



## GM TH400/475 (3L80/3L80HD) PowerPack® Intermediate (Second) Clutch Pack

Regular, Heavy Duty, Hi-Performance, Race Vehicles

### ALTO PART # 031757 & 031757HP

#### Alto # 031757 POWERPACK® CONTENTS:

- (4) 031714-160 (.062" / 1.57mm) Tan Frictions
- (3) 031715 (.076" / 1.93mm) Steel Plates
- (1) 028252-106 (.106" / 2.69mm) Heavy Duty Snap Ring

#### Alto # 031757HP POWERPACK® CONTENTS:

- (4) 031742A (.062" / 1.57mm) Red Eagle® Frictions
- (4) 031715HK (.076" / 1.93mm) Steel Plates
- (1) 028252-106 (.106" / 2.69mm) Heavy Duty Snap Ring

### DURABILITY AND PERFORMANCE BENEFITS

The 031757 kit will correct, prevent and substantially reduce the concerns of 1-2 up-shift shudder, long slide with a tail bump or bang, provides a safety increase from wrong gear starts, case lug breakage, allows reuse of a slightly worn case (lugs). The 031757HP kit offers the same benefits of the 031757 kit, however, the additional flat steel plate furnished in the kit eliminates the bottom waved cushion plate. This allows for a much shorter 1-2 up-shift in hi-performance and racing applications.

### **SELECT THE KIT FOR YOUR SPECIFIC APPLICATION! PLEASE READ THIS BEFORE BEGINNING INSTALLATION!**

For complete customer satisfaction, please read the technical description and the differences between the 031757 and the 031757HP kits. Since the 031757HP kit is furnished with an additional flat steel plate which eliminates the waved cushion plate, misuse of the product can result in customer dissatisfaction.

**FOR THE 031757 KIT:** The enclosed product has been designed to offer enhanced performance and durability for regular, heavy duty and performance TH400/475 transmissions. A heavy duty top pressure plate snap ring is furnished to reduce the overall clutch clearance and, most importantly, prevent and reduce the incident of main case lug damage or breakage from snap ring flexing! The 031757 kit performs best if a pre-faded wave cushion plate is installed. We suggest installing the originally removed bottom waved cushion plate or a good used one. To ensure that the wave plate has not faded beyond its practical limit of function, place the wave plate on a level surface such as a shop work table. Measure from the surface of the table to the top of the plate at the raised wave peaks. The plate should average between .100" - .110". A plate below 0.95 should not be installed.



## GM TH400/475 (3L80/3L80HD) PowerPacks® Intermediate (Second) Clutch Pack

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**FOR THE 031757HP KIT:** This kit is furnished with an additional FLAT steel plate which allows the product user to eliminate the original (or replacement) waved cushion plate. **Important Technical Note:** It is our recommendation that the 031757HP kit should only be installed in Hi-Performance or racing applications where the vehicle owner wants additional firmness from the deletion of the waved cushion plate!

### INSTALLATION INSTRUCTIONS FOR ALTO 031757 & 031757HP KITS

**FOR THE 031757 KIT:** Install the waved cushion (not furnished), followed by the four (4) thin friction and three (3) thin steels. Install the top pressure plate. When installing the heavy duty snap ring, do not position the snap ring end gap in the open, non-lug area of the case. Air check the clutch pack several times to seat all the components. Check the overall clutch clearance between the top of the friction plate and the bottom of the pressure plate or check between the top of the pressure plate and the bottom of the snap ring. The overall clutch clearance should be a minimum of .020" to a maximum of .050". Be sure to presoak the friction plates in clean ATF for at least fifteen minutes before final assembly.

**FOR THE 031757HP KIT:** Discard the waved cushion plate. Install the additionally furnished .076" flat steel plate followed by the four (4) thin friction plates and remaining three (3) steel plates. Install the top pressure plate. When installing the heavy duty snap ring, **do not** position the snap ring end gap in the open, non-lug area of the case. Air check the clutch pack several times to seat all the components. Check the overall clutch clearance between the top of the friction plate and the bottom of the pressure plate or check between the top of the pressure plate and the bottom of the snap ring. The overall clutch clearance should be a minimum of .020" to a maximum of .050". Be sure to presoak the friction plates in clean ATF for at least fifteen minutes before final assembly.

**Technical Notes and Tips:** Prior to installing the top pressure plate, check it carefully for flatness. Here's how. This procedure is called Flat Sanding and can be used for all components that should be flat and parallel. Using a 12" x 12" square section of **SAFETY** glass (not pane glass) place the glass section in your solvent tank. Place a section of fine to medium grit emery or aluminum oxide paper on top of the glass section. Place the top pressure plate on the paper. Start the solvent tank pump and direct the flow of solvent over the plate. This will help to flush the paper of residual grit which will cause the paper to quickly clog. Push down with moderate force while you drag the pressure plate back and forth. After about a dozen strokes, turn the pressure plate over and if the sand scratches cover the entire flat surface of the pressure plate, you're done. If not, give it another dozen or so strokes back and forth across the paper. A few minutes spent performing this procedure will save you from experiencing a possible shudder concern from a bowed pressure plate. Lastly, check the outer perimeter of the pressure plate where it contacts the main case and the bottom of the snap ring for any sharp edges which could cut into the main case or top snap ring.