

Transfer Case

Electronic Shift-On-The-Fly (ESOF) System

The ESOF transfer case system consists of the following components:

- MSS, located on the instrument panel
- Transfer case assembly (includes shift motor and synchronization clutch)
- TCCM
- Vacuum operated front locking hubs

The electronic shift transfer case is a 2-piece aluminum design. The unit transfers engine power from the transmission to the front and rear axles. Vehicles equipped with an ESOF system allow the operator to choose between 2WD(2H) and 2 different 4WD modes. The transfer case is shifted electronically based on the MSS position. Under normal driving conditions, the transfer case is in 2WD (2H), but when desired, the operator may shift into 4WD high (4H) or 4WD low (4L). The operator can shift between 2WD (2H) and 4WD high (4H) at any speed. When shifting into or out of 4WD low (4L) range, the TCCM requires that the vehicle speed is less than 5 km/h (3 mph) and the transmission in NEUTRAL.

The transfer case is equipped with a synchronizing clutch which is located inside the case. This clutch is used to synchronize the speed of the front driveline with the rear driveline during 2WD (2H) to 4WD high (4H) shifts. The transfer case is lubricated by a positive displacement fluid pump that channels fluid flow through holes in the rear output shaft.