

# ENGINE—CYLINDER HEAD DECK LEAK—4.6 AND 5.4L ENGINES—NEW “SERVICE-ONLY” GASKET AND CYLINDER HEAD KITS AVAILABILITY

Article No.  
03-6-2

**FORD:** 1999-2002 CROWN VICTORIA, MUSTANG  
1999-2001 E SERIES, EXPEDITION, F-150, SUPER DUTY F SERIES  
2000-2001 EXCURSION

**LINCOLN:** 1999-2002 TOWN CAR  
1998-1999 NAVIGATOR

**MERCURY:** 1999-2002 GRAND MARQUIS

Article **02-22-7** is being republished in its entirety to update the Model Year and Model Line coverage.

## **ISSUE**

Some vehicles equipped with the Romeo built 4.6L 2V engine or 5.4L 2V Windsor and 5.4L Supercharged engine may exhibit an oil leak or oil weepage from the cylinder head gasket at the right hand rear or the left hand front of the engine. Oil weepage is not considered detrimental to engine performance or durability. An oil leak may be caused by metal chip debris lodged between the head gasket and the block, chip debris between the cylinder head and the head gasket, or by damage to the cylinder head sealing surface that occurred during the manufacturing process.

## **ACTION**

Once an oil leak is verified with a black light test at the head gasket joint, replacement of the head gasket can be performed. If the head was damaged by chip contamination, the head should be replaced. A revised “Service-Only” gasket is now released for both of these cases.

## **SERVICE INFORMATION**

Cylinder heads damaged by brinnelling (depression marks from original gasket) of the head may still be reusable. The revised “Service-Only” gasket has a feature by which the embossed sealing area does not follow the same sealing path as the original gasket. This area is surrounding the High Pressure Oil Feed (HPOF) area. It is triangular in shape and is found in the rear of the passenger side cylinder head, or, in the front of the drivers side cylinder head (Figure 1 and Figure 2).

Required for service are:

- A straightedge (machine flatness toleranced to 0.0002” per foot in length) (available from Snap-On or as provided by Ford Motor Company)
- Motorcraft Silicone Gasket Remover (ZC-30)
- Metal Surface Prep (ZC-31)
- Service-only gasket (3U7Z-6051-BA for drivers side and/or 3U7Z-6051-AA for passenger side) with the new embossed area

The engine should be allowed to cool before removing the head or warpage may occur in deck flatness.

The cylinder head and block decks should be cleaned before performing a flatness check. Dark metal stains below the surface of the metal are normal. Do not attempt to polish off the stains with grinders or scrapers. Use a plastic scraper (or plastic ice scraper or equivalent) to pull away any residual silicone RTV with ZC-30 and ZC-31 applied in sequence.

The Workshop Manual and Service Labor Time Standards have been recently updated for both cars and truck using 4.6L 2V and 5.4L 2V and Supercharged 5.4L engines. These include instructions to remove the engine prior to removing the cylinder head. Service Labor Time Standards allow for extra time in engine removal and cylinder head deck leak repair out of vehicle.

Cylinder Head Kits are available on most applications. Refer to the current Parts Catalog Listing for applicability.

**NOTE:** The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by “do-it-yourselfers”. Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle.

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Cylinder Head Kits include:

- Complete Head assembly, with Cam and Valves
- Head Bolts
- Service Only Head Gasket
- Both Intake Gaskets
- Exhaust Gasket
- One Rocker Cover Gasket
- One set of Exhaust Studs and Nuts

If it is found that only one head is leaking, it is not necessary to remove the other head. Only repair the side for which leakage occurs.

For detailed information on these subjects refer to previous articles on general cylinder head gasket repairs, machining of aluminum heads and blocks, gasket cleaners/removers, and straightedge procedures.

PART NUMBER	PART NAME
ZC-30	Motorcraft Silicone Gasket Remover
ZC-31	Metal Surface Prep
3U7Z-6051-BA	Service-Only Head Gasket - Left
3U7Z-6051-AA	Service-Only Head Gasket - Right

**OTHER APPLICABLE ARTICLES:** 01-12-2,  
01-21-10,  
02-1-4, 02-11-4,  
02-21-13,  
02-2-3, 02-17-2

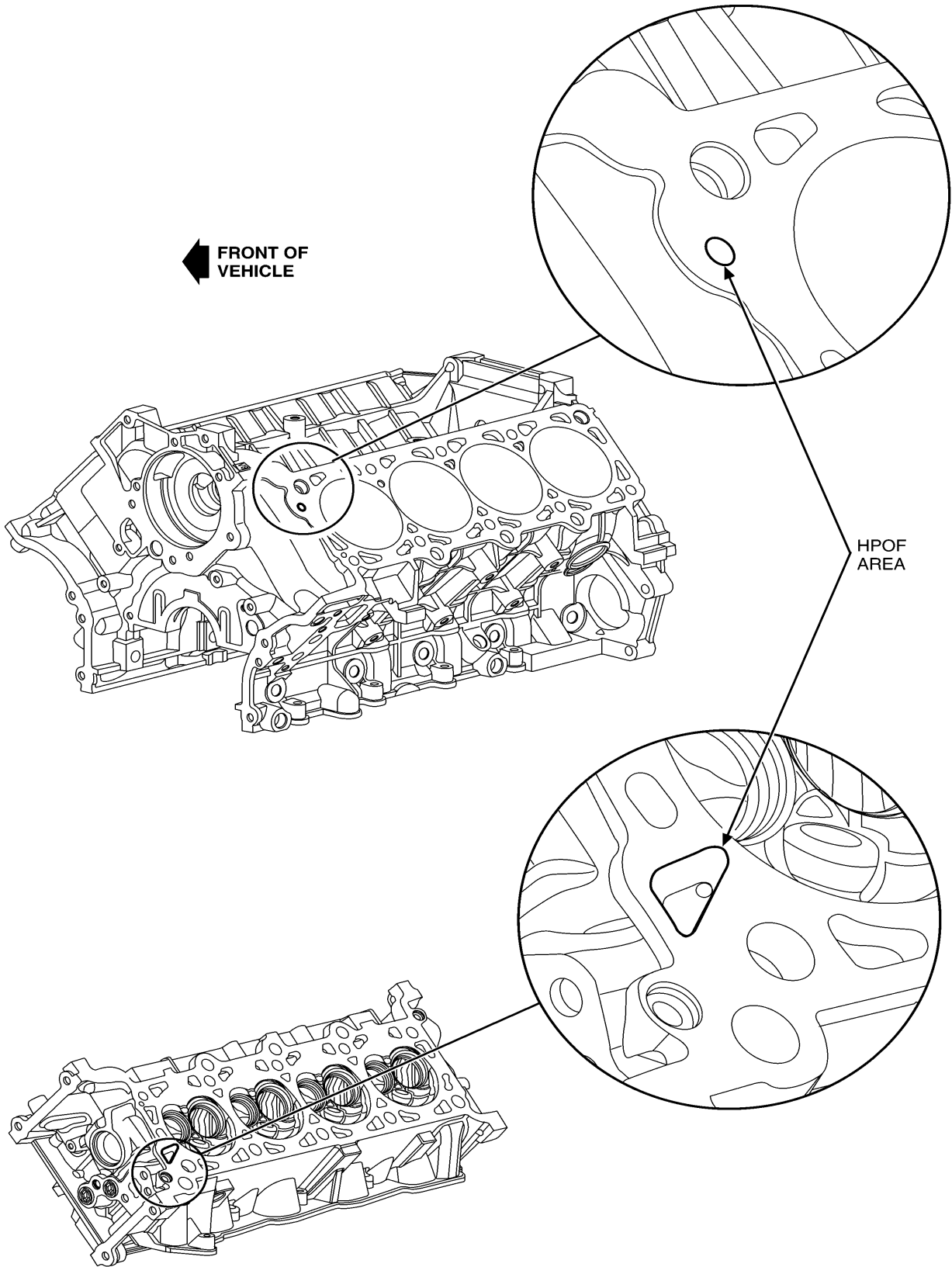
**SUPERSEDES:** 02-22-7

**WARRANTY STATUS:** INFORMATION ONLY

**OASIS CODES:** 401000, 402000, 403000, 490000,  
497000, 499000

DRIVERS SIDE (LEFT BANK)

← FRONT OF VEHICLE

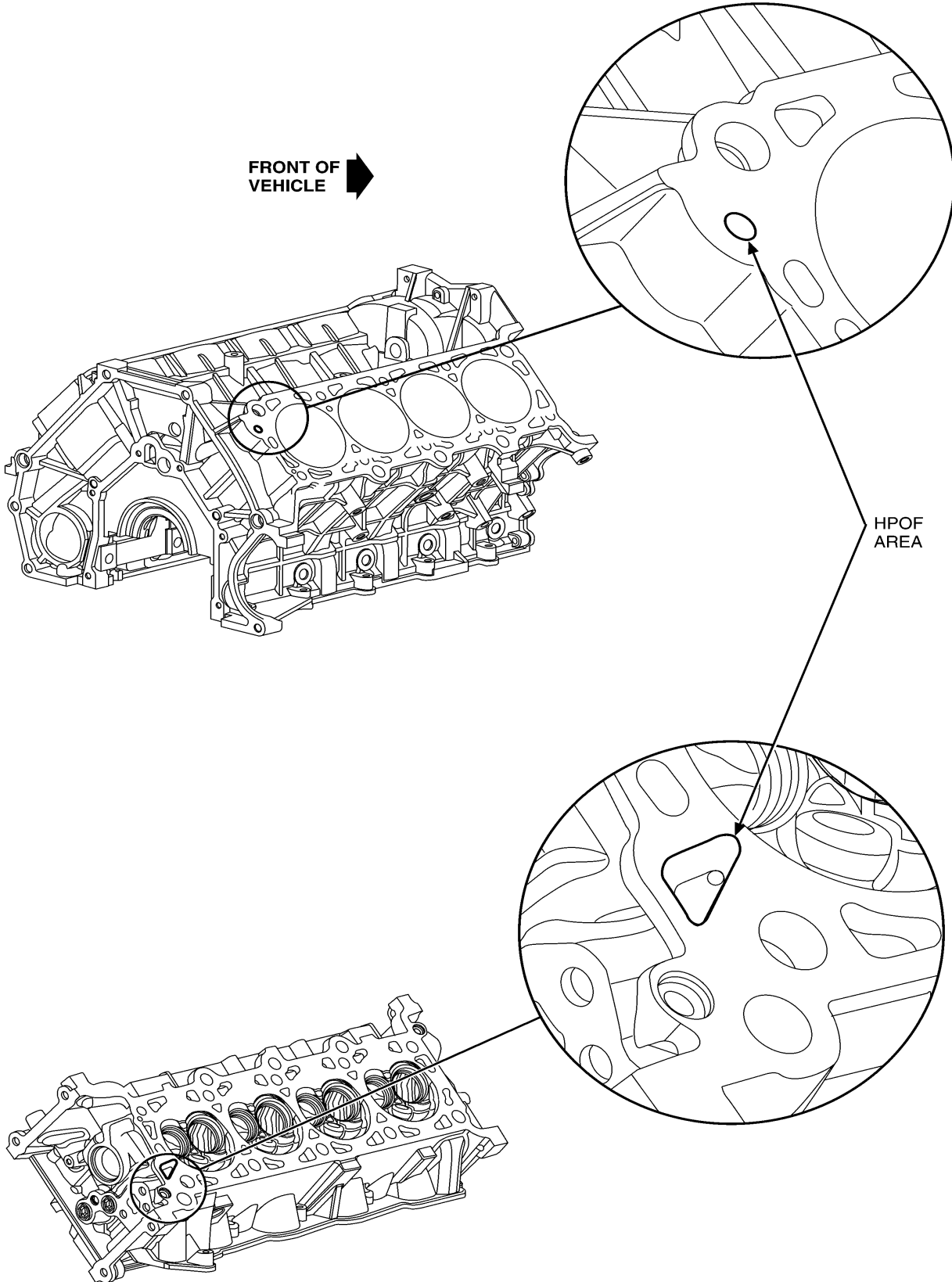


TB-6870-A

Figure 1 - Article 03-6-2

PASSENGER SIDE (RIGHT BANK)

FRONT OF  
VEHICLE →



HPOF  
AREA

TB-6871-B

Figure 2 - Article 03-6-2