SERVICE BULLETIN

M-849 February 16, 1982

VALVE GUIDE REPLACEMENTS
1948 THRU 1979 1200/1340cc CYLINDER HEADS

General

Late style replacement valve guides are available for 1948 thru 1979 1200/1340cc cylinder heads. The replacement valve guides utillze a valve guide seal to help improve oil consumption.

See Figure 1. The late style replacement valve guide is longer and does not require a retaining ring. The top section has a larger diameter and is shorter to accept a valve guide seal.

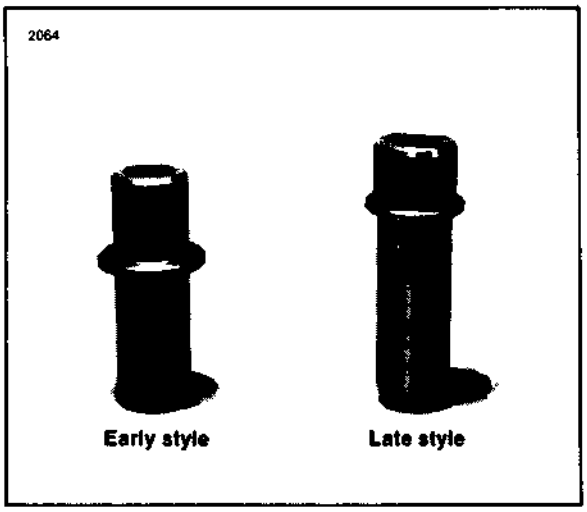

Figure 1. Early and Late Style Valve Guides

NOTE

The stamped number on late style valve guide O.D. indicates number of thousandths of an inch press diameter is oversize. Early style valve guide was marked by using grooves on the O.D.

The following chart shows the late style guide part numbers and size, and the early style superceded valve guide part numbers and size.

PART NUMBER	SIZE	SUPERCEDES PART NUMBER	SIZE
18138-79A	.001	18138-79	.001
18139-79A	.008	18139-79	.008
18140-79A	.006	18140-79	.006
18141-79A	.004	18141-79	.004
18142-79A	.003	18142-79	.003
18143-79A	.002	18143-79	.002

See Figure 2. When using the late style replacement valve guide (4), see preceding chart for correct part number, use the current lower spring collar (1), Part No. 18222-81, current top spring collar (2), Part No. 18219-81, and valve guide seal (3), Part No. 18000-81.

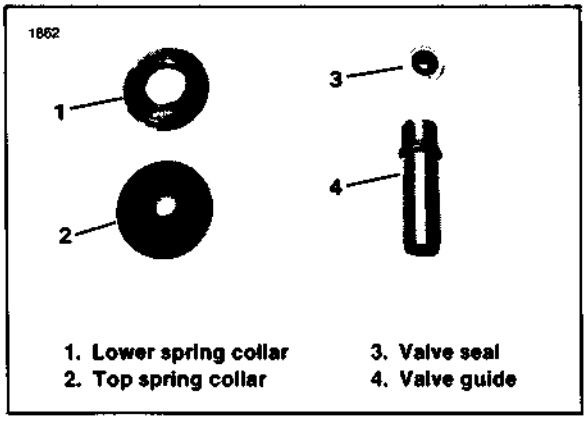

Figure 2. Current Assembly Parts

See Figure 3. The early style top spring collar, Part No. 18221-36, can be used in place of the current top spring collar after modification. Grind off .050 in. from the bottom of the collar.

The following chart shows the valve part numbers and valve stem diameters that can be used with the late style replacement valve guides.

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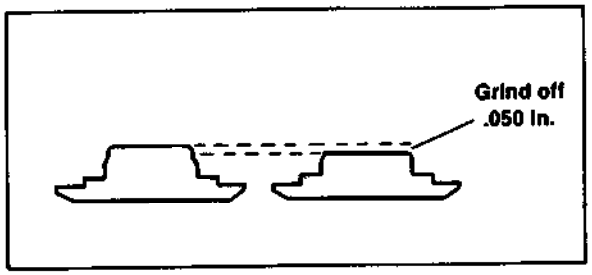

Figure 3. Top Spring Collar Modification

INTAKE	STEM DIAMETER	EXHAUST	STEM DIAMETER
18075-81	.3779-.3786	18086-81	.3764-.3771
18078-81	.3779-.3786	18089-81	.3764-.3771
18075-80	.3765-.3775	18086-80	.3740-.3750
18078-80	.3765-.3775	18089-80	.3740-.3750
18074-66	.3765-.3775	18082-57A	.3740-.3750

See Figure 4. The valves listed in the preceding chart have a slightly larger diameter valve stem. The stem of each valve must be measured with a micrometer, and the new valve guides reamed out using ADJUSTABLE VALVE GUIDE REAMER, Part No. HD-94808-80, to provide .0009 in. to .0026 in. valve stem-to-valve guide clearance for the intake valves, and .0014 in. to .0031 in. valve stem-to-valve guide clearance for the exhaust valves. Use Kent Moore SMALL HOLE GAUGE, their Part No. J26900-14, for measuring the valve guide bore.

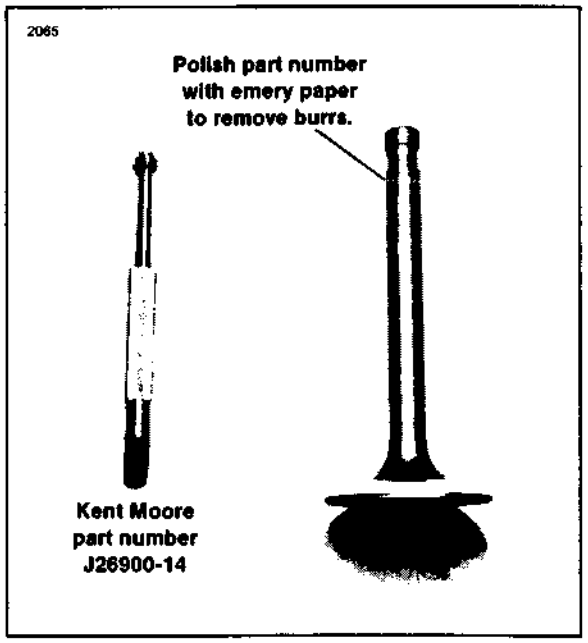

Figure 4. Small Hole Gauge and Valve

When the replacement valve guide and valve stem seal are used, a new cylinder head assembly procedure is required.

Assembly

1. Press valve guide into cylinder head using an arbor press.

IMPORTANT

Whenever a valve guide is replaced you must grind the valve seat.

2. See Figure 5. The cylinder head casting shoulder around the bore for the valve guide must extend a minimum of 1/8 in. from under the valve guide flange so the lower spring collar will sit square. If the shoulder extends less than 1/8 in., grind shoulder off flush with the cylinder head casting.

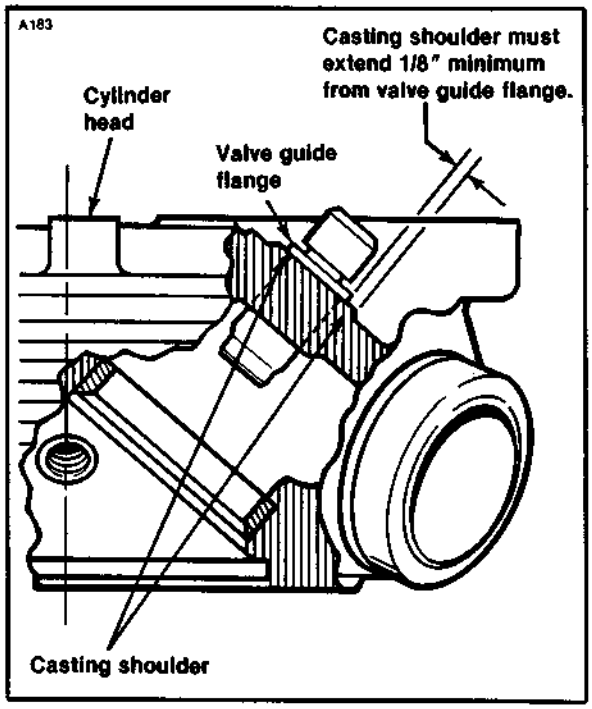

Figure 5. Cylinder Head Casting Shoulder

3. See Figure 6. After reaming guide for proper clearance, cutting valve seat in accordance with current Service Manual procedure, and grinding the casting shoulder around valve guide bore (Figure 5), check to determine that the back of the valve stem head (1) does not interfere with the end of the valve guide (2). If there is interference, remove material from end of valve guide (2) until clearance is obtained.

NOTE

See Figure 4. Before installing valve into guide, check for location of valve part number on valve stem. If the number is stamped below the valve key groove, polish

with emery paper to remove any burrs which could damage the valve seal during installation.

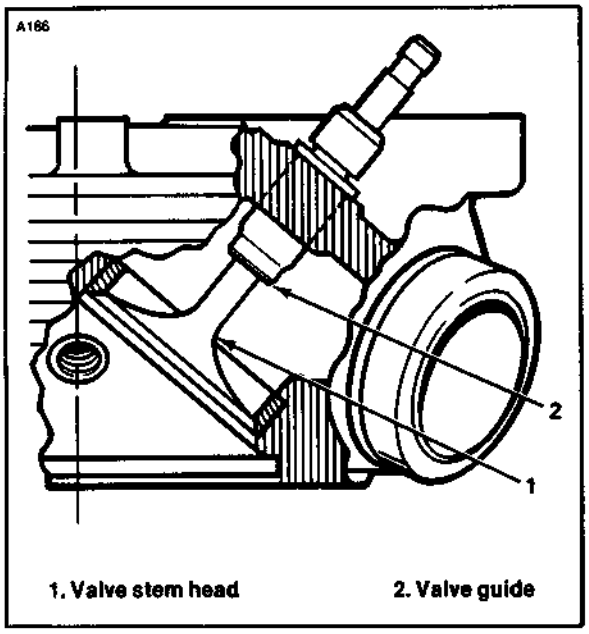

Figure 6. Valve Guide to Valve Stem Head Clearance

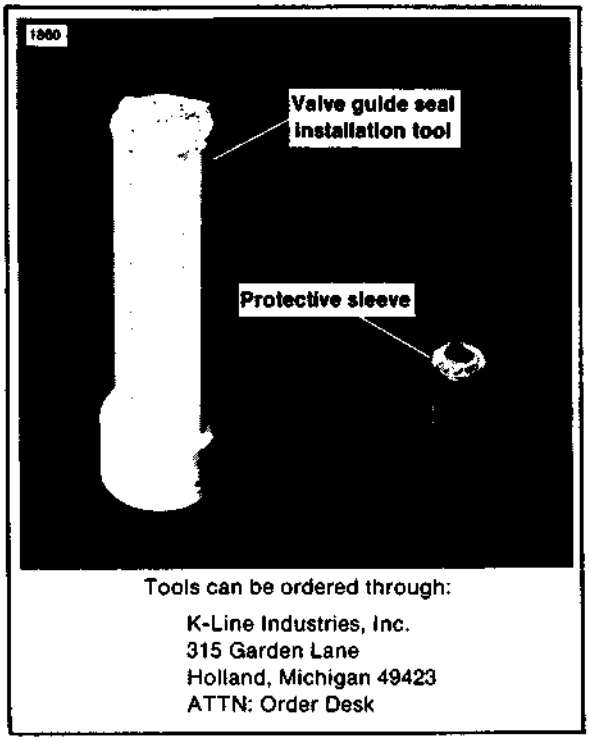

Figure 7. Valve Guide Seal Installation Tool and Protective Sleeve

4. Apply a liberal amount of motor oil onto the valve stem, then install valve into a valve guide.
5. See Figure 7. Position a PROTECTIVE SLEEVE, K-Line Part No. 1403F, over the valve stem so that it completely covers the keeper area of valve stem.
6. Slide a new valve guide seal, Part No. 18000-81, down the valve stem and position it squarely against valve guide. Remove protective sleeve.
7. See Figure 7. Using VALVE GUIDE SEAL INSTALLATION TOOL, K-Line 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.

8. Assemble the remainder of the head as described in the applicable Service Manual.