ADVANCE ADAPTERS
SINCE NINETEEN SEVENTY ONE

P/N: 50-9002

LAND ROVER SERIES T-CASE TO NP CIRCULAR 6 ADAPTER WITH GM 10SP

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	51-9000	ADAPTER PLATE
2.	1	52-9002	MAIN SHAFT 10 SPLINE
3.	1	716064	SHIM
4.	1	716064B	LOCK WASHER
5.	1	300393	THRUST WASHER
6.	1	716302	SEALED BEARING
7.	1	716310	SEALED BEARING
8.	1	716762	SEAL
9.	1	300922	90 DEGREE BARBED FITTING
10.	6	302069	STUD BOLT 2-3/16" OAL 3/8-16,24
11.	6	302071	FLANGE NUT 3/8-24 PLATED
12.	2	340031	DOWEL PIN
13.	2	723103	LOCK WASHER 5/16" PLATED
14.	2	723118	H.H.C.S. 5/16"-18x1-3/4" LG
15.	2	723101	NUT 5/16"-18 PLATED
16.	6	723704	LOCK WASHER 3/8" PLATED
17.	6	723723	H.H.C.S. 3/8"-16x1-1/2"
18.	1	728701	NYLON LOCK NUT

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Introduction:

This adapter kit fits Land Rover series I ,II,IIA and III transfer cases and adapts them to a circular 6 pattern. This adapter allows the series Land Rover owner the opportunity to repower and install different transmissions to the very durable and strong "series" transfer case. This adapter is to be used in conjunction with either one of our “Dana 300” style adapters or on some applications it can be bolted directly to a stock transmission tail housing. We have designed the adapter kit to retain the PTO function on the stock transfer case.

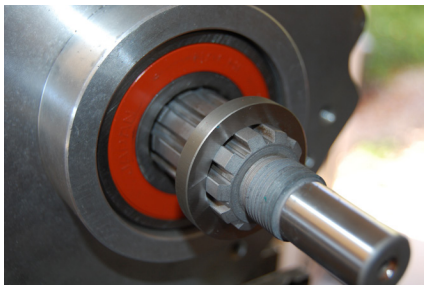
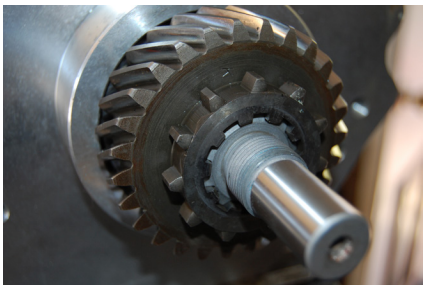
Preparation For Assembly:

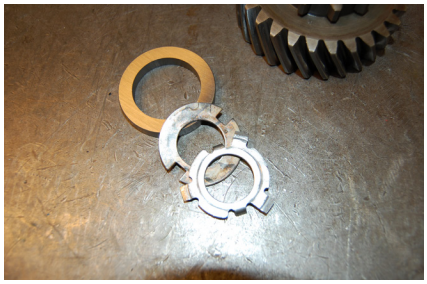
Follow the service manual procedure to remove the transfer case from the transmission. Thoroughly inspect the tranfer case to determine the condition. Overhaul if necessary to insure the quality of your adapter installation.

Procedure:

1. Install the drive gear onto the new spud shaft with shim 716064 behind the drive gear. Then install the original flat washer and the supplied lock tab. Press the gear fully onto the shaft and test fit the lock washer. The tangs will need to be trimmed. These parts are retained because they provide lubrication to the splines of the shaft and input gear. Use locking compound on the new lock nut and torque to 75ft.lbs.

2. Apply a 1/8" bead of high quality silicone on the transfer case mounting surface, Insure that you encircle the idler pin bore and the perimeter of the casting.



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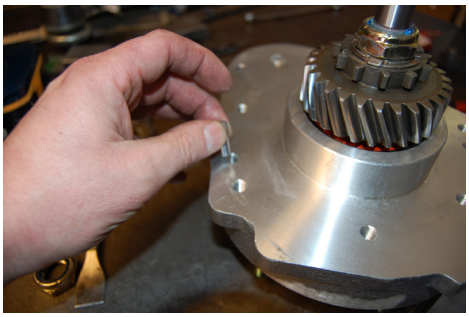
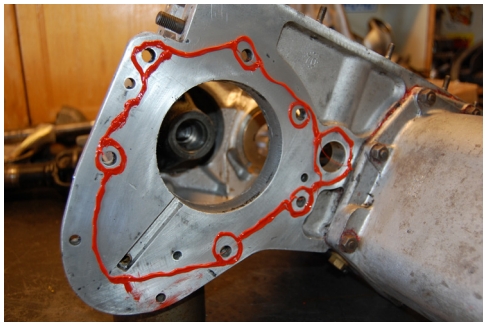


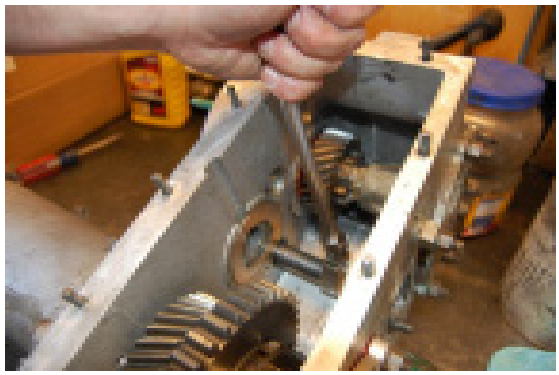


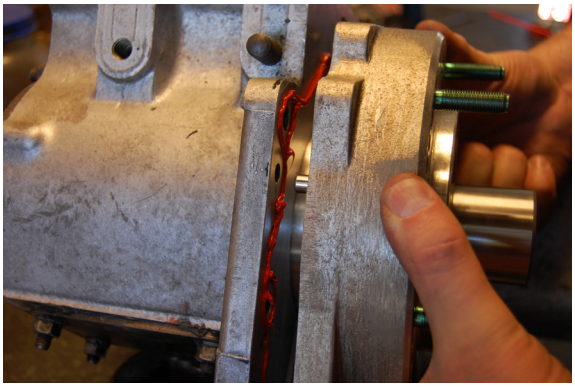
3. Install the dowel pins into the adapter casting (these are a slip fit, so be careful not to lose them)

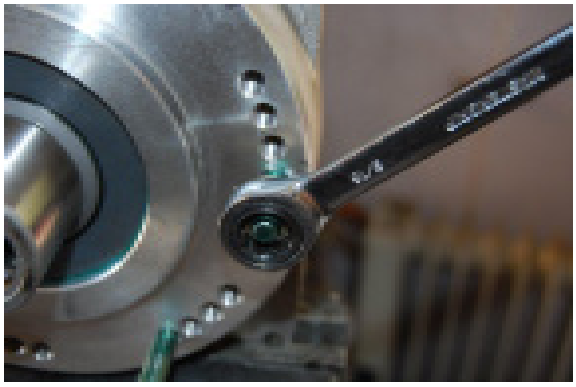
4. Install the assembled adapter plate to the transfer case. Use locking compound on all of the interior bolts and lock washers to insure they do not back out in use. Torque 3/8" bolts to 35 ft.lbs.
5. Install the remaining 3/8" bolts and lock washers. Torque to 35ft.lbs. Also install the two 5/16" bolts assemblies to the top of the adapter.

6. Install the new breather elbow into the adapter with sealant on thread.

7. Install idler gear and pan to transfer case as per manual.







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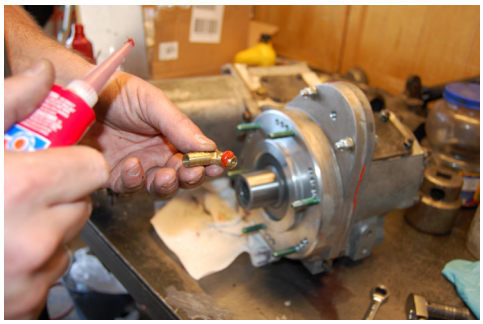
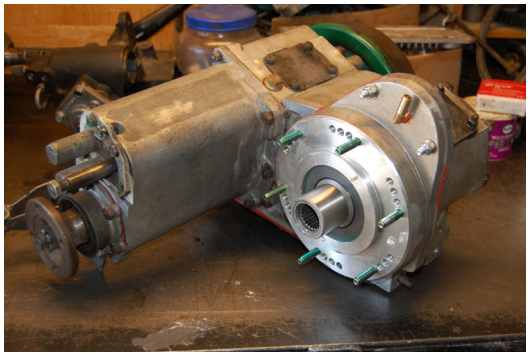
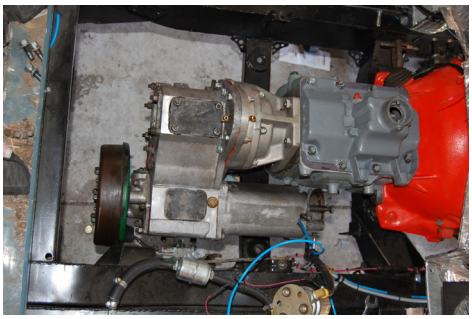
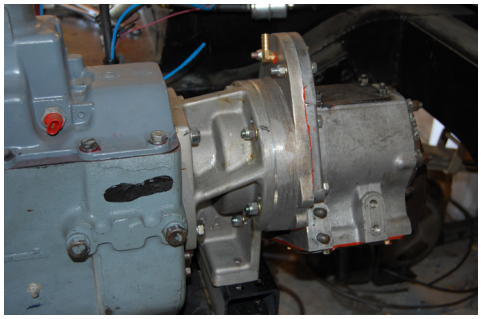
8. Test fit PTO cover. Rotate gear assembly to insure there is no interference with the new nut and PTO cover.The new nut is a close fit into the bore of the PTO cover pocket bearing. Additional gaskets may need to be stacked due to variances in transfer case casting thicknesses.
9. Finish assembling the transfer case as per factory instruction manual.
10. With the replacement engine and transmission combination positioned within the chassis rails you now have the opportunity to “clock” the transfer case. The six studs P/N 302069 and flange nut P/N 302071 are provided for final assembly in the desired “clocking” rotation.

Note: All threads into the Land Rover transfer case are standard UNC. Park brake linkage and mount system will need modifiing.









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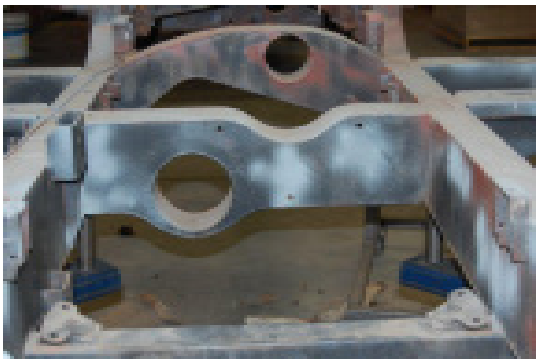
Necessary Chassis Modifications:

The chassis is a large box section ladder style. It is an excellent piece of engineering. However, close inspection is required. Being that the chassis is fully enclosed, it can rust from the inside out. New chassis's are available from a number of outfits. The vehicles are modular in their construction making them relatively easy to modify. The battery tray structure will have to be removed to allow for the installation of a "V" type engine. The original motor mounts need to be cut off the frame.



Under the bellhousing, the cross member will require a notch similar to the military LWB to allow for clearance on the front drive shaft.

On some series I,II,IIA ,it is advisable to remove the web on the second cross member from the front. The web is on the drivers side (LHD). This provides clearance for the exhaust to pass over the cross member and down the inside of the chassis. The third (transmission cross member) will also need modifying. Depending upon your transmission mounting method. If mounting from the transfer case using the original studs, you can retain the cross member. It may need to be moved in the chassis depending upon engine placement. If using the mounting surface provided on our adapters a new cross member will need to be fabricated. The park brake bell crank will also have to be modified to maintain the correct geometry to operate well. The cross shaft may also need to be modified due to the height of engine placement. On LWB models, the cross member behind the transfer case (where the original driveline passed through) will need to be removed and replaced with a section of rectangular tubing similar to the removable cross member of a Discovery or a Range Rover.

Completed modified radiator support

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Necessary sheet metal modifications:

To maintain the original external appearance of the vehicle and allow for ample cooling capacity the “breakfast” or headlight panel will need to be modified. The original radiator will not be adequate to keep the replacement engine cool. To make room for a larger radiator the original radiator support structure needs to be removed. The original radiator overhangs the first cross member.

The panel is easily modified. Drill through the spot welds and gently lever the two pieces apart. To maintain structural rigidity, you can use three pieces of 1/8"X 1" flat bar stock. One across the top, spanning the width of the panel, and the two remaining pieces will be welded vertically and parallel to the center opening. The latch is no longer used. You will need to purchase military hood latches. This provides the space for a radiator on top of the first cross member.

It is advisable to convert to power steering. When converting to power steering, the steering relay is removed.

To provide room for a “V” type engine and maintain the original look of the vehicle
It is necessary to widen the firewall or “bulkhead” to accept the wider engine. This is easily done by drilling out the spot welds that hold the center panel to the foot well. Remove the panels individually and save them for reuse. Drill out the spot-welds of the inner kick panel. The goal is to match to foot well dimensions to the driver side (LHD). Essentially creating a large factory appearing opening. Fabricate a new center panel keeping in mind the bell housing size, depending upon engine, transmission and placement .

Bulkhead spot welds

Images of the foot well panels (left side and then the right)

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