



2000 - UP NISSAN RE4FO4A/RE4RO1A SLIGHTLY DELAYED 1-2 UP-SHIFT AND QUICK OVER-SPEED DURING 2-3 SHIFT

COMPLAINT: A Nissan vehicle equipped with either the RE4RO1A or RE4FO4A transmission enters the shop with a complaint of a slightly delayed 1-2 up-shift, and a quick over-speed or cut-loose on the 2-3 shift. This condition may be confused with a high clutch failure. Upon disassembly, there are no apparent problems in the high clutch circuit.

CAUSE: One cause may be a stuck closed WOT (Wide Open Throttle) switch. On 2000 and later models, a stuck closed WOT switch not only causes the slightly delayed up-shifts (*approximately 4 - 5 mph.*) into all gears; 1-2, 2-3, 3-4, and TCC apply, it also causes shift solenoid A to be energized briefly immediately before the 2-3 up-shift command. When this takes place, the transmission instantly makes a shift from 2nd gear, back to 1st (*which feels like a cut-loose, or over-speed*), then completes the rest of the up-shifts.

NOTE: *Nissan models previous to model year 2000 do not exhibit the same condition. A stuck closed WOT switch, would cause high line pressure, and excessively late up-shifts in all ranges.*

CORRECTION: Check the WOT/IDLE Switch input, repair, or replace as necessary. The WOT/IDLE Switch on these vehicles is incorporated with the Throttle Position Sensor. Refer to Figure 1 for WOT/IDLE and TPS connector identification and pin layout.

Idle/Full Throttle Switch Check:

Step 1:

This step checks for battery reference voltage to the WOT/IDLE Switch. Turn the ignition "ON". Probe the wire side of the WOT/IDLE harness with the connector plugged in, and check for voltage at Pin 2 of the WOT/IDLE Throttle Switch Connector. Place the red lead of your voltmeter to Pin 2, and the black lead of your meter to a good ground such as the battery negative terminal. You should see a reading of approx. 8-12 volts DC with the ignition on. For reference, refer to Figure 2.

Step 2:

This step checks the Idle side of the WOT/IDLE Switch. Move the red lead of your meter to Pin 3 of the connector. Leave the black lead of your meter on the battery negative terminal. You should see a reading of approx. 8 to 12 volts DC with the ignition on and accelerator pedal at a closed throttle. As the accelerator pedal is depressed, the voltage should drop to about 0.0 volts DC. For reference, refer to Figure 3.

**CORRECTION
CONT'D:**

Step 3:

This step checks the WOT side of the WOT/IDLE Switch. Move the red lead of your meter to Pin 1 of the connector. Leave the black lead of your meter on the battery negative terminal. Depress the accelerator pedal fully to the floor. You should see a reading of approx. 0.0 volts DC at a closed throttle. As the accelerator pedal is depressed, the voltage should jump to approx. 8 to 12 volts DC, once the accelerator pedal has been depressed to between 5/8 and 3/4 throttle and should remain at the same voltage through Wide Open Throttle. For reference, refer to Figure 4.

Step 4:

This step checks for a short to power on the WOT Switch wire. Disconnect the connector from the WOT/IDLE Switch. Leave the red lead of your meter connected to Pin 1 of the connector. Leave the black lead of your meter on the battery negative terminal. You should see a reading of 0 volts. Any voltage on this wire would be an indication that the wire is shorted to a power. If the wire is shorted to a power, either locate the short in the harness, or cut the wire at the computer and the WOT/IDLE switch and run a new wire. For reference, refer to Figure 5.

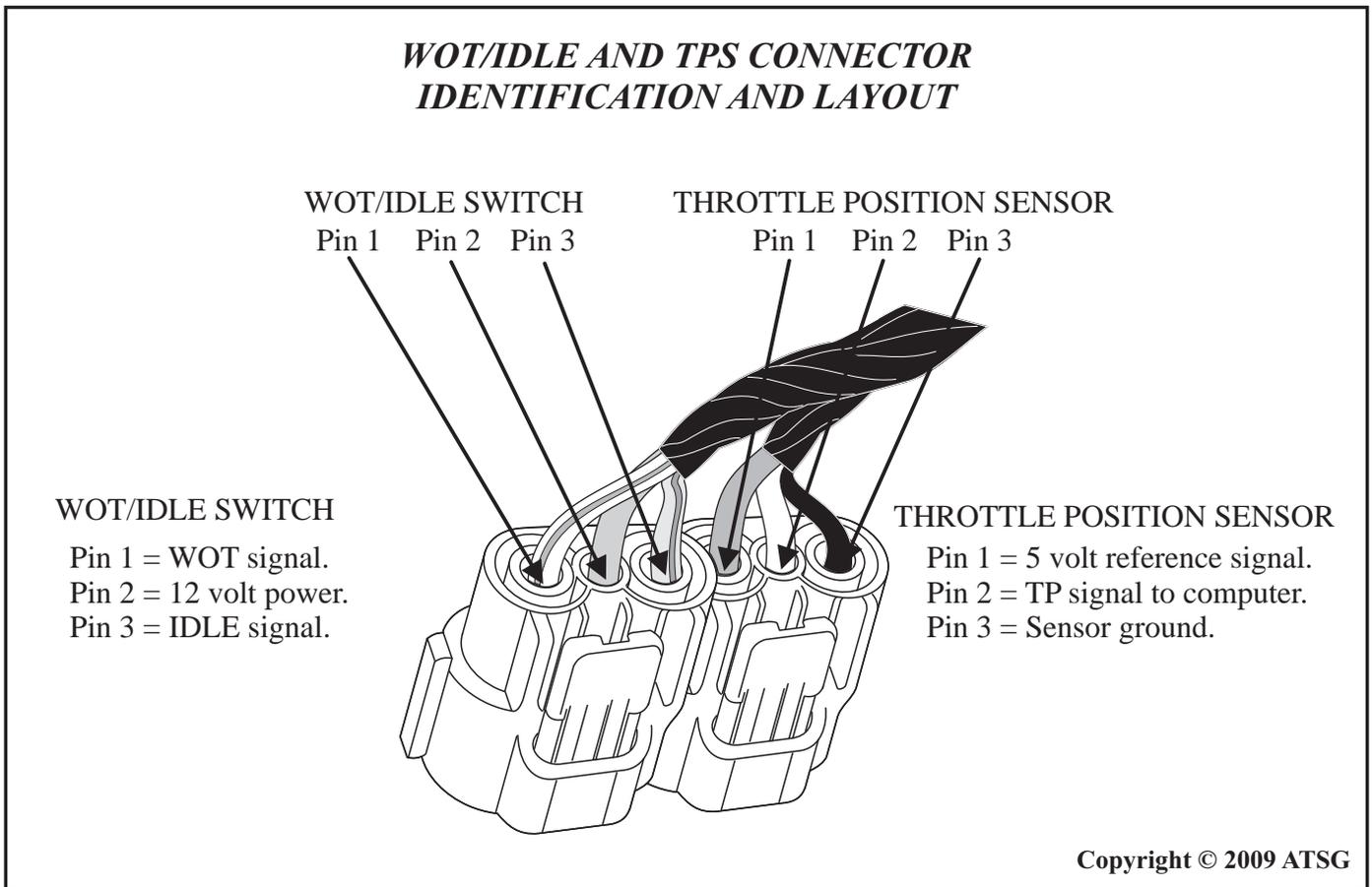


Figure 1

CHECKING REFERENCE VOLTAGE

Check voltage between Pin 2 and ground. You should see approx. 12 volts DC.

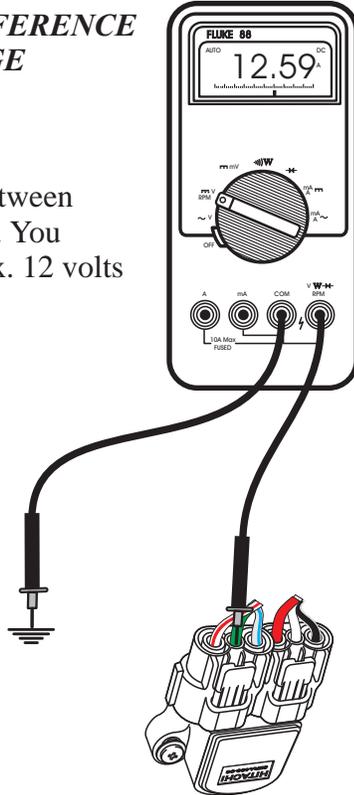


Figure 2

CHECKING IDLE SW VOLTAGE

OFF IDLE SHOWN

Check voltage between Pin 3 and ground. You should see approx. 12 volts DC at idle, and 0 volts off idle.

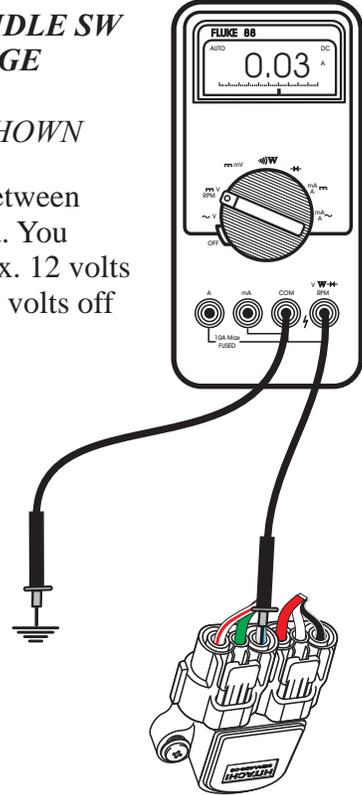


Figure 3

CHECKING WOT SW VOLTAGE

WOT SHOWN

Check voltage between Pin 1 and ground. You should see approx. 0 volts DC. Below 3/4 throttle, and approx. 12 volts at WOT.

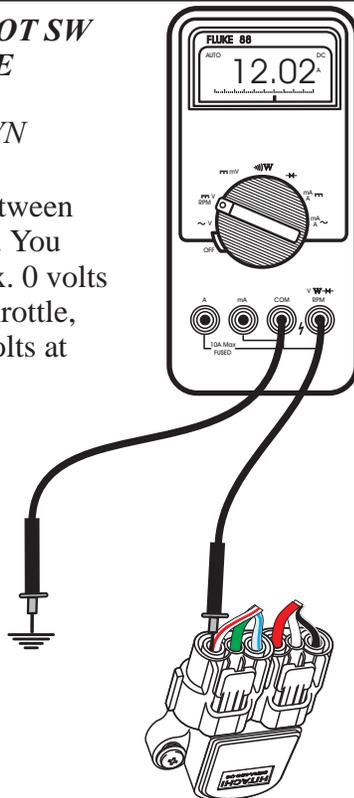


Figure 4

CHECKING WOT SW SHORT TO VOLTAGE

NO SHORT TO VOLTAGE INDICATED

Unplug connector, check voltage between pin 1 and ground, there should be 0 volts DC.

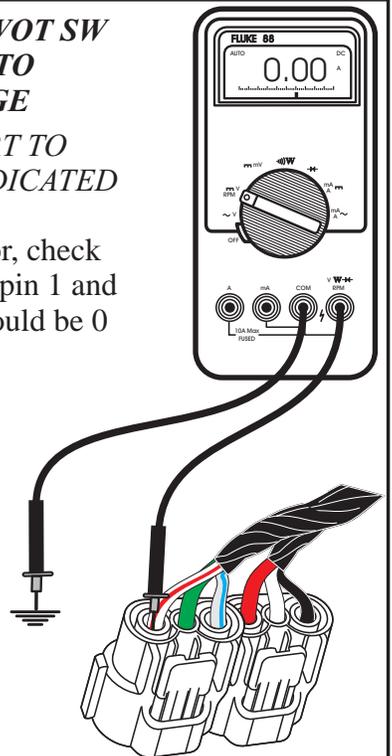


Figure 5

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