

Jeep Transfer Case Identification Guide

Note: This article does not cover every transfer case ever installed in a Jeep, but instead highlights the most popular used throughout the years. There is a lot more information available about each of the transfer cases listed below, as such this article is written to give you an overview of each. This information was compiled to give you some background on a few of the more popular transfer cases, and help you identify them should you stumble across one in a wrecking yard.

Spicer/ Dana 18:



The Dana 18, as it is commonly referred, is easily identified as it has both front and rear outputs offset to the passenger side of the Jeep. It also has 2 shifters one for high and low, the other to engage/disengage 4-wheel drive. There are 5 different varieties of the Dana 18 transfer case. The earliest versions have a 2.98:1 low range and smaller intermediate shaft while the later versions have either a 2.42:1 or 2.46:1 low range and larger intermediate shafts. The early versions had a 3" locating bore in the rear while the later cases had a 4" locating bore. All of the Dana 18 cases are cast iron. Dana 18's are typically noisy transfer cases as the offset rear forced all the gears to spin while in 2wd or 4wd. Many of the Dana 18 transfer cases were also fitted with the Warn overdrive attached to the rear via the PTO port. The overdrive also adds another shifter to the mix and makes it easy to spot a Dana 18 with the overdrive unit. The Dana 18 began its life during WWII in the MBs and GPWs and continued service until 1971 in all varieties of Jeeps both Military and civilian.

Dana 20:



The Dana 20, a replacement for the Dana 18, was first used in Jeep trucks in the early 1960's but didn't arrive in the CJ's until 1972. It has also seen action in Scouts, early Bronco's and even some early Chevy Blazers. It shares the same cast iron case as the last versions of the Dana 18 with the 4" bore and passenger front output but has a centered rear output. The Dana 20 also differs in that it has a 2.0:1 low range and single shift lever. The centered rear output allowed for a straight through design, and made the Dana 20 much quieter than the Dana 18 it replaced. It was referred to in its early years as a "silent type" case. Because of the straight through design, the Dana 20 also tended to wear less than the Dana 18. Dana 20 transfer cases are very strong, and there are numerous aftermarket parts available to increase its strength. Dana 20 transfer cases were found in the following Jeep vehicles: 1962-1979 full sized Jeep trucks, 1967-1973 Commandos, and 1972-1979 CJ-5, CJ-6 and CJ-7.

Quadra-Trac / BW 1305/1339:



This Jeep transfer case built by Borg Warner is commonly referred to as the Quadra-Trac. Jeep used the Quadra-Trac in lieu of the Dana 20 transfer case behind Jeeps that used the TH 400 automatic transmission from 1973 to 1979 in CJ's, Jeep Trucks and Cherokees. The Quadra-Trac used a passenger side front and rear output. The Quadra-Trac transfer case was the first Jeep transfer case to use an aluminum case and chain drive. It was also the first Jeep transfer case to use a vacuum selector switch instead of a direct linkage lever. The vacuum actuator switch was normally located in the glove box. It is important to note that although the Quadra-Trac transfer case was a rather quirky design during its time, it was revolutionary and led to the design of many of the transfer cases in use today. Many off-road racers used the Quadra-Trac transfer case in their race trucks during the 1970's and early 1980's with great results. The Quadra-Trac transfer case had no provision for chain adjustment, so chain replacement was required. There were 2 versions of the Quadra-Trac, the BW 1305, which had no low range, and the second version, the BW 1339 that had a low range of 2.57:1. Many Jeep owners swap out the Quadra-Trac for the Dana 18 transfer case as the two share the same offset and drop allowing the use of the stock axle assemblies.

Dana 300:



The Dana 300 is perhaps the finest of all the Jeep transfer cases. Its cast iron case, helically cut gears, straight through design and low range of 2.62:1 make it the most sought after of all the early Jeep transfer cases. The Dana 300 featured a centered rear output and a passenger side front output. A 1.25" intermediate shaft and a 30-spline input gear make the Dana 300 one of the strongest of all the Jeep transfer cases. There were two different versions of the Dana 300 the early version in 1980 used a shorter rear output yoke, while the later versions were an inch or so longer. The Dana 300 transfer case was only used in Jeep CJ's from 1980 to 1986. The Dana 300 is probably the most widely supported Jeep transfer case by the aftermarket. You can upgrade just about every component in the case, from low range gears and output shafts, to twin stick shifters. It is also interesting to note that the Advance Adapter's original Atlas T-Case was built based upon this model. This is by far the easiest of all Jeep transfer cases to upgrade.

NP 207:



The NP 207 is one of the weaker Jeep transfer cases, but can be upgraded. The NP 207 has an aluminum case and chain driven planetary reduction. Thankfully the NP 207 was installed behind some of the weakest Jeep power trains every used. It featured a 2.60:1 low range and a straight through design high range, but featured a driver side front output. It was used in one year of the Jeep YJ Wrangler 1987, and in the early XJ Cherokee's from 1984-1987.

NP 208:



The NP 208 is similar to the NP 207 as it has an aluminum case and chain driven planetary reduction. It uses a 23-spline input shaft and has a driver's side front output. The NP 208 has a low range of 2.62:1 and features a straight through rear output. It can be identified by a silver tag on the rear that reads "New Process Gear Model 208". It was used in full sized Cherokees from 1980-1983 and in Jeep trucks from 1980 to 1987. The NP 208 was the Command Trac option for the Jeeps of this period.

NP 219:



The NP 219 was an option in 1980-1982 full size Jeeps. It functions much like the early Quadra-Trac and has been nicknamed the “fake” Quadra-Trac as New Process Gear and not Borg Warner built it. It uses a viscous clutch assembly and vacuum actuation. Not many of these are still in use, rebuilt parts are getting hard to find, and the overall strength is not that great.

NP 228 and NP 229:



These two transfer cases are perhaps the weirdest ever installed in a Jeep vehicle. The NP 229 used a vacuum 2wd/ 4wd switch on the center console and had a shift lever that read H-N-L. Both models featured aluminum cases and chain drive. Early models of the NP 229 featured a lock out feature to keep the transfer case from being engaged while the vehicle was moving. This was necessary because the viscous coupler could be damaged if the vehicle was moving the slightest bit. The NP 228 and NP 229 were used in 1984- 1987 behind an AMC 4 cylinder in XJ Cherokees and XJ Wagoneer's and in 1982-1991 full size Jeeps as the Select-Trac option.

NP 231/NV 231



Once known as the NV 231 and then the NP 231, these two transfer cases are basically identical and share interchangeable parts. Nowadays this transfer case is simply labeled the 231J. The 231J features an aluminum case, chain drive, a driver side front output and centered rear output. It has the lowest low range gear ratio of all Jeep transfer cases at 2.72:1, with the exception of the NP241OR (more on that later). The major variations of the 231J-transfer case are the input gear which can be found in 21 and 23- spline and a short, medium and long versions of each. The 231J is a very strong transfer case and can be found in a variety of Jeeps since its introduction in 1988. The 231J transfer case is strongly supported by the aftermarket and can be easily upgraded. It can be found in XJ Cherokee's, MJ Comanche's, and YJ Wranglers as the Command Trac transfer case. It has also been the Command Trac transfer case in the ZJ Grand Cherokee since the ZJ's introduction in 1993. The new TJ Wrangler continues to use the 231J except in the Wrangler Rubicon.

NV 147

The NV 147 was offered as Quadra-Trac I; a no cost option on 2004 WJ Grand Cherokees. This is a full time 4WD system that does not offer a low range.

NV 242



The NV 242 can be found in XJ Cherokees and ZJ and WJ Grand Cherokees where it is commonly known as Selec-Trac. It is a chain driven aluminum cased transfer case and it offers a wide range of driver selectable options, including 2wd Hi range, full time 4wd, and part time 4wd high and low range. Its rear output is centered and front output is to the driver's side. Although not as strong as a 231, it is still plenty stout for the Jeeps it was offered in.

NV 247/249



Available on ZJ and WJ Grand Cherokees as Quadra-Trac II. This full time four wheel drive system offers a neutral and low range (2.72:1). Under normal driving conditions most torque is applied to rear axles but when slippage is detected a georotor pump engages a disc clutch to route power to the front axles. When coupled with Jeeps Vari-Loc axles the entire system is called Quadra-Drive instead of Quadra-Trac II. The NV 247 can be problematic and expensive to repair and is not one of the most popular transfer cases. Many Jeeps choose to replace this transfer case with a more conventional system when they decide to modify their ZJ or WJ.

NP 241OR Rock Trac



This is the latest and greatest in Jeep transfer case technology. Jeep finally listened to Jeep owners and the aftermarket, and gave the consumer the transfer case they have been building from the 231J for years. The 241 OR features 4.0:1 planetary reduction a heavily ribbed and reinforced aluminum case and a fixed yoke rear output. The front drive is chain driven and offset to the driver's side while the rear output is centered. The 241 OR is only available in the Jeep TJ Rubicon. This transfer case was originally designed to withstand the torque output of the Cummins Diesel, as such is one of the strongest ever installed in a factory Jeep.

Photos Courtesy of Avtograd, DaimlerChrysler