

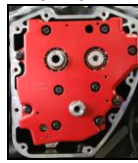


FEULING® CAMPLATE & OIL PUMP OPTIONAL FASTENER KIT INSTALLATION INSTRUCTIONS

FOR H-D TWIN CAM® ENGINES EQUIPPED WITH FEULING® OIL PUMPS AND CAMPLATES



Part # 8020/#8021



#8020 Installed on a #8000 camplate assembly

IMPORTANT NOTICE

This installation should be done by an experienced mechanic who has access to a factory service manual and all required tools. This procedure requires use of specialty tools.

CAUTION

Incorrect installation can cause engine damage not covered under warranty. Failure to install components correctly can cause engine seizure. Engine seizure may result in serious injury to motorcycle, operator, passenger, and/or others.

CAUTION

Improperly torqued bolts may result in oil leaks and distortion of the camplate and oil pump.

NOTE:

Part # 8020 Twin Cam® Engines '99 -'16 equipped with Feuling® HP+/RACE SERIES & HIGHFLOW Camplate & Oil Pump
Part # 8021 Twin Cam® Engines '99 -'16 equipped with Feuling® OE+ Camplate & Oil Pumps

- 1 Refer to the proper service manual for your model motorcycle engine.
- 2 Always use new O-rings
- 3 Clean and inspect case and oil pump holes and threads
- 4 Clean and inspect new Feuling® hardware
- 5 Lightly coat the threads and under head flange of the new Feuling bolts with the supplied moly lube.
- 6 Bolt the complete Feuling® Oil Pump including sub seal to the camplate only finger tight with the pressure housing of the pump facing the camplate using the correct oil pump bolts. 1.250 for HP+ and RS oil pumps and 1.00 bolts for OE+ oil pimps.
- 7 Check O-rings for proper installation on the case and oil pump.
- 8 Align the Gerotor gear flats with the crankshaft flats. Slide the assembly onto the crankshaft, using slight pressure slip sub seal into scavenge port hole of crankcase, it's helpful to use pressure from your thumb to push on the oil pump housing to ensure proper fit into the scavenge port hole, at the same time wiggle assemble to align camplate with dowel pins in case.
- 9 Install the 1" camplate bolts only finger tight then rotate engine over several times. This will center the camplate assemble. Alternately tighten all camplate bolts to 10 inch lbs.
- 10 Rotate engine over several times then final torque camplate bolts to 90 – 120 inch lbs.
- 11 With oil pump bolts only finger tight, rotate engine over several times. This will center the Gerotors and pump housing to the crankshaft. Alternately tighten the four oil pump bolts to 10 inch lbs.
- 12 Rotate engine over several times then final torque the oil pump bolts to 90 – 120 inch lbs.

<u>Part #</u>	<u>Description</u>
#8020	Camplate bolts = Qty. 6, ¼-20 x 1.000, Qty. 4 Oil Pump bolts = ¼-20 x 1.250, Moly Assembly Lube ½ OZ pack
#8021	Camplate bolts = Qty. 6, ¼-20 x 1.000, Qty. 4 Oil Pump bolts = ¼-20 x 1.000, Moly Assembly Lube ½ OZ pack

WARRANTY:

All parts are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of twelve (12) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at FOP's option if the parts are returned to FOP by the purchaser within the (12) month warranty period. In the event warranty service is required, the original purchaser must notify FOP of the problem immediately. Some problems may be rectified by a telephone call and need no further action. A part that is suspect of being defective must not be replaced without prior authorization from FOP. If it is deemed necessary for FOP to make an evaluation to determine whether the part was defective, it must be packaged properly to avoid further damage, and be returned prepaid to FOP with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. After an evaluation has been made by FOP and the part was found to be defective, repair, replacement or refund will be granted. Excessive flywheel pinion shaft run out can cause engine damage and or failure and will void manufactures warranty.

ADDITIONAL WARRANTY PROVISIONS:

FOP shall have no obligation in the event an FOP part is modified by any other person or organization, or if another manufacturer's part is substituted for one provided by FOP. FOP shall have no obligation if an FOP part becomes defective in whole or in part as a result of improper installation, improper break-in or maintenance, improper use, abnormal operation, or any other misuse or mistreatment. FOP shall not be liable for any consequential or incidental damages resulting from the failure of an FOP part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or any other breach of contract or duty between FOP and the customer. The installation of parts may void or otherwise adversely affect your factory warranty. In addition, such installation and use may violate certain federal, state and local laws, rules and ordinances as well as other laws when used on motor vehicles operated on public highways, especially in states where pollution laws may apply. Always check with federal, state, and local laws before modifying your motorcycle. It is the sole and exclusive responsibility of the user to determine the suitability of the product for his/her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties and risks associated therewith. Our high performance parts, engines and motorcycles are intended for experienced riders only. Feuling® Oil Pump Corporation reserves the right to change prices and/or discounts without notice and to bill at the prevailing prices at the time of shipments. The words Harley®, Harley-Davidson® and H-D® and all H-D® part numbers and model designations are used in reference only. Feuling Oil Pump Corporation is in no way associated with, or authorized by Harley-Davidson Motor Co®, to manufacture and sell any of the engine parts described in this instruction sheet.

FEULING® ARP® EXTERNAL ENGINE DRESS-UP FASTENER KITS

PRIMARY AND TRANSMISSION 12 POINT STAINLESS DRESS UP KITS - EXTERNAL BOLTS



TWIN CAM '99-'16

PRIMARY & TRANSMISSION KITS '99-'16

Kits include 12 point stainless bolts and applicable washers for the primary cover, derby cover, inspection cover, transmission top cover, right transmission bearing housing, clutch release cover, sensors and engine to transmission mounting bolts.

DYNA

[Part # 3054](#) T/C '99 - '05

[Part # 3055](#) T/C '06 - '16

BAGGER

[Part # 3056](#) T/C '00 - '06

[Part # 3057](#) T/C '07 - '16

SOFTAIL

[Part # 3058](#) T/C '00-'06

[Part # 3059](#) T/C '07 - '16

EVO - FXR / BAGGER

Part # 3067 '85 - '99 *Primary and Transmission*

Kit includes 12 point stainless bolts and applicable washers for the outer primary cover, inner primary cover outer front bolts, derby cover, inspection cover, shifter lever, transmission top cover, transmission bearing housing, transmission clutch release cover, moly paste and loctite for installation.

Part # 3068 '89 - '99 *Chassis and trim*

Chassis and Trim Stainless 12 point bolt kit, includes the following bolts and applicable washers: Front right rotor (bolts do NOT clear speedo for left rotor), fork clamps, headlight bracket, voltage regulator, rear fender struts, upper rear shocks (requires drilling larger fender hole), lower rear shocks, rear rotor, rear pully/sprocket, rear swing arm supports, front stabilizer, side covers (right & left), dash board, foot pegs (right & left), shifter peg, front axle nut, moly paste and loctite for installation.

Part # 3069 '89 - '99 *External Engine*

EVO Engines '85-'99, kit includes 12 point stainless bolts and applicable washers for Front engine mount, front case mount, rear engine to trans mount, oil filter adapter mount, upper oil pump, cam cover, case nuts (use factory bolts), rocker covers with sealing washers, moly paste and loctite for installation.

XL SPORTSTER® ENGINES '04 – PRESENT

Part # 3060 – *External engine* 12 point bolt kit, Includes: right side cover, lifter blocks, rocker covers, front engine mount, case bolts, crank sensor, required washers, Allen head button screws for points cover and moly paste for installation

Part # 3063 - *External primary/transmission* 12 point stainless bolt kit, Includes: Primary cover, clutch cover, required washers and moly paste for installation

Part # 3066 - *Chassis and trim* 12 point bolt kit, Includes: Front caliper, front rotor, fork clamps, rear fender struts, rear rotor, rear master cylinder line bracket, rear belt guard, required washers and moly paste for installation

MILWAUKEE EIGHT™ EXTERNAL FASTENER KITS

Part # 3052 - *External Engine kit* : 12 point stainless Cam cover, lifter block covers, rocker covers, case bolts, oil lines, volt regulator, Exhaust studs, exhaust locking nuts, Moly lube and Loctite

Fits: Milwaukee Eight '17 BAGGER

Part # 3053 - *External primary and transmission Kit*: 12 point stainless Primary cover, derby cover, top transmission cover right transmission bearing housing, clutch release cover, sensors and engine to transmission mounting bolts.

Fits: Milwaukee Eight '17 BAGGER