

## GENERAL MOTORS

## DESCRIPTION

Sun roofs have a sliding metal panel in the roof, operated by an electrical motor. Models with moon roofs have a sliding glass panel which admits sunlight. A sunshade is also provided, which can be manually operated to block off sun when the moon roof is closed.

## OPERATION

All models are operated by an electrical motor located in the headliner above the windshield. The control switch is in the headliner or map light housing (Cadillac). Drive cables pulled by the reversible motor open and close the roof panel. The roof panel can be operated manually by removing the rubber plug in headliner. Use the hand crank provided to turn the driving gear and close roof panel.

## ADJUSTMENT

**Vertical Adjustment** — 1) Move panel to full open position. Insert adjustment tool (J-28652) under guide rail 3" behind front screws. Loosen screws with star driver and raise or lower guide rail. Adjust both sides as necessary.

2) Using the same procedure but with adjustment tool 3" in front of screws, adjust guide rail at rear corners. If height adjustment is not enough, shim washers may be added between panel and cable support. See Fig. 2 and 3.

**Horizontal Adjustment** — 1) Close roof panel to see which side jams. Remove motor actuator. Align panel evenly within opening and replace motor actuator.

2) To align panel with front opening, open panel and loosen front guide stops. Move stops to front or rear as required, tighten guide screws, and close panel to test fit. Additional adjustment can be obtained by loosening panel-to-cable support nuts and sliding panel as necessary.

## REMOVAL &amp; INSTALLATION

## SWITCH

**Removal (Cadillac)** — Pry out lenses from map light assembly on headliner. Remove retaining screws and lower map light assembly. Disconnect wiring and remove switch.

**Installation** — To install, reverse removal procedure.

**Removal (All Other Models)** — Open panel completely and loosen headliner between opening and windshield. Reach in and compress switch retainer while pulling switch downward. Remove switch retainer from roof cavity, disconnect wiring, and remove switch.

**Installation** — Connect wiring. Press switch into opening while supporting headliner from roof cavity side with other hand. Install switch retainer and replace headliner trim.

## MOTOR ACTUATOR

**Removal** — Move panel fully open. Loosen headliner between opening and windshield. Pull down on hard headliner front edge and remove 2 motor screws. Disconnect wiring and remove motor.

**Installation** — To install, reverse removal procedure.

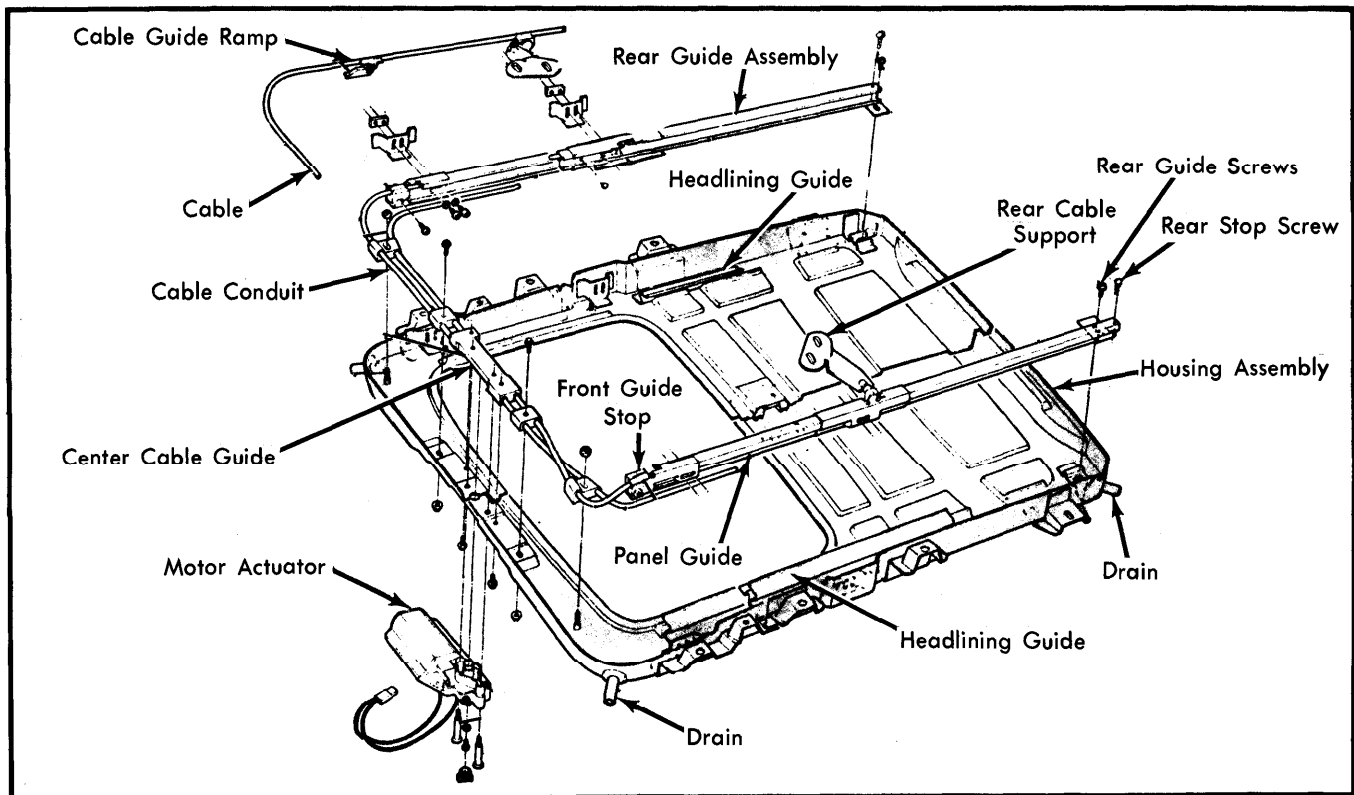


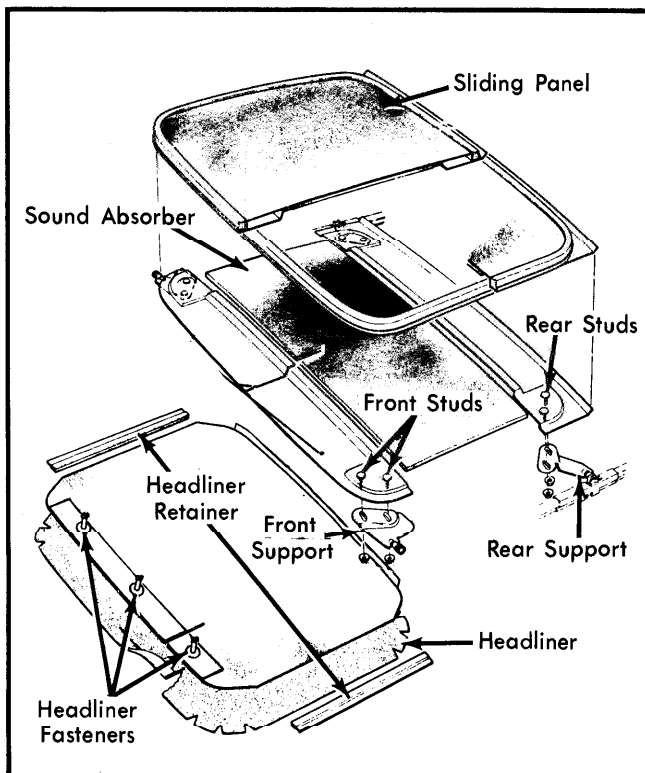
Fig. 1 Exploded View of Sun and Moon Roof Housing

## GENERAL MOTORS (Cont.)

### ROOF PANEL AND TRIM

**Removal** — 1) On sun roof models, move panel back 6" and pull down front edge of headlining on panel. Push metal panel back 6" further, then remove retainers from headlining. Slide headlining back into fully open position.

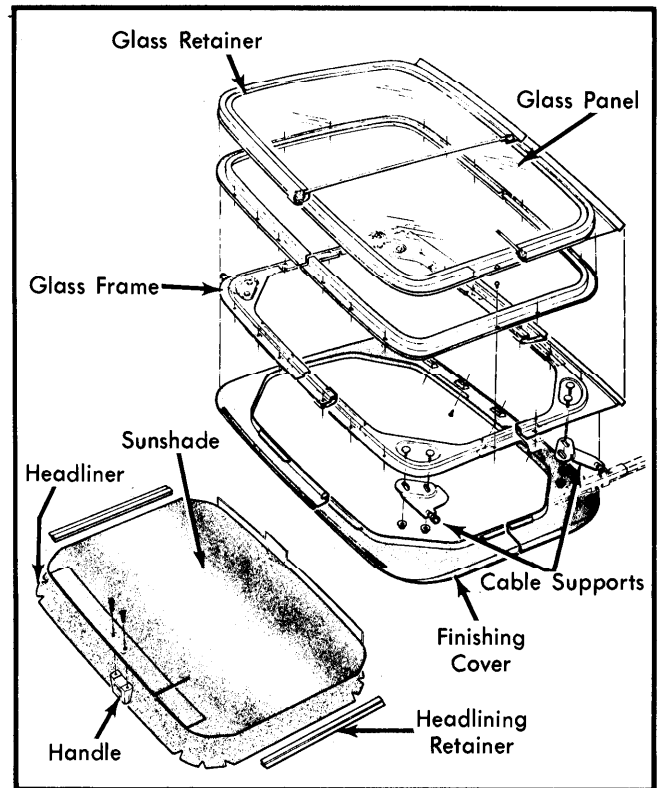
2) On glass moon roof models, pull finishing cover forward and down. On all models, move sliding panel forward until the front rollers just contact cable guide ramp with panel in lower position (not flush with roof).



**Fig. 2 Metal Sun Roof Panel Assembly**

3) Remove coat hooks, map light, trim moldings and lower headliner material. Disconnect wiring from dome lamp and switch, then remove headliner. Remove dome lamp studs, drain hoses, and rear side support screws.

4) Remove front header screws. Support roof panel housing and remove front side support screws. Remove housing from vehicle. Remove attaching nuts from front and rear cable supports and remove glass or metal roof panel.



**Fig. 3 Glass Moon Roof Panel Assembly**

**Installation** — To install, reverse removal procedure and tighten side support screws to 7-10 ft. lbs.

### CABLE ASSEMBLY

**Removal** — Remove sun or moon roof housing. Remove motor actuator. Disconnect rear cable support from sliding panel. Remove rear stop from rear top of guide. Remove rear guide support screw, lift up on guide to clear housing, and pull cable free from housing.

**Installation** — 1) Slide cable into guide and replace stop screws. Position rear cable supports so both are equal distance from rear of housing. Fasten supports to roof panel with nuts, then slide panel fully closed. Both front rollers should be on top of ramps and against front stops.

2) Check to see that both rear lifter links are vertical when front rollers are against stop. If not, adjust panel nuts. Install actuator motor, and reverse removal procedure to install housing in vehicle.