

Allison Transmission *Tap Shifter*

| | |
|----------------|-------------------------------------|
| 1031360 | Allison Transmission 2001-02 |
| 1031361 | Allison Transmission 2003-05 |

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

KIT CONTENTS:

Please check to make sure that you have all the parts listed in this kit **before** you start the disassembly of your truck.

| 1031360 Kit Contents | | | | |
|---|--|---|--|--|
| 1607230 | 12129023-B | 1607228 | | |
|  |  |  | | |
| <i>GM Shifter</i> | <i>Lock (Blue)</i> | <i>Wiring Harness</i> | | |
| Qty: 1 | | Qty: 1 | | Qty: 1 |
| 2-520334-2 | 1801123 | 1300337 | 12084912 | 1607226 |
|  |  |  |  |  |
| <i>Flag Connector (18-22ga)</i> | <i>Amber LED</i> | <i>Fuse Tapper</i> | <i>Terminal</i> | <i>Module</i> |
| Qty: 1 | | Qty: 1 | | Qty: 1 |
| 1300131 | | | | |
|  | | | | |
| Tie Wrap (Medium) | | | | |
| Qty: 6 | | | | |

| 1031361 Kit Contents | |
|--|--|
| 1607230 | 1607226 |
|  |  |
| <i>GM Shifter</i> | <i>Module</i> |
| Qty: 1 | Qty: 1 |
| 1607229 | 12129023-B |
|  |  |
| <i>Wiring Harness</i> | <i>Lock (Blue)</i> |
| 1300131 | |
|  | |
| Tie Wrap (Medium) | |
| Qty: 6 | |

Pre-Installation

Note. 2001-2002 vehicles require a TCM update (re-flash) to allow overdrive lockout, available through GM dealerships. Cite bulletin #02-07-30-051A. Tap Shifter may be installed before or after the re-flash.

INSTALLATION



VEHICLE SHOULD BE SAFELY SECURED BEFORE INSTALLATION.

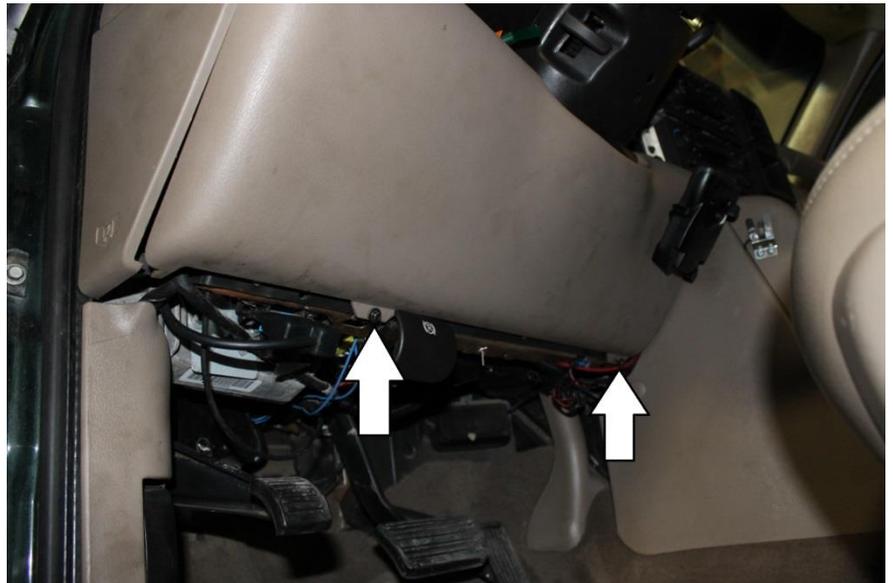
1. Disconnect batteries, secure leads away from batteries. Chock tires and apply parking brake.



2. Remove the trim around the instrument cluster. Tilt steering wheel down for better access.



3. Remove the two 7mm screws from the bottom of the knee bolster and pull bolster outwards.



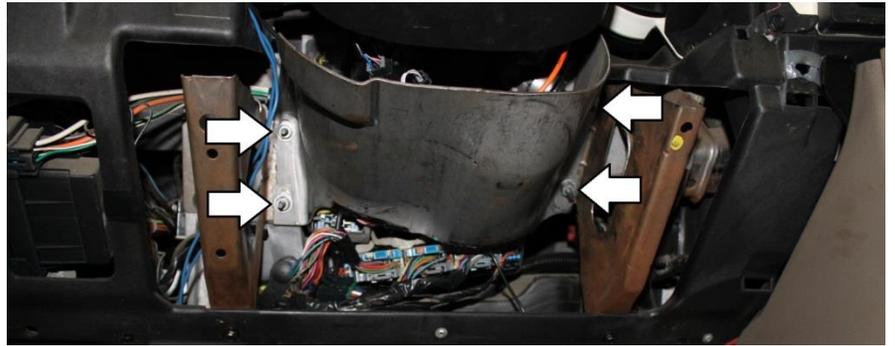
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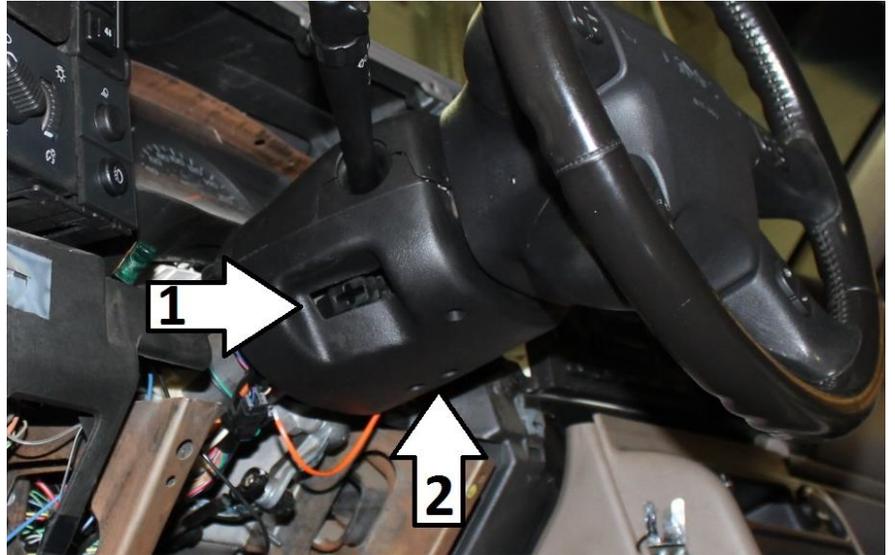
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4. Remove the steel plate below the steering column by removing the four 10mm nuts.



5. Remove the tilt lever from the steering column (1) and the screws from the bottom side (2). Unclip the upper and lower covers. Use care not to break the clips on the covers.



6. Disconnect the two pin electrical connector running to the original shift lever under the steering column. Remove the two plastic clips holding the shifter wire to the column.



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7. Pull back the rubber boot on the shift lever. Using a T27 torx bit, remove the screw attaching the shifter lever to the mechanism in the column.



8. Reattach new lever with existing torx screw.



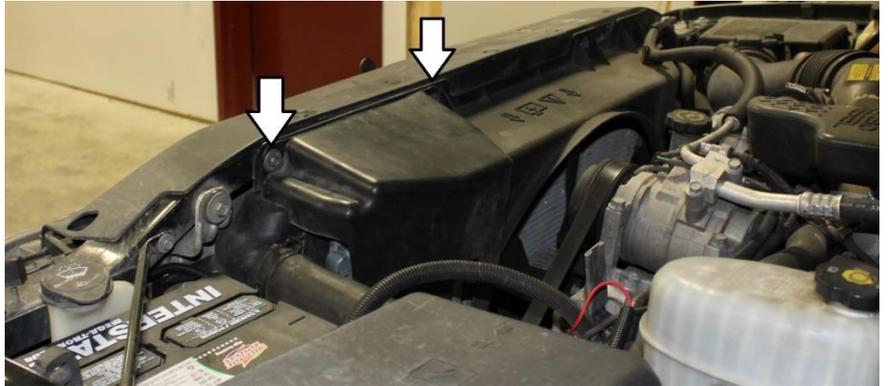
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9. Remove the two 10MM bolts securing the transmission control module cover.



10. Unclip the transmission control module from the cover if required for access. Disconnect the top (RED) electrical connector.



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11. Remove the RED retainer on the vehicles transmission harness connector. Install the supplied BLUE retainer. Keep the removed RED key incase the module is ever removed.



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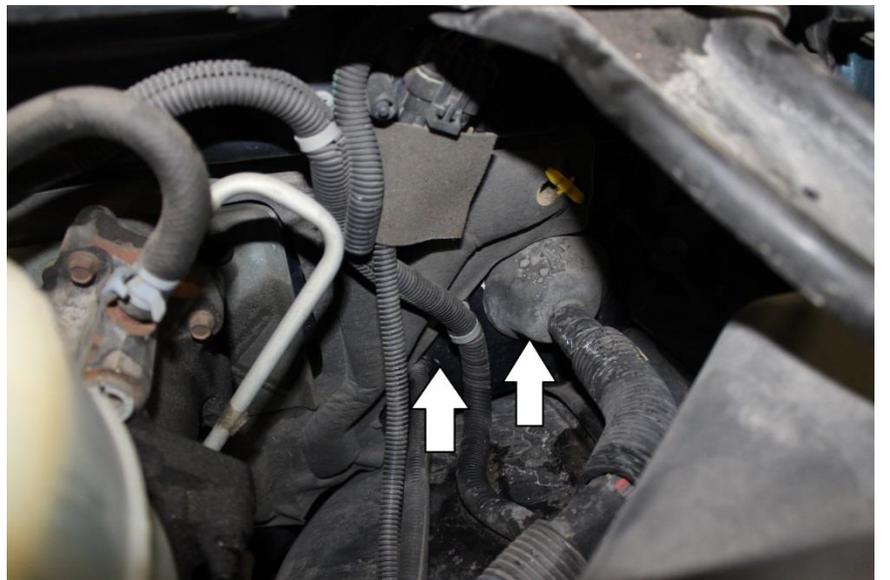
12. Connect the BD Tap Shifter wiring harness RED connector to the vehicles transmission control module.



Skip this step for 2003-2005 models.

13. For **2001-2002 vehicles**, refer to the instructions for installing the additional pin and LED indicator below at this time.

14. Route and secure the BD harness shifter wiring from the front of the engine bay into the vehicle cabin, through the firewall. The installer may wish to make an incision in the firewall boot, or punch a new hole to the left of the boot, this is left to the discretion of the installer.



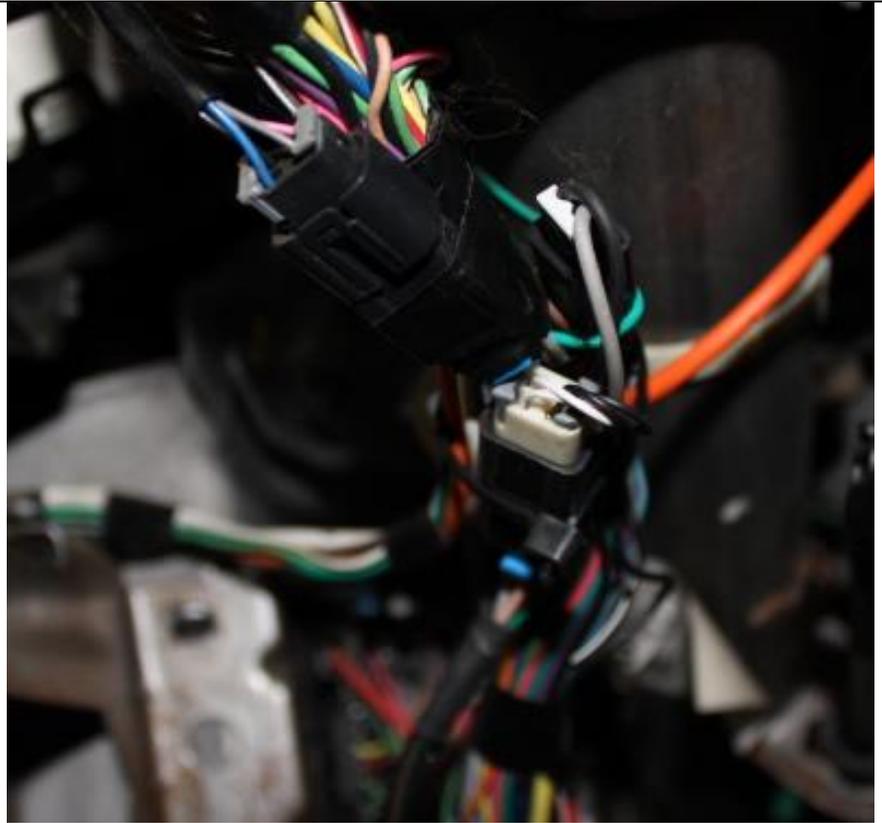
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15. Connect the new wiring harness to the shift lever and to the vehicles original shift lever connector. Depending on harness routing in the engine bay, there may be excess wire. Coil wire out of the way of the pedals if necessary.



16. Reinstall the column covers and the tilt lever.



17. Reinstall the metal plate under the knee bolster.
18. Reinstall the knee bolster.



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19. Reinstall the trim surrounding the instrument cluster. The interior should now be fully reassembled.



20. Clip the TCM back into its cover and temporarily reinstall it (you can leave the mount screws out). Route the Tap Shifter harness with the BLUE and BLACK connectors to this location. Choose a spot on the TCM cover to mount the Tap Shifter module and mark the locations to be drilled.



21. Remove the TCM from its cover again and drill the marked locations.



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22. Attach BD Tap Shift module. Reinstall the transmission control module into its carrier cover and reattach to the vehicle.



23. Connect the vehicles harness with the BLUE connector and the BD harness with the BLACK connector to the BD Tap Shifter control module.



24. Reconnect vehicle batteries and test BD Tap Shifter for correct operation. No codes should have been set as the batteries were disconnected.

25. If vehicle is a 2001-2002, have a TCM re-flash performed by GM dealer. Note, until re-flash is preformed; only 5,5,3,2,1 will be accessible.

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For 2001-2002 only:

26. 2001-2002 vehicles require an additional wire be added to the other (lower) transmission connector, labeled GRAY on the TCM. This is not the same connector that mates with the Tap Shift module. Additionally, as these trucks do not have an OD disable light, an LED may be installed at this time.

27. Choose desired location for OD disable LED on the dash board and drill hole. Feed wires through the hole and mount the LED.



28. Fish the BLACK wire from the LED through the firewall to the TCM at the front of the engine bay.

29. Run the RED wire to the fuse panel. Install supplied fuse tap as shown. Crimp flag terminal on the RED wire and install on fuse tap.



30. Remove the lower electrical connector from the TCM.



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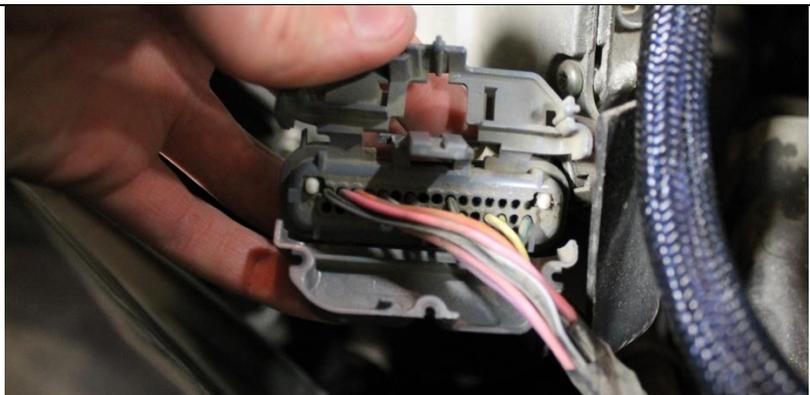
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31. Remove the clear plastic retainer from the front of the electrical connector.

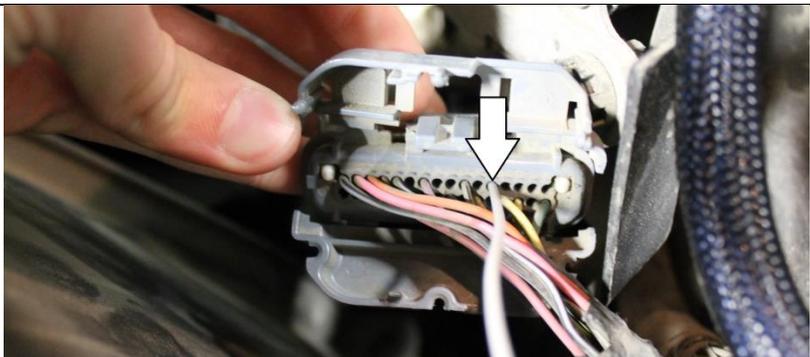
32. Unclip the clamshell on the back of the connector by gently prying the three clips apart with a small screwdriver.



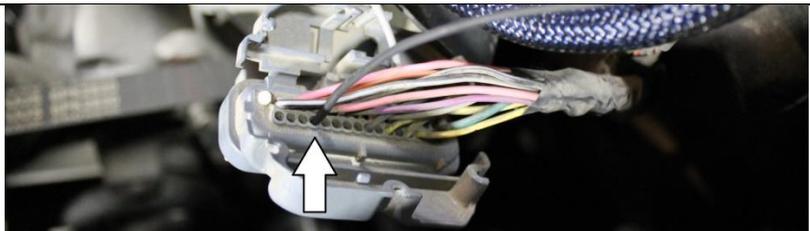
33. Open up clamshell to reveal wire entry.



34. Insert the single wire from the tap shifter harness in position 12. Ensure wire is locked into the connector adequately by lightly tugging on the wire once installed.



35. Crimp the supplied terminal onto the black wire from the LED. Install into position 20.



36. Clip the clamshell back together. Reinstall the clear retainer clip. Reattach to TCM.

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Operation Instructions

1. The tap shifter may be operated in any forward drive gear.
2. The maximum gear available in tap shift mode is determined by the gear selected with the shift lever.
3. For example: D allows for 5,4,3,2,1 whereas 3 allows for 3,2,1 etc.
4. Moving between gears is accomplished by simply tapping the +/- buttons.
5. Pressing and holding the + button for two seconds will cancel the gear selected by the tap shifter and go back to the top gear selected by the shift lever.
6. As the 2001-2002 vehicles do not have an overdrive disable indicator from factory, the installed LED will light when overdrive is disabled.

Note: Do not operate the tap shifter with the engine off. Operating the tap shifter before the truck is running will disrupt the OD cutout synchronization between the module and the body control module/TCM. Turning the key back to off will correct this situation if it arises.



Visit our Internet forums at <http://www.dieselperformance.com> and share your comments or technical support questions with some of the industry's leading experts in the diesel field.

If you have any technical difficulties, concerns, comments, or complaints, please phone our Technical Support hotline at (800) 887-5030 between 8:30am-5:00pm PST (Pacific Standard Time) Monday to Friday, or post a message on the BD Discussion Forums located at:

<http://forum.bd-power.com/>

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