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Fig 1: Power Top/Sunroof



Courtesy of CHRYSLER GROUP, LLC

The electric sun roof comprises two glass panels (the front one is mobile and the rear one fixed) and is fitted with an electrically operated sun blind.

Fig 2: Power Top/Sunroof Open



Courtesy of CHRYSLER GROUP, LLC

The positions that can be assumed by the front panel are:

- Totally open
- Swivel position.

The movement can be carried out using three buttons installed in a dedicated switch panel located on the roof light cluster.

Fig 3: Power Top/Sunroof Switch



Courtesy of CHRYSLER GROUP, LLC

KEY

1. Blind opening/closing
2. Roof opening/closing
3. Swivel position opening/closing (Vent)

When the opening button is pressed, the roof will automatically move to the opening position, without the need to hold the button down.

If during the movement the button is pressed again, the roof will stop in the current position. The same applies to the blind.

To bring the roof into swivel position, press and release the specific button. This type of swivel opening can be activated irrespective of the position of the sun roof. If the button is pressed again during the movement to reach the swivel opening position, the roof will stop.

The sun roof and the electric blind are equipped with an anti-pinch safety system capable of detecting

the presence of an obstacle whilst the roof is closing: if this happens, the system intervenes and the movement of the glass is immediately reversed.

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Fig 1: MySky Sunroof

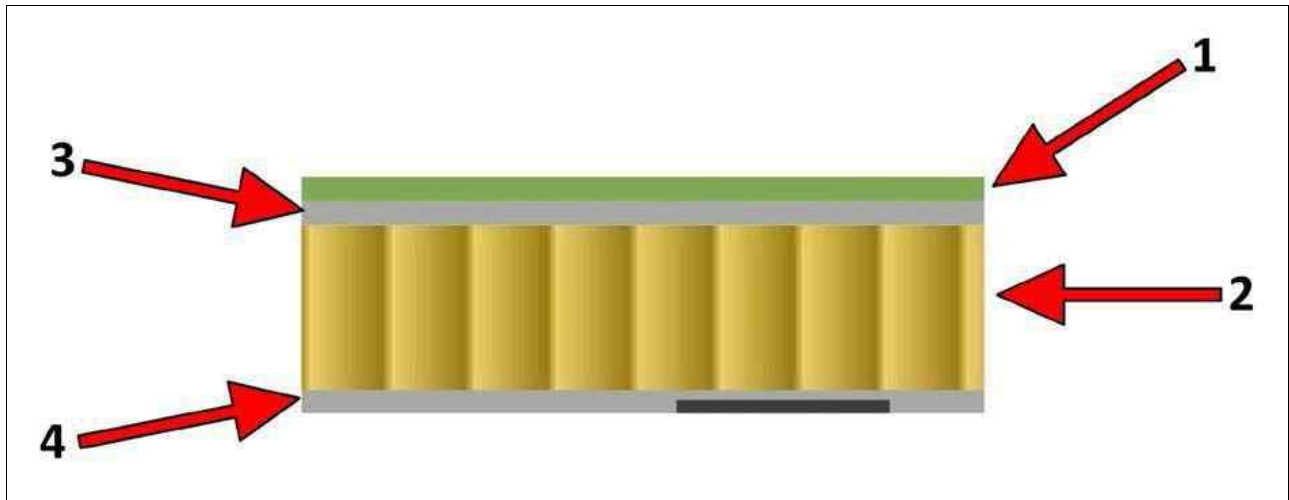


Courtesy of CHRYSLER GROUP, LLC

The MySky™ sun roof is a new and exclusive sun roof concept, specially developed for this vehicle. The roof has two panels, a front and a rear one, that can be individually or simultaneously removed, depending on the occupants' choice.

The panels are made of a special material that can guarantee total soundproofing of the passenger compartment, is lightweight, and has optimal resistance and high rigidity.

Fig 2: MySky Sunroof Design



Courtesy of CHRYSLER GROUP, LLC

KEY

1. Granular film application
2. Fiberglass
3. Honeycomb cardboard
4. Fiberglass

The panels are made of a lightweight material which is perfectly resistant to atmospheric agents, such as rain, hail, wind, etc.

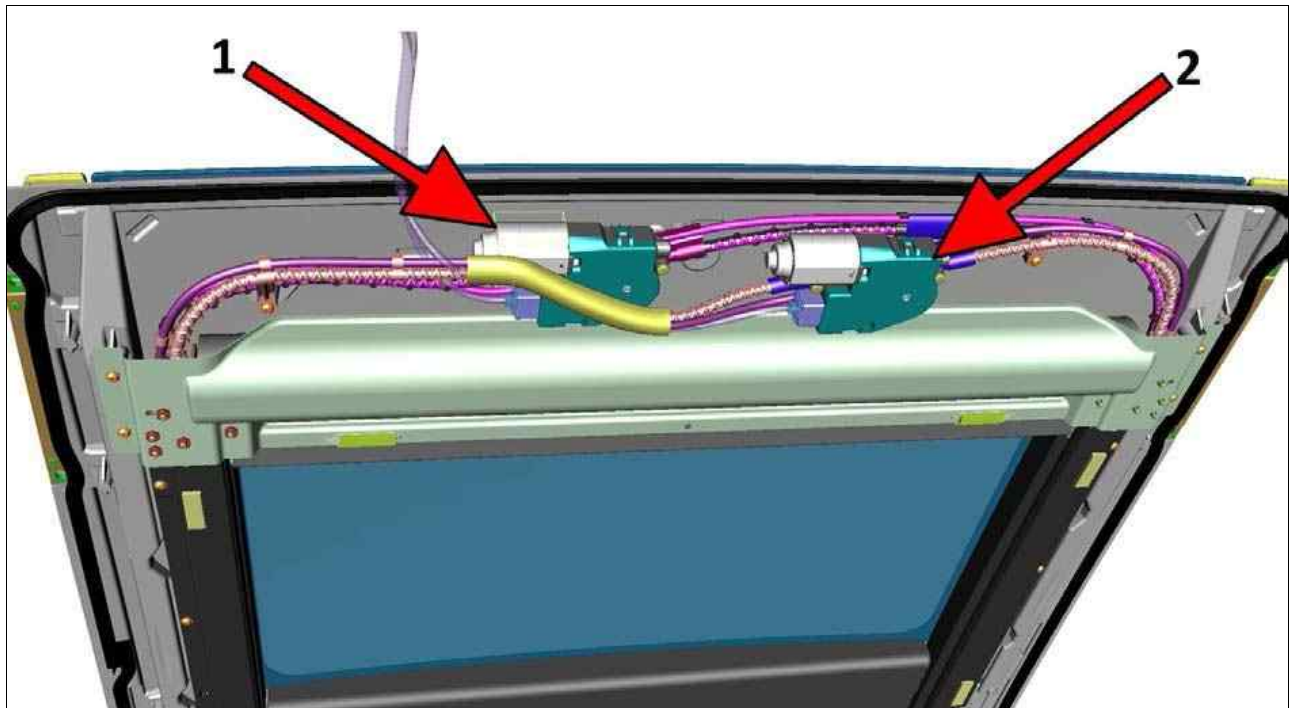
Front and rear panels are distinguished by a dedicated symbol on the bottom of the panels themselves.

On some versions, the front panel might be electrically operated.

Regardless of the type of panel movement, both can be removed independently.

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Fig 1: Power Top/Sunroof Motors



Courtesy of CHRYSLER GROUP, LLC

Key

1. Blind movement motor
2. Sun roof glass movement motor

In the rear part of the roof there are two electric motors, with simple electronics, to manage the sun roof functions such as automatic opening and anti-pinch.

The BCM controls the intensity of the lighting for the switch panel on the front roof light. Depending on the position of the switch, an earth signal is sent to the electronic circuit of the blind or roof movement motor, to identify the type of command requested: opening, closing or swivel position (VENT).

The switch position signals for opening and closing, along with the vehicle speed signals, panel-operated supply +15 and direct battery supply +30 reach the electronic circuit of the two roof movement motors.

The electronic circuit installed on the roof movement motors manages, in addition to movement, the anti-pinch function. To do this they need to recognize the sun roof and blind limit switches.

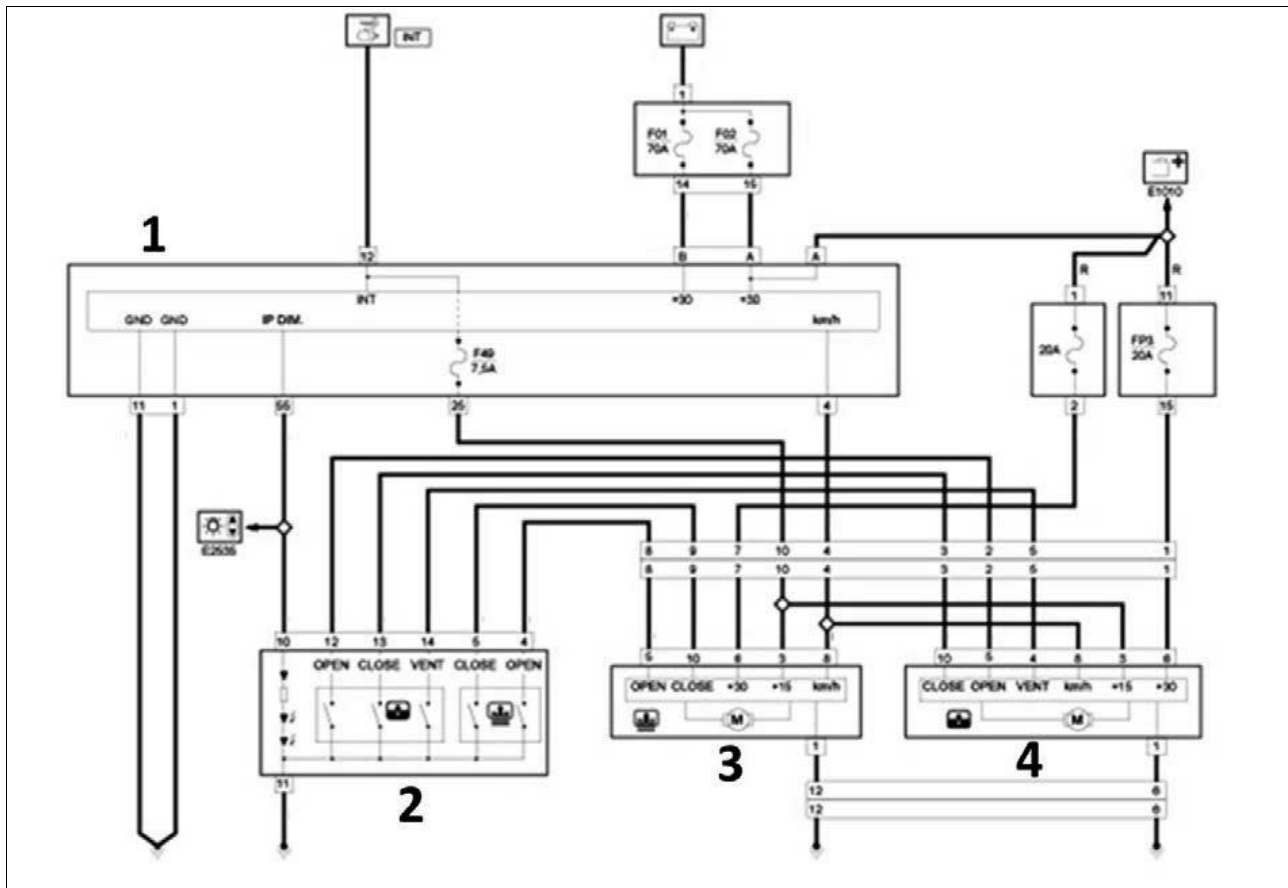
Electric sun roof limit switch initialization procedure - Following an automatic motion malfunction while opening/closing or an emergency maneuver, the automatic operation of the sun roof must be initialized again.

Proceed as follows:

- move the roof to fully closed position;
- move the ignition device to STOP and keep it there for 10 seconds;
- bring the ignition device to MAR;

- press the roof movement button in "closing" position;
- press the button for at least 10 seconds, then you should hear the mechanical stop of the roof motor;
- press the roof movement button in the "closing" position again within 5 seconds;
- hold the roof movement button down: in this position, the roof will perform an automatic opening and closing cycle. Otherwise, repeat the operations starting from the beginning;
- hold the roof movement button down until the roof is completely closed: the initialization procedure has ended.

Fig 2: Power Top/Sunroof Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

KEY

1. BCM
2. Switch panel on front roof light
3. Blind movement motor
4. Roof movement motor

Switch panel pinout

- Pin 4 blind opening signal

- Pin 5 blind closing signal
- Pin 10 lighting regulation power supply
- Pin 11 Earth
- Pin 12 roof opening signal
- Pin 13 roof closing signal
- Pin 14 swivel position signal

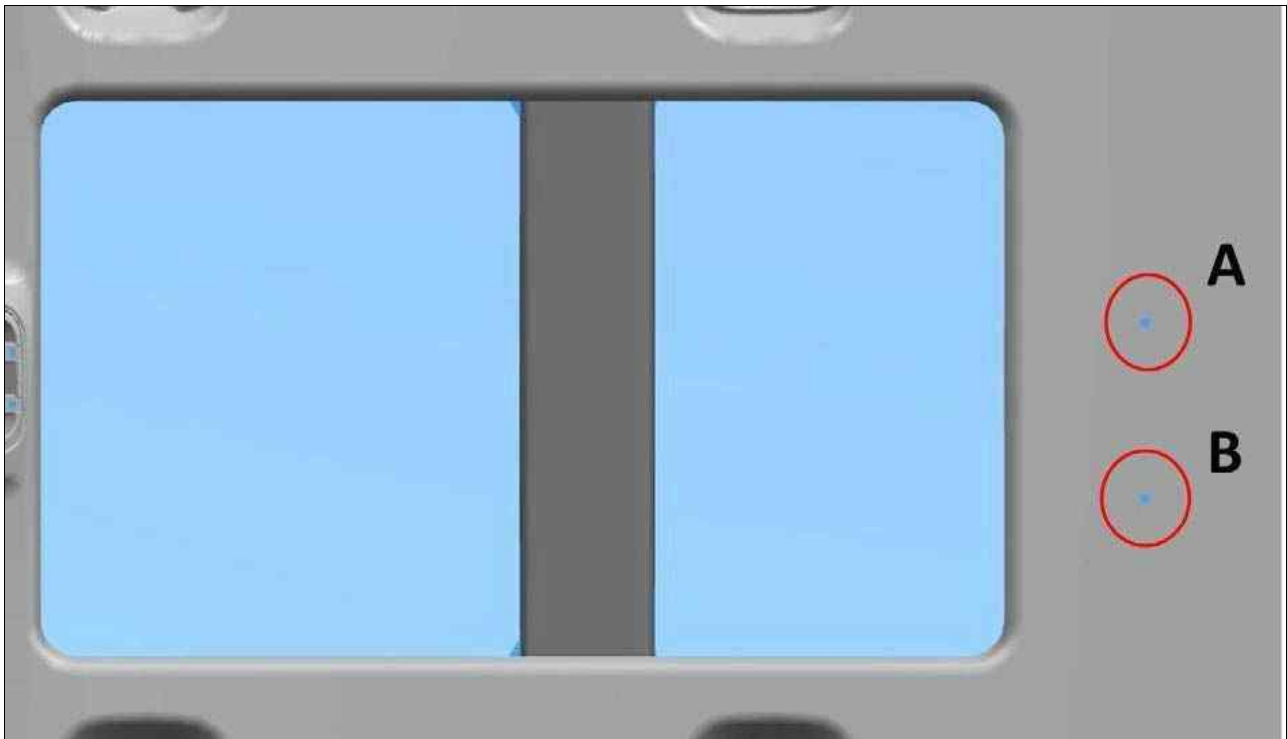
Blind movement motor panel pinout

- Pin 1 earth
- Pin 3 +15
- Pin 5 blind opening signal
- Pin 6 +30
- Pin 8 vehicle speed
- Pin 10 blind closing signal

Roof movement motor panel pinout

- Pin 1 earth
- Pin 3 +15
- Pin 4 swivel position signal
- Pin 5 roof opening signal
- Pin 6 +30
- Pin 8 vehicle speed
- Pin 10 roof closing signal

Fig 3: Protective Caps



Courtesy of CHRYSLER GROUP, LLC

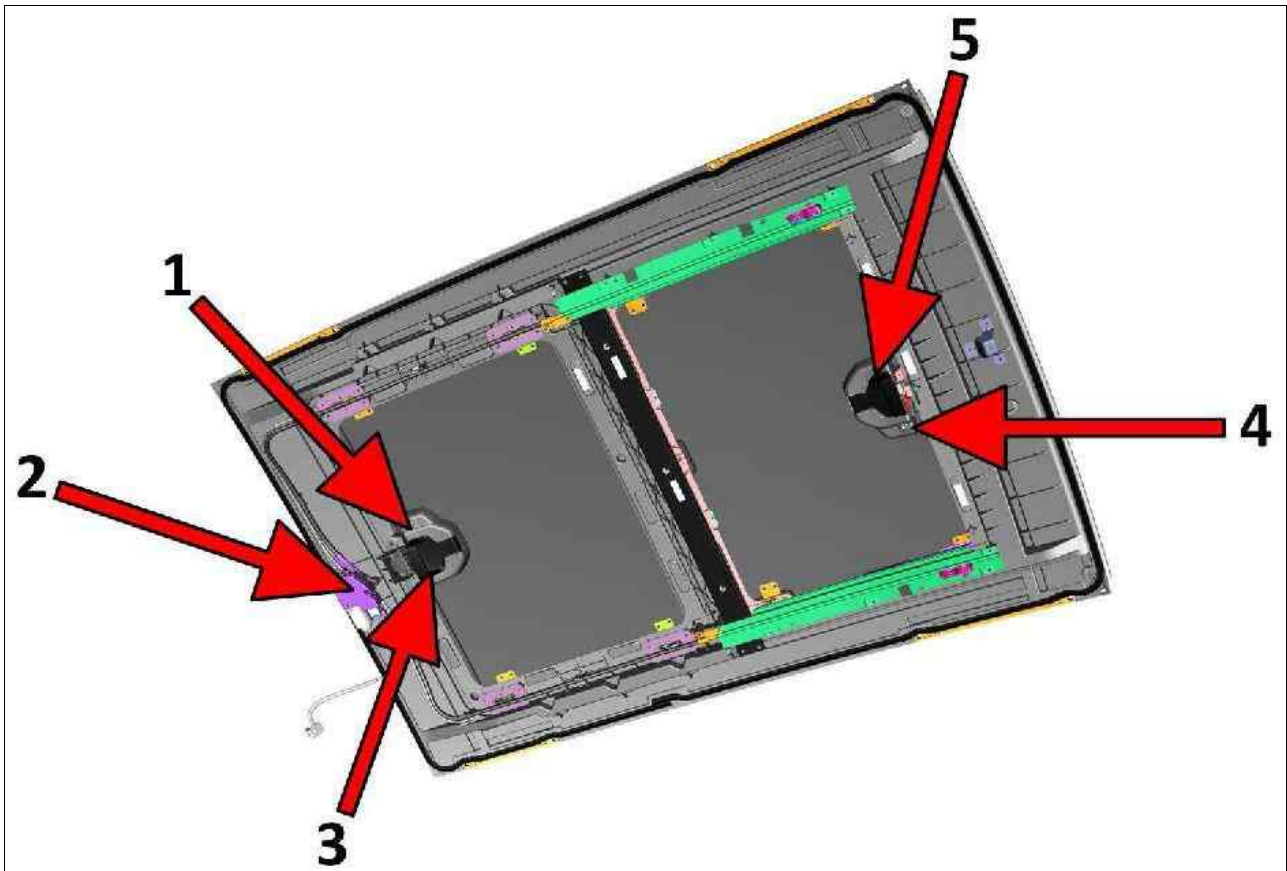
Emergency closing

- If the control buttons fail to operate, the sun blind and the sun roof can be moved manually, proceeding as described below:

- Sun blind movement: remove protective cap A on the internal trim;
- Sun roof movement: remove protective cap B on the internal trim;
- Insert the Allen key into housing A (to move the blind) or B (to move the sun roof) and insert it in the movement wheel fitted on the engine assembly. Rotate the Allen key clockwise to open the roof (or the blind) or counterclockwise to close the roof (or the blind).

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Fig 1: Motor, Panels & Handles



Courtesy of CHRYSLER GROUP, LLC

PANEL REMOVAL

1. Insert for unlocking the rear panel release handle
2. Front panel electric movement motor
3. Handle for releasing the rear panel
4. Insert for unlocking the front panel handle
5. Handle for releasing the front panel

Proceed as follows to remove the panels: Working from inside the passenger compartment, insert the special key to unlock the lever inside the dedicated housing and rotate it next to the unlocked symbol, in order to unlock the lock and simultaneously pull the handle, which is under the panel, to end of travel;

Refitting the panels:

Front panel -

- working from outside, place the panel correctly on its guides, slightly rearward;
- slide the panel forward slightly to end of travel;
- working from inside the passenger compartment, use the handle under the panel to lock it;

- make sure that the panel has been properly refitted (there should be no clearance between the panel and the guides). Working from inside the passenger compartment, push the panel from the bottom upwards, to make sure that it is properly secured to the dedicated locks.

Rear panel -

- working from outside, place the panel correctly on its guides, slightly rearward;
- slide the panel forward slightly to end of travel;
- make sure that the panel has been properly refitted (there should be no clearance between the panel and the guides). Working from inside the passenger compartment, push the panel from the bottom upwards, to make sure that it is properly secured to the dedicated locks.

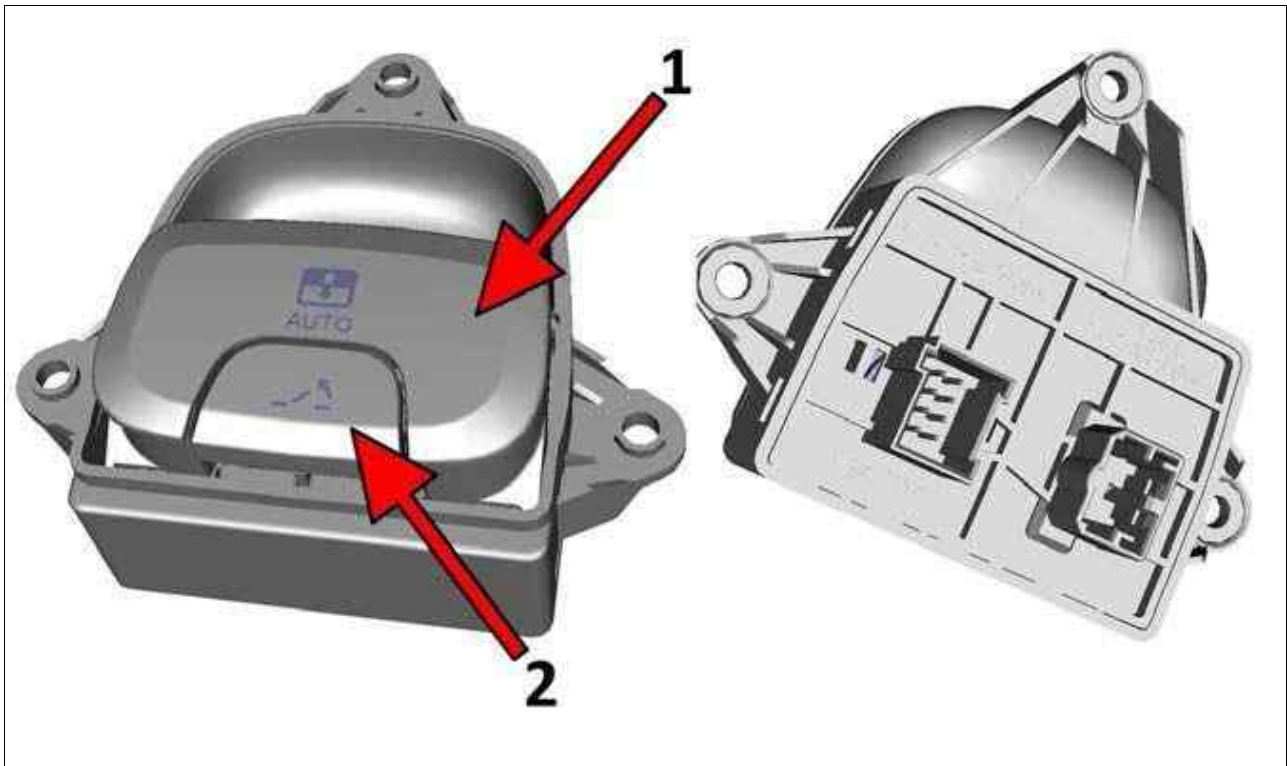
Fig 2: Handle Release Key



Courtesy of CHRYSLER GROUP, LLC

Handle release key - The key to unlock/lock the roof panel release handle is provided on vehicles equipped with MySky.

Fig 3: Roof Opening Buttons



Courtesy of CHRYSLER GROUP, LLC

Electric panel movement

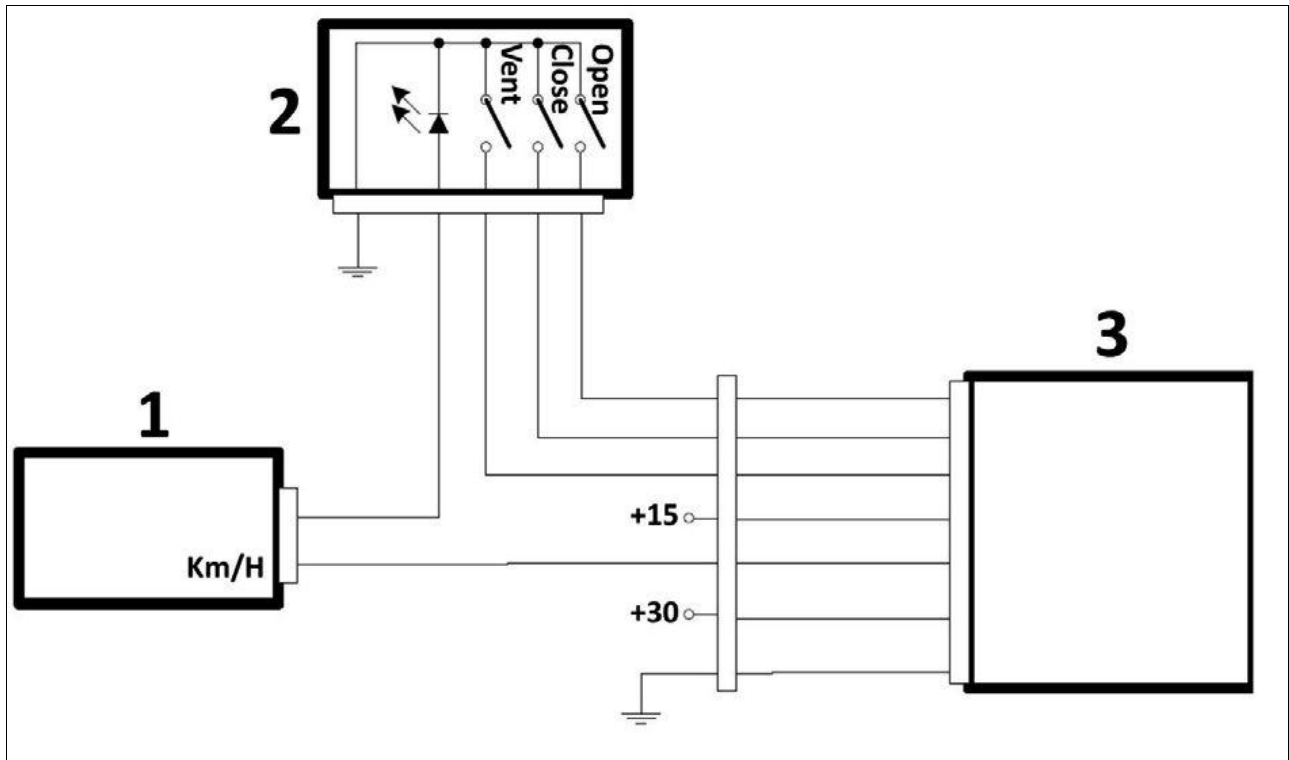
1. Roof opening button
2. Roof opening button in swivel position

The occupants of the vehicle can completely open the front panel in automatic mode by pressing the roof opening button only once. From the position of complete opening pull the button to completely close the front panel in automatic mode.

Front panel swivel opening function (Vent) - To bring the roof into swivel position, press and release the specific button. This type of swivel opening can be activated irrespective of the position of the sun roof.

Anti-pinching device - The front panel of the roof features an anti-pinch safety system capable of detecting the presence of an obstacle whilst the panel is being opened and closed. When this happens, the system stops and the movement of the panel is immediately reversed.

Fig 4: Roof Opening Buttons Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

KEY

1. BCM
2. Switch panel on front roof light
3. Front panel movement motor