



USP FSI to 1.8T Oil Pump Conversion

Part No. USPFSIOPK

The USP oil pump conversion for the 2.0T FSI (EA113) allows you to eliminate the failure prone balance shafts while at the same time adding a larger higher flowing oil pump. As an added benefit the OEM oil pan capacity is increased almost 2 quarts. The conversion is a complex installation and should only be performed by experienced engine builders.



Conversion Includes:

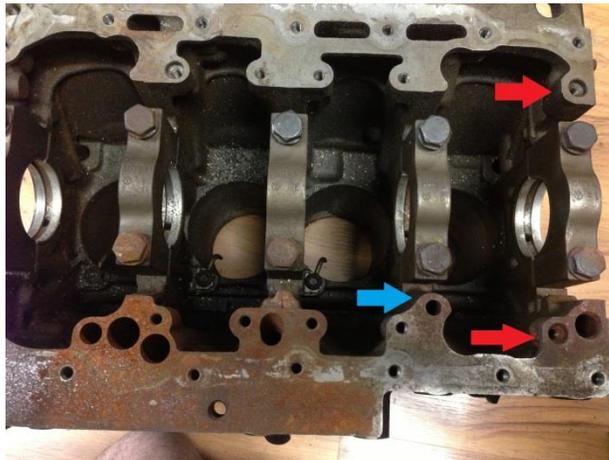
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|---------------------------|-----------------------------------|
| 1. Oil pickup tube | 7. Oil pickup tube bolts (2) |
| 2. Oil pump | 8. Oil pump mounting bolts (2) |
| 3. Oil pump chain | 9. Oil pump mounting bolt |
| 4. Oil pan baffle | 10. Helicoil tap |
| 5. Chain tensioner | 11. Helicoil |
| 6. Oil pickup tube o-ring | 12. Crank sprocket (not pictured) |

Tools Needed:

Basic hand tools are needed to complete the installation including but not limited to: metric allen key sockets, metric sockets, ratchets, torx sockets, and a torque wrench. Additionally you will need a 3-jaw puller, M7 tap, and 21/64" drill bit.

Refer to the factory repair manual for steps 1, 2, 3

1. Remove the oil pan from the engine.
2. Remove the timing belt and front seal cover.
3. Remove the factory oil pump and balance shaft assemble.
4. Drill the hole next to the blue arrow in the block using a 21/64" drill bit and then tap the hole using the included tap. Once the hole is tapped install the included helicoil until it is approximately 1/8" past the block level. Using a small flat head screw driver remove the tang from the center of the helicoil.



5. Drill and tap a M7x1mm hole in the front of the block. Now the tensioner (#5) can be installed. Torque the securing bolt to 15nm. Be sure the spring on the tensioner sits between the main cap and the edge of the block where the hole was drilled.

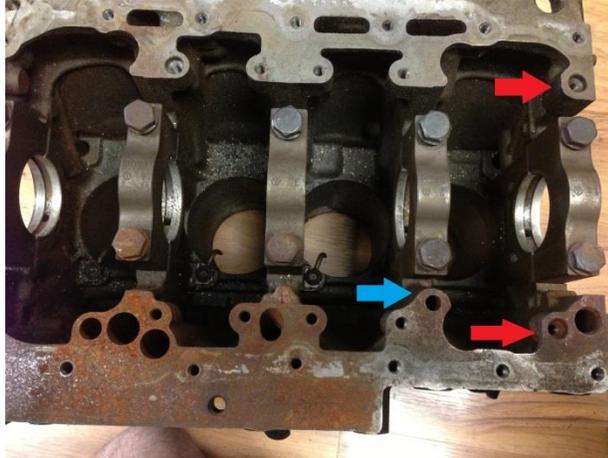


6. Heat the factory oil pump gear (on crankshaft) using a torch. When the gear is warmed up it can be removed with a 3-jaw puller. The new gear (#12) will need to be heated in an oven to approximately 300F. Once the gear is heated it will slide onto the crankshaft.

7. Drill the metal insert in the oil pump baffle (#4) using a 21/64" drill bit.



- Loosely secure the new oil pump to the block using the #8 bolts. The bolts will go into the holes indicated by the red arrows. Bolt #9 will go through the oil pan baffle (#4) and then through the oil pump and into the hole where the helicoil was installed (blue arrow). Once all 3 bolts are threaded into the block, torque them down in a cross pattern and then torque to 15nm

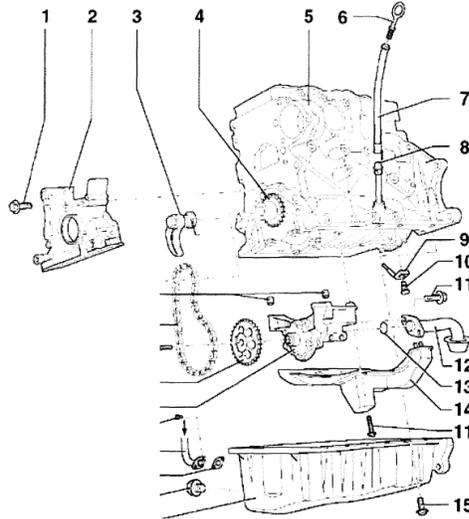


- With the oil pump installed the pickup tube (#1) can be secured to the oil pump. Be sure the o-ring (#6) is seated properly between the pickup and the pump. Secure the pickup using the included bolts (#7). Torque to 10nm.





10. Remove the center torx bolt from the oil pump and install the chain (#3) around the crankshaft gear installed in step 6. The chain will then be routed around the tensioner which was installed in step 5. The chain can then be placed on the oil pump gear. The oil pump gear can then be reattached to the oil pump. Pay special attention to make sure the keyway on the sprocket lines up with the shaft on the oil pump. Reinstall the torx bolt and torque to 25nm while counter holding the crankshaft.



11. Reinstall the front seal cover, timing belt, and oil pan according to the factory repair manual.

Questions? Email support@uspmotorsports.com