

Wiper/Washer Systems

GENERAL MOTORS SQUARE WIPER MOTOR (Cont.)

- 3) If motor will not shut off and has "LO" speed only, check for a grounded shunt field coil or grounded BLACK wire.
- 4) If motor will not shut off and has "HI" speed only, check for an open circuit in shunt field coil or open circuit in BLACK wire.
- 5) If wiper shuts off, but not in "PARK", check for a defective park switch or dirty contacts.
- 6) If speed is excessive in "HI", check for a defective resistor.

WASHER SYSTEM TEST

Washer Pump Inoperative - Check for voltage at washer pump terminal with ignition "ON". If not present, check for open black/yellow wire, or for blown fuse. If voltage is present, connect jumper from dark blue wire to ground. If motor operates, check wiring to switch. If no open in wiring, replace switch. If motor does not operate, replace motor and pump.

Washer Pressure Weak - Check hoses for cracks and leaks. Clean nozzles and filter screen. If pressure is still low, reverse leads in connector at motor. If pressure does not increase, reconnect wires as originally located and replace motor and pump assembly.

REMOVAL & INSTALLATION

WIPER MOTOR

Removal - 1) Reach behind instrument panel (above steering column) and loosen transmission drive link-to-crank arm nuts. Disconnect drive link from crank arm.

2) Raise hood, disconnect wiring, and remove 3 motor bolts. Guide crank arm through hole while removing motor.

Installation - To install, replace sealing gasket if damaged and reverse removal procedure.

WIPER ARMS

Removal - Remove wiper arm assemblies using tools (J-22128 or J-8966 or equivalent) to minimize possible windshield or paint damage.

Installation - To install, reverse removal procedure.

WIPER TRANSMISSION

Removal - 1) Remove instrument panel cover and cluster housing. Push left air duct to side. Remove speedometer cable shield and panel brace. Loosen drive link-to-crank arm nuts and disengage drive link.

2) Remove wiper arms and blades. Remove transmission-to-dashboard bolts. Move linkage to left, then rotate and move out through access hole in upper right center of dash.

CAUTION - Do not scratch windshield with transmission assembly during removal.

Installation - To install, reverse removal procedure, tightening transmission bolts to 48-72 INCH lbs.

WIPER SWITCH

Removal - 1) Disconnect battery ground cable. Remove horn cap, wheel nut, horn actuator ring and steering wheel. Pry lock plate cover off. Compress lock plate spring, then pry snap ring from slot. Remove lock plate.

2) Slide turn signal switch cam, spring, and thrust washer off shaft. Pull multi-function lever straight out, and unscrew hazard flasher knob. Remove 2 screws, pivot arm and spacer. Remove 3 turn signal switch mounting screws and pull switch up. Do not remove completely.

3) Locate ignition switch on top of steering column jacket near dash. Remove upper screw but do not move switch. Disengage actuator rod, then remove wiper switch and pivot assembly.

Installation - 1) Install wiper and directional switches. Fit pinched end of actuator rod into dimmer switch, and feed other end into wiper/washer switch. Depress dimmer and fit 3/32" drill bit into alignment hole. Push switch up to remove play, tighten screw, and remove rod. Check dimmer switch operation.

2) Reverse the remainder of the removal procedure, using a new snap ring on lock plate.

MOTOR SPECIFICATIONS

Application	Specification
Operating Voltage.....	12V
Current Draw (No Load)	
"LO" Speed.....	4 Amps.
"HI" Speed.....	3.5 Amps.
Current Draw (Stall)	
Cold Motor.....	12 Amps.
Crank Arm Speed (Minimum)	
"LO" Speed.....	31 RPM
"HI" Speed.....	55 RPM