

# 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: 50-4601

Old Part No: 711046NS-10

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Page Rev. Date: 08-13-14

## GM TRUCK 4SPEED MODEL SM465 10 SPLINE TO TOYOTA L/C 3 SPEED TRANSFER CASE

### KIT CONSISTS OF:

| No. | Qty | Part No. | Description                                                                     |
|-----|-----|----------|---------------------------------------------------------------------------------|
| 1.  | 1   | 51-8700  | ADAPTER CASTING (Ref: 711187)                                                   |
| 2.  | 1   | 52-4600  | SPUD SHAFT W/10 TOOTH (Ref: 711346-10)                                          |
| 3.  | 1   | 716013   | BEARINGRETAINER                                                                 |
| 4.  | 1   | 716301   | SEALED BEARING                                                                  |
| 5.  | 1   | 716515   | GASKET                                                                          |
| 6.  | 1   | 716568   | GASKET                                                                          |
| 7.  | 2   | 723701   | NUT 3/8"-16 PLATED                                                              |
| 8.  | 8   | 723704   | 3/8" LOCK WASHER                                                                |
| 9.  | 2   | 723711   | STUD BOLT 3/8"-16 X 2" LONG ( <i>Install 1/2" ONLY into transmission case</i> ) |
| 10. | 6   | 723723   | H.H.C.S. 3/8"-16 X 1-1/2" LONG                                                  |
| 11. | 3   | 724345   | H.H.C.S. 7/16"-14 X 5" LONG                                                     |
| 12. | 2   | 724349   | H.H.C.S. 7/16"-14 X 1-1/2" LONG                                                 |
| 13. | 1   | 728701   | NYLON LOCKNUT                                                                   |
| 14. | 1   | 728702   | 7/8" FLAT WASHER                                                                |

### OPTIONAL ITEM:

P/N 715530-T/CLINKAGE BRKT.  
(If not using a vacuum controlled shifter)

### SPECIAL INSTALLATION NOTE:

The rear output shaft bearing that is located in the back of the transmission main case has an external snap ring around the outside diameter of the bearing. The snap ring is trapped between the transmission case and the new Advance Adapter housing. By trapping the snap ring, the main shaft location is held in a firm location and the shaft is prevented from drifting either forward or rearward. The thickness of the original snap ring varies between a 2WD GM transmission and a 4WD GM transmission. Since we use the same adapter housing for both locations, it may be necessary to modify the thickness of the snap ring for installation with the new adapter housing. This can be done by simply grinding down the thickness or by doubling up on the gasket between the transmission and the transfer case. Not all applications will have this problem, but you should be aware of this variation. Two wheel drive transmissions use a thinner snap ring.

**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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### GM & CHEVY SM465 4 SPEEDS 1968 & UP:

This transmission can be identified by a case length of 12". The casting numbers on the case should be *GM465452*, *6273212* or *3901127*. The top shift cover casting number should be *GM3901131*. The P.T.O. opening is available on both sides of the main case. This transmission has a non-synchro first gear. The gear ratios for this transmission are as follows:

|                    |               |
|--------------------|---------------|
| <b>First Gear</b>  | <b>6.46</b>   |
| <b>Second Gear</b> | <b>3.58</b>   |
| <b>Third Gear</b>  | <b>1.70</b>   |
| <b>Fourth Gear</b> | <b>Direct</b> |
| <b>Reverse</b>     | <b>6.09</b>   |

In order to use this transmission with our kits, you must make sure that you have the proper output shaft from the original 4 speed transmission to couple to the new adapter. Currently, we manufacture the adapters for both 35 spline and 10 spline output shafts. If your transmission has a 32 spline output shaft, then you will be required to change to one of the other shafts listed below.

|                            |   |                              |
|----------------------------|---|------------------------------|
| <b>GM Part No. 6259663</b> | - | Output shaft with 10 splines |
| <b>GM Part No. 3932265</b> | - | Output shaft with 35 splines |

The shaft has a rear bearing that is retained with either a snap ring or special lock nut. Without this snap ring or lock nut in the proper position, the shaft will walk forward into the input shaft causing severe damage. Make sure that the shaft is locked by either the lock nut or snap ring to avoid severe damage.

The new spud shaft that we have furnished with your kit must slip over the output shaft without bottoming out or causing spline interference. The spud shaft is located in the correct position by using the bearing that is counted on the back side of the new adapter. With the spud shaft in position and the adapter on the new transmission, you must be able to rotate the shaft freely. There are certain applications that may require a slight grinding of the original output shaft to prevent the original shaft from bottoming out inside the new Advance Adapters coupler. On transmissions having 35 splines, the threaded portion at the very end of the shaft will need to be removed. This can be done with an abrasive cutoff saw and must be done for clearance inside the new adapter coupler.

The adapter plate that we have furnished for your new transmission has a special pocket that has been machined into the transmission side for clearance over the reverse counter shaft. Make sure that the counter shaft in the transmission is rotated for proper engagement into the new adapter housing.

The right side of the main case will need to be ground off for clearance of the front output yoke on certain installations. We recommend a trial fit with your transfer case and front output yoke so that any modifications that may be required can be done before final installation. This is a good time to set up the shifter linkage for the transfer case controls.

Make sure that the adapter fits flush against the back of the transmission and indexes properly over the two bearings.

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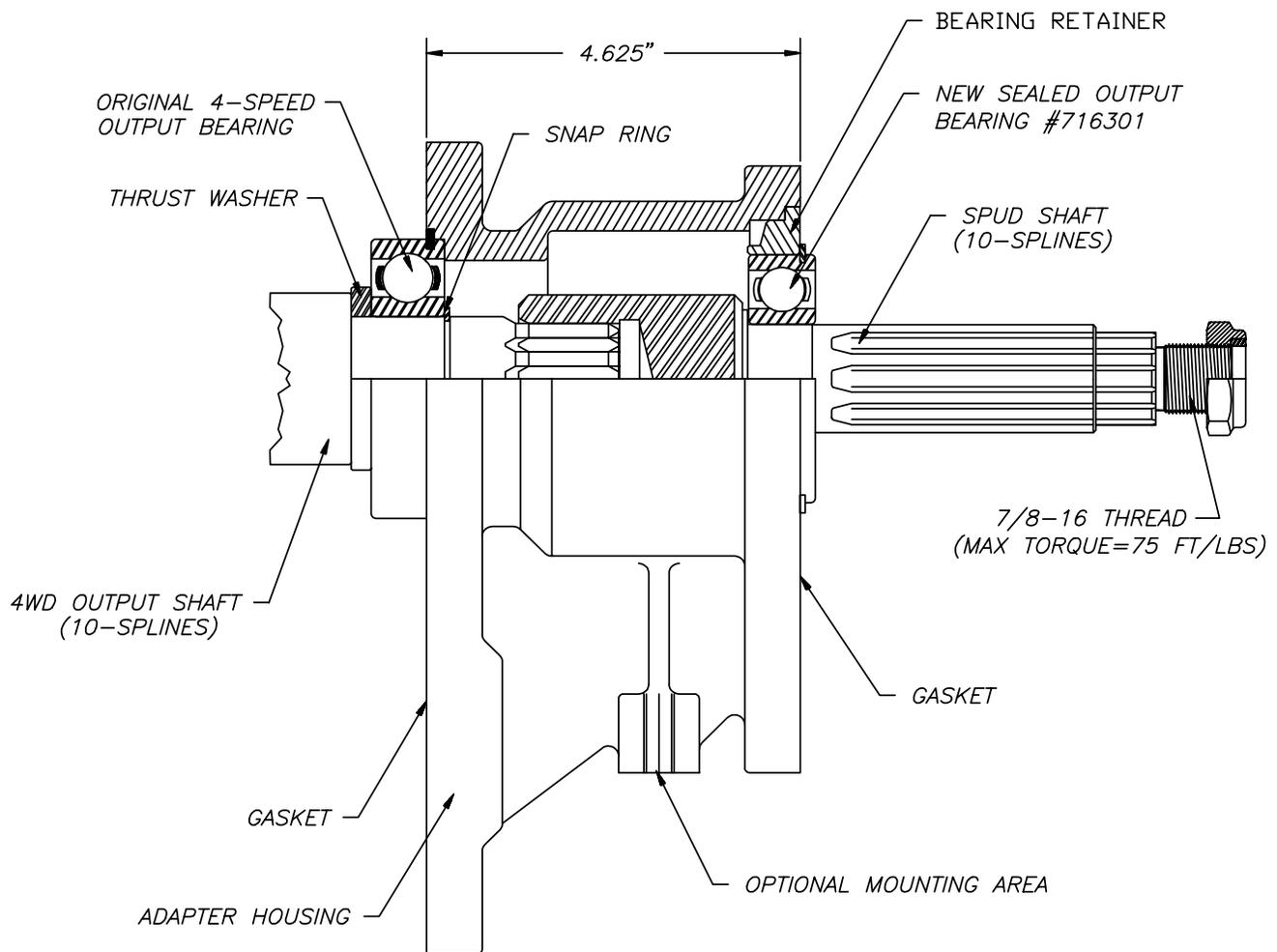
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