

Diag. Code 47, 48 Sub-Throttle Position Sensor Circuit

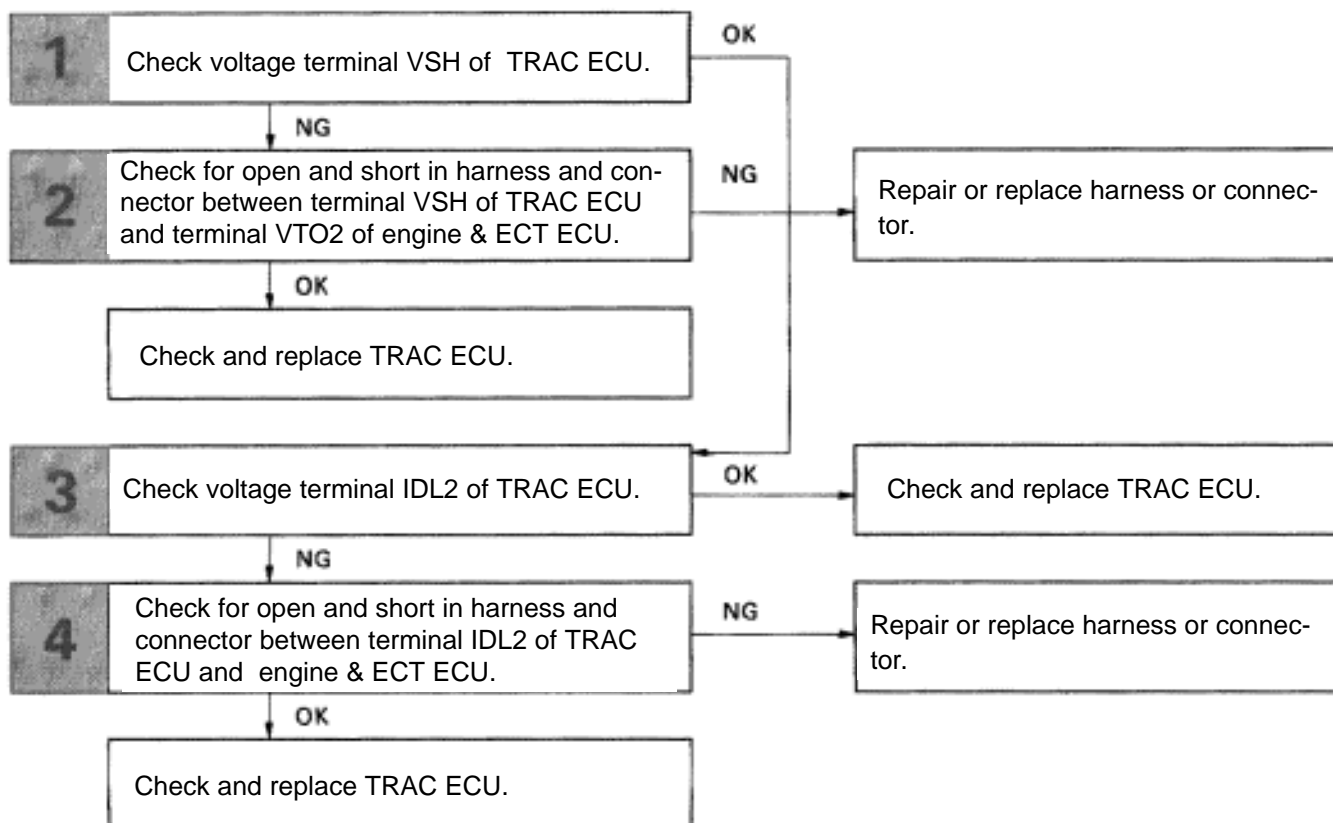
— CIRCUIT DESCRIPTION —

This sensor detects the opening angle of the sub-throttle valve and sends the appropriate signals to the ECU. If a trouble signal is input, the ECU prohibits TRAC control.

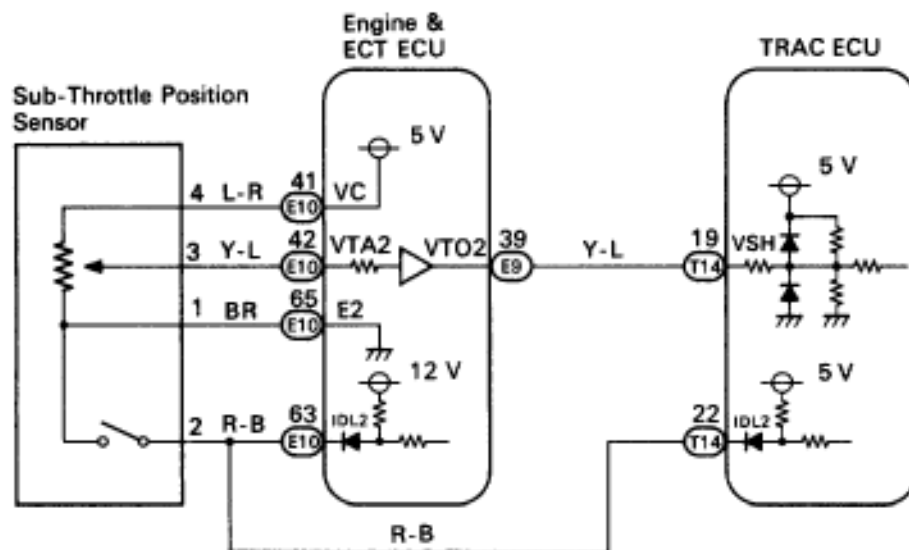
Code No.	Diagnostic Code Detecting Condition	Trouble Area
47	When any of the following (1) through (3) is detected: (1) Deviation of 5 steps or more to the closed side of the idle step during sub-throttle initial check. (2) Voltage at terminal IDL2 does not become 0 V even after sub-throttle is driven to fully closed position during sub-throttle initial check. (3) Voltage at terminal VSH is 1.45 V or more for at least 0.15 sec. while idle switch is ON.	<ul style="list-style-type: none"> •Sub-throttle position sensor •Open or short in IDL2 circuit •Engine & ECT ECU •TRAC ECU
48	Either of the following (1) or (2) continues for at least 0.12 sec. while engine speed is 500 rpm or more. (1) Input voltage of TRAC ECU terminal VSH: 4.3 V or more. (2) Input voltage of TRAC ECU terminal VSH is 0.2 V or less while IDL2 switch is OFF.	<ul style="list-style-type: none"> •Sub-throttle position sensor •Short in VSH circuit •Engine & ECT ECU •TRAC ECU

— DIAGNOSTIC CHART —

HINT: The sub-throttle position sensor signal is input to the TRAC ECU from engine & ECT ECU, so if an error occurs at the engine side, the TRAC ECU also detects it.
If diagnosis code No. 41 is being output for the engine, conduct engine side troubleshooting first.



WIRING DIAGRAM

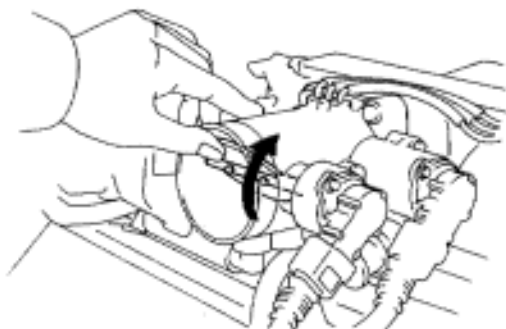


BR5401

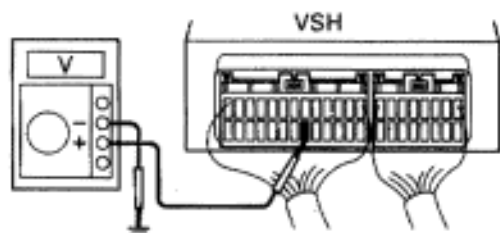
INSPECTION PROCEDURE

1

Check voltage between terminal VSH of TRAC ECU and body ground.



ON
IG ON



BR3723
BE6653
BR5460

P

1. Remove TRAC ECU with connectors still connected.
2. Remove intake air duct.
3. Disconnect step motor connector
4. Turn ignition switch on.

C

Measure voltage between terminal VSH of TRAC ECU and body ground, when the sub-throttle valve is turned from fully opened position to fully closed position.

OK

Throttle valve position	Voltage
Fully closed	Below 1.5 V
Fully opened	3 – 4.5 V

In addition, as the sub-throttle valve is turned, the voltage should increase gradually without interruption.

NG

OK

Go to step [3].

2

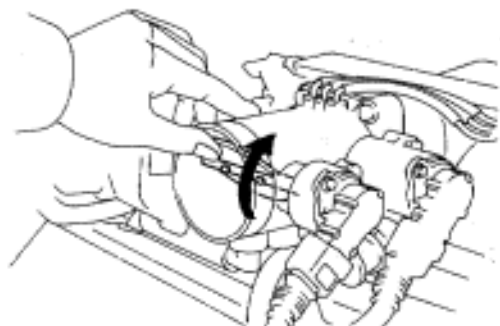
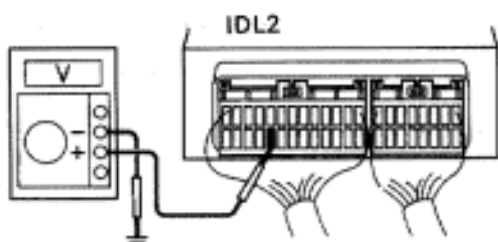
Check for open and short in harness and connector between terminal VSH of TRAC ECU and terminal VTO2 of engine & ECT ECU (See page [IN-27](#)).

OK

NG

Repair or replace harness or connector.

Check and replace TRAC ECU.

3**Check voltage between terminal IDL2 of TRAC ECU and body ground.**ON
IG ONBR3723
BE6653
BR6459**P**

Turn ignition switch on.

C

Measure voltage between terminal IDL2 of TRAC ECU connector and body ground, when the sub-throttle valve is fully closed and fully opened.

OK

Sub-throttle valve position	Voltage
Fully closed	Below 1.0 V
Fully opened	10 – 14 V

NG**OK**

Check and replace TRAC ECU.

4**Check for open and short in harness and connector between terminal IDL2 of TRAC ECU and engine & ECT ECU (See page [IN-27](#)).****OK****NG**

Repair or replace harness or connector.

Check and replace TRAC ECU.