

WIPER/WASHER SYSTEM

Article Text

1994 Suzuki Swift

For Xeon

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ARTICLE BEGINNING

1994 ACCESSORIES & EQUIPMENT

Suzuki of America Corp. - Wiper/Washer Systems

Swift

DESCRIPTION

A 2-speed wiper motor with intermittent mode is standard on all models. A 3-speed wiper motor is optional on some models. Washer system uses a reservoir-mounted electric pump located in the engine compartment.

A one-speed rear wiper/washer is optional. Rear wiper/washer switch is located on instrument panel, to right of steering column. Wiper switch has 2 positions, rear wiper ON or OFF. Washer and wiper switch has 3 positions, OFF, washer ON (depressed half way), or washer and wiper ON (fully depressed). Washer/wiper switch moves to OFF position when switch is released.

TESTING

NOTE: If wiper malfunctions or does not return to park position, check for blown fuse, faulty wiper motor, control switch or connections. If washer malfunctions, check for clogged hose or nozzle, faulty washer motor, control switch or wiring.

FRONT WIPER MOTOR

Motor Test

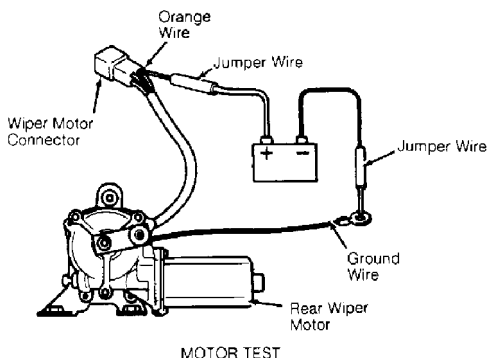
1) Disconnect wiper motor connector. Connect a jumper wire from battery voltage to Blue wire terminal of wiper motor connector. Ground wiper motor at Black lead. Low-speed should be 45-55 RPM. Connect battery voltage to Blue/Red wire terminal of connector. High-speed should be 68-78 RPM.

2) If wiper motor does not operate, operates at only one speed or less than specified RPM, check for open in wiring or faulty switch. If wiring and switch are okay, replace motor.

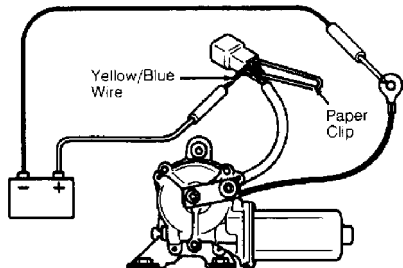
Automatic Stop Test

1) Connect a jumper between battery voltage and Yellow/Black wire. Connect a second jumper wire between negative battery terminal and Black wire wiper motor ground.

2) Use a paper clip jumper to short Blue/White and Blue wire terminals. See Fig. 1. Motor should stop at park position. Remove paper clip and short same wires again. Motor should stop at same point. If motor does not stop at same point, replace motor.



MOTOR TEST



AUTOMATIC STOP TEST

Fig. 1: Testing Rear Wiper Motor (Front Wiper Test Is Similar)
Courtesy of Suzuki of America Corp.

REAR WIPER MOTOR

Motor Test

Disconnect rear wiper motor connector. Connect a jumper between battery voltage and Orange wire. See Fig. 1. Connect a second jumper wire between negative battery terminal and Black wire wiper motor ground. Motor should rotate at 38-46 RPM. If motor RPM is not within specification, replace motor.

Automatic Stop Test

1) Connect a jumper wire between battery voltage and Yellow/Blue wire. Connect a second jumper wire between negative battery terminal and Black wire wiper motor ground.

2) Use a paper clip jumper to short Orange and Blue/Green wire terminals together. See Fig. 1. Motor should stop at park position. Remove paper clip and short same wires again. Motor should stop at same point. If motor does not stop at same point, replace motor.

INTERMITTENT WIPER RELAY

NOTE: Intermittent relay may also be called intermittent controller.

Disconnect wiper/washer switch connector. Turn wiper switch to INTERMITTENT position. Connect a jumper wire from battery voltage to Yellow/Black wire. Ground Black terminal of switch connector. If relay clicks, relay is operating properly.

WIPER/WASHER SWITCH

Disconnect wiper/washer switch. Using an ohmmeter, check continuity across switch terminals. See WIPER/WASHER SWITCH CONTINUITY table.

WIPER/WASHER SWITCH CONTINUITY TABLE (1)

Switch Position	Terminal-To-Terminal (Wire Color)
2-Speed	
OFF	BLU/WHT & BLU
LOW Speed	BLU & YEL/BLK
HIGH Speed	YEL/BLK & BLU/RED
WASHER ON	YEL/BLU & BLU/BLK
3-Speed	
OFF	BLU, BLU/WHT & To INT Relay
INT	BLU, BLU/WHT & To INT Relay; To INT Relay & YEL/BLK
LOW Speed	BLU & YEL/BLK
HIGH Speed	YEL/BLK & BLU/RED
WASHER ON	YEL/BLK & BLU/BLK
Rear Wiper/Washer Switch	
Wiper/Washer Switch OFF	
Wiper Switch OFF	ORG & BLU/GRN
Wiper Switch ON	ORG & YEL/BLU
Washer Switch ON	
Wiper Switch OFF	YEL/BLU & BLK/GRN
Wiper Switch ON	ORG, YEL/BLU & BLK/GRN
Wiper/Washer Switch ON	
Wiper Switch OFF	ORG, YEL/BLU & BLK/GRN
Wiper Switch ON	ORG, YEL/BLU & BLK/GRN
Indicator Light	RED/GRN & RED/YEL

(1) - For wire color and terminal identification, see wiring diagram in WIRING DIAGRAM.

WIPER MOTOR BRUSH & COMMUTATOR

Front Wiper Motor

Check continuity between Blue wire and Black ground lead, and between Blue/Red wire and Black ground lead. If continuity is poor, check brush-to-commutator contact surface. If surface is fouled, wipe clean with solvent. If surface is coarse or burnt, dress with 600 grit emery cloth or turn lightly on a lathe.

Rear Wiper Motor (If Equipped)

Check continuity between Orange wire and Black ground lead. If no continuity exists, check brush-to-commutator contact surface. If surface is fouled, wipe clean with solvent. If surface is coarse or burnt, dress with 600 grit emery cloth or turn lightly on a lathe.

WASHER PUMP (FRONT OR REAR)

Remove washer pump from washer fluid reservoir. Connect battery positive and negative terminals to (+) and (-) terminals of washer pump. Lower washer pump into enough water to cover intake. Check washer pumping rate.

REMOVAL & INSTALLATION

WIPER MOTOR

Removal & Installation

Remove pivot shaft mounting nut and wiper arm. Open hood and unplug wiring connector. Remove wiper linkage assembly. Remove wiper motor mounting bolts. Remove motor with bracket. To install, reverse removal procedure.

FRONT WIPER SWITCH

Removal & Installation

Front wiper control switch is part of steering column combination switch. See COMBINATION SWITCH under REMOVAL & INSTALLATION in the STEERING COLUMN SWITCHES article in the STEERING section.

WASHER PUMP

Removal & Installation

Front and rear (if equipped) washer pumps are located in the engine compartment attached to a single fluid reservoir. Disconnect negative battery cable. Remove left front fender lining. Disconnect pump lead wires and hoses. Remove reservoir mounting nuts and remove reservoir. Remove pump from reservoir. To install, reverse removal procedure.

WIRING DIAGRAMS

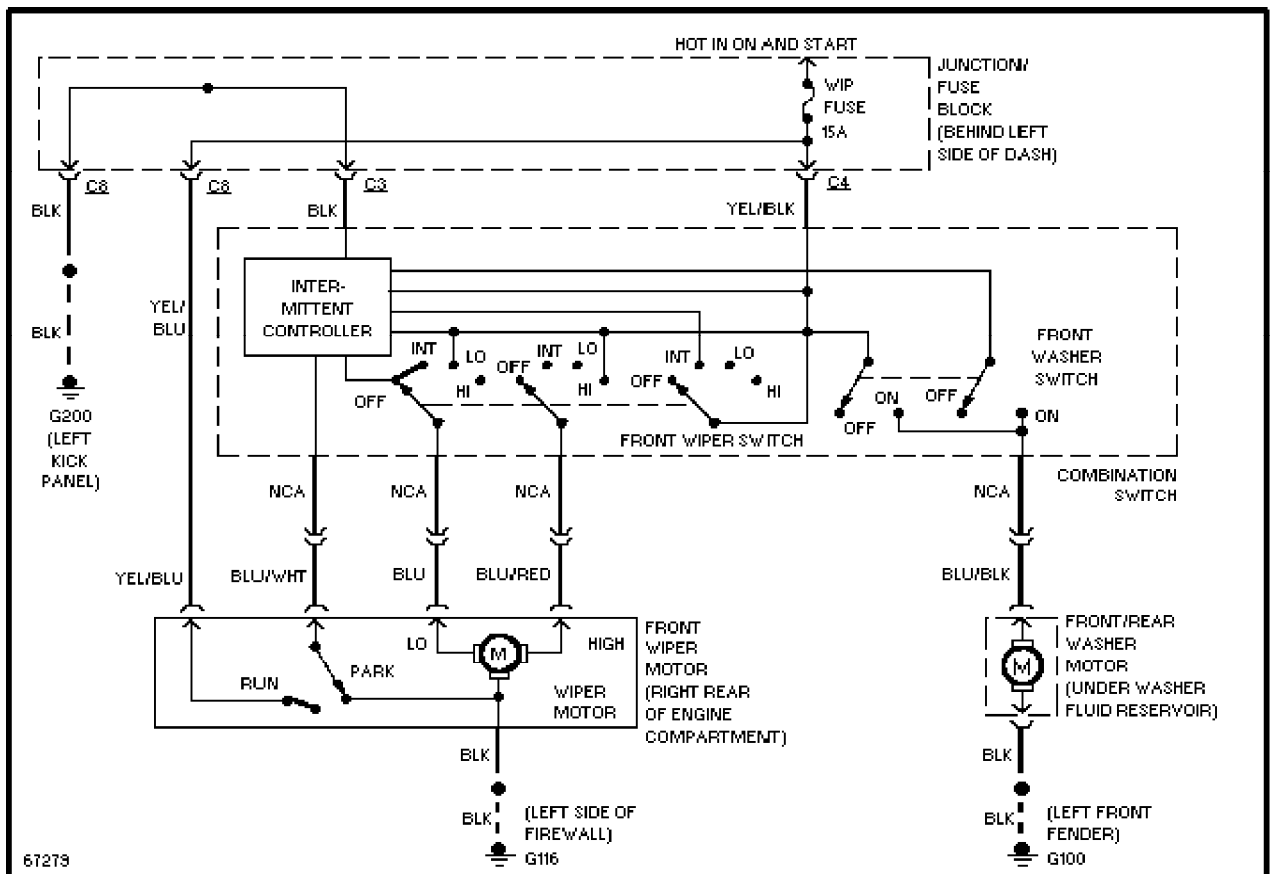


Fig. 2: Wiper/Washer System Wiring Diagram (Front)

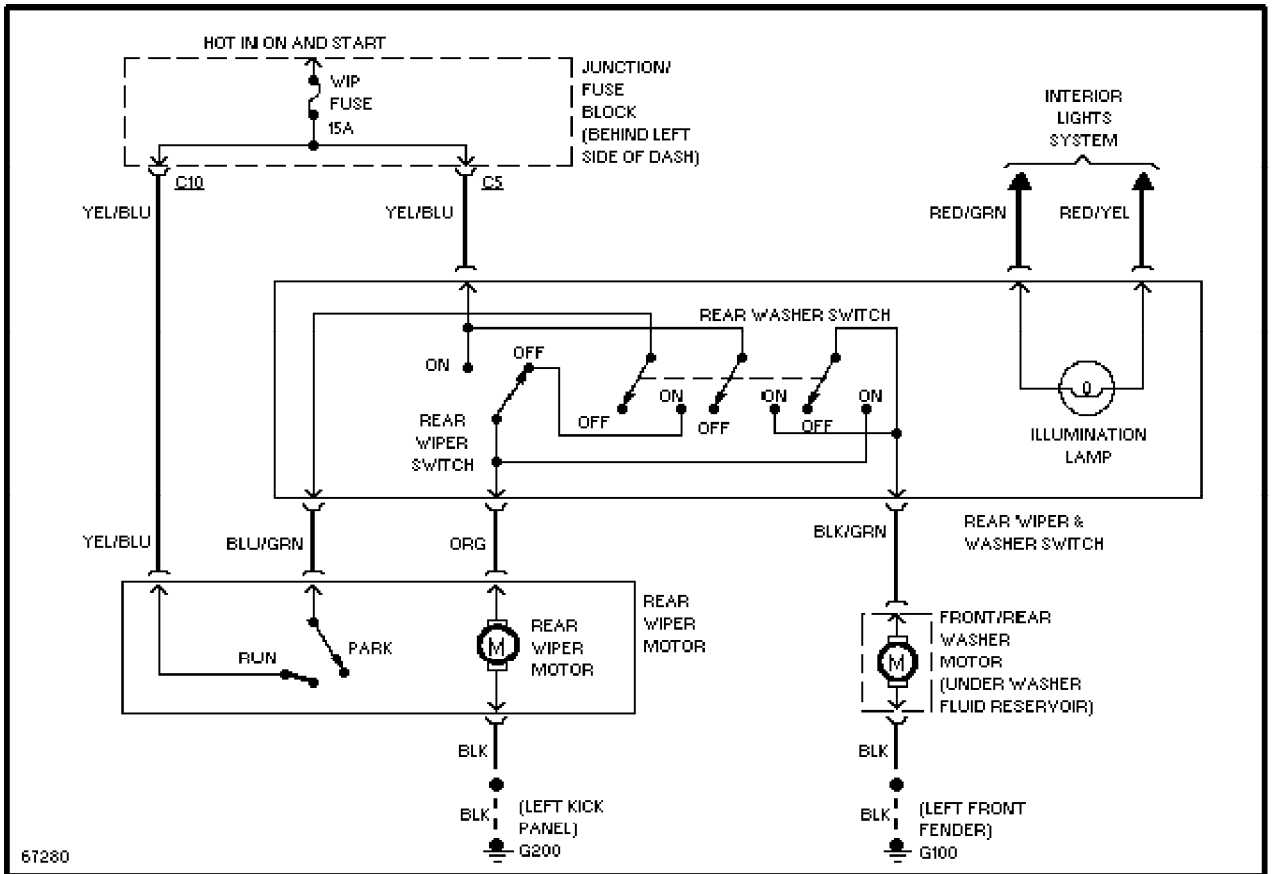


Fig. 3: Wiper/Washer System Wiring Diagram (Rear)

END OF ARTICLE