



Instruction Sheet For #1000A

Cylinder Jig Assembly

Use on Big Twin 1984-Present, Sportster 1986-Present & Buell 1987-Present



Use to repair stripped, damaged, cylinder base threads in engine case. This tool will hold centerline and squareness to where the factory intended them to be, all this 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 please be extra careful not to get chips in the assembled case. This can sometimes be kept to a minimum by applying a fair amount of heavy grease to the drill & tap.

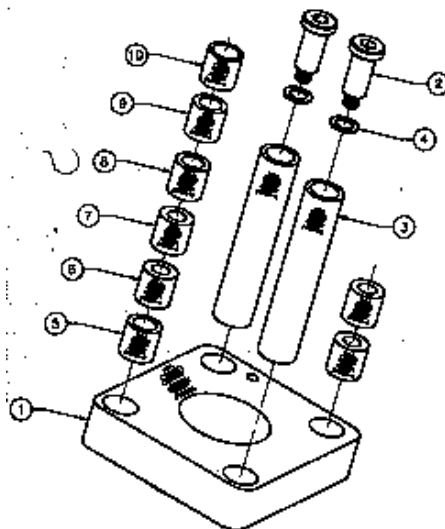
If you are going to drill with the motor in the frame you will need a 1/2" right hand drill.

Tools needed to do the job:

1 31/64 drill & 1 9/16-12 tap for using a Keensert thread repair kit 3/8-16.

If you are using a Helicoil thread repair kit 3/8-16, you will need a letter (X) drill.

1. Refer to H.D.® Service Manual for removal of top end (warning disconnect the negative cable to battery). After you have removed the top end that has the bad case thread, there is a possibility that the 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. Seal off the case bore as best as possible.
2. Install jig plate with dowel pin hole over dowel pin in case.
3. Lock down jig plate with at least two hold down devices, either the two shoulder bolts (see parts list item #9 with bushing #3 installed first), or use the spacer tube #2, with the two drill bushings #4 installed first. Hold down devices should be across 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 #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, drill 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 #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 #7 for the 31/64" drill.
12. With #7 drill bushing inserted into jig plate over the damaged hole, apply a fair amount of heavy grease to the flutes of drill size 31/64". Drill at a slow rate, drill 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 Keensert.
13. Insert tapping bushing #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	STUD SPACER TUBES	1000A-2
3	2	.378" ID X 3/4" OD X 3/4" BUSHING	1000A-4
4	2	.397" ID X 3/4" OD X 3/4" BUSHING	1000A-5
5	1	.468" ID X 3/4" OD X 3/4" BUSHING	1000A-6
6	1	.486" ID X 3/4" OD X 3/4" BUSHING	1000A-7
7	1	.572" ID X 3/4" OD X 3/4" BUSHING	1000A-8
8	1	.500" ID X 3/4" OD X 3/4" BUSHING	1000A-3
9	2	SHOULDER BOLT	1000A-9
10	2	FLAT WASHER	2031
11	1	INSTRUCTION SHEET	1000-IS

CAUTION: Wear safety glasses. Excessive force may damage parts! See JIMS® catalog for over 100 other top quality professional tools. The last tools you will ever need to buy.

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