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P/N: 50-9421

ALLISON 1000 SERIES TRANS TO GM NP205 CIRCLAR PATTERN

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1	1	300617	RELUCTOR- ATLAS INPUT
2	3	300617A	SCREW- RELUCTOR RING
3	1	300619	SENSOR- SPEEDOMETER
4	*1	340407	SNAP-RING EXT INPUT GEAR NP
5	1	51-6912	ADAPTER- ATLAS & NP205 FORD/GM ALLISON SENSOR
6	1	51-8603	ADAPTER- CIRCLE 6 ROTATION RING
7	*1	52-9600	GEAR- NP205 INPUT 46T
8	*1	52-9607	SHAFT- NP205 INPUT 29T LONG
9	*1	716315	BEARING 6210-T/C INPUT GEAR BEARING
10	*1	716467	SNAP RING-EXTERNAL 1 15/16
11	6	723701	NUT 3/8 -16 PLATED GRD 5
12	6	723704	LOCK WASHER 3/8 ZINC
13	6	723762	BOLT 3/8 -16 X 3.25" SHCS ZNC (ALLISON ADAPTERS)

* items need to be assembled

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 or transfer case bearings which can cause 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.

The adapter requires the installation of the new 29 spline input gear. This kit fits GM NP205 circular pattern 32 spline input transfer cases. This kit will replace the 32 spline input with a new 29 spline input to match the ALLISON 1000, 29 spline output shaft. The transfer case will require some disassembly of the front input to install the new gear assembly. see video: https://www.youtube.com/watch?v=_4gPVEWJJ5w

This kit has been modified to clear a portion of the shift rail; however, we have seen some applications where the .75" adapter may require some additional modification. Shift the NP205 so that the rails are fully extended, install the two adapters to the NP205 and make sure the rail or linkage does not touch the thin adapter.

The reluctor should be installed with the set screws closest to the transmission. Make sure the reluctor has a .100" gap between it and the seal retainer on the front of the NP205 case. Install the set screws with loctite so they lock the reluctor to the new input gear. Set the thick adapter on to the NP205 case and check the installation of the reluctor sensor. The sensor should have a .010" to .012" gap and the center probe of the sensor should line up with the reluctor notches.

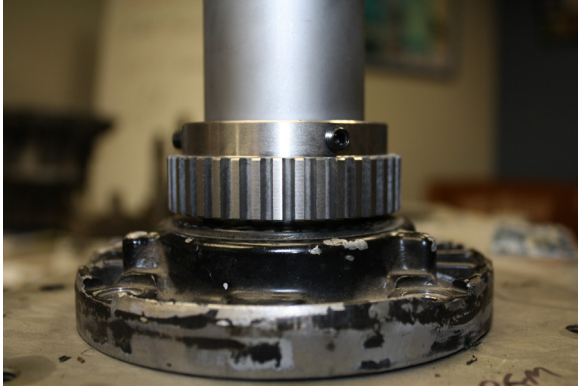
Align the c-bore holes in the thin adapter with through holes on the thick adapter and install the long 3/8 bolt through both adapters and into the NP case. These should be loctited and torqued to 30 ft.lbs.

The Allison transmission adapter needs to be lined up with the 6 holes near the counter bored holes, these should be Tapped. Note the bolt pater is not symmetrical. These holes as well as the transfer case holes only line up with the mating component one way, if you cannot get all 6 bolts into the transfer case or the adapter you may need to rotate the adapter. The 6 holes on the Allison should locate the GM NP205 in a rotation close to the stock.

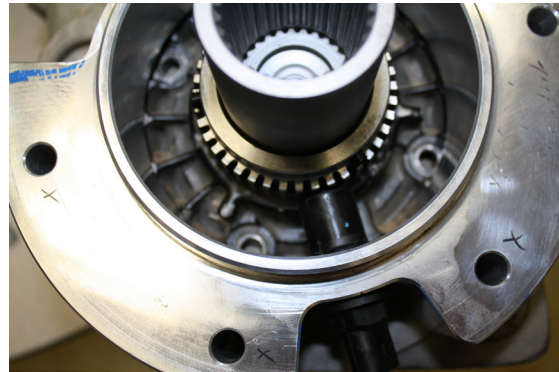
We do not offer anything for the transfer case linkage for this adapter.

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.

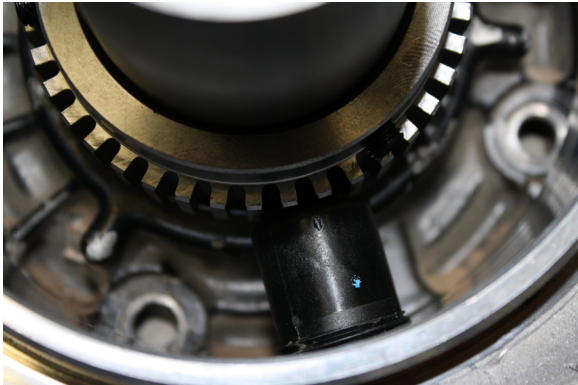
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Installed reluctor ring, make sure you have a gap between the reluctor and the NP205 front bearing retainer, approximately .100".



Test fit the adapter to the NP205 and make sure the sensor and the reluctor line-up.



The gap between the sensor and ring must be .010"-.012" Gap



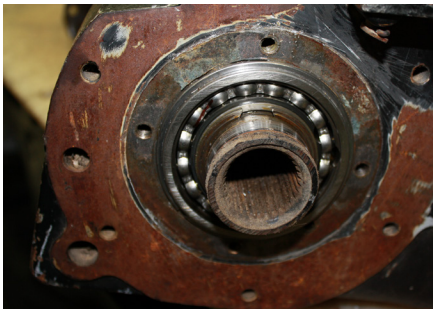
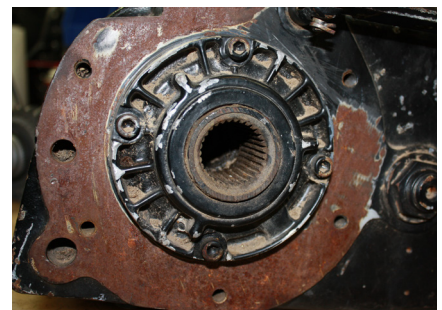
Install the 6- SHCS bolts through the two adapters and secure them to the NP205.
Photo shown is the Allison tailhousing with the 51-8603 installed.

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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.

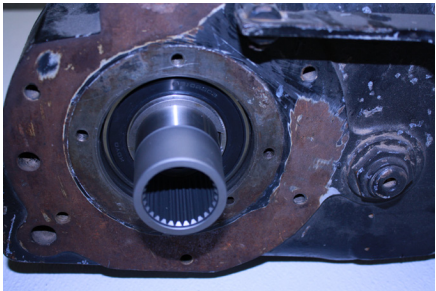
Once the old gear and bearing are removed, clean the bore of the case and get ready to reassembly the new gear assembly.

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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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