STOCK JEEP TRANSMISSION & BELLHOUSING ADAPTER Information
Jeeps 1941 & UP

Over the past 50 years, Jeep vehicles have been equipped with over 20 different transmissions. Many times it’s nearly impossible to identify the specific transmission by the year of the vehicle. This section is a condensed version of what is supplied in the Jeep Instruction Manual JP001. Listed on the following pages are the stock Jeep transmissions and the corresponding bellhousing adapters we manufacture.

(Note: The engine blocks referenced are as follows: Chevy includes all V8s, 229 & 4.3 V6. Ford includes 289, 302, 351W. AMC includes 258, 304, 360, 401, 4.2L, 4.0L, all of which have the same block bolt pattern.)

When starting a conversion, you must consider the following: (Listed as subheadings on the following pages)
1. Identify your stock transmission.
2. The strength of your stock transmission.
3. Jeep Tranny Retrofits - Can the stock AMC engine & transfer case be retained?
4. Bellhousing Selection Chart
5. Clutch linkage. (Manual transmissions only)
6. New clutch components. (Manual transmissions only)
7. Motor Mounts.
8. Cooling requirements.
9. Exhaust requirements.
10. Wiring harnesses.

IDENTIFYING THE STOCK TRANSMISSION:

Most of the early Jeeps transmissions 1941-79, used a long transmission input shaft. We manufacture adapter plates that make the stock Jeep transmission look just like a Chevy or Ford, enabling us to bolt a Chevy or Ford engine and stock bellhousing to this adapter plate. With these adapter plates, we utilize a new front bearing retainer to obtain proper bellhousing alignment. On Chevy bellhousings kits, we use a small index of 4.686”, (the larger index retainer can be substituted for the 5.125” Chevy bellhousing, P/N 716051). On Ford bellhousings, a bearing index of 4.848” is used.

T84 (1941-45) - Transmission case length of 6.750”. We do not manufacture any adapters to retain this 3 speed.

T90 (1946-72) - Transmission case length of 8.000”. T90 will normally be stamped on the case. It was used with both the 4 & 6 cylinder applications. If your T90 was originally fitted to a 4 cylinder, you will be required to purchase a 6 cylinder style input shaft, P/N 716014. This shaft has a gear tooth count of 18 teeth. On some Jeep (and Scout) vehicles, the input shaft that you are replacing may be 16 tooth. On these applications, you will also need to purchase a new cluster gear, P/N 716018.
P/N 712502 - Chevy bellhousing to T90
P/N 712505 - Ford bellhousing to T90

T86AA (1966-68) - Transmission case length of 8”. T86 will normally be stamped on the case.
P/N 712506 - Chevy bhsg. to T86
P/N 712508 - Ford bhsg. to T86

T14A (1968-75) - Transmission case length of 8.375”. T14A or 1302 is normally cast on the side of the case. This transmission was used up against two different engines; and two different input shaft lengths were used.
The description below designates the stock engine application:
P/N 712506 - Chevy bhsg. to T14A (replacing V6 engine)
P/N 712510 - Chevy bhsg. to T14A (replacing straight 6 engine)
P/N 712508 - Ford bhsg. to T14A (replacing V6 engine)
P/N 712511 - Ford bhsg. to T14A (replacing straight 6 engine)

T15A (1972-75) - Transmission case length of 10.000”. T15 or 1307 is normally cast on the side of the case.
P/N 712510 - Chevy bhsg. to T15A
P/N 712511 - Ford bhsg. to T15A
**T150** (1976-79) - Transmission case length of 9.250”. A casting number of 2603983 can be found on the case under the oil fill hole. This transmission bolt pattern is the same as a standard Ford. We manufacture two types of adapters for this application. The Ford bellhousing can bolt directly to the T150. No adapter is necessary.  
**P/N 712546** - Full Conversion bellhousing, Chevy engine to T150. (11” clutch recommended)  
**P/N 712527** - Adapter plate to accept a standard Chevy bhsg.

The next section covers both the **T98 & T18** transmissions. Since these two gear boxes are almost identical, we have grouped and listed the conversion components together.

**T98A** (1955-73) - This 4 speed transmission can be identified by a case length of 11.875”, and a casting number of T98. The shift cover is mounted on the top of the case with 6 bolts. This is an excellent transmission to mate to any V8. For the necessary adapter, you will need to determine your front input shaft stickout length. There are several various lengths and it is critical that you determine this measurement prior to ordering the necessary components for your vehicle.

**Jeep T18** (1965-79) - This 4 speed transmission has a case length of 11.875”. The casting number is T18, 1301, or shifter top cover casting T98. There are over 14 variations of this 4 speed transmission. These transmissions can have either a 4:1 or 6.32:1 1st gear ratio. This transmission is an excellent choice for Chevy and Ford conversions. The biggest problem that we have with this transmission is the various lengths of the front input shaft. To select the correct adapter, you will be required to determine your stock input shaft stickout length. **(Transmissions with long input shafts will not work in short wheel base vehicles)**.

In order to assist you in determining the necessary adapter plates for both the **T98** and **T18** transmissions, we have listed the adapters that correspond to the transmission stickout length. **The stickout length is usually 2-5/8” less than the O.A.L.**

<table>
<thead>
<tr>
<th>Stickout</th>
<th>O.A.L. Of Input Shaft</th>
<th>GM Kit Number</th>
<th>Ford Kit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-3/8”</td>
<td>10”</td>
<td>712528</td>
<td>712529</td>
</tr>
<tr>
<td>7-3/4”</td>
<td>10-3/8”</td>
<td>712512</td>
<td>712514</td>
</tr>
<tr>
<td>9-3/8”</td>
<td>12”</td>
<td>712521</td>
<td>712522</td>
</tr>
<tr>
<td>10-1/4”</td>
<td>12-7/8”</td>
<td>712517</td>
<td>712518</td>
</tr>
<tr>
<td>11-3/8”</td>
<td>14”</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>13-1/8”</td>
<td>15-3/4”</td>
<td>712516</td>
<td>N/A</td>
</tr>
<tr>
<td>13-1/4”</td>
<td>15-7/8”</td>
<td>712516</td>
<td>N/A</td>
</tr>
<tr>
<td>13-3/8”</td>
<td>16”</td>
<td>712516</td>
<td>N/A</td>
</tr>
<tr>
<td>14-1/8”</td>
<td>16-3/4”</td>
<td>712516</td>
<td>N/A</td>
</tr>
</tbody>
</table>

On any transmission that has a 17 tooth input shaft, you have the option of installing a new shorter input shaft. If you are using a T98 or T18 in a short wheel base vehicle, drivetrain length is crucial. These input shafts have a 17 tooth gear and allows us to use a 1/2” thick adapter plate. **Part No. 712512** (Chevy) & **712514** (Ford) are 1/2” thick adapter plates (thin design) that come complete with a new input shaft for your transmission.

<table>
<thead>
<tr>
<th>Part No.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>712528</td>
<td>Chevy bhsg. kit (input shaft stickout 7.375”, 1-1/16” 10 spl. (normally used in 1976-79)</td>
</tr>
<tr>
<td>712529</td>
<td>Ford bhsg. kit (input shaft stickout 7.375”, 1-1/16” 10 spl. (normally used in 1976-79)</td>
</tr>
<tr>
<td>712512</td>
<td>Chevy bhsg. kit (input shaft stickout 7.750”)</td>
</tr>
<tr>
<td>712514</td>
<td>Ford bhsg. to kit (input shaft stickout 7.750”)</td>
</tr>
<tr>
<td>712521</td>
<td>Chevy bhsg. to kit (input shaft stickout 9.375”)</td>
</tr>
<tr>
<td>712522</td>
<td>Ford bhsg. to kit (input shaft stickout 9.375”)</td>
</tr>
<tr>
<td>712517</td>
<td>Chevy bhsg. to kit (input shaft stickout 10.250”)</td>
</tr>
<tr>
<td>712518</td>
<td>Ford bhsg. to kit (input shaft stickout 10.250”)</td>
</tr>
<tr>
<td>712516</td>
<td>Chevy bhsg. to kit (13 to 14” input shaft stickout)</td>
</tr>
</tbody>
</table>

**AMC TH400** (1972-79) - Transmission case length of 24.500”. In 1971, this transmission was introduced in Jeeps; however, this early transmission used a cast iron adapter plate to fit this tranny to the AMC block. In 1974, the case was redesigned and eliminated the cast iron adapter. We manufacture an adapter to mate only the 1974 & newer transmissions to Chevy blocks.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>716133</td>
<td>AMC TH400 plate to Chevy block</td>
</tr>
</tbody>
</table>

**727 Torqueflite** (Jeeps 1976-79) - Transmission case length of 16.000”. Although rarely used within these years, it would have been found mostly in Jeep Wagons and pickups, and used with a V8 or straight 6 cylinder. The following adapters are not compatible with the 4 cylinder transmission model #904.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>716131-A</td>
<td>Chevy block (up to 1985) internally balanced</td>
</tr>
<tr>
<td>716131-B</td>
<td>Chevy block (up to 1985) externally balanced (400 small block)</td>
</tr>
<tr>
<td>716131-E</td>
<td>Chevy block (1986 &amp; up) (Some 727 transmissions, when coupled to a stock V8, may require a new torque converter)</td>
</tr>
</tbody>
</table>
SCOUT TRANSMISSIONS:

Torqueflite - On Scout vehicles that were equipped with the Torqueflite 3-speed automatic transmission, we offer a kit that will bolt a Chevy V8 to this automatic replacing the stock I.H. 304 or 345 engine. This kit comes complete with an adapter plate, crank bushing, and flexplate. This kit is not compatible with the small block 400.

P/N 712572-A Torqueflite to Chevy V8 (up to 1985)

Scout T18 & T19 - These Borg Warner 4 speed transmissions have the long 10-1/4” stickout with an 1-1/4” 10 spline input shaft. We have developed two kits to use these transmissions. The original clutch linkage will need to be modified and relocated forward from the firewall, which is the most difficult part of this particular conversion.

P/N 712530 - T18, T19 or T98 to Chevy adapter plate
P/N 712531 - T18, T19 or T98 to Ford adapter plate (new input shaft provided-17 tooth gear)
P/N CF165473S - Centerforce 11” Pressure Plate (recommended)

JEET TRANSMISSIONS:

Between 1980-86, the Jeep transmission clutch input shaft was designed shorter than the earlier year transmissions. This presented a problem with clutch & pilot bushing engagement when trying to use an adapter plate. For these year Jeep vehicles, we manufacture a full bellhousing. These bellhousings are designed to bolt directly to the stock 4 or 5 speed transmission and retain the stock clutch linkage. We utilize the original bearing retainer to align the stock transmission to a new bellhousing on Chevy or Ford engine conversions.

T176, T177 (1980-83)

Transmission case lengths of 10.250”. Casting number of 2604203. This transmission bolt pattern is the same as a standard Ford. We manufacture two types of adapters for this application. (Note: On some T177 transmissions, Jeep used a long input shaft. These adapters will not work on this application.)

P/N 712548 - Full conversion bellhousing, Chevy engine to T176 (11” clutch recommended)
P/N 712534 - Adapter plate to accept a standard Chevy bhsg. (with 4.686” index)

T4, SR4 & T5 (1980-86)

Transmission case lengths of 15.187”. These transmissions were used with the AMC 258 6 cylinder, AMC 150 4 cylinder, and the GM Iron Duke 4 cylinder. The input shafts on these transmissions are normally 1-1/8” 10 spline; however, in some 1986 applications we have found a 1” 14 spline. When converting to these transmissions, we offer two options.

P/N 712548 - Full conversion bellhousing, Chevy engine to T4, SR4 & T5 (recommended)
P/N 712533 - Adapter plate to accept a standard Chevy bhsg. (with 4.686” index)
P/N 712546 - Full conversion bellhousing, Ford engine to T4, SR4 & T5 (10-1/2” clutch recommended)

NOTE: When replacing the Iron Duke, no adapter is required. When replacing an AMC 4 cylinder and using the 712548 bellhousing, you will need to purchase a few additional items; Part numbers 716332 T/O arm boot, 716333 internal return spring, 716334 clutch release arm & 716336 slave cylinder.

904 Torqueflite (1984-86)

Transmission case length of 16.000”. This transmission was mainly found in the down-sized Cherokees coupled to either a V6 or AMC 4 cylinder. This kit should not be used on any transmission newer than 1986 due to a change in the torque converter.

P/N 716132-A Chevy block (1986 & up) to Torqueflite transmission
P/N 716132-B Chevy block (up to 1985) internally balanced to Torqueflite transmission

999 / 727 Torqueflite (1980-86)

Transmission case length of 16.000”. These transmissions can be found behind the 258 6-cylinder or AMC V8 engines.

P/N 716131-A Chevy block (up to 1985) internally balanced
P/N 716131-B Chevy block (up to 1985) externally balanced (400 small block)
P/N 716131-E Chevy block (1986 & up)
The transmissions used in Jeeps 1987 & UP changed once again. The indexing of these transmissions to the bellhousing was no longer done by a bearing retainer. Dowel pin alignment was then introduced. Along with this new type of indexing, Jeep also changed the design of their clutch mechanism. In these early year series Jeeps (1987-93), we found that Jeep used an internal hydraulic throw-out bearing design, then changed to an external design on 1994 & newer models. For these transmissions, we still manufacture a full bellhousing due to the overall length of the input shaft. When using these transmissions, it is crucial to identify the exact transmission and the type of linkage it is equipped with.

**AX4 & AX5**  
(1985-2002)  
The overall transmission case length is 22.500”. The output shaft of these trannys are a flush 21 spline in vehicles up to 1996, and then switched to a 1/2” stickout past the tailhousing in 1997 & newer Jeeps. They are normally found coupled to an AMC 4 cylinder engine. They use both an internal and an external slave cylinder. The conversion bellhousing we manufacture requires a new slave cylinder which is mounted externally. The clutch spline is 1"-14, so all conversions will require the use of a special clutch disc, Part No. 716104.

**AX4 & AX5**  
P/N 712565 - Full conversion bellhousing, Chevy to AX4 & AX5  
(Limited to a 1"-14 spline clutch & 153 tooth flywheel assembly)

**Peugeot 5 speed**  
(1987-89)  
The overall transmission case length is 24.000”. This transmission is also called BA10/15. The output shaft on this transmission is long 21 spline and is normally found coupled to an AMC 4.2L 6 cylinder engine. It always used an internal slave cylinder. The conversion bellhousing kit we manufacture provides a new internal slave cylinder. (Note: This is a very light-duty transmission.)

**Peugeot 5 speed**  
P/N 712566 - Full conversion bellhousing, Chevy to Peugeot 5 speed  
(Limited to a 10-1/2" clutch & 153 tooth flywheel assembly)

**AX15**  
(1989-99)  
The overall transmission case length is 24.000”. The output shaft on this transmission is normally a long 23 spline. It is normally found coupled to an AMC 4.0L high output 6 cylinder engine. It uses both an internal and external slave cylinder. The conversion bellhousing we manufacture requires a new slave cylinder mounted externally. In 1997, the pilot diameter of this transmission was increased to .750”

**AX15**  
P/N 712567 - Full conversion bellhousing, Chevy to AX15  
(Recommended to use a 10-1/2" clutch & 153T flywheel assembly)

**AX15**  
P/N 712543 - Adapter plate fitting the AX15 to a Ford hsg. (with a 4.848” index)

**Torqueflite 999 (30RH & 32RH)**  
(1987-2002)  
The overall transmission case length is 16.000”. The output shaft on these trannys are a flush 23 spline. They are normally found coupled to an AMC 6 cylinder engine. Transmission identification numbers are stamped on the left side of the case just above the oil pan gasket surface.

**Torqueflite 999 (30RH & 32RH)**  
P/N 716131-A Chevy block (up to 1985) internally balanced  
P/N 716131-B Chevy block (up to 1985) externally balanced (400 small block)  
P/N 716131-E Chevy block (1986 & up)

**NV3550**  
(2000-02)  
This is the newest transmission used in TJ Wranglers equipped with the 4.0L 6 cylinder engine. This tranny has a case length of 16-3/4”. The bellhousing indexes to this transmission with a dowel pin alignment. It has a 1-1/8” 10 spline input shaft, and a pilot tip diameter of .750”. The output shaft of this transmission is 23 spline. The shifter handle location is 12” from the face of the transmission to the center of the shifter handle.

**NV3550**  
P/N 712591 - Chevy V8 to NV3550, full conversion bellhousing  
(Recommended to use a 10-1/2" clutch & 153T flywheel assembly)

**NV3550**  
P/N 712544 - Ford Engine to NV3550, adapter plate

**Aisin AW4**  
(1989-2000)  
This transmission is an overdrive automatic similar to the GM 700R tranny. The transmission output shaft was both 21 & 23 splines. Due to the complex computer controls, we do not offer any adapters to retain this transmission with a new engine.

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**STRENGTH OF THE STOCK TRANSMISSION:**

Using a bellhousing adapter is usually the easiest and least expensive way of converting to a new engine. When considering the use of either a stock manual or automatic transmission, strength and durability should be the first area of concern. The stock transmissions were designed to handle the horsepower and torque of the stock engine that the vehicle was equipped with. Having this in mind, consider your driving habits, tire size, and the intended use of the vehicle. (i.e. A vehicle originally equipped with a 4 cylinder engine and 3 speed tranny many not be suited for a “heavy-footed” high horsepower V8). You may incur more expenses in the long run if your transmission is not adequate to handle your engine choice. Common sense should be used in this regard.