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2017 Ford Taurus Service and Repair Manual

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highest reading. Note the approximate number of compression strokes necessary to obtain the highest reading.

6. Repeat the test on each cylinder, cranking the engine approximately the same number of compression strokes.

Compression Test - Test Results

1. The indicated compression pressures are considered within specification if the lowest reading cylinder is at least 75% of the highest reading.

Compression Pressure Limit Chart

1. Each range listed in the Compression Pressure Limit Chart below is the allowable limit between the maximum and minimum cylinder compression test reading obtained. Use the highest cylinder pressure reading obtained to identify the appropriate range on the chart. If the lowest cylinder pressure reading is within the range shown, the indicated compression pressures are considered within specification.

Maximum Cylinder Pressure - Minimal Cylinder Pressure	**Maximum Cylinder Pressure - Minimal Cylinder Pressure**	**Maximum Cylinder Pressure - Minimal Cylinder Pressure**	**Maximum Cylinder Pressure - Minimal Cylinder Pressure**
134.0 –100.9 psi (924 – 696 kPa)	164.0 –123.0 psi (1,131 –848 kPa)	194.1 –145.0 psi (1,338 –1,000 kPa)	223.9 –168.0 psi (1,544 –1,158 kPa)
136.0 –102.0 psi (938 – 703 kPa)	166.1 –124.0 psi (1,145 –855 kPa)	195.9 –147.1 psi (1,351 –1,014 kPa)	226.0 –169.0 psi (1,558 –1,165 kPa)
138.1 –104.0 psi (952 – 717 kPa)	168.0 –126.0 psi (1,158 –869 kPa)	198.0 –147.9 psi (1,365 –1,020 kPa)	228.0 –171.0 psi (1,572 –1,179 kPa)
140.0 –105.0 psi (965 – 724 kPa)	170.0 –127.1 psi (1,172 –876 kPa)	200.0 –150.0 psi (1,379 –1,034 kPa)	230.0 –172.0 psi (1,586 –1,186 kPa)
142.0 –107.0 psi (979 – 738 kPa)	172.0 –128.9 psi (1,186 –889 kPa)	201.9 –151.0 psi (1,392 –1,041 kPa)	232.1 –174.0 psi (1,600 –1,200 kPa)
143.9 –108.1 psi (992 – 745 kPa)	174.0 –131.0 psi (1,200 –903 kPa)	204.1 –153.0 psi (1,407 –1,055 kPa)	233.9 –175.1 psi (1,613 –1,207 kPa)
146.1 –109.9 psi (1,007 –758 kPa)	176.1 –132.0 psi (1,214 –910 kPa)	206.0 –154.0 psi (1,420 –1,062 kPa)	236.0 –176.9 psi (1,627 –1,220 kPa)

2. The leakage tester is inserted in the spark plug hole, the piston is brought up to TDC (top dead center) on the compression stroke, and compressed air is admitted.

3. Once the combustion chamber is pressurized, the leakage tester gauge will read the percentage of leakage. Leakage exceeding 20% is excessive.

4. While the air pressure is retained in the cylinder, listen for the hiss of escaping air. A leak at the intake valve will be heard in the TB (throttle body). A leak at the exhaust valve can be heard at the tailpipe. Leakage past the piston rings will be audible at the PCV (positive crankcase ventilation) connection. If air is passing through a blown head gasket to an adjacent cylinder, the noise will be evident at the spark plug hole of the cylinder into which the air is leaking. Cracks in the cylinder block or gasket leakage into the cooling system may be detected by a stream of bubbles in the radiator.

5. Install the spark plugs.

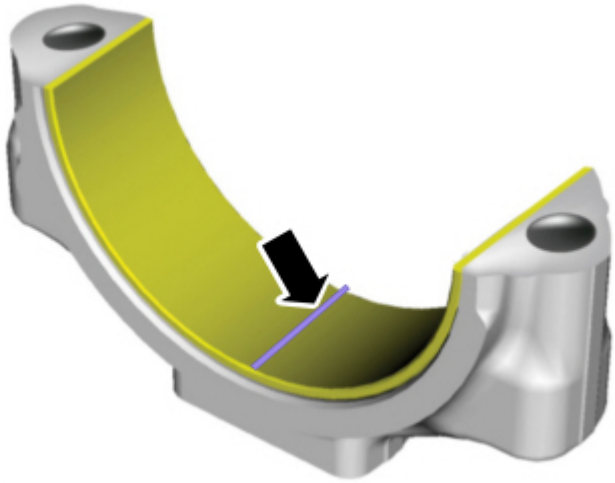
   For additional information, refer to: Spark Plugs(303-07A Engine Ignition - 2.7L EcoBoost (238kW/324PS), Removal and Installation).

   For additional information, refer to: Spark Plugs(303-07B Engine Ignition - 3.3L Duratec-V6, Removal and Installation).

   For additional information, refer to: Spark Plugs(303-07C Engine Ignition - 3.5L EcoBoost (BM), Removal and Installation).

   For additional information, refer to: Spark Plugs(303-07D Engine Ignition - 3.5L V6 PowerBoost (CN), Removal and Installation).

   For additional information, refer to: Spark Plugs(303-07E Engine Ignition - 5.0L 32V Ti-VCT, Removal and Installation).



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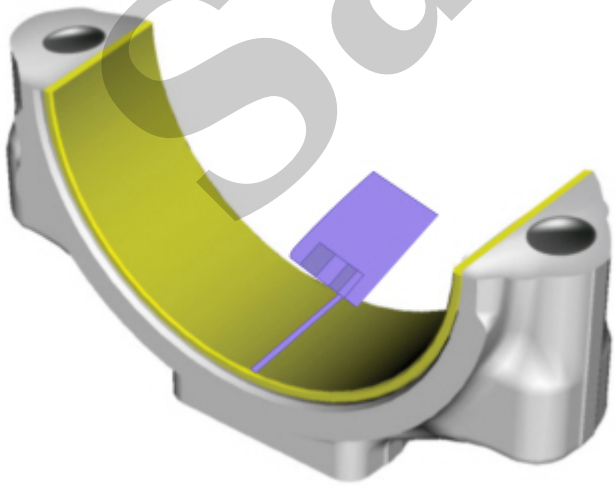
3. **NOTE**

   Do not turn the crankshaft during this step.

   Install and tighten to specifications, then remove the connecting rod bearing cap.

4. Measure the Plastigage to get the connecting rod bearing journal clearance. The Plastigage should be smooth and flat. A changing width indicates a tapered or damaged connecting rod or connecting rod bearing.



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Crankshaft End Play

303-00 Engine System - General Information	***2022 F-150***
General Procedures	***Procedure revision date: 11/3/2020***

Crankshaft End Play

General Equipment

Dial indicator
Dial indicator fixture

1. **NOTE**

   Refer to the appropriate Section 303-01 for the specification.

   1. Position the crankshaft to the rear of the cylinder block.
   2. Zero the Dial Indicator Gauge with Holding Fixture.Dial Indicator
   3. Move the crankshaft to the front of the cylinder block. Note and record the crankshaft end play.
   4. If the crankshaft end play exceeds the specified range, install new parts as necessary.

Crankshaft Main Bearing Journal Clearance

303-00 Engine System - General Information	***2022 F-150***
General Procedures	***Procedure revision date: 08/28/2012***

Crankshaft Main Bearing Journal Clearance

Check

NOTE

Refer to the appropriate Section 303-01 for the specification.

1. **NOTE**

   Crankshaft main bearing journals must be within specifications before checking journal clearance.

   Remove the crankshaft main bearing cap and crankshaft main bearing.

2. Position a piece of Plastigage across the crankshaft main bearing surface.

Cylinder Block Core Plug Replacement

303-00 Engine System - General Information	***2022 F-150***
General Procedures	***Procedure revision date: 01/8/2015***

Cylinder Block Core Plug Replacement

Repair

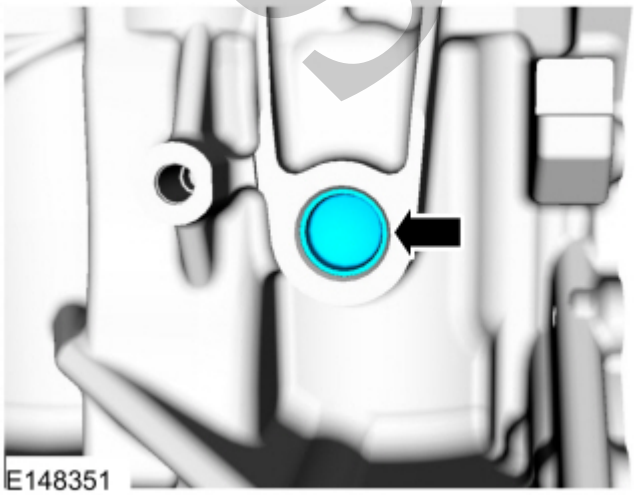
All core plugs

1. **NOTE**

   Cylinder block core plug shown, cylinder head core plug similar.

   Using the Slide Hammer and a commercially available body dent puller attachment or commercially available freeze plug puller remove the core plug.

   Use Special Service Tool : 100-001 (T50T-100-A) Slide Hammer

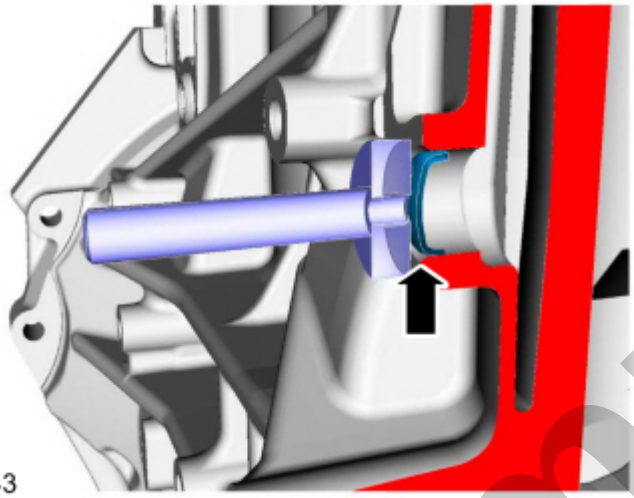


4. **NOTE**

   Do not contact the crown when installing an expansion-type core plug. This could expand the plug before seating and result in leakage.

   Coat the expansion-type core plug and bore lightly with sealant and install the core plug using a freeze plug installer. Remove the excess sealant after installation.

   Material : Motorcraft® Threadlock 262 / TA-26 (WSK-M2G351-A6)



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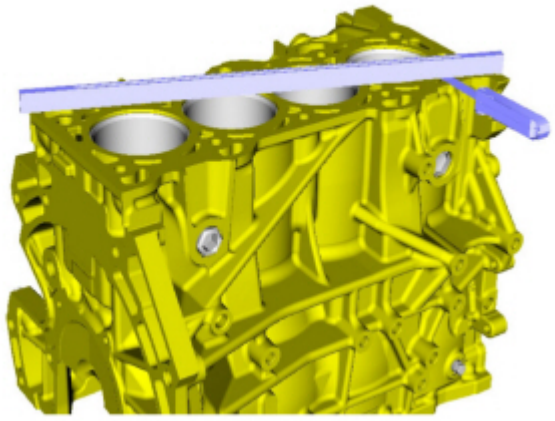

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