

E284 - PACCAR MX-13 EPA2013 and EPA2017 Service Head Gasket

 [Edit](#)  [Clone](#)

Number

E284

Section

Engine - 45

Subject

PACCAR MX-13 EPA2013 and EPA2017 Service Head Gasket

Date

12/17/2021

Condition

Cylinder head is removed.

Chassis Affected

All chassis equipped with EPA2013 or EPA2017 PACCAR MX-13 engines.

Action

Information Only

Whenever a cylinder head is removed, a service cylinder head gasket must be installed. The production cylinder head gasket included with cylinder head installation kits should be discarded.

Warranty

All PACCAR cylinder head removal and installation repairs starting from 12/20/2021 must be made with a service cylinder head gasket.

If a repair is made with a production cylinder head gasket, and subsequently fails, the failure cause will be viewed as installing an incorrect part and adjudicated accordingly.

Parts

Parts are available from PACCAR Parts.

| Quantity | Part Number | Description |
|----------|-------------|--------------------------------|
| 1 | 2312234PE | Gasket, cylinder head, service |

Background

PACCAR has developed a service cylinder head gasket that relocates the sealing surfaces to fresh areas of the block and head decks. This relocation greatly improves the sealing ability of the service cylinder head gasket over a

production cylinder head gasket, greatly reducing the risk of a related comeback.

Procedure

Only use the service cylinder head gasket when installing a cylinder head on a PACCAR MX-13 engine. The RMI Parts section will receive an update to show the availability of the service head gasket.

| Number | Description | Qty |
|------------|--|-------------|
| 1 1822941 | Flange bolt, smooth, metric thread M12X1.75X155X80 | 007 |
| 2 1822166 | Cylinder head bolt M18X2X200X115 | 026 |
| 3 1932890 | Cylinder head gasket, engine | 001 |
| 3 2312234 | Cylinder head gasket, engine | Service set |
| 4 2007501 | Crankshaft | 001 |
| 5 1780809 | Crankshaft main bearing shell, upper Up,STD Up,STD | 007 |
| 6 2047654 | Crankshaft main bearing shell, under Un,STD | 007 |
| 7 0251838 | Cylindrical dowel pin 10M6X24 mm | 001 |
| 8 1736755 | Thrust washer, crankshaft | 004 |
| 9 2112481 | Camshaft, engine | 001 |
| 10 2033373 | Locking plate | 001 |
| 11 1603811 | Flange bolt, smooth, metric thread | 002 |
| 12 1694591 | Cylindrical dowel pin | 001 |

The service head gasket relocates the sealing surface to reduce the risk of leaks caused by erosion of the original sealing surface.

To use the service head gasket in place of the production head gasket:

- The block surface must be cleaned using an aluminum oxide stone
 - The "repair height cylinder liner, STD (Basic Assembly)" RMI job that references using the Monaco brand counter bore cutting tool contains instructions for using a stone to clean the block surface.

Description

- ▼ repair height cylinder liner, STD (Basic assembly)
 - repair height cylinder liner, STD (Basic assembly)
 - repair height cylinder liner, STD (Basic assembly)

Usually Monaco based procedure

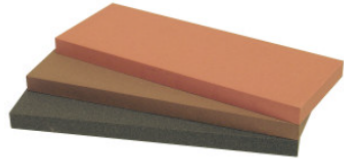
- The following part numbers have been added to the RMI job.
 - Norton India fine stone part number 61463685970
 - Grainger part number 1RDH5



Service Head Gasket Offset Inside Original Gasket

What Grit is a Norton Fine, Medium and Coarse?

Norton makes a number of stones in a Fine, Medium and Coarse grit. But those grits are seldom stated in terms of the actual grit. Based on our experience and referencing their documentation, we have determined the grits. Interestingly, Norton produces different grits for their Norton India Stones (an aluminum oxide stone) and their Norton Crystolon Stones (a silicon carbide stone).



While there is no one standard in use for grits, we generally use the standard most commonly associated with waterstones (JIS). Why do we do this? For a few reason actually. First, on the lower grits, it fairly closely follows the USA standard (CAMI) for coated abrasives (sandpaper) and the European standard (FEPA). Second, the waterstone standard has a very wide range that starts very coarse and finishing extremely fine. The CAMI and FEPA standards stop where the waterstone grits keep going finer. This allows us to use one standard across different stones. Lastly, the micron measurement allows for excellent on relative particle size comparison, so from that perspective, that is a great way to measure grit. However, if you're not familiar with that measurement, the numbers are somewhat hard to interpret. For example, a 45 micron particle size is hard to imagine, but if we said it was roughly a 325 grit, you gain some perspective.

Norton India and Norton Crystolon Grit Chart

| Stone Type | Coarse Grit | Medium Grit | Fine Stones |
|--------------------|-------------|-------------|-------------|
| Norton India Stone | 150 | 240 | 400 |