

JEEPS ZJ

To complete an installation into the Jeep ZJ's, please review the general Installation Procedures For All Vehicles located in the Atlas application guide or the on the web page.

Tailhousing Adapters

On all of these late model Jeeps (if retaining your stock transmission), Chrysler used an oil weep hole on the stock adapter housing. This weep hole was located in one of two locations: on the adapter surface where the transfer case mates to the adapter, or on the bottom center of the casting near the crossmember foot. These weep holes were designed for the purpose of informing you when the seal in the tailhousing would fail. The Atlas does not always have the same input shaft length as your stock New Process transfer case to make contact to this seal and the Atlas is double sealed in the front of the transfer case to prevent any fluid transfer. Therefore; we highly recommend plugging the weep hole using RTV Blue silicone (if on the adapter housing face), or RTV Blue silicone and a sheet metal screw (when located near the crossmember foot). This will prevent any type of fluid leak when installing the new transfer case.

The Atlas is designed with a seal and a sealed bearing on the input shaft. The reason for this is to prevent mixing of dissimilar lubricants. Whether this is a stock transmission adapter or special transfer case adapter, gearbox contamination should not be a concern.

On some stock transmissions, most notably the Peugeot (21 spline), the AW4 (21 spline), and the late model Cherokee 23 spline transmissions A518 (46RH) & A500, you may have a spline engagement problem. If the splines bottom out before the two mating surfaces meet, you may be required to use a spacer adapter. **DO NOT force these components together.**

Speedometer

All of these vehicles utilized the same type of speedometer housing in the stock New Process transfer case. The Atlas was designed to accept the stock New Process speedometer housing. If your speedometer is correct (with reference to tire size and axle gear ratio) the stock speedometer will not change. If you plan on changing tires or gear ratio, please use the Speedometer Charts located in this manual. The speedometer housing is retained into the Atlas with a metal clip. When the housing is installed into the Atlas tailhousing, the speedometer housing should be rotated clockwise or counterclockwise until the speedo gear meshes with the Atlas output speedometer gear. The new seal kit you received with your Atlas should be installed to prevent any fluid leakage.

Transfer cases like the Rock Trac 241 use a sensor rather than a speedometer housing. The speedometer housing found on the NP231 will generate the same signal as the Rock Trac sensor. If you are replacing a Jeep transfer case that used a sensor and not a speedometer housing, than we can assist you with the correct parts to fit the Atlas transfer case and retain your stock speedometer.

Rotation & Oil

The two stock rotations of the New Process transfer case are 13 or 23 degrees. We recommend the Atlas be installed at either a stock or higher rotation. The recommended 2 quarts (2-speed Atlas) or 2-1/2 quarts (4-speed Atlas) of Torco oil will be used. As mentioned earlier in this manual, if the Atlas is overfilled it will purge the excess oil out the breather tube. You should also replace the stock breather hose and restrictive vent.

ZJ INSTALLATION

Jeep Cherokees known as the “ZJ” are a great platform for offroad use. They are comfortable enough to be driven daily, yet rugged enough to warrant the Atlas. The majority of the information in this section is based on a 1994 ZJ.

The '94 ZJ was equipped with a 5.2 liter V8, a A518 (46RH) transmission, Dana 30 and 35 differentials with a 3.73 gear ratio. First, the ZJ was raised enough to clear 32 x 11.50 tires, which took 4.5 inches of lift consisting of new springs, adjustable control arms, and longer shocks. Since the Cherokee is uni-body in design, the suspension had to be adjustable allowing us to dial in our pinion angles. This was crucial to obtain correct driveshaft angles when installing an Atlas transfer case. Because of this uni-body construction, any driveline vibration (due to improper driveline angles) will be very noticeable.

Shift Indicator Switch

The Atlas is designed to work with both the vacuum actuated front axles and the stock dash board indicator lights. Since these features were designed into the Atlas based around the YJ & TJ Jeep vehicles, installing the Atlas into the ZJ & XJ presented a few problems in this area.

The shifter indicator on many of the ZJs is a 4-prong connector that indicates 4WD High, 4WD Low, and part time 4WD. Unfortunately, the shift rail detents in the Atlas cannot provide the same features as your stock indicator did. You can use a Jeep TJ switch which will indicate when you are in 4WD, but not high and low range. On our application, we opted to not use any type of shift indicator light.

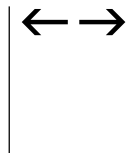
Crossmember & Body Modifications

The installation of an Atlas requires little or no modifications to the body or the crossmember. The installation that we performed actually improved driveline angles, crossmember clearance, and ground clearance. The photos that follow illustrate the Atlas with a shallower than stock rotation. On some XJs, a full crossmember/skid pan was used. If this is the case with your vehicle, you may have some of the same modifications as shown in the TJ section.

Front output shaft provides better crossmember clearance due to the positive offset yoke.

Shifter Installation

There are several configurations of Atlas twin stick handles. For the vehicles that we have installed the Atlas into, we have designed specific shifters for each application. The photos show the stock ZJ console with **Part No. 303005L** Atlas twin sticks installed.



Driver's side view (ZJ).

Because of the shorter overall design, the Atlas tucks up behind the crossmember. It reduces the high center problems on longer wheelbase vehicles.

ZJ twin sticks side-by-side in 2WD High.