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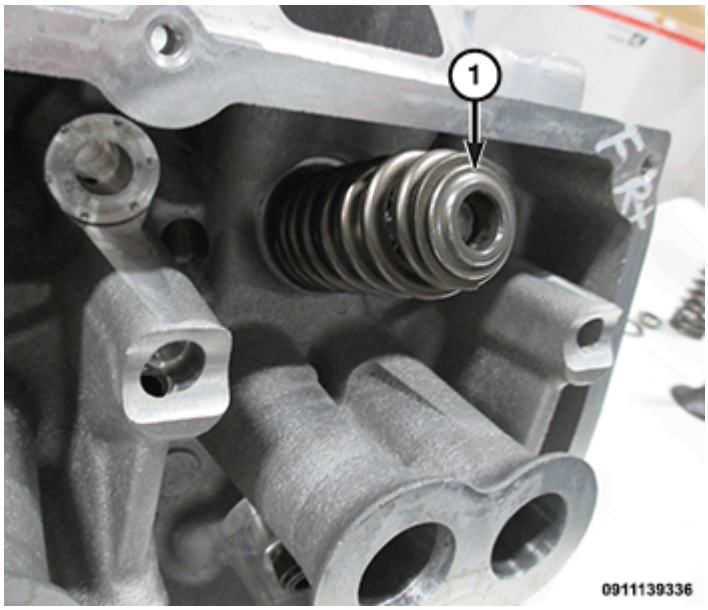
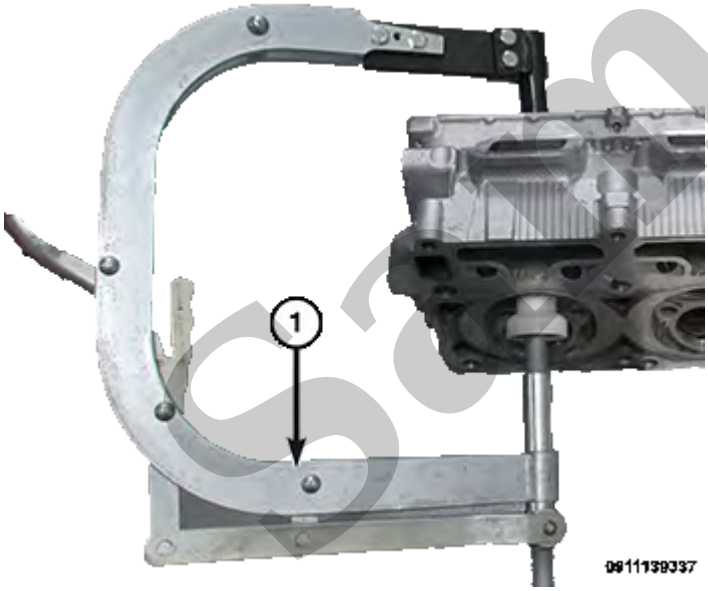
2012 JEEP Compass OEM Service and Repair Workshop Manual

Go to manual page



1 - Valve Spring Retainer

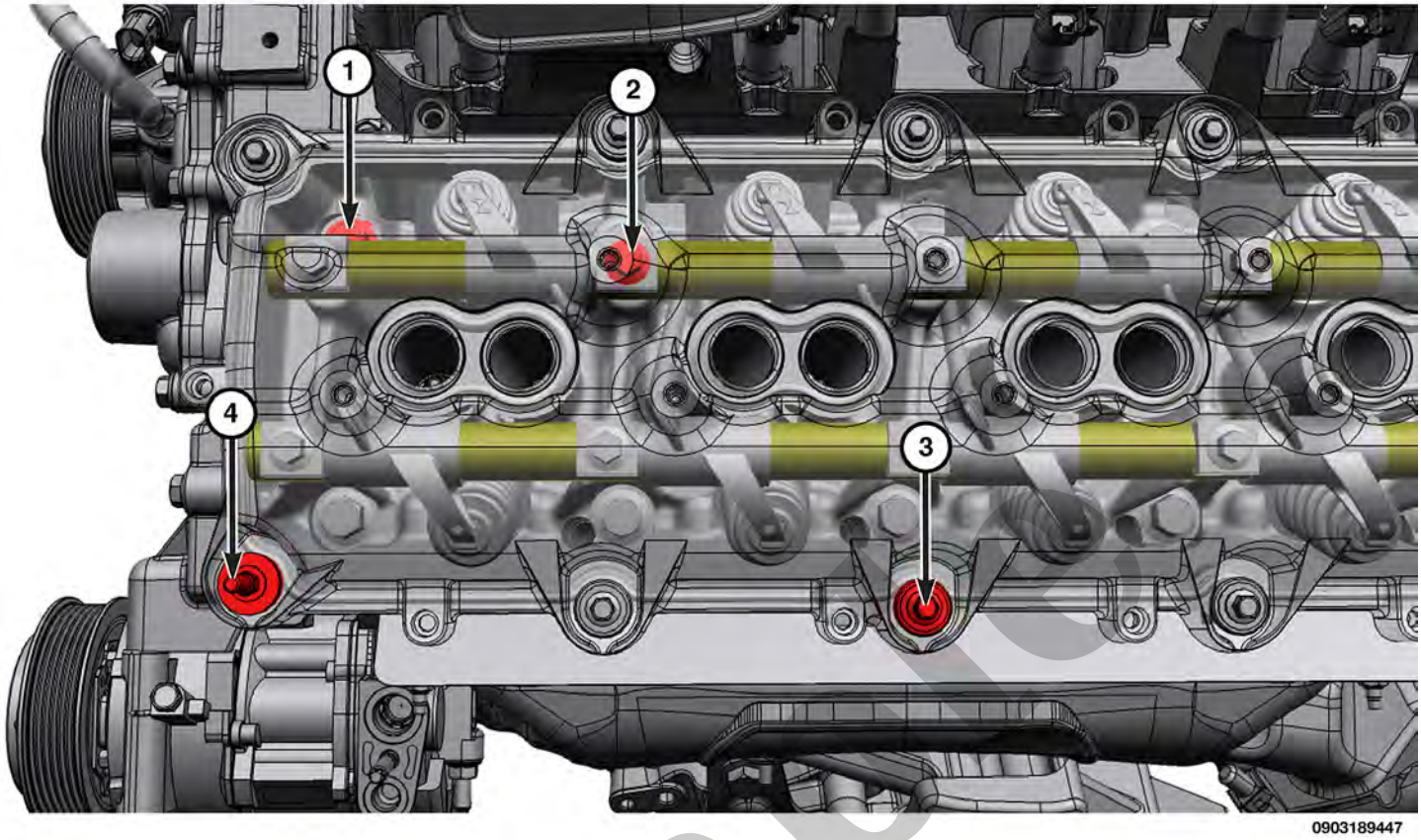
9. Install the valve spring retainers.

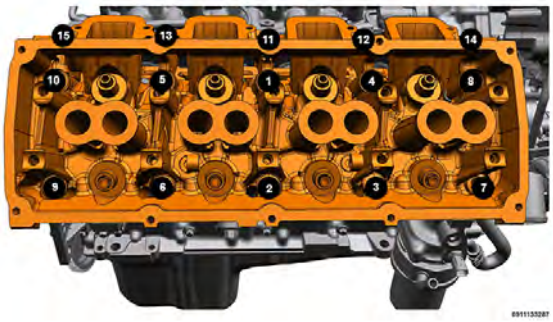


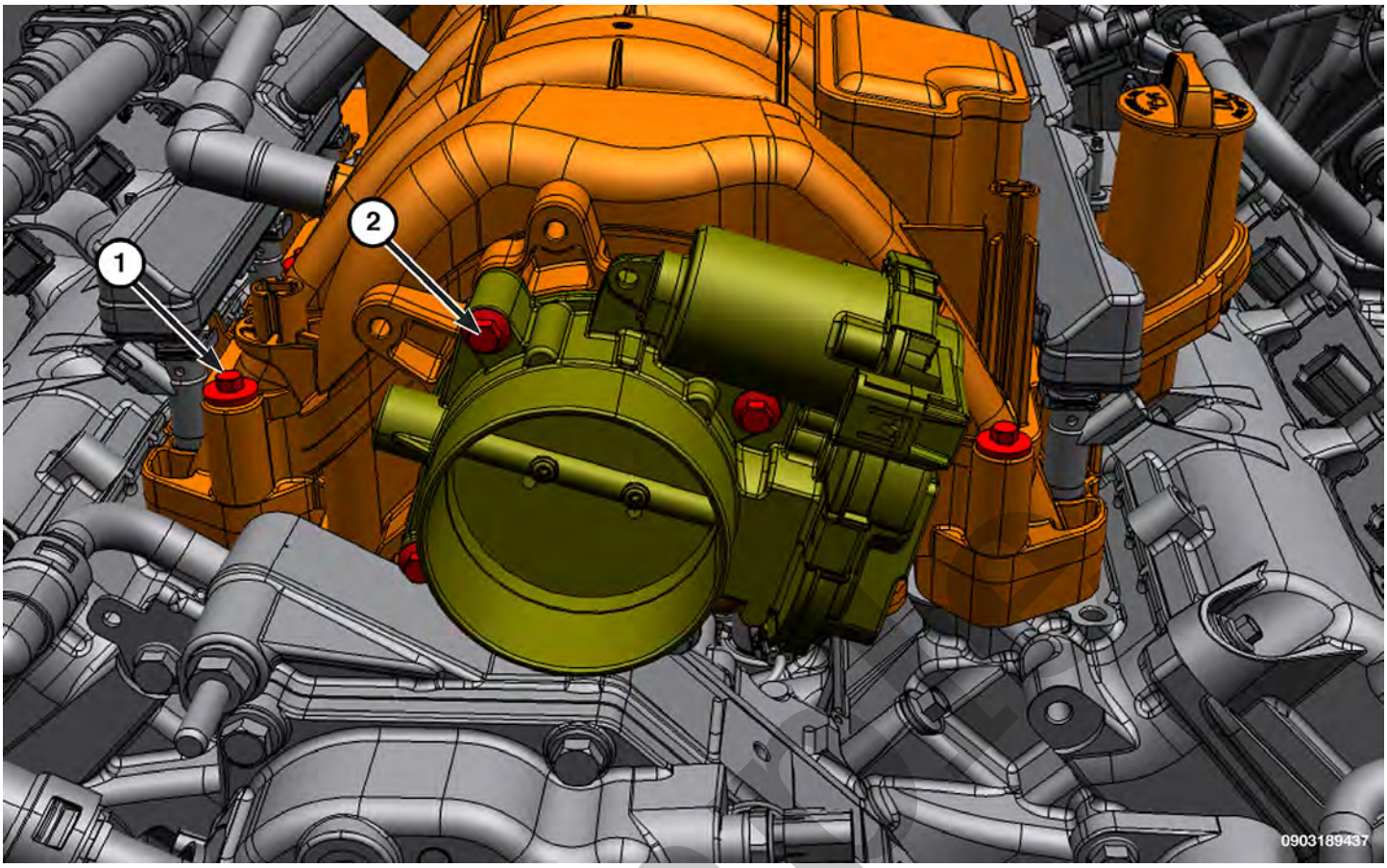
1 - Valve Spring Compressor

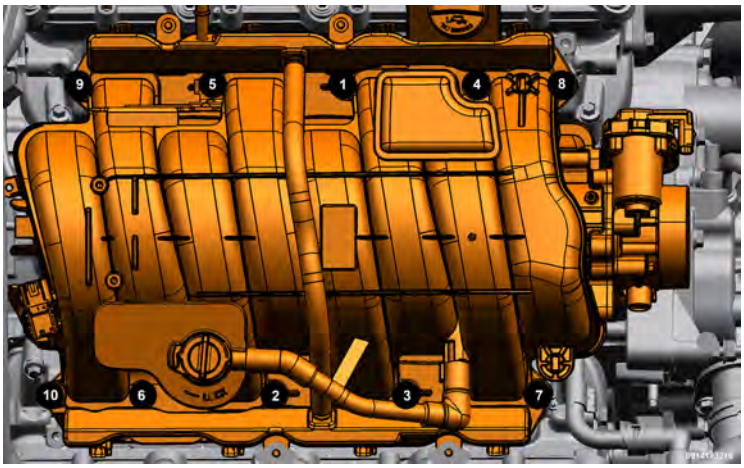
10. Compress the valve springs with the Valve Spring Compressor Tool

Compressor, Valve Spring



CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Cylinder Head Bolts	**Torque Procedure** 1. **Tighten all cylinder head bolts finger tight** 2. **Torque cylinder head bolts 1 through 10 to 34 N·m (25 ft. lbs.)** 3. **Torque cylinder head bolts 11 through 15 to 20 N·m (15 ft. lbs.)** 4. **Torque cylinder head bolts 1 through 10 to 54 N·m (40 ft. lbs.)**	Tightening Sequence Right side shown, left side similar 



CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Intake Manifold Bolts	**12 N·m (9 ft. Lbs.)**	Tightening Sequence 
2	Throttle Body Bolts	**5 N·m (44 In. Lbs.)**	Tighten bolts in a crisscross sequence

YOUR CURRENT VEHICLE

Cylinder Compression Test

CYLINDER COMPRESSION TEST

NOTE

The results of a cylinder compression pressure test can be utilized to diagnose several engine malfunctions.

NOTE

Be certain the battery is completely charged and the engine starter motor is in good operating condition. Otherwise the indicated compression pressures may not be valid for diagnosis purposes.

1. If possible, for best results, the compression test should be performed on a warm engine.
2. Clean the spark plug recesses with compressed air.
3. Remove the spark plugs and record the cylinder number of each spark plug for future reference.
4. Inspect the spark plug electrodes for abnormal firing indicators such as fouled, hot, oily, etc.
5. Disable the fuel system and perform the fuel system pressure release procedure (Refer to Engine/Fuel System/Standard Procedure)(Refer To List 1).
6. Insert a compression pressure gauge and rotate the engine with the engine starter motor for three revolutions.
7. Record the compression pressure on the 3rd revolution. Continue the test for the remaining cylinders.

   NOTE

   The recommended compression pressures are to be used only as a guide to diagnosing engine problems. An engine should not be disassembled to determine the cause of low compression unless

YOUR CURRENT VEHICLE

Hydraulic Tappets

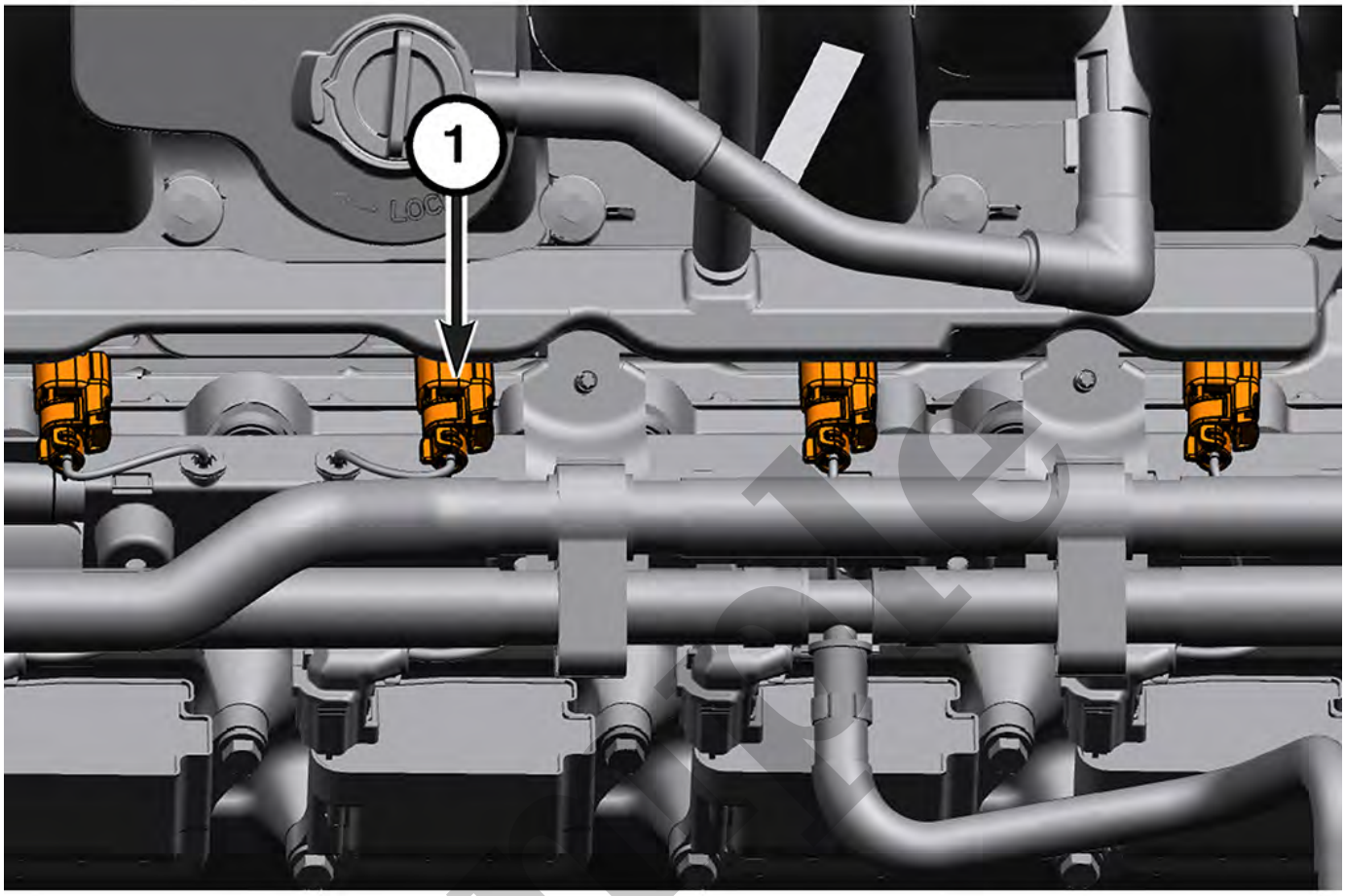
HYDRAULIC TAPPETS

To determine the source of hydraulic tappet noise (Refer to Engine/Diagnosis and Testing - MECHANICAL) (Refer To List 1).

Refer To List:

List 1

- 09 - Engine, 2.0L / Diagnosis and Testing
- 09 - Engine, 3.6L / Diagnosis and Testing
- 09 - Engine, 5.7L / Diagnosis and Testing



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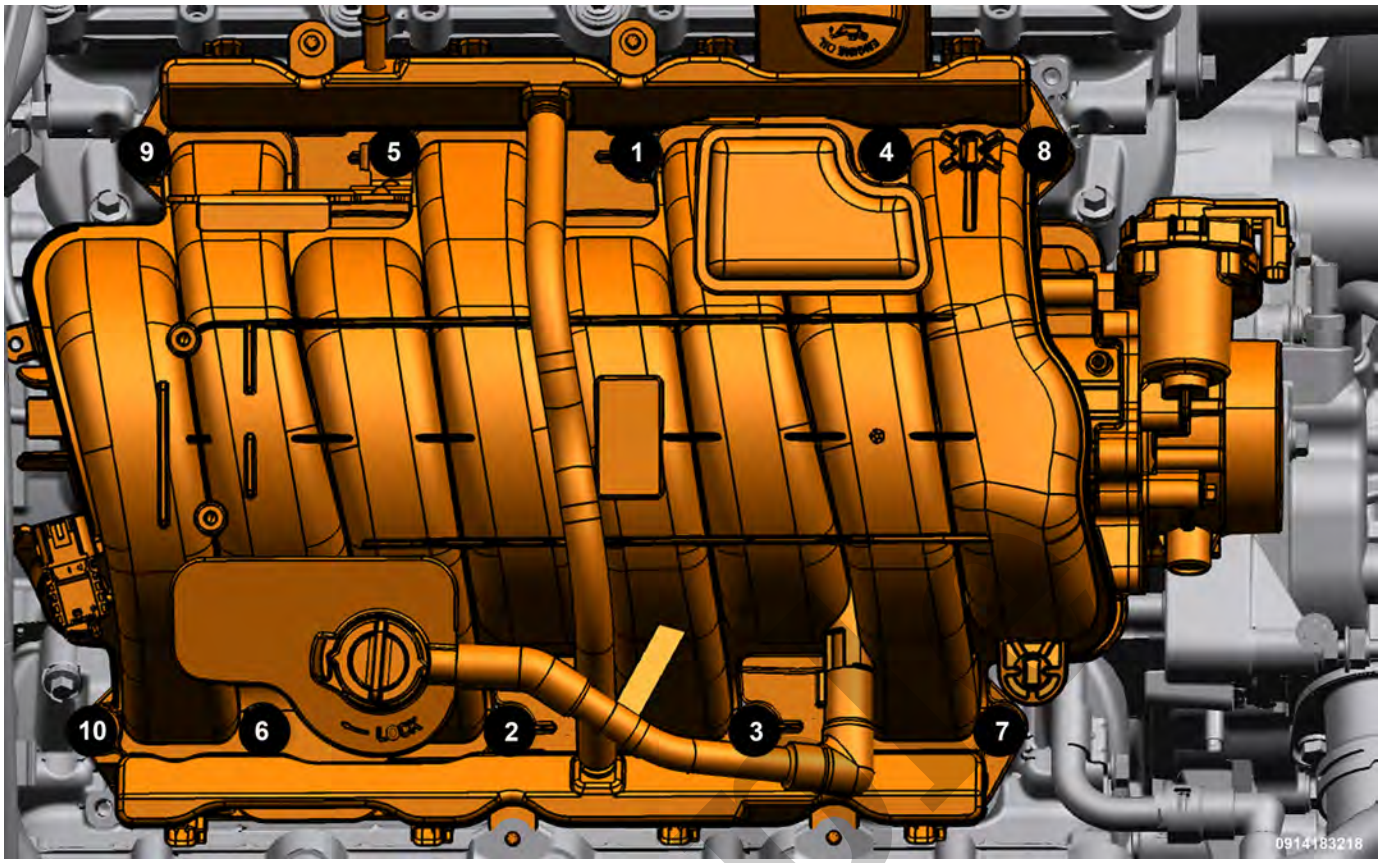
1 - Right Side Fuel Injectors Wire Harness Connectors

7. Disconnect the right side fuel injectors wire harness connectors.



Intake Manifold Bolt Sequence

13. Using the sequence shown, remove the intake manifold bolts and the intake manifold.

CLEANING:

NOTE

There is NO approved repair procedure for the intake manifold. If severe damage is found during inspection, the intake manifold must be replaced.

- Before installing the intake manifold thoroughly clean the mating surfaces. Use a suitable cleaning solvent, then air dry.

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle. The steps listed below are calling out specific procedures that should be followed during installation.

- The intake manifold seals may be reused, provided not cuts, tears or deformation have occurred.
- If reinstalling the original manifold apply Mopar® Lock & Seal Adhesive to the intake manifold bolts. Not required when installing a new manifold.
- Install the intake manifold bolts and tighten in the sequence shown in the torque table below.

Lubrication

LUBRICATION

CONDITION	POSSIBLE CAUSES	CORRECTION
OIL LEAKS	1. Misaligned or damaged gaskets and O-rings.	1. Replace as necessary.
	2. Loose fasteners, broken or porous metal parts.	2. Tighten fasteners, Repair or replace metal parts.
	3. Crankshaft rear oil seal.	3. Replace as necessary.
	4. Crankshaft seal flange. Scratched, nicked or grooved.	4. Polish or replace crankshaft.
	5. Oil pan flange cracked.	5. Replace the oil pan.
	6. Front crankshaft oil seal, damaged or misaligned.	6. Replace the front crankshaft oil seal.
	7. Scratched or damaged vibration damper hub.	7. Polish or replace the vibration damper.
	8. Crankshaft Rear Flange Microporosity.	8. Replace the crankshaft.
OIL PRESSURE DROP	1. Low oil level.	1. Check and correct oil level.
	2. Faulty oil pressure switch.	2. Replace the oil pressure switch.
	3. Low oil pressure.	3. Check the oil pump and bearing clearance.

CONDITION	POSSIBLE CAUSES	CORRECTION
		Diagnosis and Testing)(Refer To List 2).
	4. Excessive aeration of the oil	4. Change the engine oil and filter.
	5. Air trapped in the lash adjuster(s)	5. Follow the "Lifter Purge Guideline" shown below.
	6. Exhaust manifold leak	6. Inspect exhaust manifolds, fasteners, and gaskets for possible leaks.
	7. Bent push rod(s)	7. Install new push rods.
	8. Worn rocker arms	8. Inspect oil supply to rocker arms and replace worn arms as needed.
	9. Debris in tappets/lash adjusters	9. Clean/replace hydraulic tappets/lash adjusters.
	10. Worn tappets/lash adjusters	10. Install new hydraulic tappets/lash adjusters.
	11. Worn valve guides	11. Inspect all valve guides and replace as necessary.
	12. Excessive runout of valve seats or valve faces	12. Grind valves and seats.
CONNECTING ROD NOISE	1. Insufficient oil supply	1. Check engine oil level.
	2. Low oil pressure	2. Check engine oil level. If ok, Perform engine oil pressure test (Refer to Engine/Lubrication - Diagnosis and Testing)(Refer To List 2).
	3. Thin or diluted oil	3. Change oil to correct viscosity (Refer to Engine/Lubrication/Standard Procedure)(Refer To List 1).
	4. Excessive connecting rod bearing clearance	4. Measure bearings for correct clearance with plasti-gage. Repair as necessary.