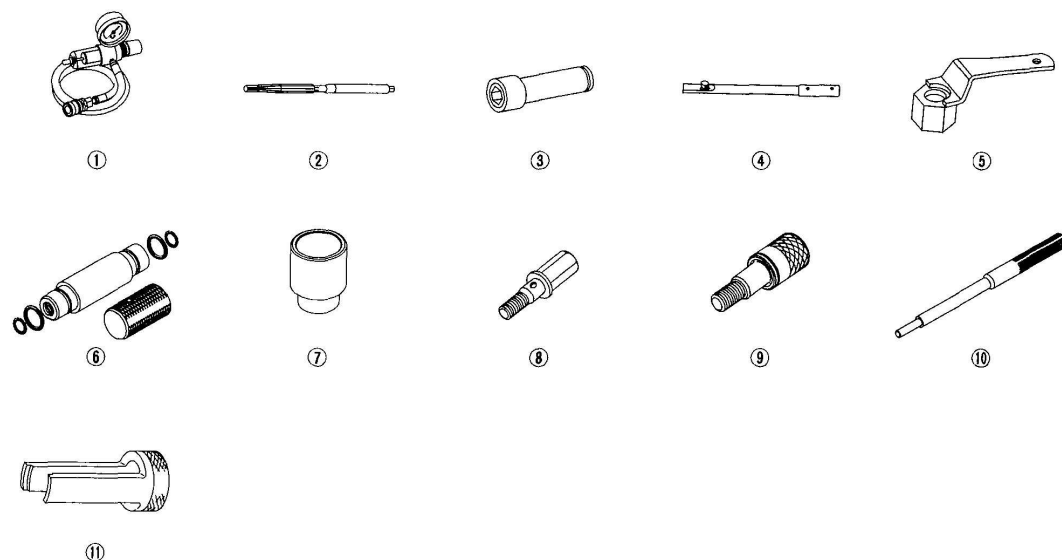


2003-06 ENGINE

Cylinder Head - MDX

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07AAJ-PNAA100	Air Pressure Regulator	1
②	07HAH-PJ7A100	Valve Guide Reamer, 5.5 mm	1
③	07JAA-001020A	Socket, 19 mm	1
④	07JAB-001020A	Holder Handle	1
⑤	07MAB-PY3010A	Holder Attachment, 50 mm, Offset	1
⑥	07PAD-0010000	Stem Seal Driver	1
⑦	07PAF-0030100	Camshaft Oil Seal Driver	1
⑧	07VAJ-P8A010A	VTEC Air Adapter	1
⑨	070AJ-0030100	VTEC Air Stopper	1
⑩	07742-0010100	Valve Guide Driver, 5.5 mm	1
⑪	07757-PJ1010A	Valve Spring Compressor Attachment	1

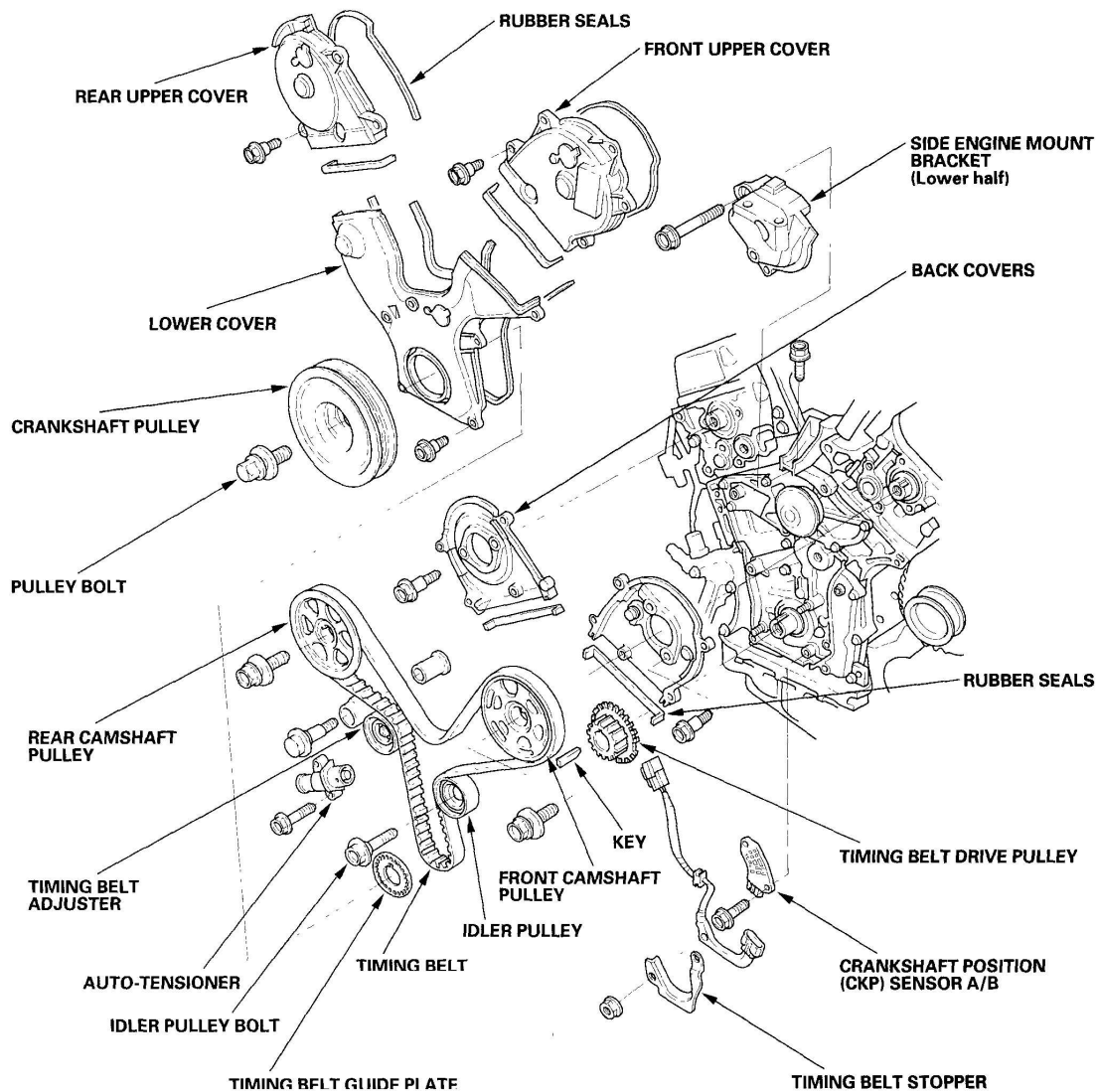


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Fig. 1: Identifying Special Tool

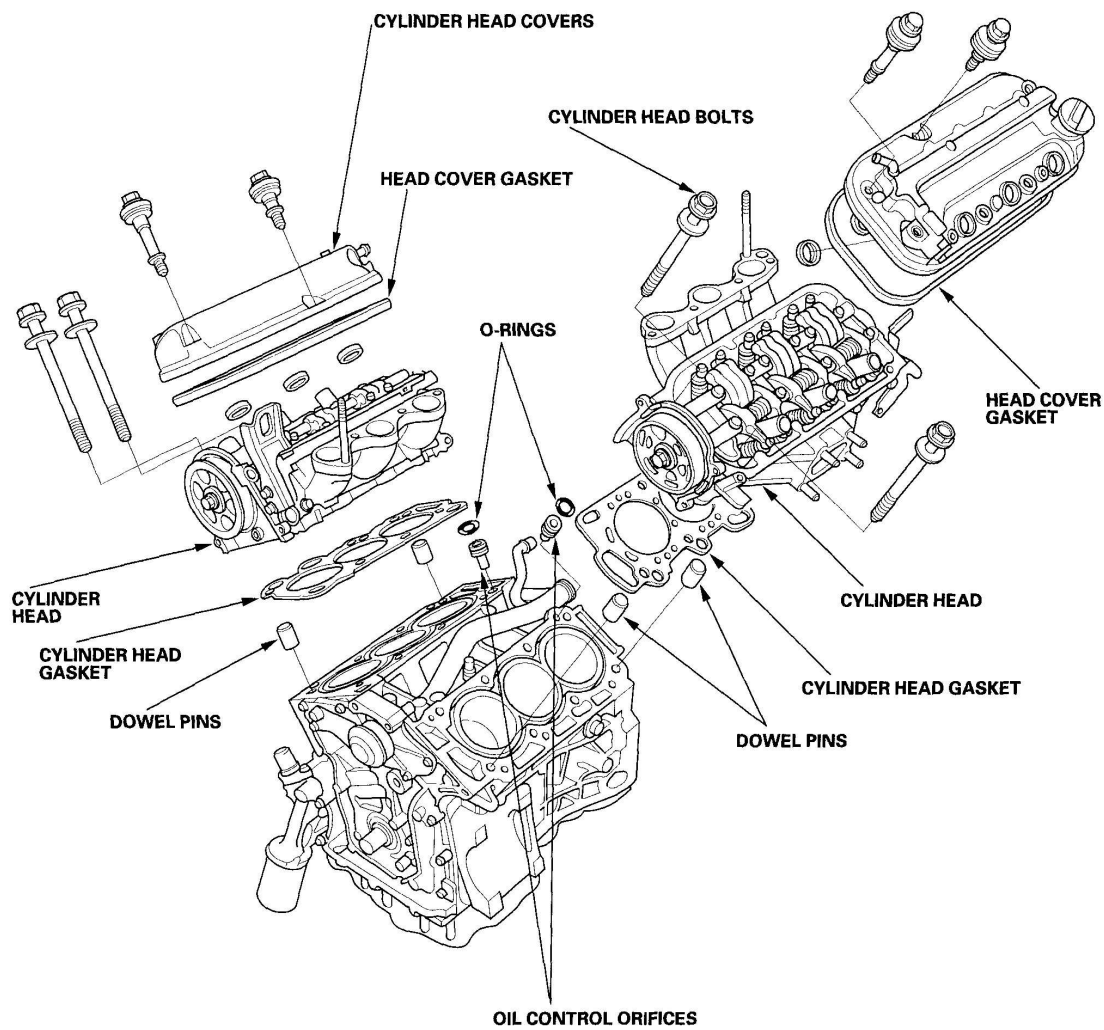
Courtesy of AMERICAN HONDA MOTOR CO., INC.

COMPONENT LOCATION INDEX



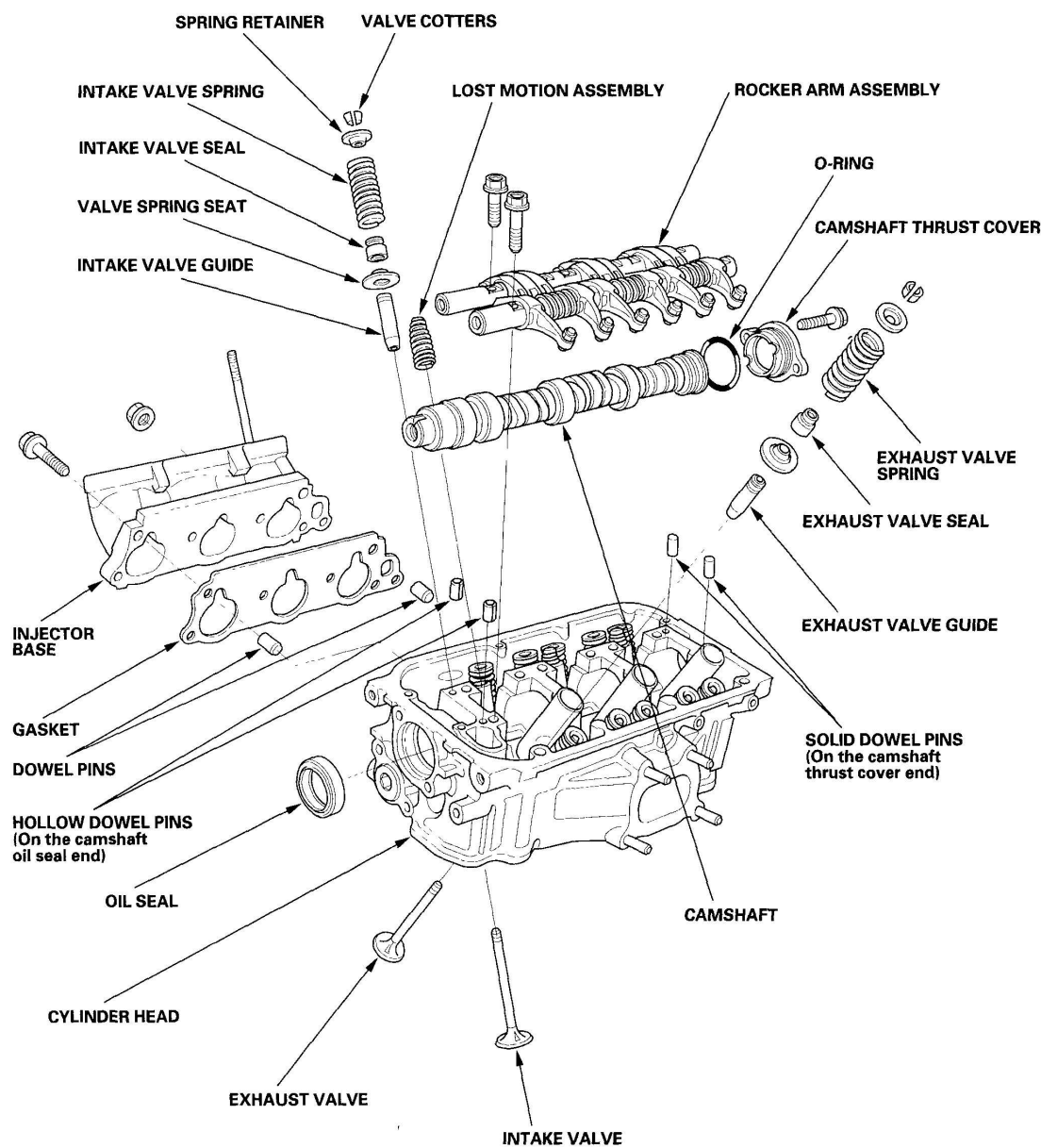
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Fig. 2: Identifying Cylinder Head Components (1 Of 3)
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Fig. 3: Identifying Cylinder Head Components (2 Of 3)
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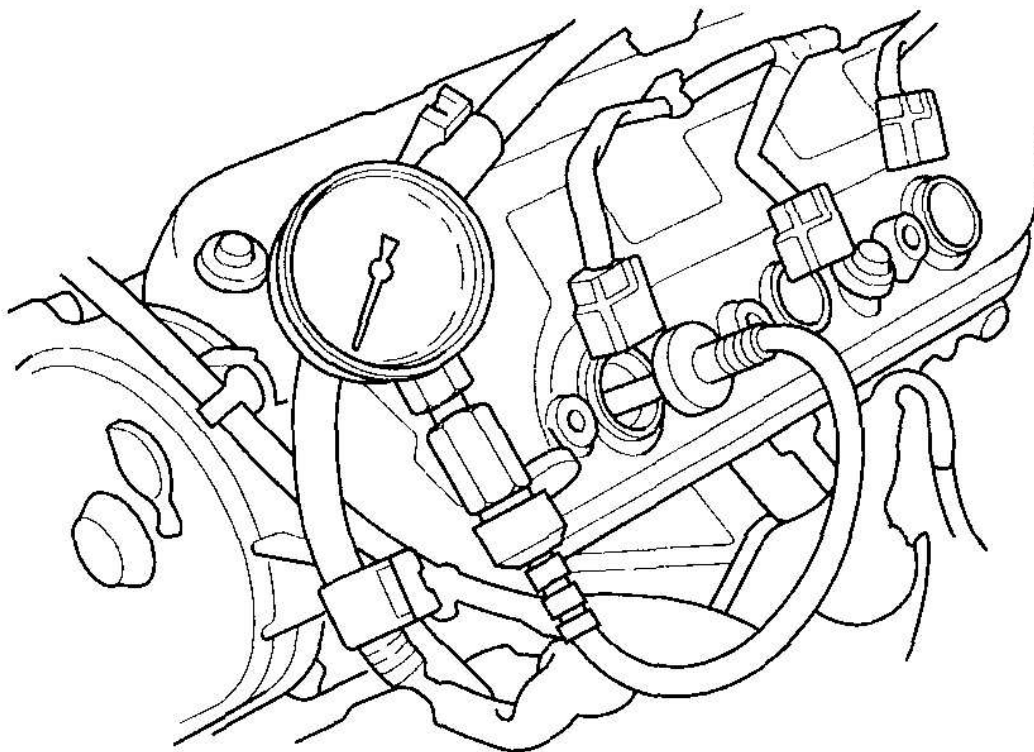
Fig. 4: Identifying Cylinder Head Components (3 Of 3)
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ENGINE COMPRESSION INSPECTION

NOTE: After this inspection, you must reset the powertrain control module (PCM), otherwise the PCM will continue to stop the injectors from functioning. Select PCM reset using the Honda Diagnostic System (HDS) (see PCM RESET).

1. Warm up the engine to normal operating temperature (cooling fan comes on).

2. Turn the ignition switch OFF.
3. Connect the HDS to the data link connector (DLC) (see step 2 in **GENERAL TROUBLESHOOTING INFORMATION**).
4. Turn the ignition switch ON (II), and select PGM-FI, INSPECTION, then ALL INJECTORS OFF function on the HDS
5. Remove the six ignition coils (see **IGNITION COIL REMOVAL/INSTALLATION**).
6. Remove the six spark plugs.
7. Attach the compression gauge to a spark plug hole.



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Fig. 5: Attaching Compression Gauge To Spark Plug Hole
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Crank the engine with the starter motor and measure the compression.

Compression Pressure: Above 930 kPa (9.5 kgf/cm², 135 psi)

9. Measure the compression on the remaining cylinders.

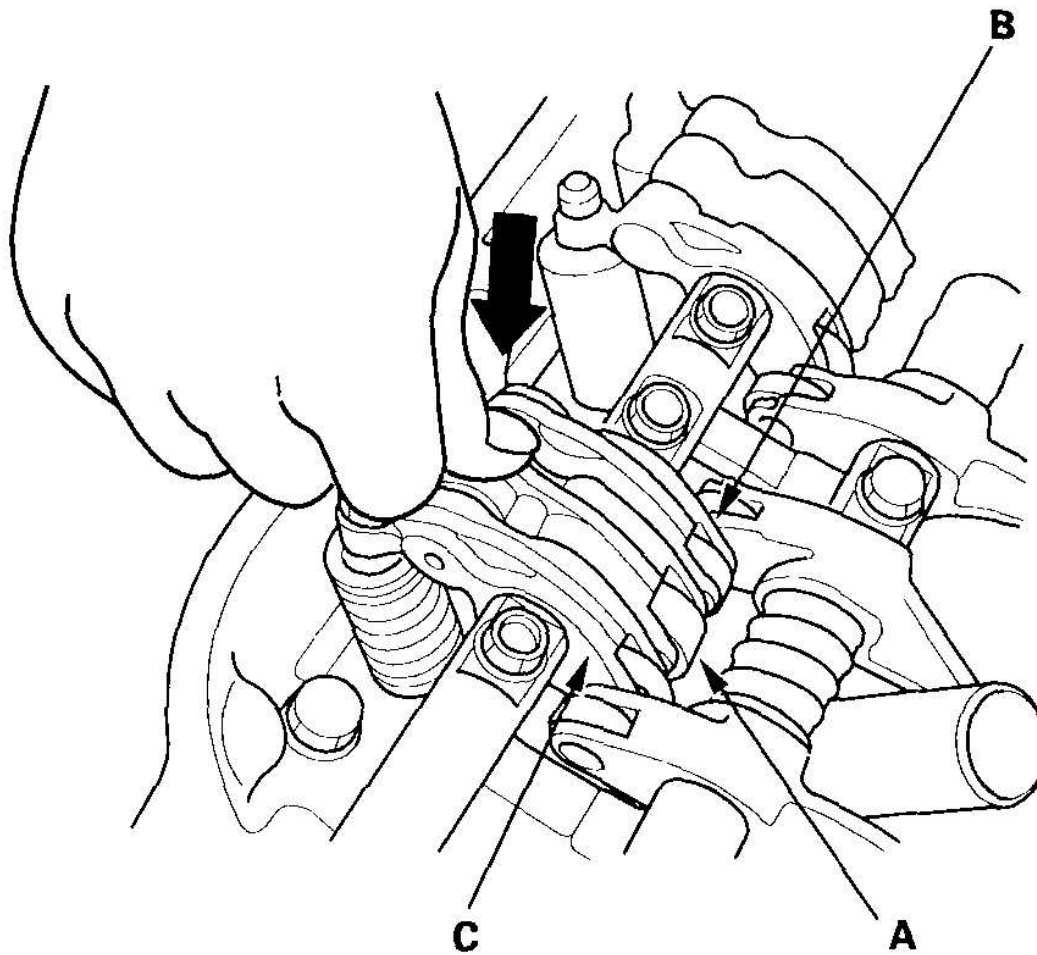
Maximum Variation: Within 200 kPa (2.0 kgf/cm² , 28 psi)

10. If the compression is not within specification, check the following items, then remeasure the compression.
 - Damaged or worn valves and seats
 - Damaged cylinder head gaskets
 - Damaged or worn piston rings
 - Damaged or worn piston and cylinder bore
11. Select PCM reset (see **PCM RESET**) to cancel ALL INJECTORS OFF function on the HDS.

VTEC ROCKER ARM TEST

Special Tools Required

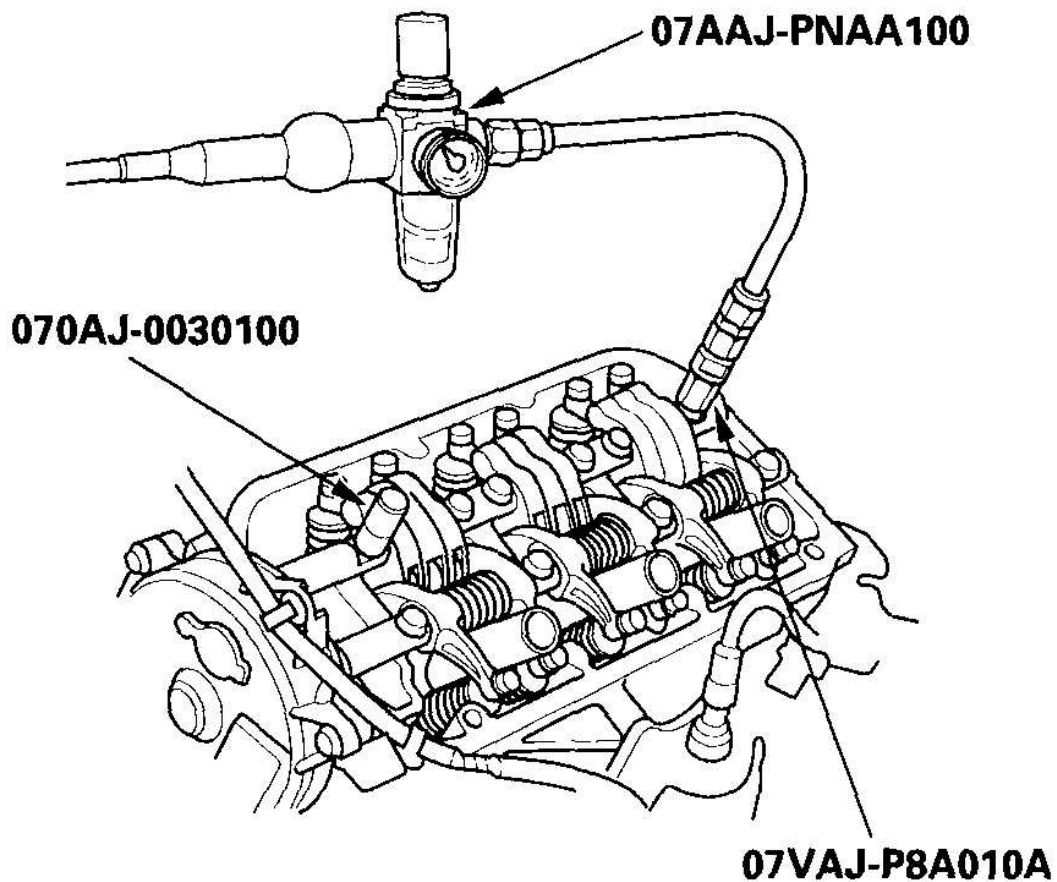
- VTEC air adapter 07VAJ-P8A010A
 - VTEC air stopper 070AJ-0030100
 - Air pressure regulator 07AAJ-PNAA100
1. Start the engine and let it run for 5 minutes, then turn the ignition switch OFF.
 2. Remove the intake manifold (see **REMOVAL**).
 3. Remove the cylinder head covers (see **CYLINDER HEAD COVER REMOVAL**).
 4. Set the No. 1 piston at top dead center (TDC) (see step 3 in **VALVE CLEARANCE ADJUSTMENT**)
 5. Push on the intake mid rocker arm (A) for the No. 1 cylinder. The mid rocker arm should move independently of the primary rocker arm (B) and secondary rocker arm (C).
 - If the mid rocker arm moves freely, go to step 6.
 - If the intake mid rocker arm does not move, remove the mid, primary, and secondary intake rocker arms as an assembly, then check that the pistons in the mid and primary rocker arms move smoothly. If any rocker arm needs replacing, replace the mid, primary, and secondary rocker arms as an assembly, and retest.



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Fig. 6: Pushing On Intake Mid Rocker Arm For No. 1 Cylinder
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Repeat step 5 on the remaining intake mid rocker arms with each piston at TDC. When all the mid rocker arms pass the test, go to step 7.
7. Check that the air pressure on the shop air compressor gauge indicates over 690 kPa (7.0kgf/cm² 100 psi).
8. Inspect the valve clearance (see **VALVE CLEARANCE ADJUSTMENT**).
9. Remove the No. 1 and No. 6 intake rocker shaft mounting bolts, then install and connect the special tools as shown in **Fig. 7** or **Fig. 8** .



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Fig. 7: Installing And Connecting Special Tools (Front)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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