

# 4EAT Modifications

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APPLICABILITY:

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

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 transmissions.

**\*\*\*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 52 mm to 50 mm 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 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.