

# PARTS & SERVICE NEWS

REF NO.	AA01179
DATE	September 11, 2001

**SUBJECT:** UPPER CREVICE SEAL INTRODUCTION

**PURPOSE:** Inform the field of installation procedures for upper crevice seal.

**APPLICATION:** QSK19 Series Engines  
See Parts & Service News AA97079A for chassis applications

**FAILURE CODE:** A226Z9

**DESCRIPTION:**

This Parts & Service News announces the release of the upper crevice seal cylinder liner and seal for service. The upper seal cylinder liner, Part Number 1315 284 H91 and upper crevice seal, Part Number 1315 285 H1, were implemented in production on K19 engines effective February 2, 2000, with engine serial number first 37191222. All other K19 engine configurations will continue to use the present cylinder liner, Part Number 1310 181 H1, in production. The upper crevice seal liner and seal were developed to alleviate counterbore leaks, which were primarily associated with high-load factor K19 engines. The upper crevice seal liner and seal also provide an effective repair on older K19 engines in the field that have worn or damaged counterbores. In many cases, counterbore leaks can be repaired without machining the counterbores for oversize liners.

The upper crevice seal liner incorporates a groove flange machined in the second (lower) press-fit area of the liner, just below the liner flange (see Fig. 1) to accept the upper crevice seal. The crevice seal, after installation on the cylinder liner, is designed to be a slip fit into the lower press-fit area of the counterbore during liner installation to prevent damage to the sealing surface of the seal. The seal **must** be installed with the chamfered (white) side facing out. (See Fig. 2). The material used in the upper crevice seal is designed to swell when it first comes in contact with engine oil. Engine oil is applied to the crevice seal 5 minutes before installing the cylinder liner to produce the proper swell of the crevice seal required to produce a leak-free joint between the cylinder liner and counterbore area. Each upper crevice seal service liner kit contains detailed installation instruction for the upper crevice seal.

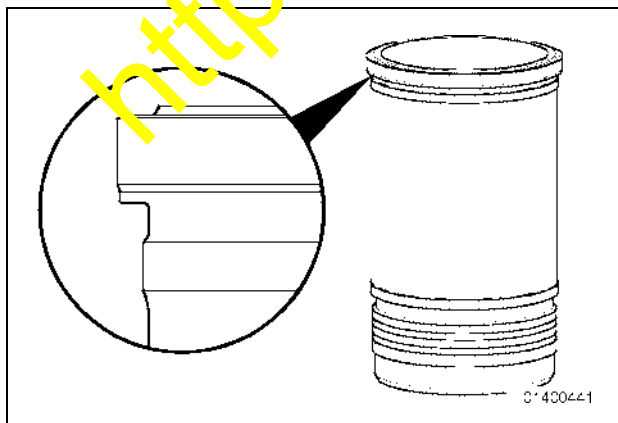


Fig. 1, Groove for Crevice seal

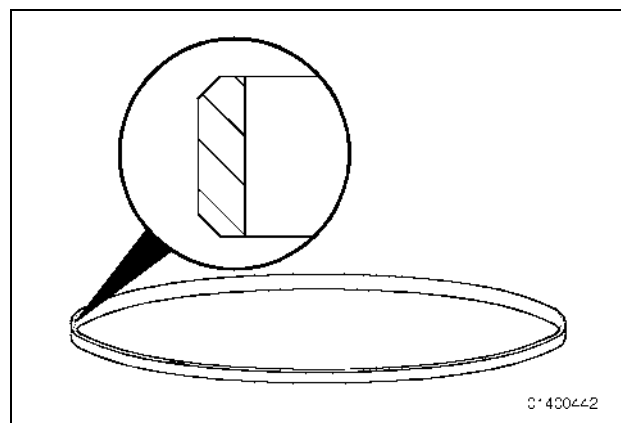
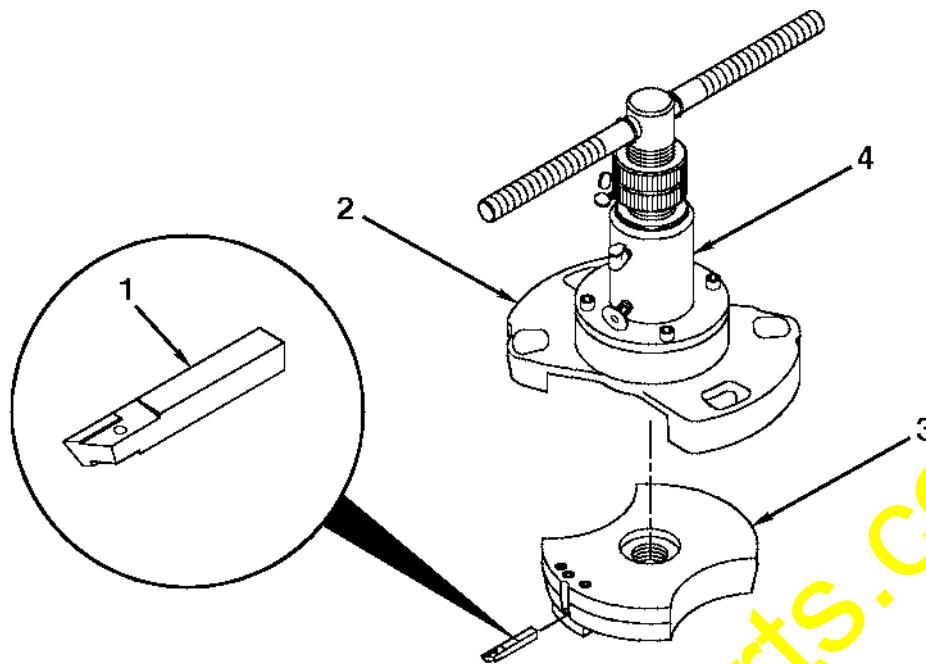


Fig. 2, Chamfered Side of Seal Faces Out

The upper crevice seal liners are presently available **only** in standard and 20/20 oversize dimensions. Other oversize cylinder liners listed in the following matrix will be phased into service as soon as quantities are available and field requirements are established. All present K19 cylinder liners, except Part Number 1310 181 H1, production liner, will be obsoleted as the new replacement upper crevice seal liners become available for service. On cylinder blocks where the counterbore inside diameter has been machined for oversize liners or where the ledge has been machined due to pitting or other irregularities, it is necessary to chamfer the inside diameter of the counterbore to prevent damage to the upper crevice seal during installation of the cylinder liner. A counterbore ledge chamfering cutter, Part Number K3163843, has been released to machine a 15-degree chamfer on the inside diameter of the counterbore when required.

The counterbore ledge chamfering tool is used in conjunction with the counterbore tool kit, Part Number K3376563, to chamfer the counterbore ledge. Service Tool Instruction, Bulletin 3377855, includes detailed instructions on chamfering the counterbore ledge. This instruction is included with each counterbore chamfering cutter tool.

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**Table 1, K19 Counterbore Ledge Chamfering Cutter, Part Number K3163843**

Item Number	Part Number	Description	Quantity
1	K3163843	K19 Counterbore ledge chamfering cutter	1
Not shown	K3377855	Service Tool Instruction	1

**Table 2, Counterbore Tool Kit, Part Number K3376563 (Sold separately)**

Item Number	Part Number	Description	Quantity
2	K3175827	*Base Plate	1
3	K3824110	*Cutter plate assembly	1
4	K3376564	*Drive unit assembly	1

\*These parts are required for this procedure and can be purchased as part of the counterbore kit , Part Number K3376563, which also includes additional parts **not** shown.

Other shop tools include the following: Depth gauge, feeler gauge, hex key wrench, dykem blue, and shop-compressed air.

<b>Std. Cylinder Liner</b>	<b>Upper Crevice Seal Service Liner</b>				
<b>Old Kit #</b>	<b>New Kit #</b>	<b>Upper Press Diameter</b>	<b>Upper Flange Thickness Lower Press Diameter</b>	<b>Lower Press Diameter</b>	<b>Description</b>
6731-21-2280	1315 284 H91	Std.	Std.	Std.	Std.
1241 668 H91	1241 668 H92	0.020 inch	Std.	Std.	Std.
1241 669 H91	1241 669 H92	0.040 inch	Std.	Std.	Std.
1296 967 H91	1296 967 H92	-0.222 inch	-0.222 inch	Std.	Std.
1241 671 H91	1241 671 H92	0.083 inch	-0.143 inch	Std.	Std.
1241 670 H91	1241 670 H92	0.060 inch	-0.153 inch	Std.	Std.
1241 672 H91	1241 672 H92	0.095 inch	-0.143 inch	Std.	Std.
1296 839 H91	1296 839 H92	0.020 inch	-0.155 inch	0.020 inch	0.020
1241 670 H92	1241 670 H93	0.060 inch	-0.128 inch	Std.	Std.

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