

CRUISE CONTROL SYSTEM

1994 Mitsubishi 3000GT

1994 ACCESSORIES & SAFETY EQUIPMENT
Chrysler Corp./Mitsubishi Cruise Control Systems

Dodge; Stealth
Mitsubishi; 3000GT

DESCRIPTION & OPERATION

The cruise control system is electronically controlled and vacuum actuated. System components include an Electronic Control Unit (ECU), vacuum pump, actuator, cruise control switch, clutch pedal switch, accelerator pedal switch, cruise indicator light, diode (if equipped), Park/Neutral (P/N) switch (A/T), closed throttle position switch, overdrive switch, stoplight switch, throttle position sensor, vehicle speed sensor and A/T control unit.

The system also has self-diagnostic capability. When self-diagnostic mode is activated, each switch and sensor is checked for defects. If cruise control system has been canceled without using a normal cancel method, a code will be set and stored in ECU. Codes can be retrieved to help determine which circuit is malfunctioning.

PRELIMINARY INSPECTION

Before performing TROUBLE SHOOTING steps, inspect vacuum pump, linkage assembly, actuator, cables and vacuum hoses. Ensure linkage and cables move smoothly. Ensure cables do not have excessive slack or tension.

TROUBLE SHOOTING

NOTE: For further trouble shooting information, see appropriate CHECK RESULTS & SYMPTOM CHARTS. See Figs. 3 - 6.

SYSTEM CANCELS OR WILL NOT RESET AFTER CANCELLATION

1) Check trouble codes. See SELF-DIAGNOSTICS under DIAGNOSIS & TESTING. If no trouble codes are stored, check to see if cruise control can be set.

2) If cruise control can be set, system may have been canceled because of driving on steep hills or loose wiring connection. If cruise control still cannot be set, perform SYSTEM INPUT TESTS under DIAGNOSIS & TESTING.

NOTE: If vacuum pump circuit and parts of actuator check okay, replace ECU.

3) If SYSTEM INPUT TESTS check okay, check vacuum pump. See TEST NO. 5 under appropriate CIRCUIT TESTS. If SYSTEM INPUT TESTS do not check okay, see INPUT CODE CHART. See Fig. 3 - 6.

ADJUSTMENTS

CRUISE CONTROL CABLE

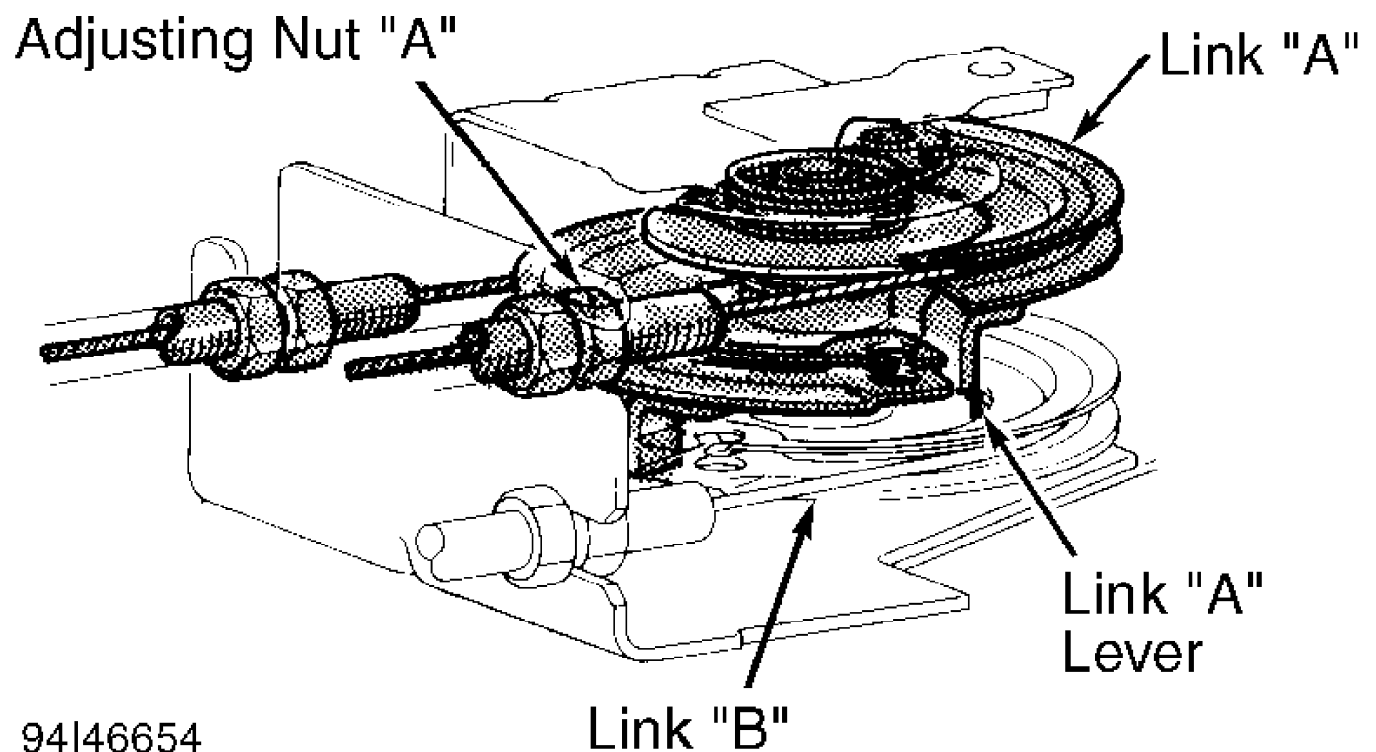


Fig. 1: Adjusting Cruise Control Cable (Stealth, 3000GT)
 Courtesy of Mitsubishi Motor Sales of America.

Stealth & 3000GT

1) Warm engine to normal operating temperature. Ensure cable is free of bends and folds. Remove cable protector. Loosen adjusting and lock nuts of link "A". Turn ignition on. See Fig. 1.

2) Turn adjusting nut "A" to reduce free play of inner cable of cruise control cable. When lever of link "A" contacts intermediate link "B", back off adjusting nut one turn.

3) Free play of inner cable should be .04-.08" (1-2 mm). Tighten lock nut. Ensure end of fixed Speed Adjusting Screw (SAS) is in contact with stopper of throttle lever.

DIAGNOSIS & TESTING

CRUISE CONTROL SWITCH FUNCTION TEST

NOTE: If vehicle speed decreases approximately 9 MPH below set speed, set speed will be canceled.

1) Cruise control switch is mounted separately to steering wheel. Turn main cruise control switch to ON position. Cruise control indicator on instrument cluster should come on.

2) To operate cruise control system, drive vehicle at desired speed between 25 and 90 MPH. Move cruise control switch downward to set desired speed. Set indicator light should come on.

3) Vehicle speed should stay at set speed. To increase set speed, move control switch upward to RESUME position and hold until new set speed is reached. To lower set speed, move control switch down to COAST position. Hold until new set speed is reached.

4) To return to set speed after cancellation, move control switch upward to RESUME position. Vehicle speed should return to previous setting before cancellation. Set speed should cancel when any

of the following occurs:

- * Cruise control switch is pulled toward driver.
- * Brake pedal is pressed.
- * Clutch pedal is pressed.
- * Transmission is shifted to Neutral.

SELF-DIAGNOSTICS

1) Self-diagnostics should be performed when cruise control cancels without driver using normal cancel modes. Data Link Connector (DLC) is located on right side of fuse box.

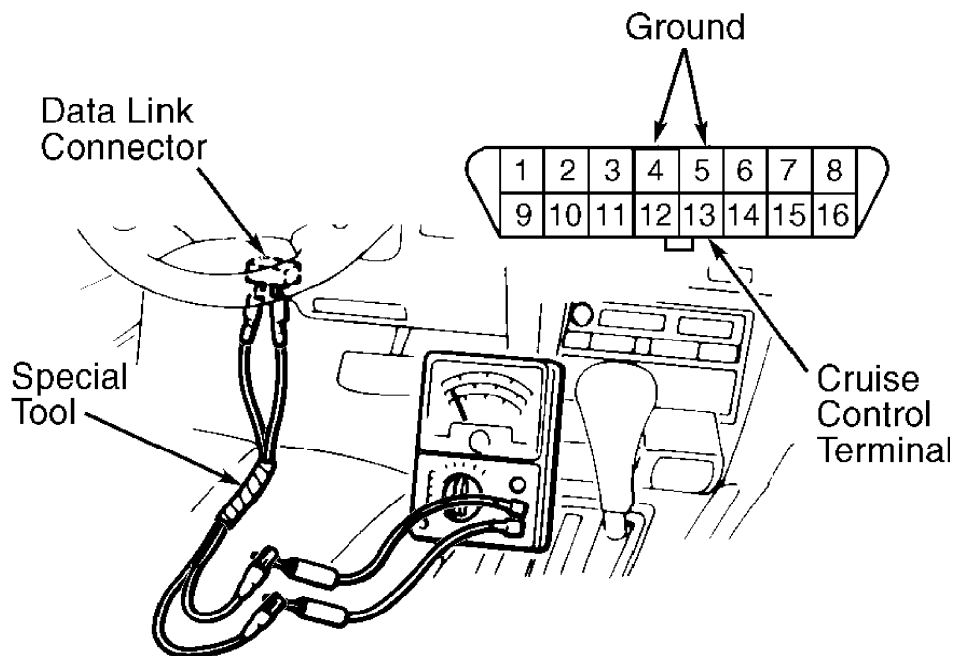
2) Use Scan Tester (MB991341) or an analog voltmeter for code retrieval. Plug scan tester connectors into cigarette lighter and DLC. Read trouble codes. If using voltmeter, connect leads of analog voltmeter between cruise control terminal and ground terminal of DLC. See Fig. 2. Read voltmeter needle sweeps to determine trouble code.

NOTE: On all models, Codes No. 15 and 16 will be displayed whether malfunction is present or not. On Stealth & 3000GT, a Code 17 will not cause system to cancel.

3) Once trouble codes have been displayed, see SELF-DIAGNOSTIC TROUBLE CODES to find appropriate CIRCUIT TEST. See appropriate CIRCUIT TESTS. To clear trouble codes, disconnect positive battery cable or go to next step.

4) Turn ignition on. Turn cruise control set switch on. Turn cruise switch on and, in less than one second after cruise switch is turned on, turn resume switch on.

5) Press set switch and brake pedal simultaneously, holding them for more than 5 seconds. Ensure codes are cleared.



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Fig. 2: Identifying Data Link Connector Terminals
Courtesy of Mitsubishi Motor Sales of America

SELF-DIAGNOSTIC TROUBLE CODES

Code 11
Possible cause: faulty vacuum pump circuit. Perform CIRCUIT
TEST NO. 5.

Code 12
Possible cause: faulty vehicle speed sensor circuit. Perform
CIRCUIT TEST NO. 4.

Code 15
Possible cause: faulty control switch. Perform CIRCUIT TEST
NO. 2.

Code 16
Possible cause: faulty control unit. Substitute known-good
control unit.

Code 17
Possible cause: faulty closed throttle position switch or
throttle position sensor. Perform CIRCUIT TEST NO. 9.

SYSTEM INPUT TESTS

1) System input tests should be performed if no trouble codes are stored when performing SELF-DIAGNOSTICS.

2) System input tests cycle each cruise control switch and sensor. Use Scan Tester (MB991341) or an analog voltmeter for system input check.










3) The scan tester setting is the same as setting for self-diagnostics. Plug scan tester connectors into cigarette lighter and data link connector.

4) If using voltmeter, connect leads of analog voltmeter between cruise control terminal and ground terminal of diagnostic connector. See Fig. 2. Turn ignition on. Turn cruise control switch to OFF position. Turn cruise control set switch to ON position.

5) Turn cruise control switch to ON position and within one second, turn resume switch to ON position. Perform each switch input test as specified in INPUT CODE CHART. See Figs. 3 - 6.

6) Cycle each switch until code is displayed. If code is not displayed, that switch or sensor is defective. When each switch or sensor is cycled and signals are reaching control unit, codes will continue to display.

7) When switch or sensor cycling stops, code display stops. If system input tests check okay, check vacuum pump. See TEST NO. 5 under appropriate CIRCUIT TESTS.

Code No.	Display patterns (output codes) (use with voltmeter)	Input operation		Check results
21		SET switch ON		SET switch circuit normal
22		RESUME switch ON		RESUME switch normal
23		Stop light switch ON (brake pedal depressed)		Stop light switch circuit normal
24		Vehicle speed more than approx. 40 km/h (25 mph)		Vehicle speed sensor circuit normal if code Nos. 24 and 25 are displayed
25		Vehicle speed less than approx. 40 km/h (25 mph)		
26		M/T	Clutch pedal position switch ON (clutch pedal depressed)	Clutch pedal position switch circuit normal
		A/T	Park/neutral position switch ON (SELECT lever placed in "N" position)	Park/neutral position switch circuit normal
27		CANCEL switch ON		CANCEL switch circuit normal
28		TPS output voltage 1.5 V or more (Accelerator pedal depressed more than half the way)		Throttle position sensor circuit normal
29		Closed throttle position switch OFF (Accelerator pedal depressed)		Closed throttle position switch circuit normal

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Fig. 3: Input Code Chart

Courtesy of Mitsubishi Motor Sales of America

Result of check	Probable cause	Remedy	Circuit Test
None of the codes appear even if input operations are performed.	Open circuit in control unit power supply circuit.	Replace main switch or repair harness.	No. 1
	Open circuit in control switch circuit	Replace control switch or repair harness.	No. 2
	Defective control unit	Replace control unit.	
Even when SET switch is set to OFF, code No. 21 does not go away.	SET switch ON malfunction	Replace the control switch.	No. 2
Even when RESUME switch is set to OFF, code No. 22 does not go away.	RESUME switch ON malfunction	Replace control switch.	No. 2
Even when CANCEL switch is set to OFF, code No. 27 does not go away.	CANCEL switch ON malfunction	Replace control switch.	No. 2
Even when brake pedal is depressed, code No. 23 is not displayed.	Defective stop light switch circuit	Replace stop light switch or repair harness.	No. 7
Even when brake pedal is released, code No. 23 does not go away.			
Even when clutch pedal is released, code No. 26 does not go away. <M/T>	Defective clutch pedal position switch circuit	Replace clutch pedal position switch or repair harness.	No. 7
Even when select lever is placed in any position other than "N" and "P", code No. 26 does not go away. <A/T>	Defective park/neutral position switch circuit	Replace park/neutral position switch or repair harness.	No. 8
Code No. 25 is not displayed even when vehicle speed is less than about 40 km/h (25 mph).	Defective vehicle speed sensor circuit	Check and repair vehicle speed sensor circuit.	No. 4
Even when vehicle speed is increased to more than about 40 km/h (25 mph), code No. 25 does not go away. Code No. 24 is not displayed, either.			

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Fig. 4: Check Results Chart (Stealth & 3000GT)
 Courtesy of Mitsubishi Motor Sales of America

Trouble symptom	Probable cause	Circuit Test	Remedy
<ul style="list-style-type: none"> The set vehicle speed varies greatly upward or downward. "Hunting" (repeated alternating acceleration and deceleration) occurs after setting is made. 	Malfunction of the vehicle speed sensor circuit	No. 4	Repair the vehicle speed sensor system, or replace the part.
	Malfunction of the speedometer cable or speedometer drive gear <Up to 1993 models (Non turbo)>		
	Vacuum pump assembly circuit poor contact	No. 5	Repair the actuator system, or replace the part.
	Malfunction of the vacuum pump assembly (including air leaks from negative pressure passage)		
	Malfunction of the ECU	—	Replace the ECU.
The cruise control system is not canceled when the brake pedal is depressed.	Brake switch (for cruise control) malfunction (short-circuit)	No. 6	Repair the harness or replace the stop light switch.
	Vacuum pump assembly drive circuit short-circuit	No. 5	Repair the harness or replace the vacuum pump assembly.
	Malfunction of the ECU	—	Replace the ECU.
The cruise control system is not canceled when the clutch pedal is depressed. <M/T> (It is canceled, however, when the brake pedal is depressed.)	Damaged or disconnected wiring of clutch switch input circuit	If the input check code No. 26 indicates a malfunction. No. 7	Repair the harness, or repair or replace the clutch switch.
	Clutch switch improper installation (won't switch ON)		
	Malfunction of the ECU		Replace the ECU.
The cruise control system is not canceled when the shift lever is moved to the "N" position. <A/T> (It is canceled, however, when the brake pedal is depressed.)	Damaged or disconnected wiring of park/neutral position switch input circuit	If the input check code No. 26 indicates a malfunction. No. 8	Repair the harness, or repair or replace the park/neutral position switch.
	Improper adjustment of park/neutral position switch		
	Malfunction of the ECU		Replace the ECU.
Cannot decelerate by using the SET switch.	Temporary damaged or disconnected wiring of control switch input circuit	No. 2	Repair the harness or replace the control switch.
	Vacuum pump assembly circuit poor contact	No. 5	Repair the harness or replace the vacuum pump assembly.
	Malfunction of the vacuum pump assembly		
	Malfunction of the ECU		Replace the ECU.

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Fig. 5: Symptom Chart (Stealth & 3000GT - 1 Of 2)
Courtesy of Mitsubishi Motor Sales of America

Trouble symptom	Probable cause	Circuit Test	Remedy
Cannot accelerate or resume speed by using the RESUME switch.	Open or short circuit in RESUME switch circuit in control switch	No. 2	Replace the control switch.
	Vacuum pump assembly circuit poor contact	No. 5	Repair the harness or replace the vacuum pump assembly.
	Malfunction of the vacuum pump assembly (including air leaks from negative pressure passage)		
	Malfunction of the ECU		Replace the ECU.
Even when CANCEL switch is set to ON, cruise control is not canceled (Cruise control, however, is canceled when brake pedal is depressed.)	Open or short circuit in CANCEL switch circuit in control switch	If the input check code No. 27 indicates a malfunction. No. 2	Replace the control switch.
	Malfunction of the ECU	–	Replace the ECU
The cruise control system can be set while traveling at a vehicle speed of less than 40 km/h (25 mph), or there is no automatic cancellation at that speed.	Malfunction of the vehicle-speed sensor circuit	No. 4	Repair the vehicle speed sensor system, or replace the part.
	Malfunction of the speedometer cable or the speedometer drive gear <Non turbo>		
	Malfunction of the ECU		Replace the ECU.
The cruise control indicator light of the combination meter does not illuminate. (But cruise control system is normal)	Damaged or disconnected bulb of indicator light	No. 3	Repair the harness or replace the light bulb.
	Harness damaged or disconnected		
	Malfunction of the ECU	–	Replace the ECU.
Cruise control ON indicator light does not come on. (However, cruise control is functional.)	Burned-out indicator light bulb	No. 3	Repair the harness or replace the main switch.
	Open or short circuit in harness		
Malfunction of control function by ON/OFF switching of ELC 4 A/T accelerator switch. (Non-operation of damper clutch, 2nd gear hold, etc.)	Malfunction of circuit related to accelerator switch OFF function	No. 10	Repair the harness or replace the part.
	Malfunction of the ECU		
Overdrive is not canceled during fixed speed driving <A/T>	Malfunction of circuit related to overdrive cancellation, or malfunction of ECU	No. 11	Repair the harness or replace the part.
No shift to overdrive during manual driving. <A/T>			

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Fig. 6: Symptom Chart (Stealth & 3000GT – 2 Of 2)
Courtesy of Mitsubishi Motor Sales of America

CIRCUIT TESTS

NOTE: To identify circuit connector terminals, see Figs. 8 - 18.
See appropriate wiring diagram.

Test No. 1 (Power Supply Circuit)

1) When cruise control switch is turned to ON position, battery voltage should be present on terminal No. 2 of control unit. If voltage is not present, check fuse No. 2 and replace as necessary. If fuse is okay, replace switch or repair harness.

2) Control unit should be grounded at all times through terminals No. 8 and 14. If circuit is not grounded, repair harness.

Test No. 2 (Set, Resume & Cancel Switch Circuits)

1) When all switches are turned to OFF position, voltage should not be present on terminal No. 18 of cruise control unit. When set switch is turned to ON position, 3 volts should be present on terminal No. 18 of control unit.

2) When resume switch is turned to ON position, 6 volts should be present on terminal No. 18 of control unit. When resume switch is turned to OFF position, voltage should not be present on terminal No. 18 of control unit.

3) When cancel switch is turned to ON position, battery voltage should be present on terminal No. 18 of control unit. When cancel switch is turned to OFF position, voltage should not be present on terminal No. 18 of control unit. If circuit does not test correctly, replace switch or repair harness.

Test No. 3 (Indicator Light Circuit)

When cruise control is active, battery voltage should be present on terminal No. 23 of control unit. When cruise control is turned to OFF position, voltage should not be present on terminal No. 23 of control unit. If circuit does not test correctly, replace switch or repair harness.

Test No. 4 (Vehicle Speed Sensor Circuit)

When vehicle moves slowly, voltage should alternate from zero volts to 2 or more volts at terminal No. 19 of control unit. If circuit does not test correctly, replace sensor or repair harness.

Test No. 5 (Vacuum Pump Circuit)

1) When release valve is on, battery voltage should not be present on terminal No. 9 (No. 12 on Stealth and 3000GT) of control unit. When release valve is off, battery voltage should be present on terminal No. 9 (No. 12 on Stealth and 3000GT) of control unit.

2) When control valve is on, battery voltage should not be present on terminal No. 13 of control unit. When control valve is off, battery voltage should be present on terminal No. 13 of control unit.

3) When DC motor is driven, battery voltage should not be present on terminal No. 26 of control unit. When DC motor is stopped, battery voltage should be present on terminal No. 26 of control unit.

4) When cruise control switch is turned to ON position, battery voltage should be present on terminal No. 25 of control unit. When DC motor is stopped, battery voltage should be present on terminal No. 26 of control unit. See Fig. 7. If circuit does not test correctly, replace vacuum pump or repair harness.

Auto-cruise control operations	DC motor (ON: Current supplied OFF: No current supplied)	Solenoid valve (ON: Closed OFF: Opened)	
		Control valve	Release valve
Acceleration	ON	ON	ON
Hold	OFF	ON	ON
Deceleration	OFF	OFF	ON
Cancellation	OFF	OFF	OFF

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Fig. 7: Testing Vacuum Pump Circuit
Courtesy of Mitsubishi Motor Sales of America

Test No. 6 (Stoplight Switch Circuit)

When brake pedal is pressed, battery voltage should be present on terminal No. 15 of control unit. When brake pedal is released, voltage should not be present on terminal No. 15 of control unit. If circuit does not test correctly, replace switch or repair harness.

Test No. 7 (Clutch Switch Circuit)

When clutch pedal is pressed, battery voltage should not be present on terminal No. 1 of control unit. When clutch pedal is released, voltage should be present on terminal No. 1 of control unit. If circuit does not test correctly, replace switch or repair harness.

Test No. 8 (Park/Neutral Switch Circuit)

1) When park/neutral switch is placed in Neutral or Park, battery voltage should not be present on terminal No. 1 of control unit.

2) When park/neutral switch is placed in Drive, Second, Low or Reverse positions, battery voltage should be present on terminal No. 1 of control unit. If circuit does not test correctly, replace switch or repair harness.

Test No. 9 (Throttle Position Sensor & Closed Throttle Position Switch Circuit)

1) When checking closed throttle position switch, if accelerator pedal is pressed, battery voltage should be present on terminal No. 4 of control unit. When accelerator pedal is released, battery voltage should not be present on terminal No. 4 of control unit.

2) When checking throttle position sensor, if throttle valve is in idle position, .45-.55 volt (.48-.72 volt on Stealth and 3000GT) should be present on terminal No. 5 of control unit.

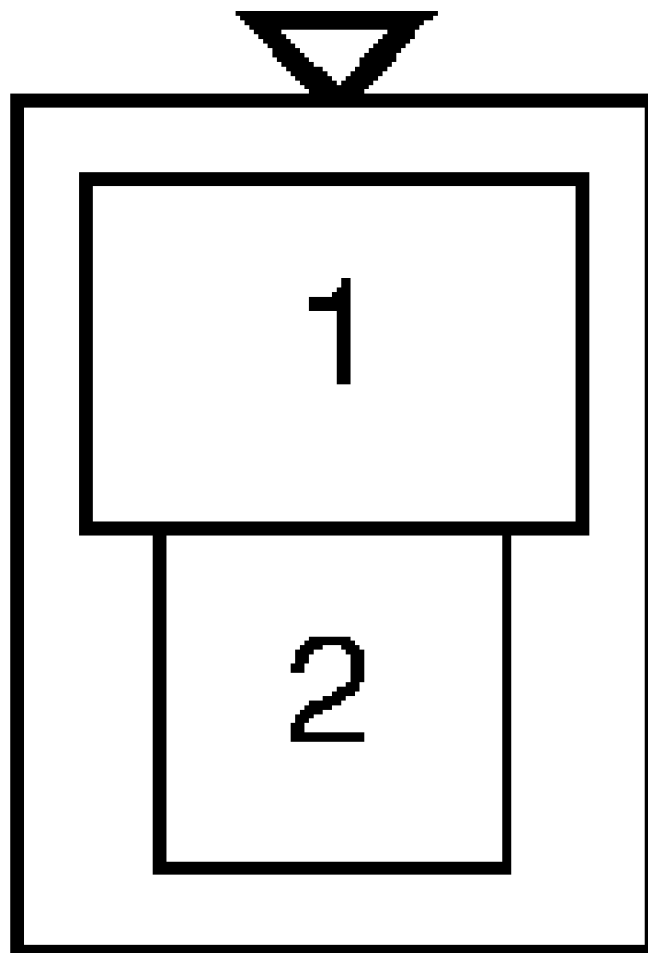
3) When throttle valve is in wide open throttle position, 4.5-5.5 volts should be present on terminal No. 5 of control unit. If circuit does not test correctly, replace switch or repair harness.

Test No. 10 (Overdrive Cancellation Circuit)

1) When ignition switch is in ON position, battery voltage should be present on terminal No. 3 of control unit. When overdrive is activated, battery voltage should be present on terminal No. 10 of control unit.

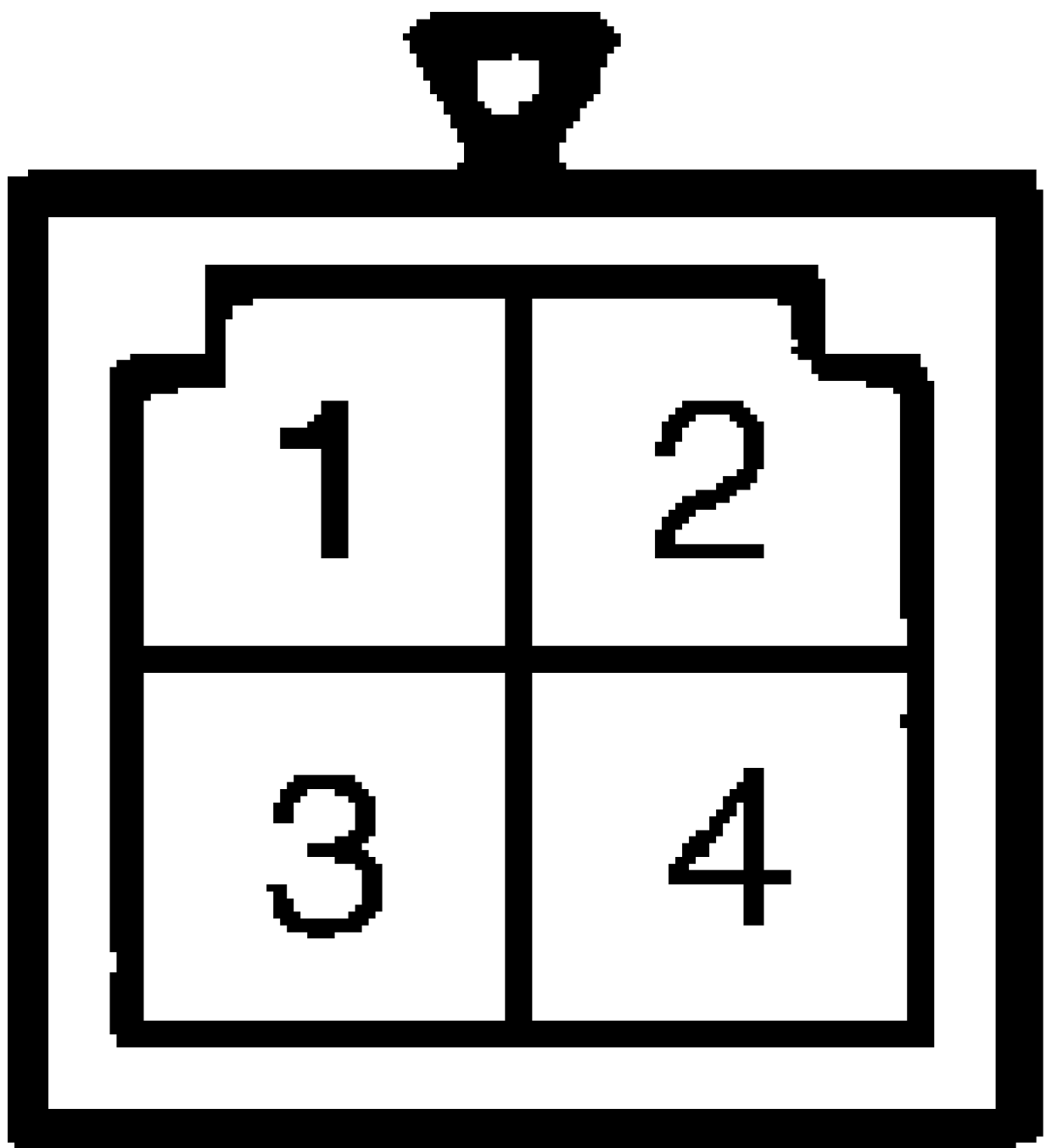
2) When overdrive is off, battery voltage should not be present on terminal No. 10 of control unit. When overdrive switch is in ON position, battery voltage should be present on terminal No. 11 of control unit.

3) When overdrive switch is in OFF position, battery voltage should not be present on terminal No. 11 of control unit. If circuit does not test correctly, replace switch or repair harness.



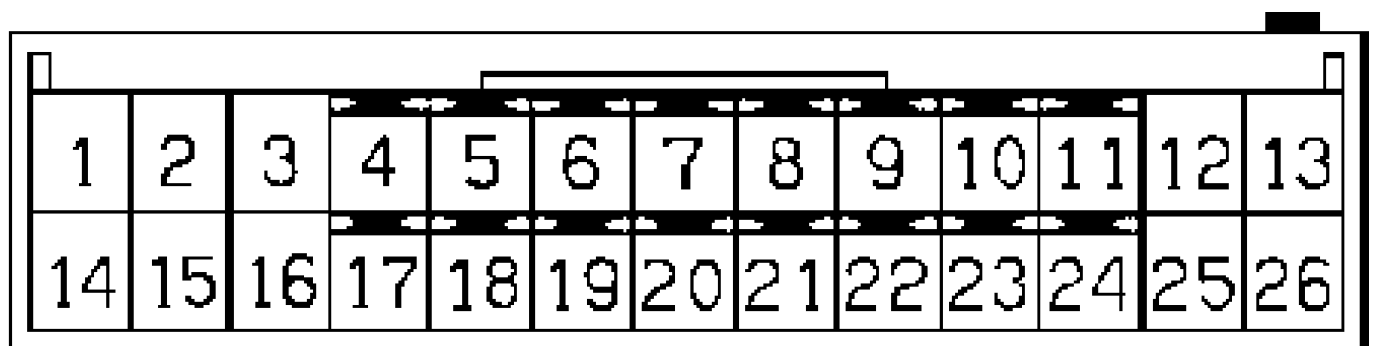
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Fig. 8: Clutch & Accelerator Switch Connector
Courtesy of Mitsubishi Motor Sales of America.



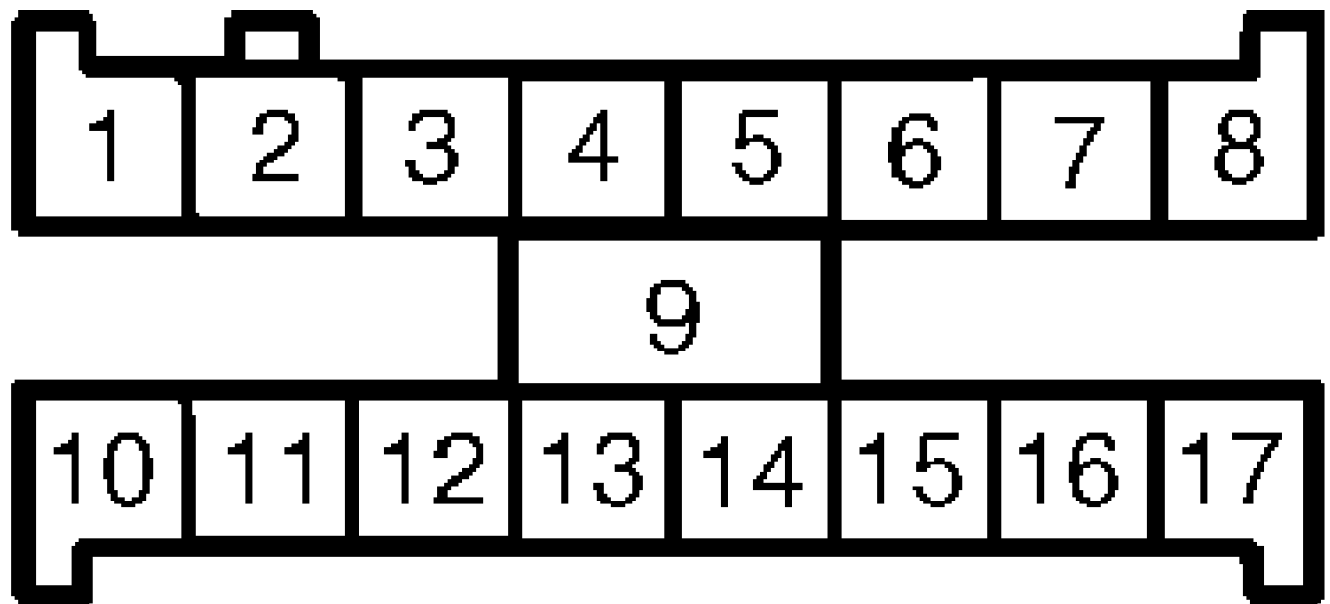
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Fig. 9: Cruise Control Relay Connector
Courtesy of Mitsubishi Motor Sales of America.



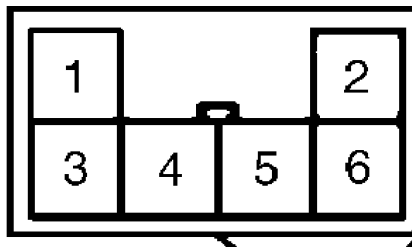
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Fig. 10: Electronic Cruise Control Unit (ECU) Connector
Courtesy of Mitsubishi Motor Sales of America.



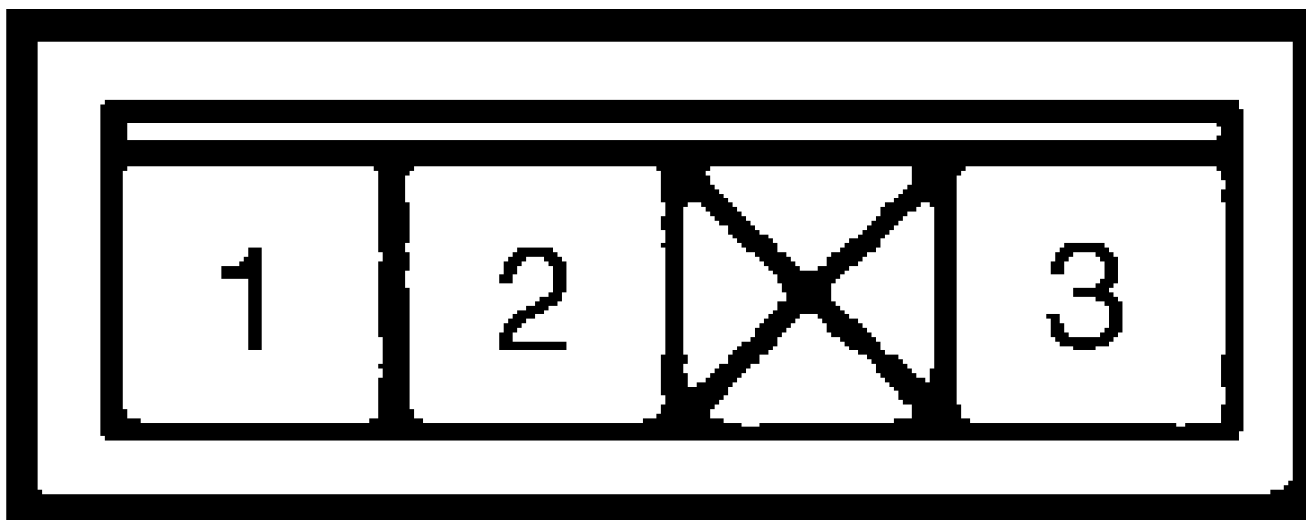
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Fig. 11: Instrument Cluster Connector
Courtesy of Mitsubishi Motor Sales of America.



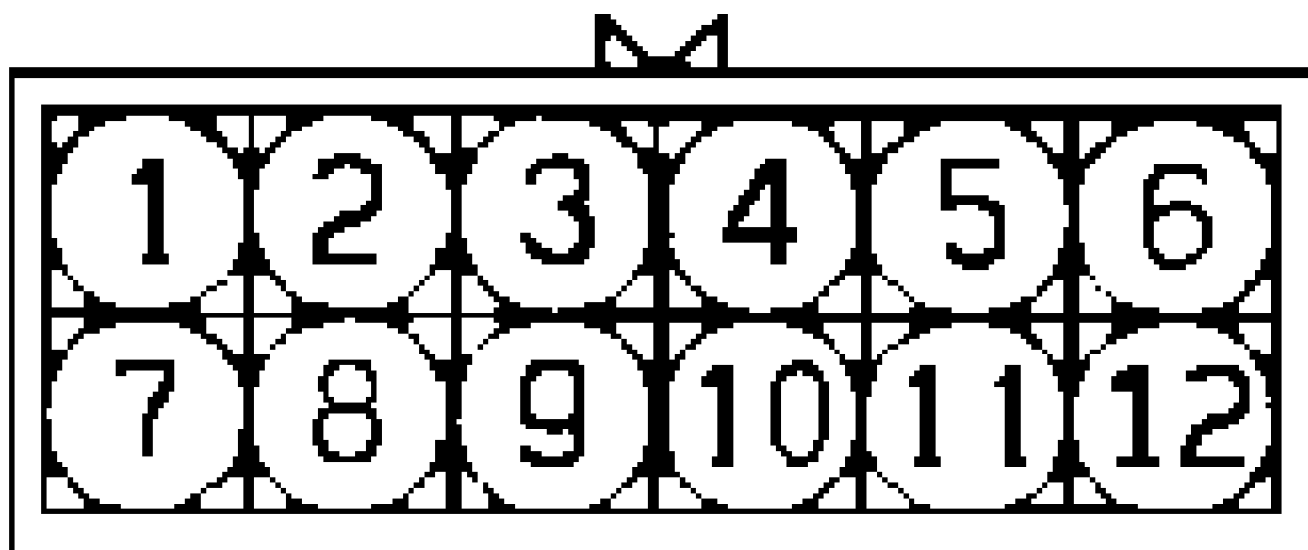
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Fig. 12: Main Cruise Control Switch Connector
Courtesy of Mitsubishi Motor Sales of America.



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Fig. 13: Overdrive Switch Connector
 Courtesy of Mitsubishi Motor Sales of America.



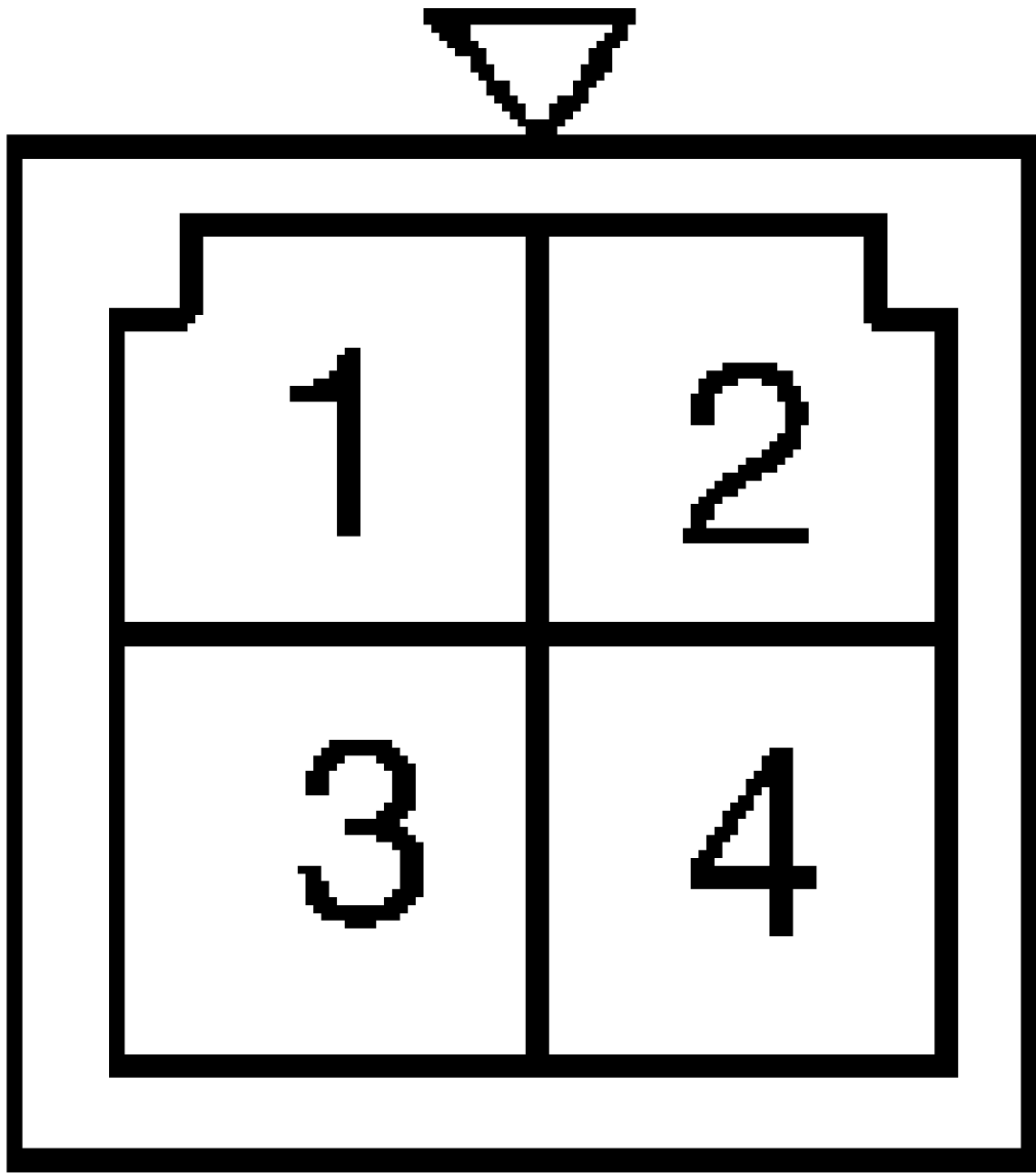
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Fig. 14: Park/Neutral Switch Connector
 Courtesy of Mitsubishi Motor Sales of America.



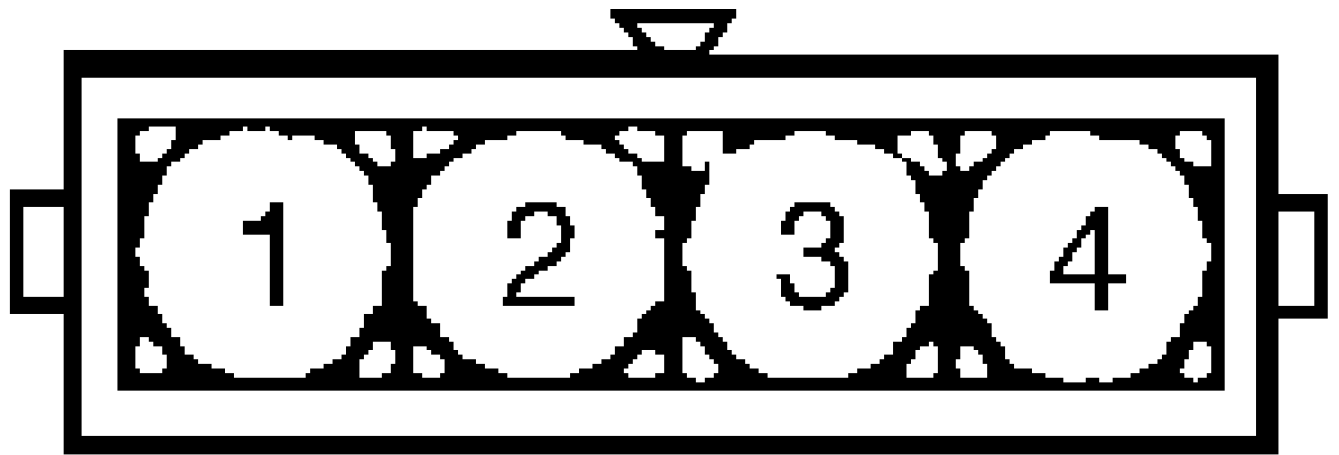
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Fig. 15: Park/Neutral Switch Connector
 Courtesy of Mitsubishi Motor Sales of America.



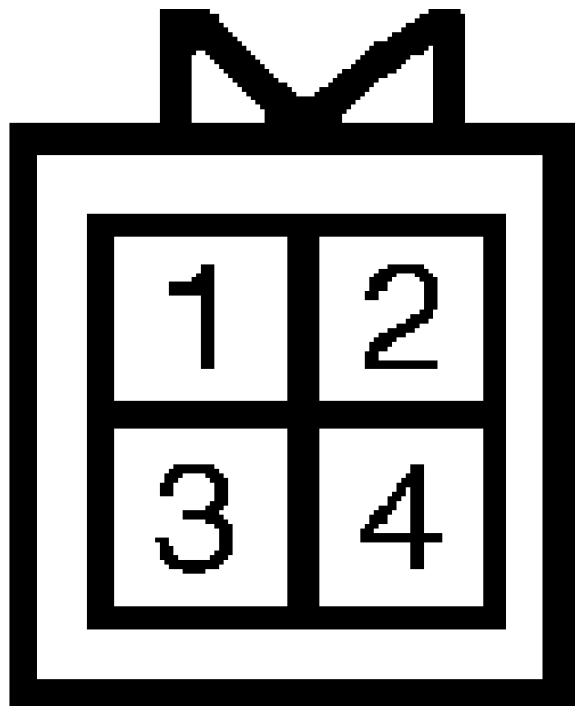
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Fig. 16: Stoplight Switch Connector
Courtesy of Mitsubishi Motor Sales of America.



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Fig. 17: Throttle Position Sensor Connector
Courtesy of Mitsubishi Motor Sales of America.



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Fig. 18: Vacuum Pump Connector
Courtesy of Mitsubishi Motor Sales of America.

Resume & Set Switch (Stealth & 3000GT)

1) Remove air bag module. See AIR BAG MODULE under REMOVAL & INSTALLATION. Disconnect cruise control switch 2-pin connector.

2) With switch in OFF position, continuity should not be present between terminals. When switch is pulled toward you for cancel mode, zero ohms should be present.

3) When switch is in RESUME position, resistance should be 820 ohms. When switch is in SET position, resistance should be 2700 ohms. Replace cruise control switch if resistance is not correct.

Main Switch (Stealth & 3000GT)

1) Pry main switch bezel with switch from console. Check continuity in each switch position. With switch in OFF position, continuity should be present between terminals No. 2 and 6 for illumination light circuit. See Figs. 8 - 18.

2) With switch in Neutral position, continuity should be present between terminals No. 2 and 6, and between terminals No. 1 and 4. With switch in ON position, continuity should be present between terminals No. 2 and 6, and between terminals No. 1, 3 and 4. If continuity is not present, replace main switch.

Cruise Control Relay (Stealth & 3000GT)

1) Remove relay. Relay is located behind center of dash, below radio. Continuity should be present between terminals No. 2 and 4. See Figs. 8 - 18.

2) Apply battery voltage to terminal No. 2 and ground terminal No. 4. Continuity should be present between terminals No. 1 and 3. If continuity is not correct, replace cruise control relay.

Brakelight/Stoplight Switch

Disconnect switch connector. When brake pedal is pressed, continuity should exist between terminals No. 2 and 3. See Figs. 8 - 18. When brake pedal is released, continuity should exist between terminals No. 1 and 4. If continuity is not correct, replace switch.

Clutch Switch

Disconnect switch connector. Continuity should be present between clutch switch terminals when clutch pedal is pressed. If continuity is not correct, replace switch.

Park/Neutral Switch

Disconnect switch connector. On Stealth & 3000GT, continuity should exist between connector terminals No. 7 and 8 when shift lever is in "P" or "N". On all other models, continuity should exist between connector terminals No. 5 and 8 when shift lever is in "P" or "N". See Figs. 8 - 18. If continuity is not correct, replace switch.

Throttle Position Switch

1) Disconnect throttle position sensor connector. Measure resistance between terminals No. 1 and 4. See Figs. 8 - 18. Resistance should be 3.5-6.5 ohms.

2) Connect an analog ohmmeter between terminals No. 2 and 4. See Figs. 8 - 18. Operate throttle valve slowly from idle to wide open throttle. Resistance should change smoothly as throttle valve is opened and closed. Replace throttle position sensor as necessary.

Closed Throttle Position Switch

1) Disconnect switch connector. Closed throttle position switch is incorporated in throttle position sensor. Continuity should exist between terminals No. 3 and 4 with accelerator pedal released. See Figs. 8 - 18.

2) With accelerator pedal pressed, continuity should not be present between terminals No. 3 and 4. Replace closed throttle

position switch if continuity is not correct.

ACCELERATOR SWITCH TEST

NOTE: Accelerator pedal switch testing information is not available from manufacturer.

VACUUM PUMP ASSEMBLY TEST

Solenoid Valves

Remove vacuum pump connector. Resistance should be 50-60 ohms between terminals No. 1 and 2, and between terminals No. 1 and 3. See Figs. 8 - 18. Ensure solenoid valve makes operating noise when battery voltage is applied between terminals No. 1 and 2, and between terminals No. 1 and 3. If solenoid valve does not make noise, replace vacuum pump assembly.

Pump Motor

Remove vacuum pump connector. Apply battery voltage between terminals No. 1 and 4. See Figs. 8 - 18. Motor should operate. Replace motor if it does not operate.

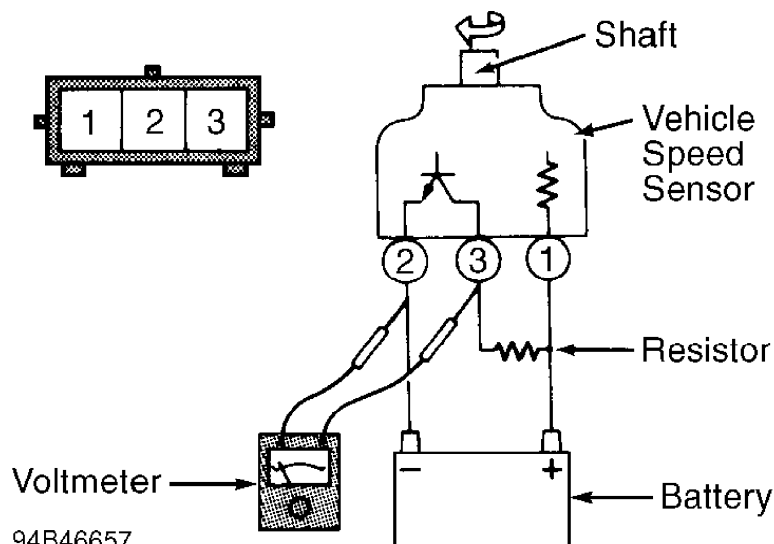
ACTUATOR TEST

Remove actuator. Apply vacuum to actuator. Actuator linkage holder should move more than 1.38" (35 mm). Actuator diaphragm should hold vacuum.

VEHICLE SPEED SENSOR

Stealth & 3000GT

Remove speed sensor from transmission. Connect battery, resistor (3-10 ohms) and voltmeter to speed sensor terminals. When speedometer shaft is turned several times, voltage should pulse 4 times each revolution. Replace speed sensor if operation is not correct.



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Fig. 19: Checking Speed Sensor Circuit
Courtesy of Mitsubishi Motor Sales of America.

REMOVAL & INSTALLATION

AIR BAG MODULE

CAUTION: The capacitor in the SRS diagnostic unit holds enough voltage to deploy air bag even after battery cable has been disconnected. Remove negative battery cable and wait for more than 60 seconds before removing air bag module.

Removal & Installation

1) Remove air bag module mounting nuts from back of steering wheel. When disconnecting clockspring connector, press connector toward the outer side to spread it open.

2) Disconnect clockspring connector from air bag module. DO NOT apply excessive force to connector. Lay air bag with pad cover face up. To install, reverse removal procedure.

ACTUATOR

Removal & Installation

Remove linkage protector. Remove cruise control cable. Remove accelerator and throttle cables. Disconnect vacuum hoses and electrical connectors. Remove linkage assembly. Remove vacuum pump and bracket. Remove actuator and bracket. To install, reverse removal procedure.

CRUISE CONTROL STEERING COLUMN SWITCH

CAUTION: DO NOT hammer steering wheel. Collapsible steering column mechanism may be damaged.

Removal & Installation

Remove knee protector and lower panel. Remove column covers. Remove air bag module and bracket. See AIR BAG MODULE. Remove clip and column switch. To install, reverse removal procedure.

INDICATOR LIGHT

Removal & Installation

Indicator light is located in instrument cluster. Remove instrument cluster. See INSTRUMENT CLUSTER. To install, reverse removal procedure.

INSTRUMENT CLUSTER

Removal & Installation

1) Disconnect negative battery cable. Remove center panel, knee protector, gauge bezel, combination meter and adapter. Remove bulb socket, bulb, gauge glass and speedometer.

2) Remove gauge cluster (or tachometer and gauge), left indicator lens and turn and high beam indicator lens. Remove A/T position indicator light, lens, printed circuit board and meter case. To install, reverse removal procedure.

CONTROL UNIT

Removal & Installation

Cruise control unit is located behind right kick panel. Remove kick panel and cruise control unit. To install, reverse removal procedure.

WIRING DIAGRAMS

