

Tool Instruction CYLINDER HEAD LIFTING BRACKET

4328406R2

Tool Number: 12-342-03



0000402001

Figure 1. 12-342-03 Cylinder Head Lifting Bracket

Purpose

Essential tool used to assist in removing the cylinder head from the engine.

Application(s)

MaxxForce® 11 (EPA 10)

MaxxForce® 13 (EPA 10)

N13 (EPA 10)

IMPORTANT: Please reference International® Service PortalSM regarding any possible revisions to this document.



GOVERNMENT REGULATION: Engine fluids (oil, fuel, and coolant) may be a hazard to human health and the environment. Handle all fluids and other contaminated materials (such as filters or rags) in accordance with applicable regulations. Recycle or dispose of engine fluids, filters, and other contaminated materials according to applicable regulations.

! WARNING: To prevent property damage, personal injury, and / or death, read all safety instructions in the “Safety Information” section of the *Engine Service Manual* or *Engine Diagnostic Manual*.

! WARNING: To prevent property damage, personal injury, and / or death, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.

! WARNING: To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

! WARNING: To prevent property damage, personal injury, or death, inspect tool of any wear / damage prior to use. Replace any worn or damaged components as necessary.



! WARNING: To prevent property damage, personal injury, or death, ENSURE bolt of lifting eye is tightened to the manufacturer recommended specification of 12 ft-lb (16 N·m) prior to use.

! WARNING: To prevent property damage, personal injury, or death, use a hoist rated for the weight of the cylinder head and follow the manufacturer's operative and safety instructions. Attach safety lifting hooks to the cylinder head lifting bracket and lifting eye.

! CAUTION: To prevent equipment damage, NEVER use power / impact tools to adjust lifting bracket.

Tool Contents

Table 1

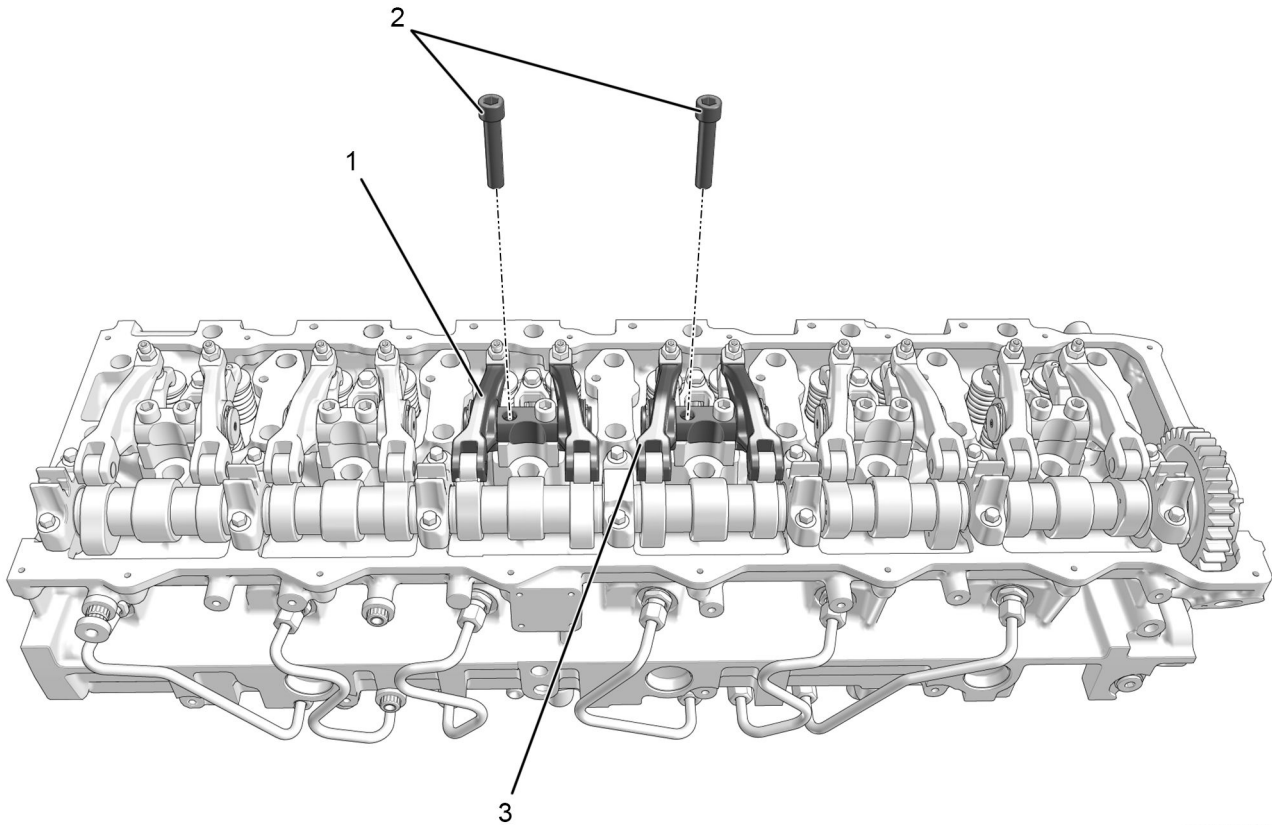
Image	Tool Number	Qty	Description
 <p>0000402003</p>	12-342-03	1	Cylinder Head Lifting Bracket
 <p>0000160075</p>	4328406R1	1	Tool Instruction

Instructions

INSTALLATION

1. Park vehicle on a flat surface.
2. Shift transmission to Park or Neutral and set parking brakes.
3. Install wheel chocks.
4. Unlatch and open hood.

Instructions (cont.)

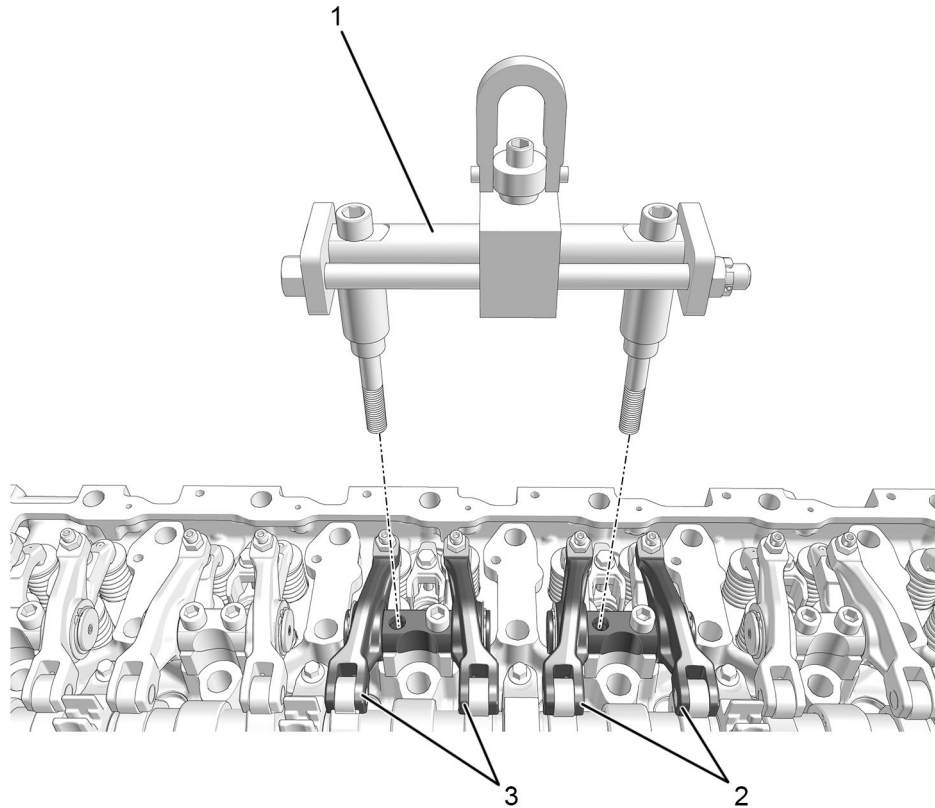


0000402009

Figure 2. Rocker Arm Bolts

- | | | |
|---------------------------------|----------------------|---------------------------------|
| 1. Cylinder 3 rocker intake arm | 2. M12 x 60 bolt (2) | 3. Cylinder 4 rocker intake arm |
|---------------------------------|----------------------|---------------------------------|
5. Access cylinder head and remove cylinder head bolts. Refer to appropriate service manual, service bulletin, or equivalent for detailed instruction.
- NOTE: Save bolts for reuse.**
6. Remove bolts (Figure 2, Item 2) from cylinder 3 and 4 rocker intake arms (Figure 2, Items 1 and 3).

Instructions (cont.)



0000402008

Figure 3. Cylinder Head Lifting Bracket

1. Cylinder head lifting bracket 2. Cylinder 4 rocker intake arm 3. Cylinder 3 rocker intake arm

⚠ WARNING: To prevent property damage, personal injury, or death, inspect tool of any wear / damage prior to use. Replace any worn or damaged components as necessary.

⚠ WARNING: To prevent property damage, personal injury, or death, ENSURE bolt of lifting eye is tightened to the manufacturer recommended specification of 12 ft-lb (16 N·m) prior to use.

7. Position big bore cylinder head lifting bracket (Figure 3, Item 1) and loosely install two mounting bolts at cylinder 3 rocker intake arm and cylinder 4 rocker intake arm (Figure 3, Items 2 and 3).
8. Using torque wrench, tighten bracket mounting bolts to 77 lb-ft (105 N·m).
9. If necessary, install 12-342-04 Cylinder Head Mounting Plates (not available in this kit).

Instructions (cont.)



0000402007

Figure 4. Lifting Bracket Adjustment Bolt

1. Adjustment bolt

⚠ WARNING: To prevent property damage, personal injury, or death, use a hoist rated for the weight of the cylinder head and follow the manufacturer's operative and safety instructions. Attach safety lifting hooks to the cylinder head lifting bracket and lifting eye.

⚠ CAUTION: To prevent equipment damage, NEVER use power / impact tools to adjust lifting bracket.

NOTE: The lifting bracket is equipped with an adjustment feature to level the cylinder head when lifting.

10. If necessary, adjust lifting bracket using adjustment bolt (Figure 4, Item 1).
11. Using an appropriate hoist, lift cylinder head. Refer to appropriate service manual, service bulletin, or equivalent for detailed instruction.
12. Place cylinder head on a clean, non-metallic surface or transfer to appropriate engine stand.

Instructions (cont.)

REMOVAL



WARNING: To prevent property damage, personal injury, or death, use a hoist rated for the weight of the cylinder head and follow the manufacturer's operative and safety instructions. Attach safety lifting hooks to the cylinder head lifting bracket and lifting eye.



CAUTION: To prevent equipment damage, NEVER use power / impact tools to adjust lifting bracket.

1. Using an appropriate hoist, lower cylinder head. Refer to appropriate service manual, service bulletin, or equivalent for detailed instruction.
2. Loosen two mounting bolts at cylinder 3 rocker intake arm (Figure 3, Item 3) and cylinder 4 rocker intake arm (Figure 3, Item 2).
3. Remove cylinder head lifting bracket (Figure 3, Item 1).
4. If necessary, remove 12-342-04 Cylinder Head Mounting Plates (not available in this kit).
5. Using torque wrench, install previously removed bolts (Figure 2, Item 2) to cylinder 3 and 4 rocker intake arms (Figure 2, Items 1 and 3). Tighten bolts to 77 lb-ft (105 N·m).
6. Install cylinder head. Refer to appropriate service manual, service bulletin, or equivalent for detailed instruction.
7. When service is complete, close and latch hood.
8. Remove wheel chocks.

Contact Information

If you would like to order additional tools or need replacement parts, please refer to the Navistar Service Tool Catalog. If you have questions, concerns, or feedback, please contact Navistar Service Tool Support Center:

- Submit a Service Tool iKNow Case File.
- Phone: 800-365-0088 (toll free).