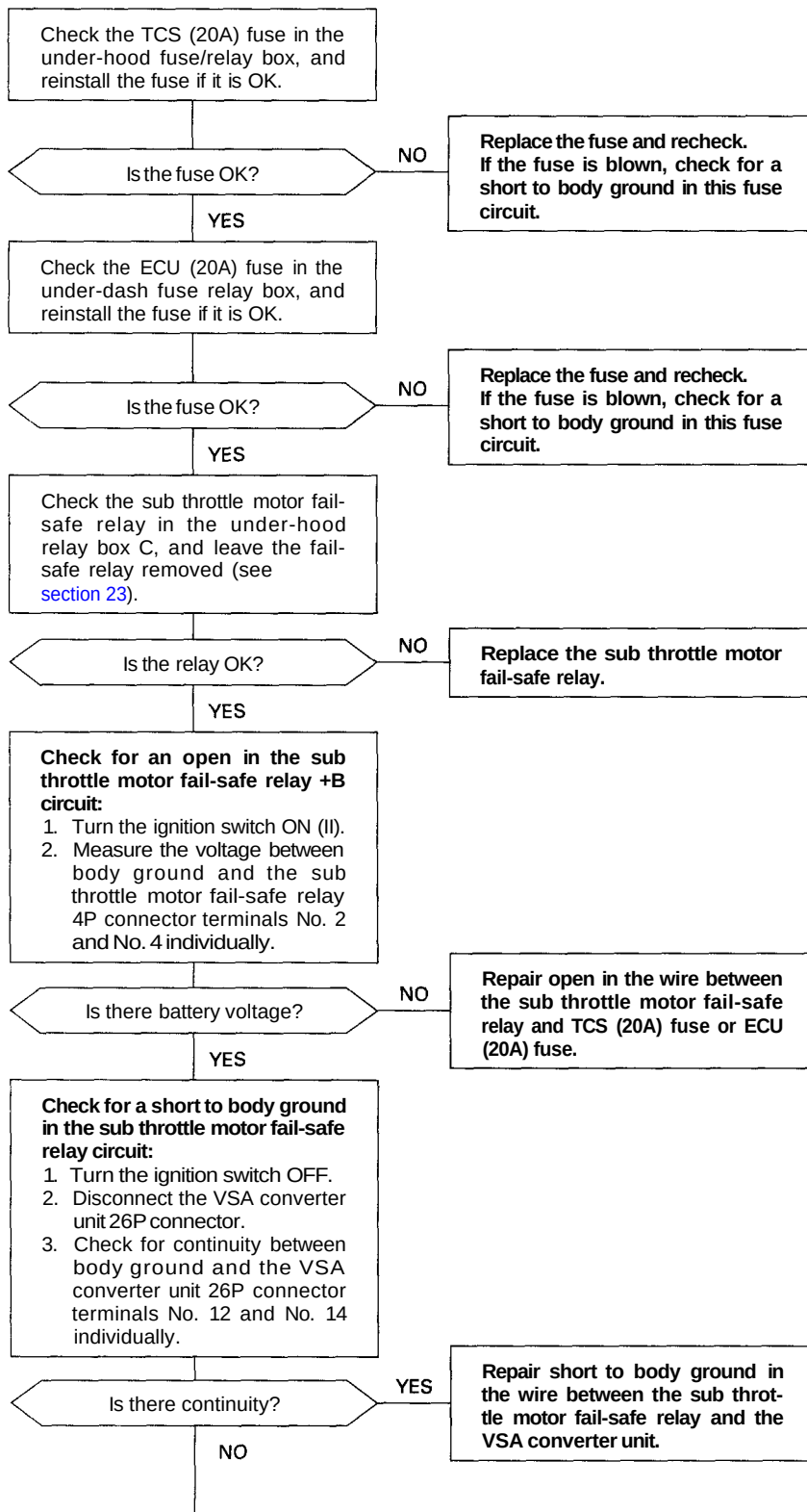
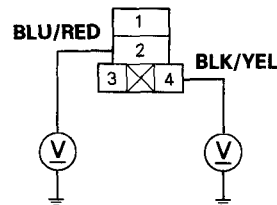


# Troubleshooting

## DTC 96, 97: TCS Control Valve Actuator

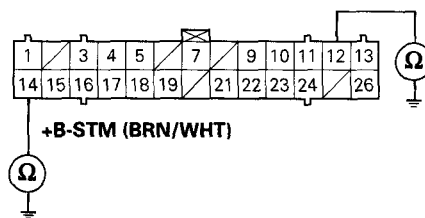


SUB THROTTLE MOTOR FAIL-SAFE RELAY 4P CONNECTOR



Wire side of female terminals

VSA CONVERTER UNIT 26P CONNECTOR  
STM FSR (BLK/WHT)



Wire side of female terminals

(From page 19-262)

**Check for an open in the fail-safe relay circuits:**

1. Check for continuity between the VSA converter unit 26P connector terminal No. 12 and the sub throttle motor fail-safe relay 4P connector terminal No. 3.
2. Check for continuity between the VSP control unit 26P connector terminal No. 14 and the sub throttle motor fail-safe relay 4P connector terminal No. 1.

Is there continuity?

NO

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

YES

**Check for a short to power in the STM circuits:**

1. Disconnect the TCS control valve actuator 2P connector.
2. Turn the ignition switch ON (II).
3. Measure the voltage between body ground and the VSA converter unit 26P connector terminals No. 3 and No. 16 individually.

Is there battery voltage?

YES

**Repair short to power in the wire between the TCS control valve actuator and the VSA converter unit.**

NO

**Check for short to body ground in the STM circuits:**

1. Turn the ignition switch OFF.
2. Check for continuity between body ground and the VSA converter unit 26P connector terminals No. 3 and No. 16 individually.

Is there continuity?

YES

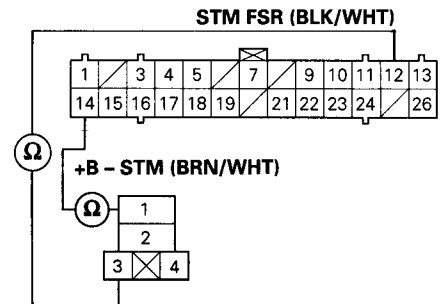
**Repair short to body ground in the wire between the TCS control valve actuator and the VSA converter unit.**

NO

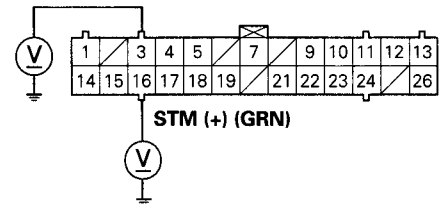
(To page 19-264)

**VSA CONVERTER UNIT 26P CONNECTOR**

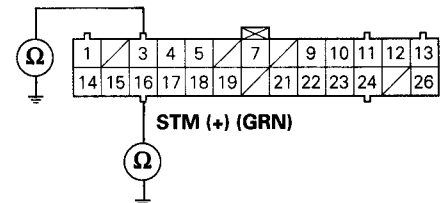
Wire side of female terminals

**STM FSR (BLK/WHT)****SUB THROTTLE MOTOR FAIL-SAFE RELAY 4P CONNECTOR**

Wire side of female terminals

**VSA CONVERTER UNIT 26P CONNECTOR****STM (-) (BRN)**

Wire side of female terminals

**STM (-) (BRN)**

(cont'd)

# Troubleshooting

## DTC 96, 97: TCS Control Valve Actuator (cont'd)

(From page 19-263)

### Check for an open in the STM circuits:

1. Check for continuity between the VSA converter unit 26P connector terminal No. 3 and TCS control valve actuator 2P connector terminal No. 2.
2. Check for continuity between the VSA converter unit 26P connector terminal No. 16 and TCS control valve actuator 2P connector terminal No. 1.

Is there continuity?

NO

Repair open in the wire between the TCS control valve actuator and the VSA converter unit.

YES

### Check the TCS control valve operation:

Connect the battery power to the TCS control valve actuator 2P connector terminal No. 1, and ground connector terminal No. 2 for one second.

#### CAUTION:

- Be careful not to short the terminals.
- After checking, disconnect the terminals.

Does the TCS control valve operate smoothly?

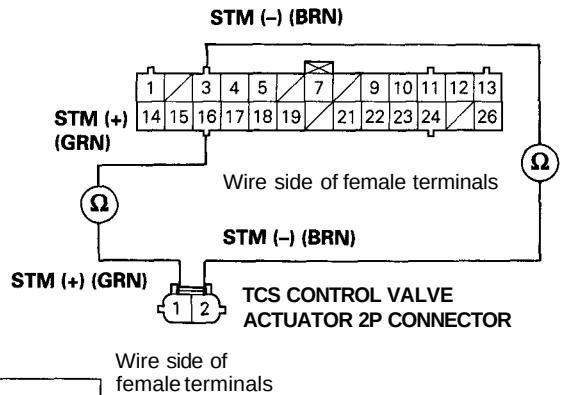
NO

Replace the TCS control valve assembly.

YES

Check for loose terminals in the VSA converter unit 26P connector. If necessary, substitute a known-good VSA converter unit, and recheck.

VSA CONVERTER UNIT 26P CONNECTOR



TCS CONTROL VALVE ACTUATOR 2P CONNECTOR

