

WIPER/WASHER SYSTEM

1993 Mitsubishi Montero

1993 ACCESSORIES & EQUIPMENT
Mitsubishi Wiper/Washer Systems

Montero

DESCRIPTION & OPERATION

All models are equipped with a 2-speed wiper motor with an optional intermittent wiper feature. Some models are equipped with a rear wiper/washer.

ADJUSTMENTS

FRONT WIPER ARM ADJUSTMENT

Ensure wiper motor is in park position. Position wiper arm and blade assembly so tip of blade is specified distance above front window trim. See FRONT WIPER ADJUSTMENT SPECIFICATIONS table.

FRONT WIPER ADJUSTMENT SPECIFICATIONS TABLE

Application	Specification In. (mm)
Driver's Side98-1.38 (25-35)
Passenger's Side	1.38-1.77 (35-45)

(1) - Information is not available from manufacturer.

REAR WIPER ARM ADJUSTMENT

Ensure wiper motor is in park position. Position wiper arm and blade assembly so tip of blade is specified distance from edge of window. See REAR WIPER ADJUSTMENT SPECIFICATIONS table.

REAR WIPER ADJUSTMENT SPECIFICATIONS TABLE

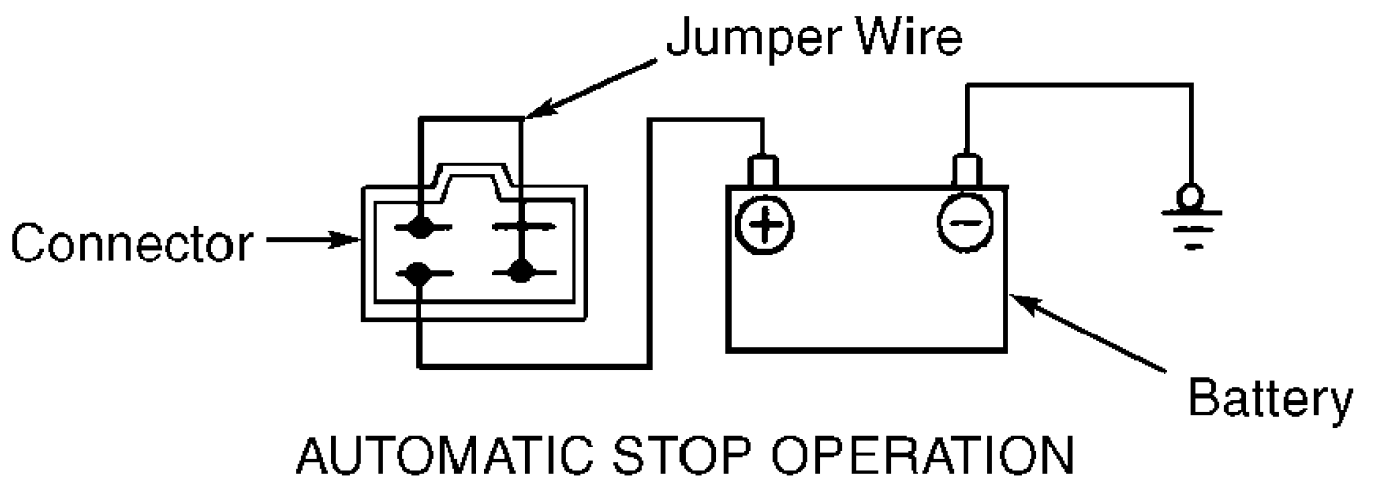
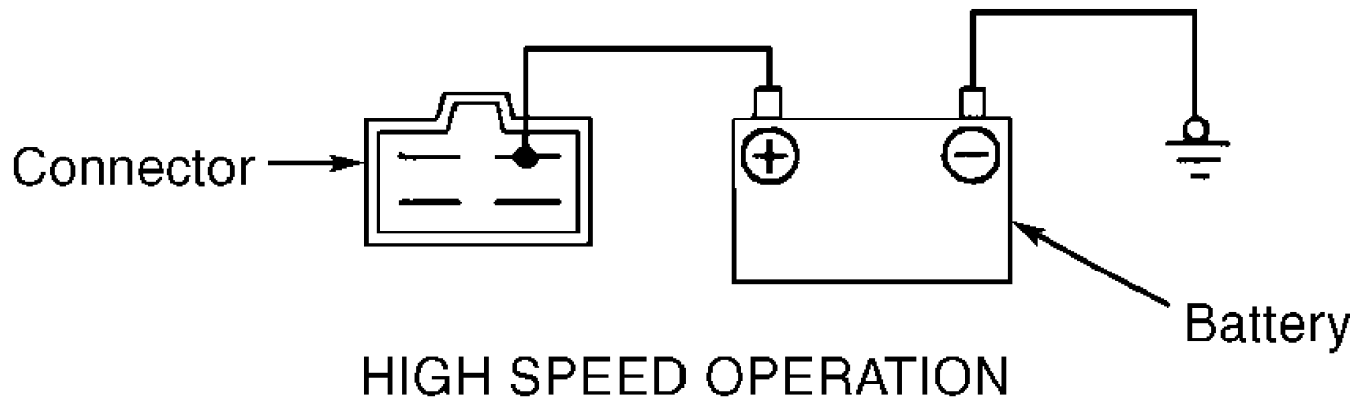
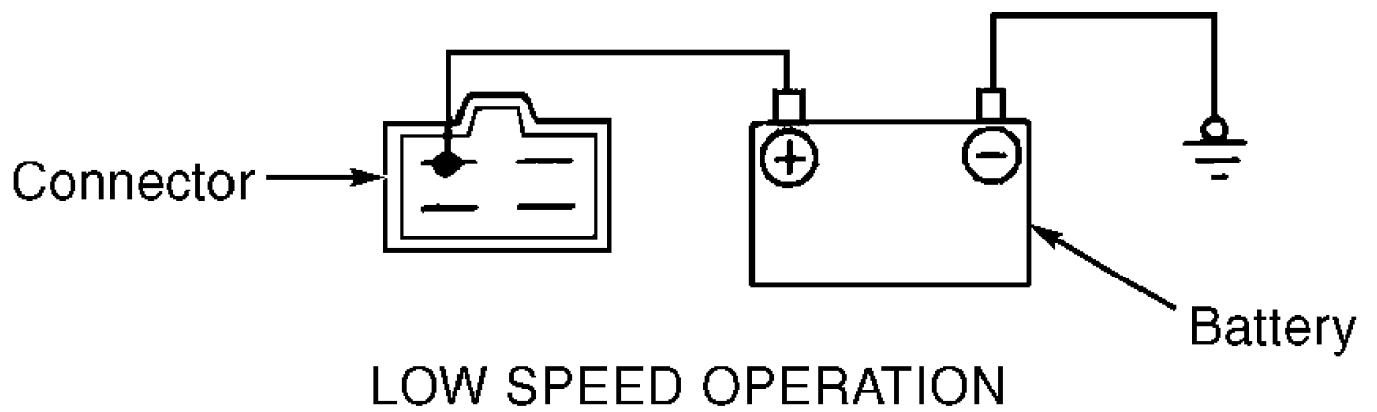
Model	In. (mm)
Montero	2.56-2.95 (65-75)

TESTING

FRONT WIPER MOTOR TEST

Checking Wiper Motor Operation

Disconnect wiring connector from wiper motor. Connect battery voltage to wiper motor connector as shown, and ensure wiper motor operates at low and high speeds. See Fig. 1.



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Fig. 1: Checking Front Wiper Motor Operation
 Courtesy of Mitsubishi Motor Sales of America.

Checking Automatic Stop

1) Operate wiper motor at low speed. See Fig. 1. Disconnect battery voltage during operation to stop motor.

2) Using a jumper wire, connect terminals as shown. See Fig. 1. Connect 12 volts to indicated terminal, and ground wiper motor

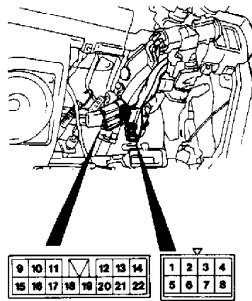
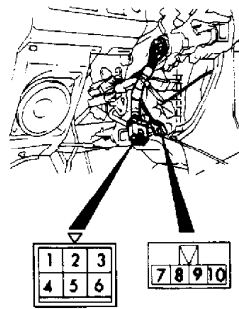
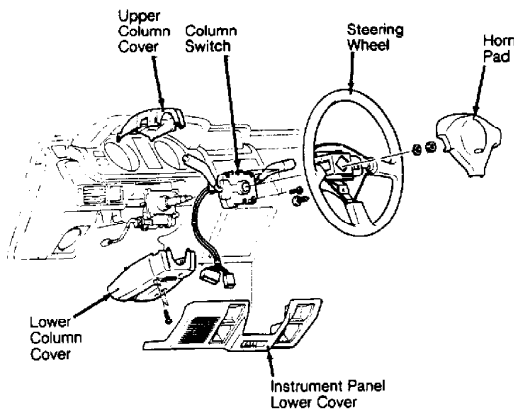
bracket. Ensure wiper arm is correctly parked.

INTERMITTENT WIPER RELAY (FRONT) TEST

NOTE: Intermittent wiper relay is incorporated into wiper switch. Information on testing is not available from manufacturer.

FRONT WIPER SWITCH TEST

Front wiper switch is part of combination switch on steering column. For steering column switch testing, see Fig. 2.



IGNITION SWITCH

Position	Terminal Key	Ignition switch						Key reminder switch	
		1	2	3	4	5	6	7	10
LOCK	Removed								
ACC	Inserted								
ON									
START									

NOTE
 ○—○ indicates that there is continuity between the terminals.

COLUMN SWITCH

Switch position		Terminal	1	5	6	11	14	17	18	19	20	22
Lighting switch	OFF											
	TAIL											
	HEAD											
Dimmer switch	LOW BEAM											
	HIGH BEAM											
Passing switch	P ₁											
	P ₂											
Turn-signal switch	RH											
	OFF											
	LH											

NOTE
 (1) ○—○ indicates that there is continuity between the terminals.

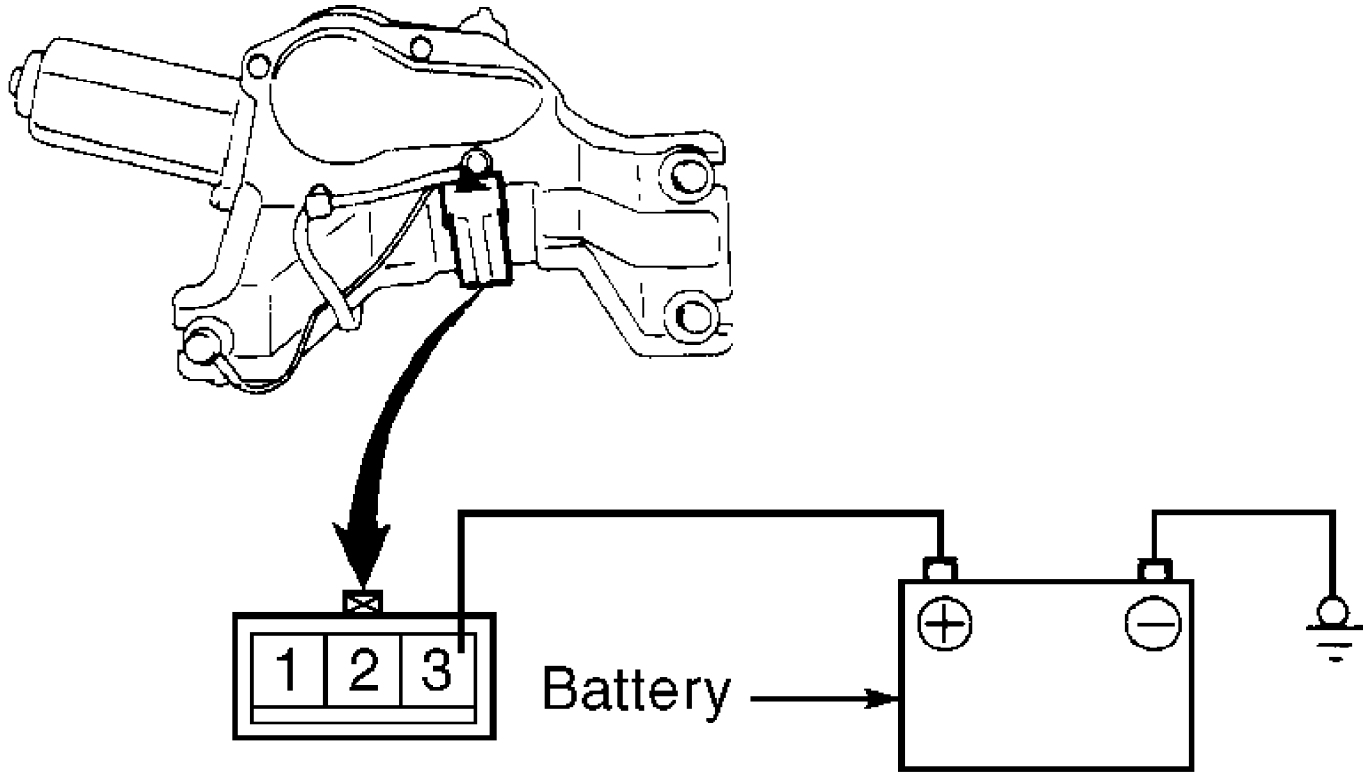
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Fig. 2: Testing, Removing & Installing Steering Column Switches
 Courtesy of Mitsubishi Motor Sales of America.

REAR WIPER MOTOR TEST

Operational Check

Disconnect wiring connector from wiper motor. Connect battery voltage to wiper motor connector as shown, and ensure motor housing is well grounded. Motor should run at low speed. See Fig. 3.

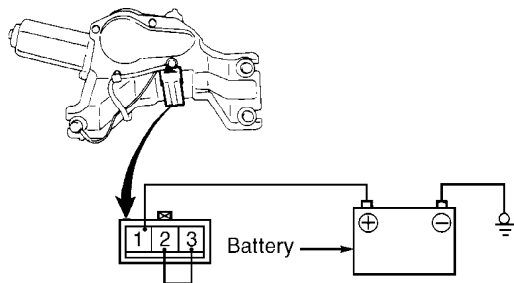


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Fig. 3: Rear Wiper Motor Operational Check
Courtesy of Mitsubishi Motor Sales of America

Automatic Stop Check

Operate wiper motor, and then disconnect wiring connector from wiper motor to stop motor operation at a point other than park position. Connect battery voltage and jumper wire to wiper motor connector as shown, and ensure motor housing is well grounded. See Fig. 4. Motor should return to park position.



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Fig. 4: Rear Wiper Motor Automatic Stop Check
Courtesy of Mitsubishi Motor Sales of America

REAR WIPER RELAY TEST

Operational Check

1) Relay is on left side of steering column, behind dash. Disconnect relay from wiring harness. Connect positive voltmeter lead to terminal No. 2. Connect negative voltmeter lead to terminal No. 5. Connect battery voltage to terminal No. 4 and ground terminal No. 5. See Figs. 5-7.

2) Jumper terminals No. 1 and 4 for 2 seconds. Remove jumper. Jumper terminals No. 1 and 5 for about 8 seconds. Voltmeter should show zero volts. After terminals No. 1 and 5 have been connected for at least 8 seconds, battery voltage should be present on terminal No. 2. Replace relay if voltage is not as specified.

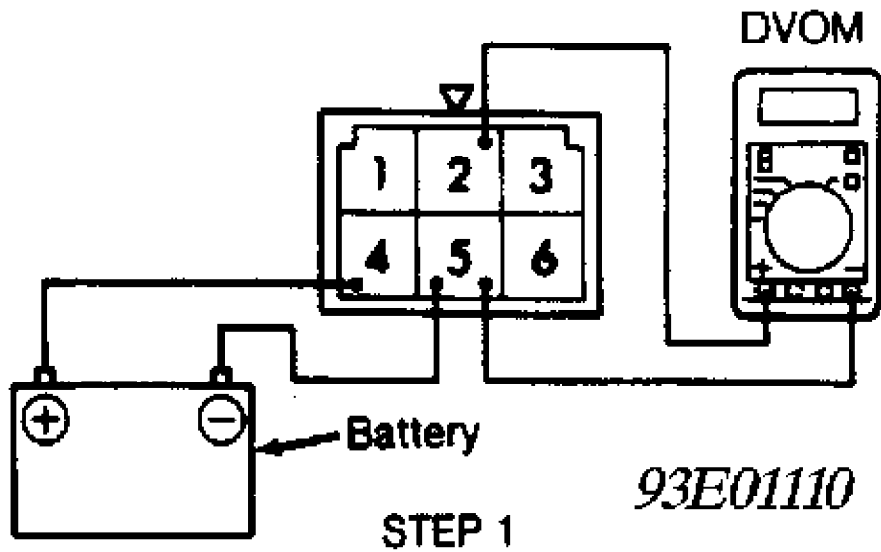


Fig. 5: Rear Wiper Relay Terminal ID (Step 1)
Courtesy of Mitsubishi Motor Sales of America.

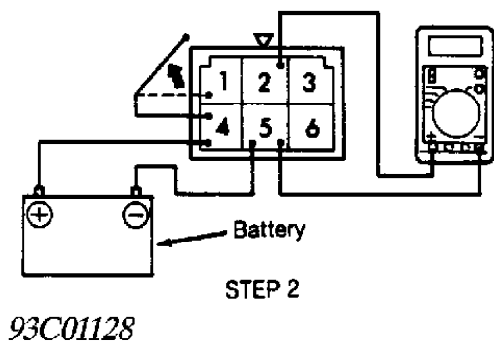


Fig. 6: Rear Wiper Relay Terminal ID (Step 2)
Courtesy of Mitsubishi Motor Sales of America.

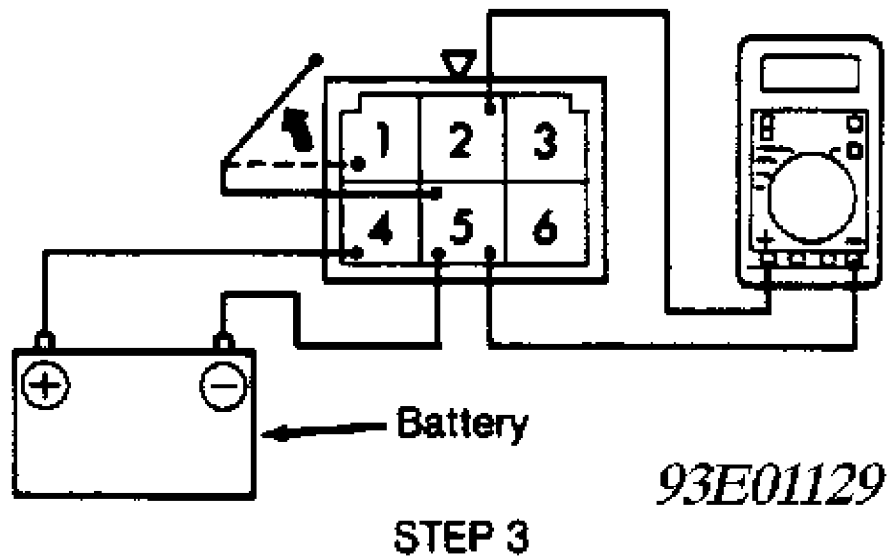
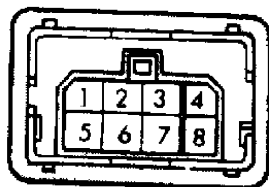


Fig. 7: Rear Wiper Relay Terminal ID (Step 3)
 Courtesy of Mitsubishi Motor Sales of America.

REAR WIPER SWITCH TEST

Remove wiper switch from instrument panel and disconnect wiper switch. Place wiper switch in OFF position. Continuity should exist between terminals No. 4 and 7. See Fig. 8. Place wiper switch in ON position. Continuity should exist between terminals No. 2 and 7. Place wiper switch in INT position. Continuity should exist between terminals No. 4 and 7, and between terminals No. 1 and 6. Depress washer switch. Continuity should exist between terminals No. 2 and 3.



MONTERO

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Fig. 8: Rear Wiper Switch Terminal ID
 Courtesy of Mitsubishi Motor Sales of America.

REMOVAL & INSTALLATION

FRONT WIPER MOTOR

Removal & Installation

Remove wiper motor bolts. Pull motor out just slightly. Disconnect wiper linkage from motor assembly and remove motor. To install, reverse removal procedure.

FRONT WIPER SWITCH

WARNING: DO NOT hammer on steering wheel. Collapsible steering column mechanism may be damaged.

Removal & Installation

Remove instrument panel under cover. Remove horn pad. Remove steering wheel. Remove upper and lower steering column covers. See Fig. 2. Remove column switch. To install, reverse removal procedure.

REAR WIPER MOTOR

Removal & Installation

Remove wiper blade and arm assembly. Remove tailgate trim, 2 bolts and wiper motor. To install, reverse removal procedure. Ensure grommet is in good condition.

REAR WIPER RELAY

Removal & Installation

Relay is located on left side of steering column, behind dash.

REAR WIPER SWITCH

Removal & Installation

Pry rear wiper switch from instrument panel and disconnect wiper switch. To install switch, reverse removal procedure.

WIRING DIAGRAMS

See appropriate chassis wiring diagram in the WIRING DIAGRAMS section.