



NAPA Tech TIPS

SUPPORTING TODAY'S PROFESSIONAL TECHNICIAN

Nissan Optical Distributor Test

Application:

Most Nissan vehicles, 1984 & newer, equipped with optical disc sensor distributors.

Problem:

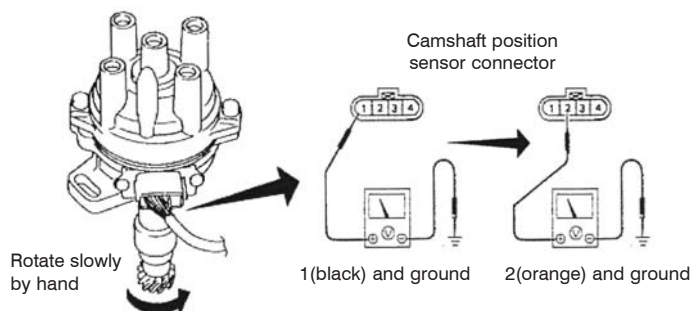
Engine turns over, but does not start.

Solution:

Many Nissan vehicles have a power transistor controlling the coil (or igniter). The power transistor is a separate unit on optical distributors. It allows the signal sent from the ECU (low current) to activate the primary circuit in the ignition coil (higher current). This induces high voltage in the secondary windings of the coil, providing spark to the distributor cap and plugs. If this transistor is faulty, the necessary spark will not result. The distributor is often blamed for this, but before replacing it, perform the test steps below.

Tests before replacement:

1. Test power transistor & coil. Refer to service manual for specific test procedures.
2. Check ECC fuse and/or fusible link at fusebox.
3. Check ECC relay, typically a black/white wire, for 12v.
4. Check for 12v at distributor; typically an orange wire, pin 2.
5. Check continuity of all wiring going to and from computer, transistor and distributor.
6. To test optical sensor in the distributor, remove distributor cap and remove the distributor but leave the harness to the sensor connected. Turn ignition switch on (**DO NOT START ENGINE**). Rotate distributor shaft slowly by hand and check voltage between terminals 1(black) and ground and then between terminal 2(orange) and ground. Measure voltage on 12v DC scale; it should fluctuate between 0 and 5 volts DC.



Note:

1993 to 1996 Altima, 2.4I, NAPA part #31-58470 with no start or driveability could be caused by engine oil coating the optical disc or cap terminals. Replace PCV valve before installing the distributor.