

INSTALLATION INSTRUCTIONS

SUBJECT: GM/ALLISON TAPSHIFTER FOR 2003-2005 KODIAK/TOPKICK

FITMENT: 2003-2005 KODIAK/TOPKICK WITH 5 SPEED ALLISON TRANSMISSION

KIT P/N: FPE-TAPSHIFTER-KDTK

EST INSTALL TIME: 60 -120 MINUTES

TOOLS REQUIRED: 10 MM SOCKET, 6" EXTENSION, 7MM SOCKET, T30 TORX BIT OR SOCKET, CABLE TIES

KIT CONTENTS:

Item	Description	Qty
1	TapShifter Wiring Harness	1
2	TapShifter Lever	1



NOTE: This product **is not waterproof**. Please take appropriate action to prevent direct exposure to moisture. Exposure to moisture is not warrantable damage and may result in premature failure of this product.

APPLICATION NOTES:

- Fits 2003-2005 Kodiak/Topkick with 5-speed Allison transmission.
- Not compatible in any **6-speed** application.

WARNINGS:

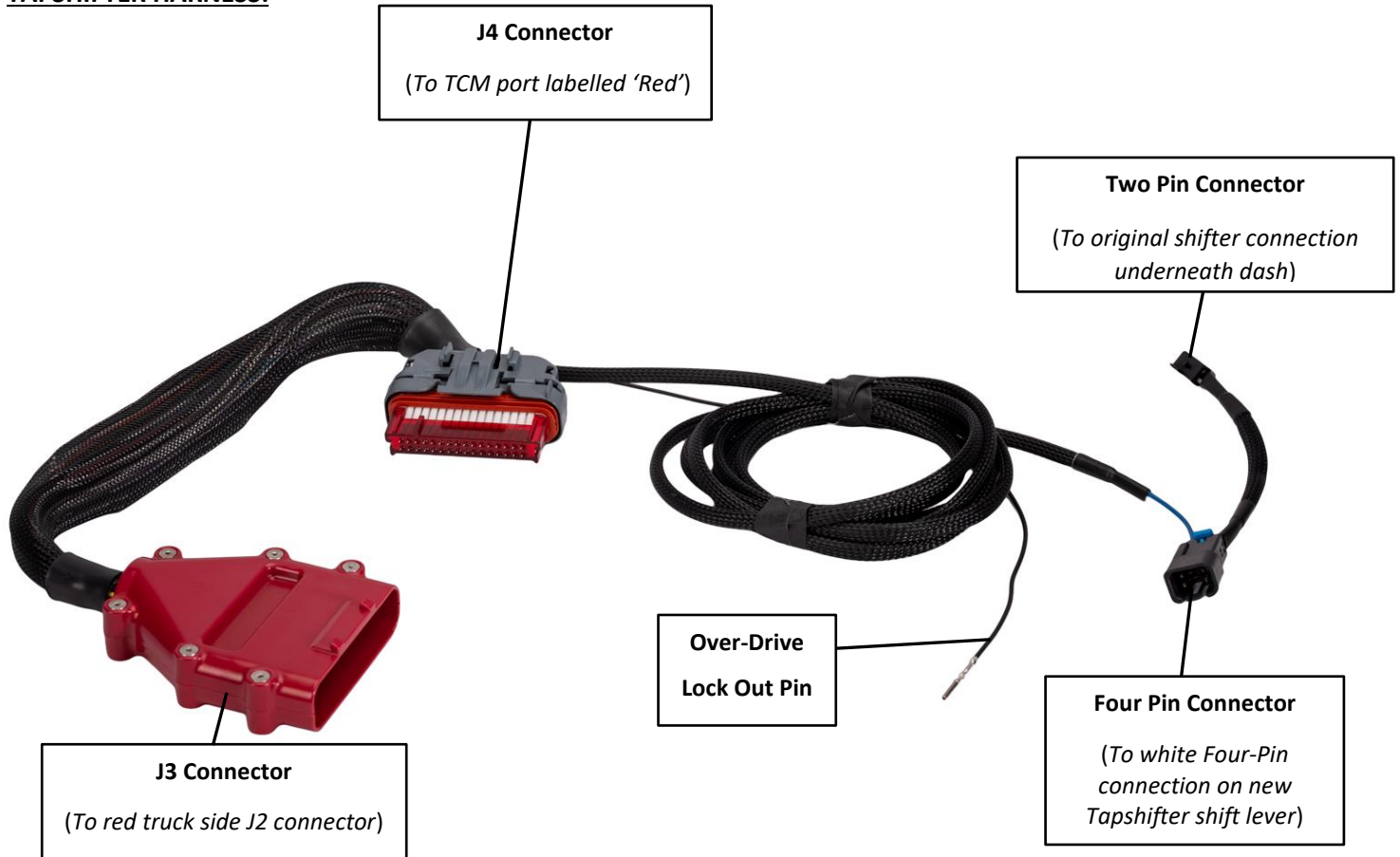
- **To avoid possible arcing and component damage disconnect the batteries prior to installation.**
- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. Fleece Performance Engineering, Inc. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines caused by the use or installation of this product.

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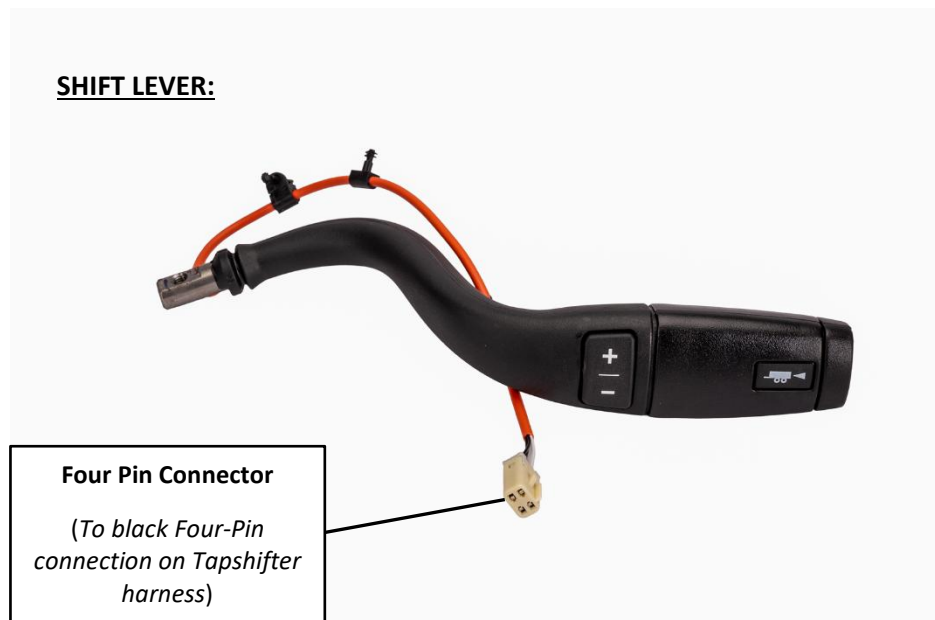
KIT OVERVIEW

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TAPSHIFTER HARNESS:



SHIFT LEVER:



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PROCEDURE:

STEP 1: Disconnect Batteries.

STEP 2: To gain access to TCM, remove the passenger side wheel well. The wheel well is held in place by two pins on the innermost side. Slide each pin out of their retaining tab, then remove the wheel well and set to aside.

STEP 3: The TCM is labeled “Red” and “Gray” to identify connectors. Starting with the side labeled “Red”, remove the red (J2) Connector from the TCM (*Figure 1*). Squeeze the plastic tabs on the back of the connector then pull the connector away from the TCM.

STEP 4: Inspect the red (J2) Connector from the truck side harness. Verify condition of the connector before proceeding with this installation. Corrosion on the pins can result in improper function of the Tapshifter.

Once condition of the (J2) connector has been verified, install the connector into the red (J3) Connector on the Tapshifter harness (*Figure 3*). **The terminal insulators are keyed to be installed in only one direction.** To prevent unnecessary damage to the harness, it is very important not to **force** the two connectors together.

STEP 5: Insert the (J4) Connector from the **opposite** end of the Tapshifter harness into the red (J2) connector on the TCM (*Figure 3*).

STEP 6: Moving on to the side labeled “Gray”, remove the gray (J1) Connector from the TCM. This can be done in the same fashion as the red (J2) Connector.



Figure 1: Red (J2) Connector

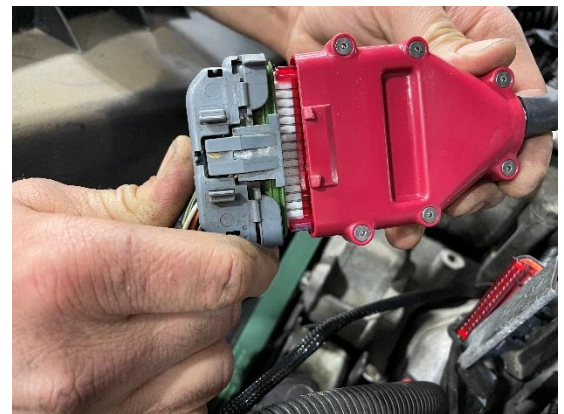


Figure 2: Red (J2) Connector and (J3) Connector.



Figure 3: (J4) Connector installed in TCM

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STEP 7: On the gray (J1) Connector, there is a clear terminal insulator. Remove the insulator by pressing the two white retaining tabs, then pull the insulator away from the connector (*Figure 4*).

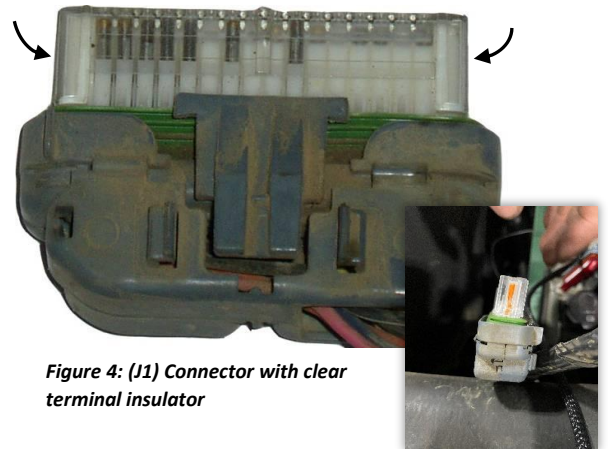


Figure 4: (J1) Connector with clear terminal insulator

STEP 8: Separate the shell of the gray (J1) connector by pressing the three retaining tabs. This will allow for the connector to be opened at the split line (*Figure 5*).

STEP 9: Inside the connector, there will be several labeled ports where each pin of the harness sits. **Locate and remove** the OEM overdrive lock out pin, this is labeled as pin 12.

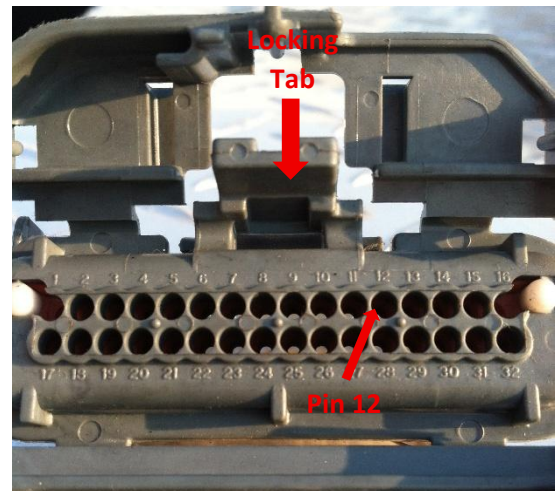


Figure 5: (J1) Connector split down middle. Locking tab and Pin 12 labeled for clarity

STEP 10: In the port where pin 12 previously sat, insert **the overdrive disable switch pin** from the (J4) connector of the Tapshifter harness (*Figure 6*).



Figure 6: Overdrive Disable pin from (J4) Connector.

STEP 11: Reassemble the **Gray (J1) Connector**. Re-install the clear terminal insulator and ensure that it is fully seated.

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STEP 12: Reinstall the (J1) Connector into the TCM port labeled "Gray" (Figure 7)

STEP 13: Route Tapshifter harness through engine compartment, avoiding any moving parts or hot components. Appropriate route will vary depending on the vehicle and its specific components.

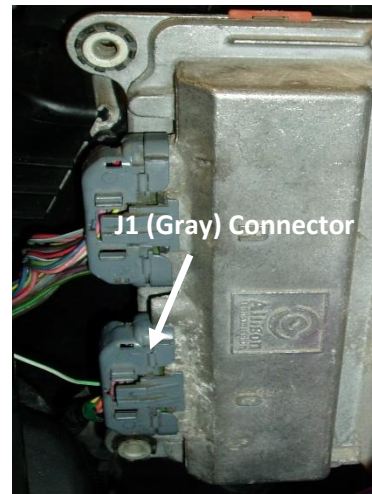


Figure 7: (J1) Connector with Overdrive disable pin installed.

STEP 14: Create or find an opening in the firewall to pass the opposite end of the Tapshifter harness through to the cab. A good location for this is at the factory bulkhead. To use this location, make an incision through the top side of the rubber boot, being careful to not cut any of the wiring underneath, then route the Tapshifter harness through the incision (Figure 9).

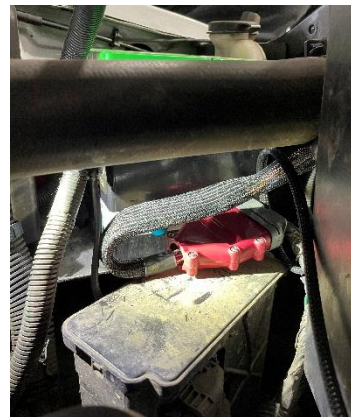


Figure 8: Routing of Tapshifter harness.



Figure 9: Factory Bulkhead. Incision can be made in rubber boot to route Tapshifter harness.

STEP 15: Once the harness is in the cab, **remove the Dash Instrument Bezel** on the top side of the steering column. Then, utilizing a 7mm socket, remove **lower dash panel** directly underneath the steering column (Figure 10). Depending on the truck, there will be two or three fasteners holding this panel in place.

STEP 16: Utilizing a 10MM socket, remove the steel support located directly under the steering wheel. The steel support is held in place with four nuts, using a 10MM socket remove all four to gain access under to the wiring underneath.

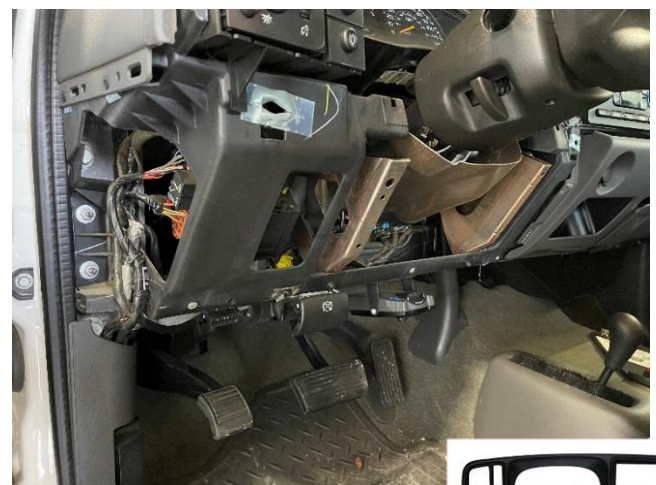


Figure 10: Bottom portion of dash removed, Dash Bezel pictured (right), Steel support (directly under steering wheel).



STEP 17: Remove the Factory Shift Lever and shift lever boot.

Remove the plastic panel covering the top of the steering column. Remove the plastic panel covering the top of the steering column. Slide the shift lever boot toward the passenger side of the vehicle and disconnect the four-pin connector underneath the steering column.

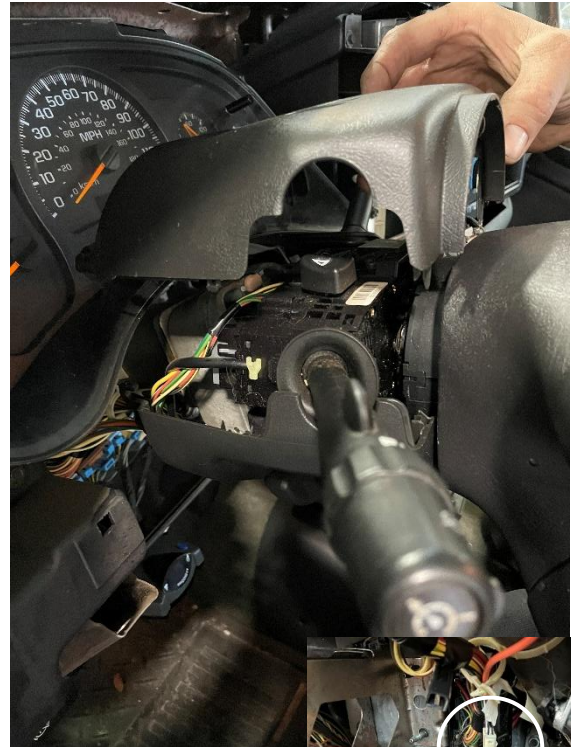


Figure 11: Plastic Panel covering the top of the steering column. Four pin connector circled.

This will expose the T30 mounting bolt on the factory shift lever. Using a T30 Torx bit, remove the mounting bolt retaining the factory lever (*Figure 12*), and set aside. Remove the factory shift lever from its mount on the steering column. Remove the shift lever boot from the factory shift lever by gently pulling the boot and lever in opposite directions. The shift lever boot can dry rot and become fragile with age. If replacement is deemed necessary, use GM Part #26093753.



Figure 12: T30 Bolt retaining shift lever, labeled for clarity.

STEP 18: Install the Tapshifter lever, which will fit in the same configuration as the factory lever. Install the shift lever boot on the end of the new Tapshifter lever. Then with the new shift lever in place, install the retaining bolt with a T30 Torx bit.

STEP 19: On the new Tapshifter lever (*Figure 13*), will be a 4-Pin connector. Route the connector and wiring in the same way as the factory lever.

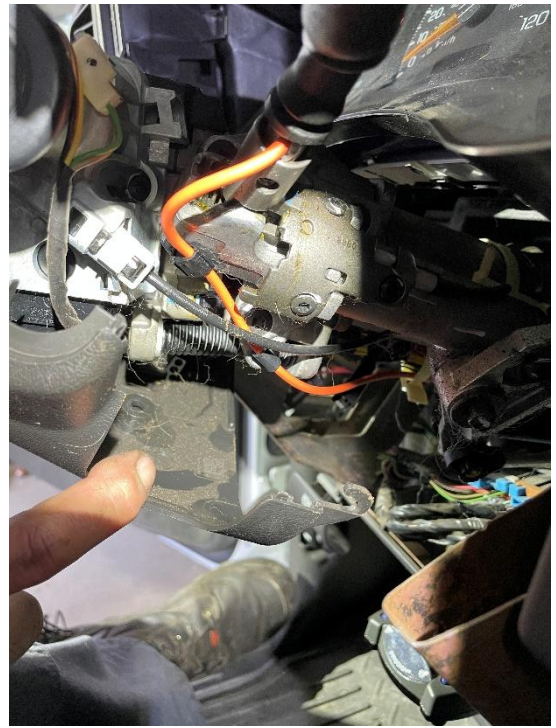


Figure 13: Tapshifter lever wiring harness, routed in factory location.

STEP 20: Plug the 4-pin connector from the new Tapshifter lever into the **Tapshifter wiring harness** routed into the cab from the engine compartment.



Figure 14: Four pin connector plugged into tapshifter harness. Circled for clarity.

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TEST PROCEDURE:

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STEP 21: Connect batteries and test Tapshifter for proper function. For this process, it is important that the brake pedal remain depressed the entire time. This action is to ensure safety for the duration of the test, not proper function. Do not start the vehicle.

- Insert the key into the ignition, then turn the key forward to the **run** position. In this position, all the lights on the dash will be illuminated and the engine will not be running. For further reference, the key will be two clicks forward from the **off** position.
- **With the brake pedal fully depressed**, shift the new Tapshifter lever into the drive position. The dash will function as normal, and the **D** symbol will be highlighted with an underline.
- At this time, using the button on the Tapshifter lever labeled **"-"**, (Figure 15) press the button to downshift the transmission. The transmission will be in **fourth gear** and the display on the dash will remain unchanged.
- Press the **"-"** button once more to downshift the transmission into **third gear**. The display on the dash will then show the number **3** highlighted with an underline (Figure 16).
- Move through the rest of the gears, ensuring each gear is displayed properly.
- Once this process is complete, use the **"+"** button on the shift lever, shift the transmission back up to **fourth gear**. This is where the **D** symbol is highlighted with an underline. Using the same button, shift the transmission up once more to get it back into the standard gear for **Drive**. The display will remain unchanged.
- Using the new shift lever, shift the transmission back into **Park**. The brake pedal can now be slowly released to prevent the vehicle from rolling backwards.



Figure 15: New Tapshifter lever with shifting button, "+" or "-"



Figure 16: Dash display, example of third gear. All gears will be highlighted in the same way.

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STEP 22: Begin reassembly of dash components.

STEP 23: Route the Tapshifter harness behind the dash, **away from moving parts**, and ensure any excess length is tied up out of the way. The use of cable ties may be required during this step.

STEP 24: Note the location of the new Tapshifter harness, then carefully reinstall the steel support. Thread each retaining nut into place and tighten with a 10MM socket.



Figure 17: Steel support reinstalled.

STEP 25: Reinstall the dash instrument bezel by pressing it back into place (Figure 19).

STEP 26: Reinstall the lower dash panel by threading each retaining bolt into place, then tighten each with the 7MM socket.

STEP 27: Once all parts are verified to be reinstalled, **start the vehicle** and using the Tapshifter lever, test each gear of the transmission once more.

STEP 28: Reinstall the driver's side fender well.

Line the fender well up in its original position, then slide each retaining pin back into place.



Figure 18: Dashboard panels reinstalled.



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