Rear Drive Axle and Differential

The rear drive axle consists of the following:

- The axle housing is a cast center section with 2 steel tube assemblies and a stamped differential housing cover
- The differential housing cover uses silicone sealant as a gasket
- The hypoid-design gearset consists of 8.8-in ring gear and a drive pinion gear
- Maximum strength retaining compound is between the ring gear face and the differential flange on High Torque axles
- Two opposed tapered roller bearings (drive pinion bearings) support the drive pinion in the axle housing
- A drive pinion collapsible spacer, located on the differential pinion shaft, maintains drive pinion bearing preload
- The pinion nut adjusts the drive pinion bearing preload
- Differential bearing shims control the differential bearing preload and the differential ring gear backlash
- Two opposed tapered roller bearings (differential bearings) support the differential assembly in the axle housing
- Removable bearing caps retain the differential assembly in the axle housing
- The differential case is a one-piece design with 2 openings to allow for assembly of the internal components and lubricant flow
- Inside the differential assembly, the differential pinion shaft supports 2 differential pinion gears
- The pinion gears engage the differential side gears, to which the axle shafts are splined
- The differential pinion shaft lock bolt retains the differential pinion shaft in the differential case
- Semi-floating axle shafts are held in the housing by U-washers positioned in the slots of the axle shaft splined ends, located in a recess of the differential side gears within the differential case
- Independent center spring in Traction-Lok® applications for clutch disc pressure

The rear axle assembly receives rotational input from the driveshaft through a piloted pinion flange. The pinion drives the ring gear which is bolted to the differential case. The design of the differential allows the side gears in the case to rotate at different speeds. The axle shafts are splined to the side gears permitting the vehicle to manipulate corners without sliding the inside tire. The weight of the vehicle is carried through the axle shaft bearing located in the tubes of the axle housing.

The axle identification tag identifies a particular axle design, a specific ratio and if it is a conventional or limited slip (Traction-Lok®) type. For additional information, refer to Section 205-00.