

CRUISE CONTROL SYSTEM

1988 Toyota Celica

1988 CRUISE CONTROL SYSTEMS
Toyota

DESCRIPTION

A main switch is used to activate the cruise control system. The main switch is located on the stalk on right side of steering column on MR2 and RWD Corolla, and on instrument panel on all other models. A control switch, with "SET/COAST" and "ACCEL/RESUME" settings, is used to set desired speed. The control switch is mounted in steering wheel pad on Celica and Supra, and is mounted on a stalk on right side of steering column on all other models. System is computer controlled on all models. System will not operate at speeds below 25 MPH on all models.

The cruise control computer on all models has diagnostic capabilities. The diagnostics vary between models. Some models employ "Type A" indicator codes. "Type A" indicator codes verify that cruise control system is functioning properly. All models employ "Type B" indicator codes. "Type B" indicator codes signal malfunctions within the cruise control system.

OPERATION

MAIN SWITCH

Depressing main switch activates system and illuminates indicator light. On models equipped with a "SET", the light will be illuminated to signal operator that desired cruising speed can be selected. Depressing the button a second time turns system and indicator lights off. Ensure main switch is off when cruise control system is not being used.

CONTROL SWITCH

When control switch is placed in "SET/COAST" position and released, desired vehicle speed is set. If switch is continuously held, vehicle speed will gradually decrease until released.

When control switch is placed in "ACCEL/RESUME" position and held, vehicle speed will gradually increase. Releasing the switch sets new vehicle speed.

To resume set speed after cancellation, place control switch in "ACCEL/RESUME" position. Vehicle speed will be reset, unless the previous speed was cancelled due to vehicle speed falling below minimum set speed.

TROUBLE SHOOTING

CRUISE CONTROL SYSTEM DOES NOT OPERATE

On all models, diagnose "Type A" and "Type B" codes. If diagnostics determine that system is operating properly, check actuator circuit.

SPEED DOES NOT DECREASE WHEN "COAST" IS ACTIVATED

On all models, diagnose "Type A" codes. If "SET/COAST" circuit is operating properly, check actuator circuit. If "SET/COAST"

circuit is not operating properly, check "SET/COAST" switch circuit.

SPEED DOES NOT FLUCTUATE WHEN "SET" IS ACTIVATED

On all models, diagnose "Type A" codes. If "SET/COAST" circuit is operating properly, check actuator circuit. If "SET/COAST" circuit is not operating properly, check "SET/COAST" switch circuit.

SPEED DOES NOT INCREASE WHEN "ACCEL" IS ACTIVATED

On all models, diagnose "Type A" codes. If "ACCEL/RESUME" circuit is operating properly, check actuator circuit. If "ACCEL/RESUME" is not operating properly, check "SET/COAST" switch circuit.

VEHICLE DOES NOT RETURN TO PREVIOUS SPEED WHEN "RESUME" IS ACTIVATED

On all models, diagnose "Type A" codes. If "ACCEL/RESUME" circuit is operating properly, check actuator circuit. If "ACCEL/RESUME" is not operating properly, check "SET/COAST" switch circuit.

VEHICLE SPEED IS LOWER OR HIGHER THAN SET SPEED

Except Van

Diagnose "Type A" codes. If system is operating properly for deviation on high and low side of set speed, check actuator and speed sensor circuits. If fault is in system on high side of set speed, check "SET/COAST" circuit of control switch. If fault is in system on low side of set speed, check vacuum switch circuit.

Van

Actuator cable free play out of adjustment. Defective actuator, brake cancel switch or cruise control computer. Open or short in actuator electrical circuit.

RETURN & ACCELERATION RESPONSE SLUGGISH

On all models, diagnose "Type A" codes. If vacuum switch circuit is operating properly, check actuator circuit. If diagnosis determines vacuum switch circuit is not operating properly, check vacuum switch.

SET SPEED DOES NOT CANCEL WHEN BRAKES ARE APPLIED

On all models, diagnose "Type A" codes. If cancel switch circuit is operating properly, check actuator circuit. If diagnosis determines cancel switch circuit is not operating properly, check stop light switch circuit.

SET SPEED DOES NOT CANCEL WHEN PARKING BRAKE IS APPLIED

On all models, diagnose "Type A" codes. If cancel switch circuit is operating properly, check actuator circuit. If diagnosis determines cancel switch circuit is not operating properly, check parking brake switch circuit.

SET SPEED DOES NOT CANCEL WHEN CLUTCH IS DEPRESSED

Manual Transmission

On all models, diagnose "Type A" codes. If cancel switch

circuit is operating properly, check actuator circuit. If cancel switch circuit is not operating properly, check clutch switch circuit.

SET SPEED DOES NOT CANCEL WHEN TRANSMISSION IS SHIFTED TO "N"

Automatic Transmission

On all models, diagnose "Type A" codes. If cancel switch circuit is operating properly, check actuator circuit. If cancel switch circuit is not operating properly, check neutral start switch circuit.

SPEED CAN BE SET BELOW 25 MPH

On all models, diagnose "Type A" codes. If speed sensor circuit is operating properly, check actuator circuit. If speed sensor circuit is not operating properly, check speed sensor circuit.

SYSTEM WILL NOT DEACTIVATE BELOW 25 MPH

On all models, diagnose "Type A" codes. If speed sensor circuit is operating properly, check actuator circuit. If speed sensor circuit is not operating properly, check speed sensor circuit.

ABOUT 14 SECONDS AFTER OVERDRIVE CUTS OUT, OVERDRIVE RESUMES

Exc. Tercel

Check Electronically Controlled Transmission (ECT) solenoid circuit.

ADJUSTMENTS

ACTUATOR CABLE FREE PLAY

If cable free play is less than .39" (10.0 mm) all models except Van, .08" (2.0 mm) at bellcrank on Van models, adjust free play. Adjust play by loosening lock nut and turning adjusting nut. When free play is set to specification, tighten lock nut.











DIAGNOSTICS

"TYPE A" CODES

1) To enable diagnostics to read "Type A" codes, turn ignition on. Turn main switch and "SET/COAST" switch on simultaneously. Refer to "TYPE A" DIAGNOSTIC CODES table.

2) Read output codes by observing indicator light flashes on main switch. The indicator light will glow for 1/4 second and go out for 1/4 second to display codes. There is a one second delay between codes. The codes will display beginning with first code set. Each code will be repeated until next function is selected.

3) "Type A" codes indicate that computer and all switch circuits are operating properly. If a code is not displayed, trouble is indicated on that particular circuit. If no code is displayed and problems still exist, see DIAGNOSTIC ROUTINE in this article.

Condition		Code Pattern	Result
"Set/Coast" On	ON OFF		"Set/Coast" Circuit Okay
"Accel/Res" On	ON OFF		"Accel/Res" Circuit Okay
"Cancel" Sw. On ²	ON OFF		"Cancel" Sw. Cir. Okay
Vacuum Sw. On	ON OFF		Vacuum Switch Circuit Okay
Brake On ¹	ON OFF		Stop Light Sw. Circuit Okay
Park Brake On ¹	ON OFF		Park. Brake Sw. Cir. Okay
Clutch On ¹	ON OFF		Clutch Switch Circuit Okay
Trans. in "N" ¹	ON OFF		Neutral/Start Switch Okay
Above 25 MPH ¹	ON OFF		Speed Sensor Circuit Okay
Below 25 MPH ¹	ON OFF		Speed Sensor Circuit Okay

¹ - Test with Vehicle jacked up and idling.

² On Vehicles with "Cancel" function in Control Switch.

50C07314
Fig. 1: TYPE "A" DIAGNOSTIC CODES

"TYPE B" CODES

1) To enable diagnostics to read "Type B" codes, DO NOT turn ignition switch and main switch off (if vehicle is exiting "Type A" diagnostics). If vehicle is not provided with "Type A" codes, turn ignition switch and cruise control main switch to "ON" position. On all models, drive at a speed of 10 MPH or less, activate "SET/COAST" switch 3 times within 2 seconds. Refer to "TYPE B" DIAGNOSTIC CODES table.

2) Read output codes by observing indicator light flashes on main switch. If no malfunctions are recorded in cruise control computer, indicator light will glow (blink on) for 1/4 second and go out for 1/4 second.

3) If malfunctions are recorded in computer, indicator light will glow for 1/2 second and go out for 1.5 seconds to display codes. There is a 4 second delay between codes. The codes will display beginning with Code 11. Each code will be repeated until next function is selected.

4) "Type B" codes indicate a malfunction in a particular circuit. If code for normal system operation is displayed and problems still exists, see DIAGNOSTIC ROUTINE in this article.

5) On Cressida and Supra models with "Super Monitor" system, "Type B" codes can also be read in numeric form on "Super Monitor" screen.

6) To enter diagnostics on Supra, test drive vehicle and note performance of cruise control system. Idle vehicle and stop engine. Set "Super Monitor" display to calendar mode. Push and hold "SELECT" button and "M" (input) button simultaneously. Keep buttons depressed for at least 3 seconds.

7) Display should change from "ERROR" to "DIAG". After a few seconds, hold "SET" button for at least 3 seconds. Display should now read "ECT". Depress "SET" button once. Display should now read "C/C". Push "SET/COAST" button 3 times within 2 seconds.

8) If code is stored in computer, it will appear on display. If cruise control system is operating normally, "C/C OK" will appear on display. If wire harness between cruise control computer and super monitor is open, "C/C OO" will appear on display. If no code is displayed and problems still exist, see DIAGNOSTIC ROUTINE in this article.

9) To enter diagnostics on Cressida, complete "Type A" diagnostics leaving ignition and cruise control main switches on. With engine idling, unplug electrical connector from fuel pump. When engine stops, reconnect fuel pump connector.

10) With engine off, turn ignition on. Push and hold "SELECT" button and "M" (input) button simultaneously. Keep buttons depressed for at least 3 seconds. Display should read "DIAG".

11) After a few seconds, hold "SET" button for at least 3 seconds. Display should now read "E/G". Push "SET/COAST" button 3 times within 2 seconds. If code is stored in computer, "C/C" will appear on display.

12) If cruise control system is operating normally, "C/C OK" will appear on display. If wire harness between cruise control computer and super monitor is open, "C/C OO" will appear on display. If no code is displayed and problems still exist, see DIAGNOSTIC ROUTINE in this article.

Condition	Code Pattern	Result
"Set/Coast" On ON OFF		"Set/Coast" Circuit Okay
"Accel/Res" On ON OFF		"Accel/Res" Circuit Okay
"Cancel" Sw. On ² ON OFF		"Cancel" Sw. Cir. Okay
Vacuum Sw. On ON OFF		Vacuum Switch Circuit Okay
Brake On ¹ ON OFF		Stop Light Sw. Circuit Okay
Park Brake On ¹ ON OFF		Park. Brake Sw. Cir. Okay
Clutch On ¹ ON OFF		Clutch Switch Circuit Okay
Trans. in "N" ¹ ON OFF		Neutral/Start Switch Okay
Above 25 MPH ¹ ON OFF		Speed Sensor Circuit Okay
Below 25 MPH ¹ ON OFF		Speed Sensor Circuit Okay

¹ - Test with Vehicle jacked up and idling.

² On Vehicles with "Cancel" function in Control Switch.

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Fig. 2: TYPE "B" DIAGNOSTIC CODES

DIAGNOSTIC ROUTINE

Power Source Circuit

Turn ignition on. Check "GAUGE" fuse ("ECU-IG" on Camry, Celica, Cressida, Supra, Tercel and Van, "WIPER" on Pickup and 4Runner, and "TURN GAUGE" on MR2). If fuse is blown, replace fuse and recheck system. If fuse blows again, check for short circuit between fuse and terminal No. 2 of main switch (terminal 16 of computer connector terminal on MR2). See Fig. 3. Also inspect main switch.

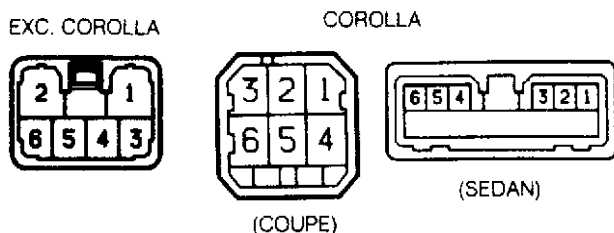


Fig. 3: Main Switch Connector Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Main Power Relay (Van Only)

1) Check for battery voltage between terminal No. 2 of main

power relay and body ground. See Fig. 4. If battery voltage is not present, check for open or short between terminal No. 2 and "ECU-IG" fuse.

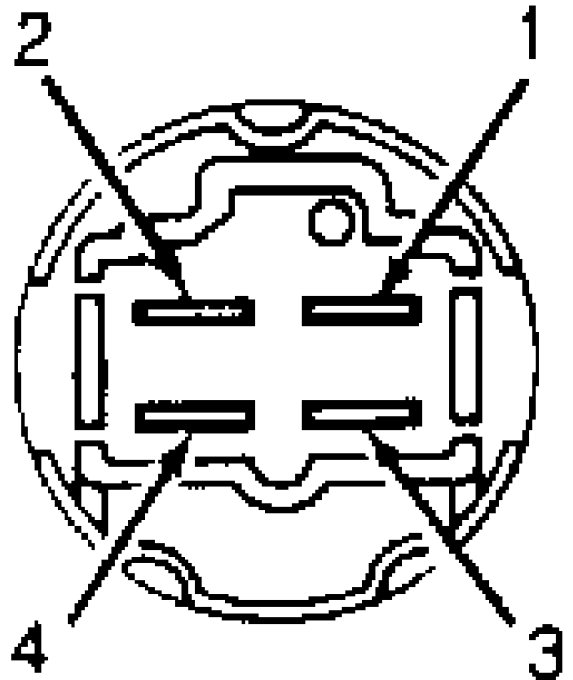


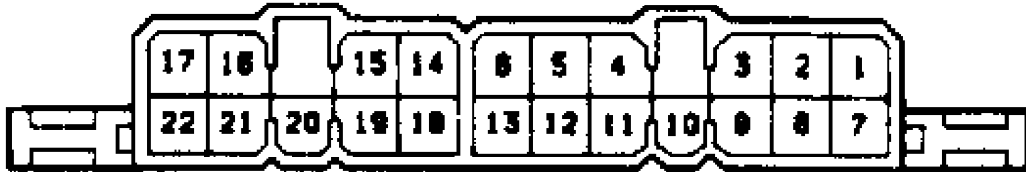
Fig. 4: Van Main Power Relay Connector Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) If battery voltage is present, check for battery voltage between terminal No. 3 of main power relay and body ground with main switch turned on. If voltage is not present, check for open or short between terminal No. 3 of main switch and terminal No. 3 of main power relay. See Figs. 3 and 4.

3) If voltage is present, check for continuity between terminal No. 1 of main power relay and body ground. If continuity is not present, check for open between terminal No. 1 and ground. If voltage is present, test main power relay operation. Replace main power relay if defective.

4) If main power relay is operating properly, disconnect connector from control switch. Check for continuity between terminal No. 9 of harness side of connector and body ground. See Fig. 5. If continuity is not present, check for open circuit between terminal No. 9 and ground.

EXC. COROLLA & VAN



COROLLA



VAN

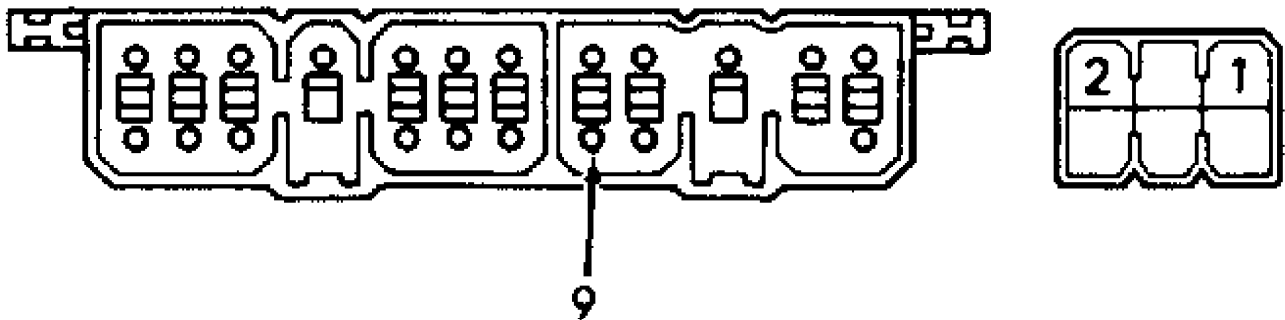


Fig. 5: Control Switch Connector Terminal Identification
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

Main Switch

1) If fuse is okay, check for continuity between terminal No. 3 (terminal No. 20 on MR2 and terminal No. 1 on Van) of main switch and body ground. See Fig. 3. If continuity is not present, check for open between terminal and fuse.

2) If fuse is blown, replace fuse and recheck. If fuse blows again, check for short between fuse and switch. Check switch operation. If continuity is present, check for battery voltage between terminal No. 2 (terminal No. 16 on MR2) of switch and body ground.

3) If battery voltage is not present, check for open between terminal and fuse. If voltage is present, check for battery voltage between terminal No. 6 (terminal No. 21 on MR2) of harness side of connector and body ground with main switch turned on.

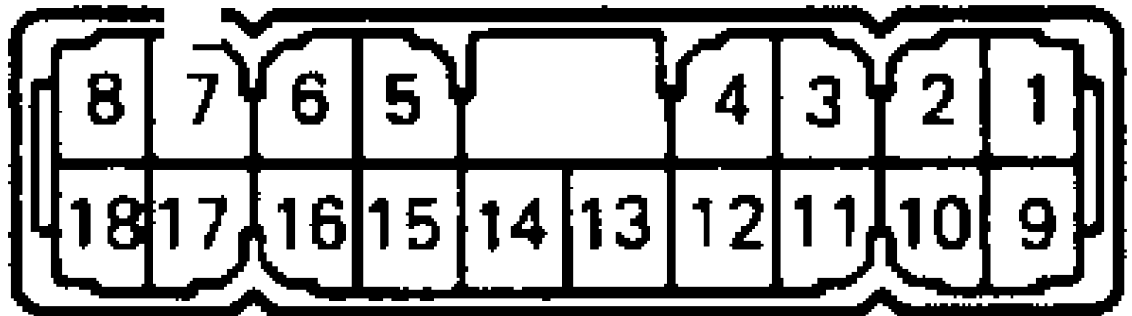
4) If battery voltage is not present, inspect main switch. If battery voltage is present, inspect indicator light operation. Connect terminal No. 4 (terminal No. 18 on MR2) to body ground. Indicator light should glow with main switch turned on.

5) If indicator light does not glow, inspect main (control on MR2) switch. If indicator light does glow, check to see if light glows with main (control) switch turned off.

Computer Circuit

1) Disconnect electrical connector from cruise control computer. Check for continuity between terminal No. 13 and body ground. See Fig. 6. If no continuity is present, check for open between terminal No. 13 and body ground and check for faulty ground connection.

EXC. VAN



VAN



Fig. 6: Computer Connector Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) If continuity is present, check for battery voltage between harness connector terminal No. 10 and body ground with main switch turned on. If voltage is not present, check for open between terminal No. 10 of computer and terminal No. 6 (terminal No. 21 on MR2 and terminal No. 4 on Van) of main (control) switch.

3) If voltage is present, connect terminal No. 3 (terminal No. 9 on Van) to body ground. Indicator light should glow with main switch turned on. If indicator light does not glow, check for open between terminal No. 3 (terminal No. 9 on Van) of computer and terminal No. 4 (terminal No. 18 on MR2) of main (control) switch.

4) If indicator light did glow, disconnect main (control) switch connector. Check for continuity between terminal No. 3 (terminal No. 9 on Van) and body ground. If no continuity is present, check for short between terminal No. 3 (terminal No. 9 on Van) of computer and terminal No. 4 (terminal No. 18 on MR2) of main (control) switch. If no continuity is present, replace computer.

TESTING

"SET/COAST" SWITCH CIRCUIT

Camry, Corolla, Cressida, Pickup, Tercel, Van & 4Runner

1) Turn ignition off. Disconnect electrical connector from cruise control switch. Check for continuity between harness connector terminal No. 14 (terminal No. 16 on Camry and terminal No. 9 of Van) of connector and body ground. See Fig. 6.

2) If no continuity is present, check for open between terminal No. 14 (terminal No. 16 on Camry and terminal No. 9 of Van) and body ground. Check for faulty ground connection. If continuity is present, check if "SET/COAST" switch operation is normal. If switch is not operating normal, replace control switch.

3) If switch operates normal, reconnect control switch connector. Disconnect computer connector, check connector. Check for continuity between terminal No. 5 (terminal No. 17 on Van) and body ground with the "SET/COAST" switch turned on.

4) If no continuity is present, check for open or short between terminal No. 5 (terminal No. 17 on Van) of computer and terminal No. 25 (terminal No. 23 on Cressida, terminal No. 5 on Camry and terminal No. 2 on Van) of control switch. If continuity is present, replace cruise control computer.

Celica & Supra

1) Turn ignition off. Disconnect electrical connector from cruise control switch. Check for continuity between terminal No. 2 of wire connector and body ground. See Fig. 5.

2) If no continuity is present, check for open between terminal No. 2 and body ground. Check for faulty ground connection. If continuity is present, check if "SET/COAST" switch operation is normal. If switch is not operating normal, replace control switch.

3) If switch operates normal, reconnect control switch connector. Disconnect computer connector, check connector. Check resistance value between terminal No. 17 and good body ground with "SET/COAST" switch turned on. See Fig. 6.

4) Resistance value should be 198 ohms. If resistance value is not as specified, check for open or short between terminal No. 17 of computer and terminal No. 3 of control switch. If resistance value is as specified, replace cruise control computer.

MR2

1) Turn ignition off. Disconnect electrical connector from cruise control switch. Check for continuity between connector terminal No. 20 and body ground. See Fig. 5.

2) If no continuity is present, check for open between terminal No. 20 and body ground. Check for faulty ground connection. If continuity is present, check if "SET/COAST" switch operation is normal. If switch is not operating normal, replace control switch.

3) If switch operates normal, reconnect control switch connector. Disconnect computer connector, check connector. Check for continuity between terminal No. 5 and body ground with "SET/COAST" switch turned on. See Fig. 6.

4) If no continuity is present, check for open or short between terminal No. 5 of computer and terminal No. 14 of control switch. If continuity is present, replace cruise control computer.

"ACCEL/RESUME" SWITCH CIRCUIT

Camry, Corolla, Cressida, MR2, Pickup, Tercel, Van & 4Runner

1) Turn ignition off. Disconnect electrical connector from cruise control switch. Check for continuity between connector terminal No. 16 on Camry and Tercel Sedan (terminal No. 20 on MR2, terminal No. 14 on Cressida, Tercel Wagon, Corolla, Pickup and 4Runner and terminal

No. 9 on Van) and body ground. See Fig. 5.

2) If no continuity is present, check for open between terminal and body ground. Check for faulty ground connection. If continuity is present, check if the "ACCEL/RESUME" switch operation is normal. If switch is not operating normal, replace control switch.

3) If switch operates normal, reconnect control switch connector. Disconnect computer connector, check connector. Check for continuity between terminal No. 17 and the body ground with "ACCEL/RESUME" switch turned on. See Fig. 6.

4) If no continuity is present, check for open or short between terminal No. 17 of computer (terminal No. 5 on MR2 and terminal No. 16 on Van) and terminal No. 17 on Camry and Tercel (terminal No. 25 on Cressida, terminal No. 23 on Corolla, Pickup and 4Runner, terminal No. 14 on MR2 and terminal No. 1 on Van) of control switch. If continuity is present, replace cruise control computer.

Celica & Supra

1) Turn ignition off. Disconnect electrical connector from cruise control switch. Check for continuity between connector terminal No. 2 and body ground. See Fig. 5.

2) If no continuity is present, check for open between terminal No. 2 and body ground. Check for faulty ground connection. If continuity is present, check if "ACCEL/RESUME" switch operation is normal. If switch is not operating normal, replace control switch.

3) If switch operates normal, reconnect control switch connector. Disconnect computer connector, check connector. Check resistance value between terminal No. 17 and body ground with "SET/COAST" switch turned on. See Fig. 6.

4) Resistance value should be about 198 ohms. If resistance value is not as specified, check for open or short between terminal No. 17 of computer and terminal No. 3 of control switch. If resistance value is as specified, replace cruise control computer.

VACUUM SWITCH CIRCUIT

Celica, Corolla, Cressida, MR2 & Supra

1) Turn ignition off. Check vacuum hoses for cracks or leaks. Replace hoses as necessary. If no vacuum leaks are found, disconnect vacuum switch connector.

2) Check for continuity between terminal of vacuum switch and body ground (between both terminals on Celica). If continuity is not present, check vacuum switch installation or faulty ground connection. If continuity is present, check vacuum switch operation.

3) If switch is not operating properly, replace vacuum switch. If switch is operating properly, disconnect vacuum pump connector. Check for continuity between terminal No. 2 connector and body ground. See Fig. 7.

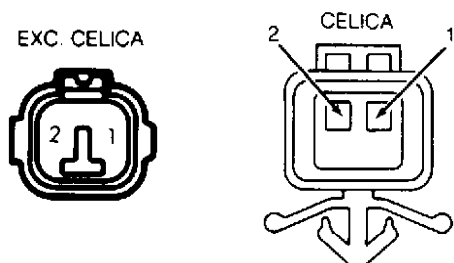


Fig. 7: Vacuum Pump Connector Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

4) If continuity is not present, check for open between terminal No. 2 and body ground. Also test body ground circuit. If

continuity is present, check vacuum pump operation.

5) If vacuum pump is not operating properly, replace vacuum pump. If pump is operating properly, reconnect vacuum switch and pump connectors. Disconnect computer connector and check for continuity between terminal No. 9 and body ground. See Fig. 6.

6) If no continuity is present, check for open between terminal No. 9 of computer and terminal of vacuum switch. If continuity is present, start engine and let engine idle.

7) Check for continuity between terminal No. 9 and body ground. If continuity is present, check for short circuit between terminal No. 9 of computer and terminal of vacuum switch.

8) If no continuity is present, stop engine and check for continuity between terminal and body ground. If no continuity is present, check for open between terminal No. 1 of computer and terminal of vacuum switch.

9) If continuity is present, check for continuity between terminal No. 1 and body ground with vacuum pump connector disconnected. If continuity is present, check for short between terminal No. 1 of computer and terminal No. 1 of vacuum pump. If no continuity is present, replace cruise control computer.

STOPLIGHT SWITCH CIRCUIT

1) Turn ignition off. Check stoplight fuse. If fuse is blown, replace fuse and check operation of stoplight switch circuit. If operation is not normal, check for short between terminal No. 16 of computer and terminal No. 1 of stoplight switch and fuse. See Fig. 8.

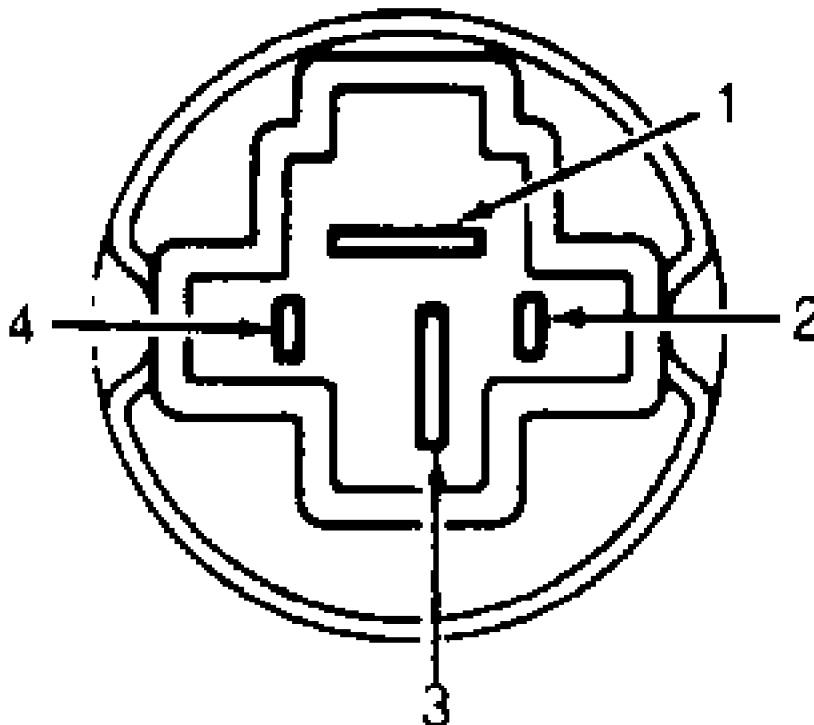


Fig. 8: Stoplight Switch Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) Disconnect stoplight switch connector, check for continuity between terminal No. 3 (terminal No. 2 on Corolla, MR2 and

Supra) of connector and body ground. If no continuity is present, check for open between terminal No. 3 and body ground. Test body ground circuit.

3) If continuity is present, check stoplight switch operation. If stoplight switch is not operating properly, replace switch. If switch is operating properly, reconnect stoplight switch connector.

4) Disconnect computer connector, check for battery voltage between terminal No. 16 and body ground with brake pedal released. If no battery voltage is present, check for open between terminal No. 16 of computer and stoplight fuse.

5) If battery voltage is present, check for battery voltage between terminal No. 15 and ground with brake pedal depressed. If no battery voltage is present, check for open between terminal No. 3 (terminal No. 2 on Corolla, MR2 and Supra) of stoplight switch. If battery voltage is present, replace cruise control computer.

PARKING BRAKE SWITCH CIRCUIT

1) Turn ignition off. Check alternator operation. If alternator is not operating properly, replace alternator. If alternator is operating properly, disconnect brake fluid level warning switch connector.

2) Check for continuity between terminal No. 2 (terminal No. 1 on Van) of connector and body ground. See Fig. 9. If no continuity is present, check for open between terminal No. 2 (terminal No. 1 on Van) and body ground. Test body ground circuit.

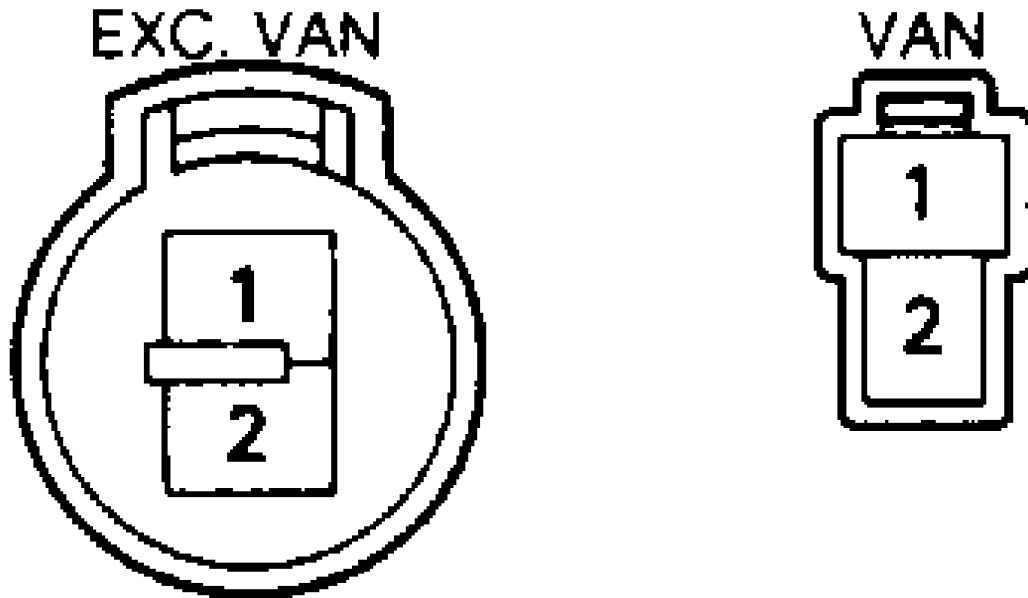


Fig. 9: Brake Fluid Level Switch Connector Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

3) If continuity is present, check operation of brake fluid level warning switch. If switch is not operating properly, replace

switch. If switch is operating properly, reconnect brake warning switch connector.

4) Disconnect parking brake switch connector. Check operation of switch. If switch is not operating properly, replace switch. If switch is operating properly, disconnect computer connector. Remove "CHARGE" fuse and turn ignition on.

5) Check that there is no voltage between terminal No. 12 (terminal No. 15 on Van) of computer and body ground with parking brake pulled up. If no voltage is present, check for open between terminal No. 12 (terminal No. 15 on Van) of computer and terminal No. 1 of parking brake switch. If voltage is present, check for battery voltage between terminal No. 12 (terminal No. 15 on Van) and body ground with parking brake released.

6) If no voltage is present, check for short between terminal No. 12 of computer and terminal No. 1 of parking brake switch, terminal No. 1 of brake level warning switch or terminal No. 2 of alternator. If voltage was present, replace cruise control computer.

CLUTCH SWITCH CIRCUIT

Manual Transmission

1) Turn ignition off. Disconnect clutch switch connector. Check for continuity between terminal No. 2 (terminal No. 3 on Van) and body ground. See Fig. 10.

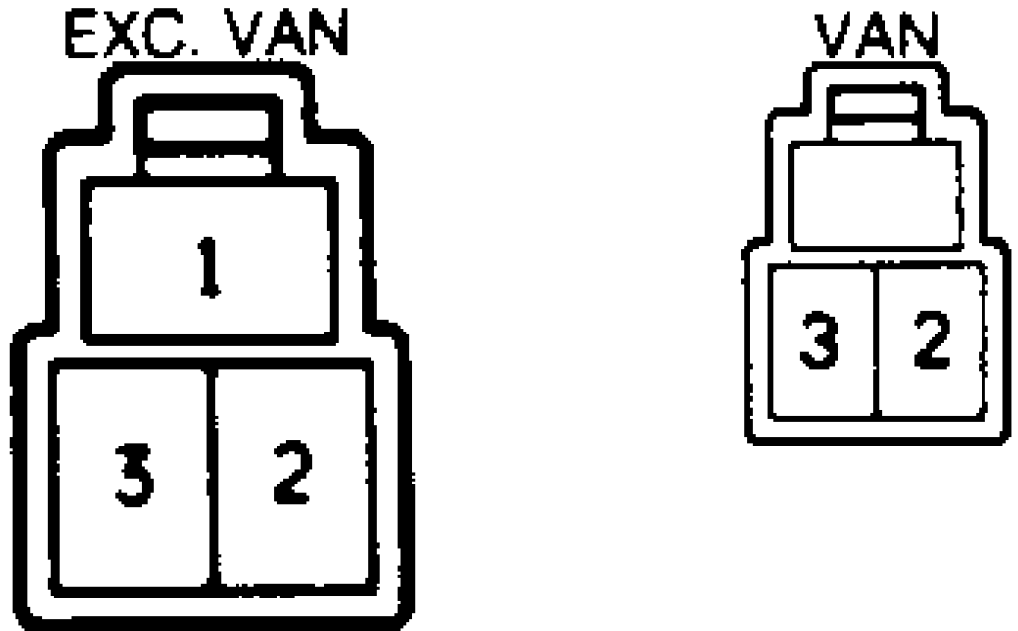


Fig. 10: Clutch Switch Connector Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) If no continuity is present, check for open between terminal No. 2 (terminal No. 3 on Van) and body ground. Test body ground circuit.

3) If continuity is present, check clutch switch operation.

If switch is not operating properly, replace clutch switch. If switch is operating properly, reconnect clutch switch connector.

4) Disconnect computer connector, check for continuity between terminal No. 11 and good body ground with clutch pedal depressed. If no continuity is present, check for open between terminal No. 11 (terminal No. 14 on Van) of computer and terminal No. 3 (terminal No. 1 on Camry and Supra and terminal No. 2 on Van) of clutch switch.

5) If continuity is present, check for continuity between terminal No. 11 (terminal No. 14 on Van) and body ground with clutch pedal released. If continuity is present, check for short between terminal No. 11 of computer and terminal No. 3 (terminal No. 1 on Camry and Supra and terminal No. 2 on Van) of clutch switch. If no continuity is present, replace cruise control computer.

NEUTRAL/START SWITCH CIRCUIT

Automatic Transmission

1) Turn ignition off. Disconnect neutral start switch connector. Check for continuity between terminal No. 2 (terminal No. 3 on Camry and Tercel Wagon) of connector and body ground. See Fig. 11.



Fig. 11: Neutral/Start Switch Connector Terminal Identification
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) If no continuity is present, check for open between terminal No. 2 (terminal No. 3 Camry and Tercel Wagon and terminal No.

1 on Tercel Sedan) and body ground. Test body ground circuit.

3) If continuity is present, check neutral start switch operation. If switch is not operating properly, replace neutral start switch. If switch is operating properly, reconnect neutral start switch connector. Disconnect computer connector, check for continuity between terminal No. 11 and body ground when shifted to "NEUTRAL" and "PARK" range.

4) If no continuity is present, check for open between terminal No. 11 (terminal No. 14 on Van) of computer and terminal No. 3 (terminal No. 1 on Corolla, Tercel Wagon and Van, terminal No. 2 on Camry and Tercel Sedan) of neutral start switch. If continuity is present, replace cruise control computer.

SPEED SENSOR CIRCUIT

1) Check for fluctuation of speedometer while driving at a steady speed. If speedometer fluctuates, speedometer might be faulty or dry. If speedometer does not fluctuate, turn ignition off. Disconnect speed sensor connector.

2) Check for continuity between body ground and terminal B on Camry analog gauges, terminal A9 on Camry digital gauges, terminal No. 2 on Celica and Corolla FX Hatchback, terminal No. 1 on Corolla Coupe, Sedan, terminal B9 on Cressida analog gauges, terminal A9 on Cressida digital gauges, terminal B5 on MR2, terminal B7 on Pickup and 4Runner, terminal A5 on Tercel Wagon, terminal B1 on Tercel Sedan, terminal No. 5 on Supra and terminal No. 3 on Van. See Fig. 12-20.

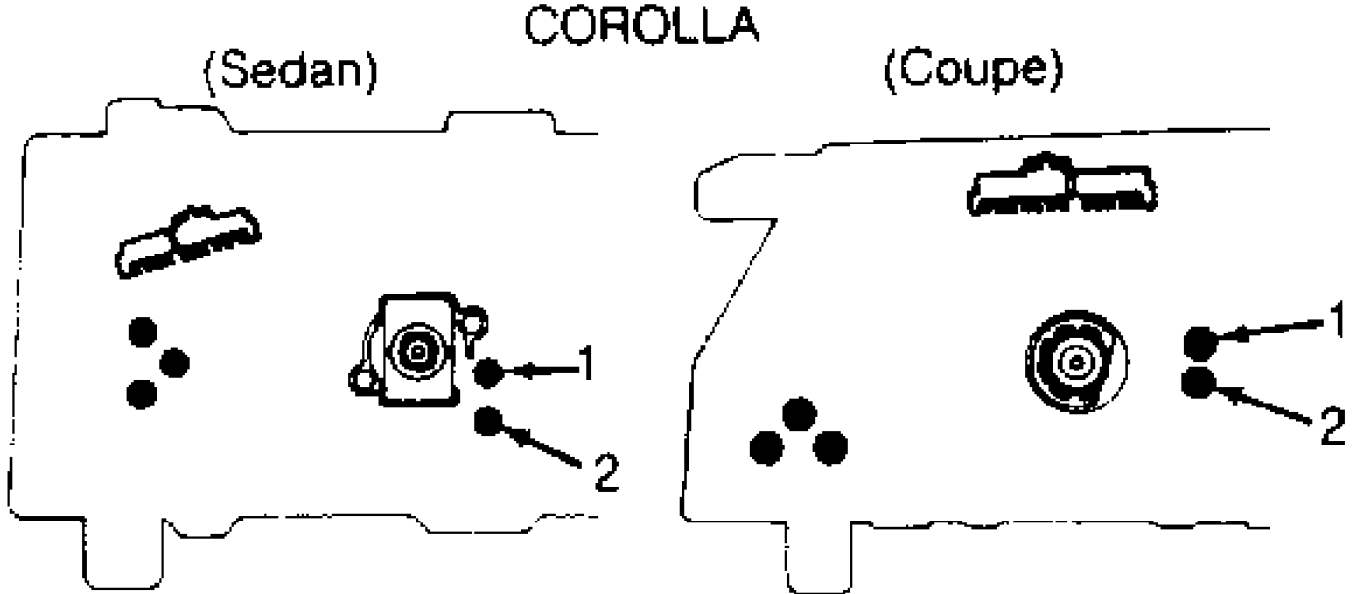


Fig. 12: Speed Sensor Connector Terminal Identification (COROLLA)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

CAMRY

(Analog)

(Digital)

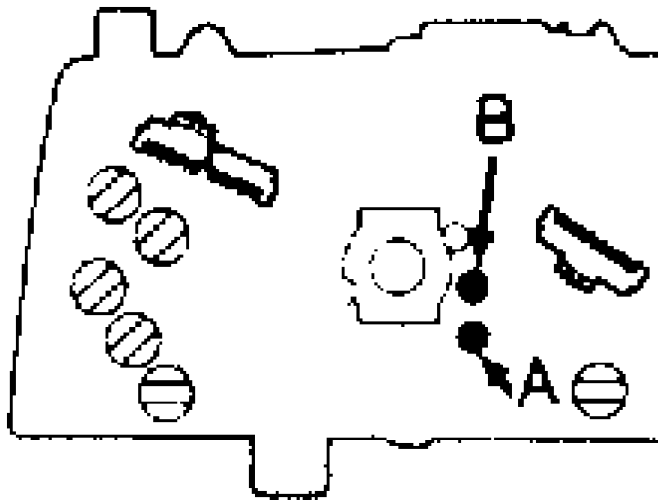


Fig. 13: Speed Sensor Connector Terminal Identification (CAMRY)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

CELICA



Fig. 14: Speed Sensor Connector Terminal Identification (CELICA)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

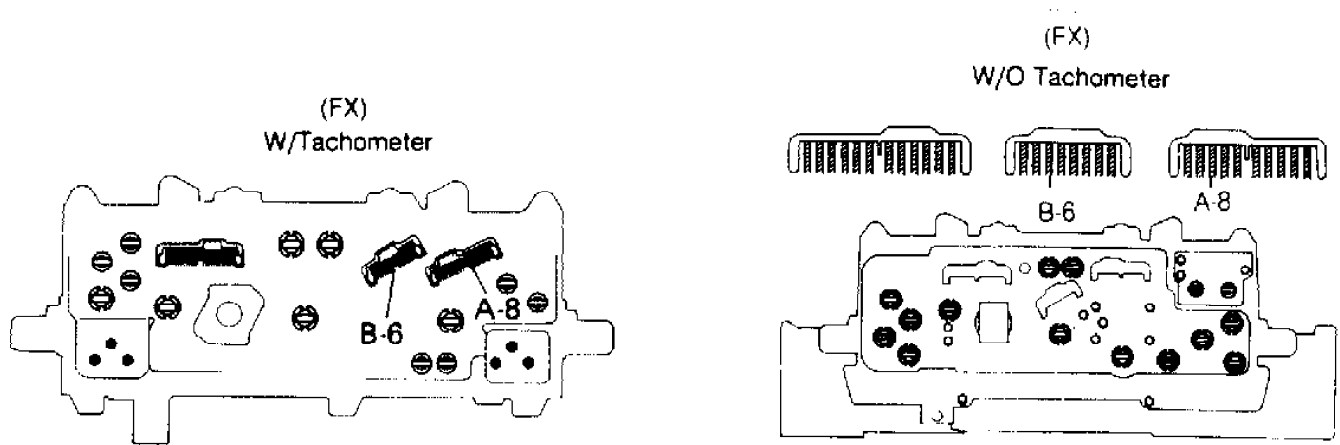


Fig. 15: Speed Sensor Connector Terminal ID (FX W/Tach and W/O Tach)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

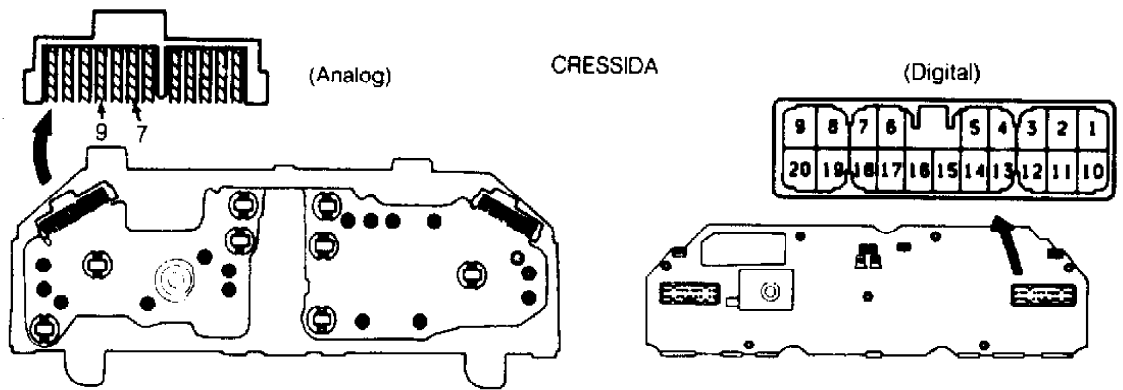


Fig. 16: Speed Sensor Connector Term ID (CRESSIDA Analog & Digital)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

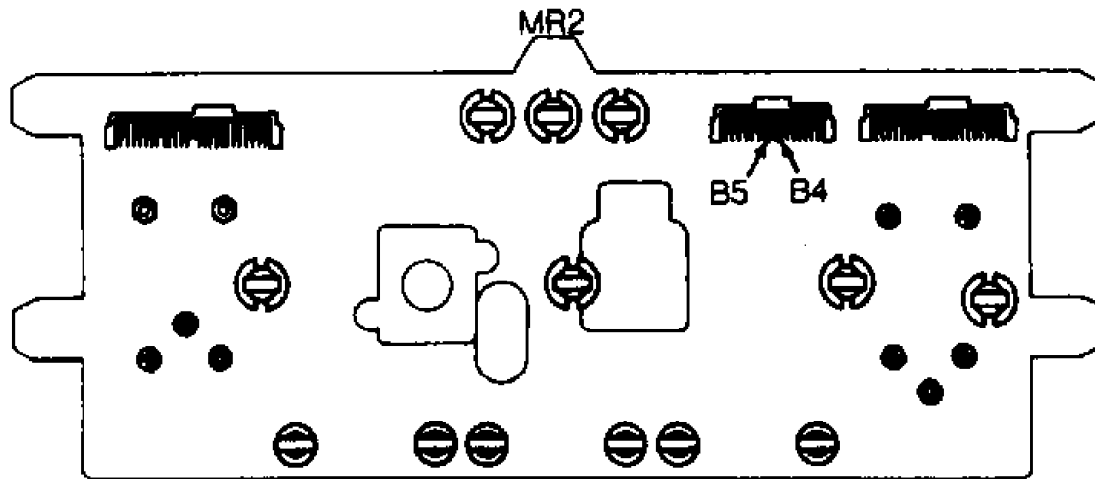


Fig. 17: Speed Sensor Connector Terminal Identification (MR2)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

SUPRA

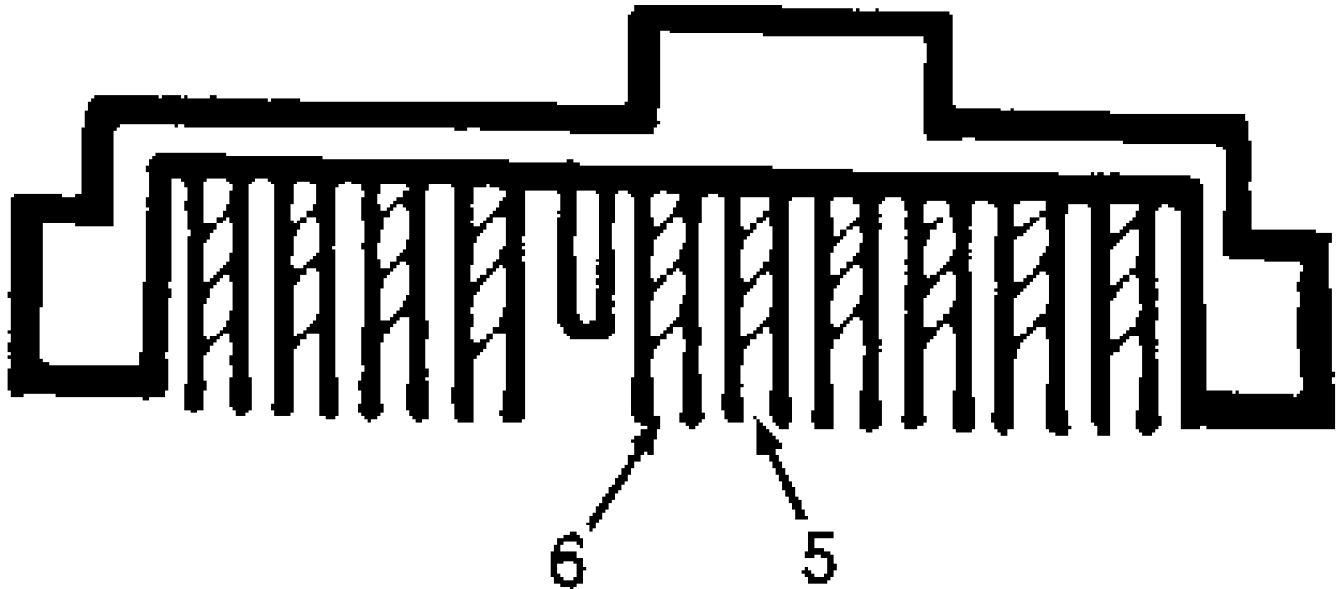


Fig. 18: Speed Sensor Connector Terminal Identification (SUPRA)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

PICKUP & 4RUNNER

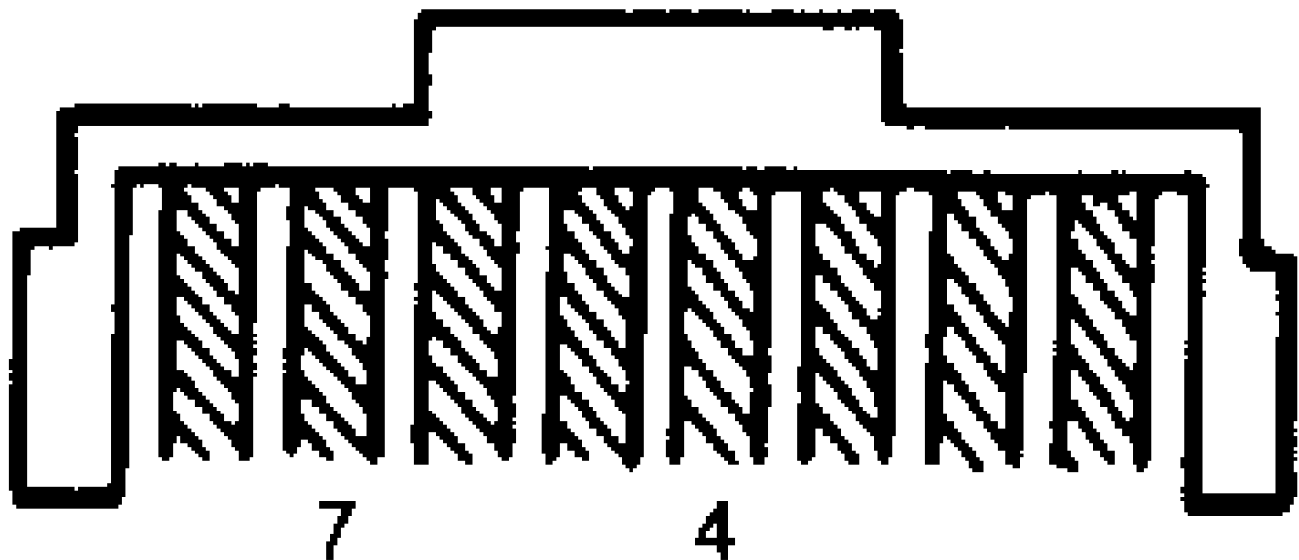


Fig. 19: Speed Sensor Connector Terminal ID (PICKUP & 4RUNNER)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

TERCEL

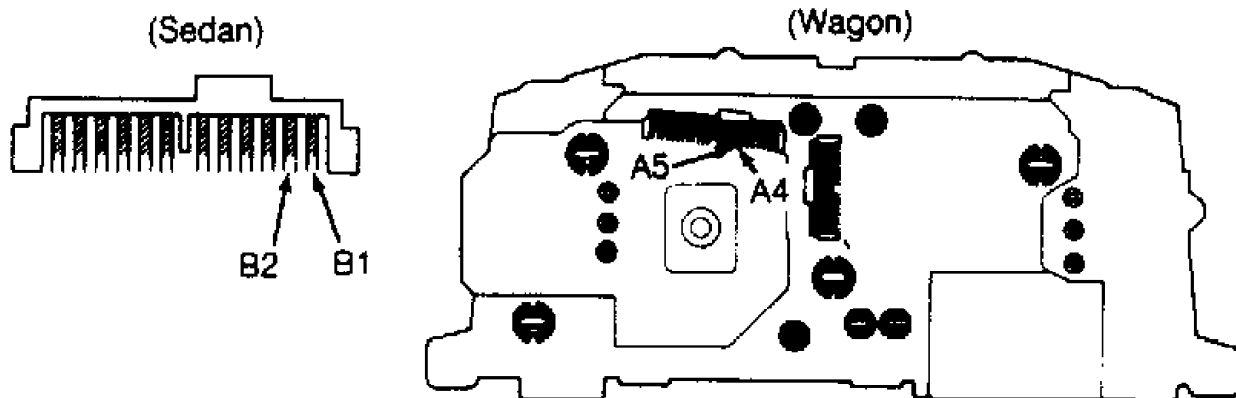


Fig. 20: Speed Sensor Connector Terminal ID (TERCEL Sedan And Wagon)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

3) If no continuity is present, check for open between terminal and body ground. If continuity is present, check speed sensor operation. If speed sensor is not operating properly, replace sensor. If sensor is operating properly, disconnect computer connector.

4) Check for continuity between terminal A on Camry analog gauges, terminal A11 on Camry digital gauges, terminal No. 1 on Celica, terminal B6 on Corolla FX Hatchback and MR2, terminal No. 2 on Corolla Coupe, Sedan and Van, terminal B7 on Cressida analog gauges, terminal A11 on Cressida digital gauges, terminal B4 on MR2, Pickup and 4Runner, terminal A4 on Tercel Wagon, terminal B2 on Tercel Sedan, terminal No. 6 on Supra of connector and terminal No. 7 of computer.

5) If no continuity is present, check for open between (terminals listed above) of speed sensor and terminal 7 of computer. If continuity is present, replace cruise control computer.

ACTUATOR CIRCUIT

Except Van

1) Turn ignition off. Check vacuum hoses for cracks or leaks. Replace hoses as necessary. If no vacuum leaks are found, check control cable freeplay. Cable freeplay should be less than .39" (10 mm).

2) If cable freeplay is not as specified, adjust control cable freeplay. If cable freeplay is as specified, disconnect actuator connector. Check operation of actuator. If actuator is not operating properly, replace actuator.

3) If actuator is operating properly, disconnect stoplight switch connector. Check for continuity between terminal No. 4 of connector and body ground. See Fig. 8.

4) If continuity is present, check for short between terminal No. 1 (terminal No. 3 on Corolla and Supra) of stoplight switch. If no continuity is present, reconnect actuator connector.

5) Check for continuity between terminal No. 4 of connector and body ground. If no continuity is present, check for open between terminal No. 1 (terminal No. 3 on Corolla and Supra) of stoplight switch.

6) If continuity is present, check operation of stoplight switch. If switch is not operating properly, replace stoplight switch. If switch is operating properly, reconnect stoplight switch connector.

7) Disconnect computer connector. Check for continuity between terminal Nos. 2 and 14 with stoplight switch released. If no continuity is present, check for open between terminal Nos. 2 and 14

of computer. See Fig. 6.

8) If continuity is present, check for continuity between terminal Nos. 2 and 14 with stoplight switch depressed. If continuity is present, check for short circuit in wire between terminal Nos. 2 and 14 of computer.

9) If no continuity is present, check for continuity between terminal Nos. 4 and 14. If no continuity is present, check for open between terminal Nos. 4 and 14 of computer. If continuity is present, replace cruise control computer.

Van

1) Turn ignition off. Check for continuity between terminal Nos. 1 and 6 of actuator. If no continuity is present, test actuator. If continuity is present, check for 2000 ohm resistance between terminal Nos. 3 and 4 of actuator. See Fig. 20.



Fig. 21: Actuator Terminal Identification
Courtesy of Toyota Motor Sales, U.S.A., Inc.

2) If 2000 ohm resistance is not present, test actuator. If 2000 ohm resistance is present, check for continuity between terminal No. 5 of actuator and body ground. If no continuity is present, test actuator. If continuity is present, check operation of actuator.

3) If actuator is not operating properly, replace actuator. If actuator is operating properly, disconnect electrical connector from brake cancel switch. Check for continuity between harness connector terminal No. 2 of brake cancel switch and body ground.

4) If continuity is not present, check for short in harness between cancel switch terminal No. 1 and terminal No. 5 of computer. If continuity is present, check continuity between terminal No. 1 of brake cancel switch and body ground.

5) If continuity is present, check for short in harness between terminal No. 1 of brake cancel switch and terminal No. 5 of computer. If continuity is not present, check for continuity between terminal Nos. 1 and 2 of brake cancel switch.

6) If continuity is not present, test switch. If continuity is present, check for continuity between terminal Nos. 1 and 2 of brake cancel switch with brake pedal depressed. If continuity is present, test brake cancel switch.

7) If continuity is not present, disconnect wiring harness at

cruise control computer. Check for continuity between computer terminal No. 5 and body ground. If continuity is not present, check for broken wire in harness between terminal No. 5 of computer and terminal No. 2 of brake cancel switch.

8) If continuity is present, check for continuity between terminal No. 5 of computer and body ground with brake pedal depressed. If continuity is present, check for broken wire in harness between terminal No. 5 of computer and terminal No. 2 of brake cancel switch. If continuity is not present, replace cruise control computer.

ELECTRONIC CONTROLLED TRANSMISSION (ECT) SOLENOID CIRCUIT

1) Turn ignition off. Disconnect electrical connector from computer. Check for continuity between terminal No. 8 of cruise control computer and terminal No. 11 of ECT computer. See Fig. 22.

2) If no continuity is present, check for open between terminal No. 8 of cruise control computer and terminal No. 11 of ECT computer. If continuity is present, check resistance value between terminal No. 8 of wire connector and body ground.

3) Resistance value should be 11-15 ohms. If resistance is not as specified, check for open or short between terminal No. 8 of cruise control computer and terminal No. 11 of ECT computer or ECT solenoid (No. 2).

4) If resistance is as specified, check for continuity between terminal No. 6 or wire connector and terminal No. 17 of ECT computer. If no continuity is present, check for open between terminal No. 6 of computer and terminal No. 17 of ECT computer. If continuity is present, replace cruise control computer.

CRUISE CONTROL COMPUTER CIRCUIT

Turn ignition off. Disconnect electrical connector from computer. Ensure terminals are clean and in good condition. Test circuits using appropriate CRUISE CONTROL COMPUTER CIRCUIT TEST SEQUENCE chart.

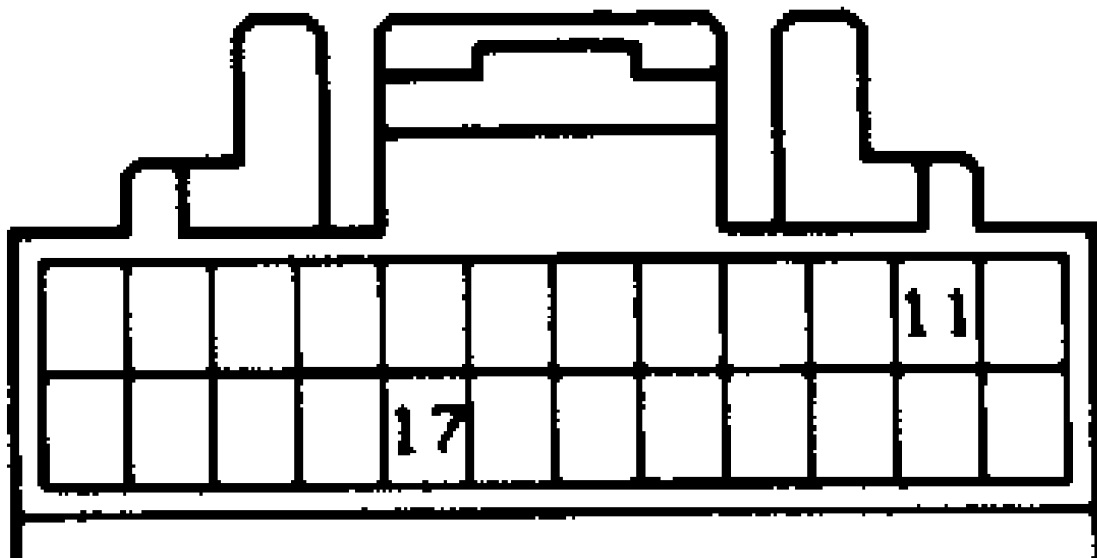


Fig. 22: Electronic Controlled Trans Computer Connector Terminal ID
 Courtesy of Toyota Motor Sales, USA., Inc.

NOTE: For wiring diagrams, see chassis wiring in WIRING DIAGRAMS section.

CAMRY

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 — Body ground	—	Battery voltage
Stop Light Switch	Voltage	15 — Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 — 14	Brake pedal released	Approx. 68 Ω
Control Valve	Resistance	4 — 14	—	Approx. 30 Ω
Control Switch	Voltage	10 — Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (indicator circuit)	Voltage	3 — Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Continuity	5 — Body ground	Turn set/coast switch on	Continuity
			Turn set/coast switch off	No continuity
Control Switch (resume/accel)	Continuity	17 — Body ground	Turn resume/accel switch on	Continuity
			Turn resume/accel switch off	No continuity
Speed Sensor	Continuity	7 — Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 — Body ground	Clutch pedal depressed or shifted into "N" range	Continuity
			Clutch pedal released or shifted into only range except "N" and "P" range	No continuity
Parking Brake Switch	Voltage	12 — Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Vacuum Switch	Continuity	9 — Body ground	Apply vacuum approx. 170 mmHg (6.69 in.Hg, 22.7 kPa)	No continuity
			No vacuum	Continuity
Vacuum Pump	Continuity	1 — Body ground	—	Continuity
Body Ground	Continuity	13 — Body ground	—	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 23: Cruise Control Computer Circuit Test Sequence (Camry)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

CELICA

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 – Body ground	—	Battery voltage
Stop Light Switch	Voltage	15 – Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 – 14	Brake pedal released	Approx. 68 ohm
Control Valve	Resistance	4 – 14	—	Approx. 30 ohm
Main Switch	Voltage	10 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Main Switch (indicator circuit)	Voltage	3 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Resistance	17 – Body ground	Push set/coast switch on	Approx. 198 ohm
Control Switch (resume/accel)	Resistance	17 – Body ground	Push resume/accel switch on	Approx. 68 ohm
Control Switch (cancel)	Resistance	17 – Body ground	Push cancel switch on	Approx. 418 ohm
Speed Sensor	Continuity	7 – Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 – Body ground	Clutch pedal depressed or shifted into "N" and "P" range	Continuity
			Clutch pedal released or shifted into only range except "N" range	No continuity
Parking Brake Switch	Voltage	12 – Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Body Ground	Continuity	13 – Body ground	—	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 24: Cruise Control Computer Circuit Test Sequence (Celica)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

COROLLA COUPE & SEDAN

COROLLA COUPE & SEDAN

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 – Body ground	—	Battery voltage
Stop Light Switch	Voltage	15 – Body ground	Brake pedal depressed.	Battery voltage
			Brake pedal released.	No voltage
Stop Light Switch and Release Valve	Resistance	2 – 14	Brake pedal released.	Approx. 68 Ω
Control Valve	Resistance	4 – 14	—	Approx. 30 Ω
Main Switch	Voltage	10 – Body ground	Turn ignition switch and main switch on.	Battery voltage
			Turn ignition switch and main switch off.	No voltage
Main Switch (Indicator Circuit)	Voltage	3 – Body ground	Turn ignition switch and main switch on.	Battery voltage
			Turn ignition switch and main switch off.	No voltage
Control Switch (Set, Coast)	Continuity	5 – Body ground	Turn set/coast switch on.	Continuity
			Turn set/coast switch off.	No continuity
Control Switch (Resume, Accel)	Continuity	17 – Body ground	Turn resume/accel switch on.	Continuity
			Turn resume/accel switch off.	No continuity
Speed Sensor	Continuity	7 – Body ground	Vehicle moving slowly.	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 – Body ground	Clutch pedal depressed or shifted into "N" range.	Continuity
			Clutch pedal released or shifted into only range except "N" and "P" range.	No continuity
Parking Brake Switch	Voltage	12 – Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Vacuum Switch	Continuity	9 – Body ground	Apply vacuum approx. 170 mmHg (6.69 in. Hg, 22.7 kPa).	No continuity
			No vacuum.	Continuity
Vacuum Pump	Continuity	1 – Body ground	—	Continuity
Body Ground	Continuity	13 – Body ground	—	Continuity

Fig. 25: Cruise Cont Computer Ckt Test Sequence (Corolla Coupe, Sedan)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

COROLLA FX HATCHBACK

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 – Body ground	—	Battery voltage
Stop Light Switch	Voltage	15 – Body ground	Brake pedal depressed.	Battery voltage
			Brake pedal released.	No voltage
Stop Light Switch and Release Valve	Resistance	2 – 14	Brake pedal released.	Approx. 68 Ω
Control Valve	Resistance	4 – 14	—	Approx. 30 Ω
Main Switch	Voltage	10 – Body ground	Turn ignition switch and main switch on.	Battery voltage
			Turn ignition switch and main switch off.	No voltage
Main Switch (Indicator Circuit)	Voltage	3 – Body ground	Turn ignition switch and main switch on.	Battery voltage
			Turn ignition switch and main switch off.	No voltage
Control Switch (Set/Coast)	Continuity	5 – Body ground	Turn set/coast switch on.	Continuity
			Turn set/coast switch off.	No continuity
Control Switch (Resume/Accel)	Continuity	17 – Body ground	Turn resume/accel switch on.	Continuity
			Turn resume/accel switch off.	No continuity
Speed Sensor	Continuity	7 – Body ground	Vehicle moving slowly.	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 – Body ground	Clutch pedal depressed or shifted into "N" range.	Continuity
			Clutch pedal released or shifted into only range except "N" and "P" range.	No continuity
Parking Brake Switch	Voltage	12 – Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Vacuum Switch	Continuity	9 – Body ground	Apply vacuum approx. 170 mmHg (6.69 in.Hg, 22.7 kPa).	No continuity
			No vacuum.	Continuity
Vacuum Pump	Continuity	1 – Body ground	—	Continuity
Body Ground	Continuity	13 – Body ground	—	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 26: Cruise Cont Computer Ckt Test Sequence (Corolla FX HBACK)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

CRESSIDA

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 – Body ground	—————	Battery voltage
Stop Light Switch	Voltage	15 – Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 – 14	Brake pedal released	Approx. 68 Ω
Control Valve	Resistance	4 – 14	—————	Approx. 30 Ω
Main Switch	Voltage	10 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Main Switch (indicator circuit)	Voltage	3 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Continuity	5 – Body ground	Turn set/coast switch on	Continuity
			Turn set/coast switch off	No continuity
Control switch (resume/accel)	Continuity	17 – Body ground	Turn resume/accel switch on	Continuity
			Turn resume/accel switch off	No continuity
Speed Sensor (Analog meter)	Continuity	7 – Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Speed Sensor (Digital meter)	Voltage	7 – Body ground	Turn ignition switch on and vehicle moving slowly	About 2V pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 – Body ground	Clutch pedal depressed or shifted into "N" range	Continuity
			Clutch pedal released or shifted into only range except "N" range	No continuity
Parking Brake Switch	Voltage	12 – Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Vacuum Switch	Continuity	9 – Body ground	Apply vacuum approx. 170 mmHg (6.69 in.Hg, 22.7 kPa)	No continuity
			No vacuum	Continuity
Vacuum Pump	Continuity	1 – Body ground	—————	Continuity
Body Ground	Continuity	13 – Body ground	—————	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 27: Cruise Control Computer Circuit Test Sequence (Cressida)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 - Body ground	—	Battery voltage
Stop Light Switch	Voltage	15 - Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 - 14	Brake pedal released	Approx. 68 Ω
Control Valve	Resistance	4 - 14	—	Approx. 30 Ω
Control Switch	Voltage	10 - Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (indicator circuit)	Voltage	3 - Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Continuity	5 - Body ground	Turn set/coast switch on	Continuity
			Turn set/coast switch off	No continuity
Control Switch (resume/accel)	Continuity	17 - Body ground	Turn resume/accel switch on	Continuity
			Turn resume/accel switch off	No continuity
Speed Sensor	Continuity	7 - Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 - Body ground	Clutch pedal depressed or shifted into "N" range	Continuity
			Clutch pedal released or shifted into only range except "N" and "P" range	No continuity
Parking Brake Switch	Voltage	12 - Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released	Battery voltage
Vacuum Switch	Continuity	9 - Body ground	Apply vacuum approx. 170 mmHg (6.69 in.Hg, 22.7 kPa)	No continuity
			No vacuum	Continuity
Vacuum Pump	Continuity	1 - Body ground	—	Continuity
Body Ground	Continuity	13 - Body ground	—	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 28: Cruise Control Computer Circuit Test Sequence (MR2)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

PICKUP & 4RUNNER

Connection or measure item	Check for	Tester connection	Condition	Specified value
STOP Fuse	Voltage	16 – Body ground	—	Battery voltage
Stop Light Switch	Voltage	15 – Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 – 14	Brake pedal released	Approx. 71 Ω
Control Valve	Resistance	4 – 14	—	Approx. 38 Ω
Main Switch	Voltage	10 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Main Switch (indicator circuit)	Voltage	3 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Continuity	5 – Body ground	Turn set/coast switch on	Continuity
			Turn set/coast switch off	No continuity
Control Switch (resume/accel)	Continuity	17 – Body ground	Turn resume/accel switch on	Continuity
			Turn resume/accel switch off	No continuity
Speed Sensor	Continuity	7 – Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 – Body ground	Clutch pedal depressed or shifted into "N" range	Continuity
			Clutch pedal released or shifted into only range except "N" and "P" range	No continuity
Parking Brake Switch	Voltage	12 – Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Vacuum Switch (22R-TE only)	Continuity	9 – Body ground	Apply vacuum approx. 220 mmHg (8.66 in.Hg, 29.3 kPa)	No continuity
			No vacuum	Continuity
Vacuum Pump (22R-TE only)	Continuity	1 – Body ground	—	Continuity
Body Ground	Continuity	13 – Body ground	—	Continuity

Fig. 29: Cruise Control Computer Ckt Test Sequence (Pickup & 4Runner)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

SUPRA

Connection or Measure Item	Check For	Tester Connection	Condition	Specified Value
Stop Fuse	Voltage	16 – Body ground	————	Battery voltage
Stop Light Switch	Voltage	15 – Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 – 14	Brake pedal released	Approx. 68 ohm
Control Valve	Resistance	4 – 14	————	Approx. 30 ohm
Main Switch	Voltage	10 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Main Switch (indicator circuit)	Voltage	3 – Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Resistance	17 – Body ground	Push set/coast switch on	Approx. 198 ohm
Control Switch (resume/accel)	Resistance	17 – Body ground	Push resume/accel switch on	Approx. 68 ohm
Control Switch (cancel)	Resistance	17 – Body ground	Push cancel switch on	Approx. 418 ohm
Speed Sensor	Continuity	7 – Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 – Body ground	Clutch pedal depressed or shifted into "N" range	Continuity
			Clutch pedal released or shifted into only range except "N" range	No continuity
Parking Brake Switch	Voltage	12 – Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	No voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	Battery voltage
Vacuum Switch (7M-GT only)	Continuity *	9 – Body ground	Apply vacuum about 170 mmHg (6.69 in.Hg, 22.7 kPa)	No continuity
			No vacuum	Continuity
Vacuum Pump (7M-GT only)	Continuity	1 – Body ground	————	Continuity
Body Ground	Continuity	13 – Body ground	————	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 30: Cruise Control Computer Circuit Test Sequence (Supra)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

TERCEL

Connection or measure item	Check for	Tester connection	Condition	Specified value
Stop Fuse	Voltage	16 - Body ground	—————	Battery voltage
Stop Light Switch	Voltage	15 - Body ground	Brake pedal depressed	Battery voltage
			Brake pedal released	No voltage
Stop Light Switch and Release Valve	Resistance	2 - 14	Brake pedal released	Approx. 68 ohm
Control Valve	Resistance	4 - 14	—————	Approx. 30 ohm
Main Switch	Voltage	10 - Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Main Switch (indicator circuit)	Voltage	3 - Body ground	Turn ignition switch and main switch on	Battery voltage
			Turn ignition switch and main switch off	No voltage
Control Switch (set/coast)	Continuity	5 - Body ground	Turn set/coast switch on	Continuity
			Turn set/coast switch off	No continuity
Control Switch (resume/accel)	Continuity	17 - Body ground	Turn resume/accel switch on	Continuity
			Turn resume/accel switch off	No continuity
Speed Sensor	Continuity	7 - Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
Clutch Switch (M/T) or Neutral Start Switch (A/T)	Continuity	11 - Body ground	Clutch pedal depressed or shifted into "N" range	Continuity
			Clutch pedal returned or shifted into only range except "N" range	No continuity
Parking Brake Switch	Voltage	12 - Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up	No voltage
			Remove CHARGE fuse and ignition switch on with parking brake lever released	Battery voltage
Body Ground	Continuity	13 - Body ground	—————	Continuity

Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 31: Cruise Control Computer Circuit Test Sequence (Tercel)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

VAN

VAN

Terminal	Connection of measure item	Tester connection	Condition	Voltage or resistance value
1	Actuator	1 — 3	—	Approx. 2 k Ω
2	Actuator	2 — Tester (+) 4 — Tester (-)	Control plate at max. acceleration	No continuity
			—	Continuity
3	Actuator	3 — 1	—	Approx. 2 k Ω
4	Actuator	4 — Tester (+) 2 — Tester (-)	Control plate at max. deceleration	No continuity
			Other	Continuity
5	Brake cancel switch	5 — Body ground	Brake pedal released	Continuity
			Brake pedal depressed	No continuity
6	Actuator	6 — 3	Move control plate slowly from acceleration to deceleration side.	Resistance slowly rises
		3 — 1	Move control plate slowly from deceleration to acceleration side.	
7	Speed sensor	7 — Body ground	Vehicle moving slowly	1 pulse each 40 cm (15.75 in.)
8	OD relay	8 — Body ground (Ignition switch ON)	OD main switch ON	Battery voltage
9	Main switch (Indicator circuit)	9 — Body ground	Main switch OFF	0 V
			Main switch ON	Battery voltage
10	Main switch	10 — Body ground (Ignition switch ON)	Main switch OFF	0 V
			Main switch ON	Battery voltage
11	Stop light switch	11 — Body ground	Brake pedal released	0 V
			Brake pedal depressed	Battery voltage
12	Stop light fuse	12 — Body ground	—	Battery voltage
13	Body ground	13 — Body ground	—	Continuity
14	Clutch switch or neutral start switch	14 — Body ground	Clutch pedal depressed Shift into P or N range	Continuity
			Clutch pedal released Shift into except P or N range	No continuity
15	Parking brake	15 — Body ground	Remove CHARGE fuse and ignition switch turned on with parking brake lever pulled up.	Battery voltage
			Remove CHARGE fuse and ignition switch turned on with parking brake lever released.	0 V
16	Control switch	16 — Body ground	Control switch OFF	No continuity
			RESUME/ACCEL switch ON	Continuity
17	Control switch	17 — Body ground	Control switch OFF	No continuity
			SET/COAST switch ON	Continuity

Fig. 32: Cruise Control Computer Circuit Test Sequence (Van)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.