

Swamp's Diesel Performance

Competition Parts For Your Diesel

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Ford 6.0L Power Stroke Head Stud Installation

IF YOU ARE INSTALLING NEW HEAD GASKET:

1) Remove the existing head bolts, head, and install new gasket. Keep the 5 bolts (for each head), which are located outside of the valve train area, as they will be reused.

1b) Ensure that the sealing surface of both the head and the block, are meticulously clean, as well that they are F-L-A-T. Follow the factory procedures & specifications for measuring head & deck (block) flatness using a machinists/ precision straightedge.

2) We recommend that you use a bottoming tap to prepare the threads in the block. Be sure to get all oil, fuel, dirt, etc out of each cylinder head bolthole by using compressed air. (Wear safety glasses)

3) Install the head studs, by hand, into the locations shown 1-10 in the attached diagram. A light coating of engine oil is all that is needed on the threads, which go into the block. Make sure the studs bottom out in the hole, and only tighten the studs finger tight...lower the cylinder head down over the studs and onto the gasket.

4) Put a small amount of Molybdenum Assembly Lubricant onto the upper threads and onto both sides of the washer. Torque the nuts onto the studs, in sequence (1-10) to 90lbft. After each nut has been torqued, loosen the nuts, and REPEAT the torque (again, in sequence 1-10) to 130lbft. Once all 10 nuts have been torqued to 130lbft, LOOSEN them for a second time, and then TIGHTEN the nuts, in sequence, to 175lbft.

NOTE: It is a lot of work to torque, loosen, torque, loosen, torque, and torque again, but it is WELL worth it. Doing this sequence of torqueing and loosening helps to seat the threads of the studs to both the nut, as well as to the cylinder block, and will give you the VERY BEST RESULTS. Take the time to do it right, so that you will never have to do it again.

5) Apply a small amount of clean engine oil into the threads, on bolts numbered 11 through 15 (the ones that you are reusing). Torque these 5 bolts in sequence to 18lbft. Once all of them have been torqued once, re-torque them to 22lbft for the final setting.

DONE! Give your arms a rest!

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If you are re-using the existing head gaskets:

1) Reference the supplied Torque Sequence Diagram and remove the head bolt labeled #1.

2) We recommend that you use a bottoming tap to prepare the threads in the block and be sure to get all of the oil, fuel, dirt, etc out of the bolt hole by using compressed air (wear safety glasses)

3) Install a head stud into the by hand (put a small dab of engine oil onto the portion of the studs which will thread into the engine block). Make sure that the stud bottoms out into the block (finger tight).

4) Put a small amount of Molybdenum Assembly Lubricant onto the upper threads of the new stud, as well as both sides of the hardened washer. Torque the stud to 90lbft. Loosen it. Torque it a **second time to 90lbft**. Loosen it, and then tighten it for the **third time to 130lbft**.

NOTE: It is a lot of work to torque, loosen, torque, loosen, torque, and torque again, but it is WELL worth it. Doing this sequence of torqueing and loosening helps to seat the threads of the studs to both the nut, as well as to the cylinder block, and will give you the VERY BEST RESULTS. Take the time to do it right, so that you will never have to do it again.

5) Repeat steps 1-3 for bolt#2 on the diagram. Repeat and continue until all (remaining) bolts, labeled 1-10 are all torqued to 130lbft. Do not worry about the bolts labeled 11-15, as these are not disturbed during this procedure.

6) After ALL of the 10 head bolts have been torqued to 130lbft. Without loosening any nuts, torque each nut, in sequence (1-10) to a FINAL torque of 175lbft.

DONE! Give your arms a rest!

Give us a call, should you have any questions.
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