

V-Twin Mfg.
Sifton Oil Passage Drain Tubes For use on EVO BT & XL Models
VT No. 16-0911

This is a custom application and should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.

Materials Required for Insert Installation:

Inserts (2)
3/8 x 16 tap for aluminum
3/16" - hex wrench
Instructions

Not in kit but needed:

Loctite 242 (blue)
Wide masking tape
WD-40

Note: Kit is for stock type cylinder only. It will not fit big bore cylinders. Satisfactory operation of the kit depends upon proper installation. Read and follow the instructions carefully.

Installation Instructions

1. Remove cylinders from engine. See service manual for instructions.
2. Identify which oil passages in the cylinders are to receive the insert. Each cylinder receives one insert each. When the cylinders are oriented as mounted on the engine, the front cylinder should have its insert installed in its front most oil passage, while the rear cylinder should have its installed in its rear most oil passage.
3. Attach a piece of wide masking tape to the outside of the cylinder extension near the correct oil passage. Insert a long 5/16" diameter bolt or dowel into the oil passage. Using a soft lead pencil scribe two lines on the tape to show the angle that the bolt (or dowel) makes to the surface of the cylinder.

Note: The oil hole is NOT at a right angle to the cylinder surface. The hole axis is also inclined toward the center of the cylinder.

Note: While not required, insert installation can be made easier by making and using a simple holding jig. Clamp the cylinder between the two pieces of wood, then clamp the jig in a bench vise.

4. Orienting the tap in line with the axis of the oil a passage hole, carefully start the tap in the oil passage hole, using the provided 3/8 x 16 tap. The scribe marks on the masking tap should be used to assist in orienting the tap.

Note: The required tap is specifically made for use with aluminum. Do Not use a tap made for steel.

5. Lubricate the tap and oil passage with a small amount of WD-40. Carefully tap the oil passage to the full depth of the tap threads (approximately 1" deep). Remove the masking tape from the cylinder extension. Thoroughly clean and dry the tapped hole and the rest of the oil passage.
6. Test the fit of the insert in the crankcase drain hole, by inserting at least 1" of the inserts drain tube end into that hole. If the drain tube cannot be inserted at least 1" into the crankcase drain hole without undue force, sand the outer diameter of the tube end until the insert can be inserted freely.

Caution: The insert should fit freely in the crankcase hole; do not force fit.

Note: The crankcase drain hole may be reamed slightly to attain the proper fit, but this is NOT recommended unless the crankcase is disassembled.

7. Put 2 drops of Loctite 242 (blue) on the two innermost threads of the tapped hole. Orient the insert so that the drain tube end extends from the cylinder, then screw the insert into the tapped threads. Insert the hex wrench through the other end of the oil passage and screw the insert into the tapped hole until it bottoms out at the end of the threads. Apply sufficient torque to fully seat the insert.
8. Perform a trial fit of the cylinder to the crankcase, without a gasket at this time. If the insert does not line up correctly with the crankcase drain hole, carefully adjust the orientation of the tube end of the insert until it can be inserted to its full depth without undue force.
9. Remove the cylinder from the crankcase, being careful not to bend the insert.
10. Repeat Steps 3-9 for the other cylinder, taking care to assure that the correct oil passage has been selected.
11. Reassemble engine, per service manual.

Caution: When mounting cylinder to crankcase. be careful to assure that the cylinder base gasket is not damaged or cut as the insert is inserted into the crankcase drain hole.

Figure 1: Identifying the correct oil passages

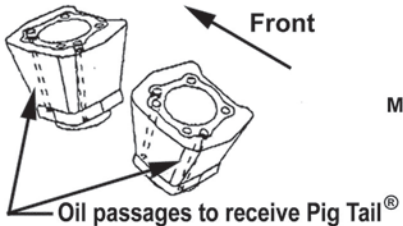


Figure 2: Marking oil passage angle

