SUBARU®

NUMBER 16-58-94

SERVICE BULLETIN

APPLICABILITY ALL LEGACY, SVX AND IMPREZA MODELS EQUIPPED WITH 4EAT TRANSMISSION

DATE 03-08-9

SUBJECT: 4EAT MODIFICATIONS

THIS BULLETIN IS FOR INFORMATION ONLY

The following modifications have been made to the 4EAT transmission to enhance its operation and durability. It is recommended that whenever an early 4EAT assembly is being repaired or rebuilt that these new components be installed.

This Bulletin is meant to assist you in diagnosing some symptoms, identifying updated components and locating related repair information.

1. Oil Pump Gasket - Refer to Figure 1

   The transmission Oil Pump Gasket (P/N 31339AA121) was changed to a metal type gasket to lessen the possibility of gasket deterioration. This gasket was installed in production starting with transmission number 513102/SVX, 527022/Legacy, and since the beginning of production on all Imprezas. This gasket must always be used when gasket replacement is necessary. When using this gasket, the small metal deflector mounted to one of the oil pump cover bolts must be removed (Reference Parts Bulletin PT-26-03-93).

   Symptoms of a deteriorated gasket are approximately 1/2 line pressure at idle and full line pressure at stall speed. It may also be accompanied by a delay going into reverse on SVX and Turbo vehicles.

2. Transmission Case - Refer to Figure 2

   The transmission case was slightly modified starting with transmission number 426208. Modification was made to prevent oil pump gasket deterioration. Installation of the updated oil pump gasket is all that is necessary to prevent gasket deterioration on these earlier transmission.

*****TRANSMISSION CASE REPLACEMENT IS NOT NECESSARY AND IS NOT RECOMMENDED*****

   Symptoms are the same as with oil pump gasket deterioration in Number 1 above since it will result in a gasket sealing problem. In both cases, oil pressure will be degraded. Other related symptoms may be a delay in starting when the select lever is placed into 'D' and/or 'R' from neutral or park.

3. High Clutch Seizure/Failure - Refer to Figure 3

Numerous modifications have been made to the high clutch and related components as listed below. Modifications were done to ensure adequate oil flow to components for cooling purposes. Some models will only need a few parts to bring them up-to-date while others will need more.

Legacy N.A. - Install Thrust Bearing (P/N 80653620) **only** up to transmission number 351299. The diameter of this bearing has been reduced from 52mm to 50mm to ensure adequate lubrication to the high clutch assembly.

SVX and Legacy Turbo - Install High Clutch Drum (P/N 31541AA030), Reverse Clutch Fiber Plates (P/N 31532AA080), Reverse Clutch Steel Plates (P/N 31536AA100) and one of the following selective Plates (P/N 31567AA350-390) up to transmission number 463969. Due to design changes between the original parts and the updated ones, these components must be replaced as a set.

*******THE TWO DESIGNS ARE NOT INTERCHANGEABLE*******

Install High Clutch Hub (P/N 31550AA020) and Thrust Bearing (P/N 806537010) only on SVX and Legacy Turbo models up to transmission number 633657 for SVX and transmission number 615173 for Legacy Turbo models.

The modified high clutch hub has additional lubrication holes in it to provide required lubrication to the fifth clutch plate of the high clutch assembly. Recommended repair for a failed high clutch is replacement with the modified part(s) as applicable above.

Symptoms of a failed high clutch might be no shifting or an increase in engine rpm when shifting into 3rd gear (trans. neutrals out).

4. Transfer Clutch Driven Plates (Metal) and Seal Rings - Refer to Figure 4

Modified Clutch Driven Plates (P/N 31589AA041) were installed to reduce rear axle binding starting with transmission number 389607. Additionally, new style Oil Seals (P/N 31377AA131) have been installed on the transfer clutch output shaft. These updated seals are black in color with a "notched" design on their inner diameter and are cut diagonally on the ends. The purpose for the change was to reduce the chance of these seals rotating in their grooves and cutting into the rear extension housing.

If you experience a case of rear axle binding on turns, with a transmission that has the updated transfer clutch driven plates, it is recommended that you install another set of the updated driven plates. After installing these new driven plates, it will be necessary to drive the vehicle in several figure 8's to break them in. As always, the first thing to check when diagnosing an AWD binding complaint is tire size. All tires must be of the same size and brand name.

Also, major differences in the tire wear patterns between front and rear, can cause binding in tight turns.

The following Service Bulletins and Techline Updates can be referenced to provide you with additional information. If your Dealer does not have a particular piece of information, contact your Regional Office or District Technical Manager.

SERVICE BULLETIN #	VOLUME	TITLE
16-36-90	12	4EAT Slow Engagement
16-42-90	12	Flushing the Transmission Oil Cooler
16-43-90	12	Torque Convertor Seating
16-47-91	13	Manual Valve Stopper Retrofit
16-48-91	13	4EAT Slow Engagement
16-49-91	14	Brake Band Adjustment/On-Car Servicing
16-50-92	14	One Way Clutch Operation
16-51-92R	14	4EAT ATF Auxiliary Filter Installation
16-52-92	14	Reduction Gear/Transfer Gear Matching
16-53-92	14	Oil Cooler Hose Routing/Flushing Info.
16-54-92	15	Gear Reduction Driven Shaft Replacement
16-55-93	15	4EAT Filter Kits - Info. & installation
16-56-93	15	`92 SVX ATF Filter Kit Installation
16-57-93	15	`92 SVX 4EAT Cooler Hose Kit Installation

TECHLINE UPDATE MONTH/YEAR	VOLUME	SUBJECT
May/1991	14	Metallic Noise on Light Acceleration
June/1991	14	4EAT Slow Engagement
June/1991	14	Legacy Trans. Oil Cooler Flushing
June/1991	14	4EAT Failure After Reduction Shaft R&R
November/1991	14	Oil Pump Cover Bolt Torque Clarification
November/1991	14	Pressure Checking Tip
December/1991	14	Valve Body Servicing
December/1991	14	Band Servo Servicing
January/1992	14	Thrust Bearing Identification
June/1992	14	4EAT Planetary and High Clutch Parts
June/1992	14	4EAT Servicing and Repairs
October/1992	14	Legacy/SVX 4EAT Torque Bind Complaints
November/1992	14	All Four Wheel Drive Vehicles
January/1993	15	4EAT AWD Complete Unit Exchange
February/1993	15	4EAT Torque Convertor Clutch Engaged
April/1993	15	Modified 4EAT Oil Pump Gasket
April/1993	15	`92 Legacy ATK-50 VIN Range Clarifications
May/1993	15	4EAT Low AFT Temperature Operation
June/1993	15	Squeaking Noise from Torque Convertor
October/1993	15	Speedometer Cable Adapter
December/1993	--	Duty Solenoid 'C' Swapping for Testing

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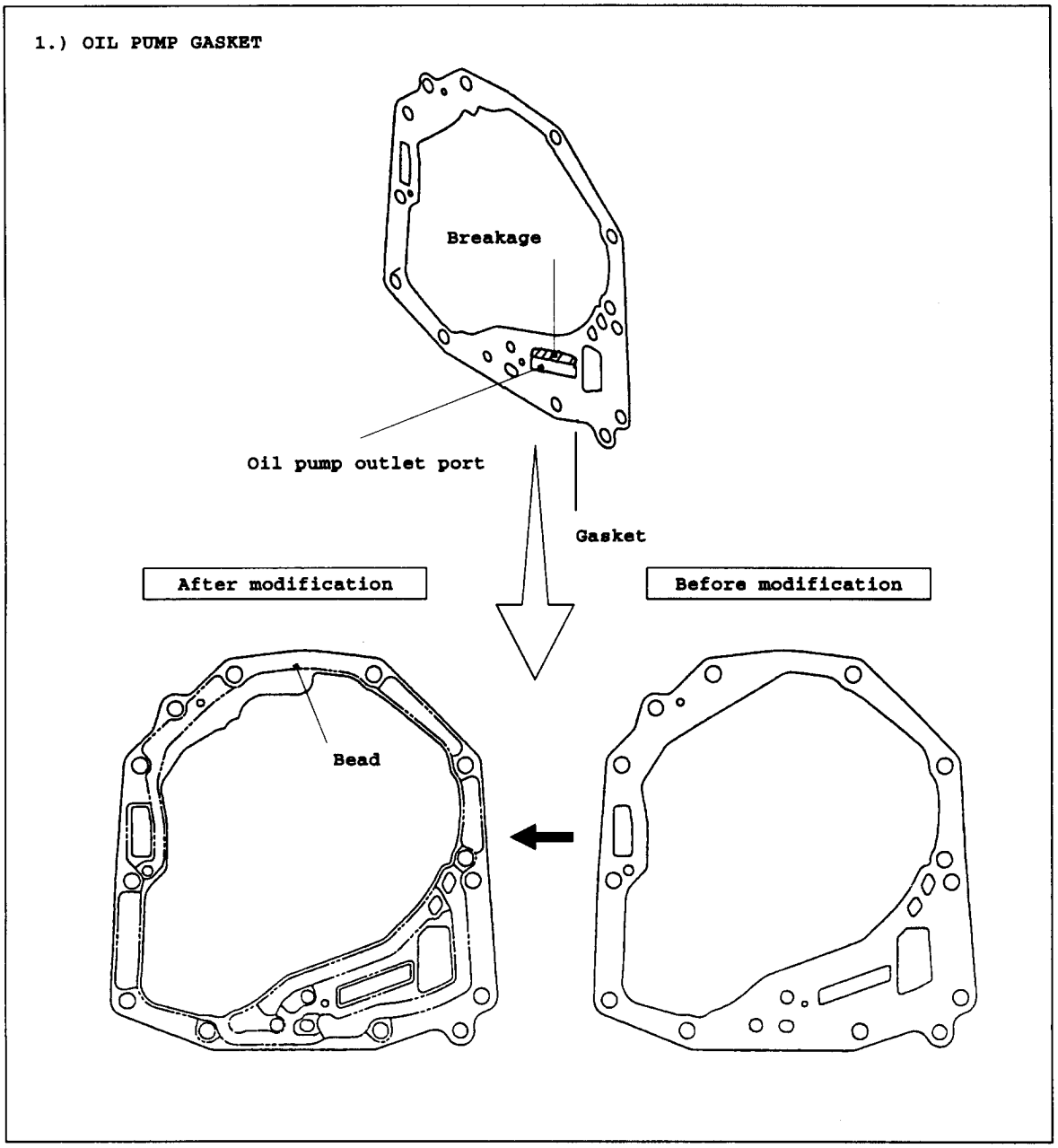
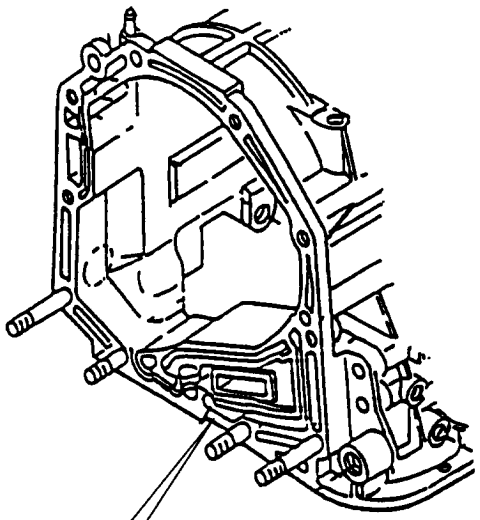
1.) OIL PUMP GASKET

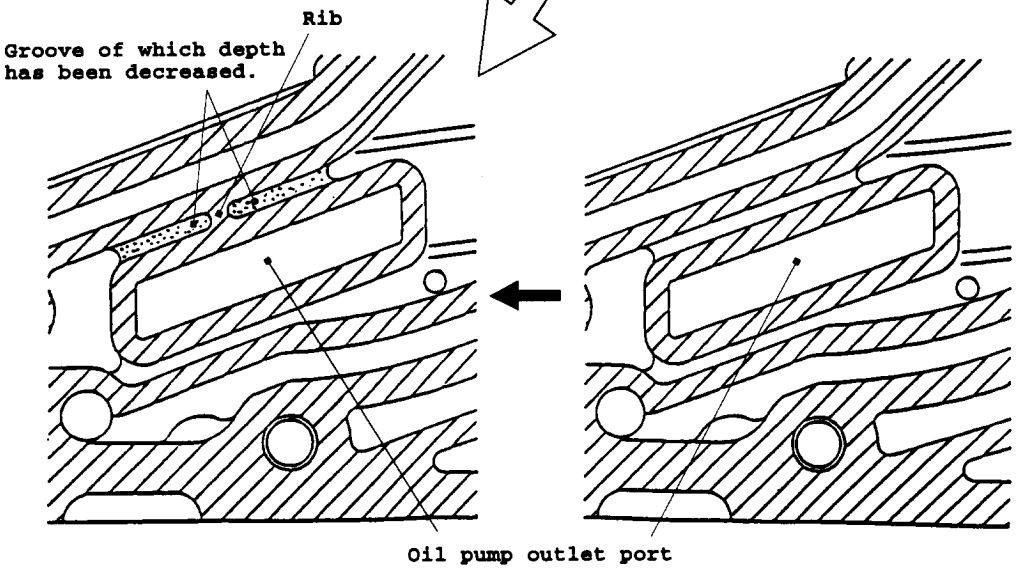


2.) **TRANSMISSION CASE**

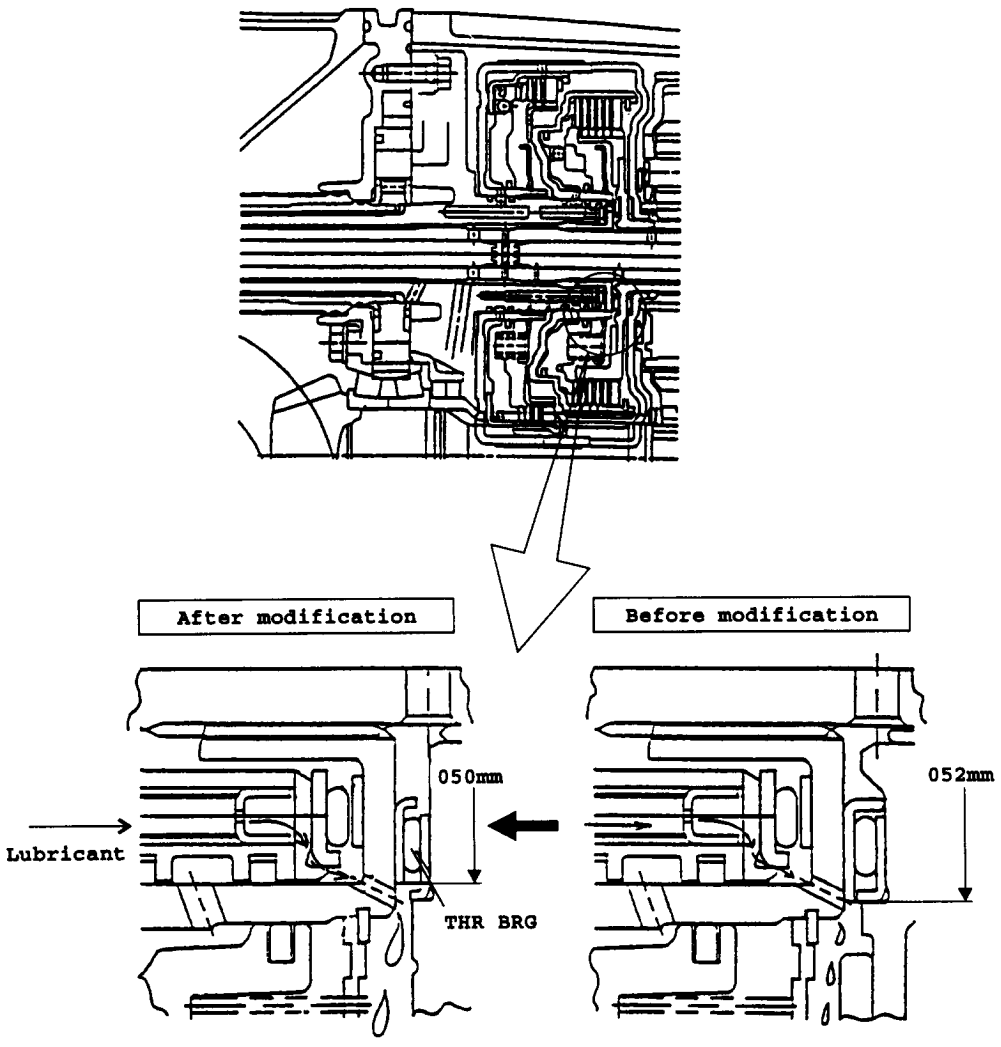


After modification

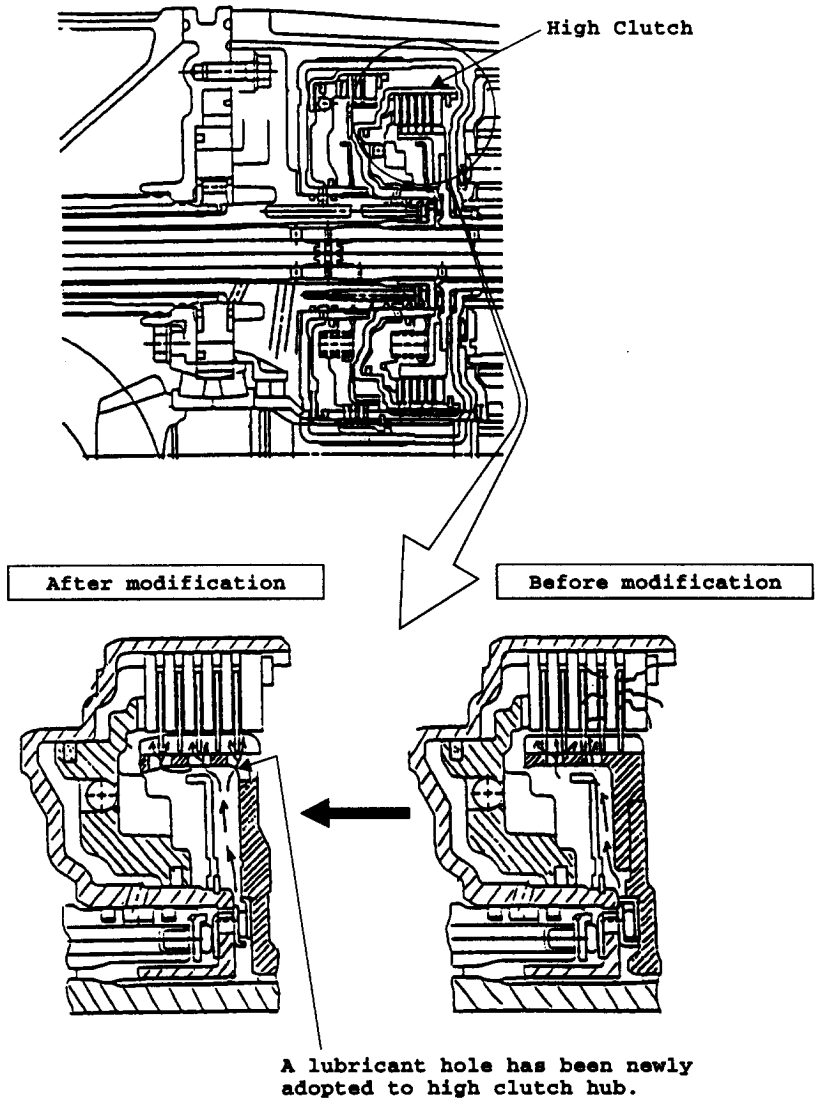
Before modification



3.) HIGH CLUTCH BEARING



3.) HIGH CLUTCH HUB



4.) TRANSFER CLUTCH DRIVEN PLATES AND OIL SEALS

Transfer and Extension