Troubleshooting Flow Chart

S_4 indicator light does not come on with the ignition switch ON. (It should come on for about 2 sec.)

Disconnect the 12 P connector from the control unit.

Check for continuity between the B1 (BRN/BLK) terminal and body ground, and between the B6 (BRN/BLK) terminal and body ground.

Is there continuity?

NO — **Repair open in BRN/BLK wire between the B1 terminal and G101/G151 and/or between the B6 terminal and G101/G151.**

YES

Turn the ignition switch ON.

Measure voltage between the B2 (BLK/YEL) and B1 (BRN/BLK) terminals, and between the B7 (BLK/YEL) and B1 terminals.

Is there battery voltage?

NO — **Repair open or short in BLK/YEL wire between the B2/B7 terminal and the dash fuse box.**

YES

Turn the ignition switch OFF.

Measure resistance between the B11 (YEL/RED) and B1 (BRN/BLK) terminals.

Is the resistance more than 100 Ω?

NO — **Repair Short in YEL/RED wire between the B11 terminal and the gauge assembly.**

YES

Connect the 12P connector to the control unit.

Turn the ignition switch ON. Be sure that the voltage is available for 2 sec. between the B11 (YEL/RED) terminal and B1 (BRN/BLK) terminals.

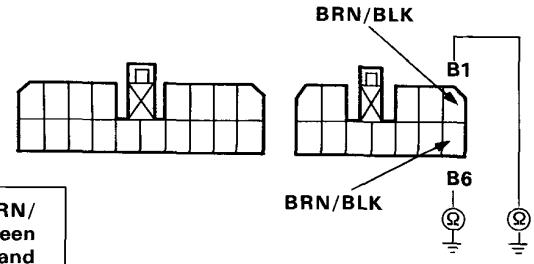
Is the voltage 3-6 V?

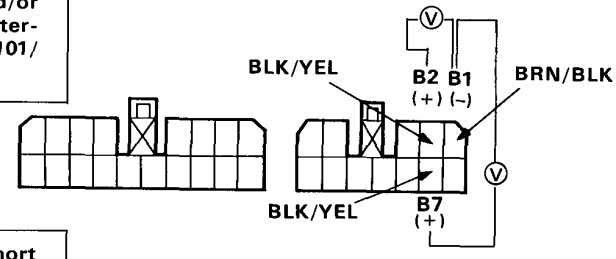
YES — **Check for open or short in YEL/RED wire between the B11 terminal and the gauge assembly. If wire is OK, check the S_4 Indicator Light Bulb and the Safety Indicator Circuit.**

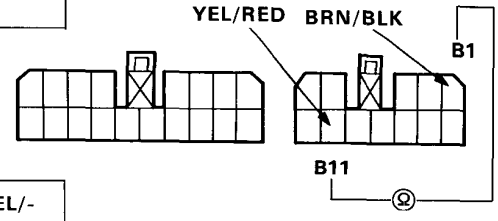
NO

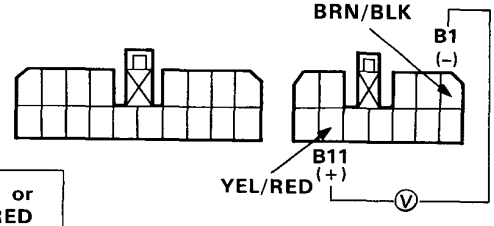
Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.









(cont'd)

Troubleshooting Flow Chart (cont'd)

S_4 won't engage.

Disconnect the 18P and 12P connectors from the control unit.

Check for continuity between the A13 (GRN) and B1 (BRN/BLK) terminals.

Is there continuity?

YES → **Check for short in GRN wire between the A13 terminal and the S_4 switch. If wire is OK, check the S_4 Switch.**

NO

Check for continuity between the A13 (GRN) and B1 (BRN/BLK) terminals while pressing the S_4 switch.

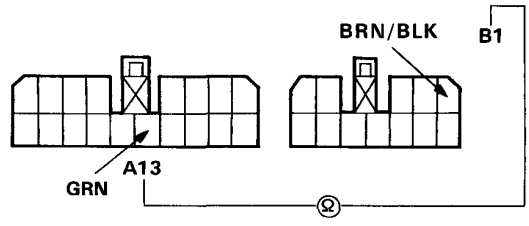
Is there continuity?

NO → **Check for open in GRN wire between the A13 terminal and the S_4 switch. If wire is OK, check the S_4 Switch.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.



Fails to shift from 2nd to first on releasing the brake pedal when stopped in D or S.

Depress the brake pedal and check that the brake lights come on.

Do the lights come on? NO → **Repair the Brake Light Circuit.**

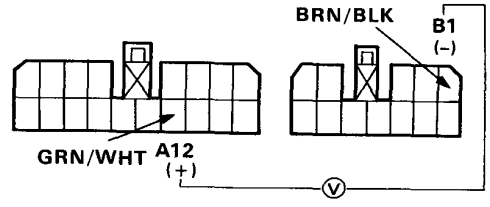
YES

Disconnect the 18P and 12P connectors from the control unit.

Depress the brake pedal.

Measure the voltage between the A12 (GRN/WHT) and B1 (BRN/BLK) terminals.

View from wire side.



Is there battery voltage? NO → **Repair open in GRN/WHT wire between the A12 and the brake light switch.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks once.

Disconnect the 12P connector from the control unit.

Turn the ignition switch ON.

Measure the voltage between the B3 (RED/WHT) and B1 (BRN/BLK) terminals.

Is there voltage? YES → **Repair short to power source in RED/WHT wire between the B3 terminal and the lock-up control solenoid valve A.**

NO

Turn the ignition switch OFF.

Measure the resistance between the B3 (RED/WHT) and B1 (BRN/BLK) terminals.

Is the resistance 14-30Ω? NO → **Check for open in RED/WHT wire between the B3 terminal and the lock-up control solenoid valve A. If wire is OK, check the Lock-up Control Solenoid Valve A (page 9-55).**

YES

Disconnect the 2P connector from the lock-up control solenoid valves assembly.

Check for continuity between the B3 (RED/WHT) and B1 (BRN/BLK) terminals.

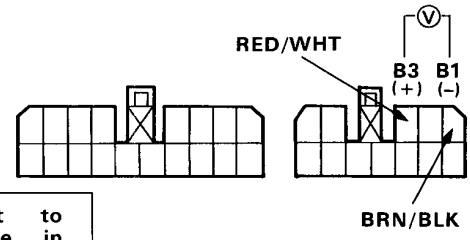
Is there continuity? YES → **Repair short to ground in RED/WHT wire between the B3 terminal and the lock-up control solenoid valve A.**

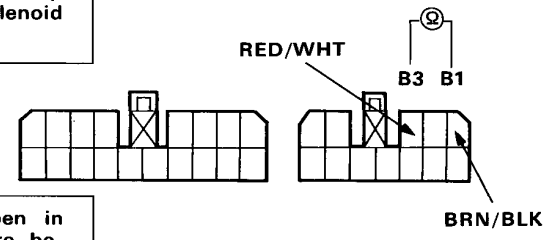
NO

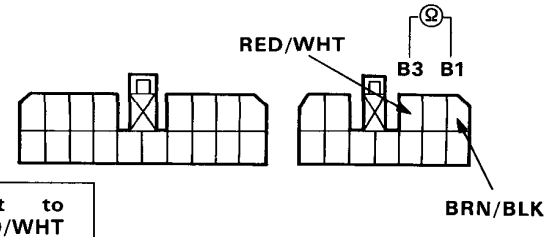
Connect the 2P connector to the lock-up control solenoid valve assembly.

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.







Self-diagnosis LED indicator blinks twice.

Disconnect the 12P connector from the control unit.

Turn the ignition switch ON.

Measure the voltage between the B8 (WHT/BLK) and B1 (BRN/BLK) terminals.

Is there voltage? YES

Repair short to power source in WHT/BLK wire between the B8 terminal and the lock-up control solenoid valve B.

NO

Turn the ignition switch OFF.

Measure the resistance between the B8 (WHT/BLK) and B1 (BRN/BLK) terminals.

Is the resistance 14-30 Ω? NO

Check for open in WHT/BLK wire between the B8 terminal and the lock-up control solenoid valve B.
If wire is OK, check the Lock-up Control Solenoid Valve B (page 9-55).

YES

Disconnect the 2P connector from the lock-up control solenoid valves assembly.

Check for continuity between the B8 (WHT/BLK) and B1 (BRN/BLK) terminals.

Is there continuity? YES

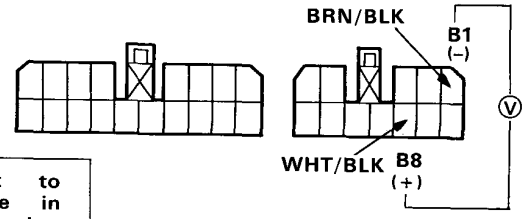
Repair short to ground in WHT/BLK wire between the B8 terminal and the lock-up control solenoid valve B.

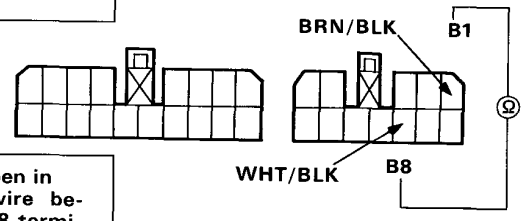
NO

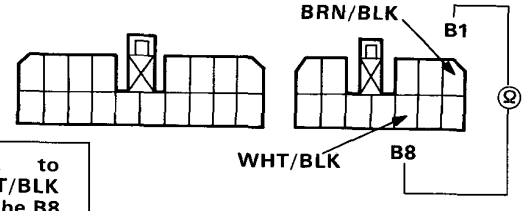
Connect the 2P connector to the lock-up control solenoid valve assembly.

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.







(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks three times. (Carbureted engine)

Turn the ignition switch ON.

Check whether the PGM-CARB. LED display blinks.

Does the LED blink? YES → **Repair the PGM-CARB. system.**

NO

Turn the ignition switch OFF.

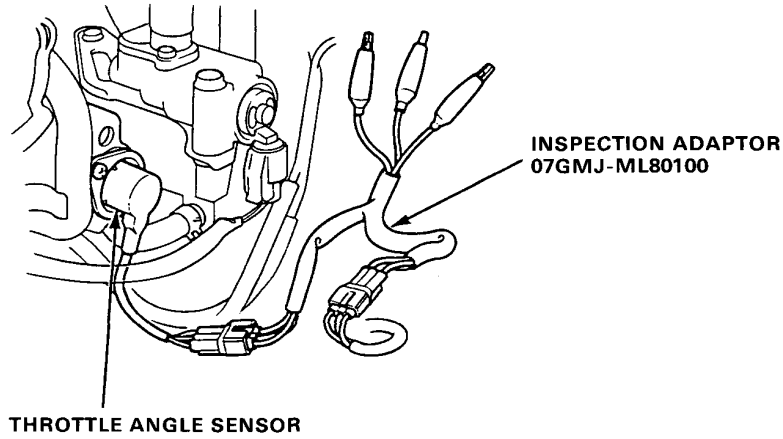
⚠WARNING
Throttle angle sensor is very near hot engine components

Connect the inspection adaptor between the throttle angle sensor and the engine wire harness.

Start the engine and warm it up to normal operating temperature.

Measure the voltage between the red clip (+) and green clip (-) of the adaptor.

Stop the engine and turn the ignition switch ON.



Is the voltage 4.50—5.50 V? NO → Measure the voltage between the red clip (+) and body ground.

YES

Start the engine.

When the throttle valve opening is at idle angle, measure the voltage between the white clip (+) and the green clip (-) of the adaptor.

(To page 9-39)

Is the voltage 4.50—5.50 V? NO → **Repair open or short circuit in YEL/WHT wire between the A15 terminal of the A/T control unit and the throttle angle sensor, and between the throttle angle sensor and the A7 terminal of the PGM-CARB control unit.**

YES

Repair open in GRN/WHT wire between the A14 terminal and the throttle angle sensor.

(From page 9-38)

Is the voltage 0.40—0.57 V? * NO → **Check for short in RED/YEL wire between the A16 terminal and the throttle angle sensor. If wire is OK, check the throttle angle sensor.**

YES

Stop the engine and turn the ignition switch ON.

When the throttle valve is fully opened, measure the voltage between the white clip (+) and the green clip (–).

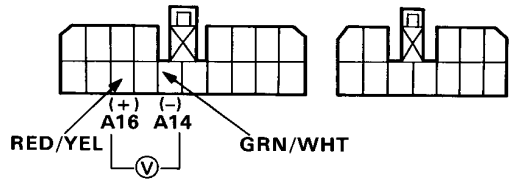
Is the voltage 3.80—4.66 V? * NO → **Check the throttle angle sensor.**

YES

Start the engine.

When the throttle valve opening is at idle angle, measure the voltage between the A16 (RED/YEL) and A14 (GRN/WHT) terminals.

View from wire side.



Is the voltage 0.40—0.57 V? * NO → **Repair open in RED/YEL wire between the A16 terminal and the throttle angle sensor.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

* ±10%

(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks three times. (Fuel-injected engine)

Turn the ignition switch ON.

Check whether the PGM-FI LED display blinks.

Does the LED blink? — YES → **Repair the PGM-FI System.**

NO

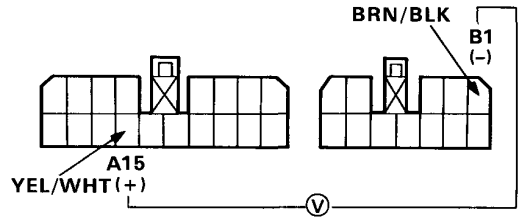
Turn the ignition switch OFF.

Disconnect the 18P and 12P connectors from the control unit.

Turn the ignition switch 0N.

Measure the voltage between the A15 (YEL/WHT) and B1(BRN/BLK) terminals.

View from wire side.



Is the voltage 4.75 — 5.25 V? — NO → **Repair open or short in YEL/WHT wire between the A15 terminal and the A10 terminal of the PGM-FI ECU.**

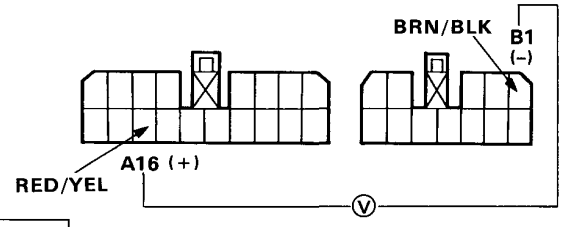
YES

Turn the ignition switch OFF.

Connect the 18P and 12P connectors to the control unit.

Turn the ignition switch ON.

Measure the voltage between the A16 (RED/YEL) and B1 (BRN/BLK) terminals.



Is the voltage 0.44—0.56 V? * — NO → **Repair open or short in RED/YEL wire between the A16 terminal and the throttle angle sensor.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

* ±10%

Self-diagnosis LED indicator blinks four times.

Jack up the front of the car and block one wheel.

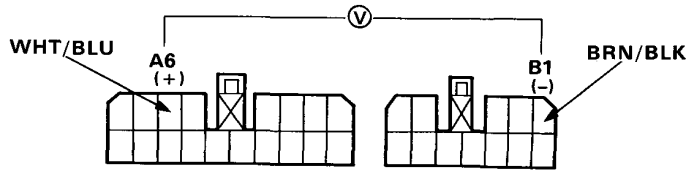
⚠WARNING

- **Set the parking brake securelyand block the rear wheels.**
- **Jack up the front of the car and support with a rigid rack.**

Turn the ignition switch ON and shift transmission to N .

Rotate the front wheel and measure the voltage between the A6 (WHT/BLU) and B1 (BRN/BLK) terminals.

View from wire side.



Does the voltage 0 — 5 V appear alternately?

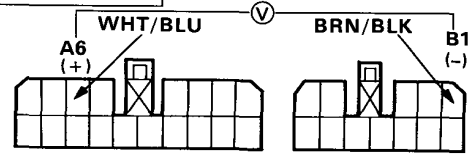
NO

Turn the ignition switch OFF.

Disconnect the 18P and 12P connectors from the control unit.

Turn the ignition switch ON.

Rotate the front wheel and check for voltage between the B1 (BRN/BLK) and A6 (WHT/BLU) terminals.



Does the voltage 0 — 5 V appear alternately?

NO

Check for short or open in WHT/BLU wire between the A6 terminal and the gauge assembly. If wire is OK, check the Speed Pulser.

YES

Substitute a known good control unit and recheck.

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks five times.

Check the shift lever position indicator in gauge for operation.

Does it operate properly? NO → **Repair the Shift Lever Position Indicator Circuit.**

YES

Turn the ignition switch ON.

Shift to other than R position.

Measure the voltage between the A1 (GRN/RED) and B1 (BRN/BLK) terminals.

Is there battery voltage? NO → **Check for short in GRN/RED wire between the A1 terminal and the shift position console switch. If wire is OK, check for loose connectors. If necessary, substitute a known good control unit and recheck.**

YES

Shift to other than N and P position.

Measure the voltage between the A2 (LT GRN) and B1 (BRN/BLK) terminals.

Is there battery voltage? NO → **Check for short in LT GRN wire between the A2 terminal and the shift position console switch. If wire is OK, check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.**

YES

Shift to other than D position.

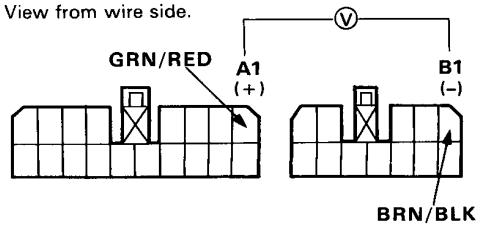
Measure the voltage between the A3 (GRN/BLK) and B1 (BRN/BLK) terminals.

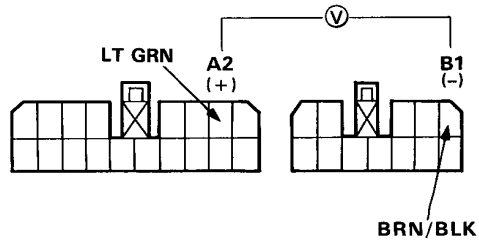
Is there battery voltage? NO → **Check for short in GRN/BLK wire between the A3 terminal and the shift position console switch. If wire is OK, check for loose controlunit connectors. If necessary, substitute a known good control unit and recheck.**

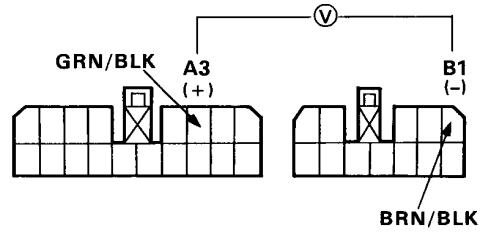
YES

(To page 9-43)

View from wire side.







(From page 9-42)

Shift to other than S position.

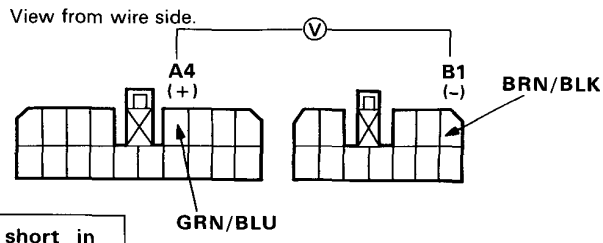
Measure the voltage between the A4 (GRN/BLU) and B1 (BRN/BLK) terminals.

Is there battery voltage?

NO

Check for short in GRN/BLU wire between the A4 terminal and the shift position console switch. If wire is OK, check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

YES



Shift to other than 2 position.

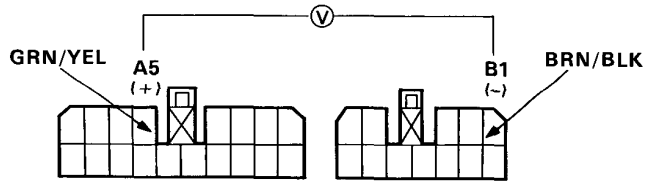
Measure the voltage between the A5 (GRN/YEL) and B1 (BRN/BLK) terminals.

Is there battery voltage?

NO

Check for short in GRN/YEL wire between the A5 terminal and the shift *position console* switch. If wire is OK, check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

YES



Substitute a known good control unit and recheck.

(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks six times.

Turn the ignition switch ON.

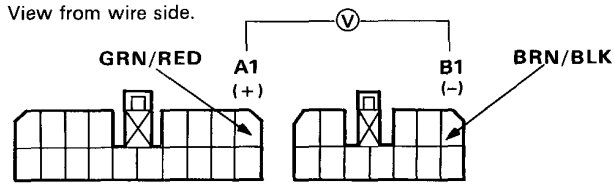
Check the shift lever position indicator in gauge for operation.

Does it operate properly? NO → **Repair the Shift Lever Position Indicator Circuit.**

YES

Shift to R position.

Measure the voltage between the A1 (GRN/RED) and B1 (BRN/BLK) terminals.

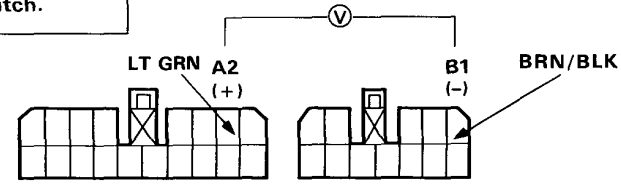


Is there voltage? YES → **Repair open in GRN/RED wire between the A1 terminal and the shift position console switch.**

NO

Shift to N and P position.

Measure the voltage between the A2 (LT GRN) and B1 (BRN/BLK) terminals.

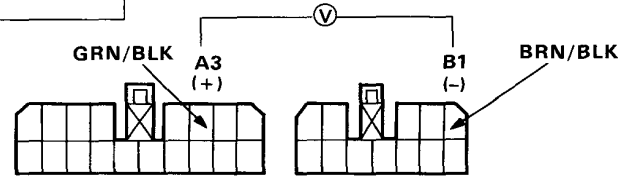


Is there voltage? YES → **Repair open in LT GRN wire between the A2 terminal and the shift position console switch.**

NO

Shift to D position.

Measure the voltage between the A3 (GRN/BLK) and B1 (BRN/BLK) terminals.



Is there voltage? YES → **Repair open in GRN/BLK wire between the A3 terminal and the shift position console switch.**

NO

(To page 9-45)

(From page 9-44)

Shift to S position.

Measure the voltage between the A4 (GRN/BLU) and B1 (BRN/BLK) terminals.

Is there voltage?

YES → **Repair open in GRN/BLU wire between the A4 terminal and the shift position console switch.**

NO

Shift to 2 position.

Measure the voltage between the A5 (GRN/YEL) and B1 (BRN/BLK) terminals.

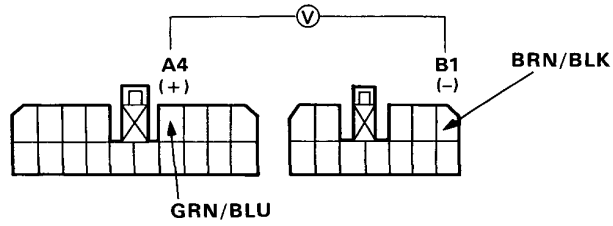
Is there voltage?

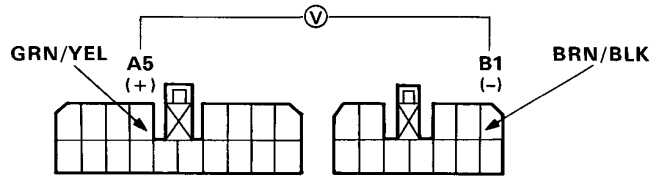
YES → **Repair oper in GRN/YEL wire between the A5 terminal and the shift position console switch.**

NO

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.





(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks seven times.

Disconnect the 12P connector from the control unit.

Turn the ignition switch ON.

Measure the voltage between the B4 (BLU/YEL) and B1 (BRN/BLK) terminals.

Is there voltage? YES → **Repair short to power source in BLU/YEL wire between the B4 terminal and the shift control solenoid valve A.**

NO

Turn the ignition switch OFF.

Measure the resistance between the B4 (BLU/YEL) and B1 (BRN/BLK) terminals.

Is the resistance 12-24 Ω? NO → **Check for open in BLU/YEL wire between the B4 terminal and the shift control solenoid valve A. If wire is OK, check the Shift Control Solenoid Valve A (page 9-56).**

YES

Disconnect the 2P connector from the shift control solenoid valves assembly.

Check for continuity between the B4 (BLU/YEL) and B1 (BRN/BLK) terminals.

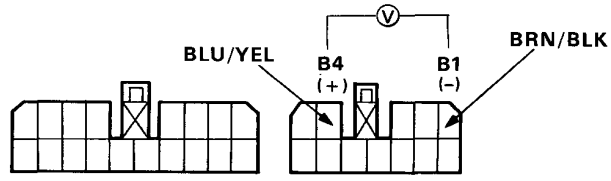
Is there continuity? YES → **Repair short to ground in BLU/YEL wire between the B4 terminal and the shift control solenoid valve A.**

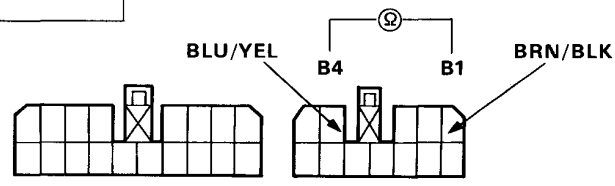
NO

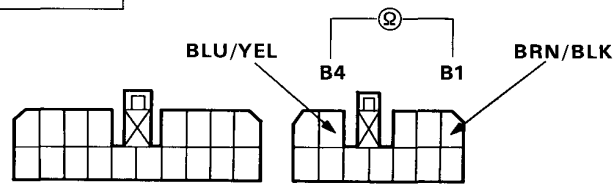
Connect the 2P connector to the shift control solenoid valves assembly.

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.







Self-diagnosis LED indicator blinks eight times.

Disconnect the 12P connector from the control unit.

Turn the ignition switch ON.

Measure the voltage between the B5 (GRN/WHT) and B1 (BRN/BLK) terminals.

Is there voltage? YES → **Repair short to power source in GRN/WHT wire between the B5 terminal and the shift control solenoid valve B.**

NO

Turn the ignition switch OFF.

Measure the resistance between the B5 (GRN/WHT) and B1 (BRN/BLK) terminals.

Is the resistance 12-24 Ω? NO → **Check for open in GRN/WHT wire between the B5 terminal and the shift control solenoid valve B. If wire is OK, check the Shift Control Solenoid Valve B (page 9-56).**

YES

Disconnect the 2P connector from the shift control solenoid valves assembly.

Check for continuity between the B5 (GRN/WHT) and B1 (BRN/BLK) terminals.

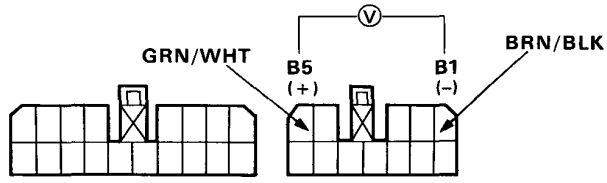
Is there continuity? YES → **Repair short to ground in GRN/WHT wire between the B5 terminal and the shift control solenoid valve B.**

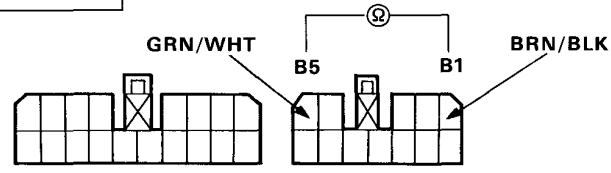
NO

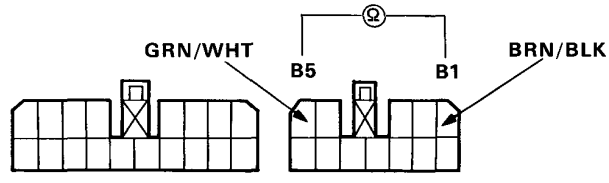
Connect the 2P connector to the shift control solenoid valve assembly.

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.







(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks nine times.

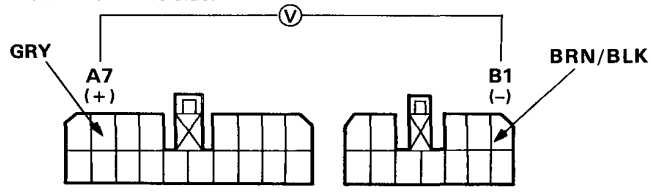
Jack up the front of the car.

⚠ WARNING
• Set the parking brake securely and block the rear wheels.
• Jack up the front of the car and support with a rigid rack.

Turn the ignition switch ON.

Rotate the front wheels and measure the voltage between the A7 (GRY) and B1 (BRN/BLK) terminals.

View from wire side.



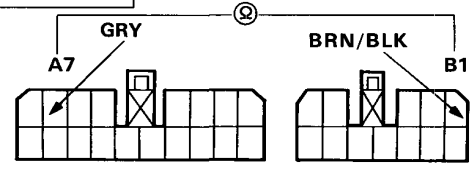
Do 0 and approx. 5 V appear alternately?

NO

Turn the ignition switch OFF.

Disconnect the 18P and 12P connectors from the control unit.

Rotate the front wheels and check for continuity between the A7 (GRY) and B1 (BRN/BLK) terminals.



Do continuity and infinity alternately appear?

NO

Check for open or short in GRY wire between the A7 terminal and the A/T speed pulser. If wire is OK, check the A/T Speed Pulser (page 9-54).

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

YES

Substitute a known good control unit and recheck.

Self-diagnosis LED indicator blinks ten times. (Carbureted engine)

Turn the ignition switch ON.

Check whether the PGM-CARB. LED display blinks.

Does the LED blink? NO → **Repair the PGM-CARB System.**

YES

Turn the ignition switch OFF.

Disconnect the 18P and 12P connectors from the control unit.

Turn the ignition switch ON.

Measure the voltage between the A15 (YEL/WHT) and B1 (BRN/BLK) terminals.

Is the voltage 4.50 — 5.50 V? NO → **Repair open or short in YEL/WHT wire between the A15 terminal and the A7 terminal of the PGM-CARB control unit.**

YES

Turn the ignition switch OFF.

Connect the 18P and 12P connectors to the control unit.

Start the engine and warm it up to normal operating temperature.

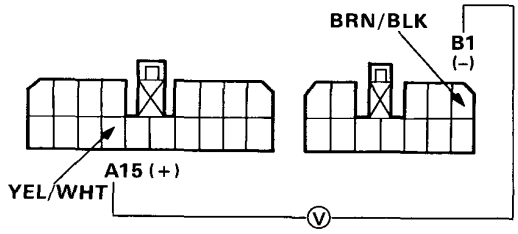
Measure the voltage between the A11 (YEL/GRN) and B1 (BRN/BLK) terminals.

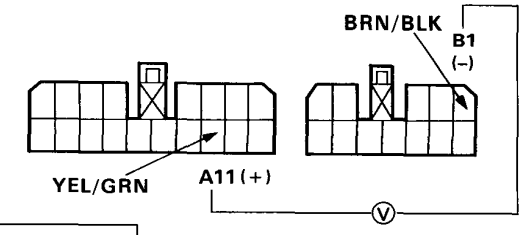
Is the voltage 0.70 — 1.60 V? NO → **Repair open or short in YEL/GRN wire between the A11 terminal and the coolant temperature sensor.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit.

View from wire side.





(cont'd)

Troubleshooting Flow Chart (cont'd)

Self-diagnosis LED indicator blinks ten times. (Fuel-injected engine)

Turn the ignition switch ON.

Check whether the PGM-FI LED display blinks.

Does the LED blink? NO → **Repair the PGM-FI System.**

YES

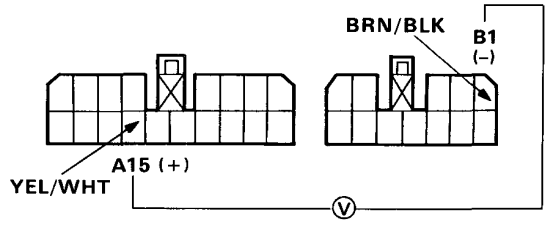
Turn the ignition switch OFF.

Disconnect the 18P and 12P connectors from the control unit.

Turn the ignition switch ON.

Measure the voltage between the A15 (YEL/WHT) and B1 (BRN/BLK) terminals.

View from wire side.



Is the voltage 4.75 — 5.25 V? NO → **Repair open or short in YEL/WHT wire between the A15 terminal and the A10 terminal of the PGM-FI ECU.**

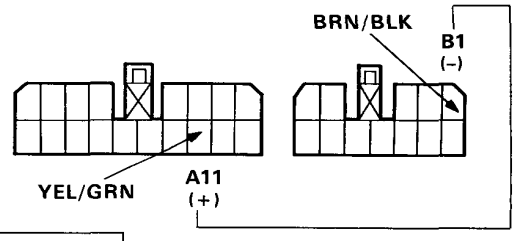
YES

Turn the ignition switch OFF.

Connect the 18P and 12P connectors to the control unit.

Start the engine and warm it up to normal operating temperature.

Measure the voltage between the A11 (YEL/GRN) and B1 (BRN/BLK) terminals.



Is the voltage 0.50 — 1.20 V? NO → **Repair open or short in YEL/GRN wire between the A11 terminal and the coolant temperature sensor.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit.

Self-diagnosis LED indicator blinks eleven times.

Disconnect the 18P and 12P connectors from the control unit.

Start the engine.

Measure the voltage between the A10 (BLU) and B1 (BRN/BLK) terminals.

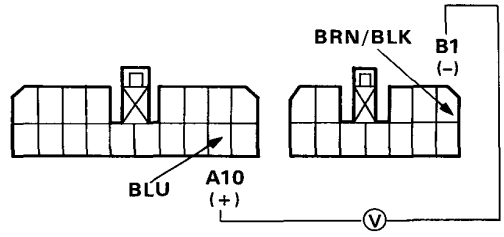
Is there battery voltage?

NO → **Repair open or short in BLU wire between the A10 terminal and the ignition coil.**

YES

Check for loose control unit connectors. If necessary, substitute a known good control unit and recheck.

View from wire side.



(cont'd)

Troubleshooting Flow Chart (cont'd)

A/C IDLE BOOST solenoid valve driving signal inspection (Carbureted engine)

Start the engine and warm it up to normal operating temperature.

Disconnect the 18P and 12P connectors from the control unit.

Turn on the air conditioner.

Measure the voltage between the A9 (RED) and B1 (BRN/BLK) terminals when the air conditioner is operating (air compressor is ON).

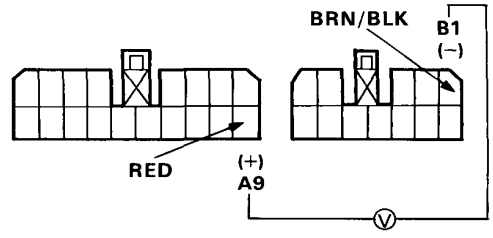
Is there battery voltage?

NO → **Check for open circuit in RED wire between the A9 terminal and the B10 terminal of the PGM-CARB control unit. If wire is OK, check the PGM-CARB. control unit.**

YES

Driving signal is normal.

View from wire side.



P/S IDLE BOOST solenoid valve driving signal inspection (Carbureted engine)

Start the engine and warm it up to normal operating temperature.

Disconnect the 18P and 12P connectors from the control unit.

Measure the voltage between the A17 (BRN) and B1 (BRN/BLK) terminals when the steering wheel is operating.

Is there battery voltage?

NO

Check for open circuit in BRN wire between the A17 terminal and the D18 terminal of the PGM-CARB control unit. If wire is OK, check the PGM-CARB control unit.

YES

Driving signal is normal.

View from wire side.