



ZPN 049112/049114/049108/049109

MODIFICATION FOR THE OIL RETURN FROM THE CYLINDER HEADS IN 1953 THRU 1984 CRANKCASES (Except Evolution Big Twin)

NOTE: This operation is necessary on any Big Bore cylinder installation for Panhead or Shovelhead engines with oil return from cylinder heads to the crankcase through a passageway in the cylinders.

Perform steps 1 & 2 with the crankcases still bolted together:

1. Place cylinder base gasket on crankcase and mark and centerpunch oil return holes. Make certain you have the gasket on in the correct position by checking the oil hole location with each cylinder.
2. Drill 1/4" diameter approx. 5/16" deep holes exactly square (90 degrees) to the gasket surface.
3. Disassemble crankcases and bolt front and rear cylinders to drive side crankcase half.
4. Drill through the oil return hole in the cylinder spigots into the crankcase approximately 5/16" (8mm) deep to connect with the previously drilled holes using a 1/4" diameter taper length drill.
5. Unbolt the cylinders and remove them from the crankcase. Use a file to break the thin web of metal at the gasket surface. File the slots to the width of the drilled holes.

Caution: Piston to cylinder wall clearance and piston ring end gap must be checked before installation. Refer to OEM workshop manual or piston and/or piston ring manufacturer for correct clearances

