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 P/N: 712561 & 712561V

## TOYOTA R150F, R151F 5 SP TRANS. TO CHEVY FLYWHEEL & GEN 3 BLOCKS

### KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	712561-BLK	ALUMINUM BELLHOUSING
2.	1	712567-PLT	DUST COVER
3.	1	716019	SLAVE CYLINDER SPACER
4.	1	716149-NS	PILOT BUSHING
5.	1	716179V	CLUTCH RELEASE LEVER
6.	1	716176SC	RELEASE ARM SPRING CLIP
7.	1	716180	CLUTCH FORK PIVOT BALL <i>(Installed)</i>
8.	1	716343	SLAVE CYL. PUSH ROD
9.	1	716635-A	SLAVE CYL. PUSH ROD END
10.	1	714210	BOLT PACK

### OPTIONAL ITEMS:

CF360056	10-1/2" P.P.
CF165552	11" P.P.
N1430	Release Bearing
716105	10-1/2" Disc
716213	Slave Cylinder
<i>(Toyota P/N 31470-60022)</i>	
712500M-D	GEN3 Flywheel kit

*Most 1997 & up GM 4.3L V6 engines had a larger crank I.D. The pilot bushing in this kit requires a steel sleeve, P/N 716155.*

### INSTALLATION INSTRUCTIONS:

This bellhousing is not compatible with transmissions that were previously equipped with diesel engines. The bellhousing design incorporates a special modified clutch release lever and a Toyota Land Cruiser slave cylinder. We have provided slave cylinder mounting on the passenger side of the bellhousing and have incorporated a new push rod location that will provide a quick short travel of the clutch release mechanism. The kit does not include the Toyota Land Cruiser slave cylinder, Part No. 31470-60022. The bellhousing is designed for the 153 tooth flywheel application. If your block is equipped with a 168 tooth flywheel, you will be required to use a high torque starter without a nose cone to fit the bellhousing (P/N 22-0001) or (P/N 22-0002) For Gen III Engine applications.

The inside of the bellhousing uses a high profile Centerforce diaphragm clutch assembly. By using this pressure plate, you can be sure that the slave cylinder travel will be appropriate for obtaining a maximum clutch release. The release bearing, Part No. N1430, is a standard flat faced Chevy release bearing. The bearing must not have continual contact with the fingers of the clutch. Adjust the length of your push rod for clearance between the fingers and the face of bearing.

In order to adjust the height of the release bearing, we recommend that you install the new bellhousing over the clutch assembly and onto the engine prior to assembling the transmission to the bellhousing. By doing this procedure, you will be able to install the clutch release lever, slave cylinder, slave cylinder push rod, and release bearing directly to the clutch assembly. The reason this is necessary is that there are variations as to the thickness of the flywheel which either raise or lower the fingers of the clutch as related to the release bearing. The push rod of the slave cylinder can be adjusted, to obtain the necessary clearance between the release bearing and clutch fingers. If the bearing is permitted continual contact on the fingers, then you will have premature release bearing failure.

We do not furnish a rubber boot for the area between the bellhousing and clutch arm since it is too restrictive for the clutch arm movement. We believe that the location of the opening is such that any dust or other debris will have a hard time accessing the opening. If you anticipate water hazards, we would recommend a small rubber flapper that could be screwed to the outside of the bellhousing.

### INSTALLATION INSTRUCTIONS:

1. Install the pilot bushing into the engine crank.
2. Bolt the flywheel to the engine crank using special flywheel bolts.
3. Assemble the clutch assembly and special disc to the flywheel using special clutch bolts.

**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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4. Assemble the clutch release arm to the inside ball pivot of the bellhousing.  
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



5. Bolt the slave cylinder to the outside of the bellhousing.  
6. Test fit the bellhousing assembly over the clutch assembly and onto the engine block.  
7. Place the N1430 release bearing onto the clutch arm fork.  
8. Adjust the length of the slave cylinder push rod to a length that provides a minimum of 1/8" clearance between the release bearing face and clutch fingers.  
9. This test fit over the clutch assembly is primarily done for establishing the push rod length. If this procedure is eliminated, you will not have any visual inspection for verifying the push rod adjustment.  
10. Remove the bellhousing assembly from the engine.  
11. Bolt the bellhousing to the front of your Toyota 5 speed transmission using the original bolts. Make sure that the two dowel pins installed in the face of the 5 speed transmission are properly fitted to the Advance Adapter bellhousing.  
12. Slide the new release bearing onto the Toyota bearing retainer. Make sure that there is grease in the internal cavity of the release bearing. Most new bearings are pre-lubricated.  
13. With all the components in position, you can now bolt the new bellhousing assembly onto the engine block. We have provided six (6) new socket head bolts, 3/8"-16 x 1-1/2" long for this purpose. Make sure the engine dowel pins are properly aligned with the new bellhousing dowel pin holes. **DO NOT FORCE THE BELLHOUSING ONTO THE ENGINE BLOCK.** Some applications may require the tip of the input shaft to be modified slightly. The bellhousing must fit evenly to the engine block.  
14. With the bellhousing now in position and the slave cylinder push rod installed, you should be able to verify the clearance between the release bearing & clutch fingers. The lever should have movement of approximately 1/8" to 1/4". **CAUTION:** If you have too much clearance, you will be utilizing too much of the slave cylinder stroke and could possibly prevent you from obtaining a full clutch release. A light duty return spring attached to the clutch release arm will prevent any premature contact of the release bearing with the clutch fingers.  
15. The Toyota Land Cruiser slave cylinder will replace the original Toyota slave cylinder.  
16. With the new slave cylinder installed, you can now bleed the slave cylinder installation by pumping up the slave cylinder pedal. Most installations are compatible with the original Toyota master cylinder. We have encountered a few installations that require changing of the Toyota master cylinder to a smaller 3/4" piston. If you have any type of clutch difficulty related to full disengagement of the clutch assembly, contact Advance Adapters for any updated information.

### **DUST COVER INSTALLATION:**

*Prior to transmission assembly, we recommend test fitting and assembly of the dust cover onto the bellhousing. Two of the 4 holes have already been drilled for self tapping screws. The lower two holes will need to be drilled for 2 self tapping screws. The drill size should be 11/64 (.171 Diameter) approximately 1/2" deep. On some applications the new hole may enter the slave cylinder mounting hole.*

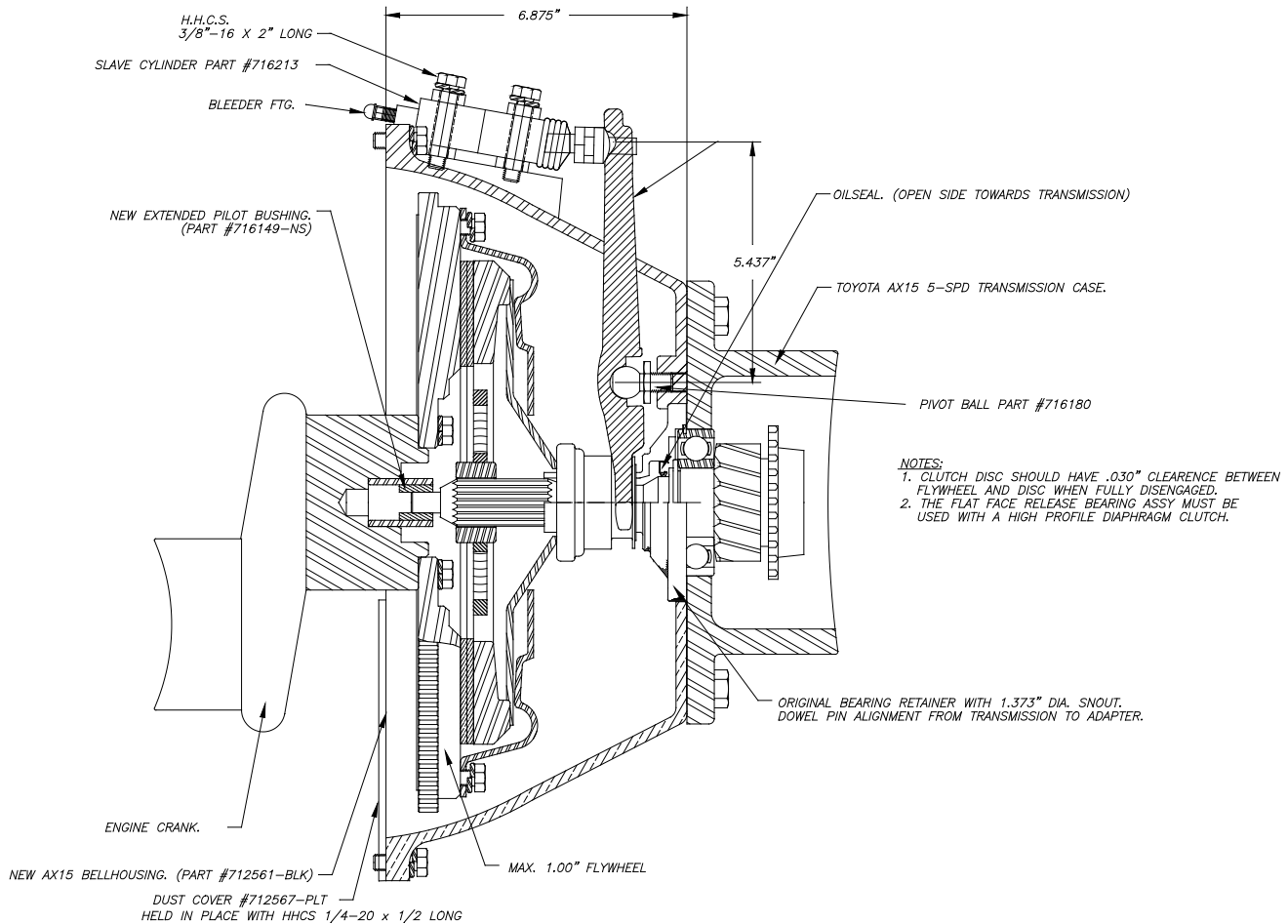
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**NOTE:** If using a Chevy V8 168 tooth flywheel, a Vortec V8 or Vortec V6 with a 168 tooth flywheel, you will be required to use a special starter. Along with the starter comes a slave cylinder spacer for the bellhousing to clear the new starter.

Toyota vehicles with the stock five speed and the install of a V6 or V8 engine have always been limited to a 153 tooth flywheel. Some of the later model engine blocks only offered a 168 tooth flywheel option, and only offered the one starter bolt pattern on the block. This hi-torque starter is a noseless starter that fits the 168 tooth flywheel and bolts to the GM blocks only having the one set of mounting holes.

One issue that arises from this special application: Since the bellhousing was designed around the 153 tooth flywheel and starter, we tucked the slave cylinder tightly to the side of the bellhousing. When using a 168 tooth flywheel, the starter is located further out on the block which causes some clearance issues on the slave cylinder. The 3/8" spacer bar included with the starter will space the slave cylinder out enough to clearance the starter.



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