



Allison Shift Kit[®]

Fits 2001-04 5 Speed Models 1000, 2000 & 2400

Hard Workers—Competition & Street ‘Show Off’ Trucks



FIX/Reduce Driving Complaints
Goes to Neutral under high load
C2 Clutch Slips—Burns
Won't Drive Forward/Backwards
Sticks in One Gear
Sets Trouble Codes
Short, Crisp, Perfect, Shifts

Tested to 500 Horsepower

If the trans **codes** or goes to neutral at 35 to 75 mph in 4th or 5th, the **C2 clutches** are probably cooked.

LISTEN UP: This means that you should get a set of C2 clutches BEFORE tear down, so you won't have a stall or rack tied up waiting for clutches. Usually, everything else you need is in this kit.

WHERE's CLUTCHES? If your distr or local Allison dealer does not have clutches call: 920] 336-1105.

Modified Engine? Without this kit more engine power usually causes codes, stuck in neutral, stuck in one gear and burned clutches.

Thanks for listening,

Gil Younger

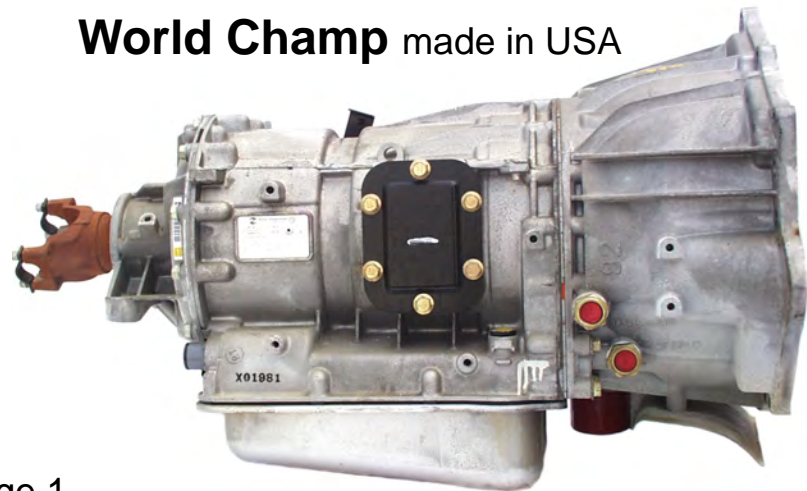
Boy do we love this trans.

Just looking at the hard parts pops out our eyeballs. It is also very easy to work on. All the shifts are clutch to clutch ECM controlled, and self adjust for short yet smooth shifts.

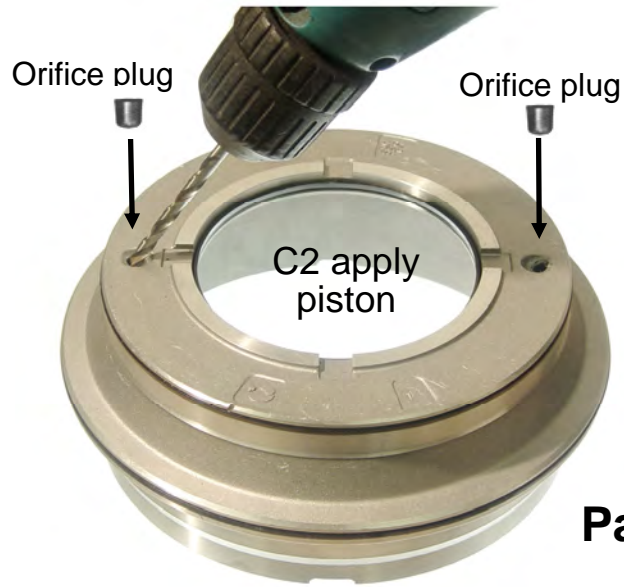
During kit development engine torque was increased to over 900 ft lbs. Then tested with 25,800 GVW on 8% grade with no trans slip, no code, and no clutch damage.

Modified engines: Use custom converter.

World Champ made in USA



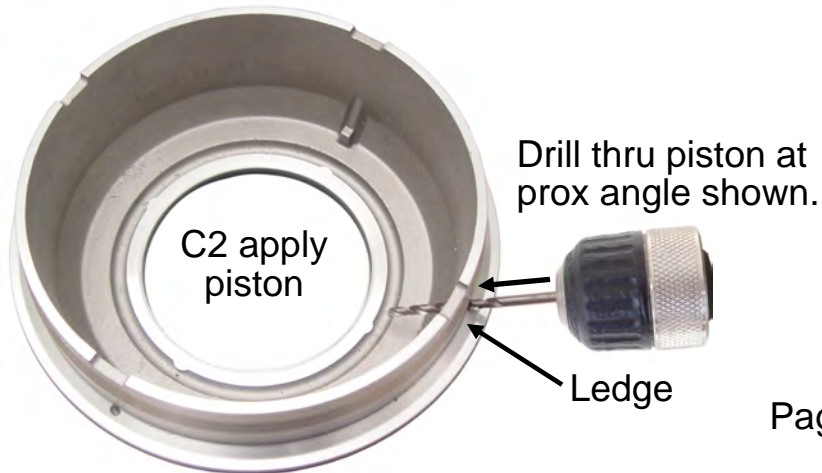
Step 1 Enlarge two holes shown, with large drill (.156) furnished, just deep enough to install orifice plugs below flush.



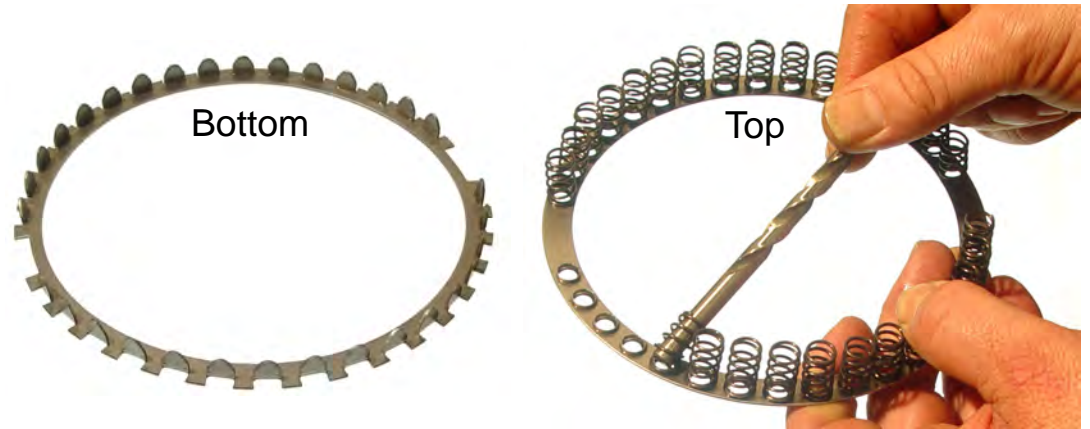
Patent Pending



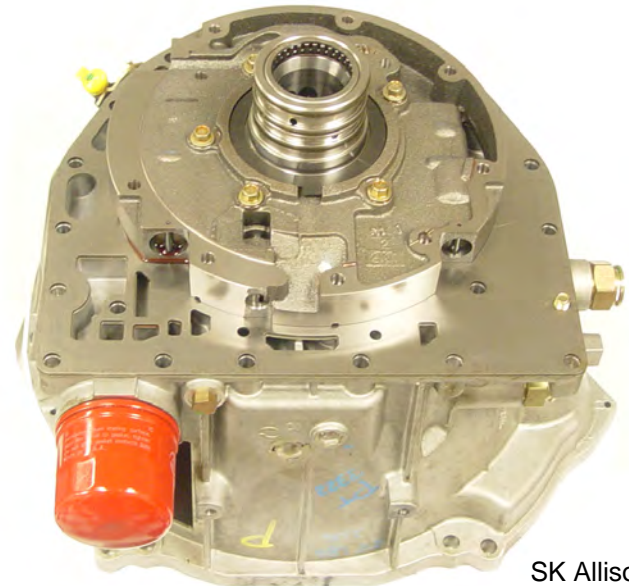
Step 2 With large drill furnished (.156) drill hole down against ledge as shown. *It's not fussy.*

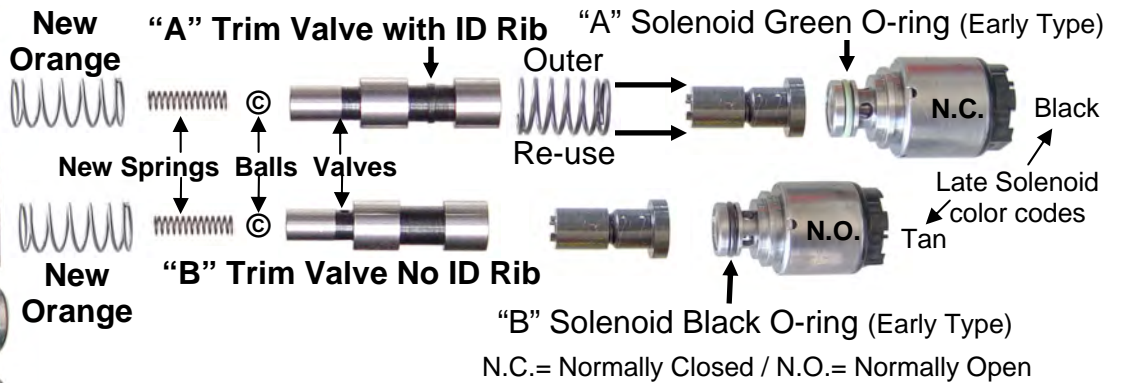
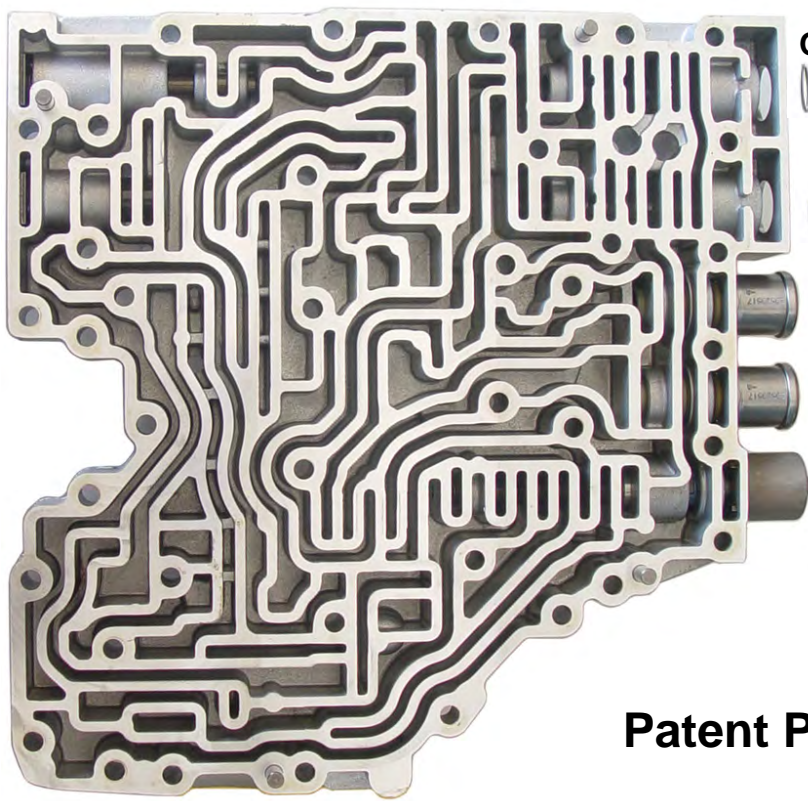


Step 3 C2 Spring Cage Separate C2 spring cage as shown. Angle old springs with 5/16 drill to remove them. Install the big end of **New Plain Springs** over flares in top cage. Then install the bottom cage into new springs.



Step 4 Assemble Rotating Clutch & install into trans. There has been a few of these leak from bell housing bolts due to roughness in the casting. A little silicone under the bolt heads is a good idea.





Step 1. Discard original trim valves and the springs on the **small** end. Place new ball then new small spring into hollow end of each new trim valve. Use assembly gel or Vaseline to hold them in place. Place new **ORANGE** springs over small end of new trim valves. Install into valve body. Don't force them, a little wiggling and they will go in. Install the "A" outer spring, solenoid valves and solenoids as shown. Outer spring must only be installed in the "A" line up.

Patent Pending

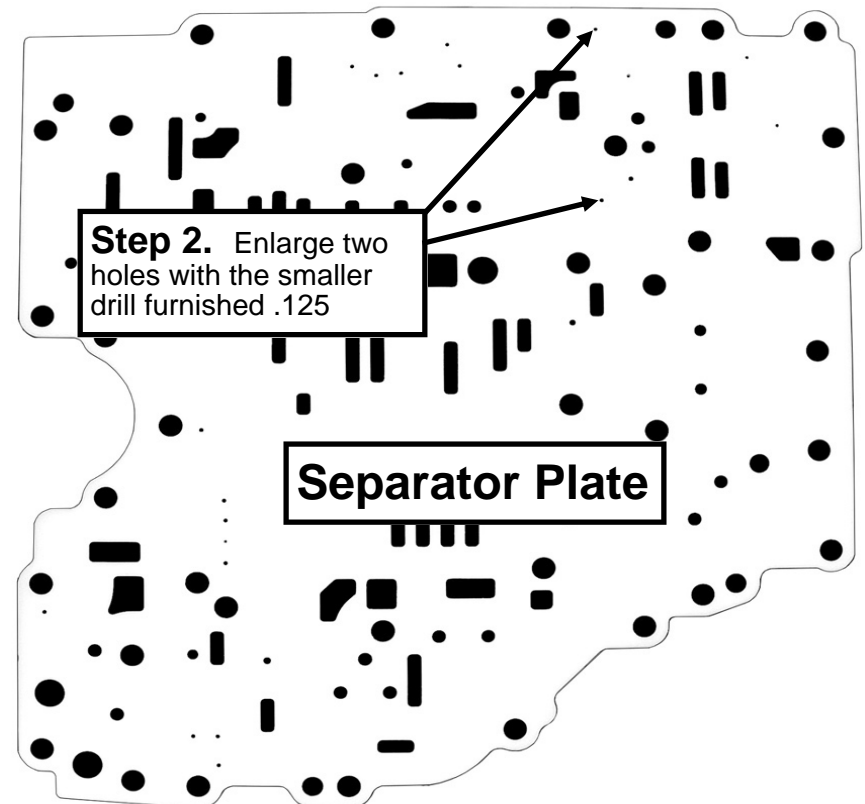
Valve Body & Plate Upgrades

To read and clear codes use scan tool and generic OBD-II software. To read **live trans data** you will need a scan tool with compatible software (cartridge).

To read & reset shift adaptive tables (Fast Learn). Use Allison diagnostic software or Tech 2 scan tool.

Codes you might see:

P0731=1st gear slip, P0732=2nd gear slip,
 P0733=3rd gear slip, P0734=4th gear slip,
 P0735=5th gear slip. P0741=TCC slip



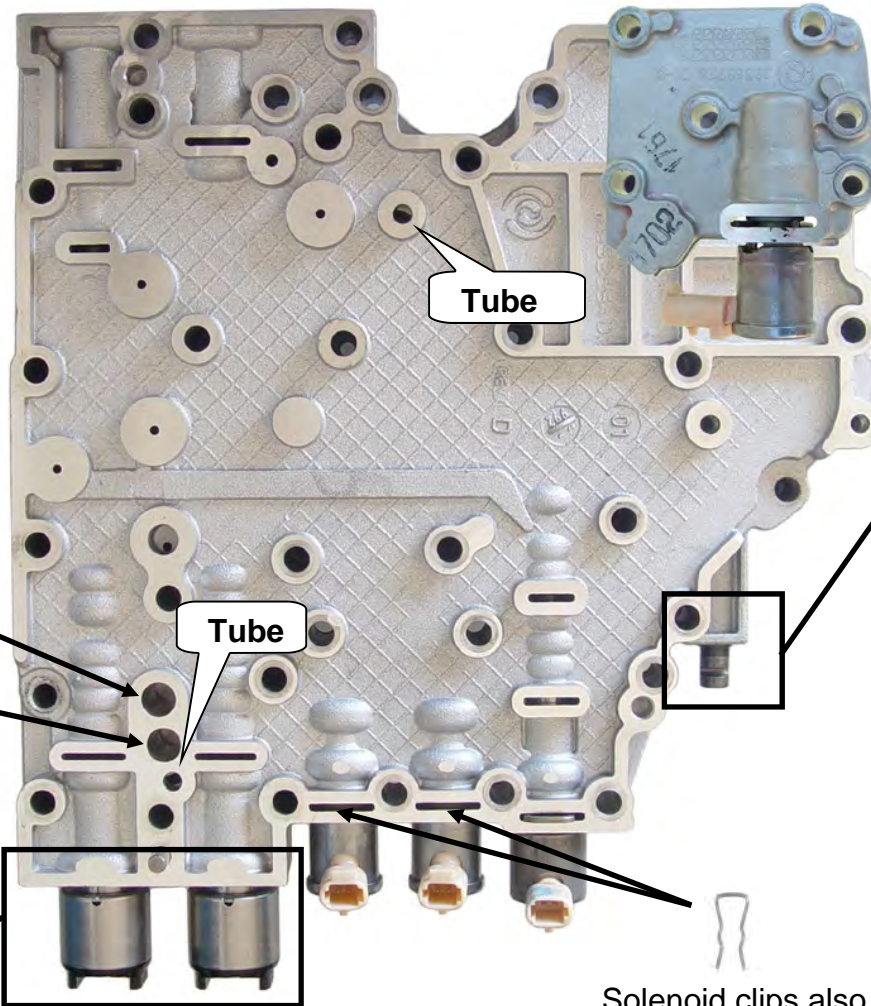
Valve Body Reassemble

Patent Pending

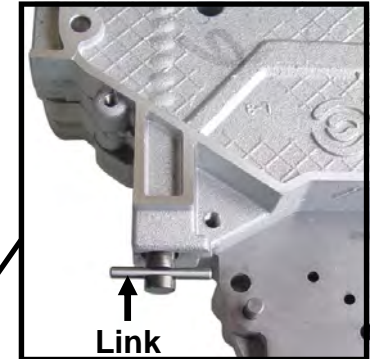


Make sure the o-rings have not fallen off!

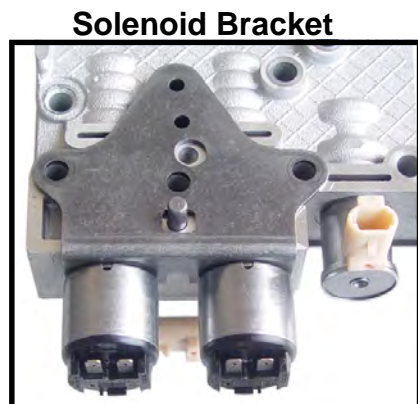
Accumulators install first hollow end out, then springs.



VB viewed from back side



Place link into groove, slide valve into VB to hold in place.



Push solenoids firmly into VB, when installing solenoid bracket.

Solenoid clips also hold wiring harness.



Read This first: Shops that have installed a few kits say that a good price is \$1400 for rear wheel drive and \$1800 for four wheel drive, plus other parts needed.

Relearn is required when adding horsepower or working on the trans: This trans is a tough piece, with intelligent computer control. The computer has adaptive strategy that constantly adjusts shift clutch pressures to match engine torque and vehicle load. With increased horsepower you must allow time for relearning.

Start relearn by making at least 6 sets of light throttle upshifts through all gears, next make six sets of shifts at 1/3 throttle, then 1/2 throttle, 3/4 throttle and so on. Treat downshifts the same way by starting with light throttle and working up to full throttle. When the shifts are quick and smooth hit the tow haul button and start over with relearn.

During relearn expect some clunks, bumps and or short flares, especially during the 3-4 shift. Bumps and flares are normal during the relearn. **Always do relearn:** With any power change or when there has been any repair or change in the pump, valve body or clutches. **Installation of the TransGo® Shift Kit® requires relearn.**

Explanation: The computerized control system on this truck is watching and recording everything, it stores data in lookup tables similar to an excel spread sheet. For example how long, in time, it takes for a gear change to complete under various conditions. It looks at and records the relationship between rate of acceleration and throttle opening, it calculates engine torque output based on inputs like fuel consumption, boost pressure, air density, temperature, throttle position, and many other factors. It uses this to calculate the load or weight that is being accelerated, at a given time. **It learns and remembers.**

All this information is used by the computer to calculate the optimum gear change apply rate. A perfect shift is as short, in time, as possible with minimum feel and stress to the drive train.

For every gear change the computer system must release one gear and bring on the next.

If the release and apply is too slow for a given torque and load, cutloose slipping will occur.

If release is too slow or apply too quick a bind up will occur—two gears at the same time.

Both of these conditions can cause major damage—Clutch failure.

Relearn usually takes about 2 hours. The can be greatly reduced by using Tech 2 or PC based Allison software to clear memory and place the TCM in the fast learn mode.

Give this trans respect and it'll give you appreciation and service.

“Thanks for listening”

TransGo Tech Team