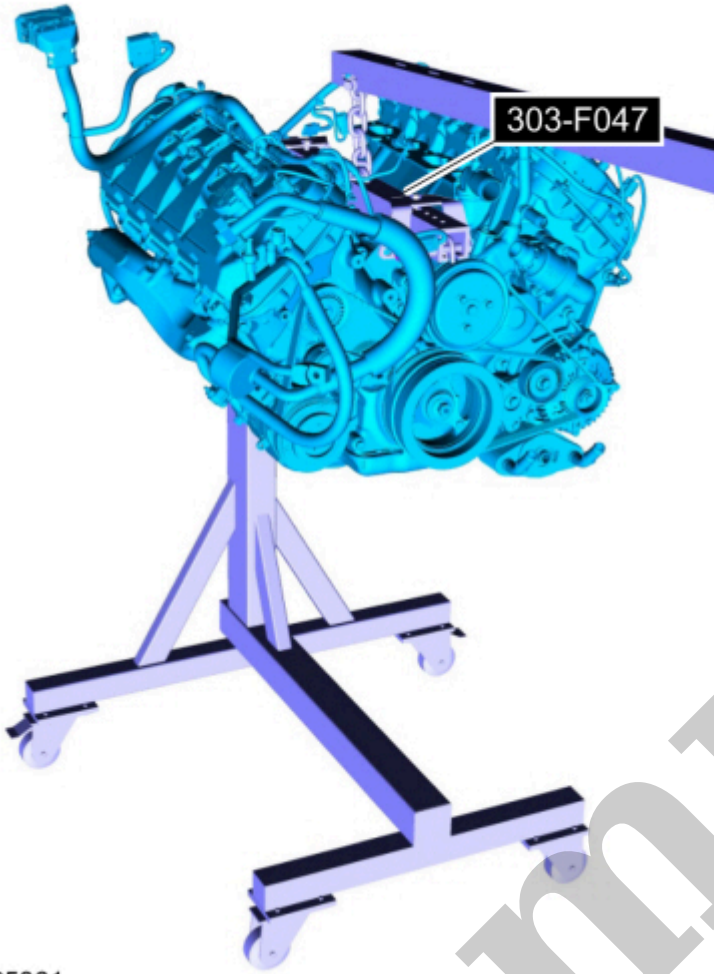


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## 2014 Ford Flex Service and Repair Manual

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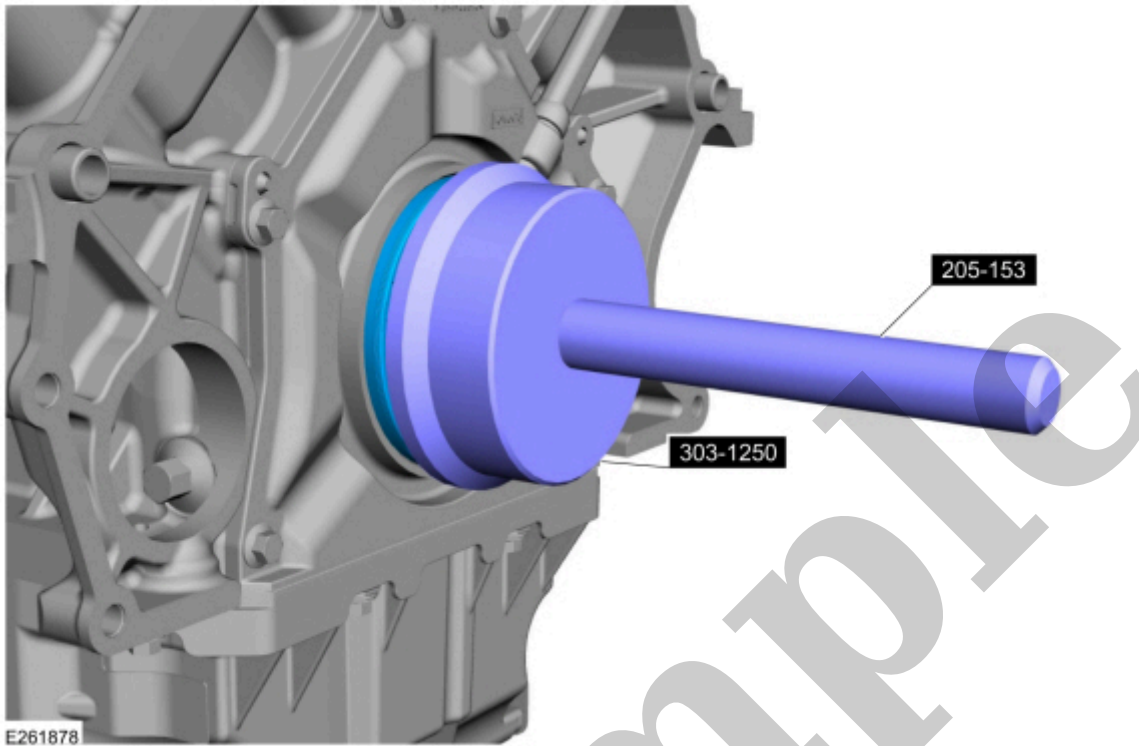
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151. Lubricate the seal bore and the seal lips with clean engine oil.

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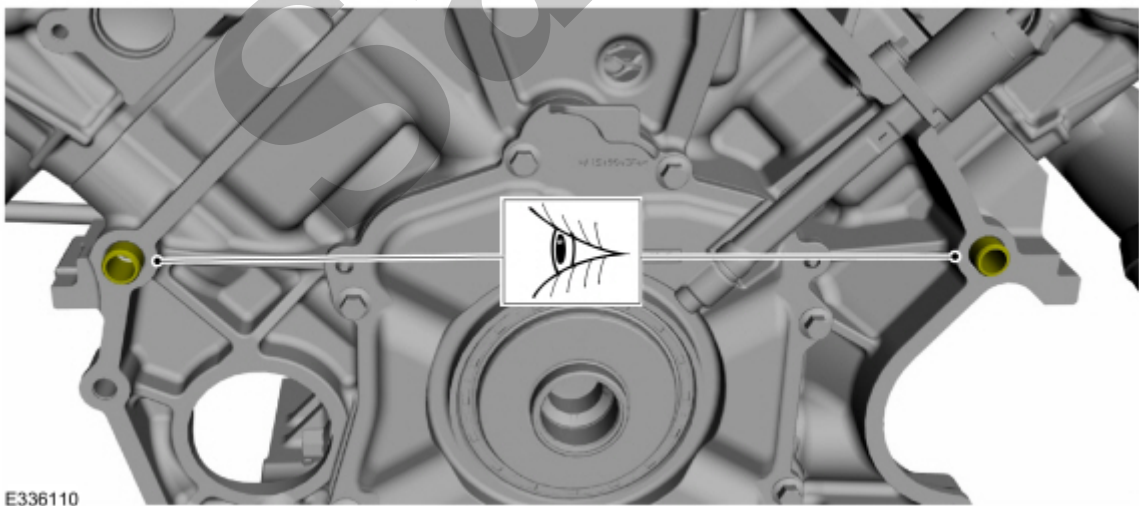
153. Using the special tools, install the crankshaft rear seal.

**Use Special Service Tool** : 205-153 (T80T-4000-W) Handle , 303-1250 Seal Installer, Rear Main

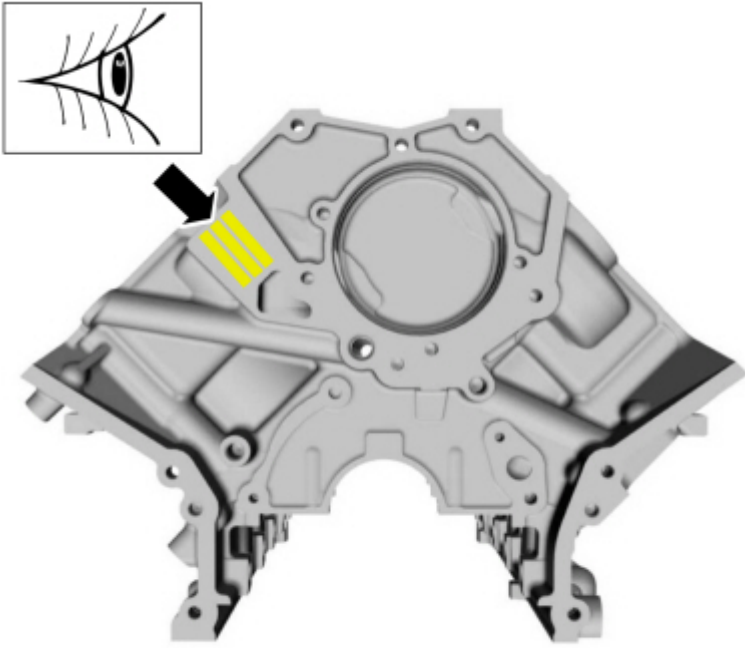


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154. Inspect the engine block dowels. If the dowels are damaged or missing, install new engine block dowels.



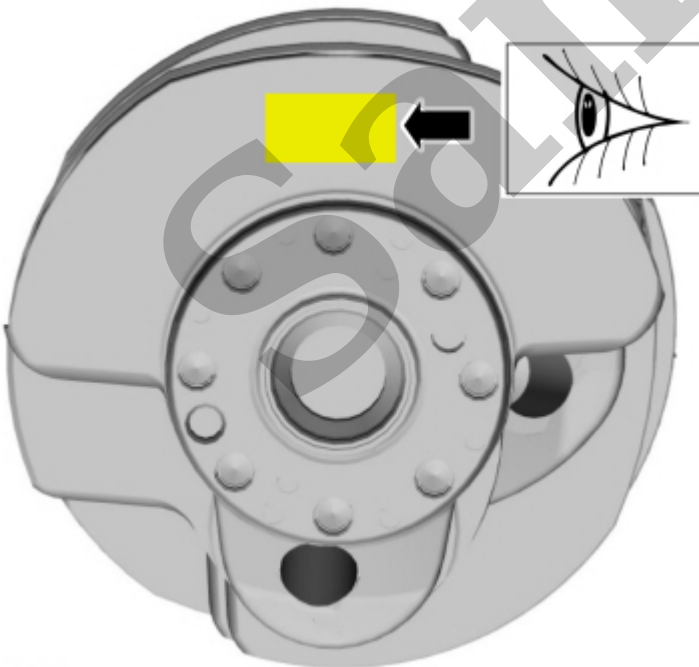
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2. Record the main bearing code found on the rear of the crankshaft.



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4. **NOTE**

This chart is for selecting main bearings 2, 3 and 4 only.

Using the data recorded earlier and the Bearing Select Fit Chart, Standard Bearings, determine the required bearing grade for main bearings 2, 3 and 4.

1. Maximum crankshaft journal diameter

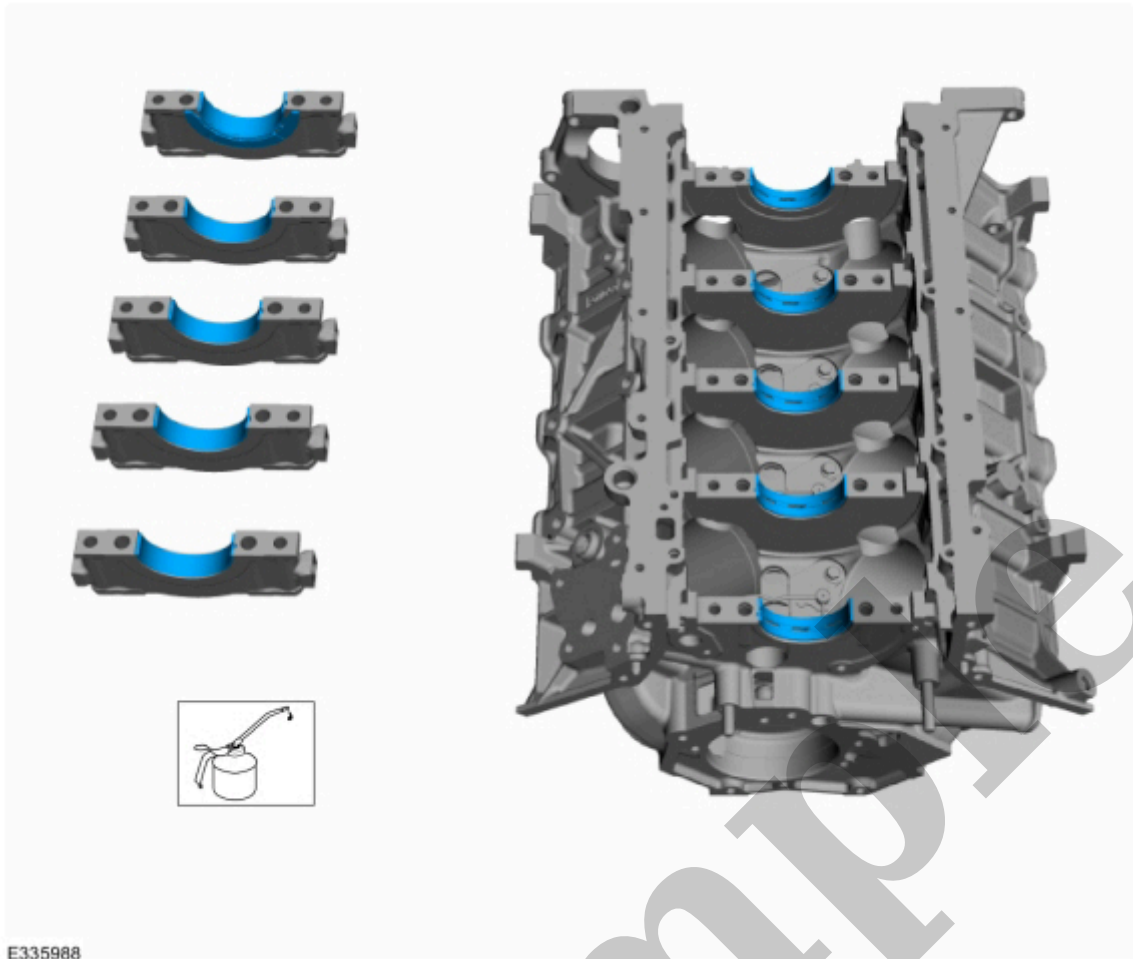
2. Minimum block bore diameter

- Read the second letter of the engine block main bearing code and the second letter of the crankshaft main bearing code.
- Read down the column below the engine block main bearing code letter and across the row next to the crankshaft main bearing code letter, until the 2 intersect. This is the required bearing grade(s) for the No. 2 crankshaft main bearing
- As an example, if the engine block code letter is "F" and the crankshaft code letter is "P", the correct bearing grade for this main bearing is a "1" for the upper bearing and a "2" for the lower bearing
- Repeat the above steps using the third and fourth letters of the block and crankshaft codes to select the No. 3 and No. 4 bearings.

②

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
X 67.505	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
W 67.504	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
V 67.503	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
U 67.502	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
T 67.501	1/1	1/1	1/1	1/1	1/2	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
S 67.500	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
R 67.499	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
Q 67.498	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
P 67.497	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
O 67.496	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
N 67.495	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
M 67.494	1/1	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2
L 67.493	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
K 67.492	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
J 67.491	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
I 67.490	1/2	2/2	2/2	2/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
H 67.489	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
G 67.488	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
F 67.487	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
E 67.486	1/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
D 67.485	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
C 67.484	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
B 67.483	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
A 67.482	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3
A 67.481	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/3	2/3	2/3	2/3

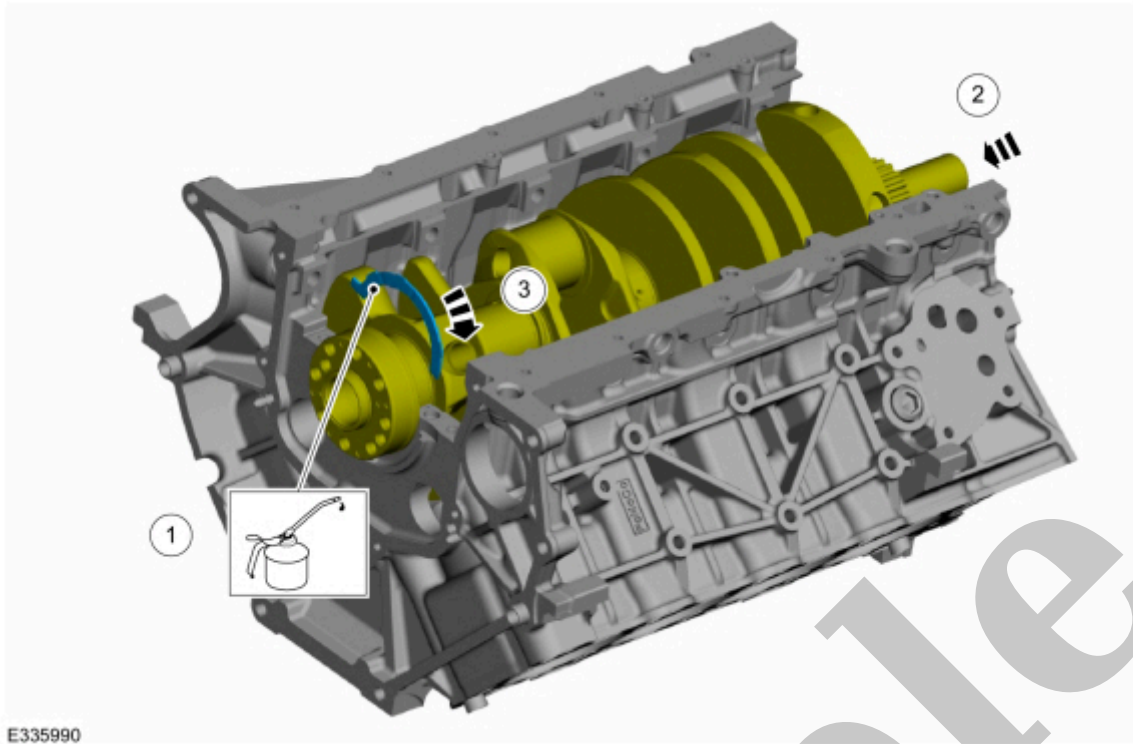
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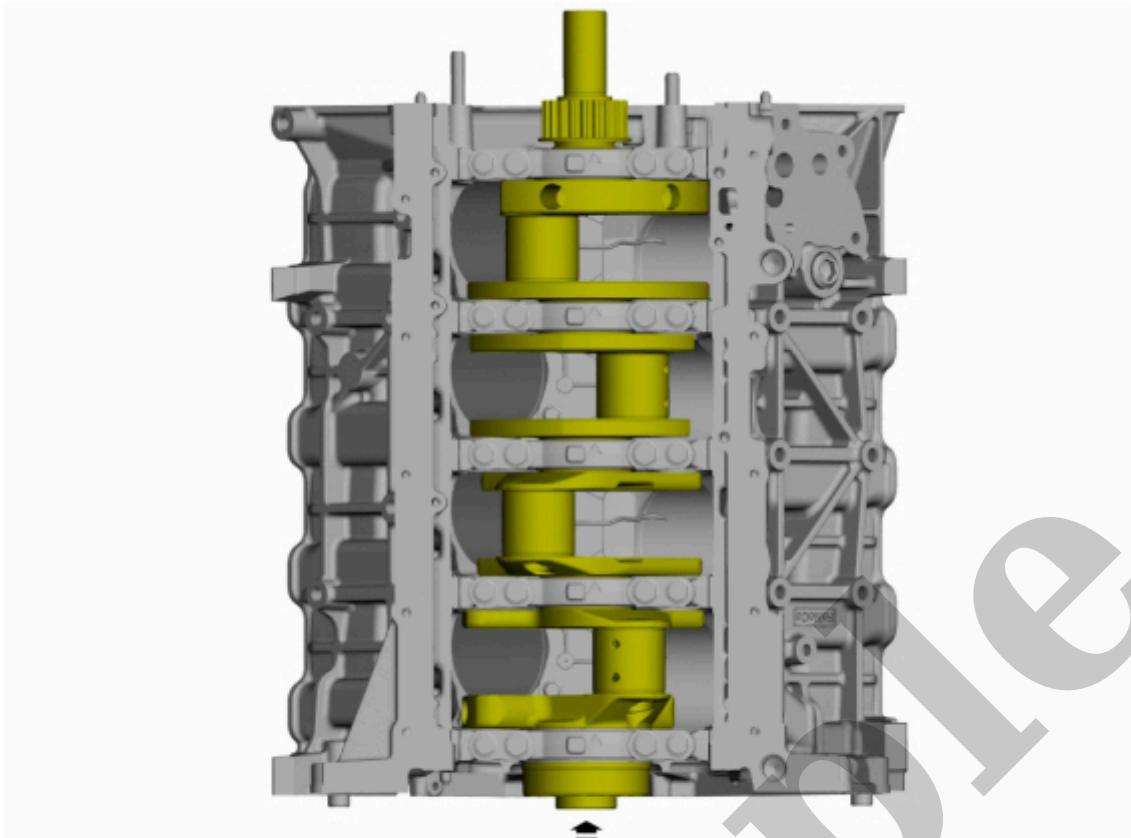
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7.
  1. Lubricate the crankshaft bearing journals with clean engine oil.
  2. Install the crankshaft into the cylinder block.



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9.
  - Lubricate the fastener threads with clean engine oil.
  - Install the main bearing caps and fasteners on the cylinder block and, keeping the caps as square as possible, alternately draw the caps down evenly using the cap fasteners.



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11. Tighten the vertical main bearing cap fasteners.

***Torque :***

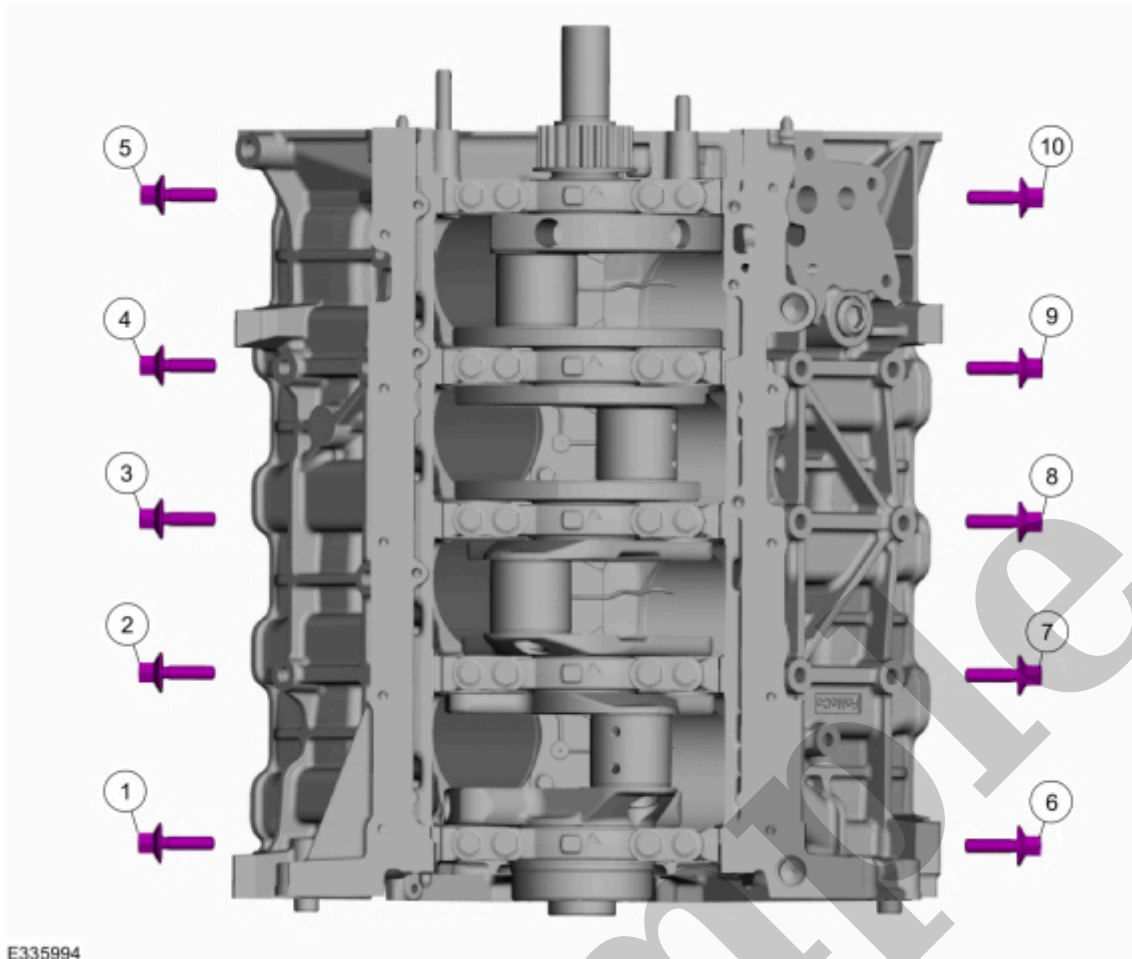
Stage 1: 1 through 20: 177 lb.in (20 Nm)

Stage 2: 1 through 10: 30 lb.ft (40 Nm)

Stage 3: 11 through 20 : 48 lb.ft (65 Nm)

Stage 4: 1 through 20: 90°





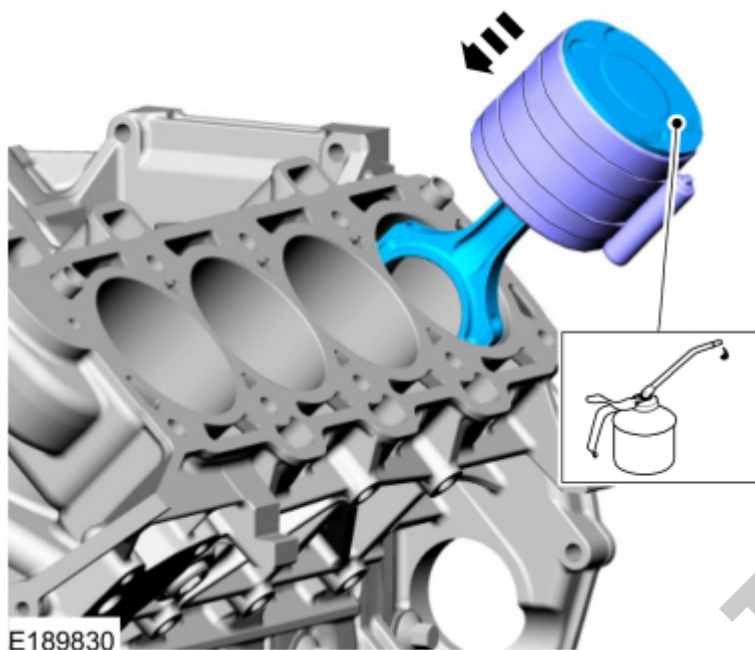
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13.
  - Check the crankshaft end play.  
Refer to: [Crankshaft End Play](#)(303-00 Engine System - General Information, General Procedures).  
Refer to: [Specifications](#)(303-01E Engine - 5.0L 32V Ti-VCT, Specifications).
  - Check that crankshaft torque-to-turn does not exceed 6 Nm (53 lb-in).
  - Check the piston-to-cylinder block and piston ring clearances.  
Refer to: [Specifications](#)(303-01E Engine - 5.0L 32V Ti-VCT, Specifications).
  - Assemble the pistons and position the piston ring gaps.  
Refer to: [Piston](#)(303-01E Engine - 5.0L 32V Ti-VCT, Disassembly and Assembly of Subassemblies).
14. Lubricate with clean engine oil and install the connecting rod bearings.

- Using a piston ring compressor, install the piston.

Use the General Equipment: Piston Ring Compressor



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#### 16. NOTICE

The rod cap installation must keep the same orientation as marked during disassembly or engine damage may occur.

#### NOTE

The connecting rod caps are of the "cracked" design and must mate with the connecting rod ends. Excessive bearing clearance will result if not mated correctly.

Install the connecting rod cap and bearing.

- Install the new bolts hand tight.