



## OTB-POL-NOD-001 Noid Test Light User Guide

This handy noid test light kit allows the user to quickly plug into Polaris vehicles to allow a visual confirmation that an electrical output is functioning correctly. This kit will allow a user to quickly find broken wires or bad components without having to cut into factory wires or back-probe electrical connectors.

### ***This Kit Includes:***

- Primary Ignition System Test Light compatible with 2005-2022 twin cylinder vehicles with single coil.
- Fuel Injector Type 1 Test Light - for use with 450cc and newer 2022 1000cc vehicles.
- Fuel Injector Type 2 Test Light - for use with 2005-2012 700-800cc and 2016-2021 1000cc turbo vehicles.
- Fuel Injector Type 3 Test Light - for use with all non turbo XP 850cc, 900cc, 1000cc twin cylinder vehicles 2009-2020
- Front Differential Test Light – Compatible with 2009-2024 4x4 vehicles

### ***Noid Light Instructions:***

Fuel Injector Test lights.

1. Unplug the fuel injector connector from the injector.
2. Choose the correct fuel injector noid test light.
3. Plug in the fuel injector to the noid test light connector.
4. Crank machine over and the test light filament should dimly glow if the fuel injector circuit is functioning correctly. You may start the machine with test light in circuit, however it will only be running on one cylinder and will run poorly.

### ***Diagnostics:***

- Bulb glows dim and pulses during cranking or idling = NORMAL
- Bulb glows bright and does not pulse:
  1. Fuel injector control wire shorted to chassis ground.
  2. The PCM transistor driver is shorted.
- Bulb does not glow
  1. Blown EFI Fuse.
  2. Bad EFI Power Relay.
  3. Broken 12V+ power wire to the injector connector.
  4. Broken injector control wire to injector connector
  5. PCM is not commanding injector to turn on due to pre-existing fuel injector open/short circuit codes.
  6. PCM transistor driver open circuit.

(\*NOTE\*) If a machine is started without a fuel injector or noid light connected the PCM will set the check engine light with a code for that injector and the injector will not fire for the rest of that drive cycle. The key must be cycled to reset the PCM to once again command the fuel injector. The code can easily be cleared with the OTB Powersports Check Tech Diagnostic tool for Polaris.

### Ignition Coil Test Lights:

1. Unplug the ignition coil connector from the coil.
2. Plug in the ignition coil connector into the dual bulb test light.
3. Crank the engine over and verify the bulbs dimly glow.

#### *Diagnostics:*

- Bulbs glow dim and pulse during cranking = NORMAL
- Bulbs glow bright and does not pulse:
  1. Ignition control wire shorted to chassis ground.
  2. The PCM transistor driver is shorted.
- Bulb does not turn on:
  1. Blown EFI Fuse.
  2. Bad EFI Power Relay.
  3. Broken 12V+ power wire to the ignition coil connector.
  4. Broken control wire to the ignition coil connector
  5. PCM transistor driver failed.
  6. No crank signal to the PCM.

### Front Differential Solenoid Test Light:

1. Unplug the front differential solenoid connector.
2. Plug in the test light in to the differential solenoid connector.
3. Turn the key switch on.
4. Turn on the AWD switch.
5. Verify that the light is at full brightness in gears HIGH, LOW, and REVERSE and that the light is NOT lit in gears NEUTRAL or PARK.

#### *Diagnostics:*

- Bulb is lit in gears HIGH, LOW, REVERSE, and NOT in gears NEUTRAL and PARK = NORMAL.
- Bulb glows bright at all times.
  1. Front differential solenoid control wire shorted to chassis ground.
  2. PCM transistor driver shorted.
  3. Gear position switch not functioning. Ensure the dash display shows each selected gear.
- Bulb does not glow:
  1. Blown Fuse.
  2. Broken AWD Switch wiring.
  3. Broken 12V+ power wire connecting to differential solenoid.
  4. Broken control wire connecting to differential solenoid.
  5. Gear position switch not functioning. Ensure the dash display shows each selected gear.
  6. PCM transistor driver failed.