

Revisions to this document are noted
by a stripe in the left-hand margin

SIL 15-WT-15, Rev. A
January, 2017
Page 1 of 5

SUBJECT: xFE Models with Technology to Increase Fuel Economy for BUS

MODELS AFFECTED: B3400, T3280, T3325, and T3375

Introduction:

Effective April 30, 2015, Allison Transmission announced a new series of BUS models that incorporate the latest advances in fuel economy technology. Referred to as xFE, designating extra Fuel Economy, the fully automatic BUS transmissions have demonstrated improvements in fuel economy in addition to those recognized with the company's FuelSense® features.

Models with the xFE technology feature the same space claim and ratings as current models, and also incorporate optimized gear ratios coupled with the FuelSense® Max package. They have been designed to enable 1st range lock up, deliver significantly more lock up operation, and operate at lower engine speeds in higher ranges to further improve fuel economy.

The new BUS for North America is designated as the B3400 xFE™. Outside of North America, Allison will offer three new xFE models: the T3280 xFE™, T3325 xFE™, and T3375 xFE™.

New Gear Ratios for xFE Models:

Ranges	Gear Ratios
FORWARD	
First	3.49
Second	2.03
Third	1.47
Fourth	1.00
Fifth	0.69
Sixth	0.59
Seventh	N/A
REVERSE	– 3.80

KZ / SL7637EN

Copyright © 2017 Allison Transmission, Inc. All Rights Reserved.

3568864

Please Note: Allison Transmission Service Information Letters are intended for use by professional, trained technicians, not for the "do-it-yourselfer." They are written to inform those technicians of conditions that may occur on some transmission models (or serial numbers ranges) or to provide information that could assist in the proper servicing of a specific Allison transmission. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, do not assume that the Service Information Letter applies to your transmission, or that your transmission has the condition described. Product evolution and information updates are inevitable. Please see your authorized Allison Transmission service dealer or distributor to understand if your particular transmission may benefit from the information contained within the Service Information Letter.

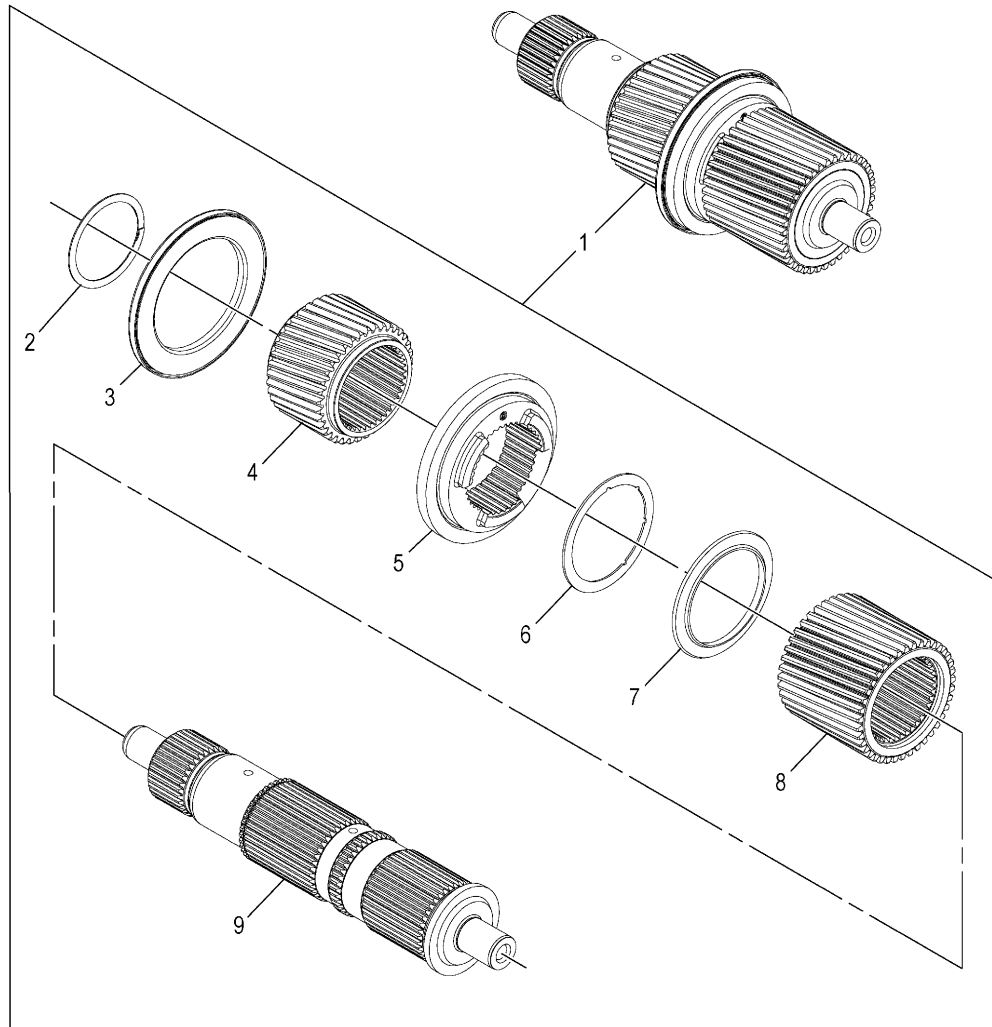
Parts Information (refer to [Figure 1](#))



NOTE: The 3000 Series xFE BUS models are configured with a new main shaft group 05-622, wide ratio P2 carrier assembly, and close ratio P3 carrier assembly. In addition, a xFE BUS requires an A61, A62, A63 TCM with a xFE calibration. Units should not be converted from wide or close ratio models to xFE models without prior written approval from the BUS OEM.

Item Number	Part Number	Description
(1)	29556376*	Main Shaft Assembly
(2)	29539807	External Retaining Ring
(3)	29500713	Thrust Bearing
(4)	29556364	P2 Sun Gear
(5)	29556363	Bearing Spacer
(6)	29503218 0.27 mm (0.01 inch)	Selective Shim
(6)	29503219 0.54 mm (0.02 inch)	Selective Shim
(6)	29503220 0.81 mm (0.03 inch)	Selective Shim
(6)	29503221 1.08 mm (0.04 inch)	Selective Shim
(6)	29503222 1.35 mm (0.05 inch)	Selective Shim
(6)	29503223 1.62 mm (0.06 inch)	Selective Shim
(6)	29503224 1.89 mm (0.07 inch)	Selective Shim
(7)	29503225	Thrust Bearing
(8)	29502001	P3 Sun Gear
(9)	29556458	Main Shaft
* Not Serviced As An Assembly- Order Detail Parts		

Disassembly and Assembly Instructions:



2765820

Figure 1. Main Shaft Exploded View

Disassembly

1. Remove external retaining ring (2) (48 mm ID (1.89 inch ID)). Replace if damaged or worn.
2. Remove thrust bearing (3) (67 mm ID (2.64 inch ID)) and inspect. Replace if necessary.
3. Remove P2 sun gear (4). Replace if damaged or worn.
4. Remove bearing spacer (5). Replace if damaged or worn.
5. Remove thrust bearing (7) (78.5 mm ID (3.09 inch ID)), if not previously removed, and inspect. Replace if necessary.
6. Remove selective shim (6), if not previously removed.
7. Remove P3 sun gear (8) from main shaft. Replace if damaged or worn.

8. Inspect and measure main shaft pilots. Minimum allowable pilot OD for reuse is 19.98 mm (0.787 inch). Inspect and measure main shaft journal OD for the P2 planetary bushing. Minimum allowable main shaft journal OD for reuse is 42.97 mm (1.692 inch).
9. Inspect for main shaft spline wear. Replace main shaft if damaged or worn.

Assembly

1. Install P3 sun gear (8) onto main shaft (9).

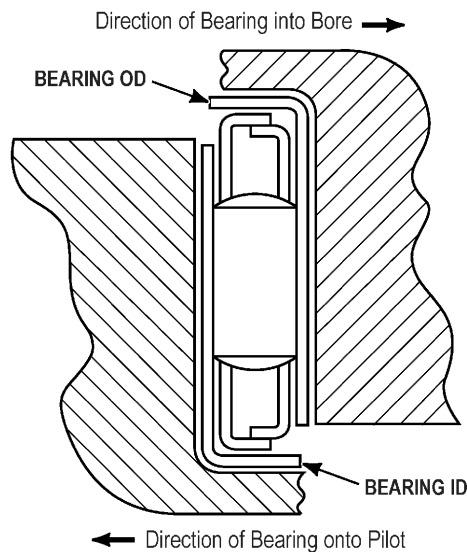


NOTE: Do not install thrust bearing (7) or selective shim (6) until final transmission assembly. Measurement for selective shim is performed during final buildup.

2. Install bearing spacer (5).
3. Install P2 sun gear (4).
4. Install thrust bearing (3). When installing thrust bearings, take care to orient the thrust bearing.



NOTE: When installing thrust bearings on to a pilot or bore, make sure the fillet on either the ID or the OD of the bearing mates with the fillet of the respective pilot or bore. Failure to do so results in bearing failure and transmission damage (see [Figure 2](#)).



2783500

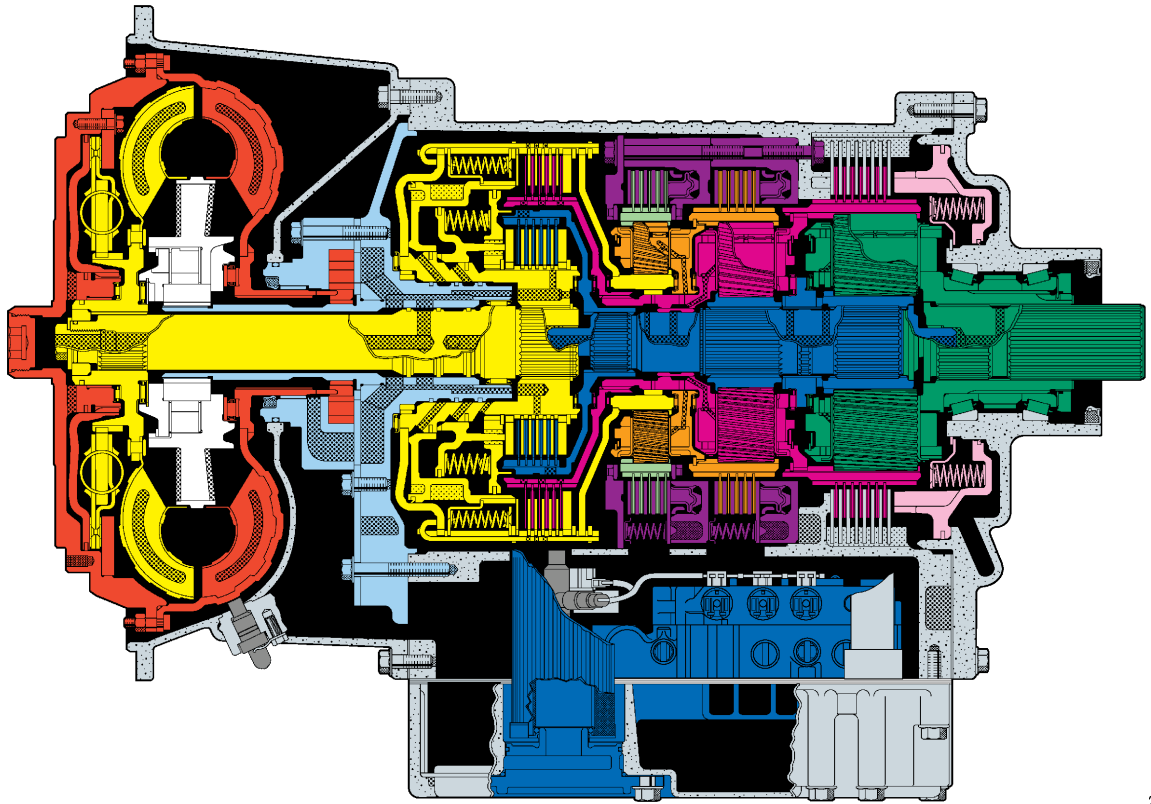
Figure 2. Thrust Bearing Orientation

-
5. Install external retaining ring (2). Compress the external retaining ring to lock it into place on main shaft.

Cross Section:



NOTE: PTO and Retarder options not shown.



2675960

Figure 3. xFE Cross Section T3280 xFE™, T3325 xFE™, and T3375 xFE™ Models