

APTБ 01/18

SUBJECT: Branch Tube Adapter Installation

February 05, 2018

Alliant Power has released part number **AP0098** High-Pressure Oil Pump (HPOP) Installation Kit with updated fitting for Ford® Power Stroke® 6.0L and Navistar® VT365 engines. Outlined below is the installation process of the updated fitting using the holding tools that are supplied with the kit.

1. Remove the HPOP per the manufactures service procedure.
2. Mount the HPOP securely in a bench top vise.

Note: If the HPOP and branch tube adapter has an assembly support bracket, remove and discard the support and all attaching fasteners as they will not be reused.

3. Remove the old fitting from the HPOP and discard.
4. Remove the mounting dowel pin (Figure 1) and save for reinstallation.



Figure 1

Note: To prevent HPOP leaks, match new seals provided in kit with old seals that were removed. Several seals are very similar in size, but will not correctly seal if used in the incorrect location.

5. Prior to installing the new jam nut fitting, lubricate the assembly with clean engine oil, then rotate the jam nut clockwise to the base of the branch tube adapter. The adapter is threaded to the jam nut (Figure 2).



Figure 2

Note: The branch tube adapter must be installed at the correct depth to prevent a high-pressure oil leak.

6. Install the branch tube adapter into the HPOP by threading it in five (5) complete turns to set proper depth and set proper alignment. Branch tube adapter oil outlet must be facing down. Tighten the jam nut to seat the O-ring at this time (Figure 3).

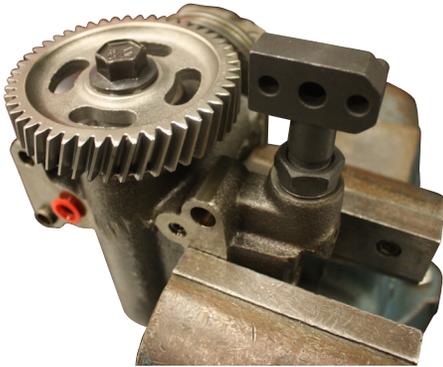


Figure 3

7. Loosen the jam nut $\frac{1}{4}$ turn and install the holding tool using the supplied plastic bolts and wing nuts to correctly align the jam nut fitting (Figure 4).

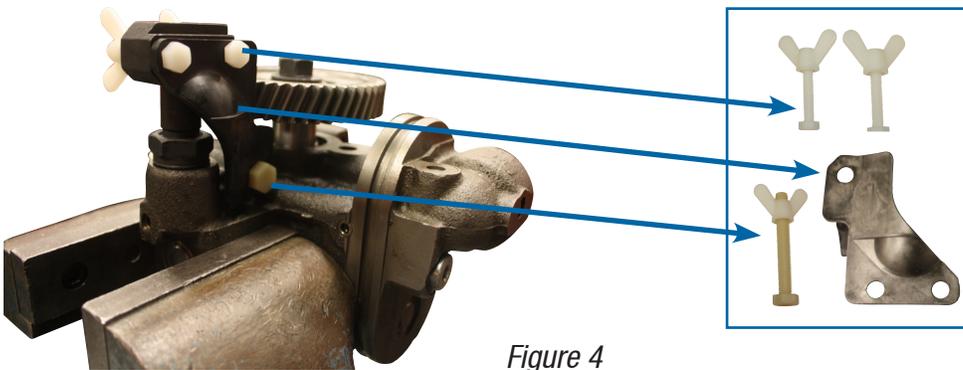


Figure 4

8. With the plastic holding tool securely fastened, torque the jam nut to 49 lb–ft (66 Nm) with a $\frac{15}{16}$ " open end crow foot and torque wrench.
 9. Remove plastic holding tool and hardware.
 10. Install mounting dowel pin that was previously removed in step 4 (Figure 1).
 11. Lubricate and install new O-rings in the branch tube inlet and HPOP inlet recesses and remove from vise.
 12. Install HPOP back onto the engine using the three (3) supplied M8x45 bolts to secure the pump to the engine block and the two (2) supplied M6x30 bolts to secure the branch tube adapter to the branch tube.
- Note:** If unable to align holes from the branch tube adapter to branch tube holes, the branch tube assembly may be bent. If the branch tube assembly is bent, it will need to be replaced.
13. Tighten the three (3) pump mounting bolts securing the HPOP to the engine block to 23 lb–ft (31 Nm).
 14. Tighten the two (2) branch tube adapter bolts to the branch tube to 97 in–lb (11 Nm).
 15. Perform leak test to verify repair. Refer to [APTB 05/14](#) for procedures on testing the high–pressure oil system for leaks.

Refer to manufactures engine service manual or equivalent for detailed assembly instructions and torque specifications.