



OBSELETE PERFORMANCE ASSEMBLY SOLUTIONS

Work Instruction
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Operation Number: 40 Description: Cylinder Head Sub-assembly and Leak Test	Prepared By: Quality Approved by: Manufacturing
Revision Date: 02/11/03 Revision Level: 07	Issue Date: 12/05/02 Issued by: Quality
Document Number: PAS-WI-IMC-112002-8	Document Tier: 3
Title: Cylinder Head Sub-Assembly & Leak Test	

CYLINDER HEAD SUB-ASSEMBLY



**INSTRUCTIONS ARE INTENDED FOR BOTH FRONT AND REAR CYLINDER HEADS.*


1. Inspect the head for paint defects, scratches, oil, grease, dirt. The head should be free of any and all contaminants.
2. Apply a small amount of red thread lock to, and install two (PN750027) set screws in each of the cylinder heads. (Front and Rear)



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3. Apply a small amount of red thread lock and insert two (PN01-165) studs in each of the cylinder heads and torque to 8-12 ft lbs. 
4. Insert the valves, Intake (PN01-045) and Exhaust (PN01-150) in their respective pockets. Intake valves are always the larger of the two and are inserted into the larger pocket.

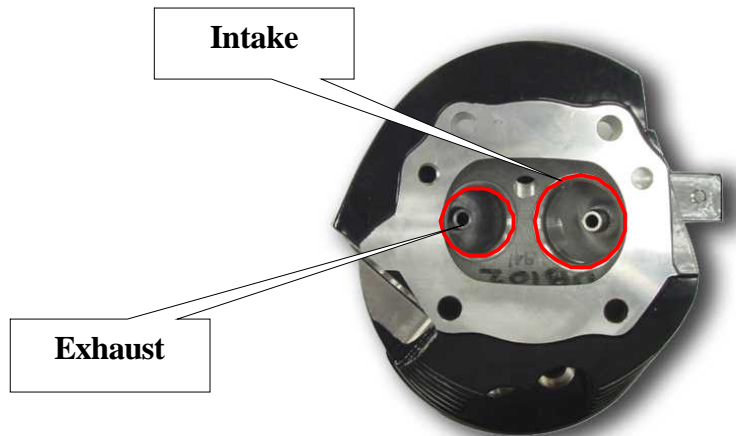


FIGURE 1.1

5. Carefully flip the head over and install the Valve Seals (PN01-261) over the top side of each valve.

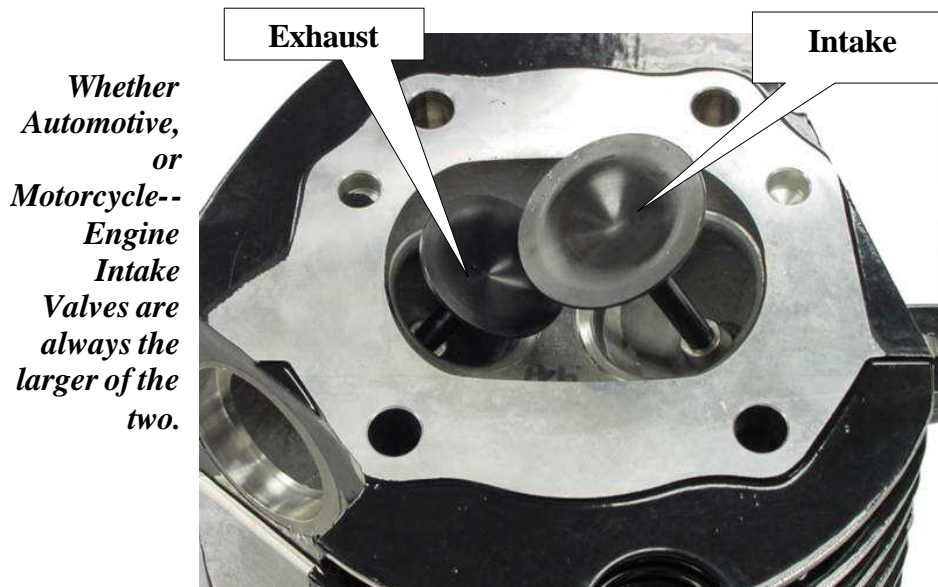


FIGURE 1.2

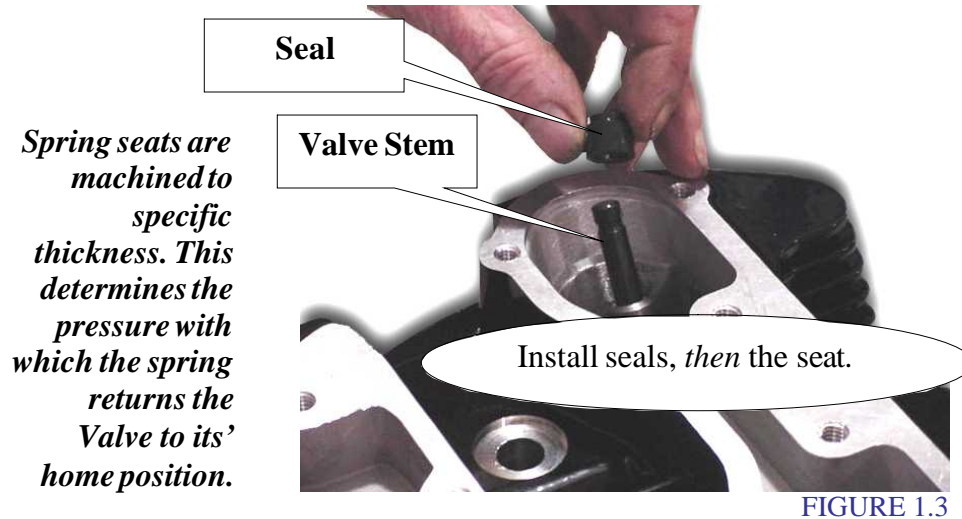


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6. Install one (1) Valve Seal(s) (PN01-261) over each of the Valves, making sure that they are pushed all the way down. Install the Seat(s) (PN01-155), over the seals.



7. Install the Valve Springs (PN01-601). FIGURE 1.4
8. Install Valve Spring Retainers (PN01-156) over the top of the Valve Springs.
9. Using the Sunnen Spring Compressor, compress the spring and Retainer. Insert two Valve Keepers (PN01-159) on each retainer, and then decompress the spring.



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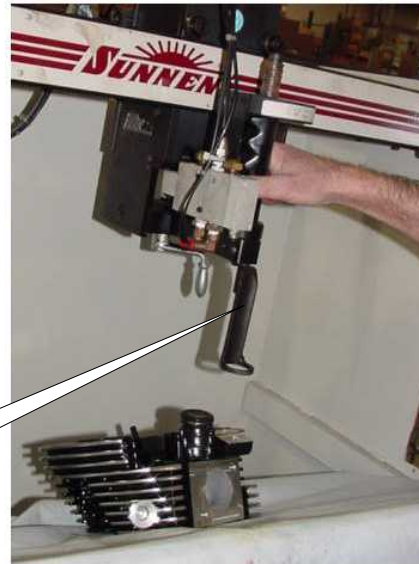


FIGURE 1.5

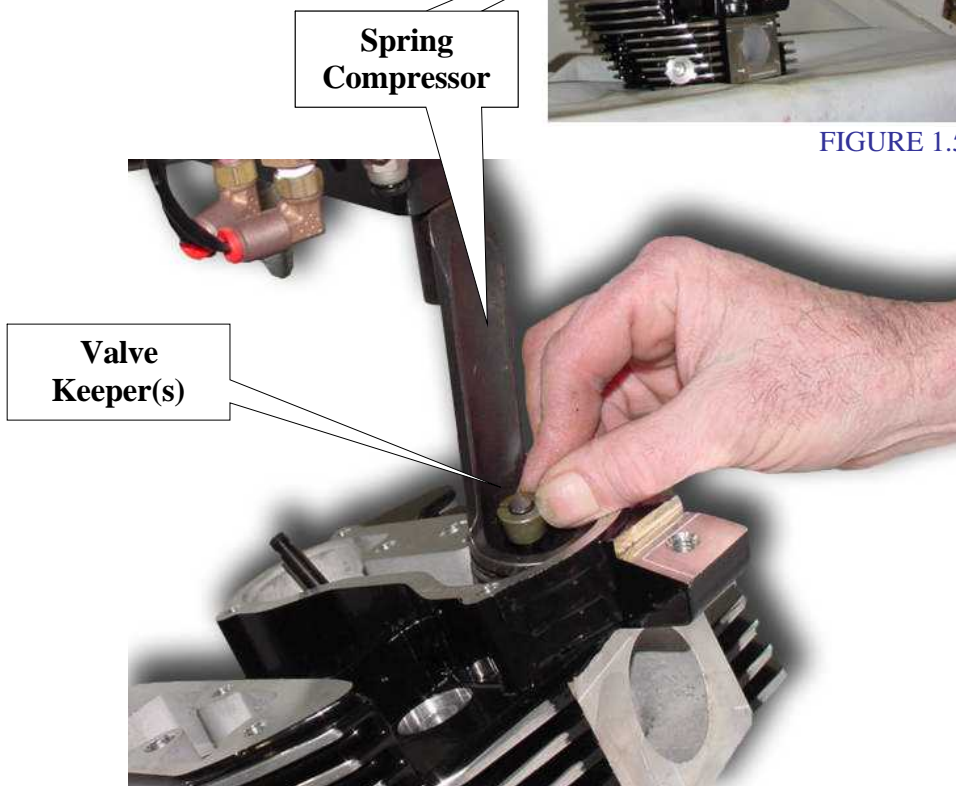


FIGURE 1.6



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10. Vacuum check @ 25-26 inches vacuum. Decay not to exceed 5.0 inches in 5 seconds. Initial the cylinder head using a paint pen to denote acceptance. If the part fails leak test, red tag it and remove it from the accepted population, placing it in the IMC MRB Hold.
 - a) Move fully assembled cylinder heads to the K-Line Vacuum Test.
 - b) Insert the Quick-Connect hose to the Spark Plug Hole.
 - c) Attach the Vacuum Tester to the Quick-Connect.
 - d) Open the Gauge, turning the in-line valve handle to a vertical position that is in parallel to the feed line. "On line on, off line off."
 - e) Switch the compressor on.
 - f) Gauge should read approximately 26 inches of vacuum.
 - g) Close the in-line valve. (Horizontal Position.)
 - h) Shut the compressor off.
 - i) Count slowly to "Five" (One Mississippi, two Mississippi, etc.)
 - j) Acceptance criteria: Less than 5.0 vacuum inches of loss in 5 seconds.

11. Place complete and tested assemblies in the appropriately marked holding area.

MAPICS PART #	INDIAN PART #	QTY/DESCRIPTION
430032	01-236	(1)Front Cylinder Head
430033	01-237	(1)Rear Cylinder Head
950021	01-150	(1)Exhaust Valve
950020	01-145	(1)Intake Valve
780003	01-155	(2)Spring Seat(s)
760019	01-261	(2)Valve Seal(s)
850017	01-601	(2)Valve Spring(s)
700015	01-156	(2)Valve Spring Retainer(s)
520002	01-159	(8 total-4 per head)Valve Keeper(s)
880016	01-165	(2)Exhaust Stud(s)