

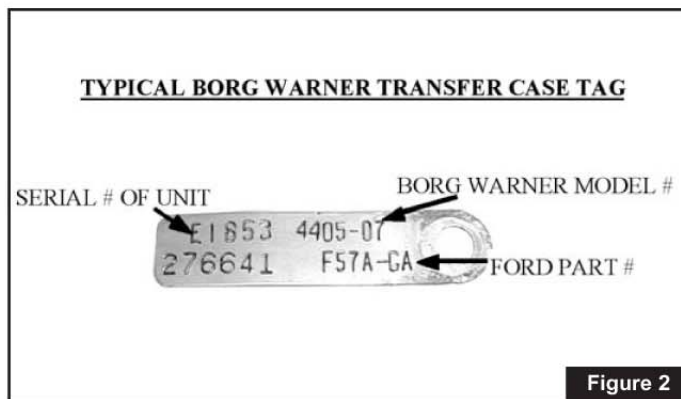
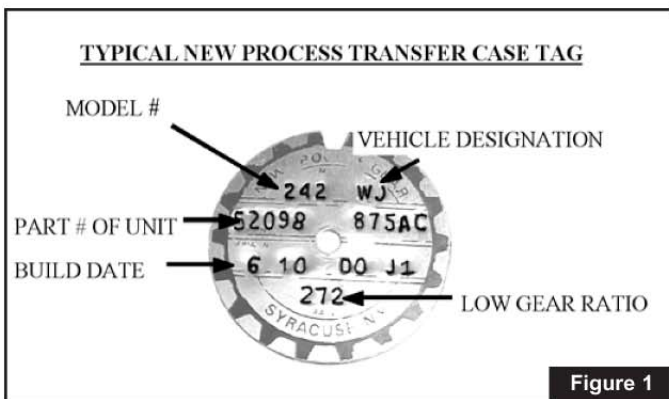
Transfer Case Identification Guide



by Mike Weinberg, President,
Rockland Standard Gear Inc.

Standard transmissions, which once were found in 100% of all cars and trucks produced, now occupy 18-20% of the overall US market. Transfer cases, which once occupied only a fraction of the market, have grown exponentially. Fueled by the

dominance of SUV's and the great expansion of the light truck market, the greatest growth in the gearboxes is in transfer cases. It is easy to predict the continuation of this trend as manufacturers create new technology to make more passenger cars all-wheel-drive.



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These “cross over” vehicles will continue to grow as the public demands better handling and traction year round.

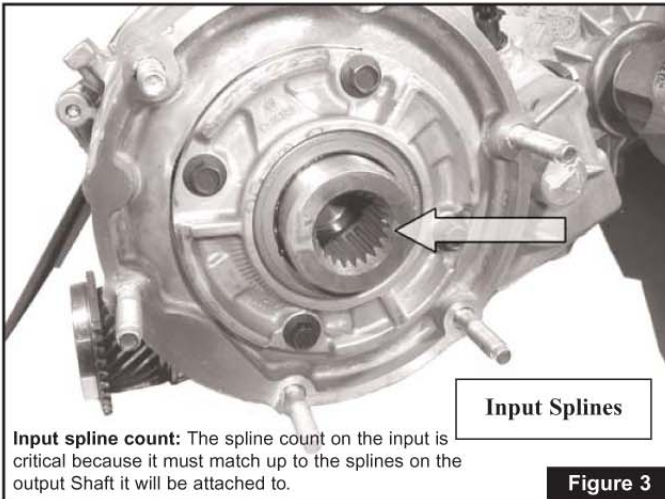
In the 60s there was only a handful of transfer cases used by the American carmakers. Typically of cast iron construction and heavy, they were bypassed after the energy crisis of the 70s made fuel economy and weight savings a high priority. Today, there are over 40 different models of transfer cases of American manufacture plus a number

of offshore units.

The two major transfer case manufacturers are Borg Warner Torque Transfer Systems, and the New Venture Gear Co. New Venture Gear was a joint venture between Daimler Chrysler Corporation and GM. This deal was recently dissolved, but it consisted of the New Process Gear Division of Chrysler joining with the Muncie Division of GM to produce manual transmissions and transfer cases. Any

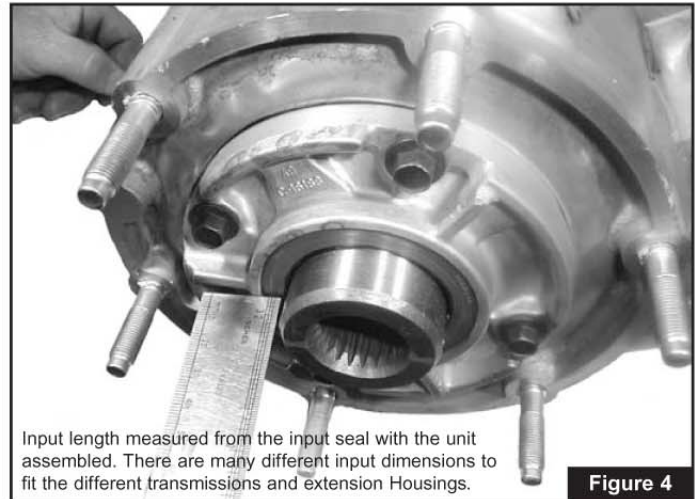
transfer case that was built by New Process Gear will be included in the New Venture transfer case line for purposes of this article.

One of the greatest problems facing the transmission rebuilder and parts suppliers in the last decade or so is the tremendous proliferation of new units. The transfer case is no different, with a number of new units appearing annually. Adding to the confusion is the fact that a great number of transfer case



Input spline count: The spline count on the input is critical because it must match up to the splines on the output Shaft it will be attached to.

Figure 3



Input length measured from the input seal with the unit assembled. There are many different input dimensions to fit the different transmissions and extension Housings.

Figure 4

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Jeep Transfer Cases



- 231J Command Trac
- 242J Select Trac
- 247J Pump Coupler AWD
- 249 J AWD

Rockland Standard Gear can custom fit all of these transfer cases to any TJ, YJ, ZJ, WJ, XJ & KJ model

Ford Transfer Cases



All Ford Transfer Cases are Remanufactured with the Latest O.E. Borg Warner Components

*Includes New Morse Chain
Models Available: 1350, 1354, 1356, 4404, 4405, 4406, 4407, 4410, 4411, 4416

GM Transfer Cases



All GM Transfer Cases are Remanufactured with the Latest O.E. Components with Updated Clutch Packs to Eliminate Chatter Problems

* Includes New Morse Chain
Models Available: 136GM, 226GM, 246GM, non-clutch style 231C-263GMXHD

Dodge Transfer Cases



All Dodge Transfer Cases are Remanufactured with O.E. Components

• Durango RT – Converts Full Time AWD to Select Trac or Command Trac
* Includes New Morse Chain
Models Available: 231D, 231DHD, 241DL, 241DHD, 242 Select Trac

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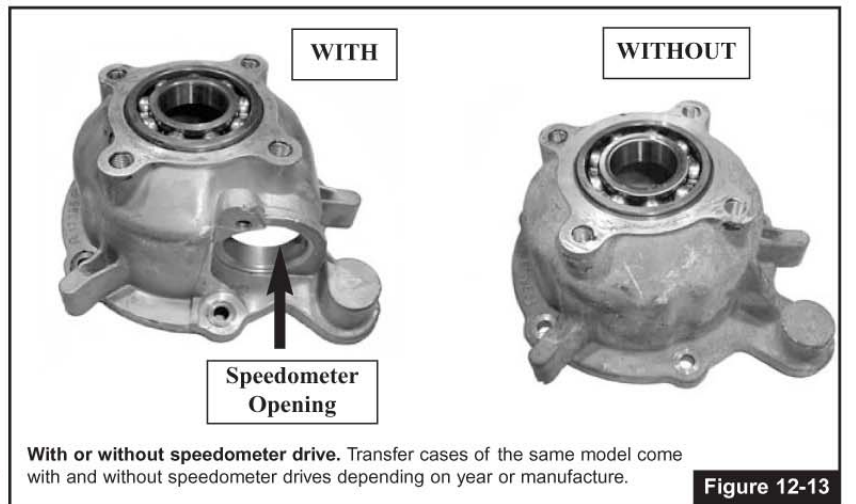
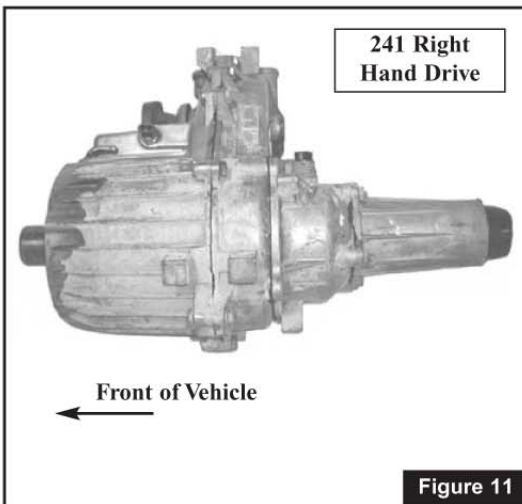
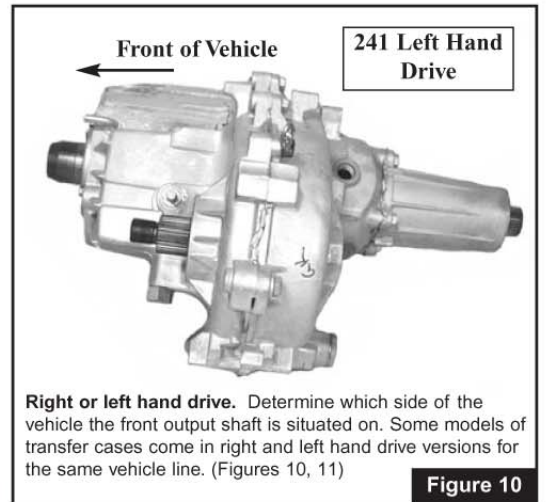
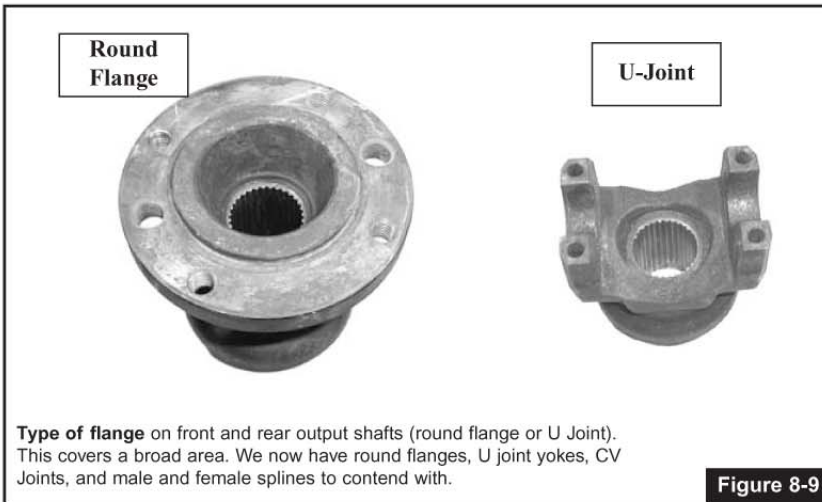
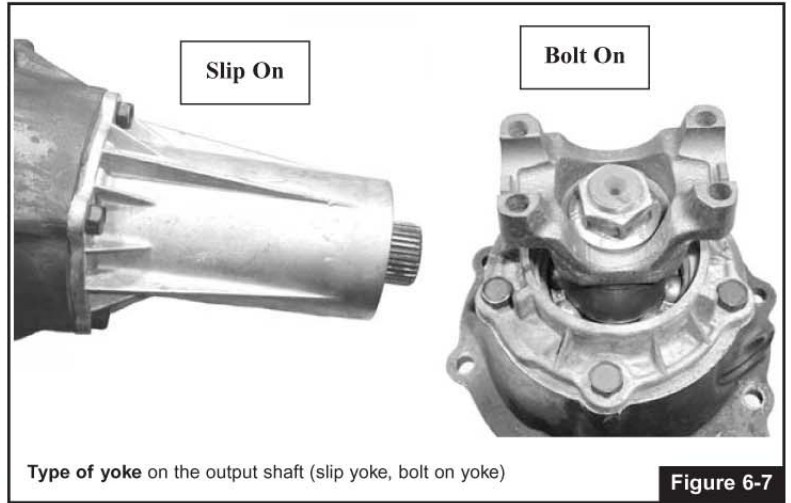
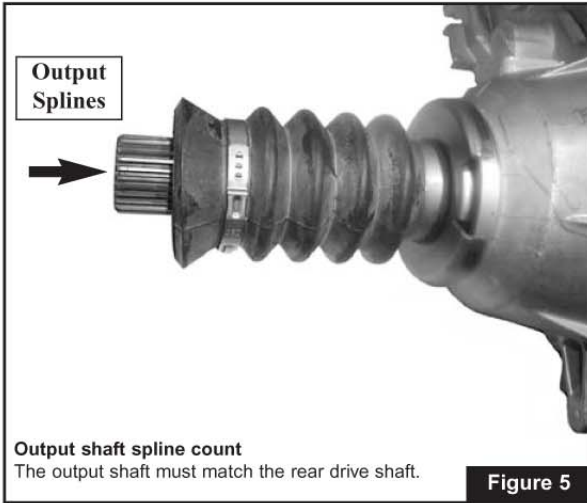
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models cross over multiple car lines, and while the basic design is the same, there are numerous variations that are model specific. For reasons unknown many people in the repair industry think that one size fits all. For example, the NV231 transfer case is found in Dodge, Jeep, and GM vehicles. It is easy to realize that a Jeep 231 will not bolt up

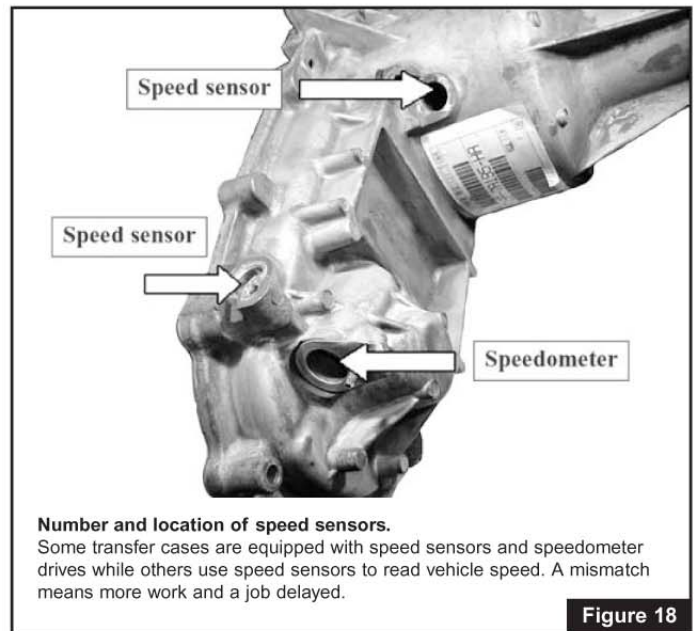
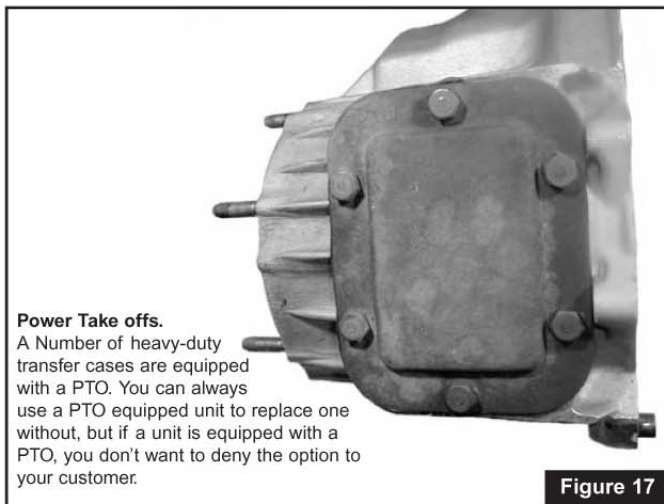
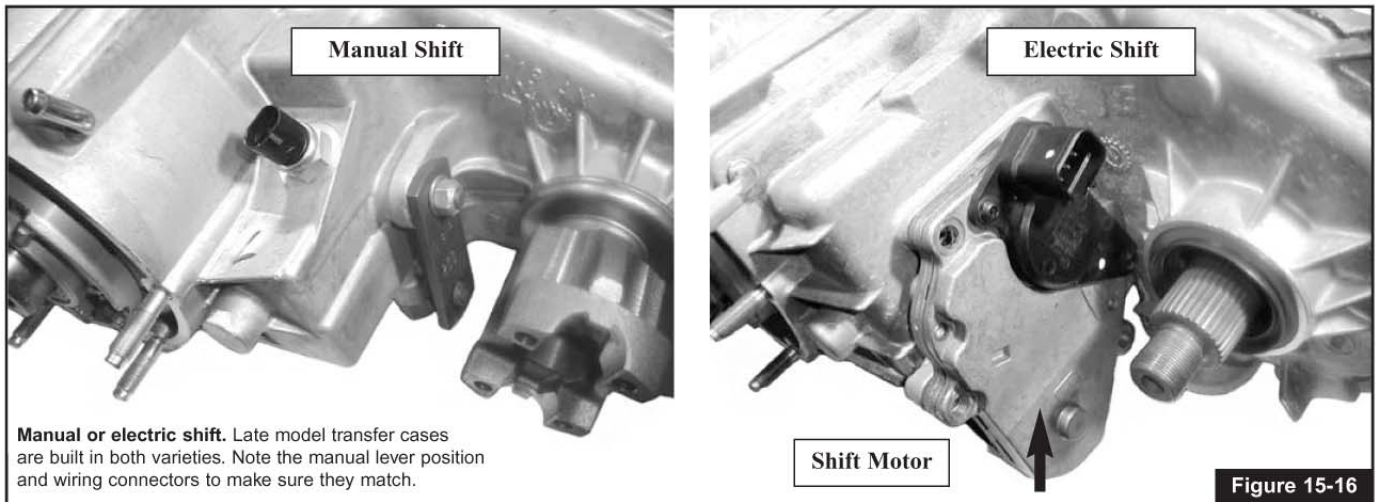
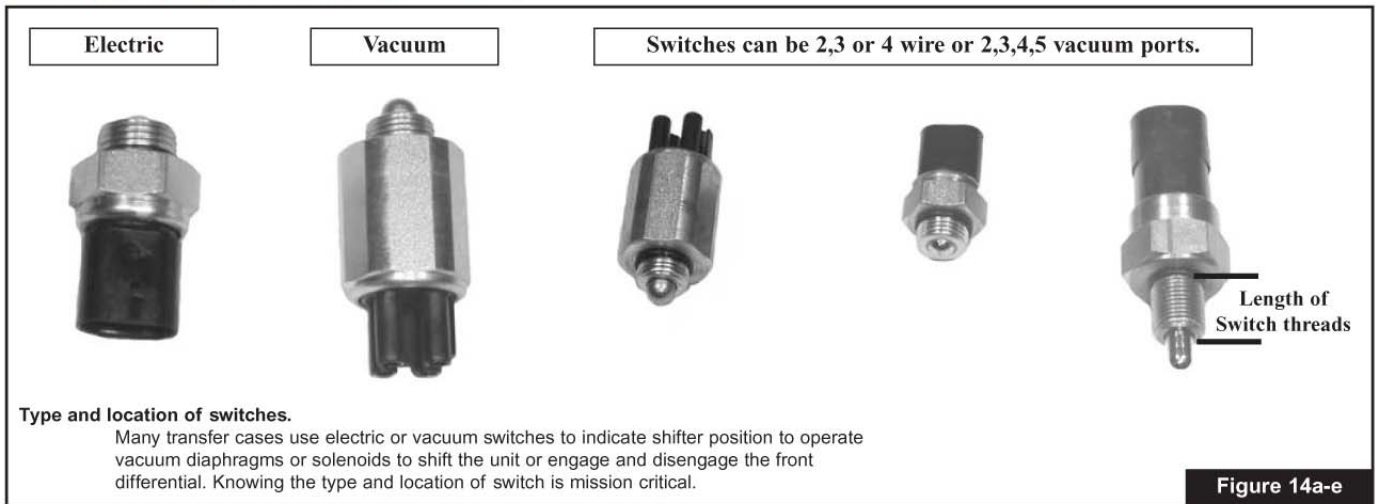
to a GM powertrain, but most shops don't realize that there are 12 different variations of the 231 found in Jeeps. Add 6 more for GM and 11 models for Dodge and we have 29 models of the 231 transfer case that can find their way into your shop. The intent of this article is to explain the differences between these variations, so that you can obtain

the correct information when ordering parts or a unit. Again, for reasons unknown, a great many shops resist answering the questions that the parts supplier needs to make this one-stop shopping.

Tag and Vehicle Identification

It is absolutely necessary to note as

Transfer Case Identification Guide



much information as possible about the vehicle. Year, production date, engine size and type, and model of transmission are all vital pieces of information. Next we must look at the transfer case

ID tag. Typical ID tags are shown here (Figures 1 & 2) with an explanation of what the information means. Record this information on your work order along with the previously gathered

vehicle specs. On late model units you will find barcode decals on the cases with OEM part numbers attached.

Transfer Case Identification Guide

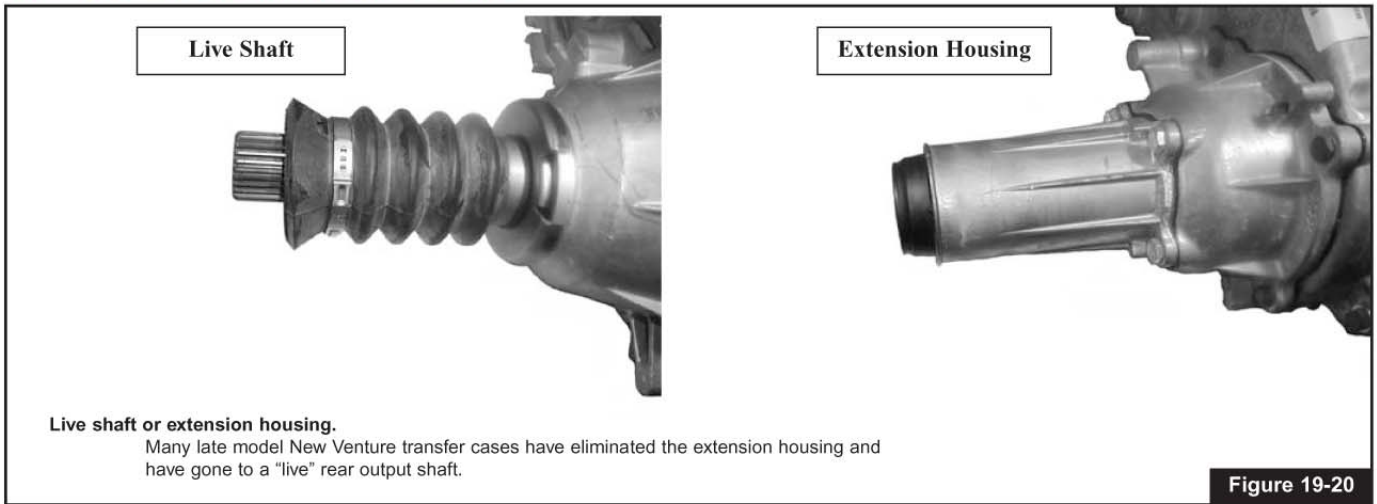


Figure 19-20

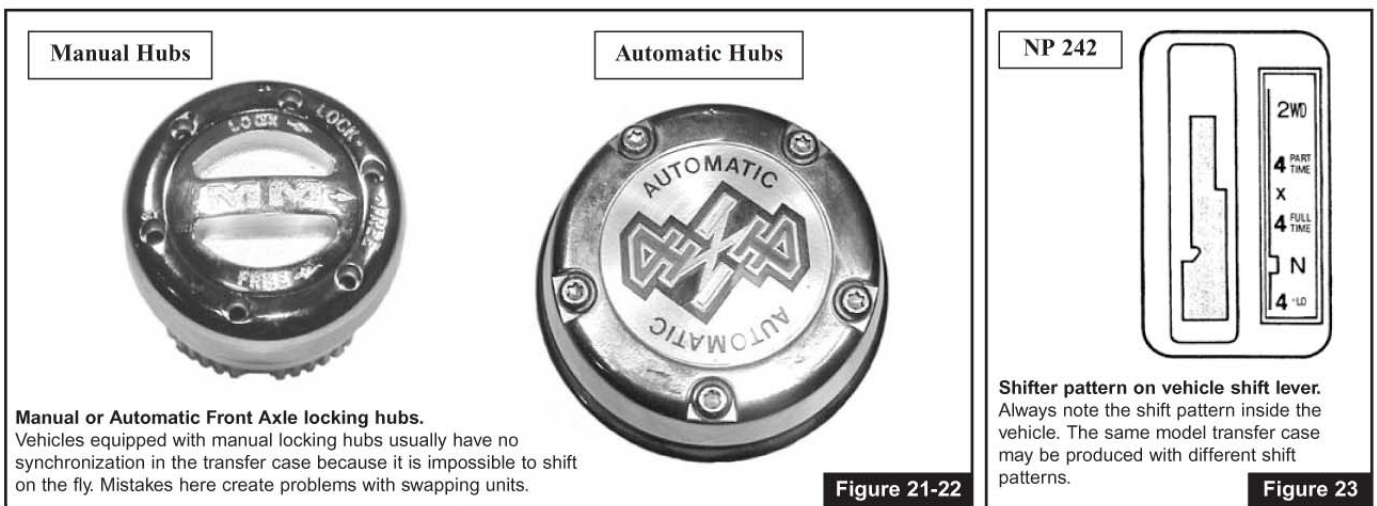


Figure 21-22

Figure 23

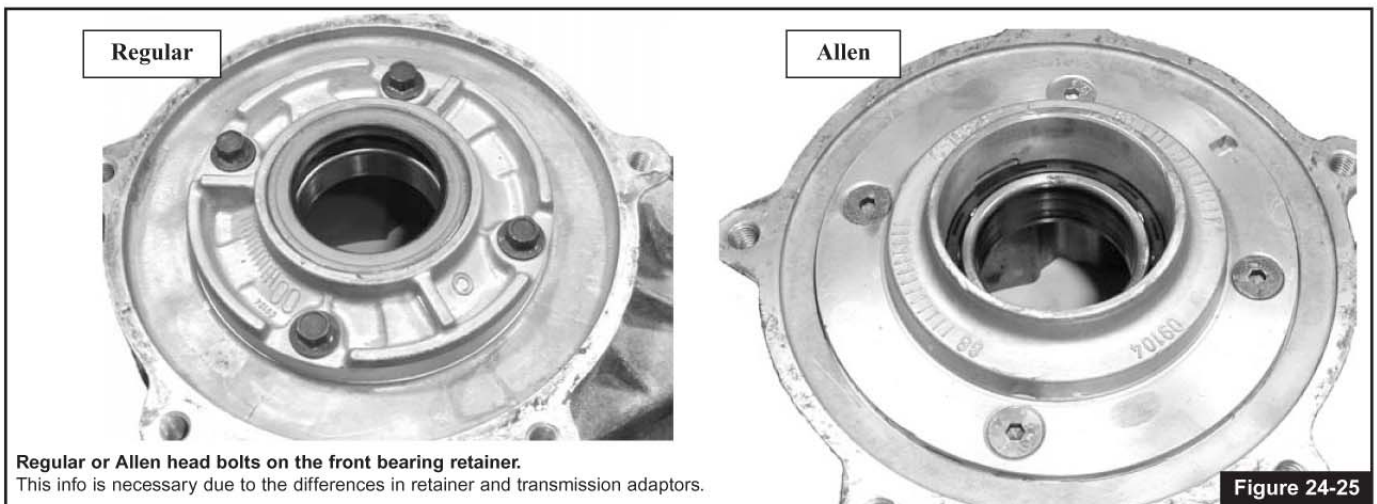


Figure 24-25

Figures 3 through 25 show the main differences in transfer cases that you must be aware of to handle these units like a pro.

Next we will go through all the different areas on the transfer case that can affect positive ID of the unit. This information is necessary because ID tags may be missing, unreadable or wrong! Never forget that someone before you may have cobbled together something from used parts and the tag may have come from another unit. Many a shop has found itself involved in a nightmare because a previous owner took it to the butcher shop before it got to you. You know the guys I mean... "if it's close we will make it fit, we don't worry about warranty after we get the money, it will be some one else's headache."

Figures 3 through 25 show the main differences in transfer cases that you must be aware of to handle these units like a pro. Not all of these areas apply to every transfer case, but making a check list will ensure that you get the right parts or the right unit for your application.

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| TRANSFER CASE | APPLICATION | YEAR | NOTES |
|---------------|---|-----------|--|
| NP203F | F150, F250, Bronco | 1973-79 | Full time unit, heavy-duty, cast iron, chain driven with direct and remote mounting. |
| NP205F | F150, F250, Bronco | 1973-79 | Part time unit, heavy-duty, cast iron, gear driven with direct and remote mounting. |
| NP208F | F150, F250 Bronco | 1980-86 | Part time aluminum case unit. |
| NV271F | F250-550 | 1999 - up | Heavy-duty manual shift, aluminum case |
| NV273F | F250-550 | 1999 - up | Heavy-duty electric shift, aluminum case |
| BW1345F | F250 | 1980-92 | Magnesium case, medium-duty, manually shifted transfer case. |
| BW1350F | Bronco II, Ranger, Explorer | 1983-89 | Light-duty, magnesium case. Manual and electric shift. |
| BW1356F | Full size Bronco, F-150, 250 | 1987-96 | Medium-duty, magnesium case, manual and electric shift |
| BW 4404F | Explorer & Mountaineer | 1996 - up | Medium-duty, magnesium case, all wheel drive equipped with viscous coupling. |
| BW4405F | Explorer & Mountaineer | 1995-99 | Electric shift, clutch pack driven torque transfer |
| BW4406F | F150, F250, Expedition, Navigator | 1997- up | Built with electric shift, manual shift, and torque-on-demand models. |
| BW4407F | F250, F350 | 1996 -98 | Medium-duty, magnesium case, manual shift. Built with and without PTO option |
| Dana28 (RA28) | Aerostar AWD models | 1990-96 | Magnetic clutch actuated torque transfer |
| NP203C | Blazer, K series | 1973 -79 | Heavy-duty chain driven, cast iron case found behind manual trans, TH350, TH400. |
| NP205C | Blazer, K10-K30 | 1966-84 | K30 and 3500 series trucks 1984 and up. Heavy-duty cast iron, gear driven unit. Found behind SM465, Th350, and TH400. |
| NP207C | S10 & Jimmy | 1983-87 | Light-duty, aluminum case with manual shift. |
| NP208C | Full size Blazer, Jimmy, & Pick-ups | 1981-88 | Part time, aluminum case built in synchronized and non-synchronized models. Used behind man. And auto trans. |
| NP231C | S10, Jimmy, and pick-ups | 1988 - up | Light-duty, aluminum case. Built with and without torque arm, cable and electric speedo, maual shift. |
| NP233C | S10, Jimmy | 1992 - up | Light-duty, aluminum case, electric shift, built with and without torque arm. |
| NP236C | Astrovan, Safari, GMC & Blazer | 1998 - up | Light-duty, aluminum case, electric shift, male splines on front output shaft. |
| NP241C | Blazer,Suburban, Tahoe | 1987 -98 | Medium-duty, aluminum case with manual shift. Part, time unit built in right and left drive models. |
| NP243C | Blazer, Suburban, Tahoe Yukon, & Pick ups | 1996 - up | Medium-duty, aluminum case, electric shift. Found behind 4L60E and 4L80E trans, |
| NV246C | Tahoe, Yukon, Suburban | 1998 - up | Medium-duty, magnesium case, electric shift. |
| BW1370C | K3500 models | 1988 - up | Part time unit with 3-piece magnesium case with oil pump spacer plate. Also known as BW4470. |
| BW4401C | K3500 New Body Style Pick-ups | 1987 - up | Part time unit with 2-piece magnesium case without oil pump spacer. |
| BW4472C | Astrovan, Safari, Bravado Typhoon, Cyclone models | 1991-98 | Full time unit, magnesium case with viscous coupling. |
| NV136C | Astrovan, Safari, Blazer | 1998 - up | All wheel drive unit (AWD) with electric clutch pack apply |
| NP203D | Ram Charger W100-300 models | 1973-79 | Heavy-duty, cast iron case, chain driven, full time unit Direct and remote mount. |
| NP205D | W100-350 Ram truck | 1982-93 | Heavy-duty, cast iron case, gear driven, part time unit |
| NP208D | Ramcharger & Pick-ups | 1980-88 | Medium-duty, aluminim case, part time unit. Built in synchronized and non-synchronized models. |
| NP231D | Dakota, W150 & Durango models | 1987-01 | Light-duty, aluminum case. Part time unit. Manual shift unit with many variations of vacuum and electric switches. Produced with two shift patterns. |
| NP241DLD | Ram Charger, W150-250 models | 1987 - up | Light Duty. Part time unit with aluminum case, manual shift. Produced with 2 types of shift patterns. |
| NP241DHD | W350 Pick-ups | | Heavy Duty Part time unit with aluminum case, produced with 2 types of manual shift patterns and all models equipped with PTO |
| NP242D | Durango, Dakota | 1997 - up | Part time-Full time unit with internal differential for full full time use. |
| Quadratrac | Jeep Cherokee CJ7 models | 1973-79 | Full time unit with cone clutch differential. Some models equipped with low reduction unit. |
| Dana 300 | CJ5, CJ7, CJ8 | 1980-86 | Cast iron case, part time unit with manual shift. |
| NP128J | AMC Eagle | 1986-88 | Full time unit without viscous coupling |
| NP129J | AMC Eagle | 1979-85 | Full time unit with viscous coupling |
| NP207J | Wrangler Cherokee models | 1983-88 | Part time, aluminum case, manual shift. |
| NP208J | Wrangler, J10, Cherokee models | 1980-83 | Part time, aluminum case, manual shift. |
| NP219J | Wagoneer, Cherokee, & pick-up models | 1980-83 | All wheel drive (AWD) unit with viscous coupling. |
| NP228J | Cherokee, Wagoneer, Grand Cherokee | 1986 only | Part time unit with aluminum case. Vacuum and mechanical shift without viscous coupling. |
| NP229J | Cherokee, Wagoneer, Grand Cherokee | 1982-92 | Part time unit with aluminum case. Vacuum and mechanical shift with viscous coupling. |
| NP231J | YJ, TJ, ZJ, WJ, XJ | 1987 - up | Part time unit, aluminum case with manual shift. Wide variety of vacuum and electric switches. Produced with live shaft and extension housing. |
| NP242J | Cherokee/Grand Cherokee | 1987 - up | Part time, full time unit, aluminum case with internal differential. Produced with live shaft and extention housing. Manual sift. |
| NV247J | Grand Cherokee, WJ model | 1999 - up | Full time unit with progressive coupling. Uses two internal pumps and clutch pack for torque transfer. Manual shift for low lock only. |
| NP249J | Cherokee/Grand Cherokee | 1993 - up | Full time unit with viscous coupling. Manual shift. Produced with and without low lock. |

These are the most common areas that you need to be aware of. On your vehicle inspection please note any torque arms braces, or weights that bolt directly to the transfer case so that the replacement unit or case will be bored and threaded to accept these pieces. The factory doesn't put anything on the

vehicle for the fun of it. There are no unimportant parts so don't have anything "left over" after the unit is installed.

From the chart above you can see that many models of transfer cases cross over many different vehicle lines, and even within the same car line there

are many variations of shift patterns, switches, and internal parts. This should only make you more aware of the need to know everything you can about the unit and the vehicle you are working on. Information is like the truth, it sets you free.

