

Pacific Performance Engineering, Inc.
www.ppediesel.com



Valve Body Recalibration Kit
ALLISON 1000 series LBZ/LMM
2001 - 2010

Installation Guide

DISCLAIMER OF LIABILITY

This agreement sets forth the terms and conditions for the use of this product. The installation of this product indicates that the Buyer has read and understands this agreement and accepts the terms and conditions.

Pacific Performance Engineering Inc., its distributors, employees, and dealers (the "Seller") shall not be responsible for the product's proper use and service. The buyer hereby waives all liability claims.

The Buyer hereby acknowledges no reliance on the Sellers skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description on the face hereof, and the Buyer hereby waives all remedies or liabilities expressed or implied, arising by law or otherwise (including without any obligation of the Seller with respect to fitness, merchantability and consequential damages), or whether or not occasioned by the Seller's negligence.

The Seller disclaims any warranty and expressly disclaims any liability for personal injury or damages. The Buyer acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the Buyer agrees to indemnify the Seller and to hold the Seller harmless from any claim related to the item of equipment purchased. Under no circumstances will the Seller be liable for any damages or expenses by reason of use or sale of any such equipment.

The Seller assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt contact the manufacturer.

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

LIMITATION OF WARRANTY

The Seller gives Limited Warranty as to description, quality, merchantability, and fitness for a particular purpose, productiveness, or any other matter of Seller's product sold herewith. The Seller shall not be responsible for the products proper use and service and the Buyer hereby waives all rights other than those expressly written herein. This warranty shall not be extended, altered or varied except by a written instrument signed by Seller and Buyer.

The Warranty is limited to one (1) year from the date of sale and limited solely to the parts contained within the products kit. All products that are in question of Warranty must be returned prepaid to the Seller and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Seller.

Under no circumstances will the Seller be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or reinstallation of this product or any other contingent expenses.

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

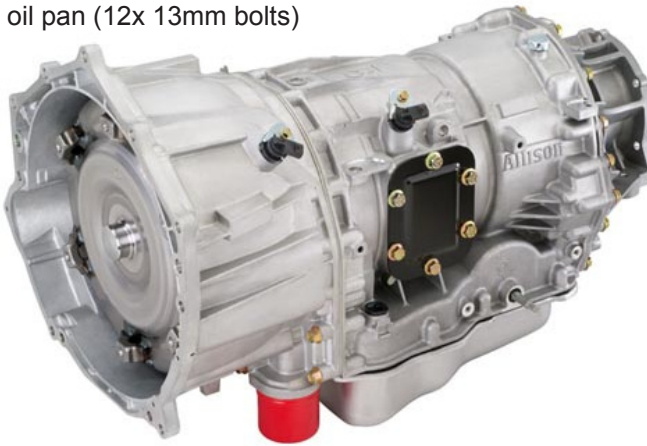
Shift kit installs from the bottom without trans removal. Install it before adding horsepower to prevent internal damage.

Step 1

Drain transmission fluid from oil pan.

Step 2

Remove oil pan (12x 13mm bolts)

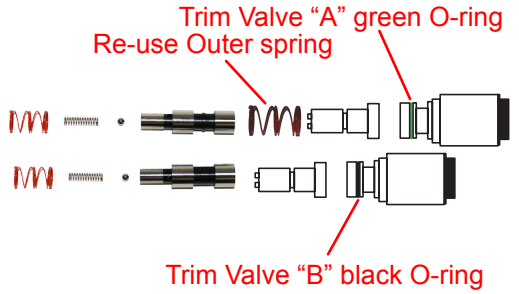
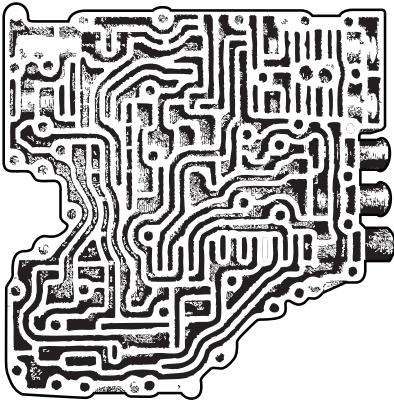


Step 3

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 in place. Place new outer springs over small end of trim valves and install into valve body. 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 valve body.

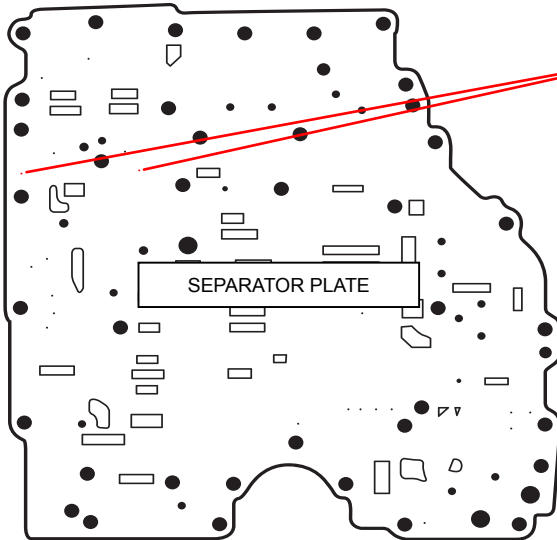


Assembly Diagram

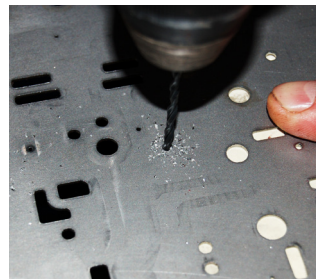
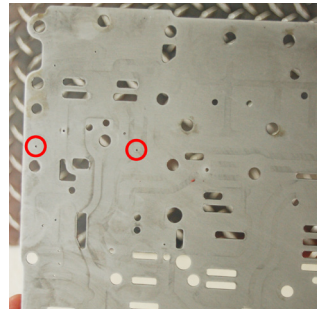


Step 4

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

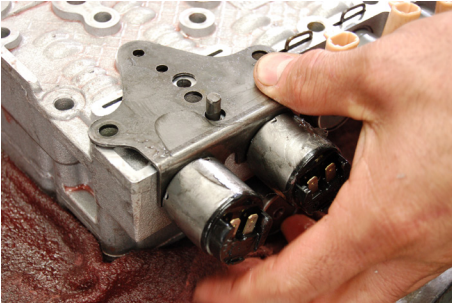


Enlarge two holes marked (red)
.125 drill bit (provided)



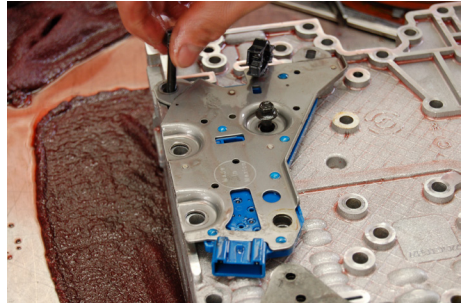
Step 5

Push solenoids firmly into VB,
when installing solenoid bracket



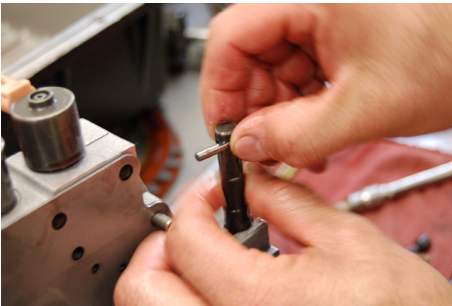
Step 6

Pressure switch installation must have
six O rings



Step 7

Place link into the valve groove



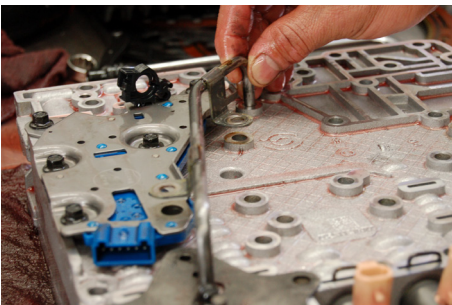
Step 8

Slide valve into VB to hold in place



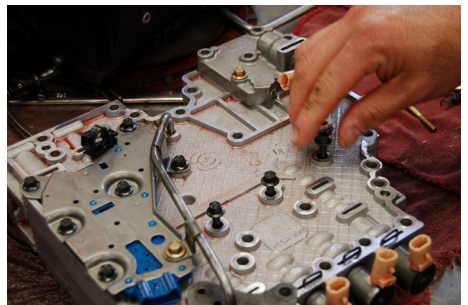
Step 9

Install tube after accumulators and
solenoid brackets. (1x long gold bolt)



Step 10

Install all bolts back into original loca-
tion and complete assembly by install-
ing back into the transmission case.



Step 11

IMPORTANT: Do not start 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 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 smothth 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: With any power change or when there has been any repair or change in the pump, valve body or clutches. Installation of the **PPE VBR Kit** requires relearn.

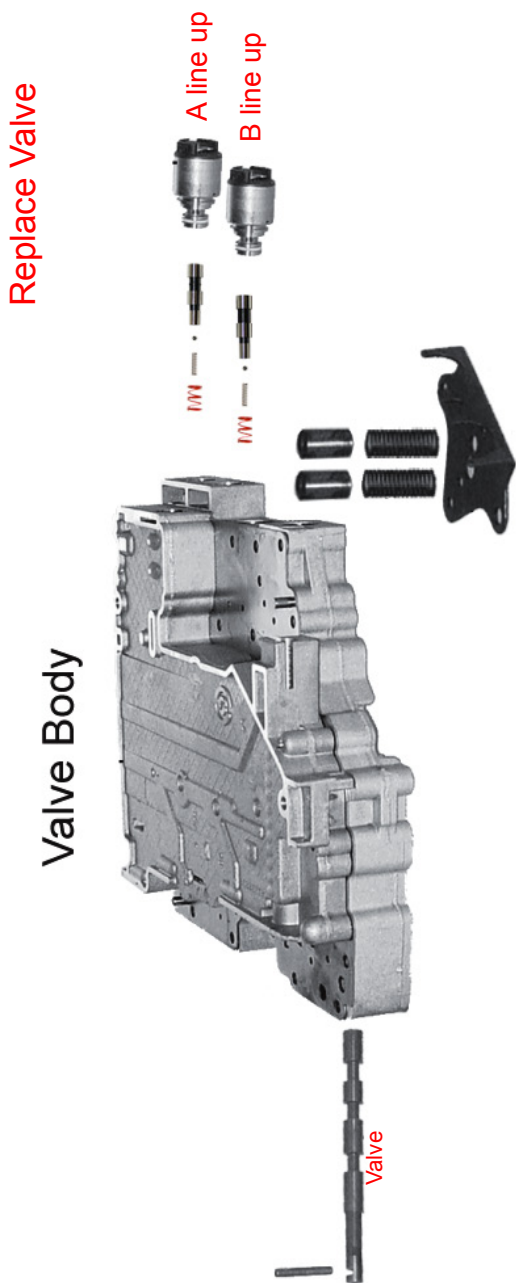
Explanation: The computerized control system on this truck is watching and recording everything, it stores data in look up tables similar to excel spread sheet. For example: how long, in time, it takes for gear change to complete under various conditions. It looks at and records the relationship between rate of acceleration and throttle opening, it calculates enging 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 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.

Still have questions or concerns?

Feel free to call our experienced technicians (714)985-4825





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