

SINGLE STICK ATLAS SHIFTER

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	303309-2	CABLE-SHIFTER 48" LENGTH 1" TRAVEL (Purple)
2.	1	302210	KNOB-SINGLE STICK (4H/2H/N/2L/4L)
3.	1	302225	ATLAS SINGLE SHIFTER HANDLE ASSY.
Items below are parts included with 302225			
	2	302205	clevis pin .625long.375 dia.
	1	302206	PIN HAIRPIN COTTER COATED
	1	302220	LEVER- ATLAS SINGLE STICK SHIFTER 5.5
	1	302221	HOUSING- ATLAS SINGLE STICK SHIFTER
	1	302223	BRACKET- ATLAS CABLE MOUNT SINGLE STICK
	2	302224	BRACKET- ATLAS SHIFT RAIL ACTUATOR
	2	303055	ROD END- ATLAS SHIFT RAIL
	2	303081	BUSHING- IGUS 1/2 X 1/2
	2	303312	BUSHING- IGUS 3/8
	2	303313	ROD END- FEMALE 1/4 -28
	1	340602	BOOT RING- ATLAS SINGLE STICK
	1	340605	BOOT- SINGLE STICK
	2	722510	BOLT 1/4-20 X 1.00" H.H.F.C.S.
	2	722514	NYLON LOCKNUT 1/4 -20 Z
	4	722546	SCREW-TEK HEX SELF DRILLING W/NEO #10- 16 X 1
	1	723703	NUT 3/8 -16 NYLOCK G5 PLT
	1	723735	WASHER 3/8 SAE FLAT PLT
	3	723741	BOLT 3/8 -16 X 5/8" HHFCS ZINC
	1	723773	SCREW 1/2 X 2 HEX SOCKET HEAD SHOULDER SCREW

Note; This shifter kit should only be used with an Atlas case built for the single stick shifter.

The shifter should be adjusted and installed to the Atlas before the transfer case is assembled into the vehicle. Once the shifting is adjusted correctly, the cable should be unbolted from the handle and the transfer case with the cable can be installed into the vehicle. It is hard to adjust the cable on the front of the transfer case once the transfer case is installed into the vehicle.

The Atlas should be shifted into neutral to install the shifter kit. See page 4

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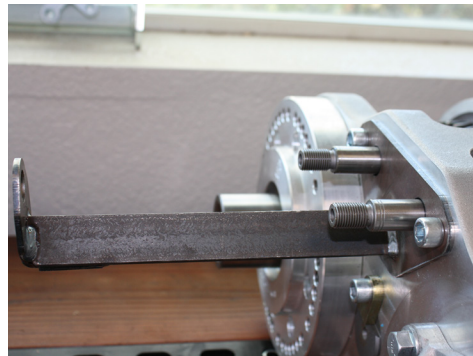
The single-stick shifter can be used on all new Atlas transfer cases and can also be retrofitted to any older Atlas transfer case. When retrofitting a single-stick shifter to an older unit, the existing transfer case linkage must be removed. This includes the twin-stick base mount, which is attached to the case with three socket head cap screws (S.H.C.S.).

After removing the old linkage, thoroughly clean the front of the transfer case. Installation of a new shifter block (Part No. 301515 or 301516) is also recommended.

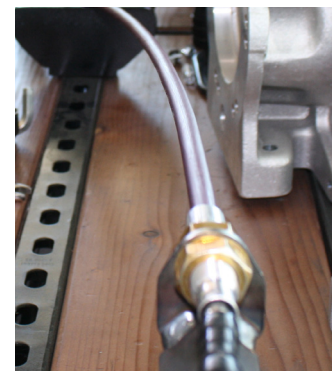
The new cable mount slides over the Atlas shifter rails and bolts to the transfer case using three new 3/8"-16 x 5/8"

hex head flange cap screws (H.H.F.C.S.). Apply a small amount of RTV silicone to the bolt threads before installation to prevent transfer case oil leaks. Torque the bolts to 35 ft-lbs.

Note: This shifter is compatible with both left-drop and right-drop Atlas transfer cases.

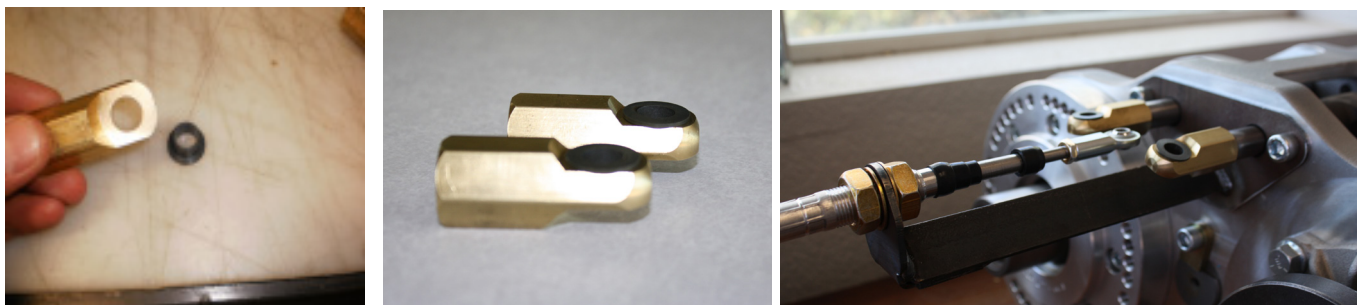


Install the cable through the bracket and loosely retain it with the 1" nut that was removed to allow it to fit onto the bracket. Install the rod end thread fully onto the cable.



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The new brass shift rail ends must be threaded onto the shift rails. The brass bushings feature a slight offset; refer to the photo below for proper orientation. Install the Igus bushings as shown in the illustration. The Igus bushings are designed to be a light press fit into the brass shift rail ends. Once the bushings are installed, thread the brass shift rail ends onto the shift rails. Thread each brass end fully onto the shift rail, then back it off one to two complete turns. When properly positioned, the Igus bushing should be oriented toward the top of the transfer case.



The actuator brackets are designed with a slotted hole on one side. Ensure that both actuator brackets are assembled symmetrically so that their orientation matches.

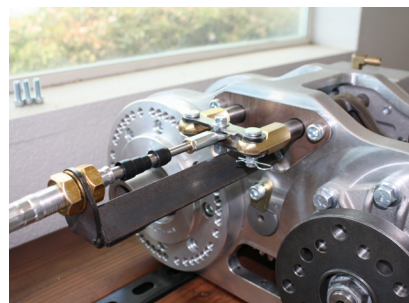
Install the shift actuator brackets onto the brass shift rail ends, positioning the slotted side on the shift rail closest to the transmission input side of the transfer case, as shown in the photo below.



The actuator brackets are a close fit within the cable mounting bracket. To simplify installation, position the lower actuator bracket first and secure it using the supplied 1/4"-20 bolt. Next, install the upper actuator bracket and fasten the two brackets together with the nylon lock nut. Once both actuator brackets have been assembled and tightened, install the clevis pins through the actuator brackets and secure each pin with the provided hairpin retainer.



At this stage, leave the cable adjustment loose. Final cable adjustment and tightening at the transfer case cable bracket should be performed after the handle assembly has been installed. This will ensure proper shifter alignment and full transfer case range of motion.



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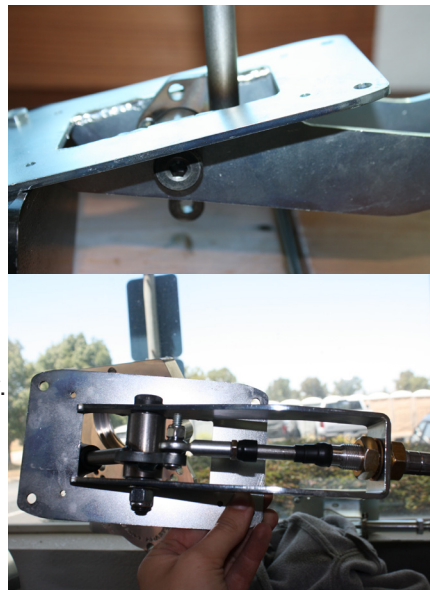
The shift handle assembly must be assembled before the final cable adjustments are made. Begin by installing the two Igus bushings into the shift handle. The bushings are designed to be a light press fit into the handle.

Once the bushings are installed, position the handle into the shifter bracket and secure it using the supplied dowel bolt, flat washer, and locking nut.

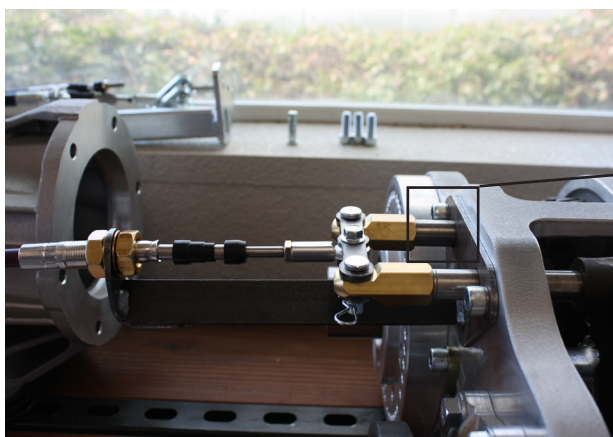
Remove one of the 1-inch cable jam nuts from the cable assembly and insert the cable through the mounting hole in the shifter box. Reinstall the jam nut and position the cable so that it is approximately centered within the shifter box. This will provide an initial adjustment range in both directions.

Next, install the second rod end onto the cable as far as the threads will allow. Tighten the jam nut against the rod end to lock it in position. Attach the rod end to the shift handle and secure it with the appropriate hardware.

The shift handle must be positioned at a 90-degree angle to the top plate of the shifter box. If adjustment is required, reposition the cable using the large cable jam nuts until the handle is perpendicular to the top plate.



With the Atlas transfer case placed in Neutral, the cable adjustment at the front transfer case bracket can be finalized. Adjust the cable nuts as necessary to align the shifter and then securely tighten the hardware.



Approximately 1" of
shift rail showing

After attachment to cable shifter housing, cycle through all shift points and adjust if shift lever hits the inside of the shifter housing.

Install boot retaining ring into supplied shifter boot. Attach shifter housing to vehicle floor using supplied 1/4" fasteners. Attach shifter boot to shifter housing using (4) supplied self tapping screws. Install shift knob jam nut and shift knob.