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 PAGE 1 OF 12 Page Rev. Date: 12-08-23
 P/N: 303036

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1	1	302051-RLE	BASE- TWIN STICK MOUNT 42RLE
2	1	302061	ATLAS LOGO 2 STICKERS NEW KNOBS
3	1	302062	SHIFTER STICKER- STD ATLAS SHIFTER L-N-H
4	1	302080	STUD BOLT 1/2 -13 X 7 B7
5	2	302422AB	LEVER BASE- ATLAS CABLE SHIFTER
6	2	302422AL	LEVER- JK CABLE SHIFTER (NO BASE)
7	2	302423	BARREL NUT- CABLE END 1/4-28
8	2	302424	KNOB- INJ MOLD (SLIP ON) JK/JL
9	1	302425	SHIFT LEVER SPACER
10	4	302426	ROLL PIN-SLOTTED .125 X .750 420 SS
11	1	302427	BOLT- SHOULDER 1/2 x 1 3/4 (3/8-16)
12	1	302450	FLANGE BOLT- 5/16 -18 x 1/2 SERRATED
13	3	302451	FLANGE BOLT- 3/8-16 x .875
14	2	302452	TORX FLAT HEAD SCREW- JL SHIFT KNOB
15	1	302454	CLEVIS PIN- 1/4 x 1"
16	1	302455	COTTER PIN- 3/32 x 3/4"
17	1	302500	MOUNT-JK SHIFTER BASE
18	1	302401	TAB- CABLE LOCK JK/JL SHIFTER MOUNT
19	1	303120	Serrated-Flange Hex Locknut 1/2 - 13 zinc
20	1	303307	BRACKET- ATLAS SHIFT CABLE
21	2	303311	CABLE- ATLAS SHIFTER, 48", 1" CLAMP/THREAD
22	2	303316	NUT- ATLAS CABLE RETAINER OUTER
23	2	303317	NUT- CABLE SHIFTER- JAM 1/4-28
24	1	303318	BLOCK- ATLAS SHIFT RAIL CABLE MOUNT
25	1	303319	NUT- RETAINING CABLE 42RLE ATLAS
26	1	303325	TUBE- ATLAS SHIFTER EXTENSION 4.25
27	4	42R508	1/2 X 1/4 IGUS BUSHING
28	1	42R726	HEAT SHIELD- FIREPROOF SLEEVE 48" (FOR CABLES AROUND EXHAUST & OR TRANSMISSION COMPONENTS)
29	2	722543	1/4 X 20 X 1-1/2 S.H.C.S.
30	1	723703	NUT 3/8 -16 NYLOCK G5 PLT
31	3	723731	BOLT 3/8 -16 X 1.00" SHCS ZINC
32	1	723735	WASHER 3/8 SAE FLAT PLT

Cable shifter instructions: The shifter bracket and cables need to be installed to the front of the Atlas before the unit is installed into the vehicle. The stock transfer case, shifter and cable will also need to be removed. The removal of the console is a good starting point.

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.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP

JK Disassembly

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. You will need to remove the plastic cover of the stock T/C shifter to access one of the bolts



Cut the old cable by the grommet to remove the grommet. The new shifter installation will use this grommet as it will be reinstalled to the floorboard with the new Atlas cables installed.



Once the console is removed, the stock transfer case needs to be removed. Support the stock drivetrain up by the transmission as you will need to remove the transmission crossmember and skid pan. After the skid pan is removed, you should be able to remove the driveshafts from the stock transfer case. If retaining the stock driveshafts, these can be left connected to the axles.

Remove the crossmember and then unbolt and remove the transfer case. Note: If you are able to lower the rear side of the drivetrain a bit, it will provide better access to the transfer case to transmission bolts. The stock transfer case shifter linkage also needs to be removed.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP

ASSEMBLY

Transfer Case End: Bolt the twin stick base to the transfer case with the 3/8"-16 socket head cap screws, use RTV silicone on the threads.

Thread the 1/2"-13 all thread completely into the twin stick base. Install the 1/2"-13 jam nut. Tighten the jam nut against the twin stick base.

Slide the extension tube and the extension tube bracket over the all thread and fasten with the 1/2"-13 serrated lock nut.

Remove one of the 5/8" jam nuts and slide the cable through the extension tube bracket. Loosely re-install the 5/8" jam nut to hold the cable in place. Remove the 1/4" nut from the cable end and discard. Slip the 303316 outer nut cap over the cable end and then thread the 303317 cable nut on to the 1/4-28 cable end. The cable nut must be set at a distance that when the cable end is inserted into the Atlas shift rail, the cable end bottoms out in the shift rail. The nut is then adjusted to the front face of the shift rail. Once the cable nut is adjusted correctly, slip the nut cap over the cable nut and onto the Atlas shift rail. Tighten the cap nut to retain the cable end to the Atlas shift rail. Use caution when turning the cap nut, making sure it does not turn the inner cable nut. Once the assembly is fastened together you should only see about 1/4" of the 1/4-28 threads coming out of the nut cap. Repeat this step on the second cable.

Once both cables are connected, the cable outer housing needs to be set to the cable mount bracket. Shift the transfer case into low range for this adjustment. The easiest way is to use a long punch and a dead blow hammer, set the punch (flat tip) on the nut cap and tap the punch lightly with the hammer. It should pop into the low gear ratio. Turning the yoke can confirm that you're in low gear. Once both shift rails are in low gear you can adjust the outer cable housing.

Loosen the large jam nuts on the cable. Apply some force on the outer housing of the cable pulling away from the transfer case. The cable is a 1" travel and the Atlas shift rail is .960". With the Atlas in low range and the outer housing of the cable extended entirely the other direction, you can now set the jam nuts to the extension tube bracket knowing that the travel of both components is correct. Repeat this on the second cable.

Shift the Atlas back into neutral so when you get to the shifter box assembly and handle orientation, it is easy to see the correct alignment.

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.



New shift rails with clearance holes drilled



support tube and bracket installed



Cable being installed through the bracket

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



Remove the 1/4" jam nut and install the nut cap over the cable.



Install the cable nut on the cable threads.



The cable should bottom out in the shift rail and the cable nut should be flush against the face of the shift rail.



Once the cable nut has been adjusted, slide the nut cap over the shift rail and tighten to retain the cable to the shift rail. Shift the transfer case into low range (shift rail pushed inward) to set the outer cable housing.



The outer cable housing now needs to be set. Pull the outer housing away from the transfer case. The inner cable should be fully extended.



With the cable fully extended in this direction you will now need to secure the 5/8" jam nuts to the bracket of the transfer case. Since the cable has a bit more travel than the Atlas needs, we recommend to thread on the circle nut(photo above) first to the bracket and then give it one addition full turn which will pull the outer cable housing back slightly. Then snug the front nut. Once both nuts are snug to the bracket, tighten them with a wrench. Before moving up to the shifter box shift transfer case back to neutral



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Link bar installation: The link block provides the option of moving the shifter cable connection point on the Atlas shift rail. Some transmissions are extremely tight on the tailhousing clearance to the rear output shifter rail of the Atlas. This block allow an off set of .500". The installation on the cable is basically the same as mentioned in the assembly instructions, with just a few exceptions. One each of the nut cap and cable nuts will not be used.



The link block nut should be installed to the shift rail. The cable should be installed to the block so that the threads are flush or slightly protruding through.

The front mount in the shifter kit has been machined for clearance on the link bar, and the 303307 cable support needs to be mounted like the photo shown. The cable is installed into the upper hole.



Slide the cable through the mounting support and then slide the block to the nut. Install the clevis pin and retain it with the cotter key.

This cable length should match the other cable on the front output. Thread the brass nut onto the shift rail and then follow the adjustment procedures on page 3 & 4.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



Stud bolts
installed for a
Jeep JK with the
stock rotation.



The Atlas is now ready to be installed. We recommend that the Atlas is shifter into gear. This will help line up the input splines of the Atlas with the output splines of the adapter during installation. The photo on page 4 (top right) show the rear output shifter into high range.

Install the unit and fasten with the 6 flanged nuts. Route the new cables up by the transmission. You will need to install the floor grommet over the new cables and this will require the hole diameter on the rubber grommet to be increased in size. Slip the cable through the grommet and then one at a time up into the JK console area.



Note: Make sure one of the cable is marked and you know if that one is connected to either the front or rear output. it is very easy to confuse which cable is what once you cant see the front of the transfer case.

Once the Atlas is Installed, you can re-install the crossmembers and connect the driveshafts.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



With the two cables coming up into the cab, the rear cable should be mounted to the shifter base closest to the passengers side and the front towards the drivers side using the cable lock tab (302501) and the 5/16 bolt. Once the cables are secured to the bracket, the bracket can be mounted to the floor board using the stock fasteners. Note: the tab that retains the cables looks exactly like the one on the front of the Atlas. We have put a drill mark on this part to identify it.



Install the cable connector ends so that the threads are flush.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



The shifter handles will need some pre-assembly before they are able to be installed into the shifter housing. The dark grey bushing get pressed into both sides of the lever base (bottom hole). There are 4 dowel pins that need to be installed into the base where the base connects to the handle. These are a light press in the base and a slip fit on the lever. Note: please notice that there is an offset to the lever bases, The photo (right) is the correct orientation to install them into the shifter housing. There is a black spacer that goes between the handle bases on the pivot bolt. If the bases are installed opposite of what is shown, they will hit the JK console.



You should also test fit the pivot bolt (shoulder bolt) through the grey bushing, they are a tight fit as you do the final install.



The handle base can now be coupled to the cable nut. The nut should slide onto the base from the side with the cable lined up with the handle groove. Once connected rotate the handle upright to the correct orientation. Note: the cable nut with the cable threads flush orientate the handle in a good location coming up through the console. If you want the handle angled further back or forward you can rotate the handle clockwise one turn for closer to the dash or counter clockwise for angled further back in the console. This is the most adjustment either way. We recommend the nut stay in the location as shown. Once both handle are connected and the base orientation is verified as the (top right) photo, they can be set into the shifter housing to install the pivot bolt.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



With the handles allied with the hole on the shifter housing, start the pivot bolt through the first handle. This is a tight push as it goes through the handle base bushings. Once the bolt is through the first handle, install the white bushing to space the handles apart and then guild the pivot bolt through the last handle. This may require some tapping on the bolt head to get it completely installed. Once through, install the 3/8 washer and nylon lock nut.



JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP

With the handle base cables connected and the shifter housing installed, you can put the console back in place. You should see the two bases with the dowel pins sticking through the console slightly.



Automatic and Manual transmission installs



Line the shifter handles with the dowel pins and install the 1/4-20 socket head bolts.

Install the shifter knobs using a torque wrench



JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



Install the shifter knobs and apply the shift stickers.



The new shifter has the proper clearance on the Jeep manual transmission movement in 1st and 2nd gear.

This shifter design does not require any adjustment. If the cable installation was followed at the transfer case as well as the shifter housing, the Atlas should be fully adjusted and ready to go.

JEEP JK ATLAS CABLE SHIFTER with a RUBICRAWLER or RIGHT DROP



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.

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