



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

**INSTALLING ALTO # 057757D
G3 POWERPACK® KIT INTO A STOCK INPUT DRUM**

Note: This kit is designed to be used with a 1991+ 3-4 Apply Ring with a “7” stamped on the bottom on the apply ring which will have an overall height of 3.671” – 3.682”.

Install the .165” bottom apply plate furnished in this kit with the five tabs down, facing the 3-4 apply ring. Install a .062” G3 friction plate, then a .095” Lindered steel plate. Alternate friction & steel plate, ending with a friction plate. Install the .0125” top backing plate & .062” Snap Ring furnished in this kit. Air check the 3-4 clutch several times to seat all the components. Insert a feeler gauge between the top friction plate and the top backing plate. Clutch clearance should be **.035” - 050”**. After checking the clutch pack clearance, remove the snap ring & top backing plate & install the five OE release spring assemblies. These are required to keep the clutch pack from dragging at high RPM's. Reinstall the top backing plate and snap ring.

**INSTALLING ALTO # 057757DX
G3 POWERPACK® KIT INTO THE SONNAX SMART-TECH® INPUT HOUSING**

Note: This kit is designed to be used with the Sonnax Smart-Tech® Input Housing Drum Kit and will not work in a stock Input Drum. It is very important that you follow the instructions that are included with the Sonnax Smart-Tech® Input Housing Kit.

Install the Sonnax bottom apply plate with the five tabs down, facing the 3-4 apply ring. Install a .062” G3 friction plate, then a .106” Lindered steel plate, Alternate friction & steel plate, ending with a friction plate (alternate .106” & .095” steel plates during the stack-up). Measure the clearance from the face (top) of the housing down to the top friction plate. Clutch clearance should be **.040” - 060”**. Install the longer Sonnax 3-4 clutch return springs. These are required to keep the clutch pack from dragging at high RPM's. Install the Sonnax bolt-on anchor plate onto the input housing. Apply a drop of Loctite® to the threads of each screw & torque to 51 in-lb. working in a crisscross (star) pattern. Air check the 3-4 clutch several times to ensure that all of the components are seated properly.



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**ALTO PART # 057757A, 057757B, 057757C, 057757BHP
057757D, and 057757DX**

**057757A Contents:
(Hi-Performance)**

- (6) 057744B210 Internal Splined Red Eagle® Friction Disc
- (6) 057745B210 External Splined Red Eagle® Friction Disc
 - (1) 057713 Top Pressure Plate
- (1) 057744 Red Eagle® Friction Plate (2 sided)
- (1) 057254-093 Snap Ring .093”

**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

**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

**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

**057757D Contents:
(Hi-Performance G3)**

- (8) 057744C158 (.062”/ 1.58mm) G3® Frictions
- (7) 57725A242(.095”/ 2.41mm) Lindered® Steels
 - (1) 057713 (.125”/ 3.18mm) Top Backing Plate
- (1) 057764B420 (.165”/ 4.12mm) Custom Bottom Apply Plate
 - (1) 057254-062 (.062”/ 1.58mm) Snap Ring

**057757dx Contents:
(Hi-Performance G3)**

- (8) 057744C158 (.062”/ 1.58mm) G3® Frictions
- (3) 057725A242 (.095”/ 2.41mm) Lindered® Steels
- (4) 057725A270 (.106”/ 2.70mm) Lindered® Steels



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"A-PACK" #057757A INSTALLATION INSTRUCTIONS

Installation: Use a #7 apply ring with this PowerPack®

- Install OE Apply Plate (.223")
- Install 2-sided Red Eagle® Friction Disc
- Install external splined Red Eagle® friction disc with friction lining facing up,
- Install internal splined Red Eagle® friction disc with friction lining facing up, continue to alternate internally splined and externally splined
- Red Eagle® friction disc ending with an internal splined disc with a total of 6 internal splined and 6 external splined one sided disc.
- Install the 5 load relief springs
- Install .125" top pressure plate
- Install .093" snap Ring

Caution: You must install all of the 1-sided Red Eagle® friction disc with the friction lining facing up or you will have a catastrophic failure of the 3-4 clutch pack. **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.

IMPORTANT!! Regardless of which pack you are installing, 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.

PART IDENTIFICATION INSTRUCTIONS 057757B, 057757BHP, 057757C

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.



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INSTALLATION FOR ALL 4L60-E ELECTRONIC UNITS

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.

POWERPACK® INSTALLATION 057757B, 057757BHP, 057757C

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 on top 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.