



Nissan VG30DETT Powerglide automatic transmission adapter

Revised 5/11/2016

Parts List

(1) Bellhousing adapter

Hardware:

(6) 82° tapered seat allen drive bolts

(1) $\frac{5}{16}$ " NC x 2 $\frac{1}{2}$ " grade 8 flange-head bolt

(9) $\frac{5}{16}$ " NC x 1" grade 8 flange-head bolts

(8) Viton o-rings, $\frac{7}{16}$ " OD (1 EXTRA)

Tools required to install kit onto transmission

$\frac{3}{16}$ " Allen socket

$\frac{1}{2}$ " socket

Torque wrench

Moly based grease

Transmission

The bellhousing needs to be machined off of the Powerglide case to allow the bellhousing and BDE adapter to be fitted. Fortunately, this is the very same requirement to fit a *JW Performance Ultrabell*. Utilizing this technique allows the transmission to be easily converted to any application that is serviced by the *JW Ultrabell*, so there is no value lost with this modification to the transmission.

TIP: the transmission case must be machined 0.010" to 0.040" below the pump surface to allow the adapter plate to position properly on the pump. This typically means that the transmission will need to be disassembled to do it properly. **Do not cut the oil pan rail to the same depth** as the rest of the housing; the adapter plate is relieved on the bottom to allow the oil pan rail to remain un-cut.

Bellhousing Adapter

A stock Powerglide case has the potential to leak fluid through the pump bolt holes; GM used plastic washers under the bolt heads as gaskets to prevent this. The BDE bellhousing adapter uses o-rings between the adapter and pump to seal both the bolt shank and the adapter to the pump, thereby preventing leaks.

- Remove the OE bolts from the front pump and discard.
- Clean the surface of the pump and ensure that the housing is machined lower than the pump surface and that there are no raised burrs.
- Install seven (7) Viton o-rings into the counter-bores on the back of the adapter (Figure 1).



Figure 1 –adapter bolt hole o-rings

- Grease the six (6) tapered seat bolt shanks, threads, and under-head surface entirely.
- Install the adapter with the o-rings towards the pump and thread the taper seat bolts into the transmission. Leave these semi-loose until all six are installed and then snug them all – this will help to center the adapter onto the transmission.
- When all six bolts are installed and snug, verify that none of the back o-rings have become dislodged, preventing the adapter from sitting flat on the pump surface.



Figure 2 – Machined housing and pump face

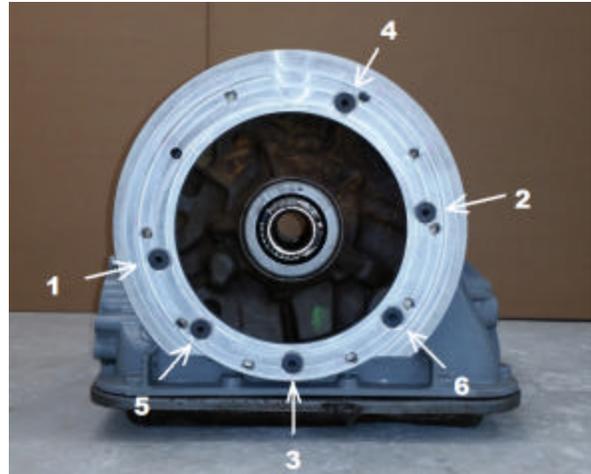


Figure 3 – Adapter installed, torque sequence

- Torque the bolts using a 3/16” Allen drive socket to 18 ft-lbs (see Figure 3 for torque sequence) and wipe off any excess grease.

Bellhousing

- Place the bellhousing onto the adapter and rotate into position. Sight through the bolt hole indicated below to locate the bellhousing.



Figure 7 – VG bellhousing installed, long bolt location

- Grease the entire shank and under-head flange surface of the 2 ½" long bolt and thread into position 7 (Figure 8) through the adapter o-ring and into the transmission threads.
- Grease the remaining short bolt's threads and under-head flange surface and install
- Torque bolts 7 - 16 to 18 ft-lbs using Figure 8 torque sequence below.



Figure 8 – bellhousing bolt torque sequence