Valve Body Recalibration Kit

ALLISON 1000 series LBZ/LMM

2006 - 2010

Also compatiable with 2001 - 2005 LB7 / LLY

Installation Guide

DISCLAIMER OF LIABILITY

This is a performance product which can be used with increased horsepower above and beyond factory specifications. Additional horsepower creates more stress on the drivetrain components, which could result in drivetrain failure. Legal in California only for racing vehicles which may never be used on the highway.

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The Buyer is solely responsible for all warranty issues from the manufacturer.

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Under no circumstances will the Seller be liable for any damage or expenses incurred by reason of the use or sale of any such equipment. In the event that the buyer does not agree with this agreement: the buyer may promptly return this product, in a new and unused condition in its original packaging, with a dated proof of purchase to the place of purchase within ten (10) days from date of purchase for a full refund. The installation of this product indicates that the buyer has read and understands this agreement and accepts its terms and conditions.

FIX/Reduce Driving Complaints

Goes to Neutral under high load
Will not drive Forward/Backwards
Sticks in one gear
Sets trouble codes
Short-Crisp-Perfect-Shifts

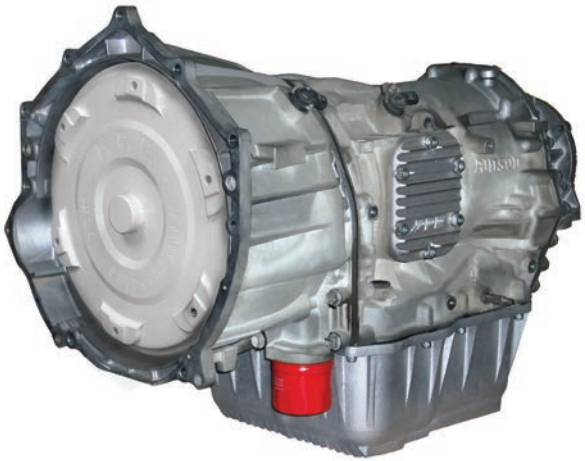
VBR kit installs from the bottom without transmission removal. Install it before adding horsepower to prevent internal damage.

Step 1

Drain transmission fluid from the oil pan.

Step 2

Remove oil pan (12x 13mm bolts). Remove Valve Body.



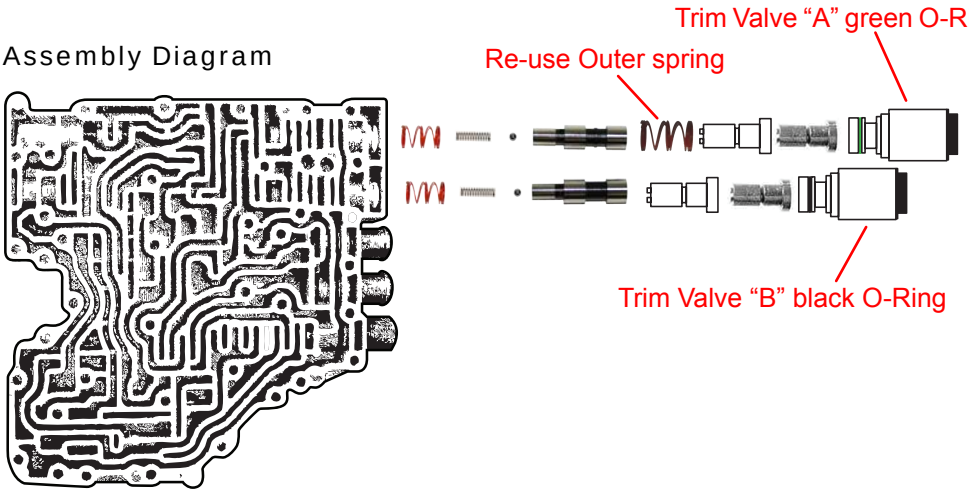
Step 3

Discard original Trim Valves and the Springs on small end. Insert new balls and small springs into small end of new Trim Valves. Use TransJel or Vaseline to hold them in place. Place new outer Springs over small end of Trim Valves and install into Valve Body (VB). Do not force them, a little “wiggling” and they will slide in. Install outer Spring on “A” Solenoid Valve. Install the Solenoid Valves and Solenoids into VB.

Trim Valve “A”

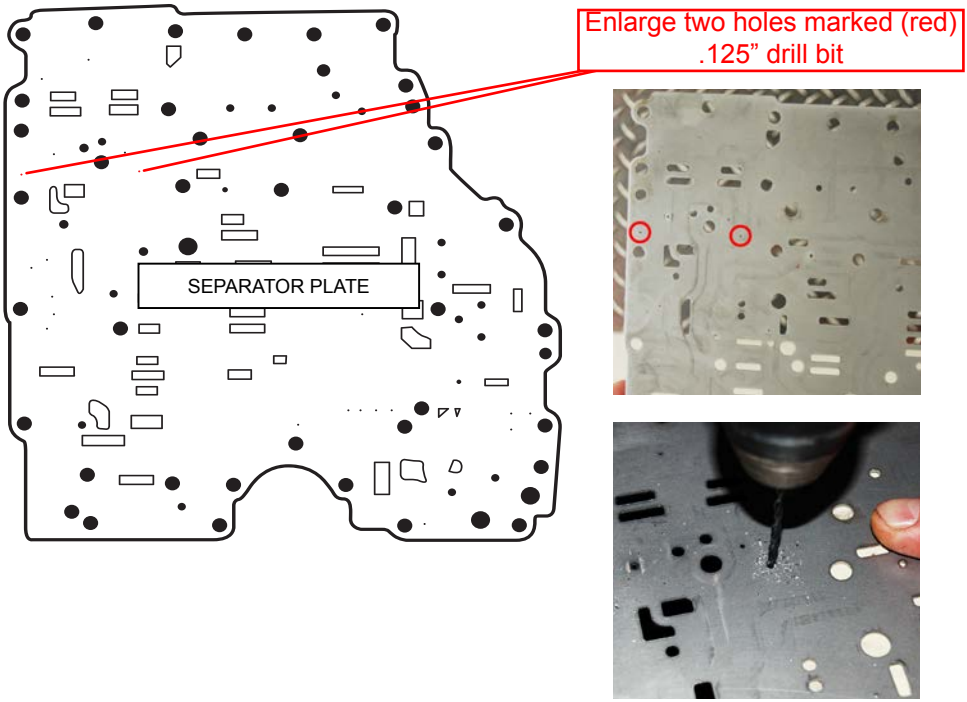
Trim Valve “B”

Assembly Diagram

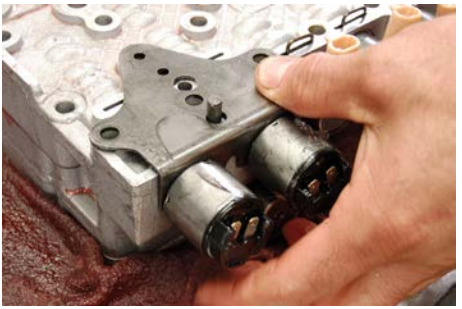


Step 4

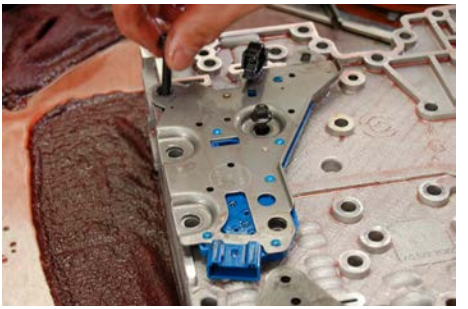
Enlarge two holes on the separator plate with the smaller drill furnished .125”



Step 5
Push Solenoids firmly into VB, when installing Solenoid Bracket.



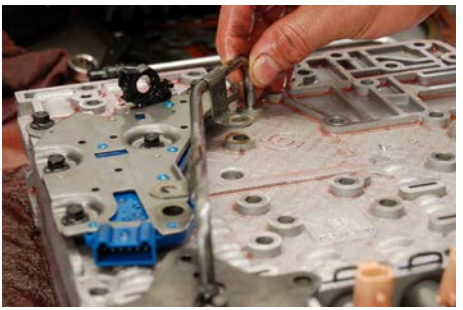
Step 6
Pressure switch installation must have six O-Rings.



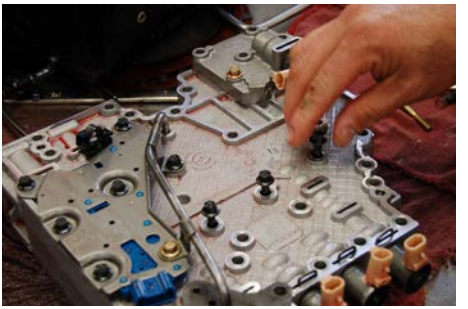
Step 7
Place link into the valve groove.

Step 8
Slide the Valve into VB to hold in place.

Step 9
Install the tube after Accumulators and Solenoid Brackets. (1x long gold bolt)



Step 10
Install all bolts back into original location and complete assembly by installing back into the transmission case.



Step 11

IMPORTANT: Do not start the engine unless transmission has been filled with transmission oil, minimum 16 quartz with shallow pan. 18 quartz with heavy duty deep pans. Such as PPE aluminum pans.

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

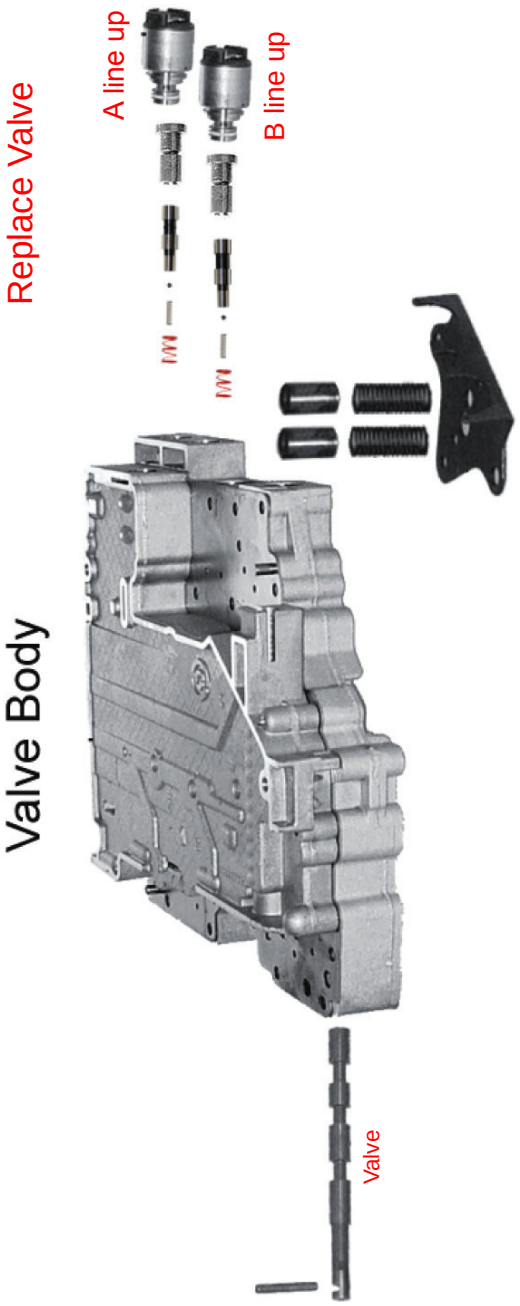
Start relearn by making at least 6 sets of light throttle upshifts through all gears, next make six sets of shifts at 1/3 throttle, then 1/2 throttle, 3/4 throttle and so on. Treat downshifts the same way by starting with light throttle and working up to full throttle. When the shifts are quick and smooth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

Always do relearn: Especially any power change, if there has been any repair or change in the pump, valve body or clutches. Installation of the **PPE VBR Kit** requires relearn.

Explanation: The computerized control system on the truck is watching and recording everything, it stores data in look up tables similar to an excel spread sheet. For example: how long, in time, it takes for 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 of 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 including clutch failure.

Relearn takes about 2 hours. This can be greatly reduced by using PPE's Xcelerator tuner and performing the Fast Re-learn feature.


Replace Valve
A line up
B line up
Valve Body
Valve