HARLEY-DAVIDSON

M-821

SERVICE BULLETIN

April 7, 1981

1340CC OILING SYSTEM CHANGES

General

Because of Harley-Davidson's commitment to product improvement, a new oiling system for 1340cc engines has been designed and put into production. The new engines will incorporate the following changes:

1. A fitting is now located at the base of each cylinder and in each tappet guide with rubber hoses connected to these fittings. These hoses, which connect each tappet guide to its respective cylinder, have become part of the 1340cc oiling system and are designed to remove some of the excess oil that travels up the push rod tubes to the rocker boxes. The first 2500 engines built were designed with the oil fittings in the center of each cylinder base. The fitting on the front cylinder base has since been moved off center to the right side of the base. When servicing the first 2500 engines, it is very important that whenever the oil fitting is removed from the front cylinder a new O-ring and spacer be used when fitting is reinstalled. The sequence of installation is as follows:

   a. Install spacer, O-ring and then fitting onto cylinder.

   b. Tighten oil fitting to 70 to 80 in-lbs torque, then continue to tighten fitting until properly located.

The rear cylinder, and front cylinder with an off-center oil fitting, does not require the spacer and O-ring, although the tightening procedure is still the same.

2. The push rod tubes have quad rings in place of the upper and lower O-rings. The quad rings have a better sealing capability and can be used to replace the upper and lower O-rings on older engines.

3. New rocker box gaskets and new tappet guide gaskets (front and rear) are used in these engines. Refer to the list in Figure 1 for the part numbers.

4. New style cylinder heads include new intake and exhaust valves, new longer valve guides which do not require retaining rings, new upper and lower spring collars and valve guide seals. Because the new valves have a slightly larger diameter valve stem, the stem of each valve must be measured and the new valve guides reamed out to provide .0009 in. to .0026 in. clearance for the intake valves and .0014 in. to .0031 in. clearance for the exhaust valves. With the addition of the new valve guide seals a new cylinder head assembly procedure is necessary. See following procedure.

Assembly

1. Apply a liberal amount of high-quality motor oil onto the valve stem, then install valve into a valve guide that was previously reamed to allow for the correct clearance. Clearance requirements are .0009 in. to .0026 in. for the intake valves and .0014 in. to .0031 in. for the exhaust valves.

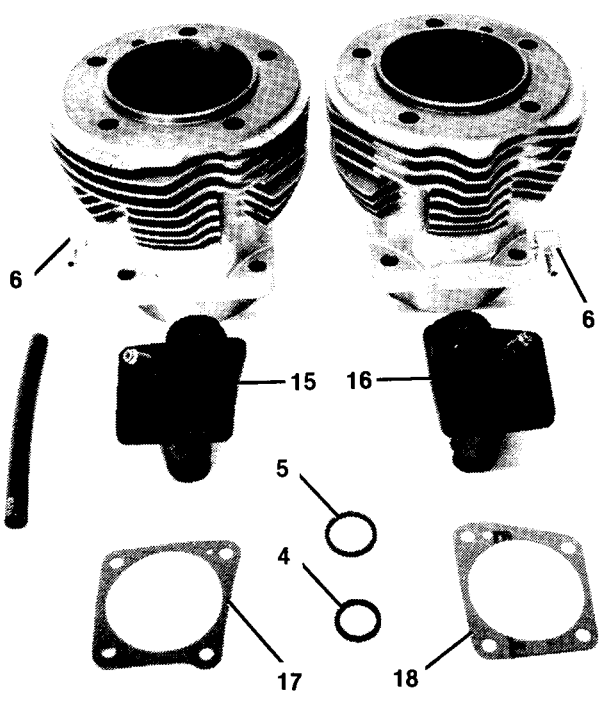
IMPORTANT

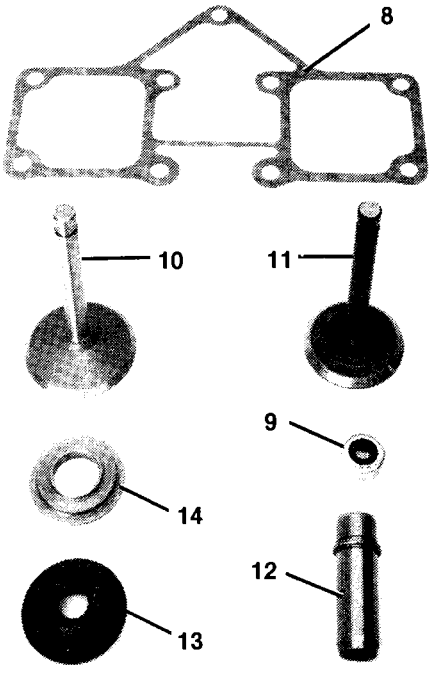
Whenever a valve is removed from a head the valve guide seal must be replaced. Also, whenever a valve guide is replaced the valve seat must be re-ground.

ROUTING:	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	CHIEF MECHANIC	MECHANIC NO. 1	MECHANIC NO. 2	MECHANIC NO. 3	MECHANIC NO. 4	RETURN THIS TO:
INITIAL HERE									

1861

1862





	Part No.	Name
1*	653	Spacer, first 2500 engines built
2*	10014	Clamp (4)
3*	11110	O-ring, first 2500 engines built
4	11118	Quad ring, upper push rod tube (4)
5	11133A	Quad ring, lower push rod tube (4)
6	16303—81	Fitting, cylinder (2)
7*	16852—67	Brace, engine mounting
8	17540—69A	Gasket, rocker arm cover (2)
9	18000—81	Valve guide seal (4)
10	18074—81	Valve, intake (2)
11	18082—81	Valve, exhaust (2)
12	18104—81 18106—81 18107—81 18108—81 18109—81	Valve guide, .006 in. O.S. Valve guide, .004 in. O.S. Valve guide, .003 in. O.S. Valve guide, .002 in. O.S. Valve guide, .001 in. O.S.
13	18219—81	Collar, valve spring (upper)
14	18222—81	Collar, valve spring (lower)
15	18602—81	Tappet guide, rear cylinder
16	18603—81	Tappet guide, front cylinder
17	18633—48B	Gasket, tappet guide (rear)
18	18634—48B	Gasket, tappet guide (front)

***Parts not shown in art.**

Figure 1. Oiling System Engine Components

2. Install and position a PROTECTIVE SLEEVE (Figure 2), Part No. 1403F, over the valve stem so that it completely covers the keeper area of valve stem.

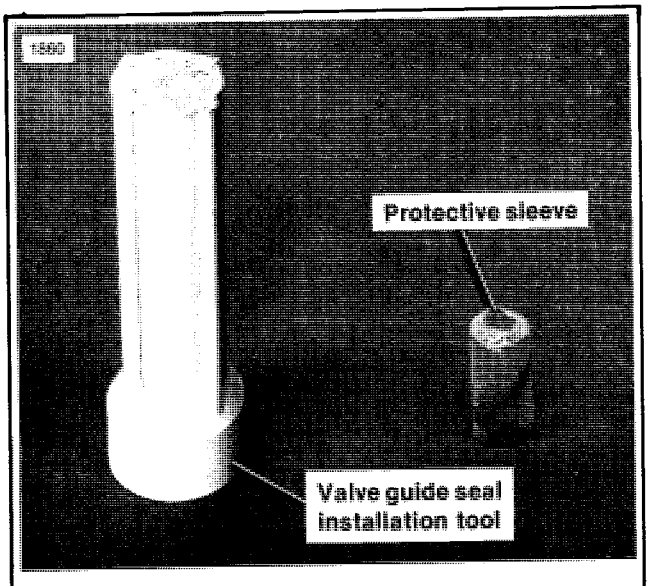
3. Slide a new valve guide seal down the valve stem and position it squarely against valve guide. Remove the protective sleeve.

4. Using a VALVE GUIDE SEAL INSTALLATION TOOL (Figure 2), Part No. 1429, carefully tap seal down on guide until it is firmly seated on guide.

IMPORTANT

Valve guide seal must be installed squarely and firmly onto guide or it will not stay on during engine operation.

5. Assemble the remainder of the head as described in the latest Service Manual.



Tools can be ordered through:

K-Line Industries, Inc.
315 Garden Lane
Holland, Michigan 49423
ATTN: Order Desk

Figure 2. Valve Guide Seal Installation Tool and Protective Sleeve