

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: 27-3520AA

New Item: (08/07)

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Page Rev. Date: 01-21-14

NV3550 TO 1966-77 FORD BRONCO

(KIT DOES NOT INCLUDE TRANSMISSION)

KIT CONSISTS OF:

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

***Use the chart below to verify your transmission as a NV3550.**

MODEL/YEAR	VEHICLE TYPE	DODGE PART NUMBER	DODGE CODE	ENGINE (Liters)
NV3550 4WD TRANSMISSIONS				
4X4 2000	TJ	52104388	AA	4.0L
4X4 2001-02	TJ	52104388	AC	4.0L
4X4 2001-02	XJ	52104385	AB	4.0L
4X4 2003-04	TJ	52104678	AA	4.0L

Note: Early model transmissions (2000-2002) will require a different shifter handle, we offer this handle as [P/N 716099A](#).

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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STEP 7:

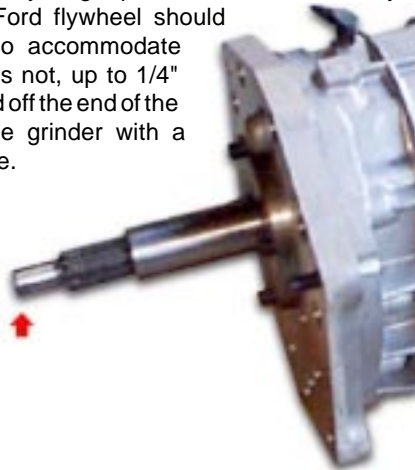
Removing the bellhousing & clutch assembly

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.

Drill holes at the bottom of the existing vent hole to widen it.



Use a die grinder to smooth out the hole shape.



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:

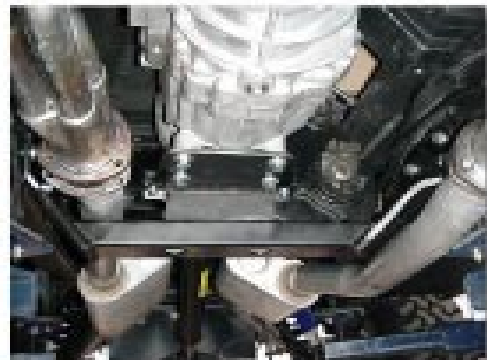
Installing the transmission assembly into the Bronco

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.