



## ZF3HP-22 & ZF4HP-22/EH Transmissions Clutch "A" (Forward) PowerPack®

### ALTO PART #053755

#### Alto # 053755 POWERPACK® CONTENTS:

- (6) 053700K (.061" / 1.55mm) High Energy Friction Plates
- (7) 053711 (.059" / 1.50mm) Steel Plates
- (1) 053701 (.071" / 1.80mm) Standard Steel Plate

### DURABILITY AND PERFORMANCE BENEFITS

This package contains specially formulated and sized friction and steel plates designed to extend durability and enhance performance of the ZF clutch "A" (forward clutch). The High Energy friction plates have a unique content and coefficient of friction which significantly extends the friction plate holding power under load even with vehicle equipped with high performance turbocharged engines! The specially sized steel plates (.059") will allow you to convert an original five (5) friction plate pack to accept six (6) of Alto's High Energy friction plates.

### INSTALLATION INSTRUCTIONS

<http://www.youtube.com/watch?v=H2xMgNkTamM&feature=related>  
Begin by installing one of the original waved cushion plates followed by one of the .059" steel plates into the aluminum carrier followed by a friction plate. Continue building up the clutch pack with a total of six (6) friction plates and a total of seven (7) steel plates. Install the remaining original waved cushion plate on top of the last steel plate. Install the clutch drum onto the aluminum carrier and install the perimeter snap ring. Air check the clutch pack several times to seat all the components. The desirable clutch pack clearance for reducing / correcting forward engagement delay is .020" - .025". If the clearance is greater than .020" - .025" remove one (1) .059" steel plate and install the furnished standard thickness .071" steel plate. Reassemble and recheck the clutch clearance. If the clutch clearance is not .020" - .025" either the drum or plate carrier is misassembled or the wave plate(s) height(s) may have faded. With the wave plates on a flat work surface measure the heights from the flat work surface to the top of each of the waved peaks. The height should average .063" - .070". Replace any waved plate that measures below .060".

**TECHNICAL NOTE:** This is a static clutch applied in all forward speeds. The clearance of .020" - .025" does not generate any adverse side effects or durability concerns. This kit has been field tested and validated in several different applications. Be sure to submerge (presoak) the friction plates in clean ATF for a least 30-45 minutes to avoid post surface glazing and premature distress.