05ID3–01

SYSTEM DESCRIPTION

1. POWER WINDOW CONTROL SYSTEM DESCRIPTION

The power window control system controls the power windows' UP/DOWN function using the regulator motors.

The main controls of this system are: the power window regulator master switch assembly, which is built into the driver side door, and the power window regulator switches, which are built into the passenger side door and rear doors. Pressing each regulator switch or any of the switches on the master switch assembly transmits an UP/DOWN signal to the corresponding power window regulator motor.

The jammed window detection mechanism consists of a magnet on the worm gear of the power window motor assy and the two Hall ICs on the connector.

2. FUNCTION OF MAIN COMPONENT

Component	Outline
Power Window Regulator Master Switch Assy	Controls window operations for all windows. Also, when window lock switch is set to lock position, window operation will only be possible for driver side power window.
Power Window Regulator Switch Assy	Located on passenger side door and rear doors. Each regulator switch assy controls window operations for its respective window.
Power Window Regulator Motor Assy	Receives switch signals and changes signals into motor activation. As a result, window position changes. Also, driver side regulator motor assy uses pulse sensors to detect window position.

3. SYSTEM FUNCTION

The power window control system has the following functions.

Function	Outline
Manual UP/DOWN function	Driver side power window: function that raises window while power window switch is pulled halfway up and lowers it while switch is pushed halfway down. Window stops as soon as the switch is released. Other power windows: function that raises windows while power window switch is pulled up and lowers it while switch is pushed down. Window stops as soon as the switch is released.
AUTO UP/DOWN function	Function that enables window of driver side door to be fully opened or fully closed by one full push downward of power window switch or one full pull. AUTO UP/DOWN function is only available on driver side power window.
Jam protection function	Function that automatically stops driver side power window and moves it downward if object is jammed in driver side power window during AUTO UP operation. During key–off operation function, jam protection function works for manual UP and AUTO UP operation. Jam protection function is only available on driver side power window.
Remote control function	Function that allows power window master switch assy to control manual UP/DOWN operations of passenger door power window and rear door power windows.
Key–off operation function	Function that makes it possible to operate power window for approx. 43 seconds after power switch's power mode is changed to ON (ACC) or OFF when either front door is closed.
Window lock function	Function where passenger door and rear door power windows' operations are disabled when window lock switch of the master switch assy is pressed. Passenger door and rear door power windows can be operated when window lock switch is pressed again.
Diagnosis	Function where power window switch can detect malfunctions in power window system and make diagnoses. Power window switch light illuminates or starts blinking to inform driver.
Fail–safe	Function that disables driver side power window AUTO UP/DOWN function if pulse sensor (Hall IC) in power window regulator motor has malfunction. Manual operation is possible through power switches.