

# JEEP YJ

To complete an installation into the Jeep YJ'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), 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.

## 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.

## YJ INSTALLATION

The YJ Wrangler was manufactured from 1987 to 1996. In those 9 years of production, Chrysler used several different transmissions. The overall length of the transmissions (the output shaft spline lengths and tooth counts) varied. We have researched several vehicles, each with a different transmission application. The information in this section is based on those applications. We have not seen every combination Chrysler offered; therefore, some additional modifications may be needed for your vehicle but not noted.

### Shift Indicator Switch

The Atlas is designed to accept the stock YJ shift indicator/modulator switch. This switch not only indicates the dashboard 4WD lights, but also activates the vacuum actuated solenoid for front axle engagement. When installing this switch into the Atlas, you must utilize the white nylon washer to obtain the proper spacing of this switch. (The .090" washer is installed with the indicator plug on the Atlas shifter housing). If your vehicle has a custom front axle, this switch can still be used - but for dashboard lights only. If you wish to omit this switch altogether, just make sure the indicator plug is secured in the shift indicator hole.

YJ sensor with  
.090" washer

### Shifter Installation

The Atlas twin stick is designed as a universal application. We recommend **P/N 303000L** or **P/N 344000** for the correct shifter configuration. This shifter protrudes from the face of the Atlas 5-1/2", but is easily shortened to other lengths. Both handles on the shifter are straight and fit in the vehicle side-by-side. As long as your YJ is not equipped with an aftermarket console, these shifter handles should have adequate clearance.

### Crossmember & Body Modifications

The stock skid pan of the Jeep Wrangler may need some modifications to allow proper clearance for the Atlas. These modifications will vary depending on the transmission length and the degree of rotation you install the Atlas. Modifications are normally done to allow the transfer case skid pan to fasten directly to the frame rails without spacers. The stock rubber mount should be retained in the stock location. By placing the skid pan into position, inspect for necessary clearance. The Atlas may interfere with certain portions of the skid pan. Mark these locations, remove the skid pan and modify the pan were necessary. We also use a drain plug which is located on the inspection cover of the Atlas. You may want to open a location on the skid pan to access this plug.

With the many rotation options available with the Atlas, most offroad enthusiasts desire more ground clearance. To obtain this additional ground clearance, the Atlas is usually installed in a shallower than stock rotation. Body modifications will normally be required. To avoid these modifications, a body lift can be used. These photos show an Atlas installed with the least degree of rotation *without* a body lift. **NOTE:** The shallower rotation may provide the needed clearance on the crossmember to avoid crossmember modifications.

The vacuum actuator to engage front axle.

Possible crossmember modifications

Possible crossmember modifications

The Atlas installed at a shallower rotation than stock.

Upper body clearance modification without a body lift and a shallower rotation than stock.