ADVANCE ADAPTERS
SINCE NINETEEN SEVENTY ONE

P.O. Box 247, 4320 Aerotech Center Way
Paso Robles, CA 93447
Telephone: (800) 350-2223 Fax: (805) 238-4201
 Page Rev. Date: 07-31-17

P/N: 344007

XJ AW4 ATLAS 4 SPEED SHIFTER

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1 kit	302010	ATLAS BAGGED HARDWARE KIT
2.	1 kit	302011	ATLAS BOOT & KNOB KIT
3.	1	302051	TWIN STICK BASE MOUNT
4.	3	303121	NUT-1/2-13 HX JAM BLACK ZINC
5.	1	303143	TWIN STICK TUBE 8.75" LONG
			(can be shortend to adjust shifter location on the floorboard)
6.	1	303132	TWIN STICK HANDLE AUTO REAR
7.	1	303133	TWIN STICK LEVER FRONT
8.	10"	303100	3/8" HEAT SHRINK
9.	2	723771	3/8"-24 x 9" ALL THREAD
10.	1	303144	STUD BOLT 1/2"-13 x 12.5"

The shift tower in this photo as shown would index onto the D.O.M. tubing and would fit a left drop case. Right drop cases would require the tower to be flip to the other side to index over the D.O.M. tubing.

NOTE: For the complete shifter installation procedures, please refer to the Final Installation section located in the Atlas manual.

As of January 1, 2005, we have changed the design of our shifter tower. We no longer us a set of Zerk fittings on the tower and have omitted the white nylon bushings. The new design uses a Igus black bushing which does not require grease. These bushings are not interchangeable.

White bushings: 303080 (large) 4 required
303095 (small) 4 required

Black bushings: 303081 (large) 4 required
303096 (small) 4 required

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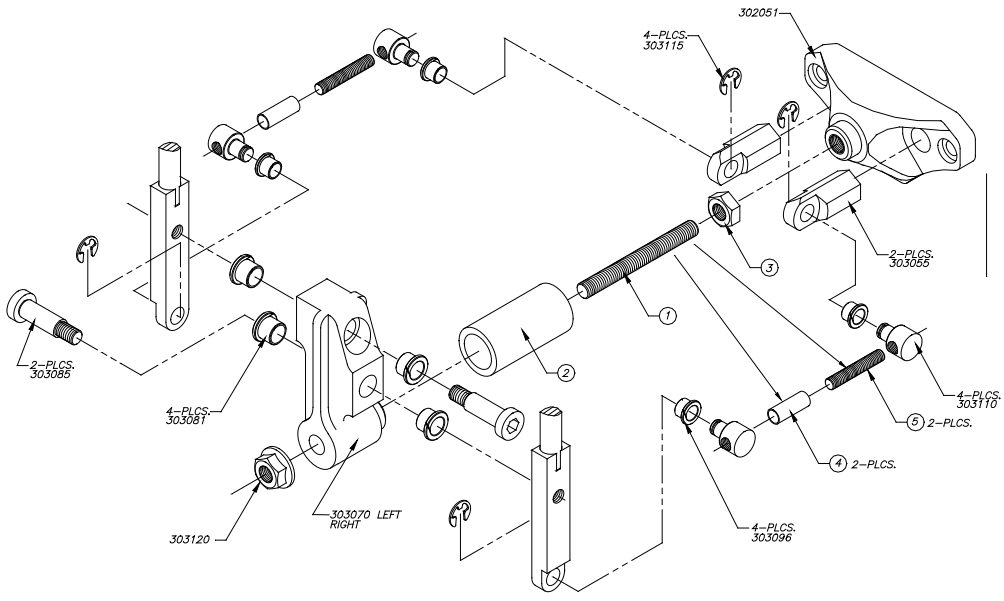
This Atlas shifter has been designed for the Jeep Cherokee XJ.

Installation Procedures:

1. Install the shifter base to the face of the Atlas using the three (3) S.H.C.S. 3/8"-16 x 1".
2. Install 1/2"-13 all-thread and jam nut to the shifter base.
3. Slide the shifter tower along the all-thread stud until the shifter arms are at the center of your stock floor cutout.
4. Measure between the tower and the base to obtain the correct extension tube length.
5. Remove the tower and install the extension tube.
6. Assemble the shift handles to the shift tower. Also install the zerk fittings to the face of the tower.
7. Install the shift tower assembly to the extension tube using the lock nut on 1/2"-13 all-thread to secure.
8. With the Atlas in neutral and the shift handles parallel with the shift tower, measure the distance for the linkage rods.
9. Connect the shift buttons and heat shrink tubing to the 3/8"-24 all-thread at the distance measured. Make sure that the all-thread is flush with the outside edge of the shift button. Cut all-thread if necessary.
10. Assemble the linkage rods to the shift handle and brass portion of the shift rod and verify the shift handles are parallel to the tower.
11. Install e-clips to retain the buttons to the mating parts.
12. Make sure the brass shift rod ends are not too tight. They should be able to rotate about 1/2 turn in each direction.
13. Modify floor board if nessary.
14. Install rubber boot and boot ring to floorboard.(note: on some twin stick configurations the boot ring may need to be cut in order to fit around the Atlas twin sticks).



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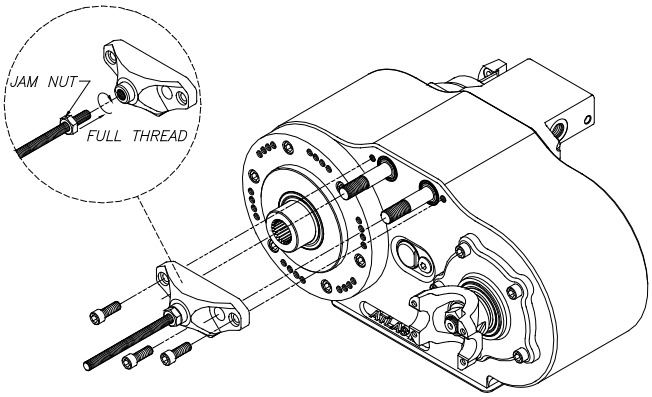
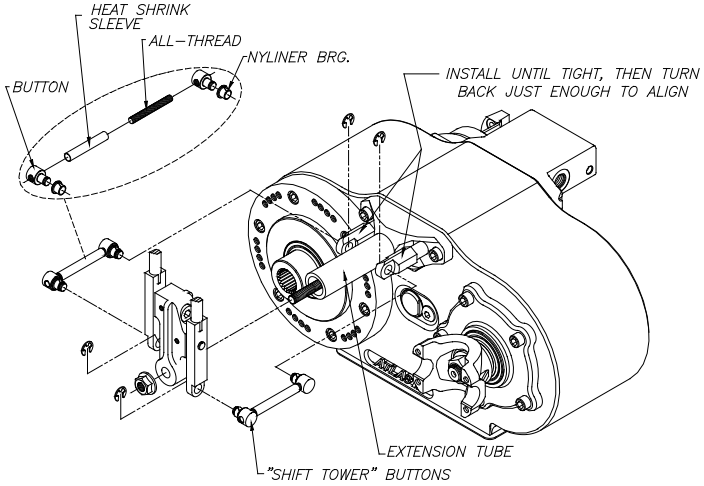


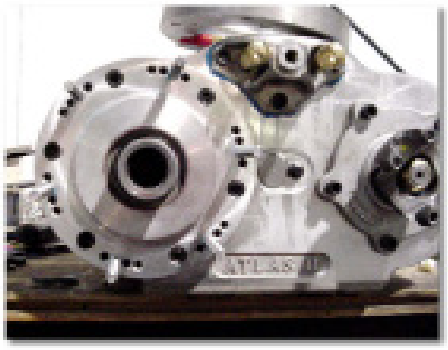


Rear view of the AW4 automatic.

The stock output shaft protrudes .500" past the stock adapter housing. To achieve the proper spline engagement on the Atlas a 1" spacer is required, P/N 51-0404.

The photo (left) shows the rotation we used to obtain the proper shifter clearance.

The photo (right) shows the minor body modification made for clearance on the Atlas.



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The photo (right) shows the Jeep console removed and the transfer case linkage removed

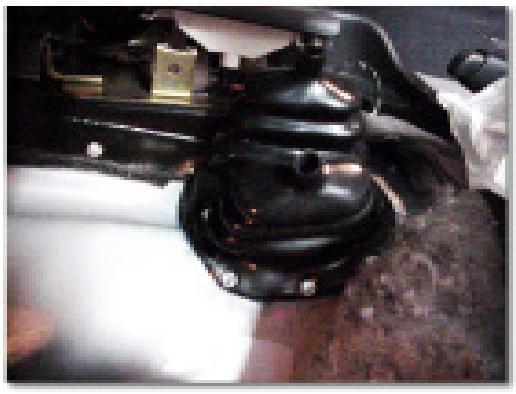
The stock console will require disassembly and the stock transfer case linkage will need to be removed.

Floorboard modifications are necessary to fit the Atlas twin stick. This photo (below) shows 1" of material removed from the right side and front of the stock hole. (.500" needs to be removed from the left side)

Once the floorboard has been modified, it should look like the photo shown here (photo below).

Since the stock floorboard hole is longer than needed, we recommend using a piece of sheet metal to cover the rear 1" section of this stock hole. (photo shown below)

Test fit the Atlas shift handles. If proper clearance has been obtained, screw the rubber boot and ring to the floorboard. Note: The boot ring will need to be cut in half for proper fit to your floorboard.



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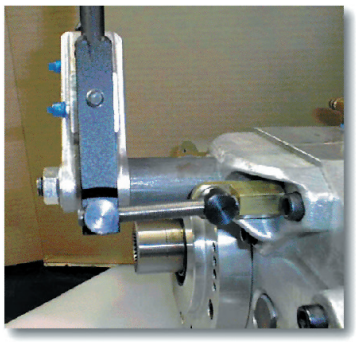
Since the stock transfer case shift indicator cover will not fit with the Atlas twin-sticks, we modified this cover. Remove the indicator panel and cut the plastic that supported the indicator panel. Ideally the plastic housing that snaps into the console is what your trying to retain. We purchased a small piece of black plastic from a local stereo installation shop and cut it to fit our plastic housing. We heated it to fit the contour and glued it into position. We then cut new access holes is the black plastic to fit our twin sticks.



The shifter problem check list: When installing the twin stick shifters, there are a few key areas that must be addressed. One of the most commonly asked questions/problem is that "my unit isn't shifting fully into one of the gear ratios". Incorrect adjustment of the shift handles to the linkage rods is normally the cause. With both shift rods in neutral, the linkage rod (connected to the shift handles) must be parallel with the aluminum shift tower. Refer to the photo.

Another concern that we've heard is that "my Atlas seems to be hard to shift". This problem could be one of two areas. The brass shift rod ends that the shifter linkage rods connect to are too tight, causing a binding affect on the shifter linkage. The brass shift rod ends should be installed until tight, then loosened enough to align to the shifter button.

If a unit has a tendency to pop out of gear, an area to check is proper floorboard clearance in relation with the shift handles. This problem mainly occurs on Jeep TJs and XJ's, since floorboard modifications are required. Most reported problems have been overcome by simply providing additional clearance. The problem of popping out of gear can also be caused by incorrect alignment of the shifter handles as previously discussed, and/or a unit in which the detent set screws have been loosened.

The last question/problem is that "my the shifter linkage come apart while in operation". The area in question is the all-thread linkage rods. These rods fit into the two shift buttons. To prevent the all-thread from unscrewing out of the shift buttons, a portion of the heat shrink tubing should have been installed. The heat shrink tubing act as a jam nut to prevent the all-thread from unscrewing. DO NOT use a jam nut on these linkage rods as it will cause binding of the shifter linkage.