



GM Powerglide High Clutch PowerPack® Hi-Performance, Racing, Drag Boats, Street Rods

ALTO PART # 019755HP

Alto #019755HP POWERPACK® CONTENTS:
(9) 019740A (.061" / 1.55mm) Red Eagle® Friction Plates
(9) 019701AK (.060" / 1.52mm) Kolene® Steel Plates

DURABILITY & PERFORMANCE BENEFITS

The enclosed product is designed to offer a significant increase in overall performance and durability when building an aluminum Powerglide for hi-performance and/or racing applications. The friction plates feature ALTO Red Eagle® hi-performance paper; when combined with the enclosed Kolene® coated steel plates, the high gear shift is MUCH firmer/shorter.

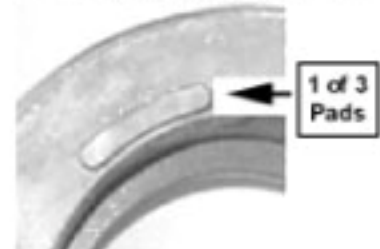
PLEASE READ THIS BEFORE BEGINNING INSTALLATION

The Powerglide PowerPack® Kit is engineered with selectively sized (thinner) friction and steel plates. In order to install the full capacity of eight (8) friction plates, a V-8 clutch drum must be used. Additionally, the clutch drum piston must be machined (a simple procedure) and the waved cushion plate is not reinstalled. With this in mind, identify the parts you are working with as the following illustrations show.

INSTALLATION INSTRUCTIONS

Using a ruler or vernier caliper, measure from the bottom of the clutch drum to the ledge where the sun gear flange rests. Defined Further: The bottom of the clutch drum is the area under the bottom of the piston. The sun gear flange ledge is the step approximately 3/16" below the snap ring groove. The measurement should be approximately 1-7/8 (1.875). This distance is much shorter if you have a six cylinder drum.

Tech Note: Look at the OEM narrow drum bushing as shown in the illustration. For added durability, a wider bushing can be installed. Use a Buick Dynaflo front pump babbitt bushing.





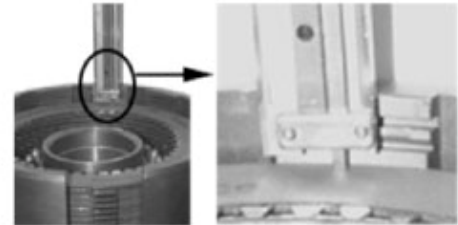
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Step 1: Measuring and Machining the Piston: There are three (3) slightly curved, bathtub shaped pads located on bottom side of the piston. Using a vernier caliper or micrometer, measure equal distances from the three (3) individual piston pads to the top of the piston depicted in the illustration between the two horizontal lines as area "A". The top of area "A" is where the first steel plate rests against. An OEM V-8 piston will measure approximately .860". Machine the piston from the top of area "A" until the height is .745" (+/- .005). Important Note: DO NOT machine the piston below .740". Doing so will cause the first steel plate proximity to be BELOW the steel plate lug area. ALWAYS check the proximity of the first steel plate to ensure that the plate lugs are in the lugs of the clutch drum. **Failure to do so may result in a bind-up non-apply!**

Step 2: Preparing the Sun Gear Flange: Since there will be a friction plate applying against the bottom surface area of the sun gear flange, it is highly recommended that you flat sand the sun gear flange friction plate contact area with heavy grit paper followed by fine paper to ensure flatness and the proper friction surface.

Step 3: Installing the Plates: Install the piston seals, piston, return springs, spring retainer, and retainer snap ring. You will NOT be installing a waved cushion plate. Instead, install one of the furnished FLAT steel plates followed by a friction plate and continuing the build-up of friction and steel plates in the usual manner. The top plate will be a friction. Note: Be sure to pre-soak the friction plates in clean ATF for at least fifteen minutes to avoid surface glazing and premature friction element distress!

Step 4: Measuring the Clutch Pack Clearance: Since the Powerglide high gear clutch pack is a dynamically applied clutch whereas the low band releases while the high clutch applies, properly timed shift overlap is very important to avoid a cut loose or spin-up. Refer to the illustrations to measure the overall clutch pack clearance. Using a venier caliper or depth micrometer, rest the flat bar of the instrument on the sun gear flange ledge which is located approximately 3/16" below the top snap ring groove. While the measuring instrument is resting on the ledge you will extend the instrument's rod until it is **lightly** pressing down on the top friction plate. Take note of the measurement which is the total clutch pack clearance. It should be .080 +/- .010. The recommended clutch pack minimum/maximum clearance is .060-.100.



Technical Note: Deleting the waved cushion plate will obviously make the high gear shift MUCH shorter and firmer. However, this can also cause a side effect of rough downshifts and/or spin-up on the downshift. If you elect to reinstall the waved cushion plate, you must reduce the total friction plate capacity and install a combination of kits thin steel plates and stock size (.070) steel plates not furnished in this kit. Each builder has his own methods for performance hydraulic calibration. Choose between the waved or no waved cushion to your specific applications.

