

CIRCUIT OPERATION

Selector Interlock

When the gear selector is in the park position, the solenoid inside the Transmission Range Selector Switch (Z110) is de-energised and prevents the selector from being moved into another gear. To free the selector, the Ignition Switch (X134) must be in position II and the brake pedal must be depressed. When this occurs, voltage from Fuse F1 is applied to the Transmission Range Selector through the closed Stop Lamp Switch (X168). The solenoid inside the Transmission Range Selector Switch is grounded at E200 through the selector switch, the KS wire and the B wire. The solenoid now energises, freeing the selector.

Ignition Key Interlock

On vehicles equipped with the interlock safety feature, the vehicle must be in park and the transfer case in high or low gear before the key can be removed from the ignition. If the gear selector or transfer gear is out of gear, the key must be cycled before removal.

If the vehicle is not in park, voltage from Fuse F12 is applied to the Key Barrel Switch (X230) through the closed contacts of the Transmission Range Selector Switch (Z110). When the ignition switch is placed in the 0 position, the Key Barrel Switch (X230) closes to energise the solenoid and prevent key removal.

If the key is in the ignition and the transfer box is in the neutral position, Interlock Relay 1 (K153) is de-energised since the relay coil is not grounded by the Transfer Box Position Switch (X175). When the relay is de-energised, voltage is applied to the Key Barrel Switch (X230) through the relay's switch contacts and the Key-In Switch (X229) causing the solenoid to energise and prevent key removal.

If the Transfer Box is in the "H" or "L" position, the Interlock Relay 1 (K153) is energised, since the relay coil is grounded by the Transfer Box Position Switch (X175). When the relay is energised, voltage to the Key Barrel Switch (X230) is interrupted. If the vehicle is in Park the Transmission Range Selector Switch (Z110) contacts are open. When the switch contacts are open, voltage to the Key Barrel Switch (X230) is also interrupted. The Ignition Key Lock Solenoid (K191) is then disabled, allowing removal of the key.

Transfer Box Interlock (NAS vehicles with automatic transmission only)

The Transfer Box Interlock safety feature is designed to prevent the transfer case shifter from being shifted out of "H" or "L" unless the vehicle's gear selector is in the neutral position.

When the gear selector is placed in the neutral position, voltage is applied to the Interlock Relay 2's coil through the Transmission Range Selector Switch (Z110). The relay's coil is grounded through the Park/Neutral Position Switch (X167).

Interlock Relay 2 now energises and applies voltage from Fuse F13 to the Transfer Box Solenoid (K161). When the Transfer Box Solenoid (K161) is energised the transfer box shifter can be operated.







