



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: 344020

New Item: (10/02)
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ATLAS LEFT DROP CABLE SHIFTER

KIT CONSISTS OF:

<u>No.</u>	<u>Qty</u>	<u>Part No.</u>	<u>Description</u>
1.	1	303305	CABLE BARREL
2.	1	303309	48" CABLE
3.	1	303121	JAM NUT 1/2"-13
4.	1	303313	1/4"-28 FEMALE HEIM JOINT
5.	1	340517-L	CABLE SHIFTER BRACKET
6.	1	340600	SHIFTER HOUSING
7.	1	340601	SHIFTER HOUSING MOUNT PLATE
8.	1	340602	SINGLE STICK BOOT RING
9.	1	340605	SINGLE STICK BOOT
10.	1	340607	SHIFT KNOB
11.	1	340610	BARREL RETAINER
12.	1	340611	CABLE SHIFTER HANDLE
13.	2	340612	CABLE SHIFTER BUSHINGS
14.	1	340613	1/4"-28 BALL JOINT
15.	1	340614	CLEVIS PIN
16.	3	340615	1/4"-20 x 5/8" BUTTON HEAD CAP SCREW
17.	1	340616	COTTER PIN
18.	3	720015	FLAT WASHERS FOR MOUNTING BRACKET
19.	1	722523	1/4" FLAT WASHER
20.	3	722531	1/4"-20 x 1-1/4" SHIFTER HOUSING BOLTS
21.	4	722542	#10 SELF TAPPING METAL SCREWS
22.	3	723720	3/8"-16 x 3/4" H.H.C.S. BRACKET MOUNTING BOLTS

SPECIAL NOTE:

We do not recommend flat towing vehicles with the Atlas 4 speed because of the planetary housing bearings and the additional needle bearing used in the Atlas. If you must flat tow your vehicle, than we recommend the drive shafts must be removed.

NOTE ON SPLINE ENGAGEMENT:

The Atlas 4 speed transfer case will not accept a positive transmission output shaft stickout. The transmission output shaft must be flush with the tailhousing. The shaft may need to be cut or a spacer adapter that we offer can be installed between the transfer case and transmission.

NOTE ON SHIFTING:

The planetary reduction portion of this box is a non-synchronized unit. **YOU MUST COME TO A COMPLETE STOP BEFORE SHIFTING THE PLANETARY.**

Manual Transmission Shifting Procedure: Stop vehicle. Shift planetary. If shift in unsuccessful, feather the clutch as you pull on the shift lever. The unit will slide easily into gear.

Automatic Transmission Shifting Procedure: Stop vehicle. Shift transmission to Neutral. Quickly shift the planetary lever. (If you pause, the transmission output shaft will accelerate while the planetary is between gears.) If the shift is not immediately successful, shut off the engine while still in neutral. Once engine is shut off, complete the shift. Then restart engine in neutral.

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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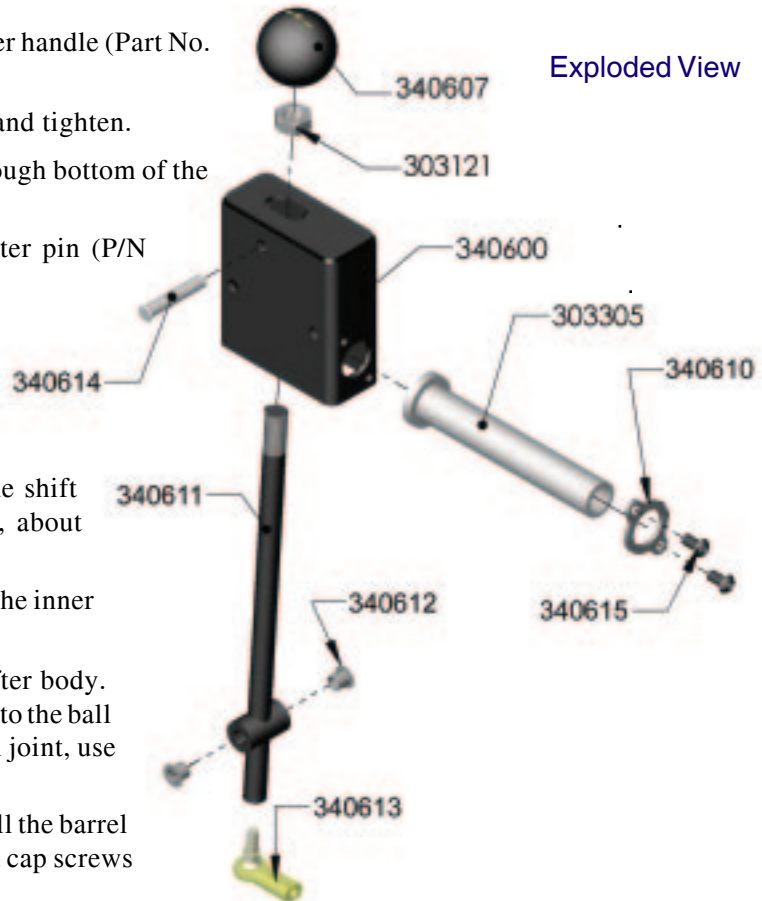
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ATLAS LEFT DROP CABLE SHIFTER

BENCH ASSEMBLY:

1. Press pivot bushings (P/N 340612) into shifter handle (Part No. 340611), using a mallet.
2. Thread ball joint (P/N 340613) into handle and tighten.
3. Slide the shifter handle (P/N 340611) up through bottom of the shifter body (P/N 340600).
4. Insert the clevis pin (P/N 340614) and cotter pin (P/N 340616) for the pivot of the handle.
5. Leave the shift knob and jam nut off until the shifter is mounted in the vehicle.
6. Slide the barrel retainer (P/N 340610) over the long side of the barrel (P/N 303305).
7. Remove the 2nd jam nut & washer from the shift cable housing and thread it into the barrel, about halfway.
8. Thread the 1/4"-28 jam nut completely onto the inner cable.
9. Insert the shift cable and barrel into the shifter body. Spin the shift cable to thread the inner cable into the ball joint. When the cable bottoms out in the ball joint, use the jam nut to lock it in place.
10. Seat the barrel into the shifter body and install the barrel retainer with the supplied button head socket cap screws (340615).
11. Mount the cable bracket (P/N 340517-L) to the transfer case using the included fasteners (P/N 723720 & 720015). BE SURE TO USE SILICONE ON THE BOLT THREADS TO SEAL THE TRANSFER CASE. (Torque bolts to 15-18 ft./lbs.)
12. Remove the 2nd jam nut and washer on the other end of the cable. Thread the cable/shifter assembly into the bracket on the transfer case.
13. Thread the female heim joint (P/N 303313) onto the cable until it bottoms out. Tighten jam nut against Heim joint.



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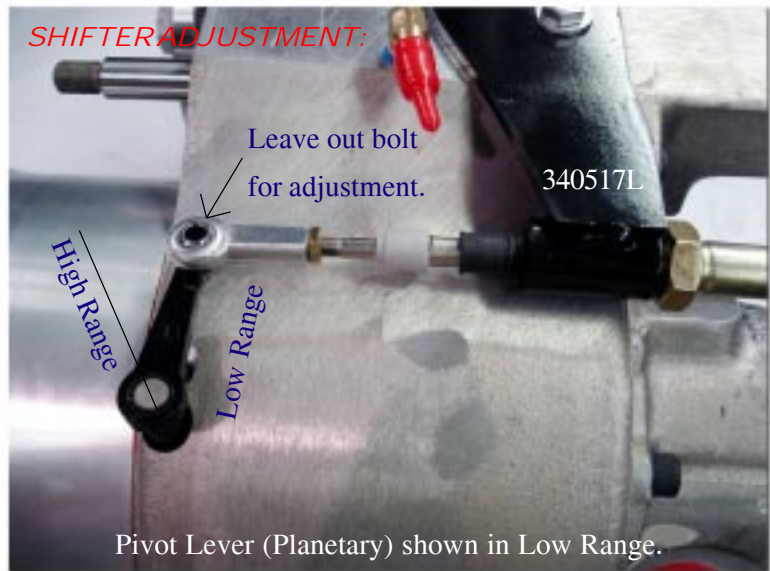
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ATLAS LEFT DROP CABLE SHIFTER

CABLE ADJUSTMENT:

1. Move the handle back and forth within the shifter body to the ends of its travel. Verify that the handle does not contact either side of the shifter body. If it does not, proceed to step 2. If the handle is contacting the shifter body, loosen the button head set screws and the barrel jam nut. Rotate the barrel independently to adjust the handle position. Recheck for interference and repeat as necessary.
2. Move the shift knob so it bottoms out toward the shift cable. This is the low range position. Move the Pivot lever (shown in the photo) to the low range position. Adjust so the hole in the heim joint is behind the tapped hole in the lever by threading cable/shifter assembly in or out of the cable bracket.



3. Move the shift knob to the other end of its travel. Using the pivot lever, shift the planetary assembly to high range. Check that the hole in the heim joint is forward of the tapped hole in the lever. Adjust as necessary by the method in step 2. Repeat steps 2 & 3 until the pivot lever travel is centered within the cable shifter travel. Adjustment is complete.
4. Thread the 1/4"-20 x 5/8" Button Head Cap Screw (P/N 340615) through the heim joint into the pivot lever.

OIL FILLING:

After installing the sight tube per the instructions in the Atlas manual, add 2-1/2 quarts of included oil while still on the bench. AFTER ADDING OIL AND BEFORE INSTALLING TRANSFER CASE INTO VEHICLE, TIP THE TRANSFER CASE ONTO THE INPUT SHAFT SO THAT THE REAR YOKE POINTS STRAIGHT UP. (This establishes the correct amount of oil in the planetary's separate reservoir.)

NOTE: We have included 3 quarts of Torco oil with the new Atlas 4 speed transfer case. The new 4 speed should only be filled with 2-1/2 quarts of fluid. Three quarts will cause the Atlas to vent out the extra fluid.

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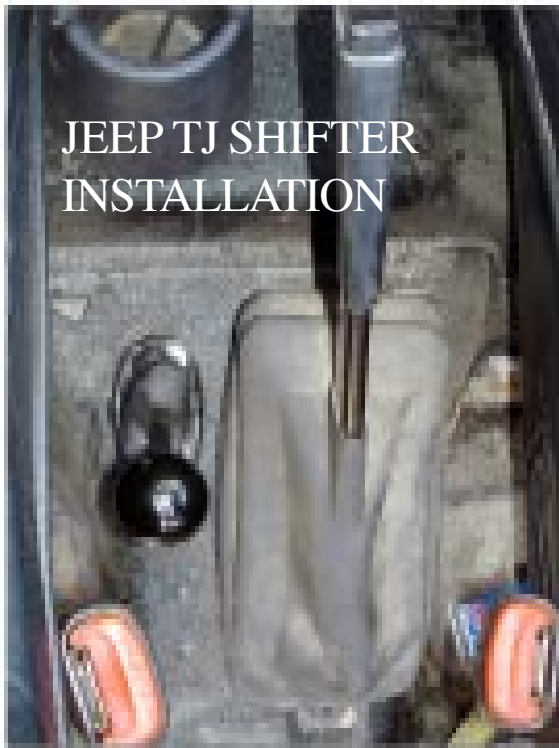
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IN VEHICLE ASSEMBLY:

1. Install the Atlas into the vehicle as per the instructions in the Atlas manual.
2. Route the cable so that it does not interfere with the driveshafts on other moving components. Also try to keep the cable away from the exhaust as much as possible.
3. Locate a open area on your floorboard for the new cable shifter.
4. Take P/N 340601 mount plate, and use it as a template to modify the floorboard for the mounting holes and shift handle access. *Note:* The floor board just needs three holes drilled and a small oval slot for the handle.
5. Slip the cable shift handle up through the new slot in the floorboard, and use the mount plate to retain the shifter housing. The floorboard should be sandwiched between our shifter housing and out mount plate.
6. Install the boot ring into the boot and use the two self tapping screws (front and back) to retain it to the mounting plate. Install the jam nut and knob.



ABOVE: THE STANDARD ATLAS SHIFTERS MOUNTED BEHIND THE PLANETARY CABLE SHIFTER IN A DODGE 2500.

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