GM 4L60 (TH700-R4) & 4L60E (700 Electronic)
3-4 Clutch PowerPack®
Regular, Heavy Duty, Race Vehicles

ALTO PART #057757B, 057757C, 057757BHP

057757B Contents:
(Regular & Heavy Duty)
(9) 057704A (.062" / 1.58mm) Friction Plates
(1) 057713 (.125" / 3.18mm) Steel Plate
(2) 057725 (.076" / 1.93mm) Steel Plates
(8) 057725A (.060" / 1.52mm) Top Backing Plates
(1) 057254-062 (.062" / 1.58mm) Snap Ring

057757C Contents:
(Regular & Heavy Duty)
(9) 057734-158 (.062" / 1.58mm) Friction Plates
(1) 057713 (.125" / 3.18mm) Steel Plate
(2) 057725 (.076" / 1.93mm) Steel Plates
(8) 057725A (.060" / 1.52mm) Top Backing Plates
(1) 057254-062 (.062" / 1.58mm) Snap Ring

057757BHP Contents"
(Hi-Performance)
(9) 057744A (.062" / 1.58mm) Red Eagle® Friction Plates
(1) 057713 (.125" / 3.18mm) Kolene® Steel Plate
(2) 057725K (.076" / 1.93mm) Standard Kolene® Steel Plates
(8) 057725AK (.060" / 1.52mm) Top Backing Plates
(1) 057254-062 (.062" / 1.58mm) Snap Ring

PLEASE READ THIS BEFORE BEGINNING INSTALLATION

When using the **057757BHP** kit, the Red Eagle® friction plates and the Kolene® type steel plates furnish a much shorter and firmer 2-3 shift. Vehicles that will benefit from the **057757BHP** kit include Hi-Performance, street rods and race applications. Of course, all of the durability and performance benefits listed below are also achieved. **VERY IMPORTANT:** The **057757BHP** kit performs very well in a true hi-performance application but should not be used in regular or heavy duty applications. Since the 2-3 shift will be significantly shorter and firmer with the **057757BHP** kit, you may receive customer complaints with regular and heavy duty vehicles. To get the full benefit of these kits, please be sure to select the right kit.

DURABILITY AND PERFORMANCE BENEFITS

The extra capacity clutch setup in these kits offers a significant increase in overall durability and performance to avoid premature friction element distress or burn-up. This is accomplished by spreading the apply and energy loads over more friction plate surface area. The additional plates greatly increase the overall clutch pack resiliency which can be best described as having an increase in clutch pack accumulation. Therefore, the apply and release of the 3-4 clutch will be much smoother. The clutch kits offer you the ability to confidently repair 4L60's and 4L60-E's in regular vehicle applications as well as the heavy duty vehicles such as on/off road trucks, commercial vehicles, and sporty hi-performance vehicles. For hi-performance, street rods, or race car applications…the 057757BHP is the "last word".

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INSTALLATION INSTRUCTIONS

Begin installation by identifying the input housing components you will be working with. These components are listed below in items "A" through "E". The technical terms used to identify each component are commonly used in most OEM and aftermarket service manuals.

A. 3-4 Clutch Apply Ring: The total height of the apply ring determines the total number of friction plates that can be installed for a V-6 or V-8 application. Stand the apply ring on a work table with the tall legs facing up. Measure from the work table to the top of the legs. A V-6 will measure 3.975" while a V-8 will measure 3.800"

B. 3-4 Clutch Retainer Ring: Has 5 short legs to mate against item "A" and is .055" thick.

C. 3-4 Apply Plate: Can be flat on both sides, can be stepped on one side only, or can be stepped on both sides for some 1990+ models.

D. 3-4 Clutch Backing Plate: The factory used a variety of different thicknesses identified by a number stamped on top. Number 3 (.198") and number 7 (.190") are the most commonly found in the units we checked. You will be reinstalling these backing plates on some stackups.

E. Top Backing Plate Snap Ring: Early models are .128" thick, late models are .093" thick. The thickness of the snap ring is matched to the specific housing snap ring groove. There is a custom snap ring furnished in this kit that measures .062" thick. This snap ring will be used in situations where the total clutch pack clearance is too tight.

POWERPACK® INSTALLATION

TECHNICAL NOTE: Dimensional differences can exist in the various input housings and housing components. The recommended clutch pack stack-ups must be exact in each and every installation. In addition, the original stepped apply plates (item "C") require a steel plate against it which takes up needless space in the clutch pack. We recommend installing the furnished .125" flat backing plate in place of the stepped apply plate. First, assemble the clutch pack according to the application you have. Air check the 3-4 clutch several times to seat all components. If the clutch clearance is not .025" - .040" use our suggestions listed under ***Adjusting the Clutch Pack Clearance.***

Early V-6 regular or heavy duty applications: Reinstall the original .125" apply plate. Install seven (7) frictions, six (6) steels and the furnished .125" backing plate. Reinstall the original .128" top snap ring.

Late V-6 regular or heavy duty applications with stepped apply plate: Discard the original stepped apply plate. Install the furnished .125" backing plate, seven (7) frictions and six (6) steels. Reinstall the #3 or #7 top backing plates and the original .093" top snap ring.

Early V-8 regular or heavy duty applications (option 1): Reinstall the original .125" apply plate. Install eight (8) frictions and seven (7) steels along with the #3 or #7 top backing plate. Reinstall the original .128" top snap ring.

Early V-8 regular or heavy duty applications (option 2): Reinstall the original .125" apply plate. Install eight (8) frictions, seven (7) steels and the .125" top backing plate furnished. Install the custom .062" snap ring.

Late V-8 regular or heavy duty applications with original stepped apply plate: Reinstall the original stepped apply plate. Install eight (8) frictions and eight (8) steel plates. Reinstall the original #3 or #7 top backing plate and the original .093" snap ring. **IMPORTANT:** FIRST install a steel plate <u>on top</u> of the stepped apply plate.

Early V-8 performance or race applications: Reinstall the original .125" apply plate. Install nine (9) frictions, eight (8) steels and the .125" top backing plate furnished. Install the original .128" top snap ring or the furnished .062" custom snap ring.

Late V-8 performance or race applications with stepped apply plate: Install nine (9) frictions and eight (8) steels. Reinstall the original #3 or #7 top backing plate and the original .093" top snap ring or the furnished .062" custom snap ring.

IMPORTANT!! Be sure to pre-soak the friction plates in ATF for a minimum of fifteen minutes. This will dissipate heat on initial start-up and apply to avoid friction paper glazing.

<u>INSTALLATION FOR ALL 4L60-E ELECTRONIC UNITS</u>

You may encounter specific element design difference regarding the 3-4 clutch retainer ring (item "B") and the 3-4 apply plate (item "C"). On *some* units, items "B" and "C" are a singular component. It can be easily identified as being a thick apply plate, flat on both sides with five extended lugs that are placed onto the legs of the 3-4 clutch apply ring (item "A") and it also measures .225" in thickness. If your unit has this design, we recommend the following stack-up. If item "A" measures 3.800", you will be installing a nine (9) friction plate set-up. Reinstall the singular design apply plate and ensure that it is fully seated down onto the legs of item "A". Install one of the friction plates directly on top of the apply plate. Install the remaining friction and steel plates in the conventional matter. Install the .125" backing plate furnished along with the original .093" top snap ring.

SETTING AND ADJUSTING THE 3-4 CLUTCH PACK CLEARANCE

After completing the assembly of the 3-4 clutch pack, air check it several times to seat all of the installed components. Insert a feeler gauge between the top friction plate and the bottom of the top backing plate. For the best overall performance of 2-3 and 3-2 shifts, we recommend setting the 3-4 clutch pack clearance to .025" - .040". If there is too much clearance, remove one or two of the .060" steels and install one or two of the standard .076" steels furnished. For clearances that are too tight on any applications where the stepped apply plate has been discarded, use another .125" flat apply plate (not furnished) at the top of the pack in place of the original #3 or #7 backing plate. To achieve the recommended clutch clearance, you can intermix and/or exchange the top backing plates, steel plates and/or top snap rings.