step 16	Go to Step 19
16	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Select Powertrain Special Functions and then Output Controls for Cruise Inhibit. While observing the INHIBIT ENABLE LED of the J 42958 Cruise Control Tester, use the scan tool in order to enable the cruise control. Did the INHIBIT ENABLE LED on the J 42958 Cruise Control Tester dim when the scan tool was used to enable cruise control?	—	Go to Step 17	Go to Step 32

Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester (cont'd)

Step	Action	Value(s)	Yes	No
17	1. Turn OFF the ignition. 2. Disconnect the J 42958 Cruise Control Tester and reconnect the vehicle harness to the cruise control module. 3. Road test the vehicle over 40 km/h (25 mph). 4. Operate the cruise control. 5. Use the scan tool in order to view the cruise inhibit status. Does the scan tool display enabled above 40 km/h (25 mph)?	—	Go to Diagnostic Aids	Go to A Powertrain On Board Diagnostic (OBD) System Check in Engine Controls
18	Did the cruise control set and operate normally?	—	Go to Diagnostic Aids	Go to Step 35
19	1. Reconnect all of the components. 2. Road test vehicle and operate the cruise control. Does cruise control operate normally?	—	Go to Diagnostic Aids	Go to Step 35
20	Test for an open, high resistance or short to ground in the ignition voltage circuit of the cruise control module. Refer to <i>Circuit Testing and Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 21
21	Repair the high resistance or the open in the ground circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 35
22	Inspect the brake/TCC and or clutch switch(es) for proper adjustment. Did you find and correct the condition?	—	Go to Step 39	Go to Step 24
23	Inspect the stop lamp switch for proper adjustment. Refer to <i>Stoplamp Switch Adjustment</i> in Hydraulic Brakes. Did you find and correct the condition?	—	Go to Step 39	Go to Step 26
24	Repair the open or the short to ground in the cruise release (cancel) input circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 33
25	Repair the short to voltage in the cruise release (cancel) switch input circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 33
26	Repair the open or the high resistance in the stop lamp input circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 34
27	Repair the open or the short to ground in the cruise control ON/OFF input circuit of the cruise control module. Refer to <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 36
28	Disconnect the J 42958 Cruise Control Tester from the cruise control module, but leave the vehicle harness connected to the J 42958 Cruise Control Tester. Did the CRUISE LAMP LED remain OFF when the cruise control module was disconnected?	—	Go to Step 29	Go to Step 35

Cruise Control Inoperative/Malfunctioning Using J 42958 Cruise Control Tester (cont'd)

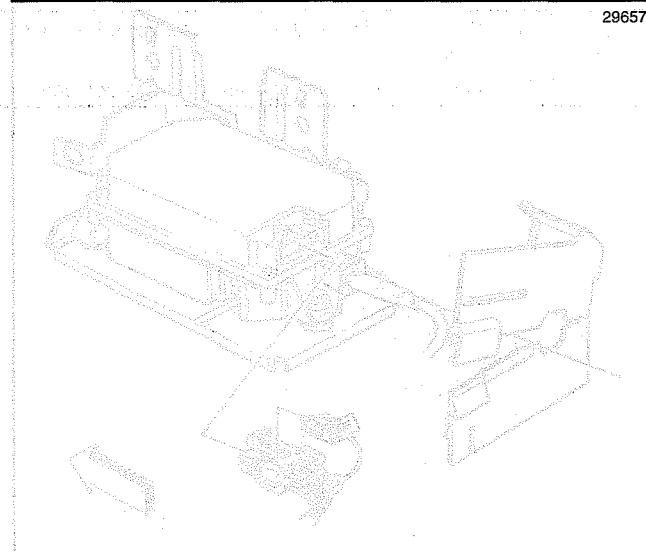
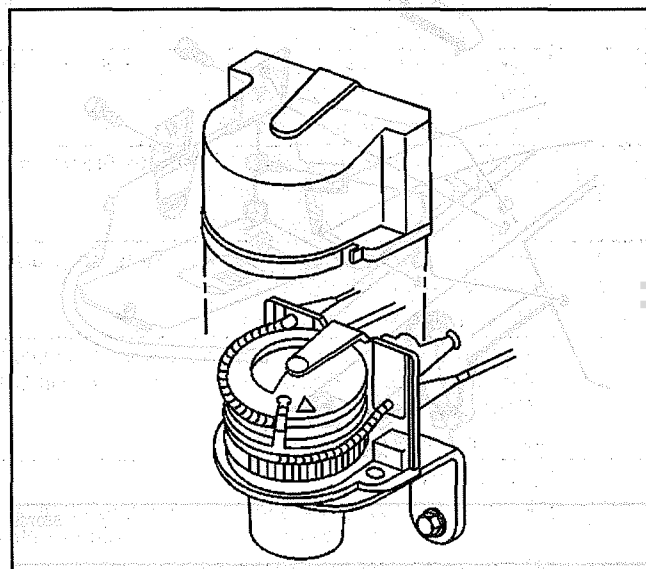
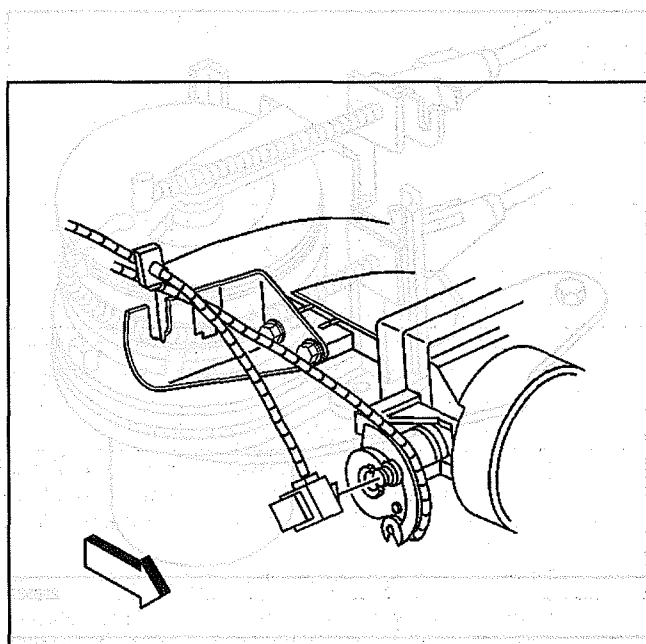
Step	Action	Value(s)	Yes	No
29	Test for and repair an open or a short to ground in the cruise engaged output circuit. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 37
30	Test for an open or short to ground in the Set/Coast input circuit. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 36
31	Test for an open or short to voltage in the Resume/Accel input circuit. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 36
32	Test for an open or high resistance in the cruise inhibit circuit between the cruise control module and the PCM. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 38
33	Test for an open or high resistance in the vehicle speed signal circuit between the cruise control module and the PCM. Refer to <i>Circuit Testing</i> and <i>Wiring Repairs</i> in Wiring Systems. Did you find and correct the condition?	—	Go to Step 39	Go to Step 38
34	Replace the brake/TCC and or clutch switch(es). Refer to <i>Cruise Release Switch Replacement</i> . Did you complete the replacement?	—	Go to Step 39	—
35	Replace the stop lamp switch. Refer to <i>Stoplamp Switch Replacement</i> in Hydraulic Brakes. Did you complete the replacement?	—	Go to Step 39	—
36	Replace the cruise control module. Refer to <i>Cruise Control Module Replacement</i> . Did you complete the replacement?	—	Go to Step 39	—
37	Replace the cruise control switch. Refer to <i>Multifunction Turn Signal Lever Replacement - On Vehicle</i> in Steering Wheel and Column - Tilt. Did you complete the replacement?	—	Go to Step 39	—
38	Replace the PCM. Refer to <i>PCM Replacement/Programming - 3.8L</i> or <i>PCM Replacement/Programming - 5.7L</i> in Engine Controls. Did you complete the replacement?	—	Go to Step 39	—
39	Operate the vehicle within the conditions for cruise control operation. Does the cruise control system operate correctly?	—	System OK	Go to Step 2

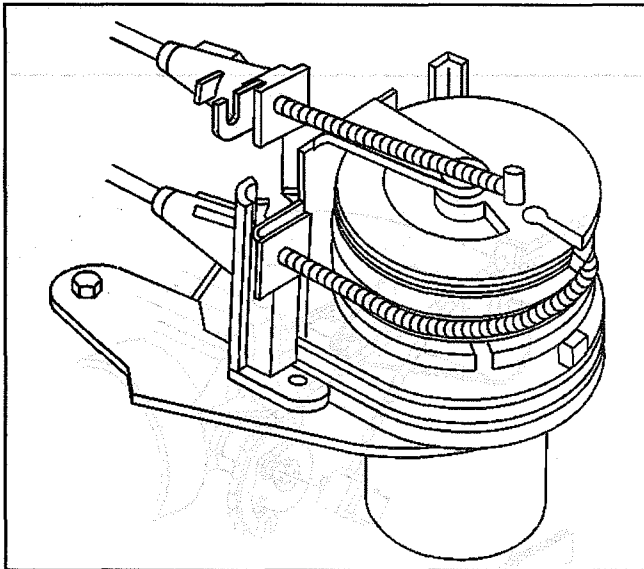
Repair Instructions

Cruise Control Module Replacement

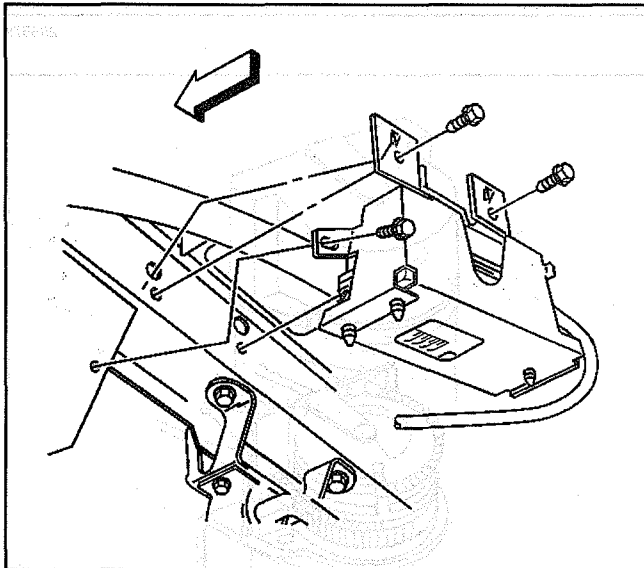
Removal Procedure

1. If equipped without traction control, perform the following:
 - 1.1. Rotate the throttle lever rearward.
 - 1.2. Push down the cable end to remove it from the throttle lever pin.
 - 1.3. Using a flat bladed tool, push in the cable retainer at the throttle body bracket.
 - 1.4. Slide the cruise control cable up from the throttle body bracket.
 - 1.5. Remove the cruise control cable from under the accelerator/cruise control cable servo bracket.
2. If equipped with traction control, unsnap and remove the cruise control servo cable adjuster cover.

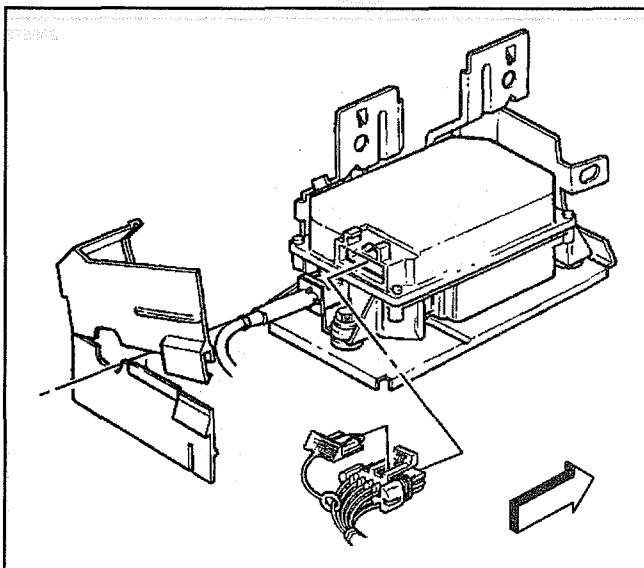




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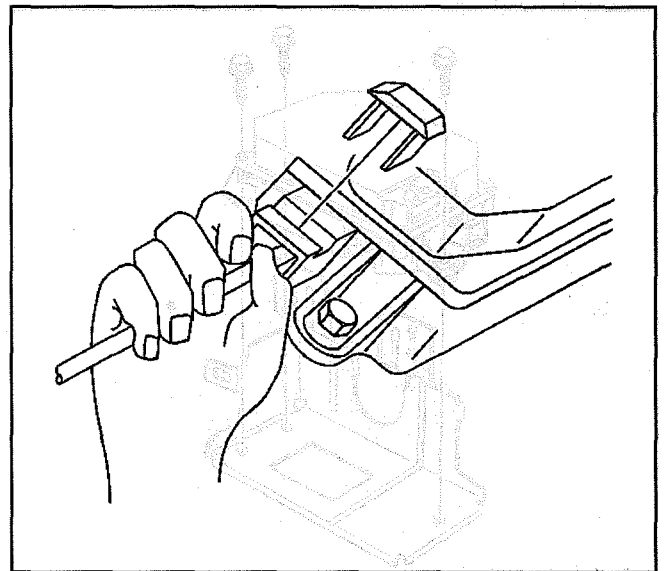
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3. If equipped with traction control, perform the following:
 - 3.1. Rotate the upper cam, and remove the cruise control cable slug from the servo cable adjuster.
 - 3.2. Unsnap the locking tab and remove the cable from the slot.
4. Lay the throttle body end of the cruise control cable down near the cruise control module.
5. Raise and suitably support the vehicle. Refer to *Lifting and Jacking the Vehicle* in General Information.
6. Remove the left front bumper fascia lower deflector. Refer to *Air Deflector Replacement - Front Bumper Fascia* in Bumpers.
7. Remove the cruise control module bracket bolts.
8. Remove the cruise control module and bracket from the left side engine compartment outer rail.
9. Unsnap and remove the cruise control module cover.
10. Remove the electrical connector retainer.
11. Disconnect the cruise control module electrical connector.

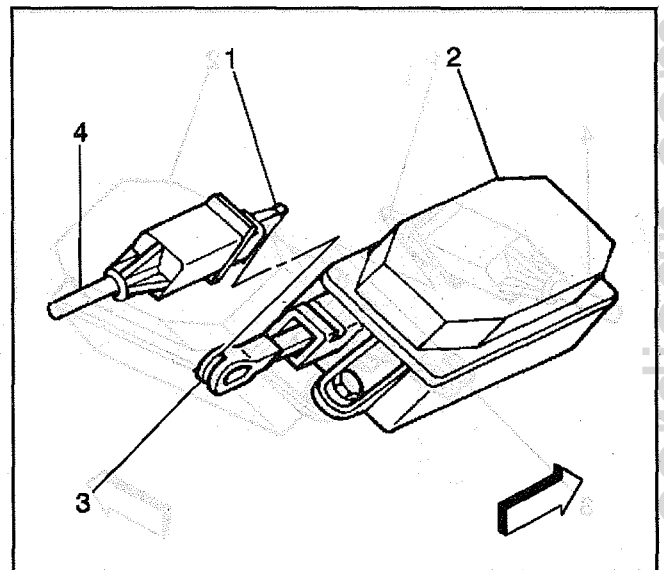
12. Remove the cable locking retainer from the module.
13. Compress the conduit tangs.



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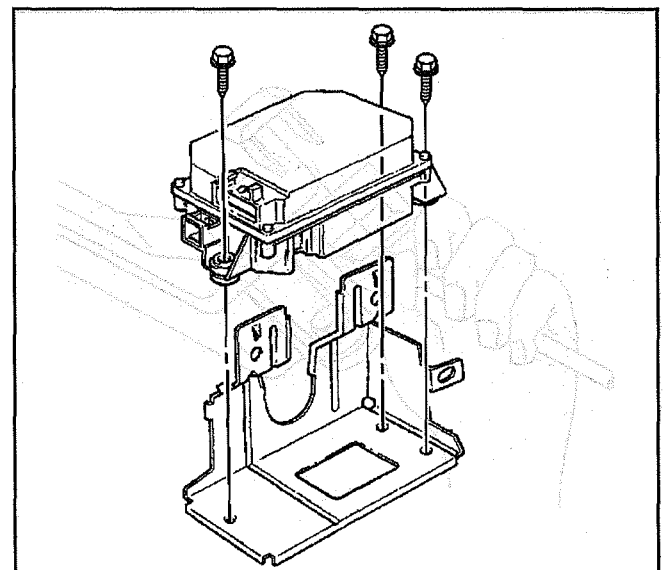
14. Pull the cruise control cable (4) out from the module (2).
15. Unhook the cable bead (1) from the module ribbon (3).
16. Lay the module and bracket on a work surface.



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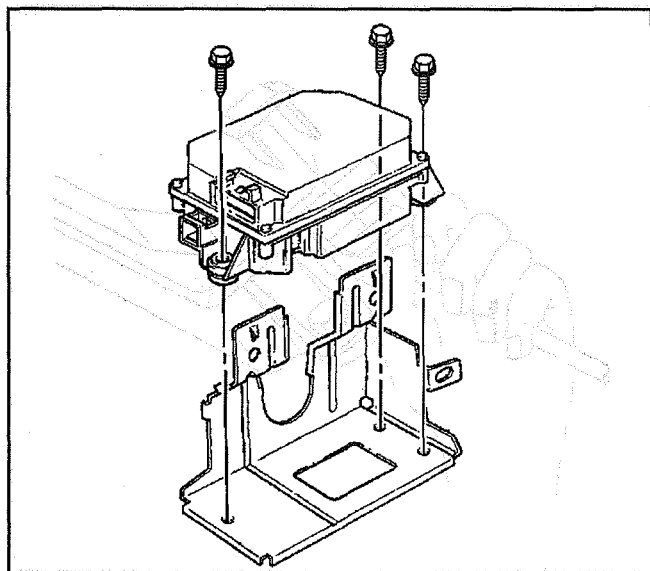
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17. Remove the cruise control module to bracket bolts.
18. Remove the cruise control module from the bracket.



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Installation Procedure

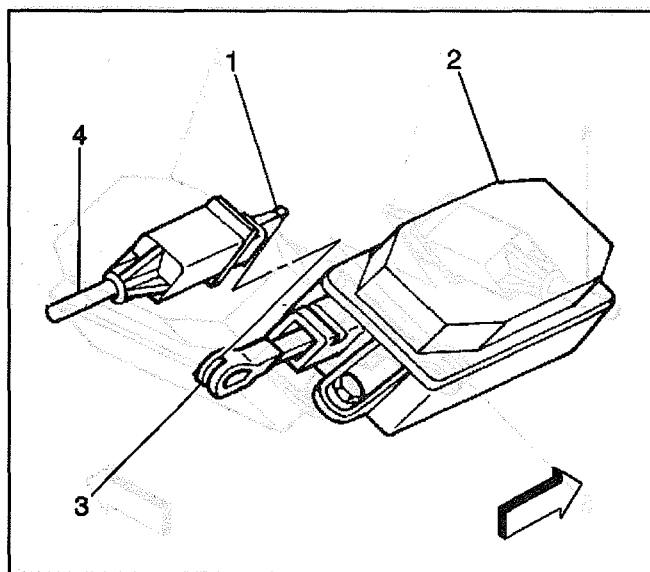
1. Place the cruise control module onto the bracket.

Notice: Refer to *Fastener Notice* in Cautions and Notices.

2. Install the cruise control module bolts.

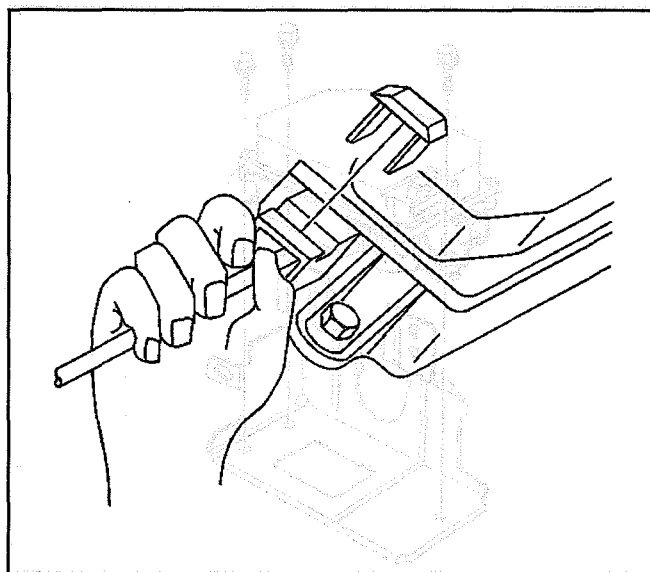
Tighten

Tighten the cruise control module bolts to 5 N·m (44 lb in).



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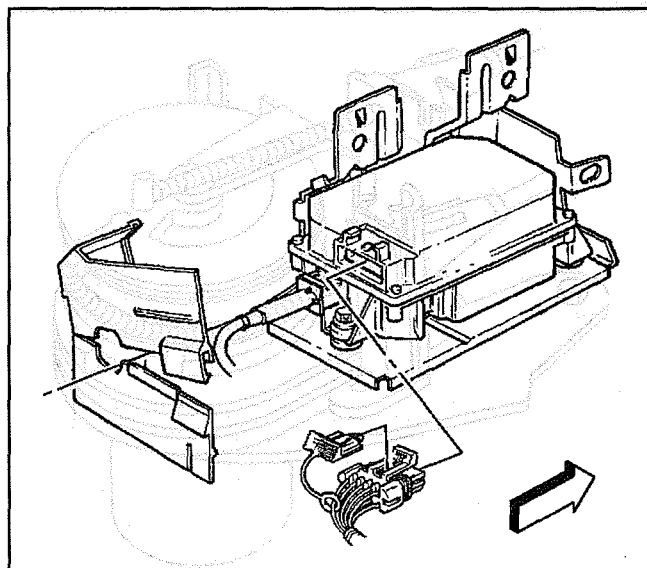
3. Inspect the cable end to insure that the O-ring is in place.
4. Pull the throttle body end of the cable until cable is taut, continue to hold while performing the following:
5. Hook the cable bead (1) to the module ribbon (3).
6. Rotate the cable end if necessary, to straighten the ribbon.
7. Push the cable fitting end over the ribbon.



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8. Snap the cable end into the module.
9. Ensure that the conduit tangs are engaged.
10. Install the cable locking retainer to the module.

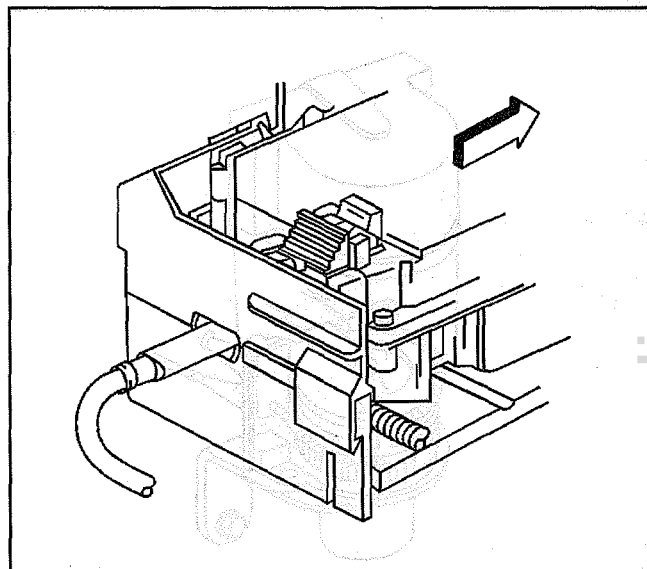
11. Connect the cruise control module electrical connector.
12. Install the electrical connector retainer.
13. Align the cruise control module cover over the cable and bracket.



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14. Snap the cover closed over the flanges on the bracket.



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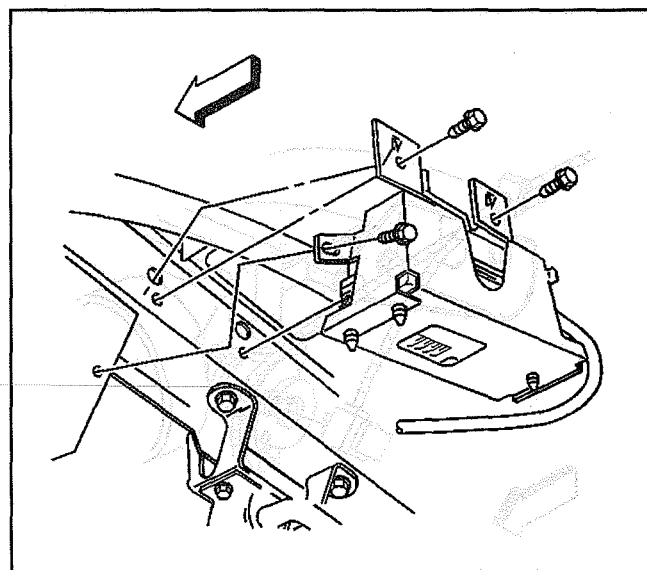
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15. Install the cruise control module and bracket to the left side engine compartment outer rail.
16. Install the cruise control module bracket bolts.

Tighten

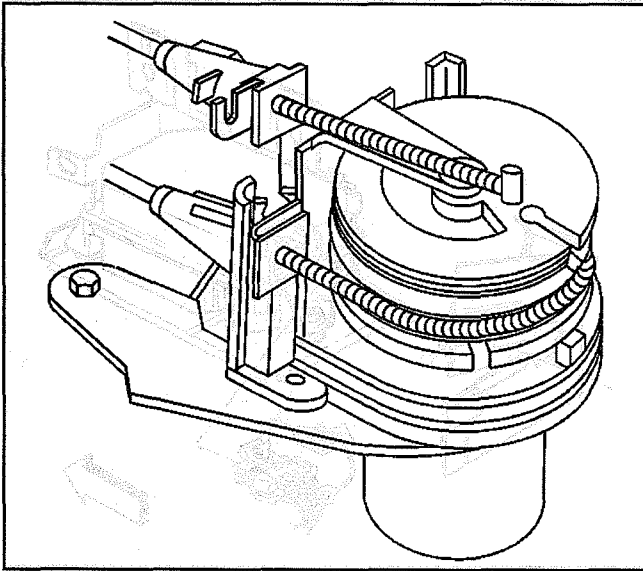
- Tighten the cruise control module bracket bolts to the rail to 10 N·m (89 lb in).
- Tighten the cruise control module bracket bolt to 2 N·m (18 lb in).

17. Route the throttle body end of the cruise control cable up to the throttle body.
18. Install the left front bumper fascia lower deflector. Refer to *Air Deflector Replacement - Front Bumper Fascia* in Bumpers.
19. Lower the vehicle.



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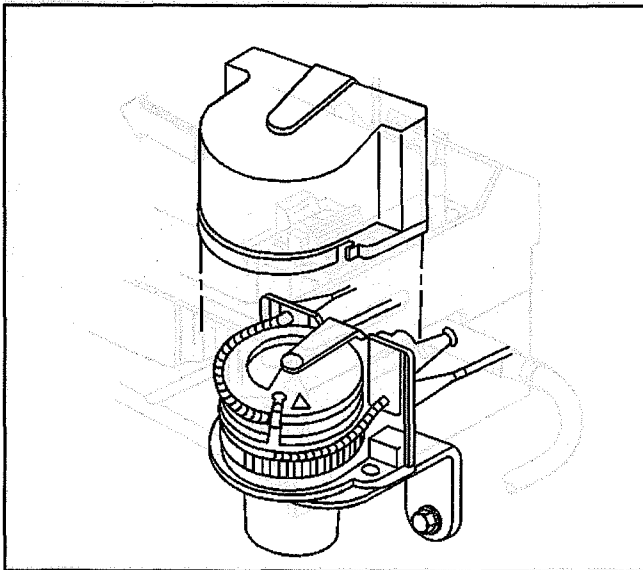
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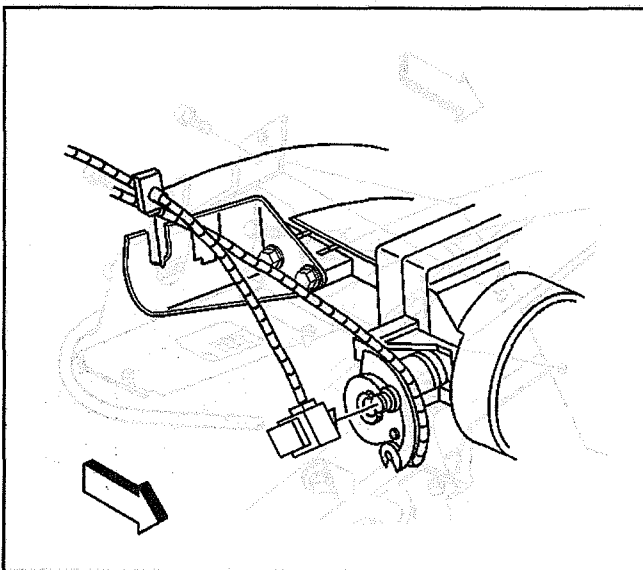
20. If equipped with traction control, perform the following:

- 20.1. Rotate the upper cam, and install the cruise control cable slug to the servo cable adjuster.
- 20.2. Slide the cable onto the slot, ensure locking tab is snapped into position.



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21. Slide the cruise control servo cable adjuster cover down and snap into place.



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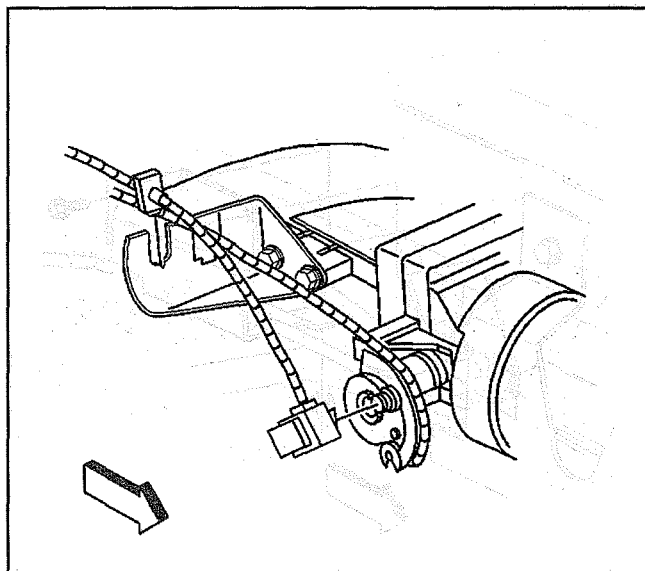
22. If equipped without traction control, perform the following:

- 22.1. Rotate the throttle lever rearward.
 - 22.2. Snap the cruise control cable end to the throttle lever.
 - 22.3. Align cable and slide onto slot, locking tab must be snapped into position.
23. Adjust the cruise control cable as needed. Refer to *Cruise Control Cable Adjustment (Without RPO NW9)* or *Cruise Control Cable Adjustment (With RPO NW9)*.

Cruise Control Cable Replacement (Without RPO NW9)

Removal Procedure

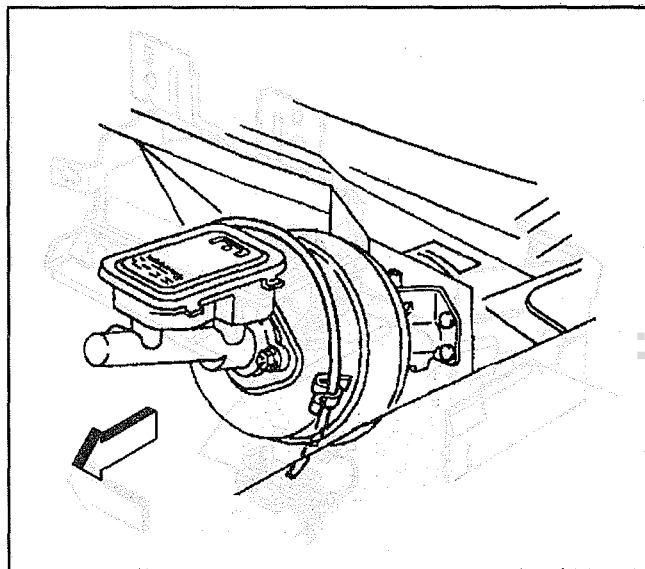
1. Rotate the throttle lever rearward.
2. Push down the cable end to remove it from the throttle lever pin.
3. Using a flat bladed tool, push in the cable retainer at the throttle body bracket.
4. Slide the cruise control cable up from the throttle body bracket.
5. Remove the cruise control cable from under the accelerator/cruise control cable servo bracket.



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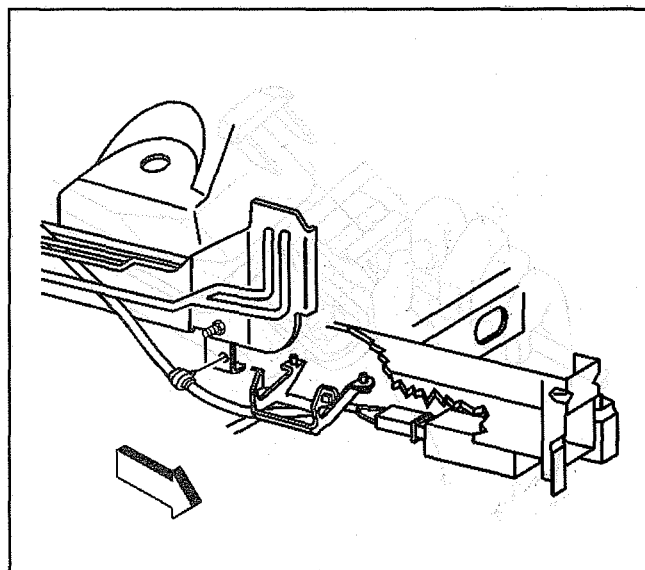
6. Remove the cruise control cable clip from the brake booster.
7. Raise and suitably support the vehicle. Refer to *Lifting and Jacking the Vehicle* in General Information.
8. Remove the left front bumper fascia lower deflector. Refer to *Air Deflector Replacement - Front Bumper Fascia* in Bumpers.



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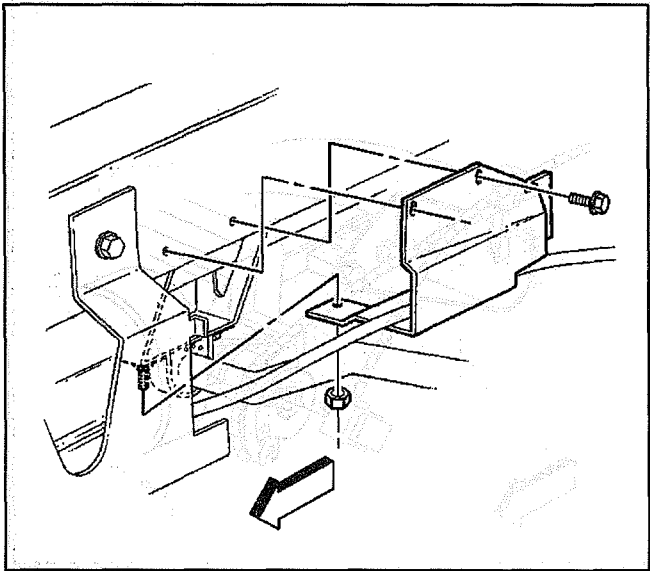
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9. Disconnect the cruise control cable rosebud clip from the brake pipe clip.

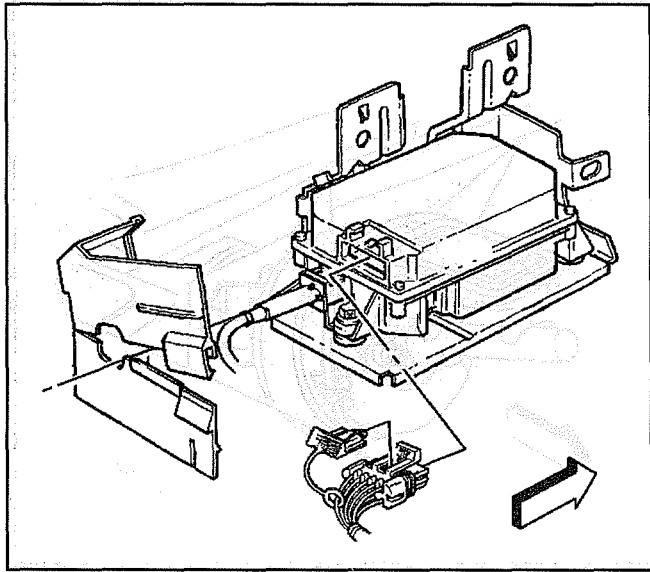


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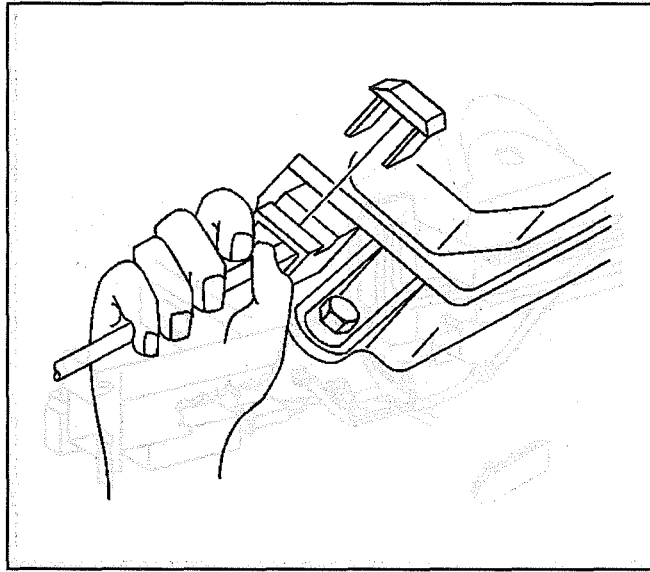
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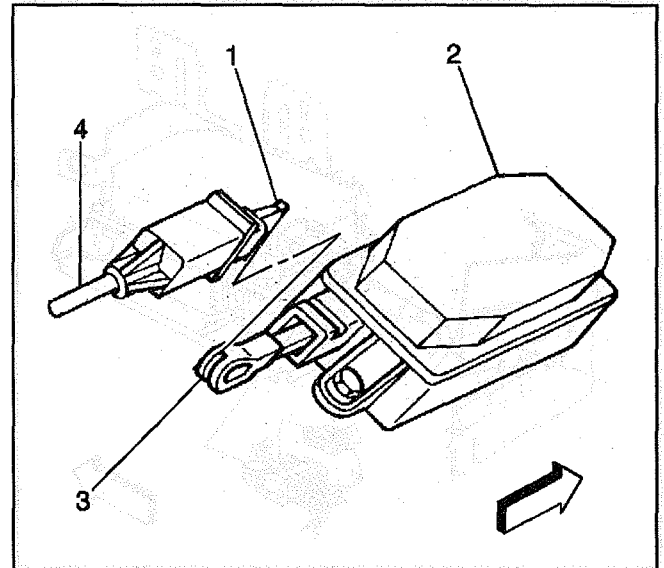
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10. Remove the cruise control module shield bolts and nut.
11. Remove the cruise control module shield.

12. Unsnap and remove the cruise control module cover.

13. Remove the cable locking retainer from the module.
Compress the conduit tangs

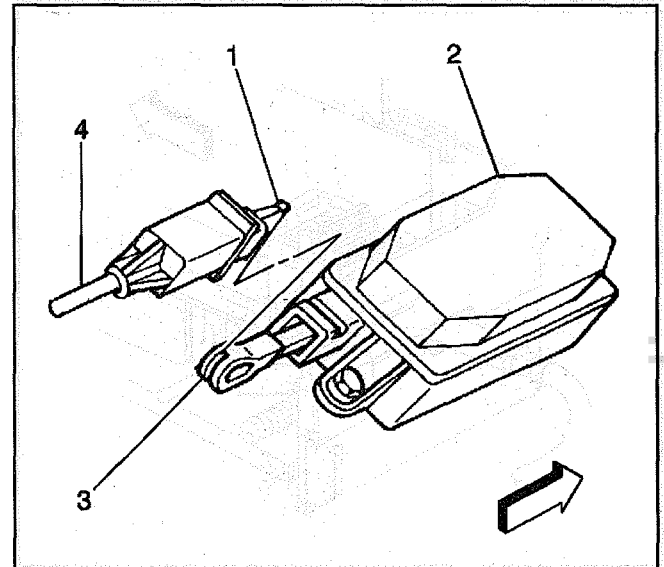
14. Pull the cruise control cable (4) out from the module (2).
15. Unhook the cable bead (1) from the module ribbon (3).
16. Remove the cruise control cable from the vehicle.



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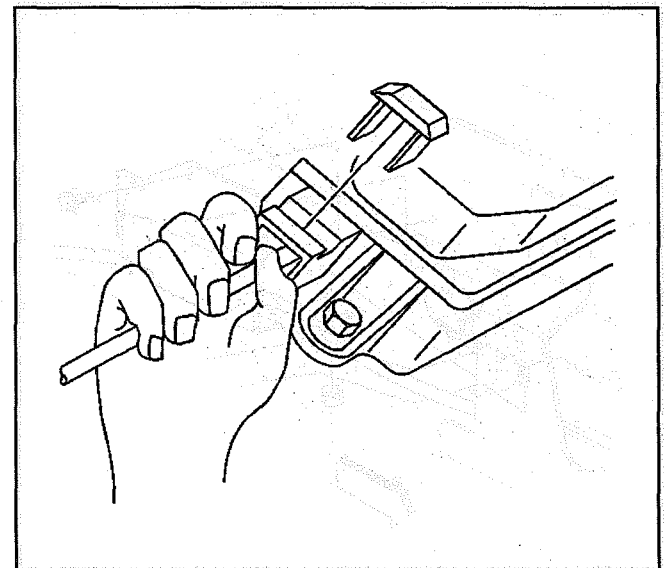
Installation Procedure

1. Install the cruise control cable to the vehicle.
2. Inspect the cable end to insure the O-ring is in place.
3. Hook the cable bead (1) to the module ribbon (3).
4. Remove the shipping retainer.
5. Rotate the cable end if necessary, to straighten the ribbon.
6. Pull the throttle body end of the cable until the cable is taut.
7. Push the cable fitting end over the ribbon.

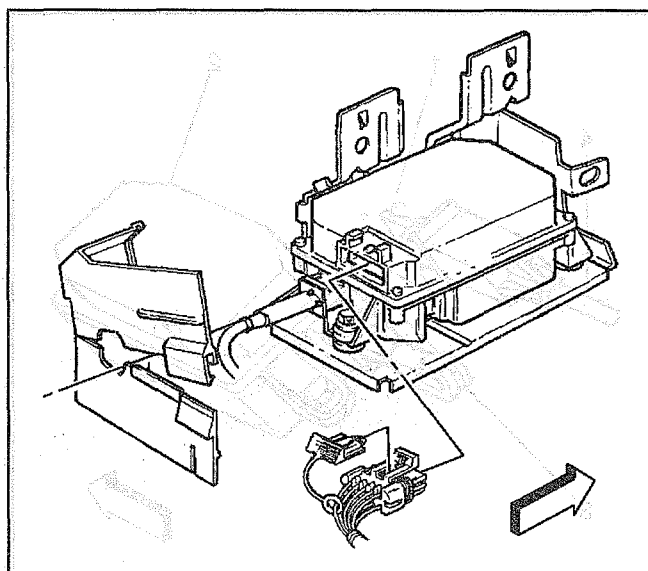


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8. Snap the cable end into the module.
9. Ensure that the conduit tangs are engaged.
10. Install the cable locking retainer to the module.

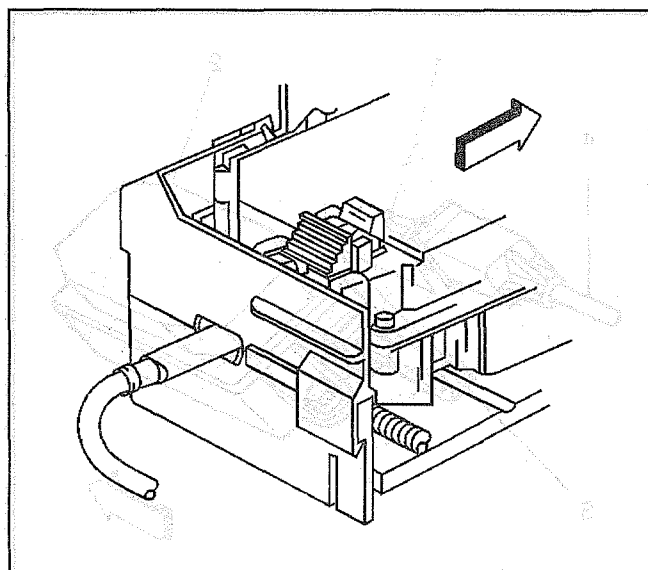


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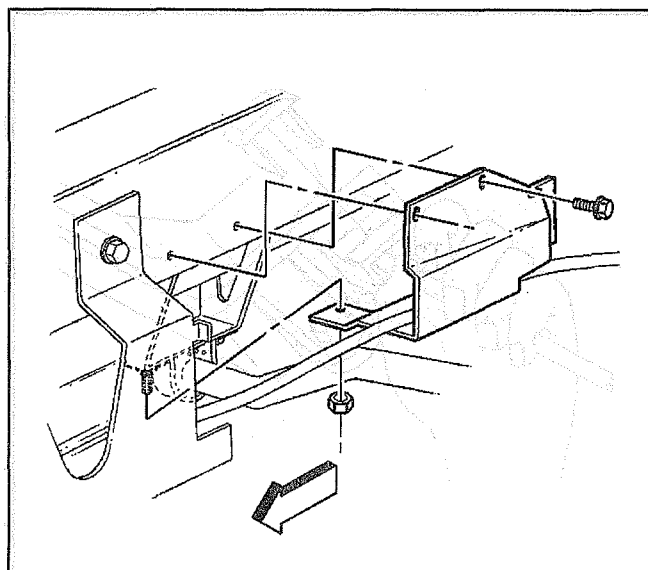
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11. Align the cruise control module cover over the cable and bracket.



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12. Snap the cover closed over the flanges on the bracket.



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13. Install the cruise control module shield.

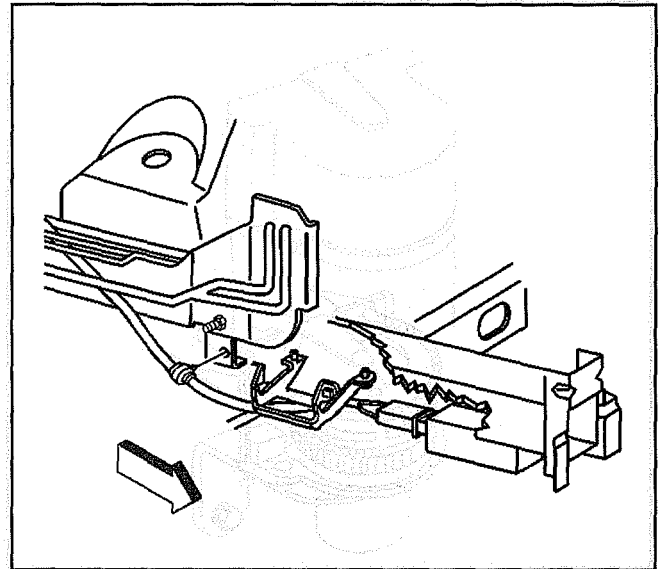
Notice: Refer to *Fastener Notice* in Cautions and Notices.

14. Install the cruise control module shield bolts and nut.

Tighten

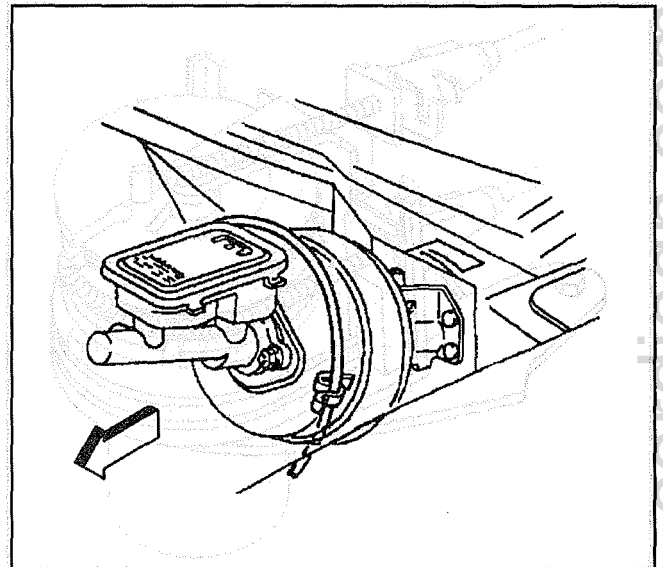
- Tighten the cruise control module shield bolts to 6 N·m (53 lb in).
- Tighten the cruise control module shield nut to 27 N·m (20 lb ft).

15. Connect the cruise control cable rosebud clip to the brake pipe clip.
16. Install the left front bumper fascia lower deflector. Refer to *Air Deflector Replacement - Front Bumper Fascia* in Bumpers.
17. Lower the vehicle.



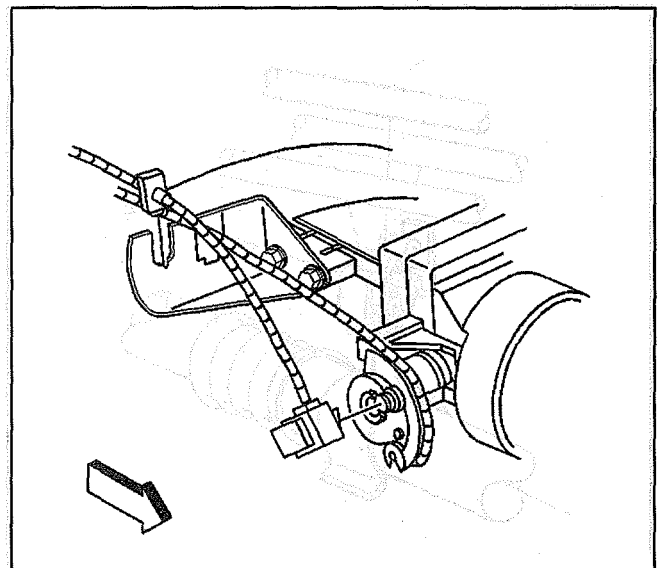
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18. Install the cruise control cable clip to the brake booster.
19. Install the cruise control cable under the accelerator/cruise control cable servo bracket.

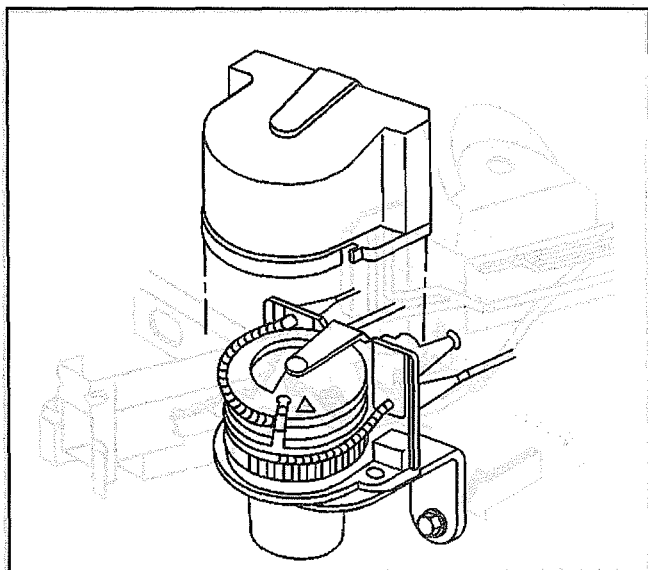


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20. Rotate the throttle lever rearward.
21. Snap the cruise control cable end to the throttle lever.
22. Align cable and slide onto slot, locking tab must be snapped into position.
23. Adjust the cruise control cable as needed. Refer to *Cruise Control Cable Adjustment (Without RPO NW9)*.



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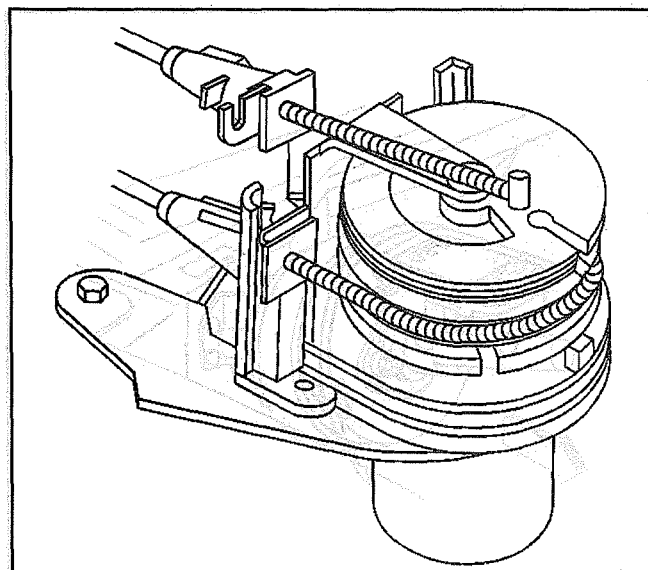
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Cruise Control Cable Replacement (With RPO NW9)

Removal Procedure

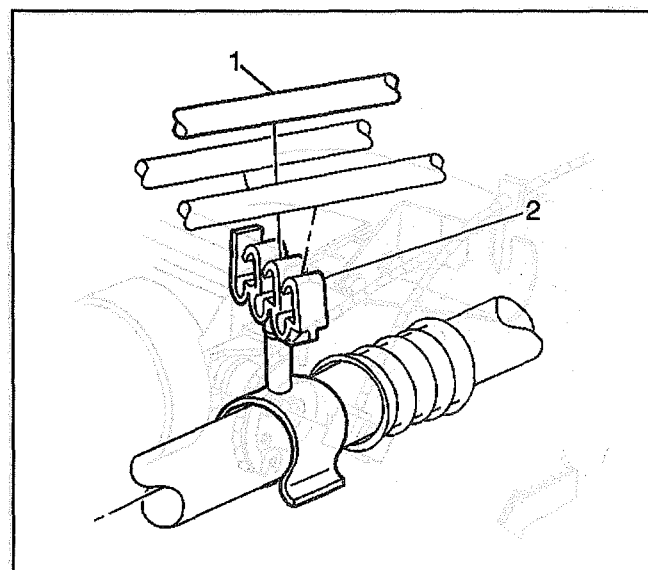
1. Unsnap and remove the cruise control servo cable adjuster cover.



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2. Rotate the upper cam, and remove the cruise control cable slug from the servo cable adjuster.
3. Unsnap the locking tab and remove the cable from the slot.

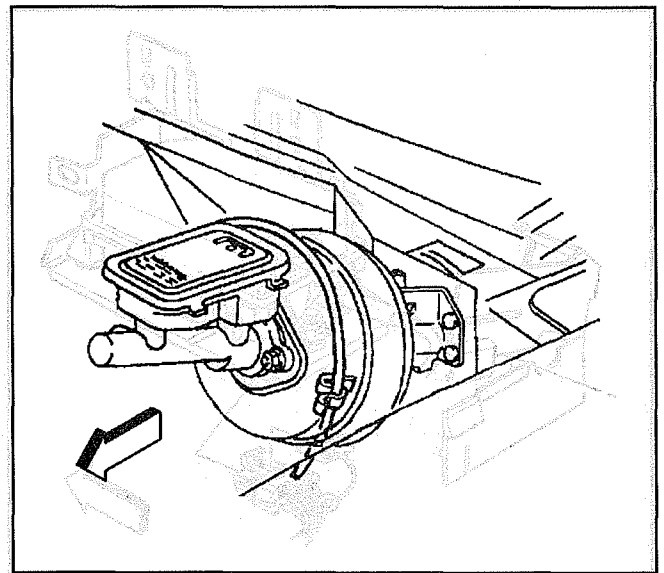


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4. Unsnap the cruise control cable (1) from the accelerator control cable clip (3).
5. Remove the cruise control cable from under the accelerator/cruise control cable servo bracket.

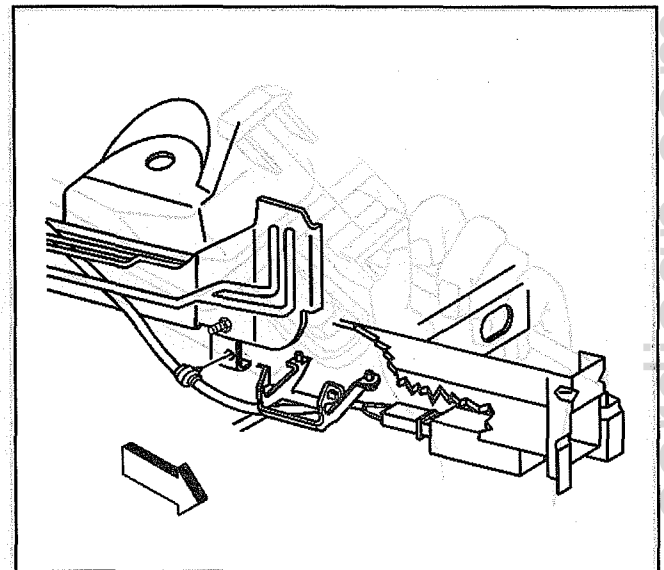
6. Remove the cruise control cable clip from the brake booster.
7. Raise and suitably support the vehicle. Refer to *Lifting and Jacking the Vehicle* in General Information.
8. Remove the left front bumper fascia lower deflector. Refer to *Air Deflector Replacement - Front Bumper Fascia* in Bumpers.



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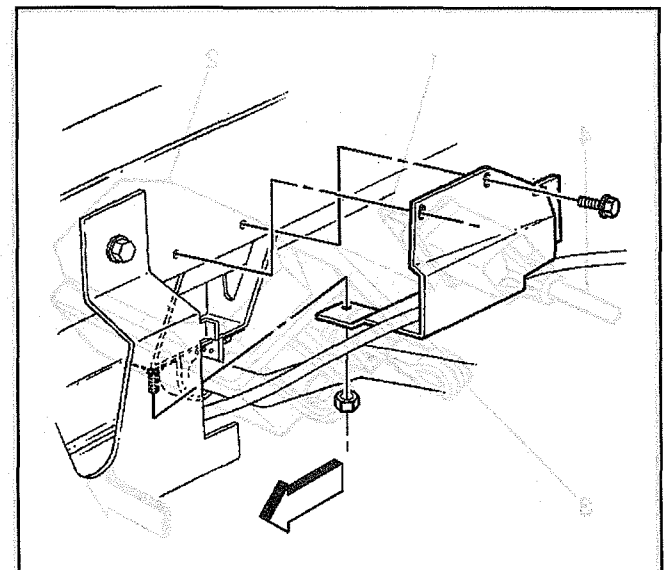
9. Disconnect the cruise control cable rosebud clip from the brake pipe clip.



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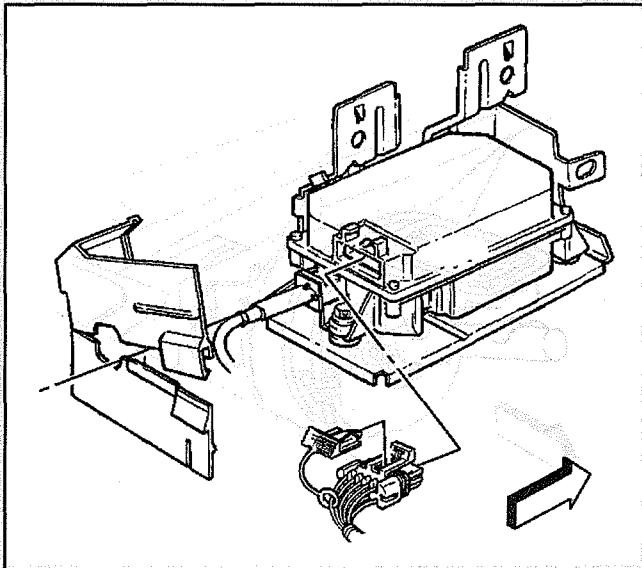
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10. Remove the cruise control module shield bolts and nut.
11. Remove the cruise control shield.



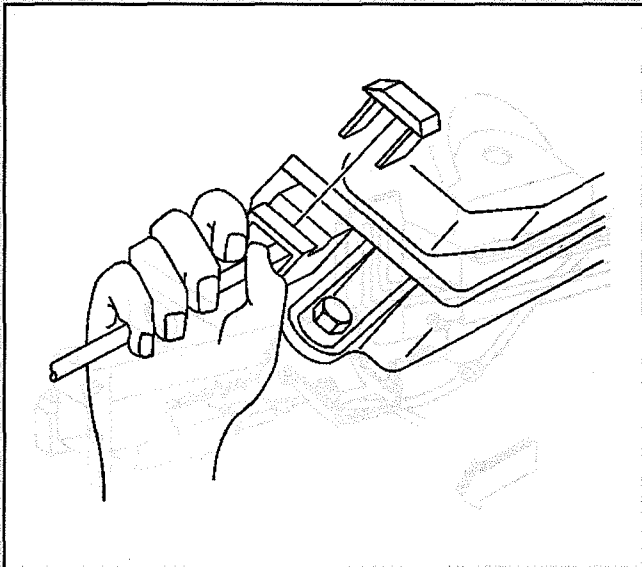
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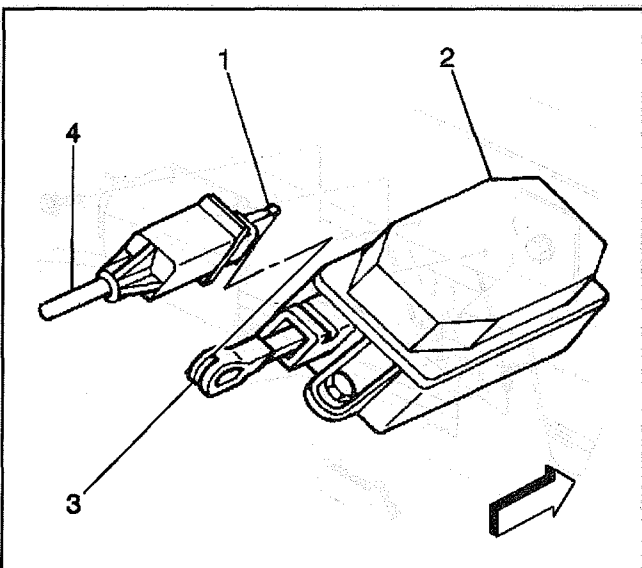
12. Unsnap and remove the cruise control module cover.



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13. Remove the cable locking retainer from the module.

Compress the conduit tangs



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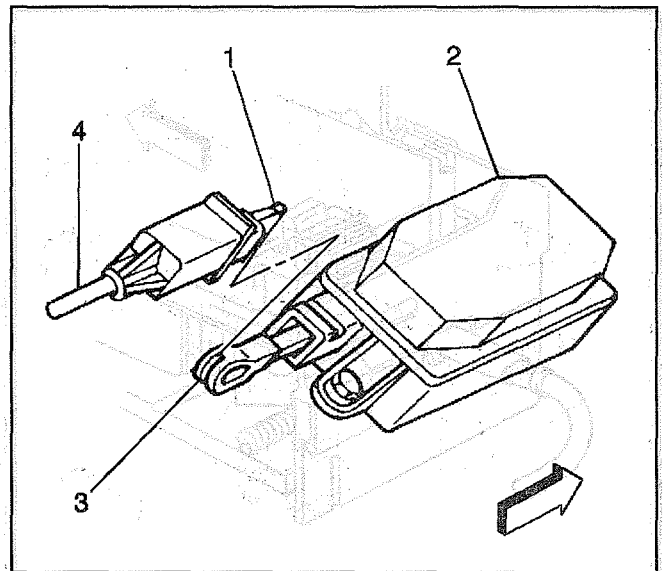
14. Pull the cruise control cable (4) out from the module (2).

15. Unhook the cable bead (1) from the module ribbon (3).

16. Remove the cruise control cable from the vehicle.

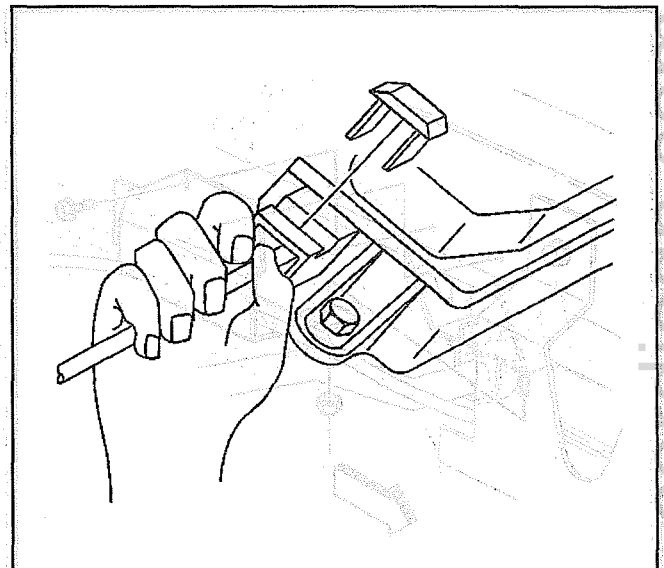
Installation Procedure

1. Install the cruise control cable to the vehicle.
2. Inspect the cable end to insure the O-ring is in place.
3. Hook the cable bead (1) to the module ribbon (3)
4. Remove the shipping retainer.
5. Rotate the cable end if necessary, to straighten the ribbon.
6. Pull the throttle body end of the cable until the cable is taut.
7. Push the cable fitting end over the ribbon.



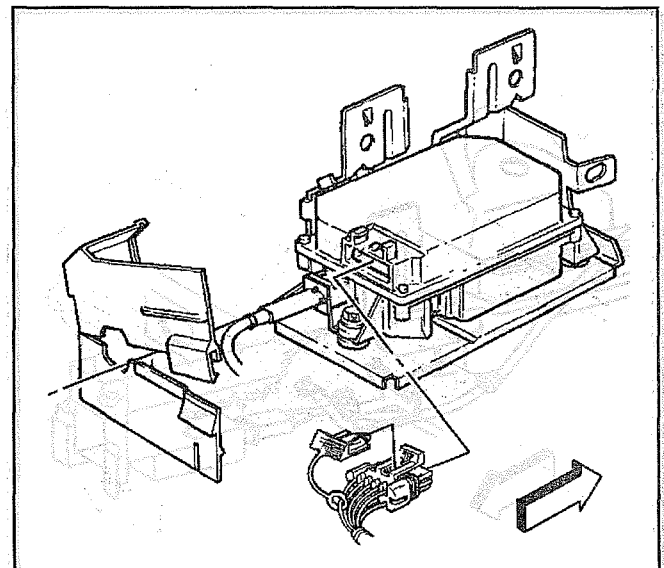
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8. Snap the cable end into the module.
9. Ensure that the conduit tangs are engaged.
10. Install the cable locking retainer to the module.

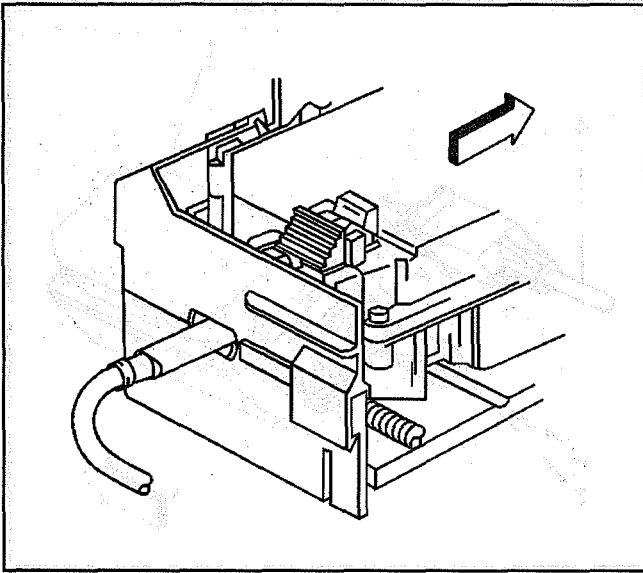


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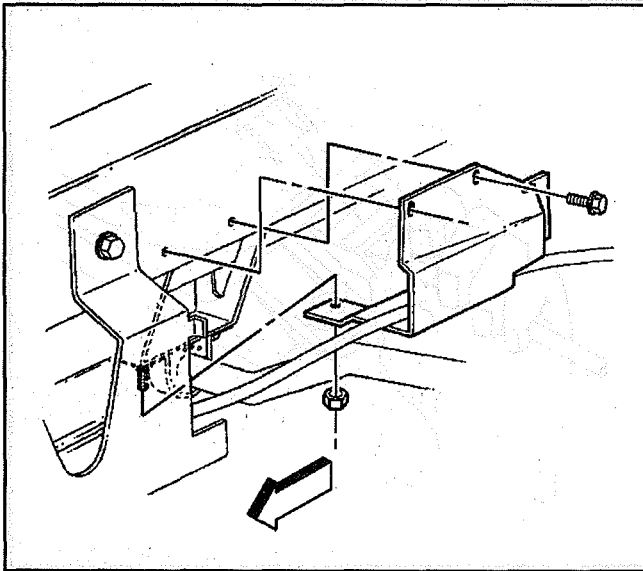
11. Align the cruise control module cover over the cable and bracket.



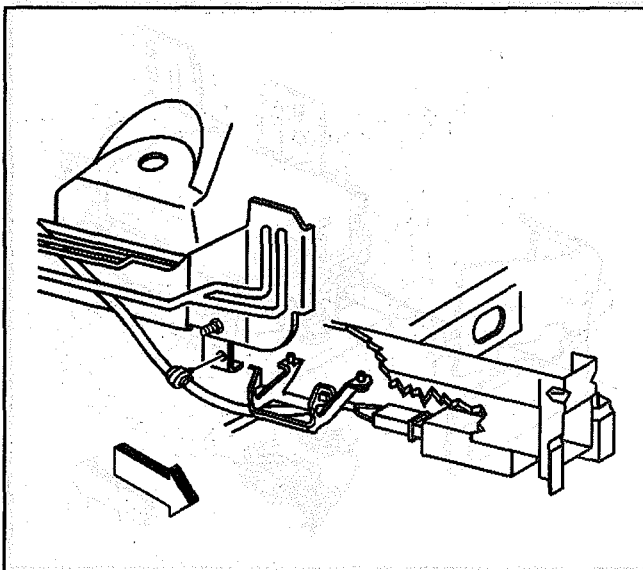
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12. Snap the cover closed over the flanges on the bracket.

13. Install the cruise control module shield.

Notice: Refer to *Fastener Notice* in Cautions and Notices.

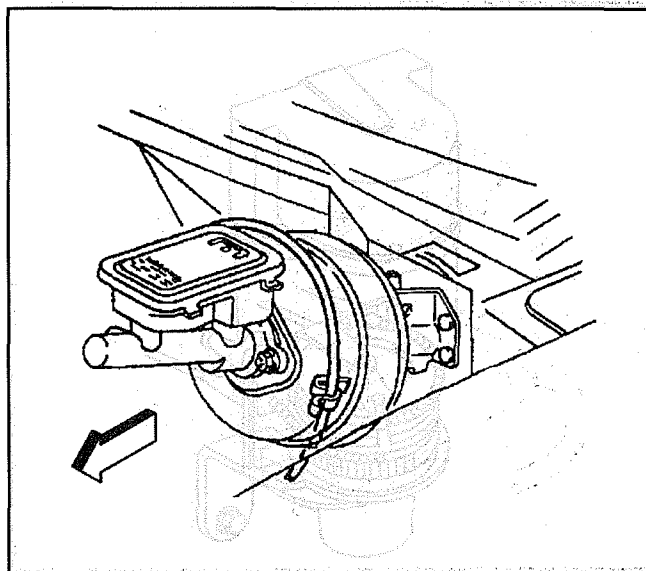
14. Install the cruise control module shield bolts and nut.

Tighten

- Tighten the cruise control module shield bolts to 6 N·m (53 lb in).
- Tighten the cruise control module shield nut to 27 N·m (20 lb ft).

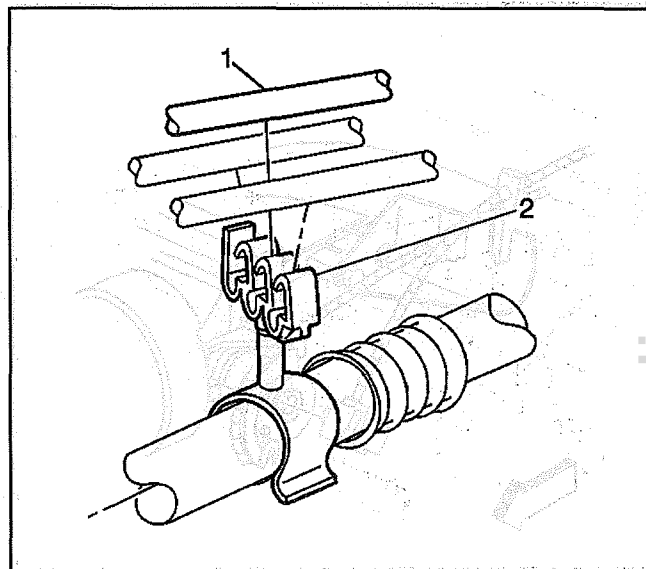
15. Connect the cruise control cable rosebud clip to the brake pipe clip.
16. Install the left front bumper fascia lower deflector. Refer to *Air Deflector Replacement - Front Bumper Fascia* in Bumpers.
17. Lower the vehicle.

18. Install the cruise control cable clip to the brake booster.
19. Install the cruise control cable under the accelerator/cruise control cable servo bracket.



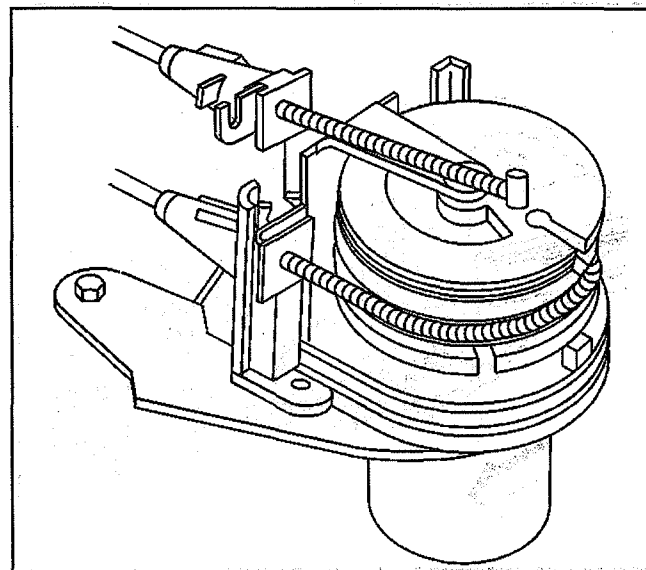
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20. Snap the cruise control cable (1) into the accelerator control cable clip (3).

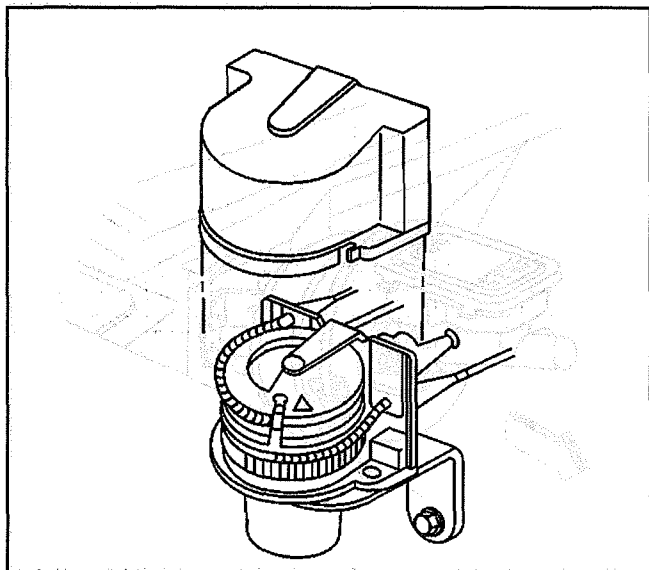


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21. Rotate the upper cam, and install the cruise control cable slug to the servo cable adjuster.
22. Slide the cable onto the slot, ensure locking tab is snapped into position.

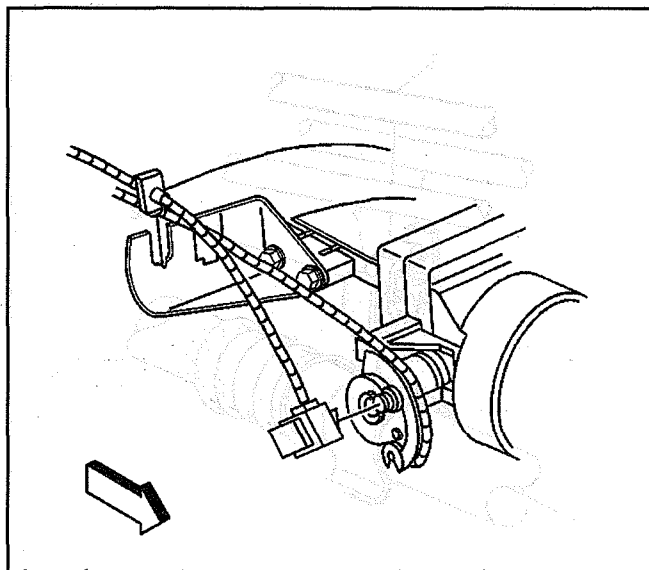


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23. Slide the cruise control servo cable adjuster cover down and snap into place.
24. Adjust the cruise control cable as needed. Refer to *Cruise Control Cable Adjustment (With RPO NW9)*.



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Cruise Control Cable Adjustment (Without RPO NW9)

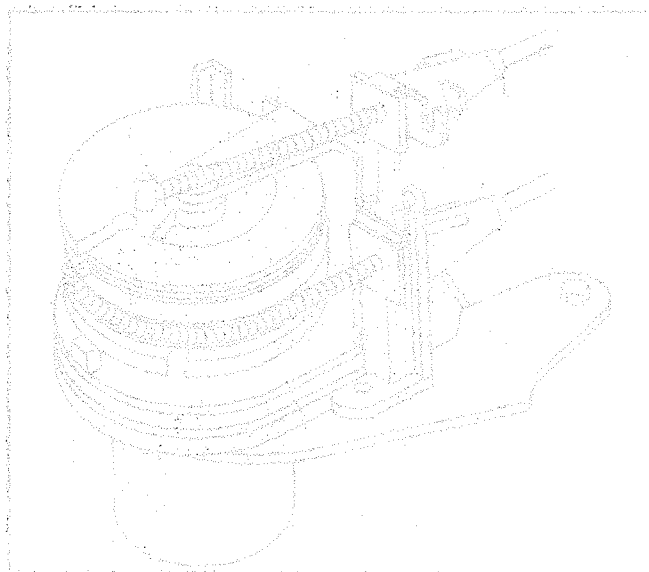
1. Ensure that the cable fitting is snapped onto the throttle lever pin.
2. Ensure that the cable is locked into position on the bracket.
3. Pull the cable adjustment slider on the cable end rearward until all slack is removed from the cable but without opening the throttle.
4. Push down cable adjustment lock button until it snaps and locks in place.
5. Ensure that the locking tab is secure on both sides.

Important: Cable must not have more than 2.0 mm of slack.

6. Excess slack in cable can cause poor performance, such as hesitation on cruise setting.

Important: Cable should never be adjusted so tightly that tension from the cable will not allow the throttle to close properly.

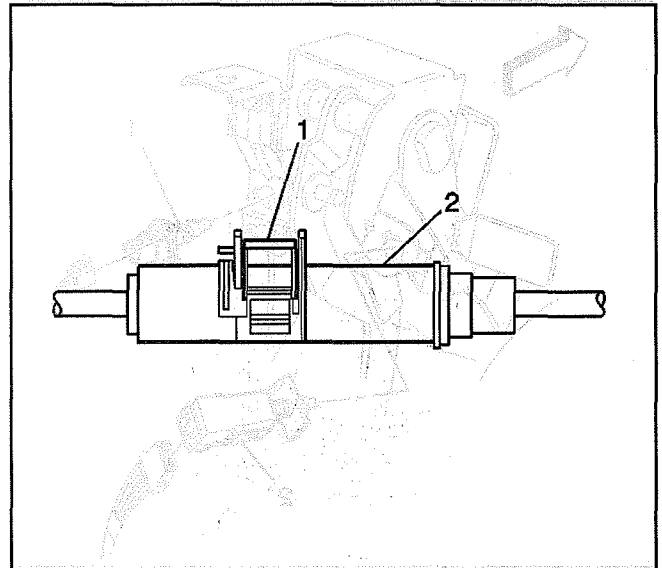
7. Pulling cable too tight will prevent engine from returning to idle and could cause unstable idle quality.



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Cruise Control Cable Adjustment (With RPO NW9)

1. Lift the adjustment lock button (1) up.
2. Pull the cable adjustment slider (2) rearward until all slack is removed from cable, but without opening the throttle.

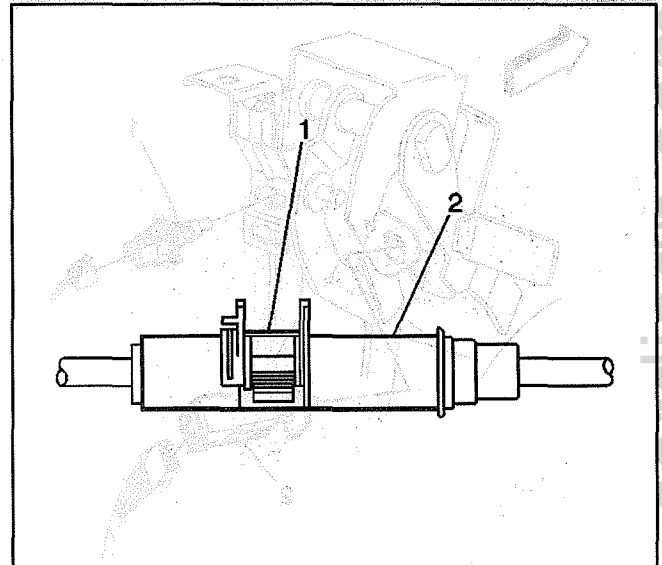


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3. Push down the cable adjustment lock button (1) until it snaps and locks in place.

Important: Ensure that cable is correctly adjusted to avoid excess slack which will cause degraded cruise and traction control performance and inability to achieve wide open throttle. If cables are set too tight the throttle will not fully close.

4. Ensure that the locking tabs are secure on both sides.

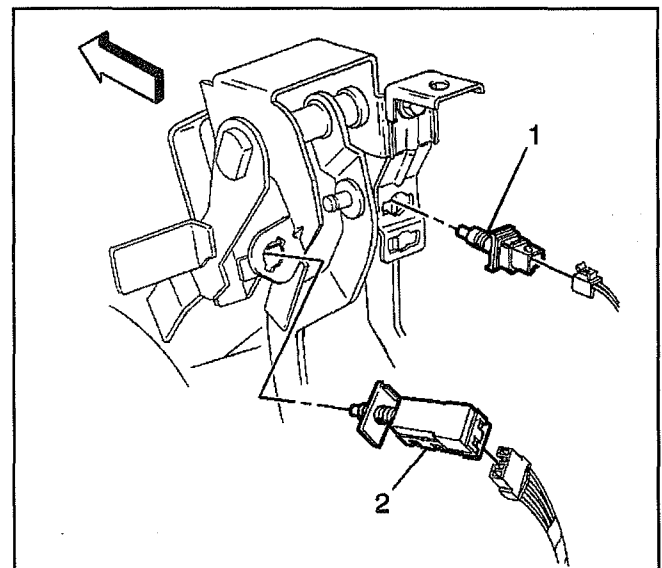


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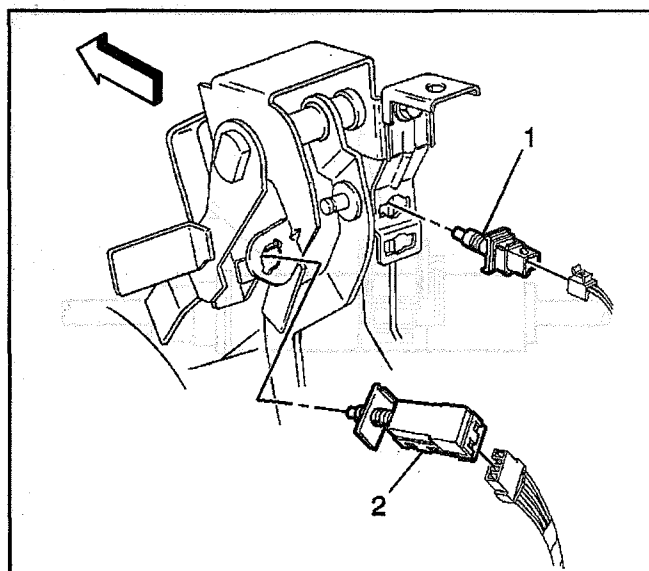
Cruise Release Switch Replacement

Removal Procedure

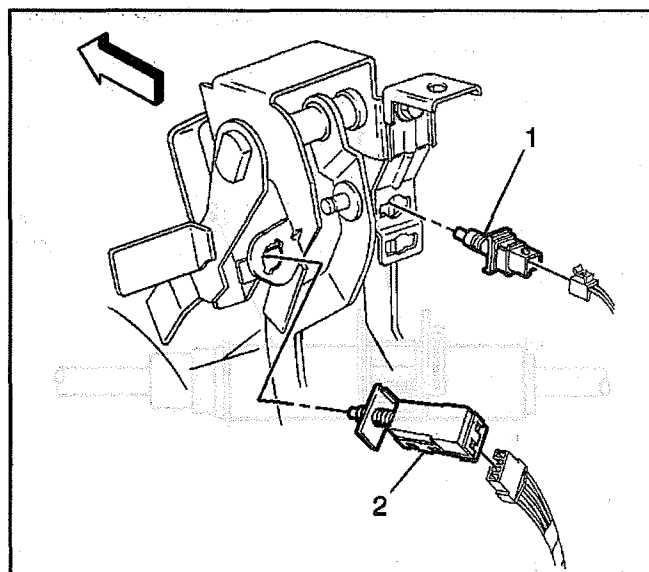
1. Remove the left instrument panel sound insulator. Refer to *Closeout/Insulator Panel Replacement - Left* in Instrument Panel, Gauges and Console.
2. Disconnect the cruise control release switch (1) electrical connector.
3. Remove the cruise control release switch (1).



296589



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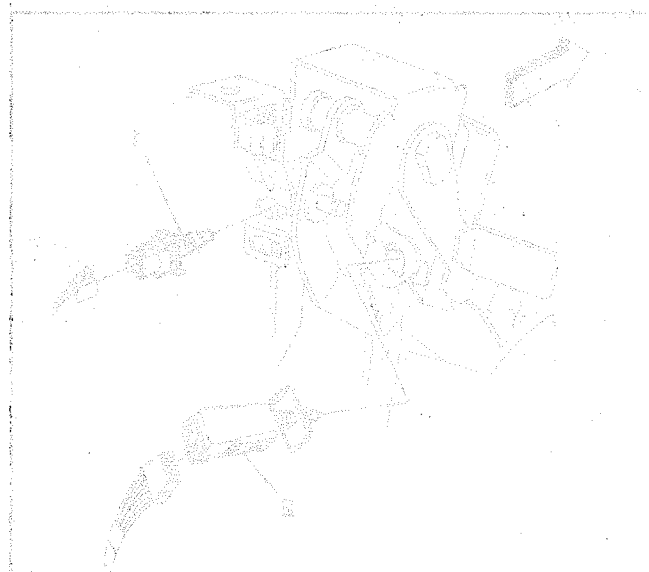
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Installation Procedure

1. With the brake pedal depressed, insert the cruise control release switch (1) into the bracket until the retainer is fully seated.
2. Connect the cruise control release switch (1) electrical connector.
3. Adjust the cruise control release switch as needed. Refer to *Cruise Release Switch Adjustment*.
4. Install the left instrument panel sound insulator. Refer to *Closeout/Insulator Panel Replacement - Left* in Instrument Panel, Gauges and Console.

Cruise Release Switch Adjustment

1. Ensure that the cruise control release switch (1) is fully seated in the bracket.
2. Slowly pull the brake pedal rearward until the audible clicking is no longer heard.
The switch will be moved in the retainer providing adjustment.
3. Release the brake pedal.
4. Ensure that the following contacts open at 25.4 mm (1 in) or less of pedal travel:
 - 4.1. The release switch (1)
 - 4.2. The stoplamp and torque converter clutch (TCC) switch
5. Ensure that the switches open simultaneously or before the onset of braking.
6. The brake pedal may travel up to 25.4 mm (1 in) before the cruise control system disengages.



296589

Description and Operation

Cruise Control System Description

Cruise control is a speed control system that maintains a desired vehicle speed under normal driving conditions. However, steep grades up or down may cause variations in the selected speeds. The electronic cruise control system has the capability to CRUISE, COAST, RESUME SPEED, ACCELERATE, and TAP-UP or TAP-DOWN.

With cruise control you can maintain a speed of about 40 km/h (25 mph) or more without keeping your foot on the accelerator. When the driver applies the brakes, presses the clutch pedal or turns off the on/off switch, the cruise control turns off.

The main parts of the cruise control system are the following components:

- The cruise control module assembly
- The function control switches
- The vehicle speed sensor (VSS)
- The cruise control release (brake) switch assembly
- The cruise control (clutch) switch assembly
- The stoplamp switch assembly

The cruise control system uses a cruise control module assembly to obtain the desired vehicle cruise operation. Two important components in the module assembly help to do this. The first is an electronic controller, and the second is an electric stepper motor. The electric controller monitors vehicle speed and operates the electric stepper motor. The electric stepper motor moves a strap that is attached to the cruise control cable which moves the throttle linkage. The stepper motor operates in response to the electronic controller to maintain the desired cruise speed. The cruise control module assembly contains a low speed limit which will prevent system engagement below a speed of 40 km/h (25 mph). The operation of the electronic controller is controlled by function control switches located on the multi-function lever.

The cruise control module assembly has an electronic controller and an electric stepper motor to vary the throttle in each different cruise control mode. The module assembly is not serviceable.

The cruise control function switch includes the ON/OFF, SET/COAST and R/A (resume/accelerate) switches. The switch assembly provides driver control of the cruise control system.

The cruise control release (brake) switch, the cruise control (clutch) switch and the stoplamp switch assemblies are used to disengage the cruise control. The cruise control release (brake) switch assembly and the stoplamp switch assembly, mounted on the brake pedal bracket, disengage the system electrically when the driver presses the brake pedal. The cruise control (clutch) switch, mounted on the clutch pedal bracket, will also disengage the system when the driver presses the clutch pedal. When either pedal is pressed, the speed of the vehicle is stored in the cruise module memory.

The Vehicle Speed Sensor (VSS) is mounted to the automatic or manual transaxle assembly and produces an AC signal. The frequency of this signal is proportional to the speed at which the automatic or manual transaxle assembly output shaft rotates, which in turn is proportional to the speed of the vehicle. The AC signal is supplied to the Powertrain Control Module (PCM) where it is converted to the number of pulses per mile per second to determine vehicle speed. The signal is then sent to the cruise control module assembly and the speedometer assembly at a rate of 4000 pulses per mile.

Cruise Control System Operation

To Set Cruise Control

1. Move the cruise control switch to the ON position.
2. Accelerate to the desired speed.
3. Push in the SET button at the end of the multifunction lever and release it.
4. Remove your foot from the accelerator pedal.

To Resume a Set Speed

Once cruise control has been set at a desired speed with the SET button, the set speed is stored in the memory of the controller. If the driver, for any reason, must apply the brake or depress the clutch pedal, cruise control will disengage. The cruise control may be reset in this manner:

1. Accelerate close to the desired speed (25 mph (40 km/h) or more).
2. Move the cruise control switch from the ON position to the R/A (Resume/Accelerate) position for about half a second.
3. The vehicle will accelerate to and resume the previously set speed.

If either the ignition switch or the cruise ON/OFF switch is turned off, the cruise control memory will be erased.

To Reduce Speed While Using Cruise Control

There are two ways to reduce your speed while using cruise control.

1. Push in and hold the set button at the end of the lever until you reach the lower speed you want. Then release it.
2. To slow down incrementally, push the set button for less than half a second. Each time you do this, the vehicle will slow down 1.6 km/h (1 mph).

To Increase Speed While Using Cruise Control

There are two ways to increase speed while using cruise control.

1. Accelerate to the higher speed, and push the SET button at the end of the multi-function lever. Then release the button and the accelerator pedal. The cruise control will now maintain that higher set speed.

- Once a set speed has been chosen, the driver can move the cruise switch from the ON position to the R/A position and hold it there until the new speed setting is reached. Then release the switch. To increase your speed incrementally, move the switch to R/A for less than half a second and release it. Each time you do this, the vehicle will go 1.6 km/h (1 mph) faster.

The accelerate feature will only work after you turn on the cruise control and push the SET button.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase your speed. Once you are a safe distance past the other vehicle, remove your foot from the accelerator pedal. The vehicle will then return to the preset cruise control speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon your speed, load, and the incline of the hills. When going up steep hills, you may have to step on the accelerator pedal to maintain your speed. When going downhill, you may have to brake or shift to a lower gear to maintain your speed. However, applying the brake will turn off the cruise control. Many drivers find this to be too much trouble and choose not to use cruise control on steep hills.

To Erase Cruise Speed Memory

Cruise control set speed memory is erased in either of the following two ways:

- The ignition is turned off.
- The cruise control ON/OFF switch is turned off.

To Disengage Cruise Control

There are three ways to turn off the cruise control:

- Step lightly on the brake pedal.
- Move the cruise switch to the OFF position.
- Press the clutch pedal.

Cruise Control Multifunction Switch

The multifunction switch contains the normally open ON/OFF, SET and R/A switches. It cannot be serviced. The complete multi-function lever must be replaced as an assembly. Refer to *Multifunction Turn Signal Lever Replacement - On Vehicle* in Steering Wheel and Column — Tilt.

Cruise Release (Brake) Switch

The cruise release (brake) switch is a normally closed switch mounted on the brake pedal bracket. For adjustment of the cruise release (brake) switch, refer to *Cruise Release Switch Adjustment*.

Stoplamp Switch

The stoplamp switch is a normally open switch mounted on the brake pedal bracket. For adjustment of the stoplamp switch, refer to *Stoplamp Switch Adjustment* in Hydraulic Brakes.

Cruise Control (Clutch) Switch

The cruise control (clutch) switch is a normally closed switch mounted on the clutch pedal bracket.

Cruise Control System Circuit Description

Ignition positive voltage is supplied from the A/C cruise fuse to the cruise control module. The cruise control module ground is applied by G109. When the cruise control ON/OFF switch is turned to the ON position, ignition positive voltage is supplied to the cruise on/off terminal of the cruise control module. If the driver has not pressed the brake pedal or the clutch pedal, ignition positive voltage is supplied through the cruise control release (brake) switch and the cruise control (clutch) switch (if equipped), to the cruise cancel terminal of the cruise control module. When the driver presses the brake pedal, battery positive voltage is supplied from the stop/hazard fuse, through the closed stop lamp switch to the brake input terminal of the cruise control module. When pressing R/A (resume/accelerate) on the control switch, ignition positive voltage is applied to the resume/accelerate terminal of the cruise control module. When Set/Coast is pressed on the control switch, ignition positive voltage is applied to the set/coast terminal of the cruise control module.

The cruise control module receives a vehicle speed signal input from the Powertrain Control Module (PCM). In operation, the voltage varies between 0 V and 5 V.

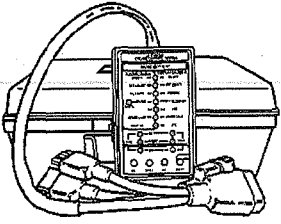
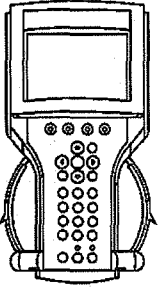
The cruise control module cruise engaged output terminal sends a signal to the Powertrain Control Module (PCM) when the cruise control is engaged. The cruise control module cruise inhibit input terminal is a circuit used by the PCM to inhibit cruise control when conditions inconsistent with cruise operation are present.

The PCM will inhibit cruise control under the following conditions:

- The vehicle speed is less than 40 km/h (25 mph).
- PARK, REVERSE, NEUTRAL, or 1st gear is indicated by the transaxle range switch.
- Low engine RPM is present.
- High engine RPM (fuel cut-off) is present.
- The vehicle speed is too high.
- An over or undercharged battery voltage condition exists.
- The antilock brake system/traction control system is active for more than 2 seconds.

If the PCM determines that any of the cruise control inhibit conditions are present, the PCM requests that the cruise control module disengage cruise control. The PCM accomplishes this request by opening the cruise inhibit output circuit. If the cruise engage output signal, sent by the cruise control module to the PCM, indicates that the cruise control is still engaged after the PCM has requested that cruise control disengage, the PCM sets a DTC.

Special Tools and Equipment

Illustration	Tool Number/ Description
 3430	J 39200 Digital Multimeter
 427620	J 42958 Cruise Control Tester
 59260	Scan Tool