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2012 JEEP Grand Cherokee SRT-8 OEM Service and Repair Workshop Manual

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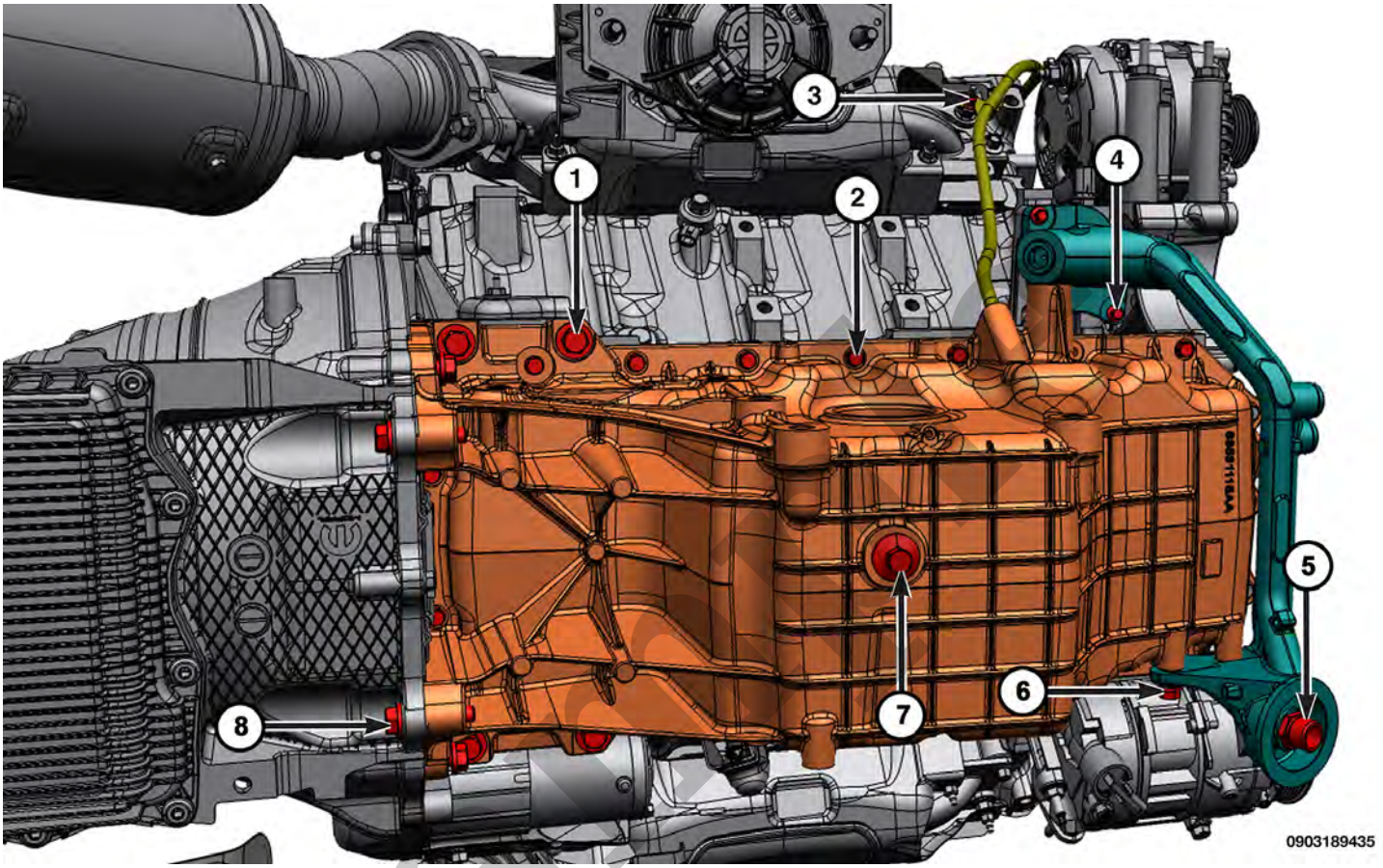
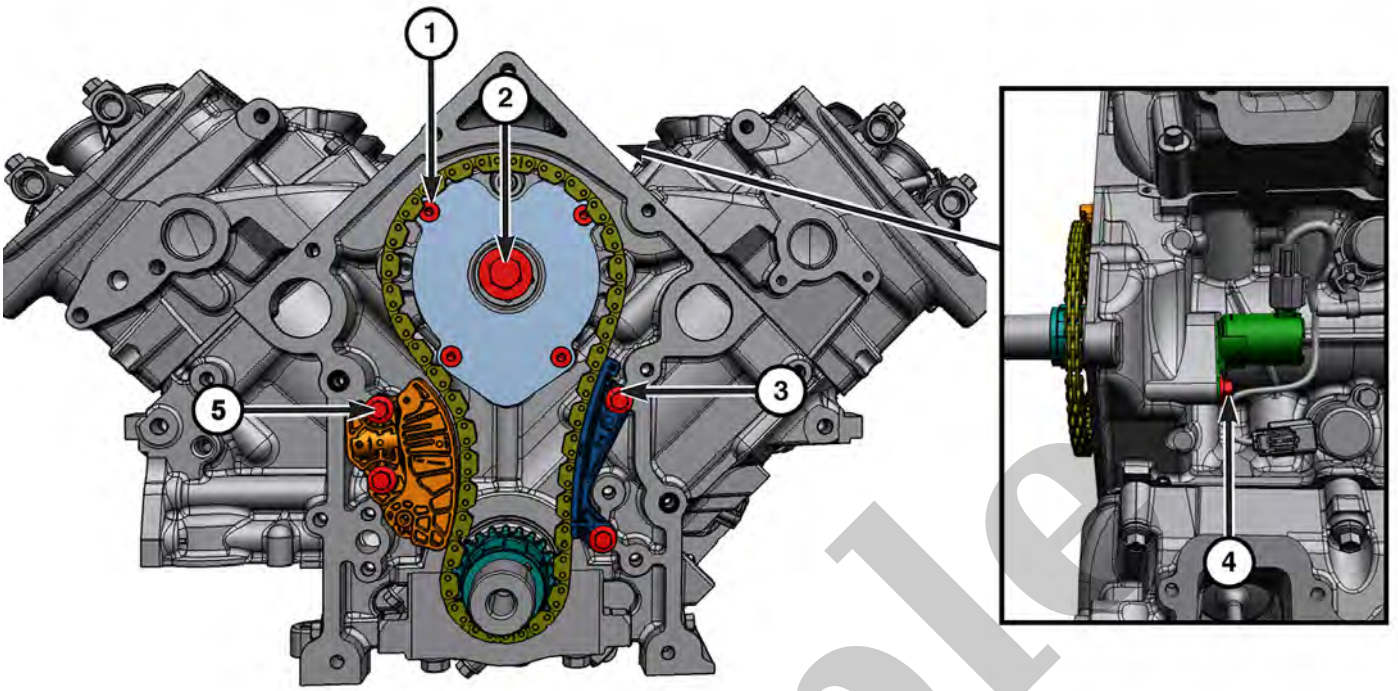
4	Cylinder Head Cover Stud Bolts	**11 N·m (8 Ft. Lbs.)**	–

TORQUE SPECIFICATIONS - LUBRICATION



CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1 2	Oil Pan to Engine Block M10 Bolts Oil Pan to Engine Block M6 Bolts	**54 N·m (40 Ft. Lbs.)** **14 N·m (10 Ft. Lbs.)**	Tightening Sequence



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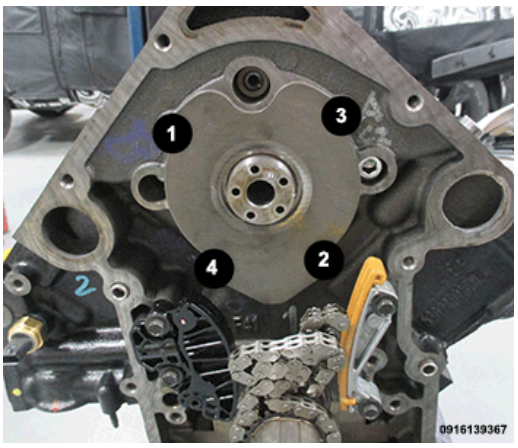
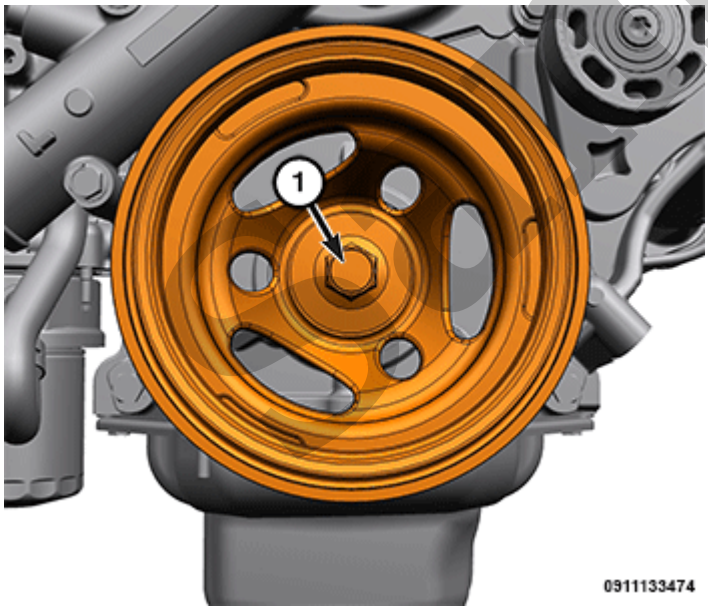
CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Camshaft Thrust Plate Bolts	**13 N·m (10 Ft. Lbs.)**	Tightening Sequence  0916139367
2	Camshaft Phaser Bolt	**98 N·m (72 Ft. Lbs.)**	–
3	Timing Drive Guide Bolts	**11 N·m (8 Ft.**	–

Vibration Damper

VIBRATION DAMPER

REMOVAL

1. Disconnect and isolate the negative battery cable(s) (Refer to Electrical/Battery System/Standard Procedure).
2. Remove the serpentine belt (Refer to Engine/Accessory Drive/BELT, Serpentine/Removal and Installation) (Refer To List 1).
3. Remove the cooling fan (Refer to Engine/Cooling System/FAN, Cooling/Removal and Installation)(Refer To List 2).



1 - Vibration Damper Bolt

4. Remove the vibration damper bolt.
5. Remove the vibration damper using Crankshaft Insert

CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Timing Chain Cover Stud Bolts	**28 N·m (21 Ft. Lbs.)**	–
2	Belt Tensioner Bolt	**55 N·m (41 Ft. Lbs.)**	–
3	Idler Pulley Bolt	**29 N·m (21 Ft. Lbs.)**	–
4	Idler Pulley Bracket Bolts	**29 N·m (21 Ft. Lbs.)**	–
5	Timing Chain Cover Bolts	**28 N·m (21 Ft. Lbs.)**	–
6	Vibration Damper Bolt	**185 N·m (136 Ft. Lbs.)**	–
7	Timing Chain Cover Slide Bushing Bolt	**25 N·m (18 Ft. Lbs.)**	–
8	Idler Pulley Bolt	**55 N·m (41 Ft. Lbs.)**	–

Refer To List:

List 1

- 09 - Engine, 2.0L / Accessory Drive / BELT, Serpentine / Removal and Installation
- 09 - Engine, 3.6L / Accessory Drive / BELT, Serpentine / Removal and Installation
- 09 - Engine, 5.7L / Accessory Drive / BELT, Serpentine / Removal and Installation

List 2

- 09 - Engine, 2.0L / Cooling System / Engine Cooling / FAN, Cooling / Removal and Installation
- 09 - Engine, 3.6L / Engine Cooling / FAN, Cooling / Removal and Installation
- 09 - Engine, 5.7L / Engine Cooling / FAN, Cooling / Removal and Installation

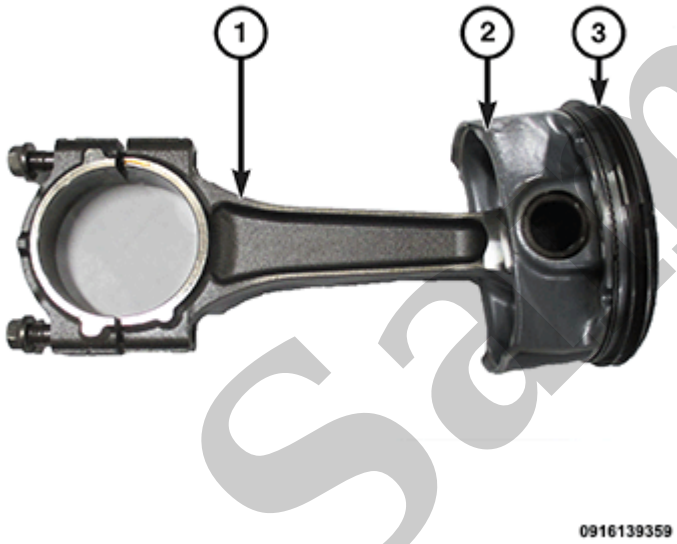
YOUR CURRENT VEHICLE

Piston Assembly

PISTON ASSEMBLY

CAUTION

Do not use a metal stamp to mark connecting rods as damage may result, instead use ink or a scratch awl.



1 - Connecting Rod
2 - Piston Skirt
3 - Piston Ring Groove

The pistons are made of a high strength aluminum alloy. Piston skirts are coated with a solid lubricant (Molykote®) to reduce friction and provide scuff resistance. The piston top ring groove and land is anodized. The connecting rods are made of forged powdered metal, with a fractured cap design.

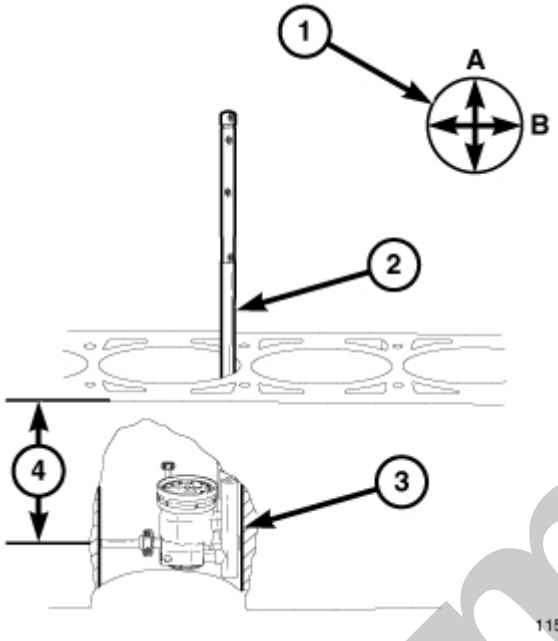
Camshaft Bearings

CAMSHAFT BEARINGS

INSPECTION

The camshaft bearings are not serviceable. Do not attempt to replace camshaft bearings for any reason. If the camshaft bearings are damaged, the engine block must be replaced.

4. Inspect the insert locking tabs for damage.
5. Inspect the crankshaft thrust washers for scoring, scratches, wear or blueing.
6. Replace any bearing that shows abnormal wear.
7. Inspect the main bearing bores for signs of scoring, nicks and burrs.
8. If the cylinder block main bearing bores show damage, replace the engine block.

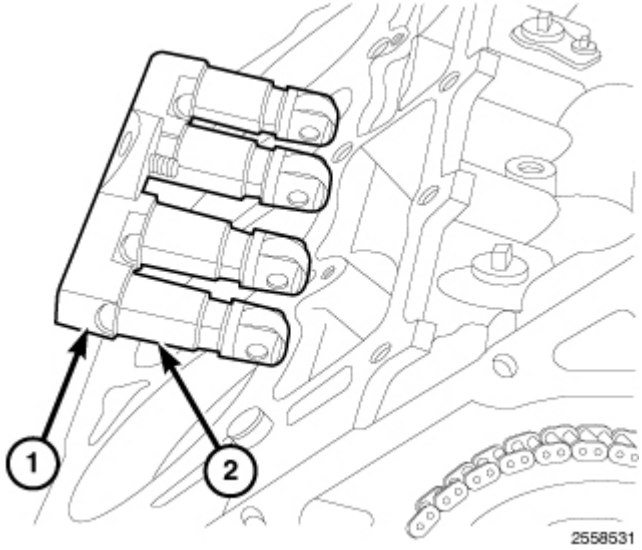


1 - Point (A) 90° From Crankshaft Axis (B)
2 - Cylinder Bore Gauge
3 - Cylinder Bore
4 - Cylinder Bore Measuring Area

CYLINDER BORE INSPECTION

1. Use a cylinder bore gauge to correctly measure the inside diameter of the cylinder bore. A cylinder bore gauge capable of reading in 0.003 mm (0.0001 in.) Increments is required. If a bore gauge is not available, do not use an inside micrometer.
2. Measure the inside diameter of the cylinder bore at three levels below the top of the bore. Start at the top of the bore, perpendicular (across or at 90°) to the axis of the crankshaft at point A.
3. Repeat the measurement near the middle of the bore then repeat the measurement near the bottom of the bore.

2. Remove the tappet guide holder retaining bolt from the tappet guide holder assembly.



1 - Tappet Guide Holder
2 - Tappets

CAUTION

The lifter and retainer assembly must be installed as a unit.

CAUTION

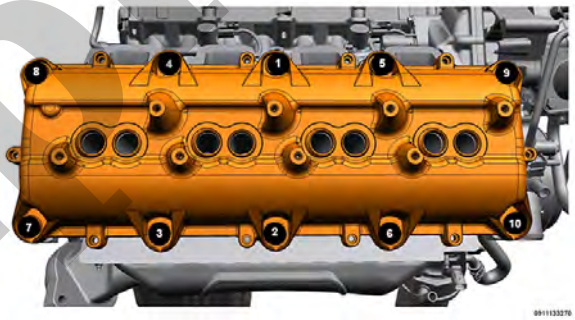
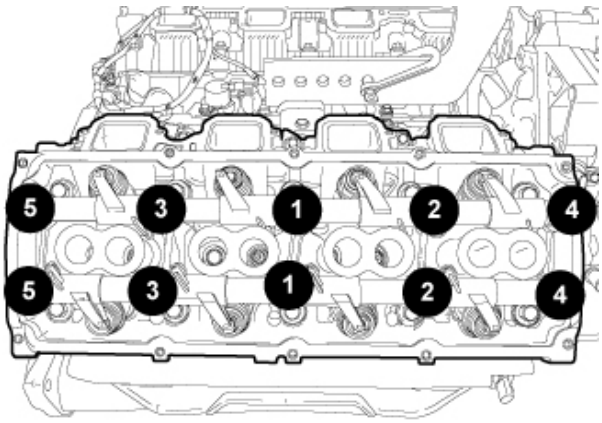
If the lifter and retainer assembly are to be reused, identify the lifters to ensure installation in their original location or engine damage could result.

3. Remove the tappet guide holder and tappets as an assembly.

4. Check the camshaft lobes for abnormal wear.

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.

		5. **Torque cylinder head bolts 11 through 15 to 20 N·m (15 ft. lbs.)** 6. **Turn cylinder head bolts 1 through 10 an additional 90°** 7. **Torque cylinder head bolts 11 through 15 to 28 N·m (21 ft. lbs.)**	
2	Cylinder Head Cover Bolts	**11 N·m (8 Ft. Lbs.)**	Tightening Sequence Right side shown, left side similar. 
3	Rocker Arm Bolts	**Torque Procedure** 1. **Snug to 10 N·m (7 ft. lbs.)** 2. **Torque to 23 N·m (17 ft. lbs.)** 3. **Individually loosen by 1/2 turn and re-torque to 23 N·m (17 ft. lbs.)** 4. **Turn an additional 30°**	Tightening Sequence  921225