



NV3550 TO 1966-77 FORD BRONCO

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	26-3550	NV3550 TRANSMISSION
2.	1 Kit	50-9920	TRANSFER CASE ADAPTER & TC SHIFTER BRKT.
3.	1 Kit	712544	FORD TO NV3550 BELLHOUSING ADAPTER PLATE & CLUTCH DISC
4.	1 Kit	716000	NV3550 CROSSMEMBER MOUNT KIT
5.	1 Kit	716099	SHIFTER HANDLE

SPECIAL NOTE:

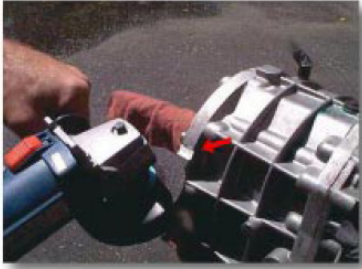
1. No driveline modifications necessary.
2. The NV3550 assembly is 1/4" shorter than the factory 3 speed or 4 speed.
3. The NV3550 is slightly taller than the stock 3 or 4 speed. A 1" body lift is recommended for the best transmission alignment.



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INSTALLATION PROCEDURES:



STEP 1:

Preparing the NV3550 transmission for the bellhousing adapter
Match the bellhousing adapter to the front of the NV3550. Mark the transmission where the top two holes of the adapter meet the front flange. A small notch will need to be ground into the flange to provide clearance for the bolts. Carefully use an angle or die grinder to grind the clearance for the bolts. NOTE: The NV3550 has an aluminum case. This material grinds very easily.

STEP 2:

Bellhousing adapter plate installation

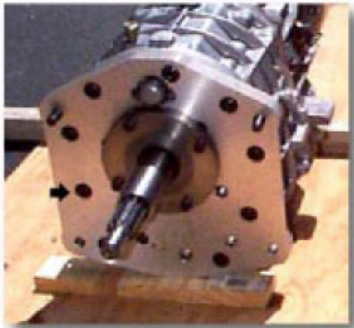
Install the bellhousing adapter plate to the NV3550 using (9) Allen bolts supplied. NOTE: Use Loctite.



STEP 3:

Removing the original transmission

Remove the driveshafts, shifter cables, and exhaust (if necessary). Remove the original transmission and transfer case assembly from the vehicle. Leave the bellhousing in the vehicle.



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STEP 4: **Transfer case adapter to Dana 20**

Remove the transfer case adapter and stub shaft from the original transmission. Apply the new AA gasket to the transfer case. Aligning the transfer case adapter with the most clockwise holes will match to the factory indexing (lowest setting). You can use the other set of holes for a higher rotation; however, this can cause some problems with body clearance, frame clearance, and transfer case shifter linkage alignment. The higher rotation does give you better ground clearance and is a nicer fit on to the new crossmember mount provided. Once you have chosen the rotation, use Loctite and install the (6) Allen bolts.



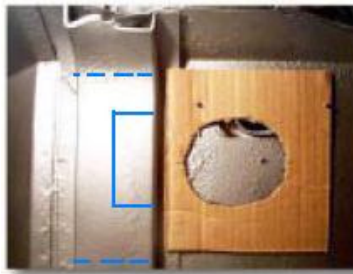
NV3550 Assembled

STEP 5: **Installing the adapter and transfer case assembly to the NV3550**

Grease the NV3550 tail shaft splines and install the stub shaft & bearing assembly. Apply light grease to the o-ring and attach the transfer case to the transmission with (6) bolts using Loctite. Use the driver's side top 2 bolts to attach the transfer case shifter bracket.

STEP 6: **Prepare the body for the shifter hole**

Measure the NV3550 (with the front adapter plate installed) from the edge to the shift tower. It is best to make a template. Measure the location on the body to be cut for the new shifter. **NOTE:** To find your measurement, it is best to do this with the bellhousing still installed.



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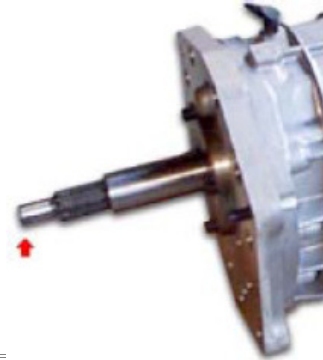
NV3550 TO 1966-77 FORD BRONCO

STEP 7: Removing the bellhousing & clutch assembly

NOTE: It is recommended that the flywheel be turned and new throw out bearing be installed with the new clutch disk.

STEP 8: Checking flywheel pilot shaft hole depth

The NV3550 has a slightly longer pilot shaft than the factory 3 speed. The factory Ford flywheel should have enough depth to accommodate this; however, if it does not, up to 1/4" may have to be trimmed off the end of the shaft. A simple angle grinder with a cutoff wheel is suitable.



STEP 9: Modifying the factory bellhousing to match the NV3550

Match the bellhousing to the transmission to measure the clearance.

1. Drill holes at the bottom of the existing vent hole to widen it.
2. Use a die grinder to smooth out the hole shape.



3. The final shape should be large enough to clear the front shift rail of the NV3550 transmission. This relief **should not** be cut down into the bellhousing index diameter.

Match the bellhousing again to the transmission to confirm clearance when bolted together.

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STEP 10: **Installing the new clutch & bellhousing assembly**

Use Loctite on the flywheel bolts if they were removed. Remove the original pilot bushing from the flywheel and install the new AA pilot bushing (**do not grease pilot bushing**).

Install the new disc and pressure plate to the flywheel. Install the new throw out bearing and arm to the bellhousing and grease with an anti-seize lube.

Install the bellhousing and torque to factory specifications.



Step 11: **Installing the shifter into the body hole**

Remove the shift tower from the NV3550 (4 bolts). Slide it through the hole in the body and use a string to hold it in place. This makes the transmission installation easier, as the shifter tower does not interfere with the body. When removing the shifter tower, make sure the shifter hole on the transmission is covered to keep debris out of the transmission.

STEP 12: **Installing the transmission assembly into the Bronco**

We recommend using a transmission jack. Once the transmission has been installed and bolted to the bellhousing, you will be required to reinstall the transmission shift tower.



STEP 13: **Installation of the transmission crossmember**

For installation, see Instruction Sheet 716000.

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NV3550:

The NV3550 transmission is an ideal transmission swap for the early Broncos. This 5 speed is rated at 300 ft./lbs. at 7200 GVW. A stock Bronco weighs 4200 GVW. When installed into a Bronco, the NV3550 can then handle an even a higher torque rating due to the lower vehicle weight - so strength is not an issue. The weight of this 5 speed is 97 lbs., which is similar to the stock 3 speed & 4 speed transmissions. The overall size and length make it an ideal fit. This transmission will adapt to either the stock Dana 20 or to our Atlas transfer case.

The gearing of this 5 speed is as follows:



1st	4.01
2nd	2.32
3rd	1.40
4th	1.00
5th	0.78
Rev	3.57

Low gear ratio options:

		Vehicle with 4.56 axle and Dana 20 (2.46:1)	Vehicle with 4.56 axle and Atlas (4.30:1)
1st	4.01	44.99:1	78.62:1
2nd	2.32	26.03:1	45.49:1
3rd	1.40	15.70:1	27.45:1
4th	1.00	11.22:1	19.60:1
5th	0.78	8.76:1	14.87:1

Freeway speed information: (Vehicle with 33" tires and 4.56 gears in 5th gear would have the following RPM's)

MPH	RPM
55	1993
65	2355
70	2537
75	2718

Gear Oil:

The NV3550 uses a special gear oil only available from your Chrysler dealer under Part No. 4874464.



CROSSMEMBER ASSEMBLY FOR THE NV3550 INTO 1966-77 FORD BRONCOS

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	716000-1	CROSSMEMBER MOUNT
2.	1	716000-2	TRANSMISSION PLATE MOUNT
3.	1	716000-3	TRANSMISSION RUBBER MOUNT
4.	2	720011	10mm-1.5 NUT (for studs in rubber mount)
5.	10	723704	3/8" LOCK WASHERS (8 for frame bolts, 2 for rubber mount studs)
6.	8	723722	3/8"-16 x 1-1/4" H.H.C.S. (crossmember-to-frame bolts)
7.	10	723735	3/8" FLAT WASHERS (8 for frame bolts, 2 for rubber mount studs)
8.	4	724302	7/16" FLAT WASHER (trans plate to rubber mount)
9.	6	724303	7/16" LOCK WASHER (2 for trans plate to rubber mount & 4 for trans plate to trans)
10.	2	724304	7/16"-14 NUT (for trans plate to rubber mount)
11.	6	724307	7/16"-14 x 1" H.H.C.S. (2 for trans plate to rubber mount)



This crossmember is designed to fit the NV3550 transmission into 1966-77 Ford Broncos. This three piece mount bolts directly to the stock frame rails using the stock frame holes. The Fords frame rails are tapered from the front to the back; our crossmember mount has this same taper. When fitting the crossmember between the frame rail, a rubber mallet may be necessary to knock it into position. One of the prototype vehicles that we installed the crossmember into had some welds on the inside frame rails that needed to be ground off before the crossmember would fit. Due to the age of these vehicles, the frame rail width may vary, which could cause some proper fit issues.

The NV3550 transmission mount plate should be bolted to the transmission as shown. This offsets the rubber mount mating surface back towards the rear axle and up towards the floorboard.



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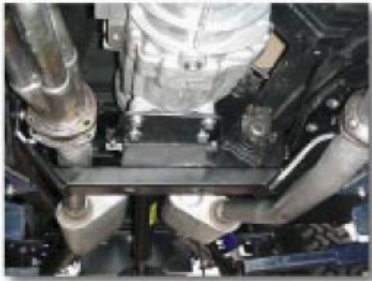
CROSSMEMBER ASSEMBLY FOR THE NV3550 INTO 1966-77 FORD BRONCOS



The rubber support should then be bolted to the transmission mounting plate. The crossmember can now be fitted to the rubber mount and the frame rails. The driver's side exhaust should fit under the crossmember and the passenger side exhaust should fit inside the crossmember. Depending on the exhaust configuration in your vehicle, you may be required to do so modifications to the exhaust for proper fit. The new crossmember is a tight fit between the transfer case and transmission. A notch has been cut in the crossmember for clearance of the Dana 20 front output retainer bolt. This notch is necessary on applications

using the stock transfer case rotation.

Due to tight tolerances, the crossmember holes to the frame have been oversized to allow for some adjustment. We have also slotted the holes in the crossmember tube to allow for some vehicle variances. Once the crossmember has been secured to the frame, be sure to secure the rubber mount to the tubular section of the crossmember mount



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