

# 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: 303008L

New Item: (12/06)

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Page Rev. Date: 06-06-08

## ATLAS TRANSFER CASE JEEP JK CABLE SHIFTER SOLD WITH AN ATLAS

### KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	302051-RLE	TWIN STICK BASE MOUNT
2.	1	302075	1/2" INSIDE STAR WASHER
3.	1	302080	1/2"-13 x 7" STUD BOLT
4.	1	303120	1/2"-13 SERRATED LOCK NUT
5.	1	303121	1/2"-13 JAM NUT
6.	1	303152	KNOBS
7.	1	303303	BARREL RETAINER PLATE
8.	2	303305	CABLE BARREL
9.	1	303307	EXTENSION TUBE BRACKET
<small>(THIS BRACKET HAS 3 CABLE SUPPORT HOLES, USE THE TWO THAT ARE IN LINE WITH THE MOUNTING STUD HOLE FOR ALL APPLICATIONS EXCEPT 42RLE)</small>			
10.	2	303309	SHIFTER CABLE - 48" LONG
11.	1	303310	PIVOT SHOULDER BOLT- 5/16" x 2-1/2"
12.	4	303312	HANDLE PIVOT BUSHINGS
13.	2	303313	1/4" FEMALE HEIM JOINT
14.	1	303320	SHIFTER BODY
15.	2	303323	SHIFTER HANDLE BASE
16.	2	303324	SHIFTER HANDLE BOLT ON
17.	1	303325	EXTENSION TUBE 3.95"
18.	3	340615	1/4"-20 x 5/8" BUTTON HEAD CAP SCREW
19.	1	722523	1/4" FLAT WASHER
20.	4	722542	#10 x 1/2" SELF TAPPING SCREWS
21.	2	722545	1/4"-20 x 3/4" B.H.C.S. HEIM BOLTS
22.	1	723141	5/16"-18 LOCKNUT
23.	4	723153	5/16"-24 x 1/2" S.H.C.S. (HANDLE BOLTS)
24.	3	723731	3/8"-16 x 1" SOCKET HEAD CAP SCREW
25.	1	303315	LINKBLOCK
26.	1	722513	LOCK WASHER
27.	1	722515	1/4-28 X .75 HHCS
28.	1	722523	FLAT WASHER

### Additional parts boxed with shifter kits, but part of Atlas T/C assembly.

1.	1	301600	SITE TUBE KIT
2.	6	302069	ATLAS STUDS
3.	6	302071	3/8"-24 NUTS
4.	2	303200	TORCOIL

### 42RLE Transmissions note:

42RLE Transmissions have some clearance issues with the tailhousing on one of the new shifter cables. If you have the 42RLE transmission, you will need to use the upper cable support hole on bracket 303307. This cable support hole moves the inside cable away from the transmission tailhousing give you the needed clearance. We have also included a shift rail link bar that provides the correct alinement of the Atlas shift rail to the new cable location. Install the link bar to the shift rail with the 1/4-28 fastener, flat and lock washers. The Atlas base mount 302051-RLE has also been modified to clear the new link bar.

**NOTE ON SHIFTING:** The Atlas Transfer case is a synchronized unit. The transfer case shifts best when the shafts are spinning. Note that when the transfer case is shifted when not in motion, the teeth may or may not be aligned. If the teeth are aligned, then the unit will slip into gear easily. If the unit does not slip into gear easily, then no amount of pulling on the handle will cause the unit to shift. The transfer case must be spun slightly and then it will shift.

**SPECIAL NOTE:** The components packaged in this kit have been assembled and machined for specific type of conversions. Modifications to any of the components will void any possible warranty or return privileges. If you do not fully understand modifications or changes that will be required to complete your conversion, we strongly recommend that you contact our sales department for more information. This instruction sheet is only to be used for the assembly of Advance Adapter components. We recommend that a service manual pertaining to your vehicle be obtained for specific torque values, wiring diagrams and other related equipment. These manuals are normally available at automotive dealerships and parts stores.

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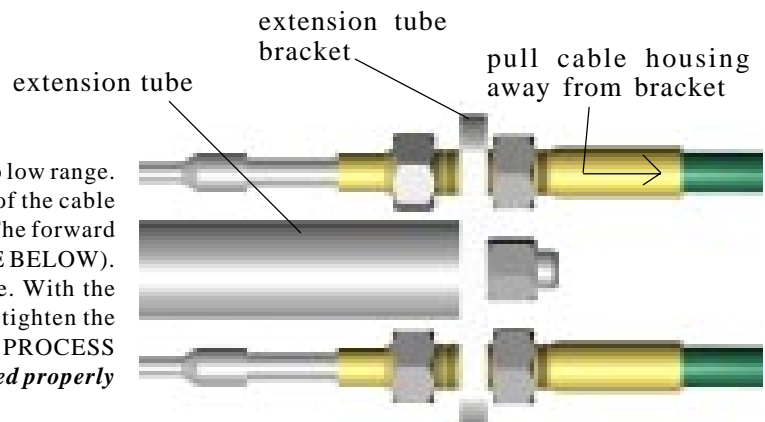
### JK Disassembly

1. Remove the JK console to gain access to the stock cable transfer case linkage. Unbolt the linkage and remove the cable and rubber grommet from the floorboard. Retain the nuts that hold the shifter to the floor for the new Atlas shifter.
2. Cut the old cable by the grommet to remove the grommet from the new shifter installation. This grommet will be reinstalled to the floorboard with the new Atlas cables installed.



### Atlas cable adjustment note:

**Adjustments \*IMPORTANT STEP:** Shift the Atlas into low range. Next loosen the 1/2" - 13 jam nuts to the far thread ends of the cable assembly. Pull the cable housing away from the Altas. The forward nut should have an **INITIAL GAP of 1/8"** (SEE FIGURE BELOW). Next tighten the same nut up until it contacts the plate. With the nut flush against the plate, tighten 1/2 turn more. Then tighten the rear nut against the opposite side of the plate (REPEAT PROCESS FOR BOTH CABLES). **NOTE: If step this not completed properly the Atlas will not fully shift into gear.**



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### ASSEMBLY

#### Transfer Case End:

We recommend installing this on the transfer case while the transfer case is still out of the vehicle.

1. Bolt the twin stick base to the transfer case with the 3/8"-16 socket head cap screws.
2. Thread the 1/2"-13 all thread completely into the twin stick base. Install the 1/2" star washer and a 1/2"-13 jam nut. Tighten the jam nut against the twin stick base.
3. Slide the extension tube and the extension tube bracket over the all thread and fasten with the 1/2"-13 serrated lock nut.
4. Insert the shift cable through the extension tube bracket. Install the large jam nut and thread the cable into the end of the Atlas shift rails. Tighten the jam nut. Fasten the cable to the bracket by sandwiching the bracket between the two jam nuts. Repeat for second cable.
5. Make a mark on the cable that is connected to the front shift rail control of the Atlas. This will help when setting up the shifters configuration in the cab.
6. Route the new cables up by the transmission. Increase the hole diameter on the rubber grommet to fit the new cables. Slip the cable through the grommet and then one at a time up into the JK console area.



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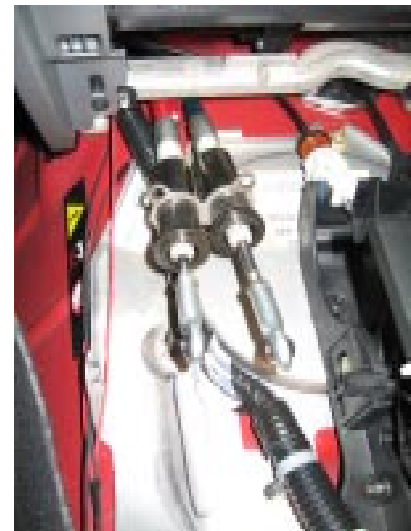
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### Shifter End:

1. Grind approximately 1/4" off the top of the front mounting stud to provide clearance for the bottom barrel retainer bolt (See picture below).
2. Remove 1 of the 5/8" jam nuts and the lock washer from each cable and discard.
3. Slide the Barrel Retainer plate over both shifter cables. Then thread both cable barrels onto the shift cables. If you want the front shift handle on the right or left side in the console, now is the time to make the choice. We prefer the front shift lever control on the left side and the rear handle on the right.
4. Now thread the heim joints onto the shift cables inner rod until they bottom out and tighten the jam nuts.
5. Using a mallet, press the pivot bushings into the shifter handles bases.
6. Install the shift handle bases into the shifter base using the shoulder bolt and fasten with the 1/4" flat washer and the 5/16" locknut.
7. Slide the cables into the front of the shifter body.
8. Slide the cable barrel retainer plate up the shifter body and loosely fasten it with the 1/4"-20 button head cap screws.
9. We have provided access holes in the shifter body to install the button head bolts through the heim joint and into the handle base. Once these bolts are installed and tight, then you will need to adjust the linkage. Put the Atlas in a neutral position on both the shift rails. Look at the orientation of the handle bases to the shifter housing. In neutral they should be at a 90 degree in relation to the base. Adjust the barrels on the shifter housing to achieve this. Tighten down the barrel retainer. Install the bolt on handles to check shifting. You may want to get the vehicle in a running condition to check the shifting since the Atlas shifts easier while moving. Adjust cable as necessary by loosening the barrel bolts and adjusting the barrels.
10. Once adjusted install the shifter housing onto three of the studs that retained the stock cable shifter and retain with the stock bolts. *Note:* The front bolt must be installed first as the shifter is installed.
11. Test shift once more before removing the bolt on handles and reinstalling the console. Once the handles are removed, install the console and bolt back on the handle and install the knobs that correspond to the front and rear shifting.



GRIND LOCATION



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