

P.O. Box 247, 4320 Aerotech Center Way Paso Robles, CA 93447 Telephone: (800) 350-2223 Fax: (805) 238-4201 PAGE 1 OF 6 Page Rev. Date: 08-06-18 P/N: 712569

BELLHOUSING FOR JEEP 4.0 HIGH OUTPUT 6 CYLINDER ENG. TO T150, T176, T5, T18 & T4

KIT CONSISTS OF:				CAUTION: This BHSG will not
<u>No.</u>	Qty	Part No.	Description	fit NP435 Ford Transmissions
1.	1	N1714	CLUTCH RELEASE BEARING (GM Arm x Ford I.D.)	with 5.125 index diameter.
2.	1	712569-BLK	BELLHOUSING	
3	1	716109	3/4" SOFT PLUG	
4.	1	716156	PILOT BUSHING W/ .670" I.D. (T150 & T18)	
5.	1	716156GM	PILOT BUSHING W/ .590" I.D. (T4, T5 & T176)	
6.	1	716176	CLUTCH RELEASE ARM (Test Fit on New Bearing & Modify)	
7.	1	716176SC	GM THROW-OUT LEVER SPRING CLIP	
8.	1	716180	BALL PIVOT	
9.	1	716332	CLUTCH RELEASE ARM BOOT (See NOTE below)	
10.	2	723134	H.H.C.S. 5/16"-18 x 1-1/4" LG. (Slave Cylinder)	
11.	6	724303	7/16" LOCK WASHERS	
12.	4	724328	H.H.C.S. 7/16"-14 x 1-1/4" LG. (Transmission)	

<u>NOTE:</u> The 4.0L blocks originally mated to a manual transmission used a 2 piece pilot bushing. Both pieces must be removed, the bearing and the sleeve. If these pieces are not removed, the new brass pilot bushing will not fit. We do not offer a smaller pilot bushing to fit the reducer sleeve. On 4.0L that were originally mated to a automatic the new pilot bushing will fit without any modifications.

CAUTION:

On Ford 4 speed truck transmission model T18, we have encountered a serious problem where the original transmission front bearing retainer was too short permitting the release bearing to slip off the end. We believe that the difficulty was developed because the use of a low profile pressure plate. When using the high diaphragm type pressure plate on these applications, the clutch finger height will be approximately 1/2" higher and this will prevent any possibility of the release bearing from traveling an excessive distance.

Limiting the clutch pedal travel could also prevent the release bearing from traveling too far forward. If there is any difficulty with this, please call Advance Adapters immediately for assistance.

CLUTCH INFORMATION:

It is very important that you double check the flywheel and pressure plate clearances on the inside of the new Advance Adapter bellhousing. We have encountered a few installations that were using an aftermarket clutch assembly that interfered with the inside of the new Advance Adapter bellhousing. The interference was sufficient enough to prevent the engine from being turned over by the starter motor. The customer then had to completely disassemble the bellhousing to make the necessary adjustment. We recommend that you verify clearance on the inside of the bellhousing prior to transmission assembly.

<u>WARNING</u>:

This Bellhousing cannot be used with a Mustang T5 transmission.

<u>NOTE:</u> The throw out arm boot provided in this bellhousing kit was designed for a Jeep throw out arm. The arm provided in this kit is a Chevrolet arm. The boot may need to be modified for the correct arm location in the boot.



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INSTALLATION INSTRUCTIONS:

Depending on the year of the vehicle that you are dealing with, you will need to vary the clutch control requirements accordingly. The bellhousing that Advance Adapters has manufactured will use a GM clutch release arm along with a special Centerforce clutch release bearing #N1714. Test fit the new bearing on the new GM release arm. It may be necessary to file or grind the lugs of the new arm slightly in order to fit into the groove of the new bearing. The new GM clutch arm will have an internal snap ring to lock onto the ball pivot stud inside the new bellhousing. On Jeep vehicles that were originally equipped with a mechanical clutch control, you should not have any problem adapting your original clutch linkage to the new clutch arm. On Jeep vehicles that were previously equipped with a hydraulic slave cylinder such as 1987-2005 and 1980-1986 four cylinders, you will need to use a Jeep slave cylinder that was used in the 1980-1983 Iron Duke four cylinder Jeep vehicles. We offer this slave cylinder kit as Part No. 716331. This new assembly will include all the necessary parts to mount to the new bellhousing.

The bellhousing is a direct duplicate of the original AMC stock bellhousing. The flywheel sensor, dowel pin holes and dust cover mounting holes are all in the original location. The original dust cover or block plate must be retained for use with the Advance Adapter bellhousing. This plate is normally already on the engine block. When using the hydraulic clutch slave cylinder kit (P/N 716331), you will need to make a small cut out in the dust cover in order for the slave cylinder to be installed. Refer to the diagrams on the following pages for the exact cut out location. The flywheel sensor must be installed onto the new bellhousing using the original bolts. The factory dowel bolts provide the necessary accuracy to mount the sensor in the appropriate location.

Prior to assembling the bellhousing onto the engine, you will need to install the clutch ball pivot. We have provided two (2) different locations depending on the year of the vehicle that the bellhousing is being installed into. The upper location will be for Wrangler hydraulic clutch controls, while of the lower location will be for mechanical clutch type controls. Refer to **Page 6** for additional information.

If you are using this bellhousing on a Jeep vehicle equipped with a Dana 300 or Dana 20 transfer case, you will need to modify the lower right portion of the bellhousing. The bolt area at the extreme bottom will need to be removed in order for the front drive shaft to have the necessary clearance.

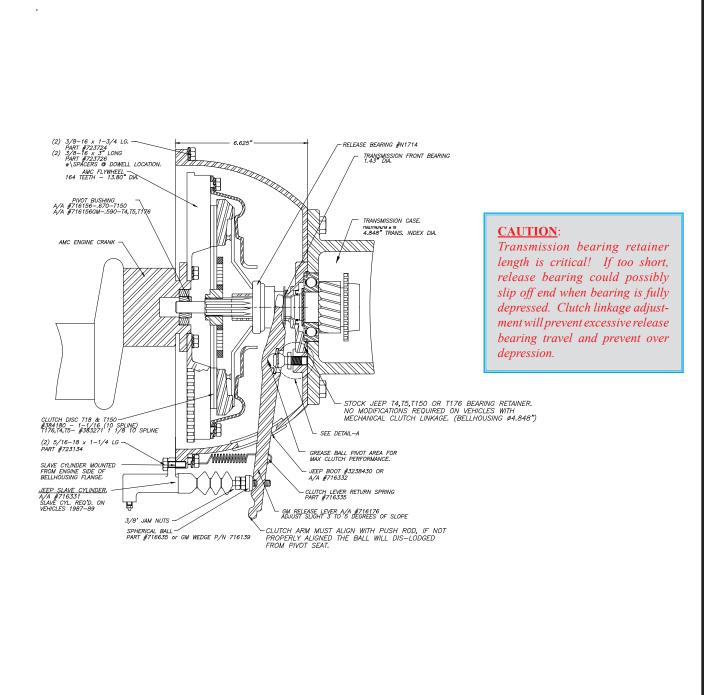
Depending on the transmission that you are using, you will need to vary both the pilot bushing and the clutch disc. The original 4.0 engines were normally equipped with an AX15 5 speed transmission that had a 1-1/8"-10 spline clutch disc. If you are using the T4, T5 or T176 transmissions, then the original clutch disc can be retained. If you are using a T18 or T150 transmission, then you will need to change the disc to a Centerforce part number of 384180. Be sure to select the proper pilot bearing for installation into the 4.0 crankshaft. It is advisable that you check the input shaft tip engagement into the new pilot bearing after installation. On certain applications such as the T150,T176 and T5 transmissions, it may be necessary to shorten the input shaft length in order to avoid bottoming out of the input shaft into the engine crank area. *DO NOT FORCE THE TRANSMISSION INTO POSITION.* The flywheel must be 1" thick. We have seen some flywheels up to 1.5" thick, which can cause interference problems. This 1" measurement should be taken from the crank flange to the clutch disc surface. This bellhousing also requires the use of a diaphragm pressure plate. Most Borg & Beck 3 finger pressure plates will not work.

<u>CAUTION</u>: On some of the early installations, we have encountered an interference problem between the clutch pressure plate and clutch release arm. The solution is to grind the necessary clearance on the inside of the bellhousing and modify the release lever approximately 1/16". It will be necessary for you to check the clutch clearance inside the bellhousing prior to transmission assembly. This problem has only occurred with aftermarket clutch assemblies or thicker than normal flywheels.



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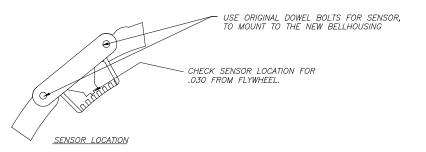
Note:

2005 & Newer 4.0L engines use a new location and style of crank position sensor. Shown in photo below is the newer CPS location. If your engine is pre-2005, please plug this hole with the 3/4" soft plug that has been provided. Plug will need to be pressed or tapped in using a dowel and soft hammer.



The new pivot ball needs to be installed into the bellhousing. Apply blue Loctite to the threads and torque to 40-45 ft-lbs. The clutch fork will need the spring clip installed; a pair of needle nose pliers works well. Once the spring clip is installed, apply grease to the spring and socket of the fork. *Note: Clutch fork must be installed into the bellhousing before bolting to the engine.

Place the fork over the pivot ball, centering the spring clip. With a dead blow hammer, hit the back side of the fork using ample force, directly perpendicular to the pivot ball (2 or 3 times may be required). Fork should move free, with slight resistance. If not, repeat the force with the dead blow hammer. See photo





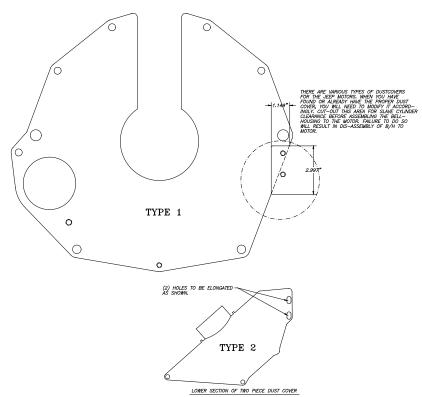


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*NOTE:

The lower dust cover must be modified accordingly before installation of slave cylinder. Slave cylinder should be installed to top of dust cover.



NOTE: THE LOWER DUST COVER MUST BE MODIFIED ACCORDINGLY BEFORE INSTALLATION OF SLAVE CYLINDER. SLAVE CYLINDER SHOULD BE INSTALLED TO TOP OF DUST COVER.



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