

ADVANCE ADAPTERS INC.

P.O. Box 247, 4320 Aerotech Center Way
Paso Robles, CA 93447

Telephone: (800) 350-2223 Fax: (805) 238-4201

P/N: 715543-241

New Item: (10/10)

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TJ 241 CABLE SHIFTER

KIT CONSISTS OF:

Qty	Part No.	Description
1	303303	SHIFTER BODY BARREL RETAINER
11	303311	HEAT SHIELD-FIREPROOF SLEEVE 1/2"
2	303312	BUSHING-IGUS 3/8"
2	303313	HEIM JOINT-FEMALE 1/4-28
4	303341	BOLT-1/4-28X5/8 BHCS
2	303342	SET SCREW-6-40X3/16 CPSS
2	303343	Access plug
1	303344	Pivot Dowel Pin (Ground) 2.25"***
1	303345	Sealant - Butyl Tape
1	303346	BOLT-1/4-28X5/8 SHCS
3	340615	Bolt - 1/4-20 X 5/8"*** BHCS**
1	722514	NYLON LOCKNUT 1/4-20
2	723753	F.H.C.S. 3/8-161 1/4
3	42R617	BOLT 1/4-20 X 3/8"*** BHCS**
1	42R700	Shifter Box- TJ pivot housing
2	42R701	PIVOT PIN MOUNT
1	42R702	BOTTOM COVER
1	42R703	HANDLE MOUNT- DRIVER SIDE
1	42R706	Shift knob - NP231
1	42R707	Lever - T-case NP241
1	42R709	SPRING-WAVE
1	42R715	BARREL- CABLE TJ- RUBICRAWLER
1	42R725	SHIFTER CABLE- 2"*** TRAVEL "
1	42R735	BOLT 1/4-20 X 1"*** HHCS**
4	42R745	PLUG 7/16 BLACK
1	715543A	CABLE SHIFTER HOUSING CABLE PLUG
1	715543B	CABLE SHIFTER HANDLE SPACER
1	715543C	TJ CABLE T/C SHIFTER BRKT
1	300474	YOKE SEAL WASHER
1	300476	YOKENUT



Tool List:

1. FULL SET OF HAND TOOLS INCLUDING:
 - 6 mm ALLEN WRENCH
 - 16 mm DEEP SOCKET
 - 8mm HEX BIT SOCKET
 - 3/8" DRIVE RATCHET
 - 15/16" WRENCH
 - 5/32" ALLEN WRENCH
2. 3/8" TORQUE WRENCH
3. STUBBY 9/16" WRENCH REQUIRED,
RATCHETING RECOMMENDED.
4. #40 TORX BIT

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Disassembly/Preparation For Assembly:

1. Use an Advance Adapters Uni-Raise (PN: 15-1000) (See *Figure 1*) or some other device to support the transmission pan to support its weight. Take **caution** to avoid denting the pan and damaging the transmission.
2. Remove the four M10 foot-mount nuts from the crossmember.
3. Remove crossmember and any aftermarket skid plates.
4. Remove front drive shafts. The front yoke of the NP241 is also required to be removed to install the new shift lever. The removal of the yoke is the only way to reach the #40 torx head and this is has been thread locked to the transfer case from New Process.



Figure 1: Uni-Raise

Interior Disassembly/Reassembly:

1. Remove the cup holder if it is removable, depending on the style of your console. (See *Figure 8*)
2. Remove the transmission shift handle by grabbing firmly and pulling straight up until it pops off.
3. Using a small flat head screw driver, remove the transmission shift indicator cover. Once it pops loose you must disconnect the light on the bottom side of the cover to completely remove it. (See *Figure 9 and 10*)



Figure 8: Cup Holder Removal



Figure 9: Transmission Shift Indicator

4. Use a 10mm socket to remove the two console bolts located under the cup holder and under the shift indicator panel.

5. Move transfer case handle to 4wd-Low and then pull the console out.



Figure 10: Indicator Light

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- Using a flathead screwdriver, remove the wire loom connector clip from the transfer case shifter bracket. (See *Figure 11*)
- Using an 8mm socket, remove the five transfer case shifter bracket bolts. Make sure to save these bolts as they will be reused.
- Using a straight screw driver or a pry bar, pry the linkage rod from the floor shifter assembly. (fig 11A) Also pry the linkage rod from the stock transfer case lever.(fig 11B)



Figure 11: Remove Wire Loom Connector Clip

- Using a 10 mm socket, remove the four bolts securing the shifter pivot assembly. (See *Figure 12*) You will have to lift up the carpet to get to these bolts. The bracket will fall when the bolts are removed if it isn't held. Seal the bolt holes with the four supplied black plastic plugs.



Figure 12: Shifter Pivot Assembly Bolts



Figure 11A



Figure 11B

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10. Remove the transfer case shifter and the linkage by lifting it up and out through the floor. (See *Figure 13*)
11. Remove linkage assembly and remove the bracket from the front of the transfer case. The upper bolt can be accessed through the shifter hole in the floor board if needed. (Fig13A & 13B)
12. Take the new shifter housing and apply butyl tape around the perimeter of the shifter box.
13. With the aid of another person, install the shifter box assembly ensuring that the transfer case cable is routed under the transmission cooler line.
14. Route the new cable along side the transmission.
15. Bolt the shifter box assembly down using an 8 mm socket and the 5 stock OEM bolts removed previously.



Figure 13: Remove Shifter Linkage

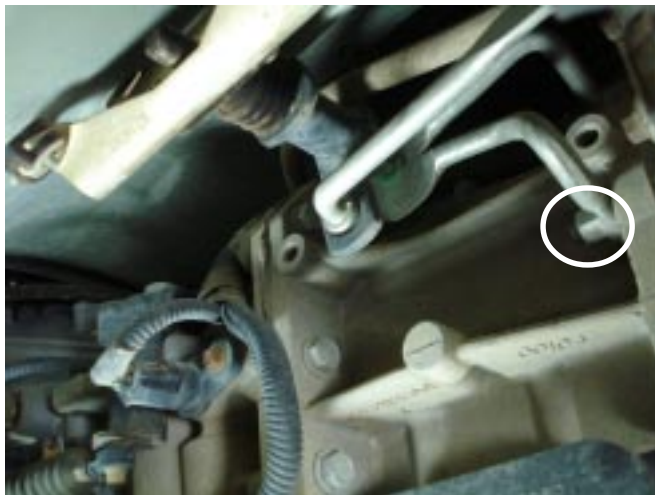


Figure 13A & B

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16. Move the transmission shifter into the "Neutral" position with the new handle in the vertical position. Point the front of the console towards the passenger side, then rotate the console counterclockwise as you maneuver it down over the handle and transmission shifter. Bolt the console down using a 10mm socket and the two bolts removed earlier. Install the shift indicator back on to the console making sure to plug in the indicator bulb before snapping it back in to place. (See *Figure 17*)

17. Install the new shift knob using the supplied 3/8-16x1-1/4" flat head cap screw.

Shifter Box Assembly End Cable Adjustment:

1. Rotate the transfer case cable barrel until the center of the knob is 1" from the console when in its lowest position. (See *Figure 21*)
2. Tighten the three 1/4-28x5/8" bolts that retain the cable barrel retaining clip. (See *Figure 22*)
3. Using a 15/16" wrench, tighten the 5/8" jam nuts on the shift cables.
4. Bolt on the bottom cover of the shifter box using the supplied 1/4-20x3/8" button head cap screws. **NOTE:** Make sure you start all 3 before final tightening. Use RTV for a water tight seal.



Shifter Box Assembly



Figure 21: 1" from console



Figure 22: Tighten Retaining Clip



Figure 17: Console Install

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Transfer Case Installation and Transfer Case Shifter Cable Gear Box End Adjustment:

1. Bolt the transfer case shifter bracket to the front of the transfer case where the stock bracket was bolted.
2. Route the transfer case shifter cable through the transfer case shifter bracket hole with a jam nut on both sides of the bracket and then completely thread the heim joint on to the end of the cable and tighten the jam nut. This cable should already be routed under the transmission cooler lines.
3. Remove the transfer case shift lever. Note: The transfer case front yoke must be removed. Use an 1-1/8" socket and impact gun to remove the yoke nut and yoke. Do not allow any contaminants to enter the transfer case while the yoke is off. Use a long T40 Torx bit and remove the shift lever bolt and then the shift lever. To reinstall the yoke, install a new rubber yoke washer in to the yoke splines. Apply a bead of silicone to the inside of the yoke. Apply ATF to the lip of the yoke seal, slide yoke over the rubber washer until it bottoms out in the case. Secure using the new yoke nut, this is very important as the yoke nuts are designed for one time use, and torque to 110 ft-lbs. (See *Figure 31*)
4. Install the new supplied shift lever with the original bolt (use a medium strength thread locking compound on the threads) and see *Figure 30* for correct lever orientation. Torque to 20 ft-lbs.
5. Adjust the transfer case shifter cable by adjusting the two 5/8" nuts so that the heim travels an 1/8" past the shift lever for both directions of travel.
6. Attach the cable shifter heim to the previously installed shift lever (See *Figure 30*) using the supplied 1/4-20x1" hex head bolt and a nylock hex nut.
7. Check the position of the lever through the console, adjustments can be made by adjusting the cable barrels below the shifter box assembly. The transfer case shift lever should change to approximately 1.25" from the console after installation and final adjustment.



Figure 30: New Transfer Case Shift Lever Orientation



Figure 31: Proper Yoke Installation Order

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