

Technical Bulletin

NISSAN NAVARA D40/PATHFINDER R51 – Four Wheel Drive Malfunction

Applicable References: ADN11489, ADN11490, ADN11491, ADN17225, ADN17226, ADN17235

Applications: Nissan Navara D40 & Pathfinder R51 up to build date 15/09/2009

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Problem

- 4 wheel drive low range indicator flashes when in 2 wheel drive.
- Engine malfunction indicator lamp (MIL) may be illuminated.
- Diagnostic trouble code (DTC) P1814 may be stored, referring to 4wd detect switch.

Cause

Water ingress into the transfer box which gets past the rear prop-shaft dust cover and oil seal. This can affect one or more of the transfer box detect switches. There are three switches which perform multiple functions.

Diagnosis and repair

Use suitable diagnostic equipment (e.g. G-Scan) to communicate with the 4wd system.

Check the live data displayed for the following parameters:

- 2wd Switch
- 4wd High Switch
- 4wd Low Switch
- 4wd Low Position Switch
- Automatic Transmission Park Switch (ATP)
- Wait Detection Switch
- 4wd Mode

If 2wd is selected on the centre console, all but the 2wd switch data should be in the [OFF] position. If the data shows any other switch in the [ON] position then this will indicate a faulty switch.

Although the diagnosis may only show one switch to be faulty, it is recommended that all three switches are replaced because of the increased risk of premature failure due to water ingress into the transfer box.

It is recommended that you drain the transfer box of oil, replace the rear prop-shaft oil seal (**ADN17235**) and fit a new modified dust cover and spacer (**ADN17226 + ADN17225**). The spacer should be installed inside the dust cover before fitting.

The modified dust cover has two drain holes and should be installed with these holes positioned vertically (12 and 6 o'clock), not horizontally (3 and 9 o'clock).



As the prop-shaft will need to be removed to carry out the seal and cover replacement, Blue Print recommends that the prop-shaft yoke and matching flange is marked with paint on the final drive so that it can be reassembled in the same position to avoid the risk of imbalance/vibration.

Further Instructions on next page

Blue Print also recommends that the prop-shaft securing nuts and bolts are replaced and tightened to the correct torque setting of 95Nm.

The Nissan OE references are:

- 371207S00A (rear prop-shaft bolt, x 4)
- 37171VC30A (rear prop-shaft nut, x 4)

The three switches are located on the underside of the transfer box. The switch located towards the rear of the transfer box is:

- **4wd Shift Switch** (Grey) - **ADN11491**.

Note: It can also be referred to as the 'Wait detection' or 'Neutral position switch'.

The other two switches are positioned together and further forward on the underside of the transfer box. These are:

- **4wd Low Switch** (Grey with green stripe) - **ADN11489**.
- **Automatic Transmission Park (ATP) Switch** (Black) - **ADN11490**.

Note: This switch is fitted to both automatic and manual transmission models.

We recommend you replace the switches one at a time to prevent the risk of incorrect positioning/fitment.



4wd low switch/
Automatic transmission
park switch



4wd shift switch



Original dust cover with
smaller drain-hole



Modified dust cover fitted
in correct position

When all three switches have been replaced, along with the prop-shaft oil seal and the modified dust cover and spacer, refit the prop-shaft and fill the transfer box with new oil up to the level plug. (Approximately 2 litres of Dexron III)

On completion of the repair, check the operation of the 4wd system and clear any stored DTCs. Check the live data for correct operation of switches and carry out a road test. After road testing it is good practice to re-check for any DTCs.