

## TCS Control Valve Actuator

### Diagnostic Trouble Code 5-4 : Initial Motor Operation Diagnosis

5-5 : Motor Operation (1) Diagnosis

5-6 : Motor Operation (2) Diagnosis

5-7 : Over Limit Motor Current Diagnosis

5-8 : Motor Driver Open Diagnosis

5-9 : Under Limit Motor Current Diagnosis

5-10: Motor Driver Shorted Diagnosis

- With engine running, TCS indicator light is ON.
- With the SCS service connector connected (see page [19-159](#)), DTC 5-4, 5-5, 5-6, 5-7, 5-8, 5-9 and/or 5-10 are indicated.

Check the TCS (15 A) fuse in the under-hood fuse/relay box.

Is the fuse OK?

NO

Replace the fuse and recheck.

YES

NOTE: Reinstall the fuse if it is OK.

NOTE: Start the engine, and recheck the fuse. If the fuse is blown, check for a short to body ground in the VPM circuit between the fail-safe relay and TCS control unit.

**Check for an open in the IG1 circuit:**

1. Turn the ignition switch ON (II).
2. Measure the voltage between the fail-safe relay connector terminal No. 4 and body ground.

Is there battery voltage?

NO

Repair open in the wire between the ECU (20 A) fuse and fail-safe relay.

YES

Check the fail-safe relay (see [section 23](#)).

Is the relay OK?

NO

Replace the fail-safe relay.

YES

**Check for an open in the FSR circuit:**

1. Turn the ignition switch ON (II).
2. Measure the voltage between the TCS control unit 20P connector terminal No. 6 and body ground.

Is there battery voltage?

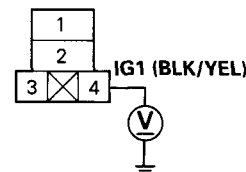
NO

Repair open in the wire between the fail-safe relay and TCS control unit.

YES

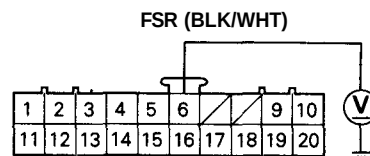
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#### FAIL-SAFE RELAY CONNECTOR



Wire side of female terminals

#### TCS CONTROL UNIT 20P CONNECTOR



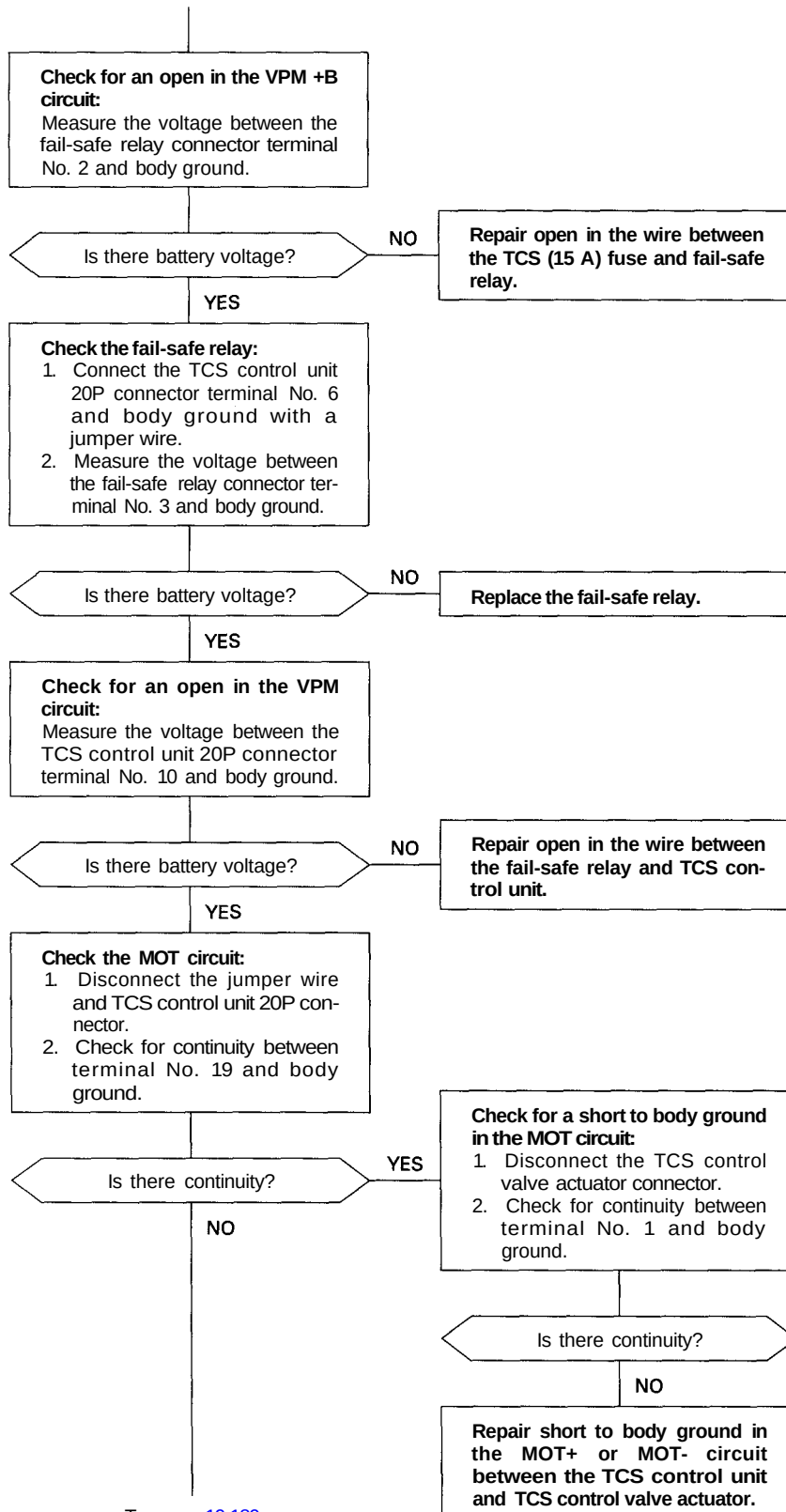
Wire side of female terminals

(cont'd)

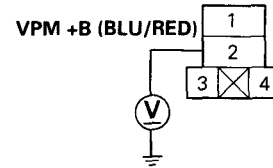
# Troubleshooting

## TCS Control Valve Actuator (cont'd)

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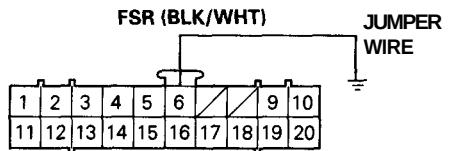


### FAIL-SAFE RELAY CONNECTOR



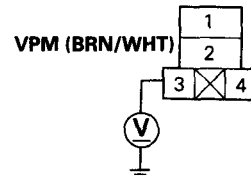
Wire side of female terminals

### TCS CONTROL UNIT 20P CONNECTOR



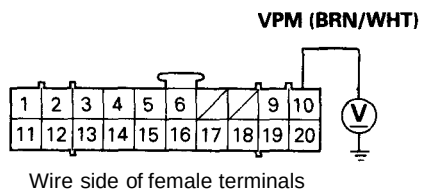
Wire side of female terminals

### FAIL-SAFE RELAY CONNECTOR

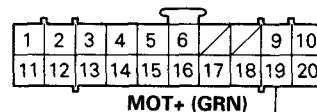


Wire side of female terminals

### TCS CONTROL UNIT 20P CONNECTOR

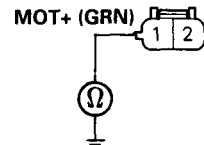


Wire side of female terminals



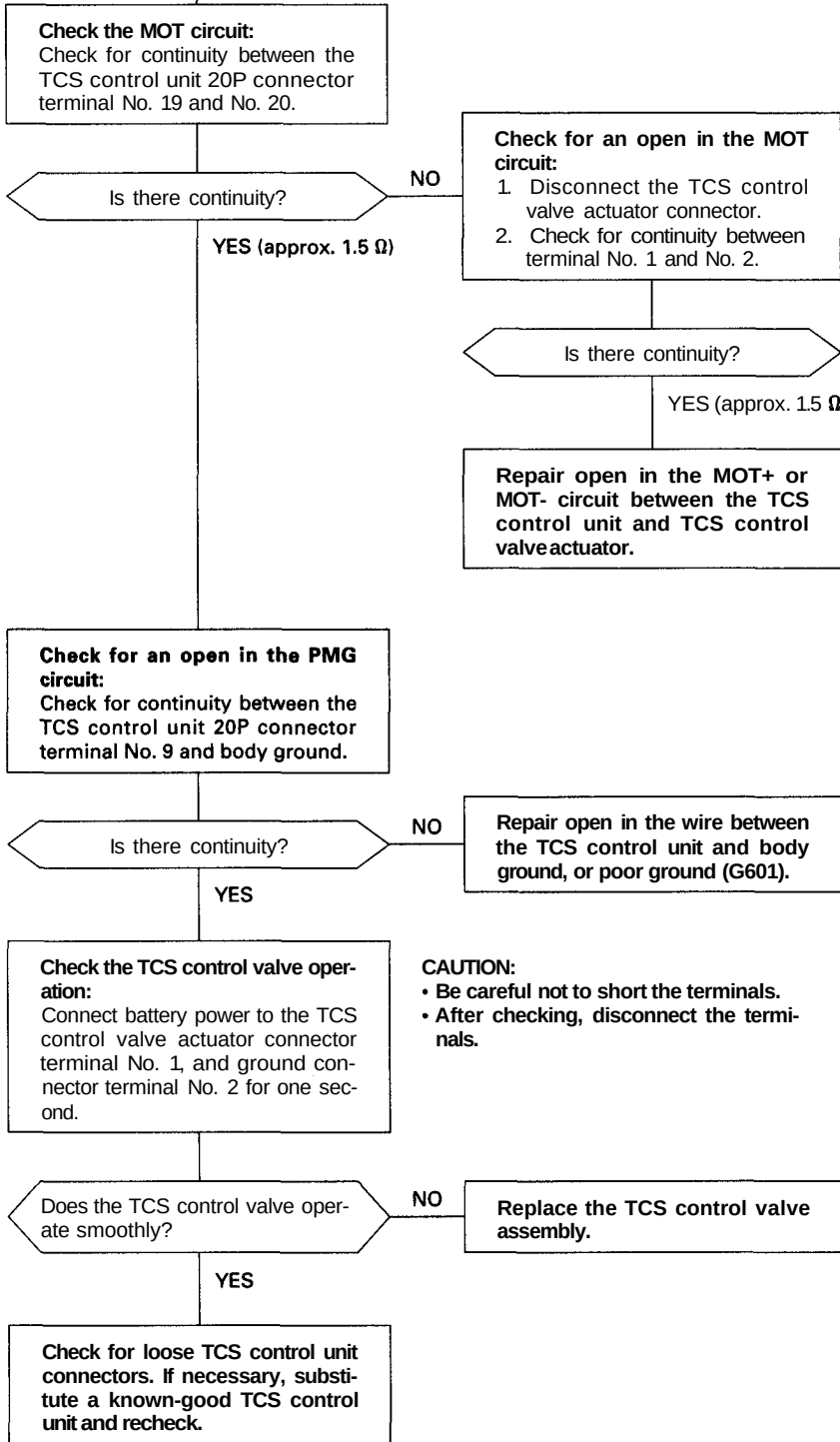
MOT+ (GRN)

### TCS CONTROL VALVE ACTUATOR CONNECTOR

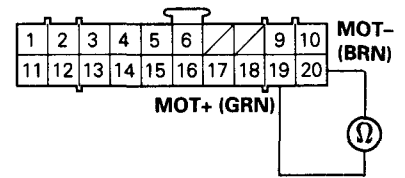


Wire side of female terminals

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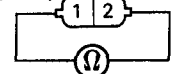


## TCS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

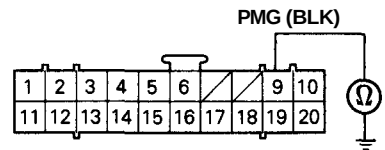
## TCS CONTROL VALVE ACTUATOR CONNECTOR



Wire side of female terminals

**Replace the TCS control valve assembly. (Open circuit inside the motor)**

## TCS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

## TCS CONTROL VALVE ACTUATOR CONNECTOR

