

Revised 5-92

Improved Cylinder Head – 135 thru 220

ONE PIECE CYLINDER HEAD

220 Model
1987 and 1988
S/N 0B116662 thru 0C100860

135 thru 200 Models
1988 thru 1992
S/N 0B241881 thru 0D123402

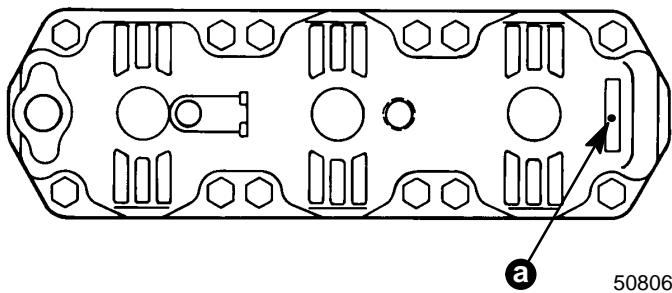
Mercury Marine has developed a new technology for applying an additional protective coating to the V6 one piece cylinder head. This coating greatly reduces salt water corrosion. These improved cylinder heads are installed on new V6 models and are available as a replacement part.

Outboards S/N 0D123403 and later and service powerheads with date stamp 10-23-91 and later have the improved cylinder heads installed.

Quicksilver replacement one piece cylinder heads with the new coating have been available in two versions. The first version is not painted on the exterior surface, is gray in color and requires painting upon installation. The second version is painted black on the exterior surface. Both have the new protective coating.

IDENTIFICATION:

The improved heads have a drilled hole in the cast pad on the outer surface of the head to identify that the new coating has been applied.

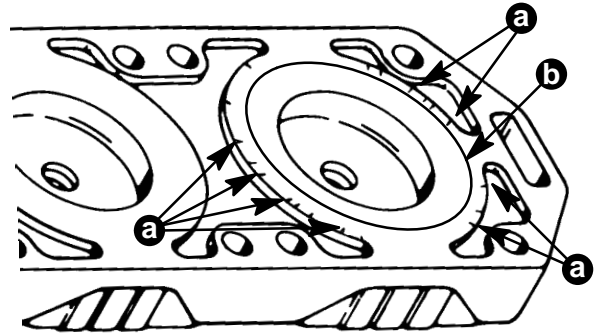


a - Drilled Hole in the Cast Pad

Figure 1. One Piece Cylinder Head with New Protective Coating

INSPECTION:

Whenever cylinder heads are removed on a salt water outboard, inspect for corrosion on the machined sealing surface. Visually inspect for corrosion that has started on the flat surface next to the water flow area and is progressing toward and under the head gasket fire ring sealing area. Replace with the improved cylinder heads if corrosion exists as described.



a - Corrosion Starting from the Edge
b - Fire Ring Seal Area

Figure 2. Cylinder Head Sealing Surface

PART NUMBERS:

Part numbers of the one piece cylinder heads are listed below. When ordering, refer to the correct parts manual to obtain the original cylinder head part number. That part number will automatically supersede to the part number of an improved cylinder head. Only one piece cylinder heads with the new coating are available from Mercury Marine.

	Without New Coating	With New Coating	
		Version One Unpainted	Version Two Painted
18419--1	15221A-1	15221A-2	15221A-4
	18419--2	18419--6	18419--7
	18488--4	18488--5	18488--8
	18488--3	18488--6	18488--9
	18787--3	18787--7	18787-10
	18789--3	18789--6	18789--9

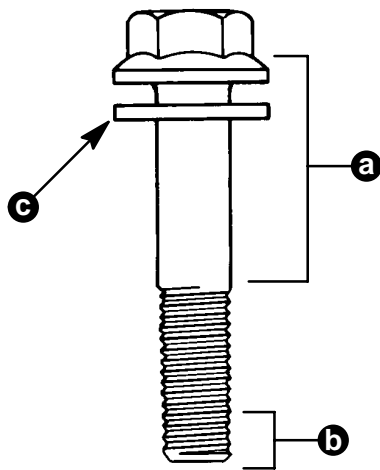
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PAINTING:

Unpainted cylinder heads require painting before operating the outboard. Painting the cylinder heads after they are installed on the block only requires masking of the engine components to protect them from over spray. Painting the cylinder heads before they are installed requires masking the area under every head bolt to prevent head bolt over torque, all the spark plug holes and seat areas, the heat sensor hole and the threaded hole next to the heat sensor hole.

INSTALLATION:

Replace cylinder head gaskets whenever cylinder heads are installed. To obtain the highest degree of corrosion protection, install only Quicksilver cylinder head gaskets. With the flat washer installed, apply light oil (10W-30) to the first four threads of the cylinder head bolt. The underside of the cylinder head bolt should be clean and free from oil.

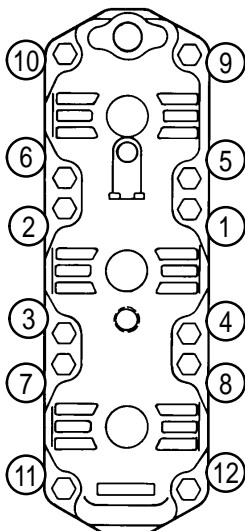


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- a - No Oil in this Area
- b - Oil First 4 Threads Only
- c - Flat Washer

Figure 3. Cylinder Head Bolt

Torque the cylinder head bolts to 40 lb. ft. (54.2 N-m) and in the proper sequence.



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Figure 4. Cylinder Head Bolt Torque Sequence

RETORQUE:

IMPORTANT: The procedure for cylinder head bolt re-torque is new and improved. Retorque cylinder head bolts only when the block is cold.

The following retorque procedure will ensure long term head gasket durability. Retorque the cylinder head bolts after the outboard is run the first time. Warm the block completely by running 1/2 to 1 hour. Allow the block to cool for two hours. Retorque the cylinder head bolts when the block is cold. Follow the torque sequence and working with one bolt at a time, loosen bolt 1/4 turn, then retorque it to 40 lb. ft. (54.2 N-m).

REMINDER:

When servicing 200 models with serial number 0D077248 thru 0D122746, remove the idle stabilizer/advance module, install an idle stabilizer module and reset the timing. Refer to service bulletin 91-35.

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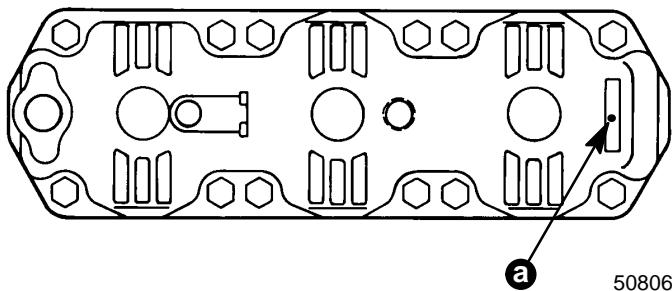
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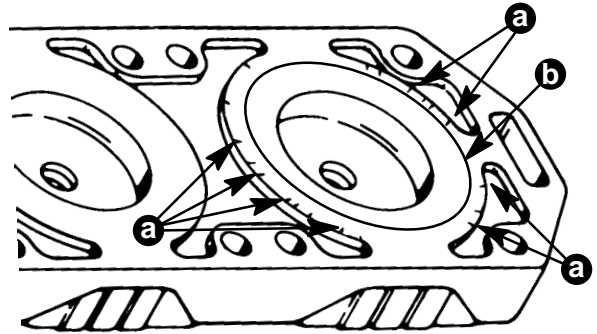


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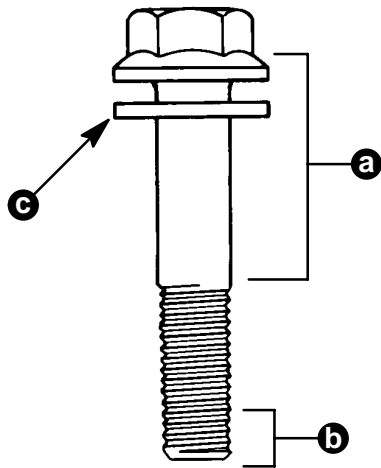
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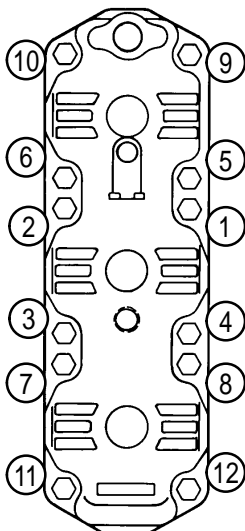


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WARRANTY:

The Mariner/Mercury exclusive 3 year limited corrosion warranty in the US and Canada will cover corrosion on the cylinder heads as described in this bulletin on the models listed for thirty six (36) months from the date of original sale.

Complete warranty claim listing:

- Outboard serial number.
- Parts required.
- One half (0.7) hour labor for each cylinder head.
- Warranty Labor Rate Code OP39.
- Failure Code 411 54.
- US and Canada - Return cylinder heads with the claim.