



GM TH400/4L80E Forward Clutch PowerPack®

Hi-Performance, Racing, Street Rods

GM TH400/4L80E Direct Clutch PowerPack®

Hi-Performance, Racing, Drag Boats, Street Rods

Instruction Sheet

Alto Kit # 031755BHP POWERPACK® CONTENTS: GM TH400 Forward 1964-95

Qty	Part #	Description
6	031702B155	G3® Friction Plates (.061" / 1.54mm)
5	031701AXPS	Anti-Drag Performance Steel Plates (.060" / 1.52mm)
1	031711K	Bottom Apply Plate (.090" / 2.28mm)
14	A50003	Rubber Anti-Drag Inserts

Alto Kit # 031755CHP POWERPACK® CONTENTS: GM 4L80E Forward 1990-On

Qty	Part #	Description
7	031702B155	G3® Friction Plates (.061" / 1.54mm)
6	031701AXPS	Anti-Drag Performance Steel Plates (.060" / 1.52mm)
1	031711-325	Bottom Apply Plate (.128" / 3.25mm)

Alto Kit # 031756AHP POWERPACK® CONTENTS: GM TH400 4L80E Direct 1964-On

Qty	Part #	Description
7	031702B155	G3® Friction Plates (.061" / 1.55mm)
7	031701AXPS	Performance Steel® Plates (.060" / 1.52mm)
1	031761A939	Top Pressure Plate (.370" / 9.39mm)
1	031250	Snap Ring
18	A50003	Anti-Drag Inserts

Installation:

Note: Always pre-soak friction elements for at least 15-20 minutes in manufacturer recommended ATF.

031755BHP - GM TH400 Forward Clutch PowerPack®

This kit is designed to change the capacity of the GM TH400 Forward Clutch Pack from four (4) friction discs to five (5) friction discs or from five (5) friction discs to six (6) friction discs. There are four possible apply piston combinations. Two aluminum pistons were used along with one steel piston, with two different height spacers.

Four (4) Friction Disc Forward Clutch

Aluminum piston .910" from pad on bottom to surface where first steel plate rides. Steel piston uses a .780" spacer.

Five (5) Friction Disc Forward Clutch

Aluminum piston .745" from pad on bottom to surface where first steel plate rides. Steel piston uses a .628" spacer.

Four (4) Friction Disc to Five (5) Friction Disc Forward Clutch (Aluminum or Steel Piston)

Stack-up is the same method as OE. Start with .060" steel plate without insert and end with friction disc. Use five steel plates and five friction discs. (There will be no anti-drag inserts installed at this point). Check

clutch pack clearance from the top of the friction disc to the bottom of the pressure plate ledge, using a feeler gauge. Clearance should be .040" - .055" (1.02mm – 1.40mm).

Five (5) Friction Disc to Six (6) Friction Disc Forward Clutch (Aluminum or Steel Piston)

Stack-up is the same method as OE. Start with .090" bottom apply plate alternate friction disc and .060 steel plates without inserts. End with a friction disc. Use one bottom apply plate, five steel plates and six friction discs. (There will be no anti-drag inserts installed at this point). Check clutch pack clearance from the top of the friction disc to the bottom of the pressure plate ledge, using a feeler gauge. Clearance should be .040" - .055" (1.02mm – 1.40mm).

Disassemble stack-up: Install 4 anti-drag inserts evenly spaced into 3 of the steel plates. For the Five Friction Disk to Six Friction Disk install bottom apply plate, and for the rest install plate without inserts, install friction plate, install steel plate with inserts, install friction plate, install steel plate without inserts, install friction plate, install steel plate with inserts. Continue stacking the plates, in this manner, you will have 3 steel plates with inserts, and 2 steel plates without inserts. The top 2 steel plates will have inserts, place them so they do not contact each other. Install top pressure plate (Direct Hub / Forward Pressure Plate) and snap-ring, you may have to put pressure on the pack to seat snap-ring.

031755CHP - GM 4L80E Forward Clutch PowerPack® Hi-Performance, Racing, Street Rods

Discard the bottom cushion spring. Install bottom apply plate, install friction plate, install a steel plate without anti-drag inserts then alternately install the friction and steel plates, ending with a friction plate. (1 bottom apply plate, 6 steel plates, 7 friction plates). (There will be no anti-drag inserts installed at this point). Check clutch pack clearance from the top of the friction disc to the bottom of the pressure plate ledge, using a feeler gauge. Clearance should be .040" - .055" (1.02mm – 1.40mm). Note: This kit will eliminate the bottom disc cushion spring, which will cause the unit to have a much firmer garage shift to forward gears.

Disassemble stack-up: Install 4 anti-drag inserts evenly spaced into 4 of the steel plates. Install bottom apply plate, install friction plate, install steel plate with inserts, install friction plate, install steel plate without inserts, install friction plate, install steel plate with inserts. Continue stacking the plates, in this manner, you will have 4 steel plates with inserts, and 2 steel plates without inserts. The top 2 steel plates will have inserts, place them so they do not contact each other. Install top pressure plate (Direct Hub / Forward Pressure Plate) and snap-ring, you may have to put pressure on the pack to seat snap-ring.

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Start with the bottom cushion spring. Install a steel plate without anti-drag inserts then alternately install the friction and steel plates, ending with a friction plate. Install the top pressure plate. Install the snap ring. (1 cushion spring, 7 steel plates, 7 friction plates, 1 top pressure plate) (There will be no anti-drag inserts installed at this point). Place the direct clutch onto the center support and apply the clutch several times using air pressure. This will seat the friction and steel elements for a more accurate piston travel measurement. Piston travel specifications are .121" to .236" (3.07 to 6.00mm).

Disassemble stack-up: Install 4 anti-drag inserts evenly spaced into 4 of the steel plates. Install bottom cushion spring, install steel plate with inserts, install friction plate, install steel plate without inserts, install friction plate, install steel plate with inserts. Continue stacking the plates, in this manner, you will have 4 steel plates with inserts, and 3 steel plates without inserts. Install top pressure plate and snap-ring, you may have to put pressure on the pack to seat snap-ring.