

## FORD NP205-29SPL INPUT TO FIT GM 4WD 6L90 29 SPL TRANS

### KIT CONSISTS OF:

No.	Qty	Part No.	Description
1	*1	340407	SNAP-RING EXT INPUT GEAR NP
2	1	51-9550	ADAPTER RING NP205 FORD CIRCULAR 1
3	1	51-9604	ADAPTER- 6L80/6L90 TO FORD NP205
4	*1	52-9600	GEAR- NP205 INPUT 46T
5	*1	52-9601	SHAFT- NP205 INPUT 29T
6	*1	716315	BEARING 6210-T/C INPUT GEAR BEARING
7	*1	716467	SNAP RING
8	2	720044	H.H.C.S. 10mm X 1.5TH X 20mm GRD10.9 (rev B on casting ID crossmember threads)
9	6	723701	NUT 3/8 -16 PLATED GRD 5
10	6	723704	LOCK WASHER 3/8 ZINC
11	6	723712	STUD BOLT 3/8 -16 X 3-1/2 GRD B7
12	2	724302	FLAT WASHER 7/16 SAE ZINC
13	2	724303	LOCK WASHER 7/16 STD PLTD
14	2	724307	H.H.C.S. 7/16 -14 X 1

**Note:** Transfer case shifter linkage bracket will need to be fabricated.

\* items need to be assembled

**SPECIAL INSTRUCTIONS:** When assembling the transmission to the transfer case, **DO NOT FORCE** the two gear boxes together. If the shaft is too long, there is the possibility of pre-loading the transmission bearings which can lead to premature failure. Take the extra time to make sure that the shafts do not bottom out internally. If there is an interference problem, it may be necessary to grind the end of the new output shaft to obtain the proper length.

All married Ford NP205 transfer cases are a 31 spline female input shaft. This kit will replace the stock 31 spline input with a new 29 spline input to match the 6L90 29 spline output shaft spline. The transfer case will require some disassembly of the front input to install the new gear assembly.

This kit has been modified to clear a portion of the shift rail; however, the 6L90 adapter must be modified for the shift rail clearance also. The 1" adapter plate can be used as a template to mark the notch needed in the adapter.

1. Align U-shaped notch of adapter with rearmost cylindrical boss of tailhousing, keeping in mind that the tailhousing's bolt pattern aligns with the adapter's tapped hole bolt pattern. Once aligned, transfer outline of notch to tailhousing with felt tip marker.
2. Take a 1/4" drill bit and wrap a piece of tape around the bit 1" from the tip. This serves as a depth gauge. With a hand drill or drill press, drill as many holes in the outlined area as possible.
3. With a cold chisel, knock out the remaining material. With the shift rods in the fully extended position, make a trial fit of components to ensure that the pocket depth is enough to clear shift rods and cross link.



**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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Note: 6L90 4WD transmission output shafts. We have seen two different lengths of outputs. One is similar to the 6L80 4WD and the other is longer. The longer shaft is approximately 5" +/- stickout. Trimming this shaft will not allow enough splines to fit the transfer case. A 3/4" spacer will be needed and you will still need to modify the shaft length.

long shaft is GM 24264191

shorter shaft is GM 24285487

The cut shaft below shows the short splines left on the long version 6L90 output shaft.



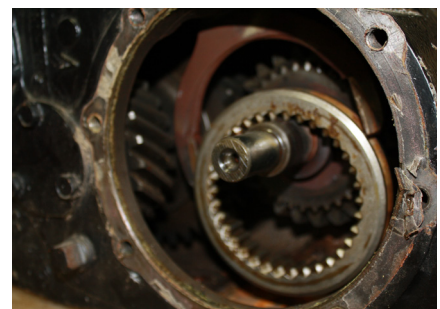
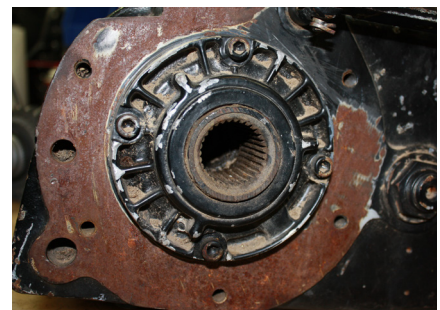
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When replacing a NP205 male input 10, 27, or 23 spline, the NP205 case will require machining for the larger input bearing bore.

Photos shown are of a Ford T/C. The installation on the new gear is the same on all models of T/C's



Remove the tailhousing bolts and front retainer bolts (if your transfer case has a front retainer). Shift the transfer case into 2WD high range and remove the tailhousing from the transfer case. Once the T/C output is removed, shift the T/C into low range which will release the slider. Remove the snap ring from the shaft to the bearing so the shaft and the bearing can be separated. This will allow the gear to drop downward and clear the shift fork.

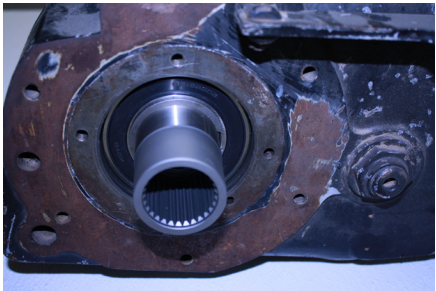
Once the old gear and bearing are removed, clean the bore of the case and get ready to reassembly the new gear assembly.

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The new gear comes assembled with the outer bearing snap ring pulled off the bearing. From the back side of the transfer case install the gear and bearing into the case. The gear gets assembled at an angle to clear the shift fork. Slide the bearing and gear up to meet the case bore. The bearing should slide into the case bore enough to align everything, you can tap the back of the gear with a rubber mallet to get the bearing fully installed. Note the bearing should come out the front of the case and expose the snap ring groove.



The slider ring of the NP205 will need to be installed back onto the shift fork in low range and then the transfer case needs to be shifted into high range. During this procedure be careful of your fingers as you need to line the slider with the gear drive teeth. Once the gear and slider are supported together you will need to install the front bearing snap ring. This will retain the gear in the proper location in the case. The snap ring can be started in the bearing groove with your thumb and then just working it into place with your other hand until it spirals into place. With the rubber mallet tap the front of the gear assembly to set the bearing and snap ring against the case.

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