

Neutral Start Switch Circuit

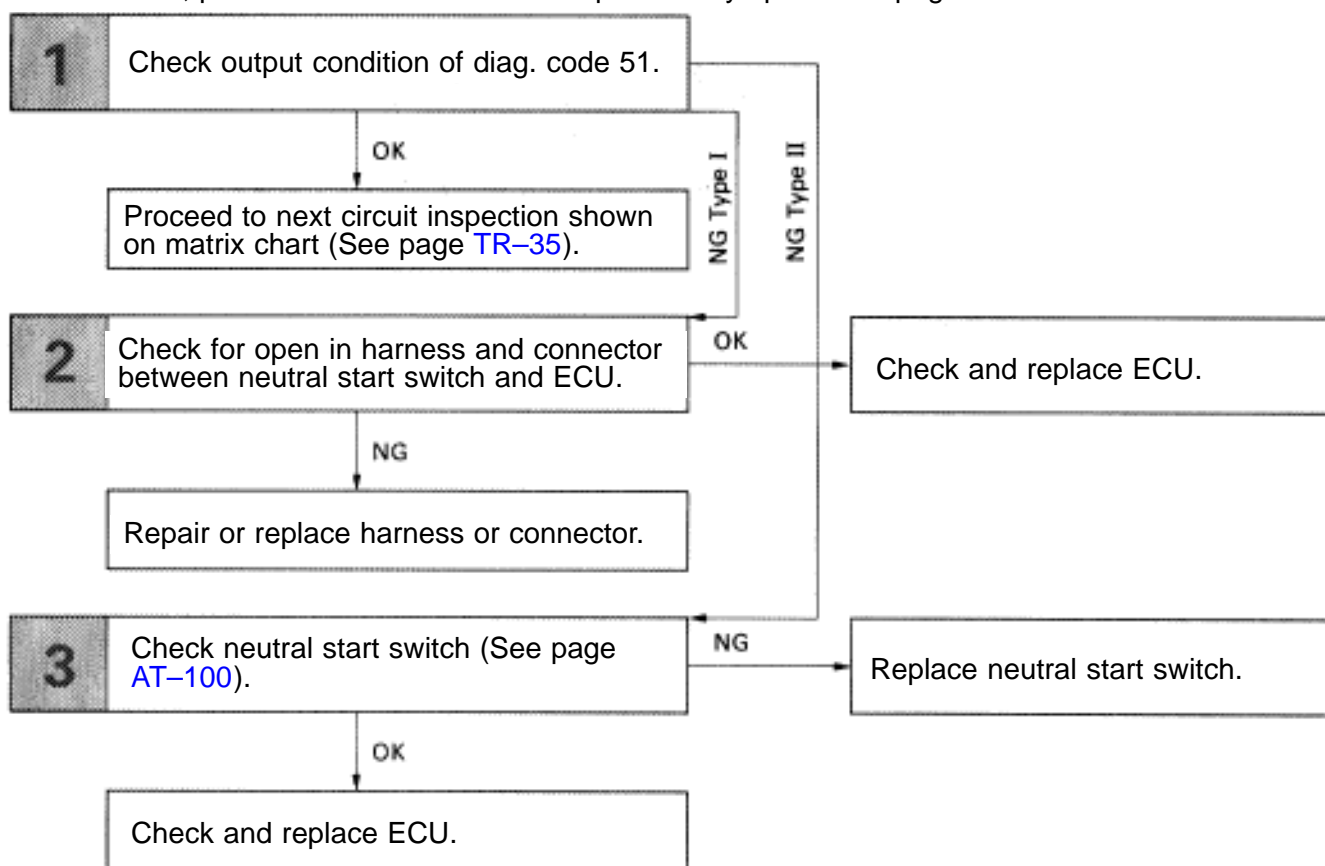
— CIRCUIT DESCRIPTION —

The neutral start switch goes on when the shift lever is in the N or P shift position. When it goes on the terminal NSW of the ECU is grounded to body ground via the starter relay and theft deterrent ECU, thus the terminal NSW voltage becomes 0V. When the shift lever is in the D, 2, L or R position, the neutral start switch goes off, so the voltage of ECU terminal NSW becomes battery voltage, the voltage of the ECU internal power source. If the shift lever is moved from the N range to the D range, this signal is used for air-fuel ratio correction and for idle speed control (estimated control), etc.

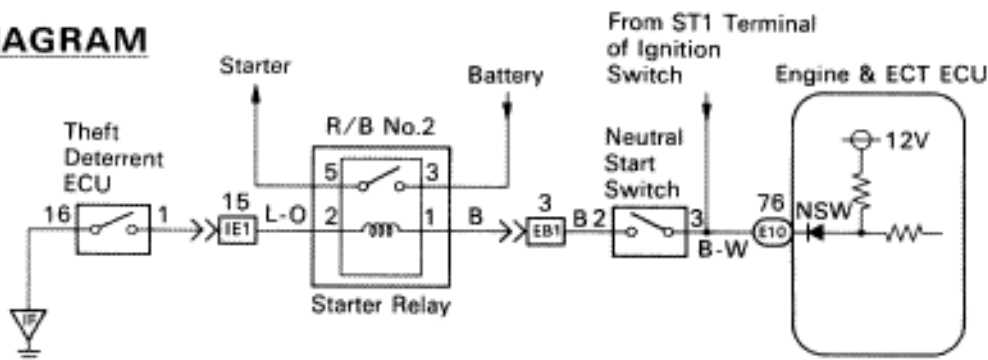
When the neutral start switch is off, code "51" is output in the test mode diagnosis. (This is not abnormal.)

— DIAGNOSTIC CHART —

HINT: This diagnosis chart is based on premise that the engine is cranked normally. If the engine is not cranked, proceed to the matrix chart of problem symptoms on page [TR-35](#).

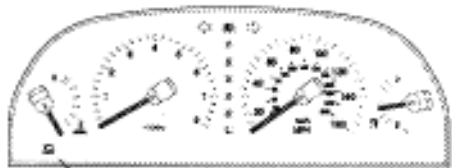


WIRING DIAGRAM



INSPECTION PROCEDURE

1 Check output condition of diag. code 51.



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- P** (2) Connect terminals TE2 and E1 of TDCL.
 (2) Turn ignition switch on.
 (2) Crank the engine.
 (2) Connect terminal TE1 and E1 of TDCL.

- C** Check if diagnostic code "51" is output when then shift level is in the P and D shift positions.

Result:

Shift Position	Result		
	OK	NG Type I	NG Type II
"P"	Normal Code	Code 51	Normal Code
"D"	Code 51	Code 51	Normal Code

OK

NG
Type I

Go to step 2.

NG
Type II

Go to step 3.

Proceed to next circuit inspection shown on matrix chart (See page [TR-35](#)).

2 Check for open in harness and connector between engine & ECT ECU and neutral start switch (See page [IN-27](#)).

NG

OK

Check and replace engine & ECT ECU.

Repair or replace harness or connector.

3 Check neutral start switch (See page [AT-100](#)).

OK

NG

Replace neutral start switch.

Check and replace engine & ECT ECU.