GVW-191

Flywheel Seal Install Tool

1972- 1979 Bus and1980-1991 Vanagon Engines

If you are getting ready to finall fix your leaky "rear main" flywheel seal for the LAST TIME, this is the tool to push you in the right direction. Not only does this tool make sure your new seal is perfectly centered, the cup also ensures the seal is pressed to the right depth and it doubles as a drill jig to add an additional oil return hole in the engine block reducing the oil pressure behind the seal – possibly the reason the seal was leaking in the first place!

Tools Needed

- 19mm Ratchet or Wrench
- 19mm Box End Wrench
- Size 10 Hex Key or Socket
- Seal Lubricant (we use Reinzosil)
- Emery or fine sandpaper

DISCLAIMER: This kit has been designed for easy installation. However, this seal is critical to keeping the engine lubrication system operational. The installation of this kit is not within everyone's ability. Read through these instructions carefully and decide if installing it is for you. If not, please take your vehicle engine to an automotive mechanic.

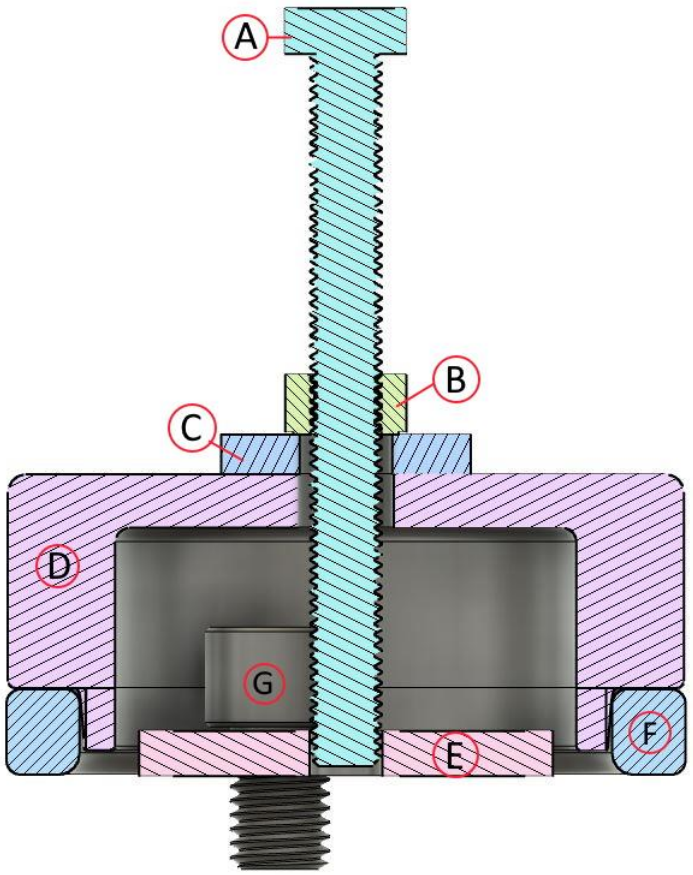
Hardware List

A:(1)12mm x1.75 x 100mm bolt
B: (1)12mm x 1.75 Nut
C: (1) 12mm Washer
D: (1) Tool Cup
E: (1) Tool Center

Not Included
F: Oil Seal
G: Flywheel Bolts
3/16" drill bit

Not illustrated:
3/16" drill bit
Seal lubricant
Anaerobic sealant

Tool Side Profile Diagram



Seal Installation Instructions

1) Carefully remove the old seal with a seal puller making sure not to scratch or score the crankcase seal mating surface. Clean the crankcase sealing surface with emery paper or a fine sandpaper, then wipe down all surfaces with a degreaser.

2) Install the tool center (E) onto the end of the crank using 2 of the old flywheel bolts. Align the GoWesty van with the alignment pin on the end of the crankshaft. Make sure the tool center is centered on the end of the crankshaft and snug the flywheel bolts down.

3) Place the M12 nut (B) onto the M12 bolt (A) and thread it most of the way up the bolt. Then place the M12 washer (C) on the bolt, followed by the tool cup portion of the tool (D).
    a. Skip down to drill jig instructions below at this point to add an additional oil return hole if/as needed.

4) Apply a thin layer of Reinzosil (or similar) onto the seal and slide it onto the tool cup with the flat side of the seal in contact with the cup. Apply an anaerobic sealant/adhesive (of your choice) to the outside of the seal. Thread the bolt assembly into the center portion of the tool on the end of the crankshaft.

5) Slide the seal and cup down the shaft until the seal contacts the crankcase, then thread the nut and washer down the bolt until they contact the cup.

6) Make sure the seal is touching the engine block all the way around—straight and flat, not crooked. Place the box end wrench on the nut and use a socket or wrench on the bolt head to prevent it from turning. Slowly tighten down the nut until the seal is seated. DO NOT COMPRESS THE SEAL PAST A GENTLE HAND TIGHT

7) With the seal installed, the bolt can be loosened and removed from the tool center. Finally, remove the flywheel bolts and the tool center.

Flywheel Bolts: Only New N-902-268-01
Flywheel Bolt Torque: 81ft-lbs/110N-m
Crank Shaft End Play: 0.10mm/.004"

Drilling Additional Oil-Return Hole

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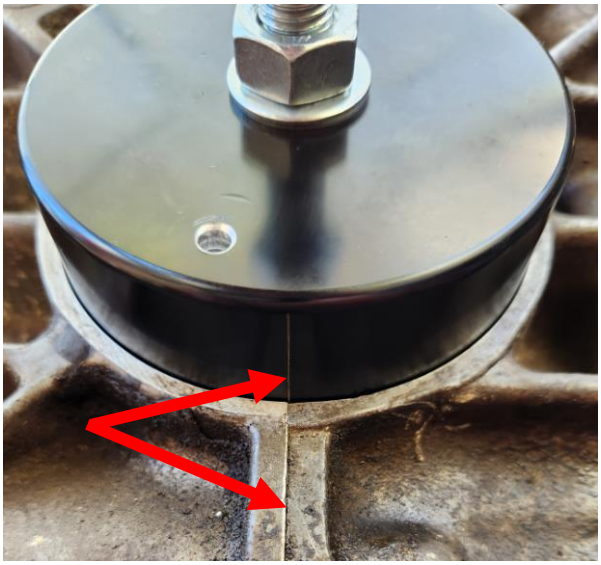

1) With the old flywheel seal and all shims (and rear thrust washer - 2.1-liter engine only) removed, thread the bolt (A) into the tool center (E) to position the tool cup. Do not tighten bolt.

2) Align the score on the outside of the tool cup with the bottom split in the engine case (shown to right).

3) Using two wrenches, tighten the nut so that the tool does not move during drilling. Do not over-tighten, 15 ft-lbs max.

4) Using a 3/16" drill bit, adjust the bit so that there is exactly 2 – 3/8" from chuck to drill tip.

5) Use the drill guide hole to drill into the case. Start with very light pressure until the tip of the drill bit initiates the start of the hole, then proceed with normal force.

6) Continue drilling about half way or until you feel resistance from the metal chips binding. Remove tool cup, and clear chips thoroughly.

7) Reinstall the tool and align the drill hole properly. Continue until the drill bit bottoms out. That will bring the tip of the drill bit about 1/8" from drilling through the block.

8) Remove tool cup and thoroughly clean drilling debris.

9) Reinstall the tool, adjust the bit so that there is exactly 2 – 1/2" from chuck to drill bit. Carefully drill through the block with the use of the tool. Be cautious as the crank is located behind the drill bit. Once the hole has been fully drilled, clear the chips completely.

You're Done!