

# ADVANCE ADAPTERS INC.

P.O. Box 247, 4320 Aerotech Center Way  
Paso Robles, CA 93447

Telephone: (800) 350-2223 Fax: (805) 238-4201

## P/N: 50-5915

New Item: (01/07)

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Page Rev. Date: 01-14-16

## DANA 300 & ATLAS TRANSFER CASE TO TOYOTA CRAWLER BOX

### KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	51-5902	DUAL TRANSFER CASE ADAPTER PLATE
2.	1	51-9111	ADAPTER HOUSING
3.	1	52-5915	SHAFT
4.	1	51-5915A	SHIFTRAIL BUSHING <i>(Installed By AA)</i>
5.	6	716065	10mm X 1.25" X 48mm SPECIAL STUD
6.	1	716511	O-RING
7.	1	716517	GASKET
8.	1	716323	NEEDLE BEARING FOR CLUSTER GEAR
9.	6	720012	10mm X 1.25" NUT
10.	4	723701	3/8"-16 HEX NUTS
11.	4	723704	3/8" LOCK WASHERS
12.	4	723711	3/8" -16 x 2" LG.
13.	2	300921	FILL & DRAIN PLUG
14.	1	911069	SPECIAL KEY STOCK
15.	1	TT001	TOYOTA TRUCK INSTRUCTION MANUAL

### PREPARATION OF THE GEAR BOX

Disassemble the extra transfer case gear box. Detailed instructions can be obtained in our Toyota Truck manual or a Toyota service manual. Locate the output shaft and remove it from the case. The reduction box requires the use of the gear, bearing, thrust washer, steel ball and snap ring located on this shaft.



Remove the output shaft from the front case by removing the 4 bolts with a 14mm socket. Remove the bearing retainer and snap ring.



Remove the low range gear by removing the snap ring that retains the roller bearing onto the rear shaft. Press the roller bearing off of the shaft. Retain this bearing and snap ring to be installed into the new adapter shaft.



Now that the roller bearing is removed, you will see a spacer. Remove the spacer, low range gear, and needle bearing. You will need to retain these items to re-install on to the new shaft.



**SPECIAL NOTE:** The components packaged in this kit have been assembled and machined for specific type of conversions. Modifications to any of the components will void any possible warranty or return privileges. If you do not fully understand modifications or changes that will be required to complete your conversion, we strongly recommend that you contact our sales department for more information. This instruction sheet is only to be used for the assembly of Advance Adapter components. We recommend that a service manual pertaining to your vehicle be obtained for specific torque values, wiring diagrams and other related equipment. These manuals are normally available at automotive dealerships and parts stores.

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The low gear and needle bearing must then be installed onto the new shaft supplied. The thrust bushing and 1/4" ball will need to be placed on top of the output gear as illustrated.

The stock roller bearing will need to be installed into the adapter plate and is retained by the 51-9111 when bolted to the plate.

We have also included a new caged needle bearing that needs to be installed into the adapter housing for the cluster gear support.



Install the stock bearing into the adapter plate. Note the bearing is a press fit onto the shaft. To retain the bearing in the adapter plate while pressing onto the shaft, we recommend, bolting the 51-9111 casting temporary to the adapter plate which traps the bearing in place. This keeps the bearing in place while pressing the shaft on to it. Leave the new shaft assembly standing upright on the work bench and install the bearing/plate on to the shaft assembly. This shaft assembly is a light press fit. Once the shaft is installed through the bearing, remove the 51-9111 casting and then install the small snap ring on the shaft. This snap ring will prevent the output shaft from traveling forward. Make sure the gear has the proper end play .007-.010".

The shift fork or shift rod for the reduction box must be modified. A key stock has been provided to be welded to the shifting component. This has to be done because this is the only shift rod retained in the crawler box.

With the proper end play determined, the new shaft, gear, thrust bushings all in position & assembled into the new adapter, and the shifter modifications made, you can now assemble this assembly on the reduction gear box. Make sure that the new bearing has been installed for the counter shaft. Make sure that the shifter ring and fork are in the proper location and the pocket needle bearing is installed in the output shaft.



Install the O-ring on the front of the 51-9111 casting. Install the 4 stud bolts and locktite them into the crawler adapter plate. Then install the 51-9111 casting and secure it to the crawler adapter.

The 51-9111 has two rotation options for the Dana 300 transfer case. Test fit the Dana 300 to the adapter kit and check for shifter interference.



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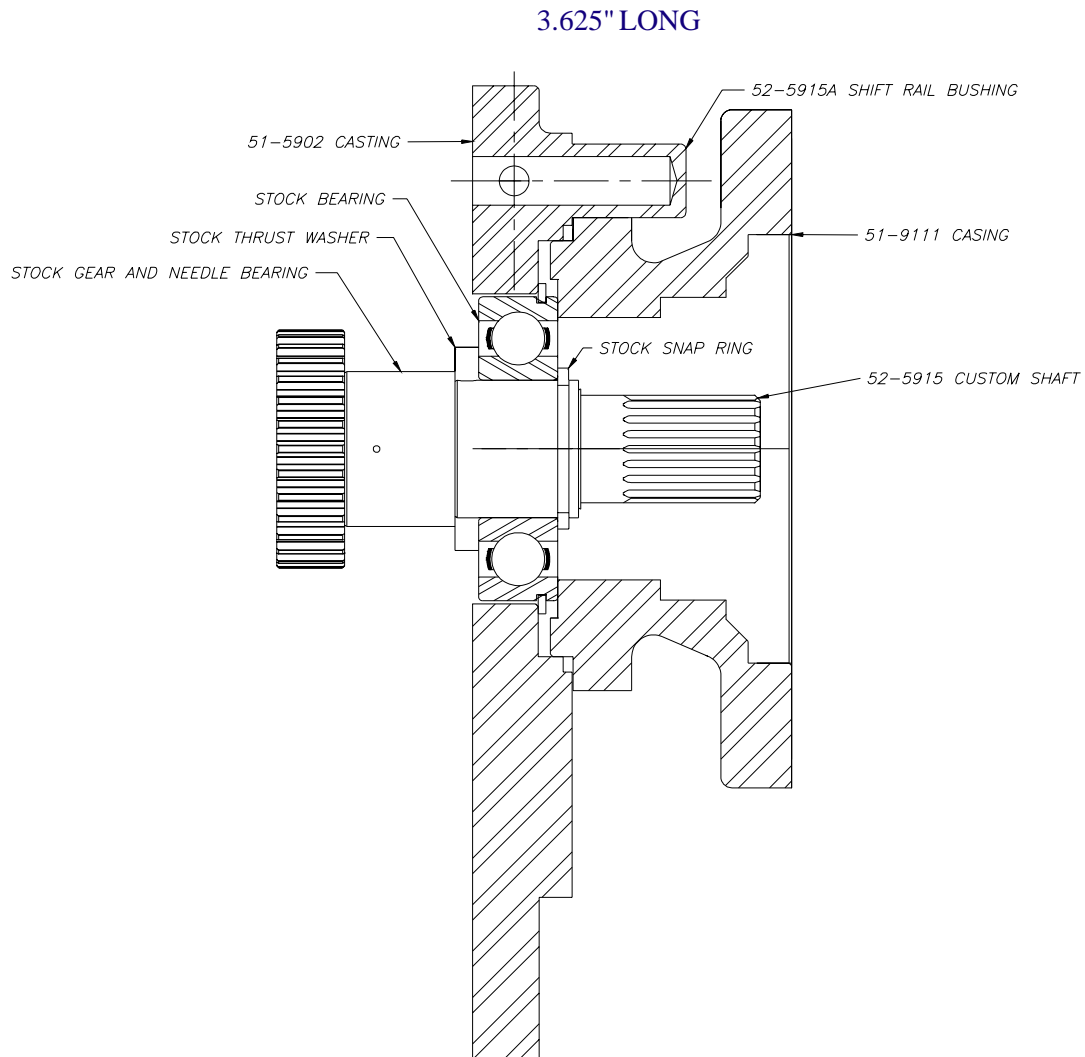
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