



No.: 09 TS-11
April 21, 2009

TO: Service Locations

FROM: Technical Service

SUBJECT: **MBE 4000 Cylinder Head And Head Gasket Information**

NOTE: This document supersedes 07 TS-04Rev and AP2007-014.

ISSUE

A recessed grommet sealing area was machined around each coolant inlet and outlet port in the cylinder head to give a better mating surface for the thicker rubber seal in the head gasket. See Figure 1. The new cylinder head and gasket became effective with engine S/N: 0460866443 built on August 1, 2006.

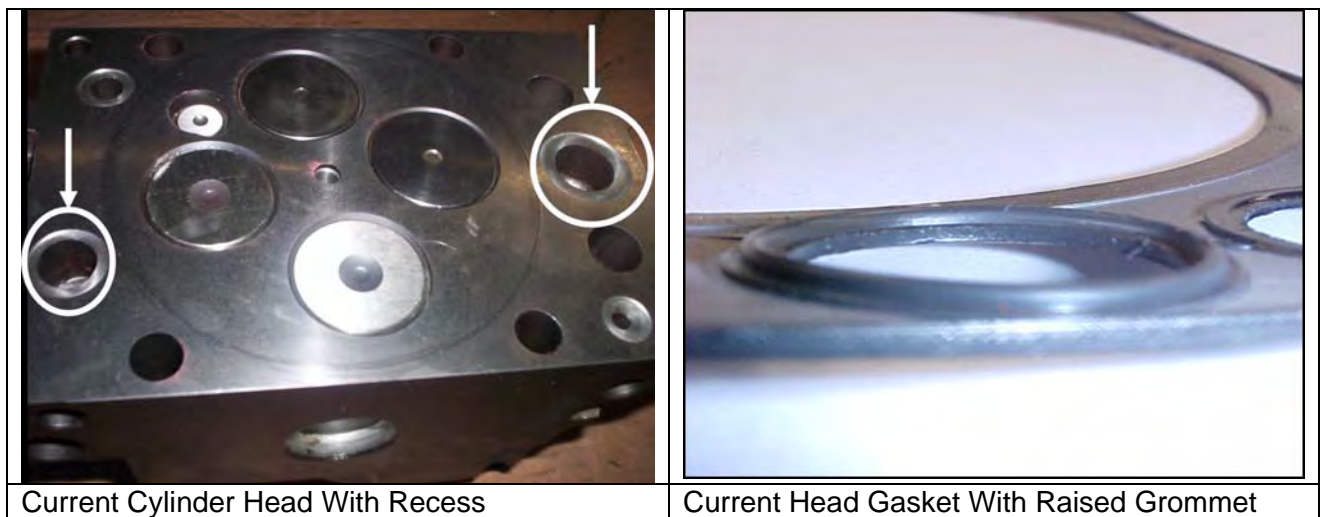


Figure 1 – MBE 4000 Cylinder Head Recess and Head Gasket Grommet

Further improvements to the cylinder head is a change to a cast iron cup plug instead of a steel cup plug to prevent head cracking. See Figure 2. The new cylinder head became effective with engine S/N: 0460884866 built on April 25th, 2007.

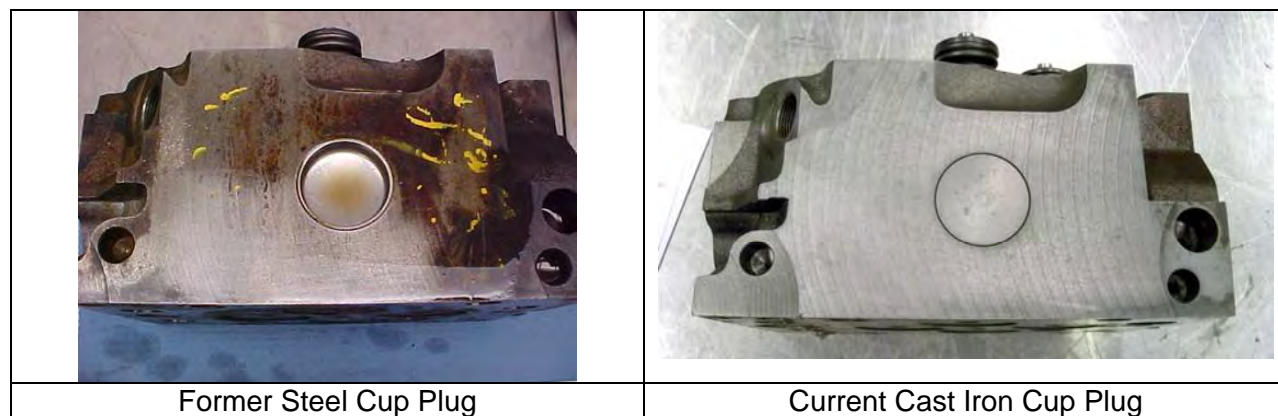


Figure 2 – MBE 4000 Cylinder Head Cup Plug

Another improvement to the head gasket includes the removal of the vent gap around the perimeter of the gasket. This will prevent water intrusion under the gasket which can cause rusting and pitting of the fire deck surfaces of the cylinder block and head, but ultimately does not affect the sealing surfaces. See Figure 3. The new cylinder head gasket became effective with engine S/N: 0460896913 built on September 3rd, 2007.

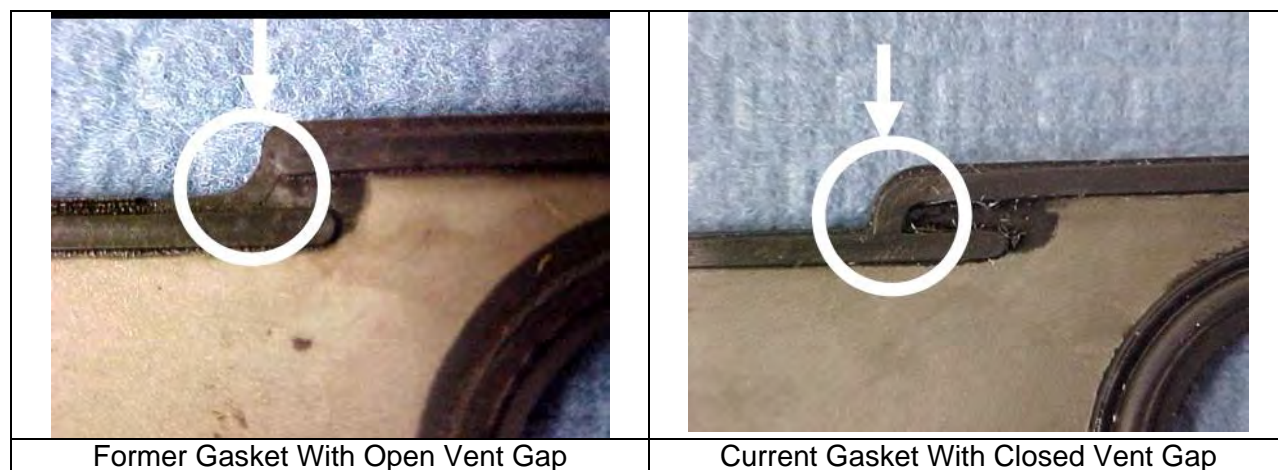


Figure 3 – MBE 4000 Cylinder Head Gasket Vent Gap

REQUIRED ACTION

Note these items when servicing the cylinder heads and gaskets.

- Grommet style cylinder heads and gaskets **MUST** be used together on the same cylinder. Do NOT mix grommet and non-grommet style cylinder heads and gaskets on the same cylinder.
- Grommet and non-grommet style cylinder heads and gaskets can be used in the same engine provided they are matched as noted above. Do NOT replace all six cylinder heads and gaskets simply to have all the same new parts on the engine.
- Reference Technical Service letter [09 TS-9](#) for more information.

REQUIRED MATERIAL

Table 1 provides a list of the current service part numbers. Stock of former part numbers CANNOT be returned and may be used until they are exhausted.

Engine Type	Current Part Number	Former Part Number(s)	Description	Current Part Comments
EPA04 after engine S/N: 0460866443 and all EPA07	RA4600101720	R4600101120	Cylinder Head with Valves	Grommet style parts that must be used together.
	A460016042027	A4570161220 A4600160420	Cylinder Head Gasket	
EPA04 prior to engine s/n 0460866443	RA4600102020	R4600101120 RA4600101720	Cylinder Head with Valves	Non-grommet style parts that must be used together. NOTE: If you are reusing the former grommet style cylinder heads, use matching current grommet style head gasket P/N: A460016042027.
	A4600160520	A4570161120 A4570161220 A4600160420	Cylinder Head Gasket	
All EPA98	RA4570108620	4600100620	Cylinder Head with Valves	Grommet style parts that must be used together. NOTE: If you are reusing the former non-grommet style cylinder head, use matching current non-grommet style head gasket P/N: A4600160520.
	A460016042027	A4570161120 A4570161220 A4600160420	Cylinder Head Gasket	

Table 1 – MBE 4000 Cylinder Head and Gasket Part Numbers

REPAIR PROCEDURE

Refer to the EPA07 MBE4000 Service Manual (DDC-SVC-MAN-0026) and EPA04/98 MBE 4000 Service Manual (DDC-SVC-MAN-0023) for repair information.

CONTACT INFORMATION

Please contact the Detroit Diesel Customer Support Center at 313-592-5800 or email csc@daimler.com if you have any questions.