SERVICE BULLETIN

M-870 April 15, 1983

NEW VALVE GUIDES FOR XL SERIES
TRANSMISSION MAINSHAFT SHIMS
IGNITION MODULE/SENSOR CONNECTORS

VALVE GUIDES

New style intake and exhaust valve guides, Figure 1, are being incorporated on the XL series 1000cc engines, beginning with crankcase number 783. New flat lower spring collars and new longer inner and outer springs are also being included at the same time. The longer springs provide increased spring tension.

The new style valve guides will also be used for service replacement of old style guides on all XL series 1000cc engines, and will allow the use of all old valve train components, if desired.

IMPORTANT

The new lower spring collars and new longer springs can only be used with the new style valve guides.

NOTE

To prevent possible mismatch of springs with old style valve guides and valve train components, the new springs are identified with red or orange paint on several coils.

New Spring Data

Outer Spring Load
Valve Closed — 52-67 lbs. @ 1-3/8 in.
Valve Open — 171.6 - 194.4 lbs. @ 3/32 in.

Inner Spring Load
Valve Closed — 20.9 - 29.1 lbs. @ 1-13/64 in.
Valve Open — 79.7 - 90.3 lbs. @ 25/32 in.

Spring Free Length
Outer Spring — 1-9/16 in.
Inner Spring — 1-11/32 in.

Because the new style valve guides do not have a shoulder, special VALVE GUIDE DRIVER HD-33871, Figure 2, must be used to control the guide installed height. See Figure 3.

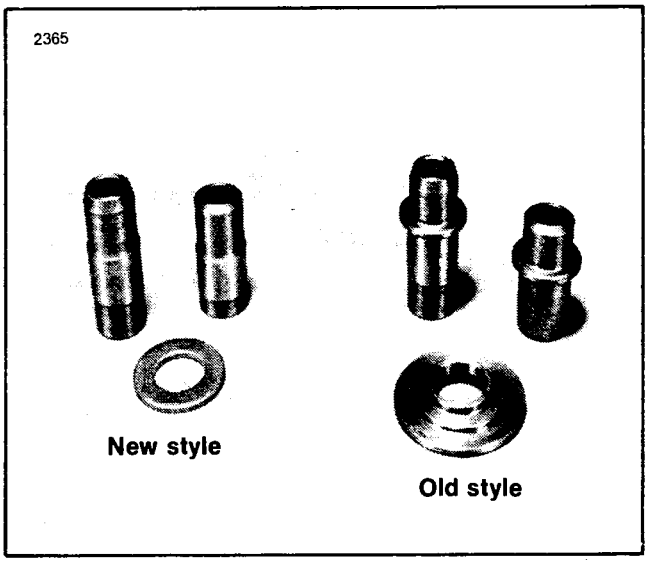

Figure 1. Valve Guides and Collars

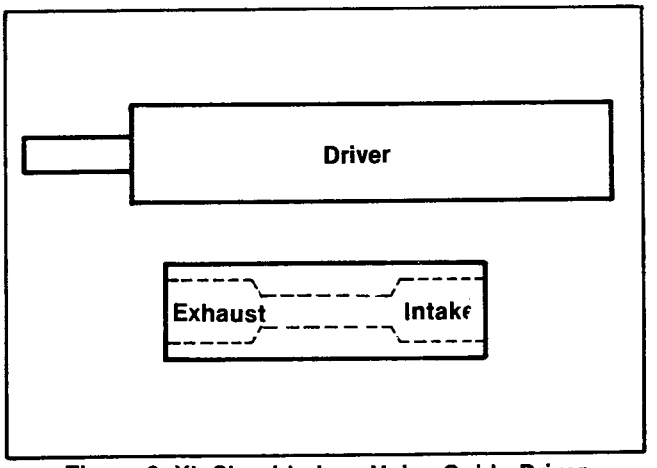

Figure 2. XL Shoulderless Valve Guide Driver

The following chart shows the new style replacement guide part numbers and size and the old style superseded valve guide part numbers and size.

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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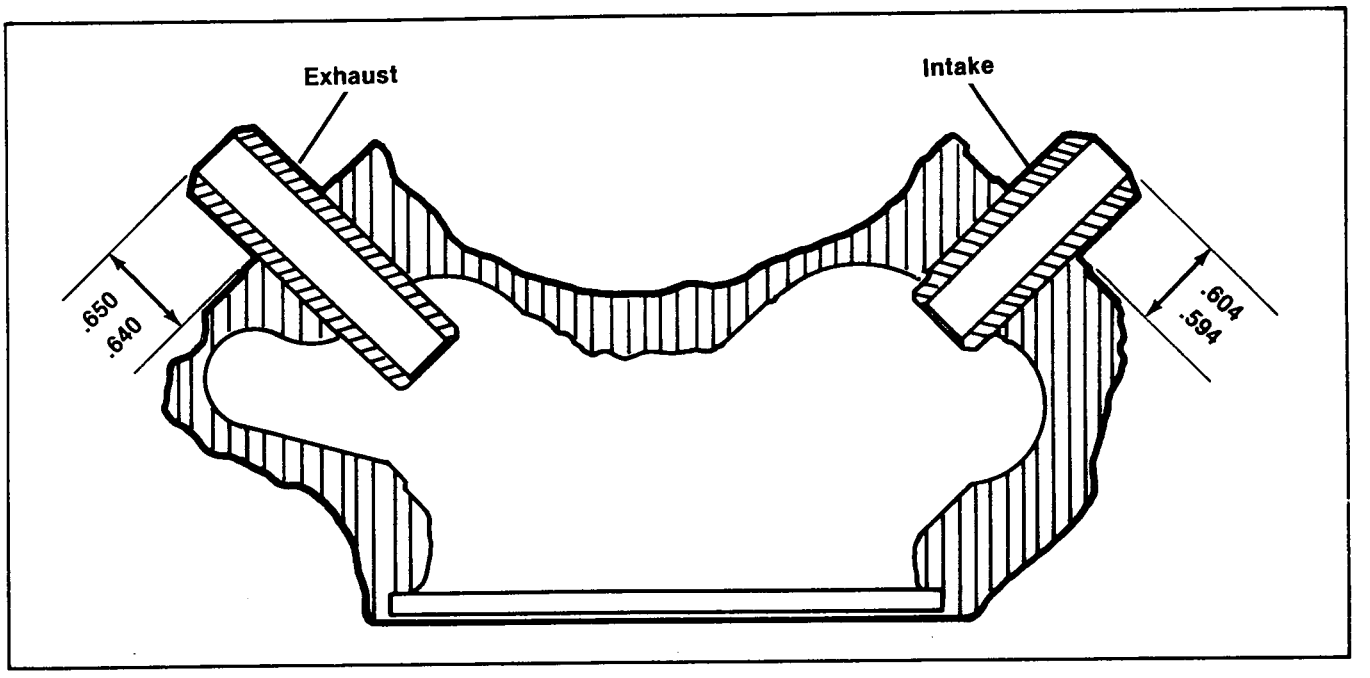

Figure 3. Valve Guide Projection

New Style	Size	Application	Old Style	Used On
18170—57B	STD	Exhaust	18170—57A	1954 — Early 1983
18172—57B	.001 O.S.	Exhaust	18172—57A	1954 — Early 1983
18171—57B	.002 O.S.	Exhaust	18171—57A	1954 — Early 1983
18168—79A	.004 O.S.	Exhaust	18168—79	1979 — Early 1983
18176—57C	STD	Intake	18176—57B	1954 — Early 1983
18179—57C	.001 O.S.	Intake	18179—57B	1954 — Early 1983
18180—57C	.002 O.S.	Intake	18180—57B	1954 — Early 1983
18191—79A	.004 O.S.	Intake	18191—79	1979 — Early 1983

PROCEDURE (Figure 4)

1. After removing the valve keys, valves, collars and springs, heat the cylinder head and drive the old valve guides from the head with a hammer and drift pin.

2. Install the new valve guides using VALVE GUIDE DRIVER HD-33871. Place the correct end of the tool over the guide and drive the guide into the head until the tool bottoms on the head.

CAUTION

Excessive force may damage the cylinder head or guides.

3. Reassemble the valve train as described in the current XL Service Manual.

NOTE

Remember, if you're using the new lower collar, then the new springs must be used. Also, if new springs are used, you must use the new lower collars.

TRANSMISSION MAINSHAFT THRUST WASHERS

A production change, modifying the method of controlling transmission mainshaft end play, is being incorporated on late 1983 XL series machines. The new style thrust washer, Figure 5, is thicker than the old style thrust washer, allowing the use of one washer where two were previously required. Also the tang used to prevent full rotation of the washer has been eliminated as has been the rollpin in the crankcase, Figure 6.

The new thrust washers are available in four thicknesses; 0.098, 0.107 inch, 0.116 inch and 0.125 inch. A single new washer can replace the earlier style thrust washers if the end play is great enough to require the use of the new thicker washers.

The early style thrust washers (0.030 - 0.085 inch) with tangs will be available for service through Parts and Accessories for those early vehicles requiring thinner washers.

See Figure 7. The mainshaft end play limits remain the

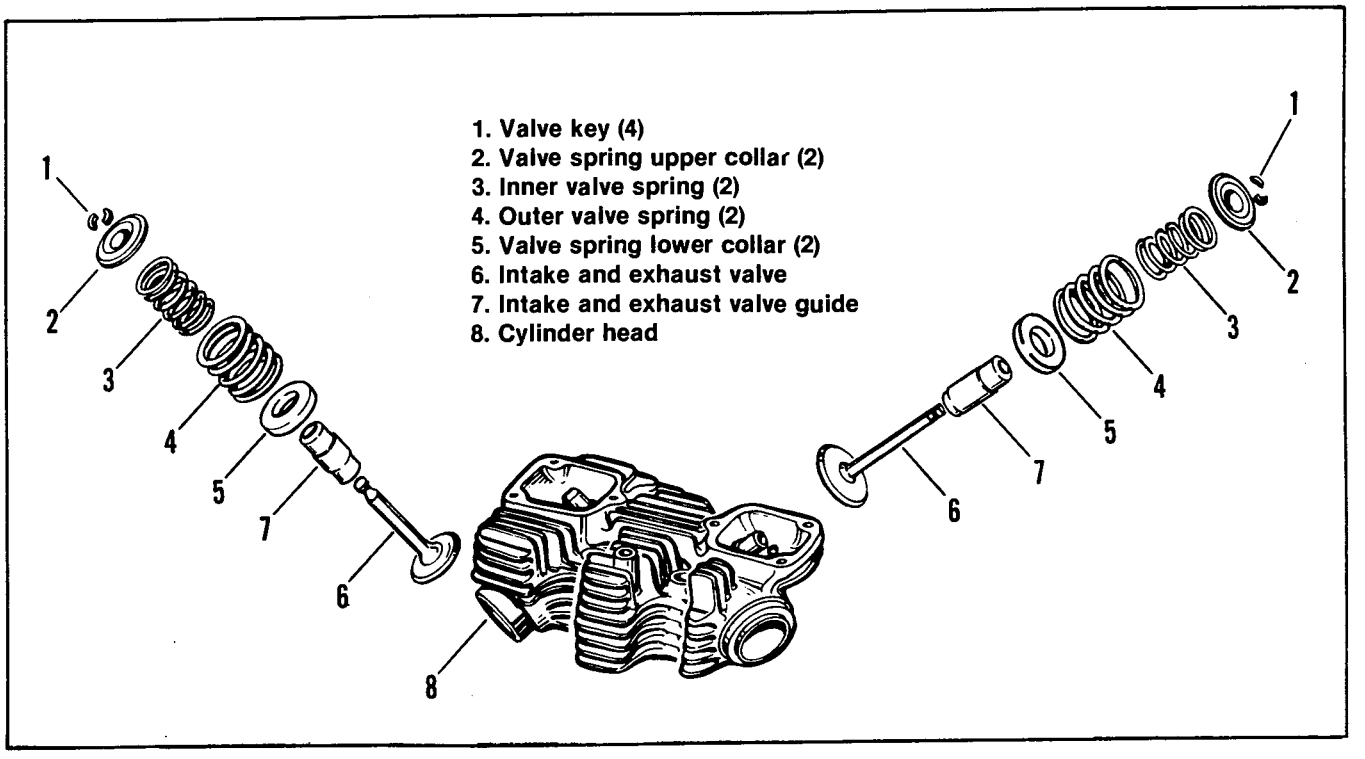

Figure 4. Valve Train Components

same, 0.003 inch minimum with preload to 0.020 inch unloaded.

Figure 5. Mainshaft Thrust Washer

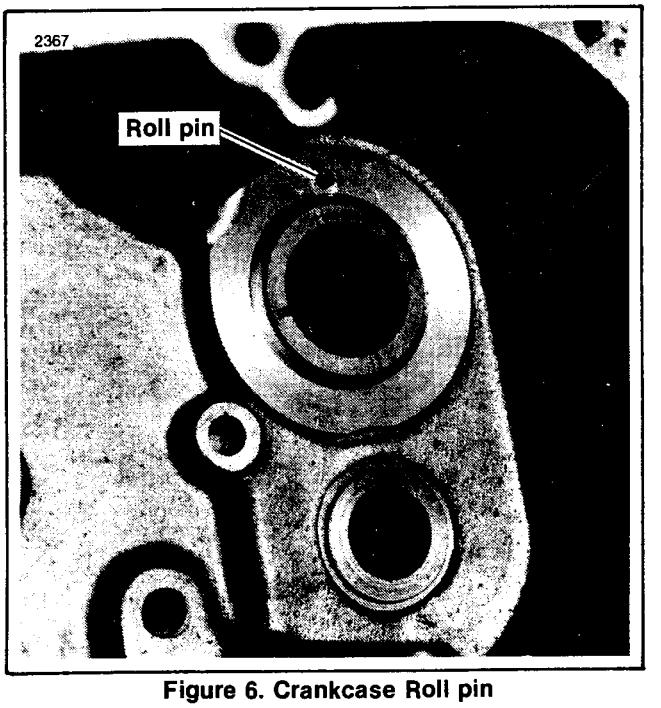

Figure 6. Crankcase Roll pin

IGNITION MODULES/SENSORS

Late 1983 XL ignition modules Part No. 32410—84 and sensor assemblies Part No. 32400—80 are being manufactured with rubber rather than plastic connectors. This change is being made to improve component service life and to avoid possible separation of connectors in the field. When servicing early 1983 ignition systems, always check the module/sensor connectors for tight fit.

The late 1983 XL modules and sensors will interchange with the early 1983 XL modules and sensors, but will require replacement of the mating connector half if only one component is replaced. Rubber receptacles with 2 sockets and 1 pin or rubber plugs with 2 pins and 1 socket, (Figure 8) are available through Parts and Accessories.

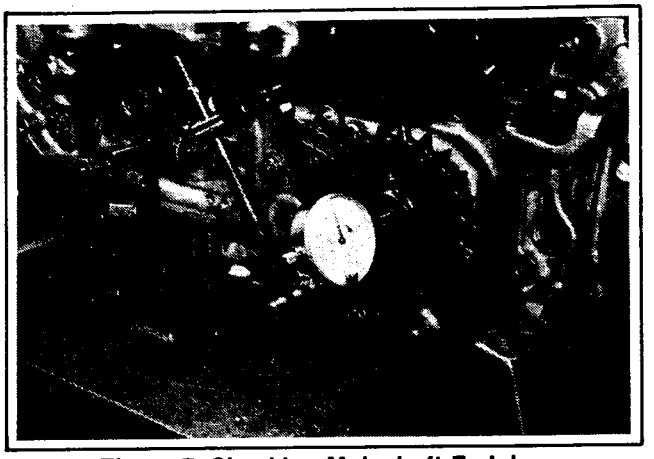

Figure 7. Checking Mainshaft Endplay

Component	Part No.	Material	Used On
Module connector	72051—77	Rubber	Late 83
Sensor connector	74521—77	Rubber	Late 83
Module connector	72051—83	Plastic	Early 83
Sensor connector	74521—83	Plastic	Early 83

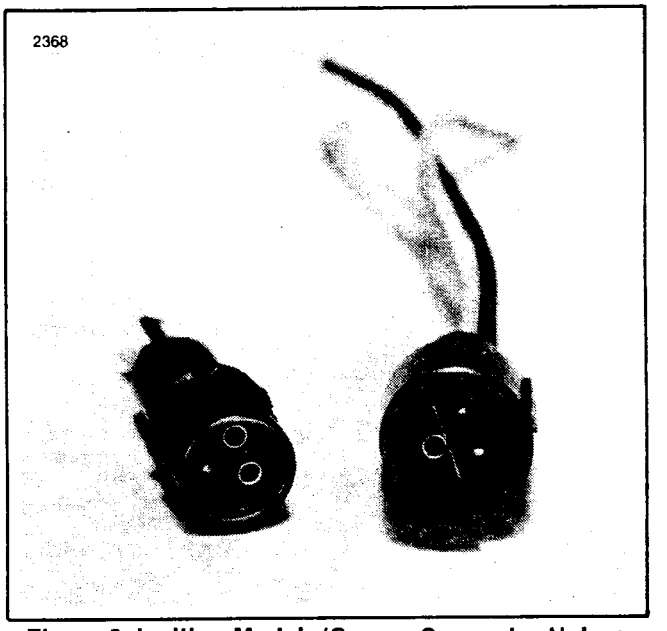

Figure 8. Ignition Module/Sensor Connector Halves

NOTE

When servicing early 1983 XL ignition system components, always replace the ty wrap used to secure the module and sensor plastic connector halves.