Rear Drive Axle and Differential

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The rear axle assembly consists of the following:

- Integral-type housing hypoid gear design (center of the pinion se from the driveshaft. The direction of the rotation determines movement of the vehicle
- Hypoid differential ring gear and pinion consisting of a 10.50-inch ring gear and an overhung drive pinion that is supported by 2 opposed tapered roller bearings
- Pinion bearing preload that is maintained by a drive pinion collapsible spacer on the differential pinion shaft and adjusted by the pinion nut
- Cast center section with 2 steel tubes
- A rubber gasket between the differential housing cover and the rear axle housing
- Differential pinion shaft that is retained by a threaded differential pinion shaft lock bolt attached to the differential case
- Differential case that is mounted in the rear axle housing between 2 opposing differential bearings that are retained in the rear axle housing by 2 removable bearing caps
- Differential bearing preload and ring gear backlash which are adjusted by differential bearing shims that are located between the differential bearing cups and the rear axle housing
- Optional ELD

The rear drive axle receives rotational torque from the driveshaft. The direction of the rotation determines movement of the vehicle. The rotation enters the rear drive axle through the drive pinion flange, turning the drive pinion and rotating the ring gear. The ring gear is bolted to the differential case. The differential case houses the pinion shaft upon which the differential pinion gears ride. The pinion gears are in mesh with the differential side gears to which the axle shafts are splined. It is the unique arrangement of the differential that allows the axle shafts to be driven at different speed when needed, such as when driving around corners. An ELD is also available which electronically locks the differential side gears to the differential case which will allow maximum torque to both rear wheels. The operator controls the differential with a dash mounted switch.

The ELD system consists of the following components:

- ELD field coil, located at the rear differential
- Rear differential with dog clutch
- MSS (unique for ELD equipped vehicles, the ELD switch is integrated with the MSS), located on the instrument panel

The optional ELD system allows the operator to lock the rear differential side gears on slippery and/or off road surfaces. ELD operation is requested by pulling out (4WD electronic shift vehicles) or turning the MSS to the ON position (2WD vehicles).

The operator can engage the ELD per the charts below:

ELD engagement/disengagement speeds - 4WD Vehicles

Switch Position	Engage	Disengage	Re-engage
2H	32 km/h (20 mph)	41 km/h (25 mph)	32 km/h (20 mph)
4H	32 km/h (20 mph)	41 km/h (25 mph)	32 km/h (20 mph)
4L	90 km/h (56 mph)	100 km/h (62 mph)	90 km/h (56 mph)

ELD engagement/disengagement speeds - 2WD Vehicles

Switch Position	Engage	Disengage	Re-engage
Off	N/A	N/A	N/A
On	32 km/h (20 mph)	41 km/h (25 mph)	32 km/h (20 mph)