POWER WINDOWS

1998 Mitsubishi Galant

1998 ACCESSORIES & EQUIPMENT
Mitsubishi - Power Windows

Galant

DESCRIPTION & OPERATION

With ignition switch in RUN position, battery voltage is applied to master power window switch located on driver's door. Master power window switch provides power and ground for all power window switches and motors. Master power window switch offers one-touch operation of driver's window. A solid state control unit, incorporated in master switch, fully lowers driver's window when switch is completely depressed. Master switch also includes lock-out feature to prevent passengers from operating any of the other power window door switches. Power windows can be operated for up to 30 seconds after ignition is turned off.

COMPONENT LOCATIONS

COMPONENT LOCATIONS TABLE

Component	Location
Data Link Connector (DLC)	Under Left Of Dash, Below Steering Column
ETACS-ECU	Behind Left Side Of Dash

TROUBLE SHOOTING

* PLEASE READ THIS FIRST *

NOTE: For trouble shooting information, see SYMPTOM TESTS.

POWER WINDOWS INOPERATIVE

Check for faulty fusible link, faulty fuse or faulty power window switches. See WIRING DIAGRAMS.

ONE WINDOW FAILS TO OPERATE

If one window does not operate, even if both master and passenger side power window switches are pressed, check for faulty master power window switch or power window motor that is inoperative. If one window does not operate only when either main/master or passenger side power window sub-switch is pressed, but does operate when both switches are pressed, check power window switch that is inoperative.

ONE-TOUCH SWITCH FUNCTION INOPERATIVE

Replace main/master power window switch.

SYMPTOM TESTS

NOTE: To diagnose symptom, see Fig. 1, then go to appropriate test under CIRCUIT TESTS.

Trouble symptom	Probable cause	Circuit test no.
When ignition switch is turned to ON, power window does not operate.	• Broken wire in power window switch circuit or in each harness. • Power window switch is faulty. • Power window motor is faulty.	1
Opening and closing of the power windows is possible with each seat switch, but operation from the power window main switch (driver's side door) is not possible.	• Short circuit in data line • Open circuit in data line • Malfunction of power window main switch	2
Opening and closing of the power windows is possible with the power window main switch, but operation from each sub switch is not possible.	• Malfunction of sub switch	Replace the respective sub switch.
After turning the ignition switch to OFF, the power windows operate even if the front door is opened within 30 seconds.	• Broken wire in input circuit in front door switch. • Front door switch is faulty. • Power window switch (driver's side door) is faulty	3
After turning the ignition switch to OFF, the timer does not operate.	• Power window switch (driver's side door) is faulty.	Replace power window switch (driver's side door).

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Fig. 1: Symptom Chart
Courtesy of Mitsubishi Motor Sales of America

CIRCUIT TESTS

Test No. 1

1) Check power window motor. See POWER WINDOW MOTOR under COMPONENT TESTS. Replace as necessary. Check power window switch. See POWER WINDOW SWITCH under COMPONENT TESTS. Replace as necessary. If motor and switch are okay, go to next step.

2) Check dedicated fuses No. 12 and 13. See WIRING DIAGRAMS. Replace fuses as necessary. If fuses are okay, disconnect left front power window switch harness connector. Turn ignition on. Check voltage between ground and power window switch harness-side connector terminal No. 1 (Green wire). If battery voltage is present, go to next step. If battery voltage is not present, go to step 4).

3) Check voltage between ground and power window switch harness-side connector terminal No. 9 (vehicles without keyless entry) or terminal No. 11 (vehicles with keyless entry). See WIRING DIAGRAMS. If battery voltage is present, go to step 5). If battery voltage is not present, go to next step.

4) Check connectors and circuit between dedicated fuses, ignition switch and power window main switch. See WIRING DIAGRAMS. Repair as necessary.

5) Check for continuity between ground and left front power window switch harness-side connector terminal No. 24 (Black wire). If continuity is present, go to next step. If continuity is not present, go to step 9).

6) Disconnect right front power window switch harness connector. Check for continuity between ground and right front power window switch harness-side connector terminals No. 1 (Black wire) and No. 9 (Black wire). If continuity is present, go to next step. If

continuity is not present, go to step 9).

7) Disconnect right rear power window switch harness connector. Check for continuity between ground and right rear power window switch harness-side connector terminals No. 1 (Black wire) and No. 3 (Black wire). If continuity is present, go to next step. If continuity is not present, go to step 9).

8) Disconnect left rear power window switch harness connector. Check for continuity between ground and left rear power window switch harness-side connector terminals No. 1 (Black wire) and No. 10 (Black wire). If continuity is present, replace left front (driver's side) power window switch. If continuity is not present, go to next step.

9) Check connectors and circuit between each power window switch and ground. See WIRING DIAGRAMS. Repair as necessary.

Test No. 2

1) To check for open in data line circuit, go to next step. To check for short in data line circuit, go to step 3).

2) Disconnect left front (driver's side) power window switch harness connector. Check voltage between ground and left front power window switch harness-side connector terminal No. 11 (vehicles without keyless entry) or terminal No. 13 (vehicles with keyless entry). See WIRING DIAGRAMS. If battery voltage is present, replace left front power window switch. If battery voltage is not present, repair open in data line circuit.

3) Disconnect harness connector from all power window switches. Check for continuity between ground and left front door harness-side connector terminals No. 11 (vehicle without keyless entry) or terminal No. 13 (vehicles with keyless entry). See WIRING DIAGRAMS. If continuity is not present, go to next step. If continuity is present, repair short in data line circuit.

4) Connect harness connector to all power window sub-switches. Check voltage between ground and left front power window switch harness-side connector terminal No. 11 (vehicle without keyless entry) or terminal No. 13 (vehicles with keyless entry). See WIRING DIAGRAMS. If battery voltage is present, replace left front power window switch. If battery voltage is not present, replace affected power window sub-switch.

Test No. 3

1) Check front door switch. See DOOR SWITCH under COMPONENT TESTS. Replace as necessary. If door switch is okay, go to next step.

2) Disconnect harness connector from left front power window switch. Turn ignition on. Turn off front door switch by closing front doors. Remove door light bulbs. Check voltage between ground and left front door power window switch harness-side connector terminal No. 11 (vehicles without keyless entry) or terminal No. 13 (vehicles with keyless entry). See WIRING DIAGRAMS. If 5 volts are present, go to next step. If 5 volts are not present, replace left front power window switch.

3) Check circuit between left front power window switch and left front door switch. See WIRING DIAGRAMS. Repair as necessary.

COMPONENT TESTS

CIRCUIT BREAKER

Press UP switch to fully close window. Continue to press switch for 40 seconds. Release UP switch and immediately press DOWN switch. If window begins to open within 60 seconds, circuit breaker is okay. Circuit breaker is part of window motor assembly.

DOOR SWITCH

Remove appropriate door switch from door jam. Disconnect harness connector from door switch. With switch in ON (open) position, continuity should be present on all terminals. With switch in OFF (depressed) position, continuity should not be present on any terminals. Replace as necessary.

POWER WINDOW MOTOR

1) Remove appropriate door trim panel. Connect positive lead of a 12-volt test battery to either motor terminal. Connect negative lead of test battery to other motor terminal. Motor should operate, unless it is already at maximum travel.

2) Reverse test battery leads. Motor should operate in opposite direction. If motor does not operate as specified, inspect wiring. If wiring is okay, replace motor. Reverse test battery leads again to complete full function test of motor.

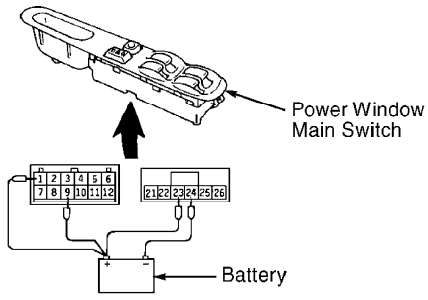
POWER WINDOW SWITCH

Main Switch

Remove power window main switch from trim panel. Apply battery positive voltage to switch terminals No. 1, 9 and 23. Apply battery ground to switch terminal No. 24. See Fig. 2. Continuity should be present at specified terminals. See Fig. 2. If continuity is not as specified, replace power window main switch.

Sub-Switch

Remove power window sub-switch from trim panel. Apply battery positive voltage to switch terminal No. 2. Apply battery ground to switch terminals No. 1, 3, 4, 9 and 10. See Fig. 3. Continuity should be present at specified terminals. See Fig. 3. If continuity is not as specified, replace power window sub-switch.



Terminal No.			Switch position		
			UP	OFF	DOWN
Front (L.H.)		21	○	○	○
Front (L.H.)		22	○	○	○
		23	○		○
		24	○	○	○
Front (R.H.), Rear (R.H., L.H.)	Normal	10	○	○	○
		11	○		○
		24	○ ○	○	○ ○
	Lock	11	○		○
	Lock	24	○		○

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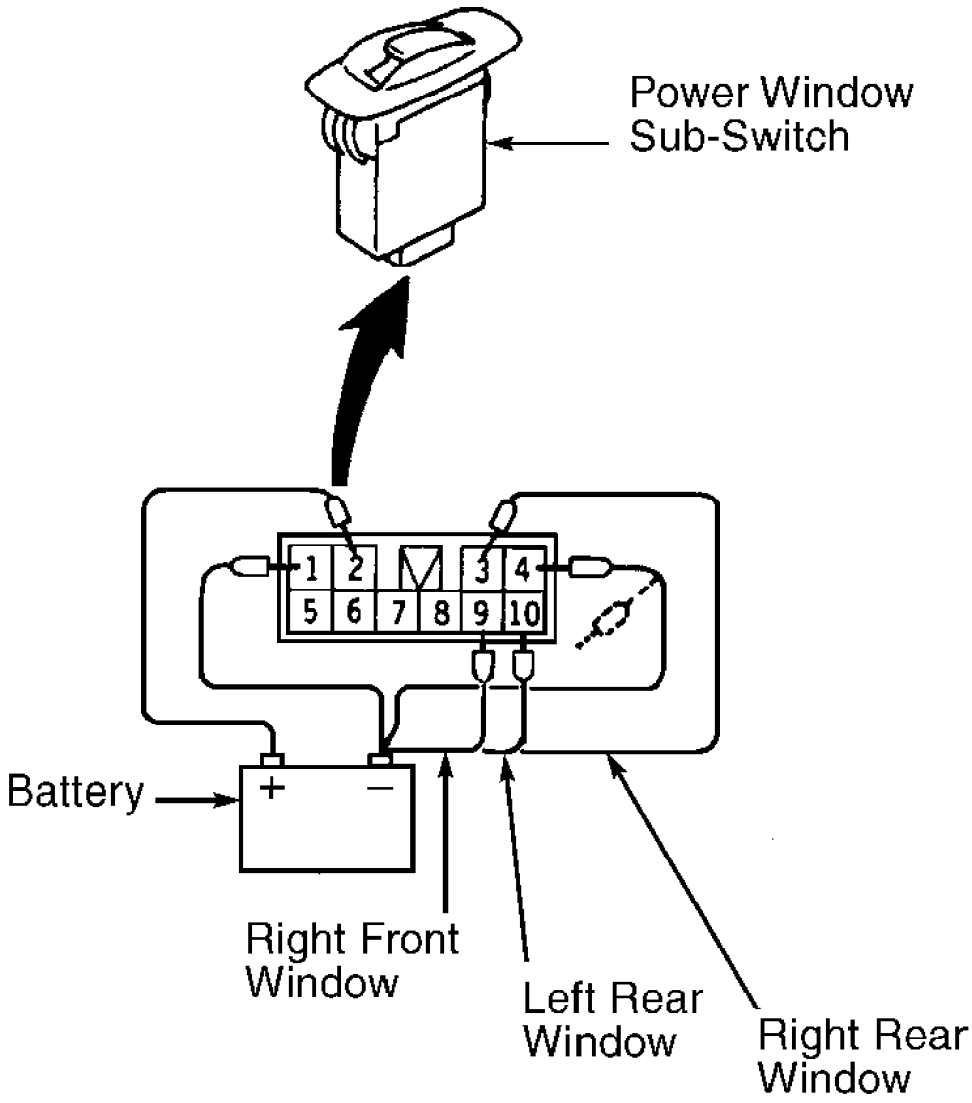
Fig. 2: Testing Power Window Main Switch
Courtesy of Mitsubishi Motor Sales of America



Terminal No.		Switch position		
		UP	OFF	DOWN
Sub switch	1			
	2			
	7			
	8			

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Fig. 3: Testing Power Window Sub-Switch
Courtesy of Mitsubishi Motor Sales of America

REMOVAL & INSTALLATION

POWER WINDOW MOTOR

Removal & Installation

Remove door trim panel and waterproof shield. Remove glass retaining screws and glass. See Fig. 4. Remove motor and slider assembly retaining bolts. Remove motor and slider assembly from door. To install, reverse removal procedure.

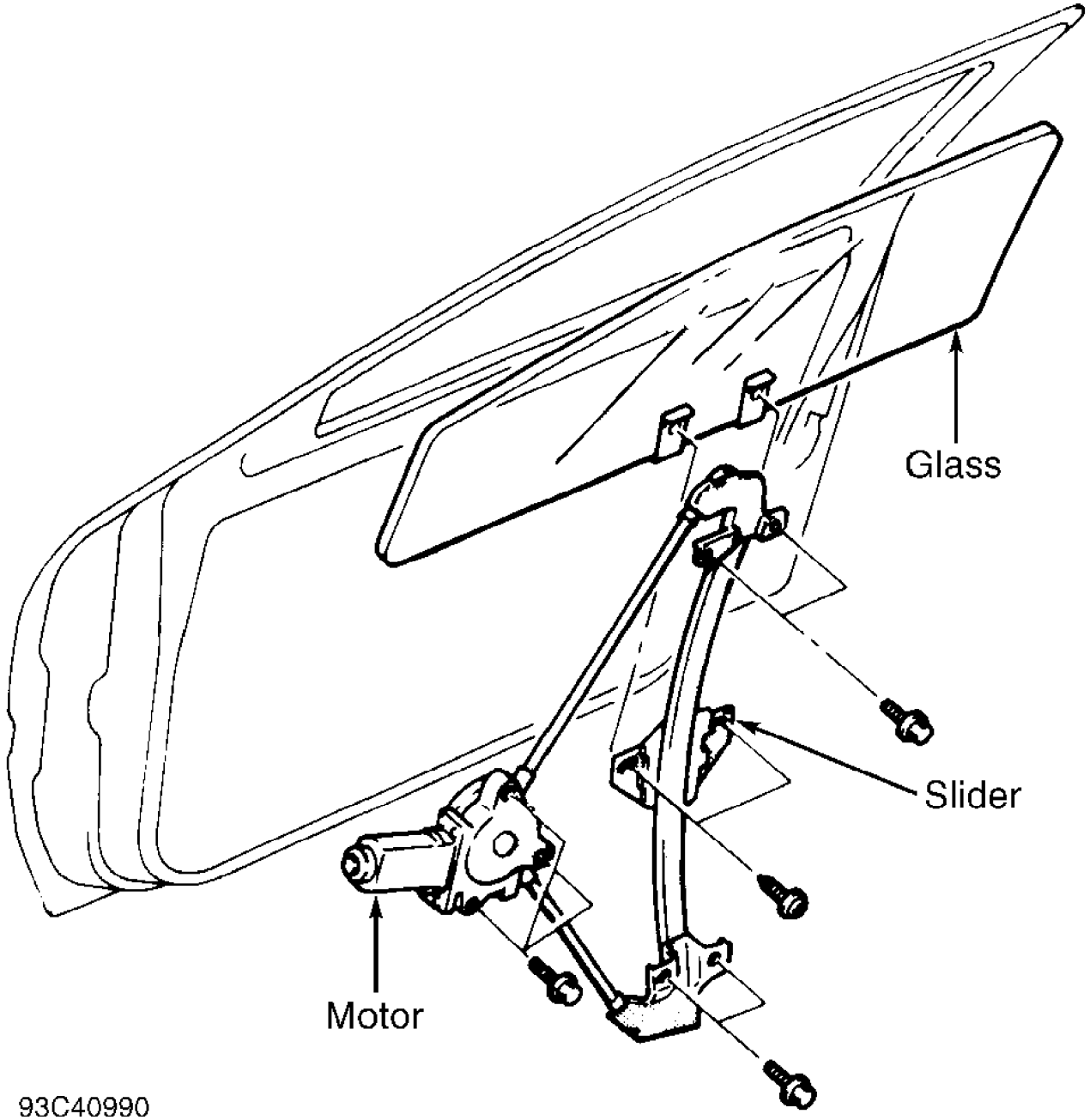

Fig. 4: Removing Power Window Motor & Slider Assembly
Courtesy of Mitsubishi Motor Sales of America

WIRING DIAGRAMS

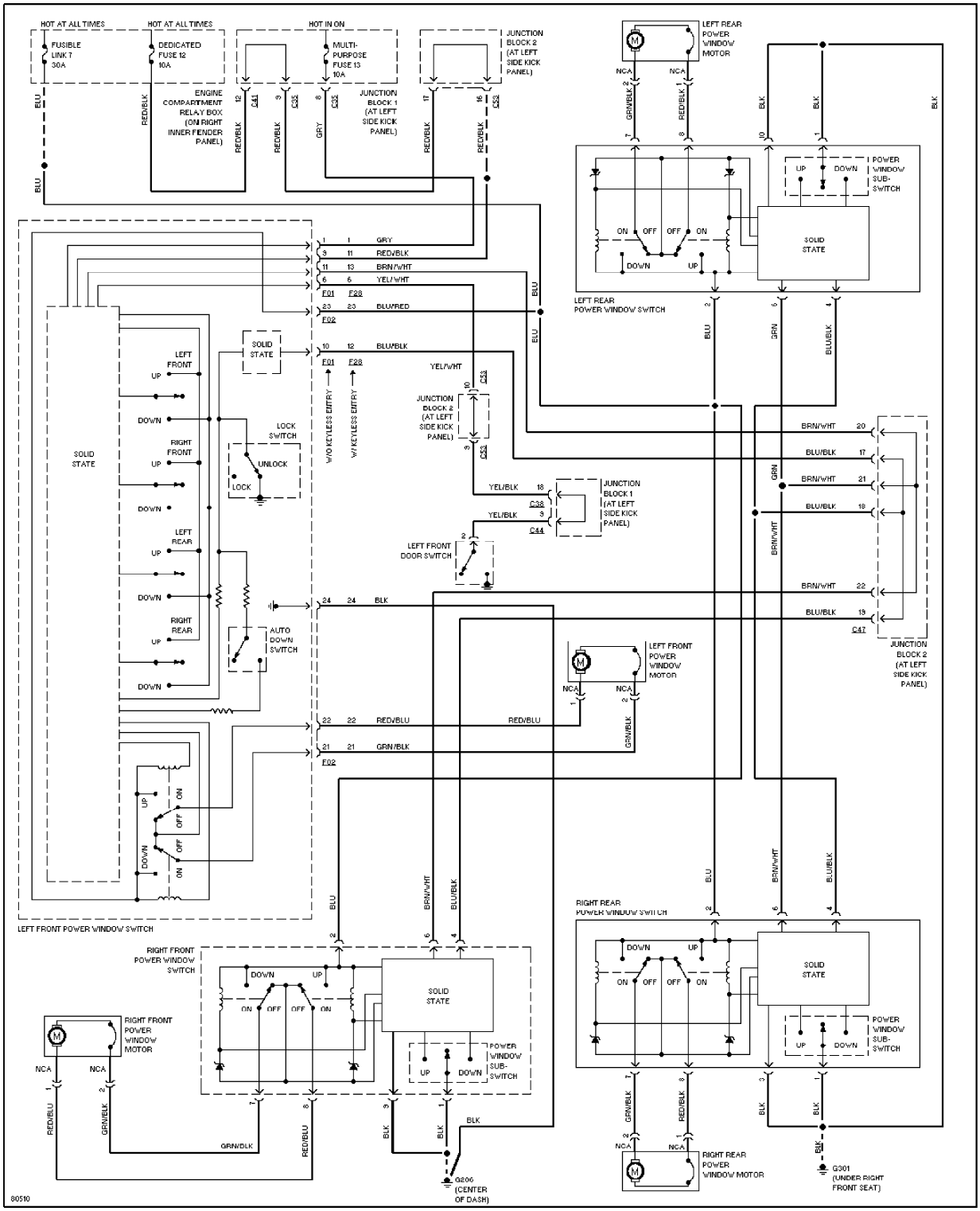

Fig. 5: Power Windows System Wiring Diagram