

**V-Twin Mfg.
Oil Pump Drill Jig Factory Style
VT No. 16-1843**

This tool should only be used by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper use.

This Oil Pump Drill Fixture is designed for use on all 1973 and later 1200/1340cc engine model motorcycles.

NOTE: Refer to the appropriate Service Manual for removal, inspection, and installation of oil pump assembly. This pump body can be fitted to 1973 - 1980 style crankcases, provided the cases are drilled to match the pressure relief passage in the oil pump body. See Photo 1. This is accomplished with the use of the Oil Pump Drill Fixture VT No. 16-1843 as shown in Figure 2. The kit includes four screws which properly align the jig to the crankcases.

NOTE: The DRILL JIG Kit was originally supplied with four 1/4 - 20 in. screws. These screws will not fit 1973 through 1978 crankcases. Use two HEX HEAD SCREWS, 1/4- 24 in. in these applications. Any new drill jig kits purchased will come complete with both thread types.

Installation

1. For older crankcases with the two oil pump studs, as shown in Photo 2, mount the jig as shown.
2. On newer crankcases without studs, use all four screws for proper jig alignment. Be sure to tighten the jig securely to the crankcase surface.
3. Drill this hole all the way into the gear case compartment using a 5/32 in. drill bit. Be sure to remove all shavings before reassembling the engine.
4. Since the 1973 - 1980 style crankcases are no longer available, the new cases are supplied with a TAPERED PLUG, HD Part No.723. See Figure 3. It is not necessary to drill a hole in these new cases. Removing the TAPERED PLUG serves the same purpose.

Vehicle Fitment

See Photo 4. Configuration of oil line connection nipple fittings on the oil pump cover are different on certain model motorcycles. Motorcycles equipped with 5-speed transmissions have a different oil return and feed fitting configuration than that of 4-speed models. It will be necessary to change the angle of the fittings coming off the top of the oil pump cover. The FXDG needs a different oil return line fitting to accommodate the braided oil lines. Remove the existing fitting and insert a fitting from our Oil Pump Fitting Kit Vt No. 40-056. Position this fitting 35° to 40° away from the feed line fitting.

FLT/FXR

Turn first the oil feed fitting and then the oil return fitting 30° counterclockwise. For late 1984 and later FXR models, the feed (F) fitting must be in a vertical position. Remove the feed nipple and elbow from pump. Replace only the nipple into the pump. The elbow is not needed.

NOTE: To avoid leaks, apply a coat of Pipe Sealant to threads when replacing or repositioning fittings.

Primary Chain Oiler

On 1981 and later 5-speed models, late 1984 and later 4-speed models, or any vehicle with a primary belt, the primary chain oiler must be blocked off. You may use one of the following procedures to block off the primary chain oiler:

1. Braze shut the tube on the oil pump. (Item 1 in Photo 5 is connected to this tube.)
2. Clamp a 1/4 in. bolt into one end of a short length of oil line hose (about 4 in.). Connect other end of hose to the primary chain oiler tube. To prevent leakage, use a bolt that is not threaded all the way to the head and tighten clamps securely.

Installing Plug or Oil Switch

See Photo 6. For Evo engines, install the plug (1) as shown. On all other models, install the original oil pressure switch instead. Remember to coat threads of plug or switch with Pipe Sealant.

WARNING: Check engine oil pressure after completion of drilling and installation of oil pump. Check oil return to tank at oil tank fill plug.

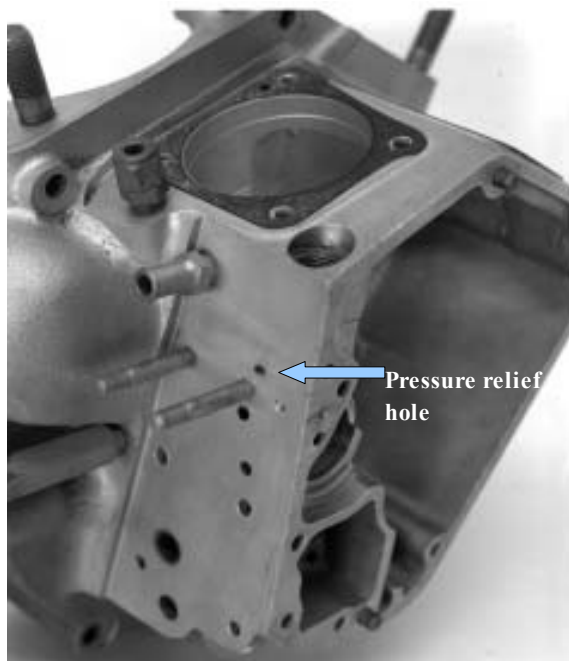


Photo 1 Drilled old style crankcase

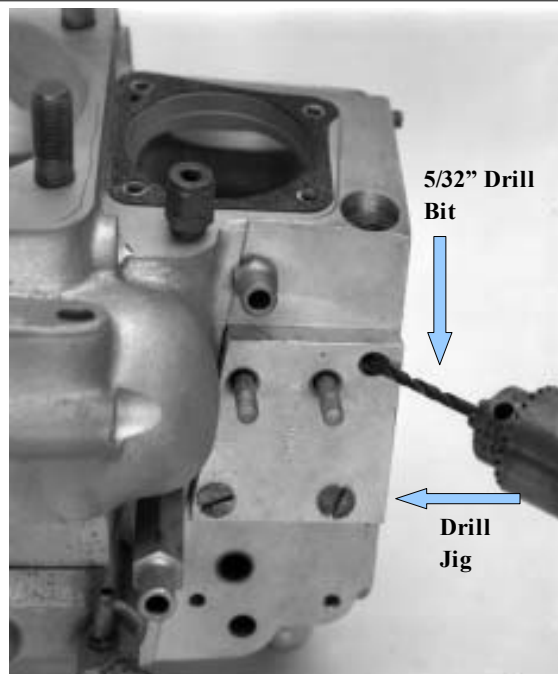


Photo 2 Drilling old style crankcase

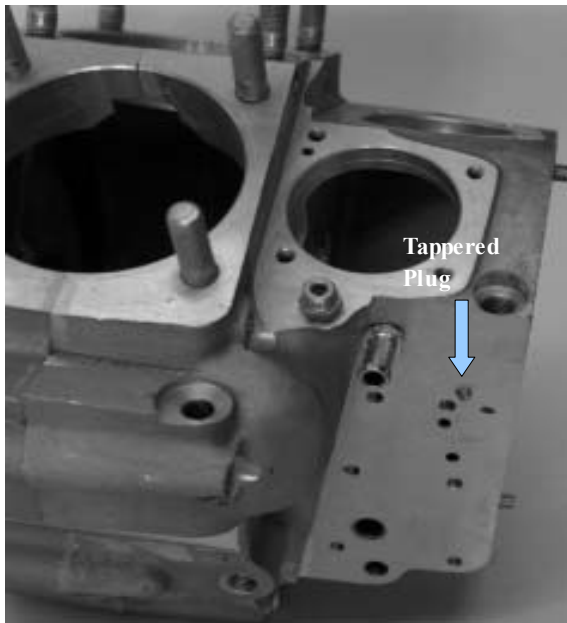
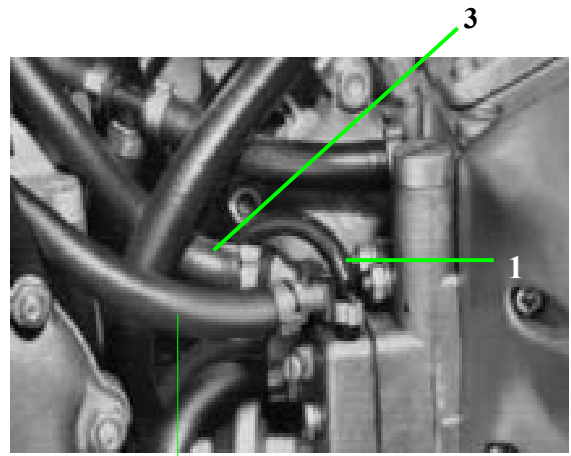


Photo 3. New Style Crankcase



- 1. Primary chain oiler
- 2. Main oil-feed Line
- 3. Oil return line

Photo 5. Oil Pump Hose Routing

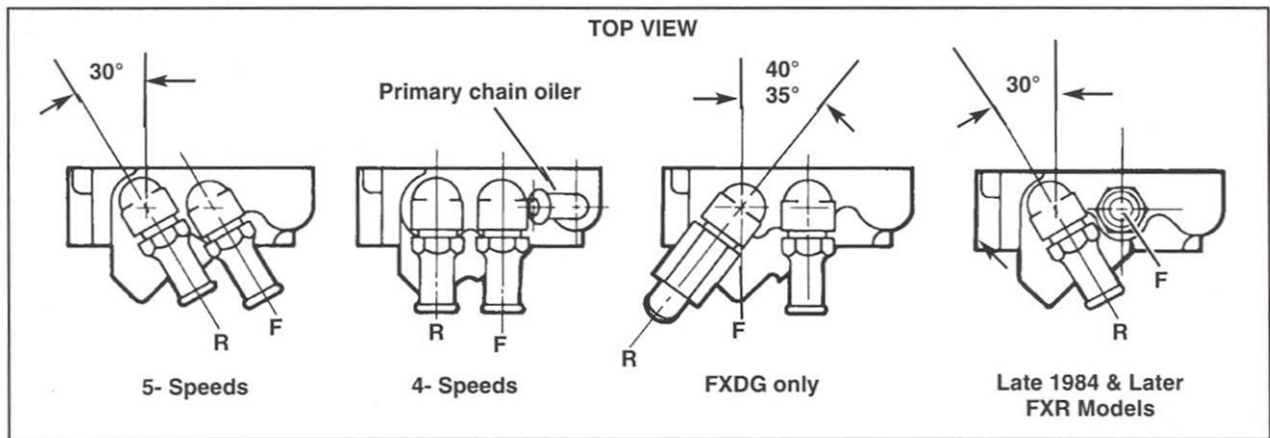


Photo 4. Fitting configuration

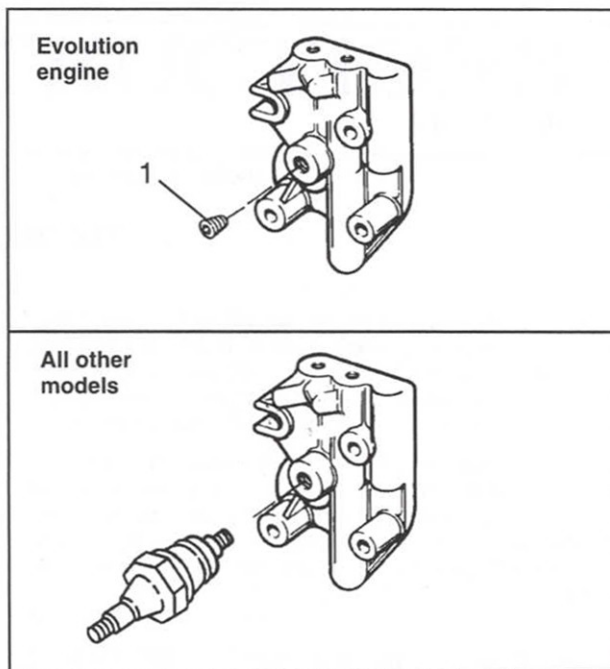


Photo 6 Pump cover oil pressure switch mounting hole