

Illustration 5

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Note: Install main bearing caps with the part number and FRONT toward the front of the block. Each cap has a number. Each cap must be installed in the same position as the correct number on the side of the cylinder block pan rail.

8. Tighten the bolts in the letter sequence to the following torque. Use Tooling (E) and Tooling (B) and tighten the bolts to a torque of 190 ± 14 N·m (140 ± 10 lb ft).
9. Tighten the bolts in the letter sequence to the following torque. Tighten the bolts for an additional 180 ± 5 degrees ($1/2$ turn).

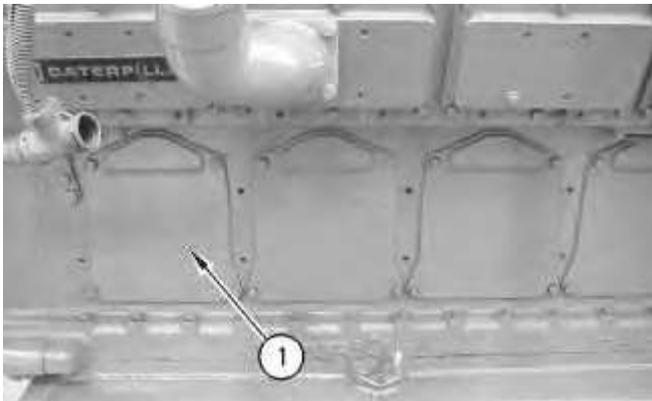


Illustration 6

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10. Install covers (1) onto the side of the engine.



Illustration 6

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10. Apply Tooling (B) to the bolts.
11. Tighten Bolts (A) and (B) to a torque of 90 ± 5 N·m (66 ± 4 lb ft).
12. Tighten Bolts (C) and (D) to a torque of 90 ± 5 N·m (66 ± 4 lb ft).
13. Tighten Bolts (C) and (D) again to a torque of 90 ± 5 N·m (66 ± 4 lb ft).
14. Tighten the bolts for an additional turn of 90 ± 5 degrees.

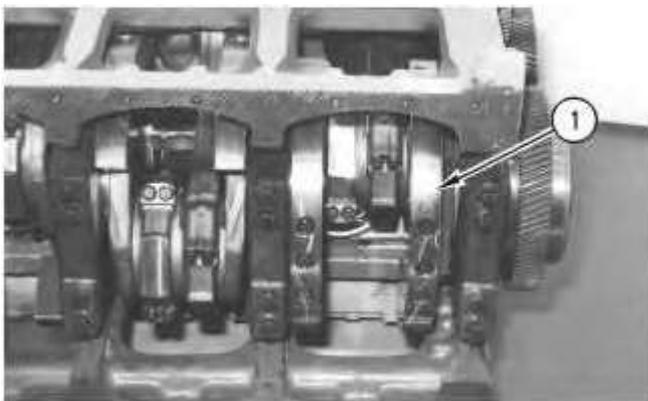


Illustration 7

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- Note:** Do not reuse counterweight bolts.
15. Apply Tooling (B) to the counterweight bolts.
 16. Install counterweights (1) . Tighten bolts to a torque of 70 ± 5 N·m (52 ± 4 lb ft). Turn the bolts for an additional 120 ± 5 degrees.

cleaning procedure for bolts.

Use the following procedure in order to tighten the cylinder head bolts. Refer to Illustration 1 for the tightening sequence:

1. Clean the bolts with a wire brush. Wipe the bolts with a dry cloth. Coat the bolt threads with clean engine oil.
2. Tighten bolt (1) through bolt (8) in the numerical sequence to $30 \pm 5 \text{ N}\cdot\text{m}$ ($22 \pm 4 \text{ lb ft}$).
3. Tighten bolt (1) through bolt (8) in the numerical sequence to $270 \pm 35 \text{ N}\cdot\text{m}$ ($200 \pm 26 \text{ lb ft}$).
4. Tighten bolt (1) through bolt (8) in the numerical sequence to $450 \pm 20 \text{ N}\cdot\text{m}$ ($330 \pm 15 \text{ lb ft}$).
5. Tighten bolts (9) and (10) to $55 \pm 10 \text{ N}\cdot\text{m}$ ($41 \pm 7 \text{ lb ft}$).

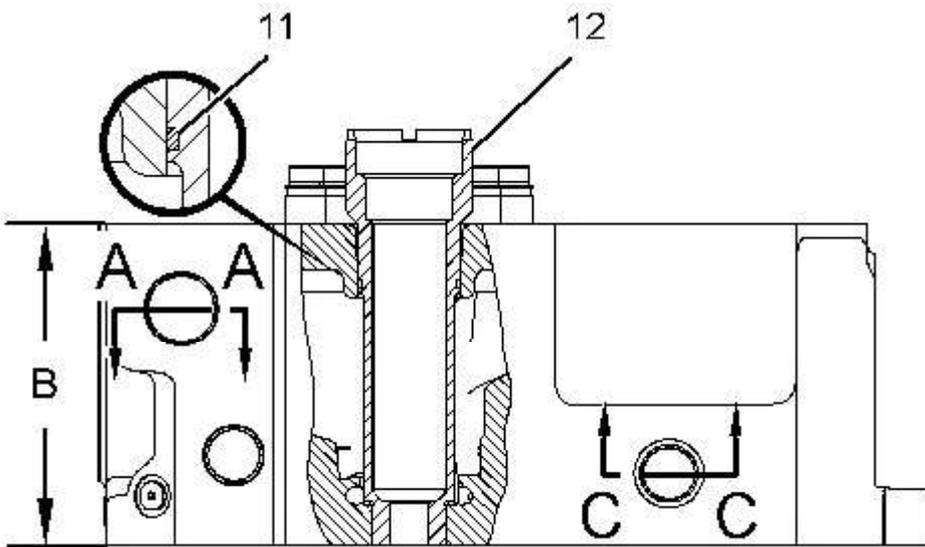


Illustration 2

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(11) Coat the bore in the head and the O-ring seal with liquid soap before assembly.

Note: Before assembly, apply **4C-5599** Anti-Seize Compound to the threads of the adapter.

(12) Torque for the adapter ... $120 \pm 10 \text{ N}\cdot\text{m}$ ($90 \pm 7 \text{ lb ft}$)

(B) Height of the new cylinder head ... $142.00 \pm 0.15 \text{ mm}$ ($5.591 \pm 0.006 \text{ inch}$)
