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# Roof Opening Panel - System Operation and Component Description

## System Operation

### Sunroof System Function

The roof opening panel motor and the shield motor are hard wired to both the BCM and the roof opening panel control switch. The only function of the BCM is to provide battery voltage and accessory delay voltage to the roof opening panel motor and battery voltage only to the shield motor. Both motors are interchangeable with the shield having one extra ground circuit which determines that it is the shield motor and that the roof opening panel motor is the master motor. The 2 motors communicate on a K Bus for interaction but there is no vehicle communication with the motors. The K Bus is only for communication between the motors and is not used for diagnostics. The roof opening panel control switch is hard wired to the roof opening panel motor with a sunroof open circuit, sunroof close circuit and a tilt/vent switch circuit. When the roof opening panel control switches are pressed a ground signal is sent to the roof opening panel motor to activate the respective switch request. The shield open and close switches are hard wired to the shield motor and operate the same as the roof opening panel motor.

### Switch Operation

The sunroof opening panel switches are located in the overhead console in the center of the overhead console switch bank. The sliding glass panel has 3 switches in-line, in the center of the switch bank, The forward switch is the close switch, the center switch is the vent switch, and the rear switch is the open switch. The two switches to the right side of the roof opening panel switches are the shield switches the first being shield close and then shield open. All of the roof opening panel switches are single position switches that can achieve one touch operation in either direction by pressing the switch for less than 1 second. For manual operation, simply press and hold the switch until the roof opening panel or shield is in the desired position and release the switch. When the front roof opening panel is in the fully closed or between fully closed and full vent position the vent switch operates in either manual or one touch operation similar to the roof opening panel and shield switches. If the shield is not open at least to the front of the rear fixed glass (comfort stop) when the vent or roof opening panel glass open switch is pressed then the shield will first open to the comfort stop position before the roof opening panel glass