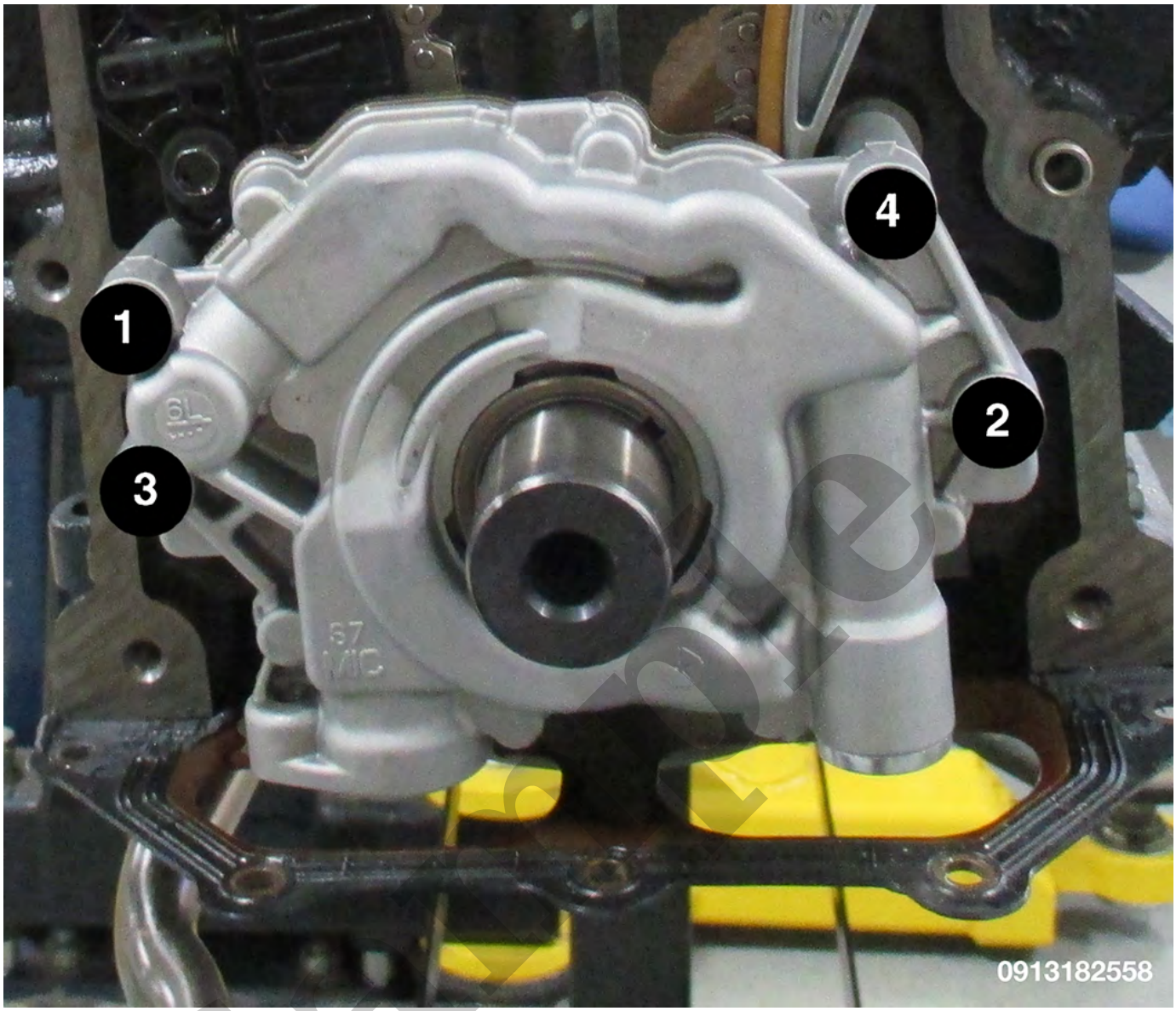
Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2013 JEEP Grand Cherokee OEM Service and Repair Workshop Manual

Go to manual page



1 - Oil Pump Bolts Tightening Sequence

- Install the oil pump bolts and tighten to the proper torque in the sequence shown.

TORQUE SPECIFICATIONS - LUBRICATION

YOUR CURRENT VEHICLE

Engine Oil And Filter Change

ENGINE OIL AND FILTER CHANGE

CRANKCASE OIL LEVEL INSPECTION

CAUTION

Do not overfill crankcase with engine oil, pressure loss or oil foaming can result.

Inspect engine oil level approximately every 800 kilometers (500 miles). Unless the engine has exhibited loss of oil pressure, run the engine for about ten minutes before checking oil level. Checking engine oil level on a cold engine is not accurate.

To ensure proper lubrication of an engine, the engine oil must be maintained at an acceptable level. The acceptable levels are indicated between the ADD and SAFE marks on the engine oil dipstick.

It is recommended that the engine oil level should be checked when the engine is at operating temperature.

1. Position vehicle on level surface.
2. With engine OFF, allow approximately five minutes for oil to settle to bottom of crankcase, remove engine oil dipstick.
3. Wipe dipstick clean.
4. Install dipstick and verify it is seated in the tube.
5. Remove dipstick, with handle held above the tip, take oil level reading.
6. Verify the oil level to be at the top of the "SAFE" range +/- 1/4 of the total distance of the range.
7. Add oil only if level is below the ADD mark on dipstick.

ENGINE OIL CHANGE

Change engine oil at mileage and time intervals described in Maintenance Schedules (Refer to Vehicle Quick Reference/Maintenance Schedules - Description) .

YOUR CURRENT VEHICLE

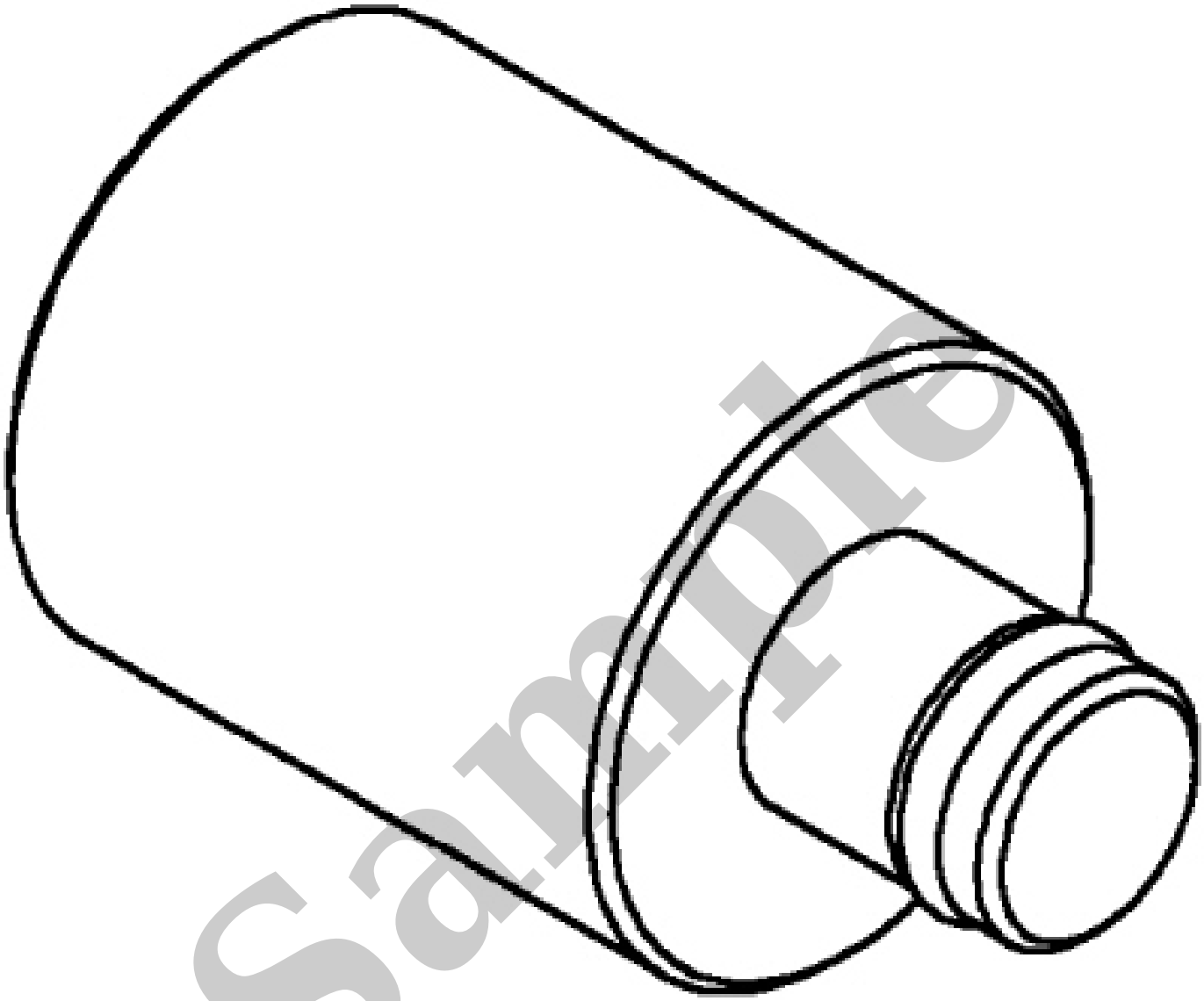
Special Tools

SPECIAL TOOLS

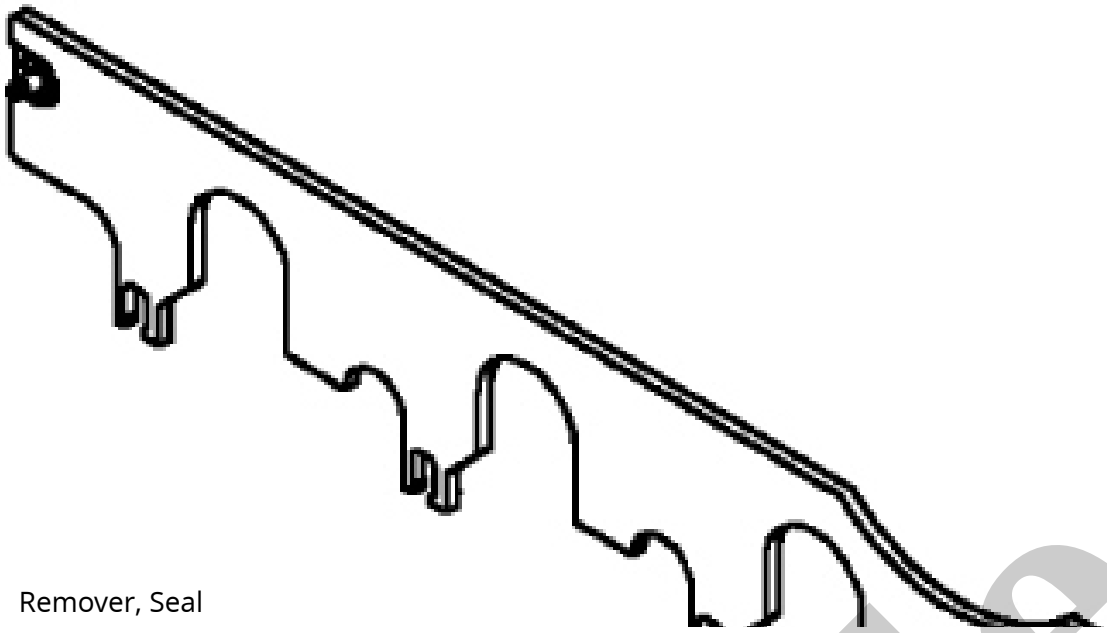
Remover, MDS Solenoid

Puller

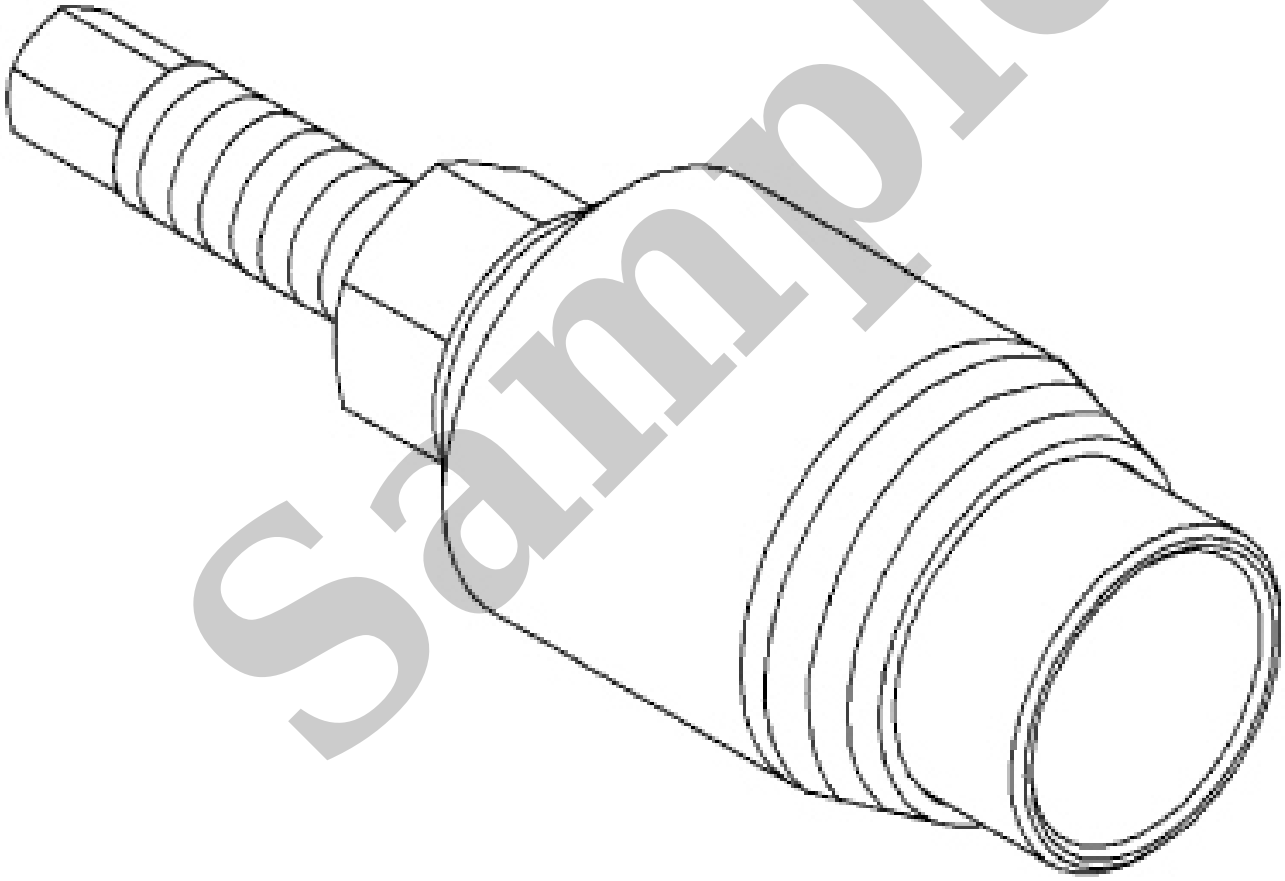
Insert, Crankshaft



Pins, Tensioner



Remover, Seal

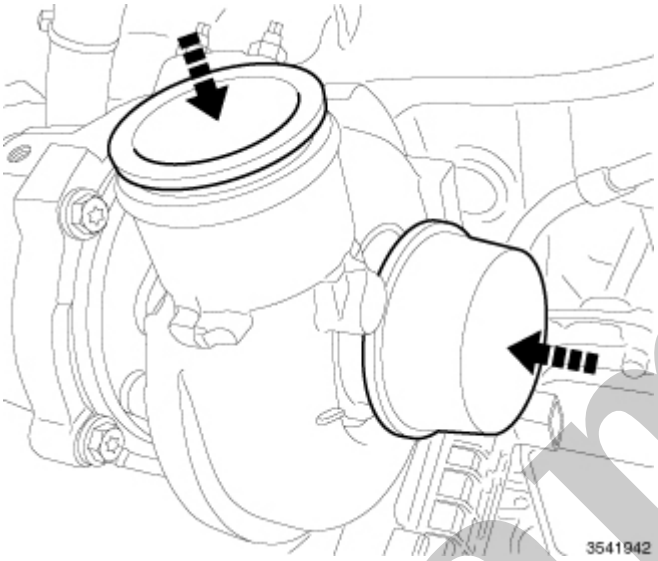


Cylinder Indicator

Dust Covers And Protective Caps

DUST COVERS AND PROTECTIVE CAPS

Graphic shows dust cover and protective cap as example only.



To avoid the possibility of dust, dirt, moisture and other foreign debris being introduced to the engine during service, cover or cap all openings when hoses and tubes are removed.

Graphic shown as example only.

YOUR CURRENT VEHICLE

Repair Damaged Or Worn Threads

REPAIR DAMAGED OR WORN THREADS

CAUTION

Be sure that the tapped holes maintain the original center line.

Damaged or worn threads **cannot** be repaired in the following locations:

- Spark plug threads in the cylinder head.
- Camshaft bearing cap attaching threads.
- Crankshaft main bearing cap bolt threads in the engine block.
- Cylinder head bolt holes in the engine block.

Damaged or worn threads can be repaired. Essentially, this repair consists of:

- Drilling out worn or damaged threads.
- Tapping the hole with a special Heli-Coil Tap.
- Installing an insert into the tapped hole to bring the hole back to its original thread size.

No. 2	1.23 - 1.25 mm	0.048 - 0.0492 in.
No. 3	2.03 - 2.05 mm	0.079 - 0.080 in.

PISTON PINS

DESCRIPTION	SPECIFICATION	
	Metric	Standard
Clearance In Piston	0.009 - 0.017 mm	0.0004 - 0.0007 in.
Diameter	24.004 - 24.007 mm	0.945 - 0.9451 in.
Length	74.85 - 75.15 mm	2.95 - 2.96 in.

PISTON RINGS

DESCRIPTION	SPECIFICATION	
	Metric	Standard
Ring Gap		
Top Compression Ring	0.40 - 0.55 mm	0.015 - 0.021 in.
Second Compression Ring	0.24 - 0.51 mm	0.009 - 0.020 in.
Oil Control Rails	0.15 - 0.66 mm	0.0059 - 0.0259 in.
Side Clearance		
Top Compression Ring	0.04 - 0.09 mm	0.001 - 0.0035 in.
Second Compression Ring	0.04 - .08 mm	0.001 - 0.0031 in.
Oil Control Rails	0.06 - 0.21 mm	0.002 - 0.008 in.
Ring Width		
Top Compression Ring	1.17 - 1.19 mm	0.0460 - 0.0468 in.