



A Division of Thiessen Products, Inc.

INSTRUCTION SHEET FOR #1000A

EVO CYLINDER STUD JIG ASSEMBLY

No. 1000A - Use on Big Twin 1984-1999 single cam only. (Note: Includes aftermarket engines.)
Use on Sportster 1986-Present, & Buell® 1987-present, except 1125R.

Note: Sportster® & Buell® will need shorter stud spacers, order separately to modify.

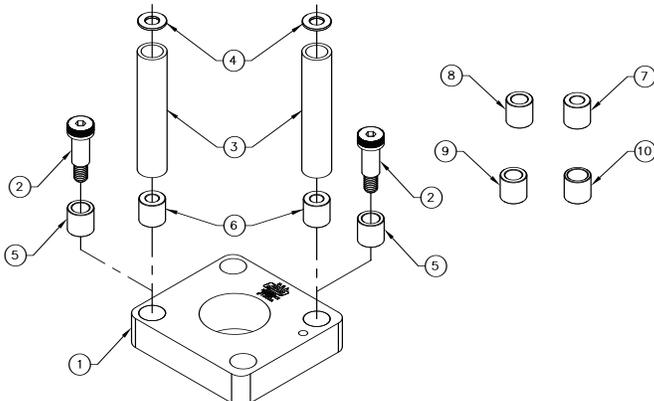
Use to repair stripped, or damaged, cylinder stud threads. This tool will hold centerline and squareness to where the factory intended them to be with the engine still in frame, using an angle head drill. If at all possible, disassemble cases to prevent drilling and tapping chips from entering the oiling system. If disassembling is not an option, be extra careful not to get chips in the assembled case. This can sometimes be kept to a minimum by applying heavy grease to the drill & tap.

CAUTION: Wear safety glasses. Excessive force may damage parts! Disconnect negative battery cable at the battery.

Tools needed to do the job: A 31/64 drill & a 9/16-12 tap for using with a 3/8-16 Keensert thread repair kit. If you are using a 3/8-16 Helicoil thread repair kit, you will need a letter (X) drill.



1. Refer to H-D® Service Manual for removal of top end (disconnect the negative cable at the battery). After you have removed the top end that has the bad case thread, there is a possibility that other threads are in need of repair. Remove old gasket and all bad studs. JIMS suggests to replace all studs to the latest H-D® cylinder studs, H-D® part No. 16837-85C or equivalent. Seal off the case bore as best as possible.
2. Install jig plate No. 1000A-1 with dowel pin hole over dowel pin in case.
3. Lock down jig plate with at least two hold down devices, either two shoulder bolts No. 1000A-9 or use two spacer tubes No. 1000A-2 over 2 No. 1000A-4 bushings. If all 4 cylinder studs have been removed, use the 2 shoulder bolts No. 1000A-9 to hold jig plate to case, with 2 drill bushings No. 1000A-3 lightly lubricated. Hold down devices should be diagonal from each other left to right or right to left.
4. Torque jig plate to 10 ft. lbs.
5. If you are using a Helicoil kit, use drill bushing No. 1000A-5 inserted into jig plate over the damaged hole.
6. Apply a fair amount of heavy grease to the flutes of drill size "X". Drill at a slow rate, in 1/4" increments. At the end of each 1/4" increment, clean off all chips. Drill to a depth of 3/4".
7. Helicoils are .562 long, no need to drill deeper than 3/4" deep. Remove drill bushing.
8. Insert tapping bushing No. 1000A-6 into jig plate over drilled hole. Apply a fair amount of grease into flutes of tap. Tap in 1/4" increments. At the end of each 1/4" increment, clean off all chips. Tap to the end of drilled hole only.
9. Remove tapping bushing, look down hole, if chips and grease are present, remove with a Q-tip.
10. Remove all traces of grease before you use 680 Loctite on Helicoil.
11. If you are using Keensert repair kit, use drill bushing No. 1000A-7 for the 31/64" drill.
12. With No. 1000A-7 drill bushing inserted into jig plate over the damaged hole, apply a fair amount of heavy grease to the flutes of 31/64" drill. Drill at a slow rate in 1/4" increments. At the end of each 1/4" of drilling, clean off all chips. Drill to a depth of 3/4", if your Keensert length is 1/2". If longer, drill about 1/4" more than the Keensert.
13. Insert tapping bushing No. 1000A-8 into jig plate over drilled hole. Apply a fair amount of grease into flutes of tap. Tap in 1/4" increments. At the end of each 1/4" increment, clean off all chips. Tap to the end of drilled hole only.
14. Remove tapping bushing, look down hole, if chips and grease are present remove with a Q-tip.
15. Remove all traces of grease before you use 687 Loctite on Keensert.
16. Reassemble top end per H-D® Service Manual.



PARTS AVAILABLE SEPARATELY

No.	Qty.	Description	Part No.
1	1	CYLINDER JIG	1000A-1
2	2	SOCKET CAP SHOULDER BOLT, 3/8-16 X 1/2 X 1 LG	1000A-9
3	2	STUD SPACER TUBES	1000A-2
4	2	FLAT WASHER, 3/8"	2031
5	2	.500" ID X 3/4" OD X 3/4" BUSHING	1000A-3
6	2	.378" ID X 3/4" OD X 3/4" BUSHING	1000A-4
7	1	.397" ID X 3/4" OD X 3/4" BUSHING	1000A-5
8	1	.468" ID X 3/4" OD X 3/4" BUSHING	1000A-6
9	1	.486" ID X 3/4" OD X 3/4" BUSHING	1000A-7
10	1	.572" ID X 3/4" OD X 3/4" BUSHING	1000A-8
11	1	INSTRUCTION SHEET	1000-IS

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