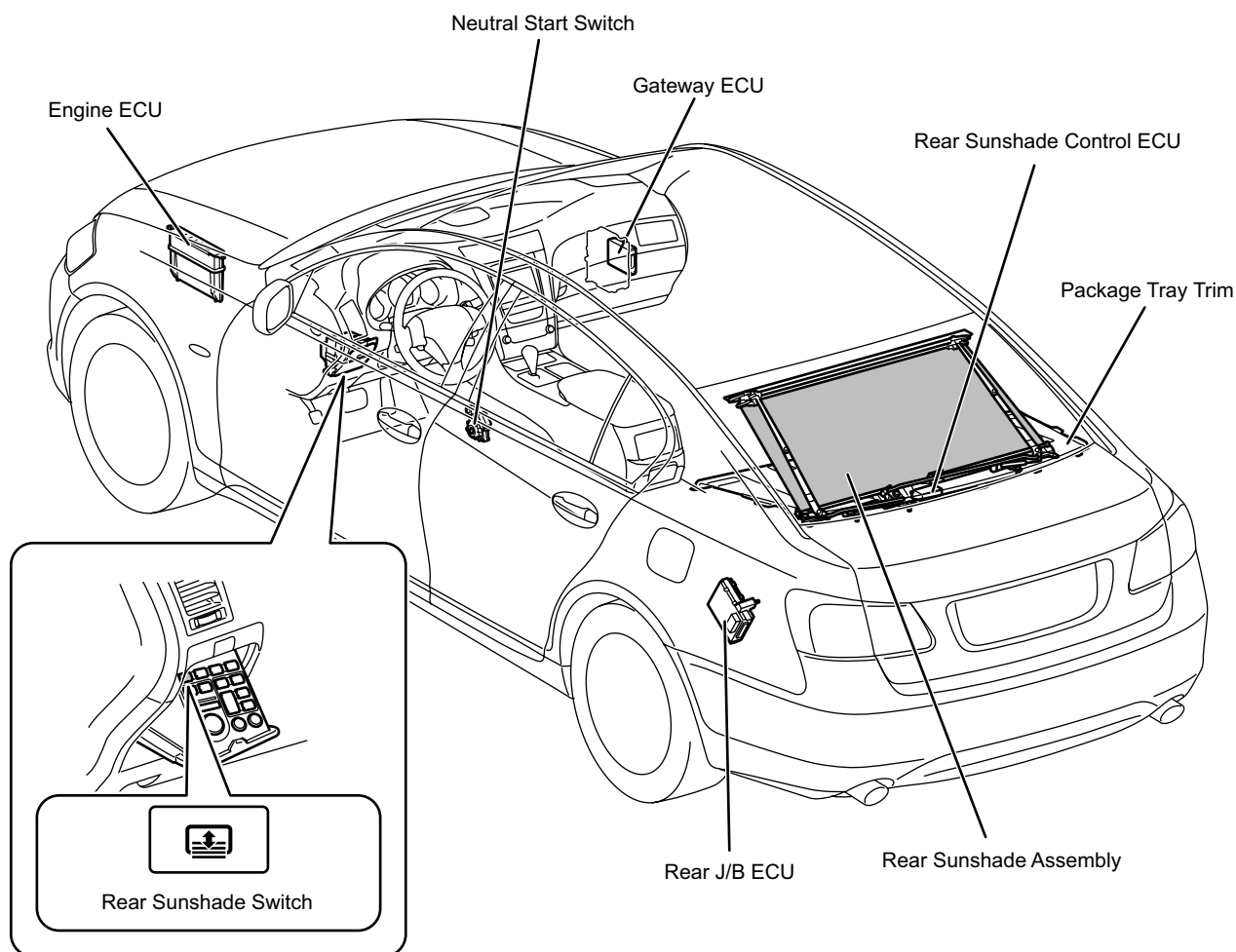
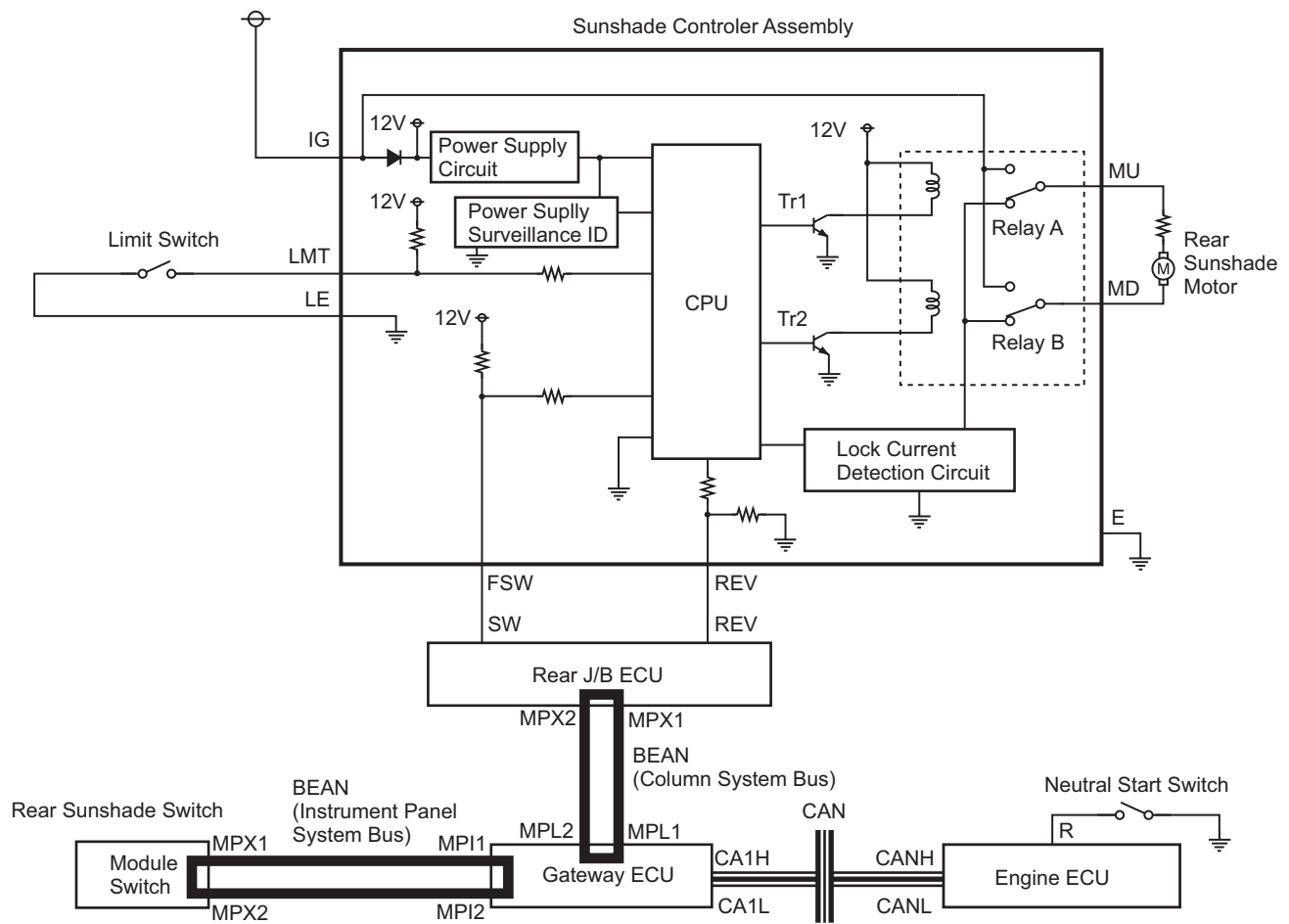


Rear Sunshade

- A power rear sunshade located on the package tray trim is available as optional equipment on all models.
- When the user operates the rear sunshade switch while the engine switch is ON, the power rear sunshade is deployed to cover the back window glass and protect the rear seat occupants from direct sunlight.
- To prevent the rear view from being blocked by the deployed sunshade, this system is provided with a reverse-linked auto-down function, which automatically lowers the sunshade when the shift lever is engaged in R (reverse). The reverse-linked auto-down function supports the customizable function through the use of the diagnosis tool (hand-held tester). Thus, the response time of the reverse-linked auto-down function can be changed as follows: 0.7 seconds, 1.2 seconds, 0.9 seconds, and none: 0 seconds.
- The power rear sunshade stores completely in the package tray trim, thus ensuring good looks when it is not being used.
- The power rear sunshade consists of the following components: the rear sunshade assembly, rear sunshade control ECU, and rear sunshade switch. In addition, it uses the following ECUs that are related to the reverse-linked auto-down control: engine ECU, luggage room J/B ECU, etc.



System Diagram



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Open/Store Operation

- When the user operates the rear sunshade switch, the sunshade controller receives the input of this signal.
- Upon receiving the input of the ON signal from the rear sunshade switch while the ignition is ON and the limit switch is ON (rear sunshade in the retracted position), the CPU in the sunshade controller turns Tr1 ON. This causes relay A to turn ON, thus allowing the current to flow from the MU terminal to the rear sunshade motor, and the MD terminal. As a result, the motor operates in the normal direction to deploy the rear sunshade. After the rear sunshade completes its deployment, the CPU detects that the motor has locked, and turns Tr1 and relay A OFF, in order to stop the operation of the motor.
- Upon receiving the input of the ON signal from the rear sunshade switch while the ignition is ON and the limit switch is OFF (rear sunshade in a position other than retracted), the CPU in the sunshade controller turns Tr2 ON. This causes relay B to turn ON, allowing the current to flow from the MD terminal to the rear sunshade motor and the MU terminal. As a result, the motor operates in the reverse direction to retract the rear sunshade. After the rear sunshade completes its retraction, the CPU detects that the motor has locked, and turns Tr2 and relay B OFF, in order to stop the operation of the motor.

Reverse-Linked Retraction Operation

- When the shift lever is put into the R (Reverse) range, the reverse signal from the neutral start switch is input by the engine ECU, and is transmitted to the gateway ECU using CAN communication. The gateway ECU uses bidirectional body electronics area network (column system bus) to transmit the signal it received to the luggage room J/B ECU, which then transmits from terminal REV to the sunshade controller.
- When the CPU in the sunshade controller inputs a reverse signal from terminal REV while the limit switch is ON (rear sunshade is not stored), relay A is turned OFF and relay B is turned ON. This rotates the motor in reverse to store the rear sunshade.

Fail-Safe Operation

- If the motor does not stop (the CPU does not detect the locking of the motor) after approximately 15 seconds have elapsed from the time the motor started its normal or reverse operation, a timer function that is programmed in the CPU of the sunshade controller turns relay A or B OFF, in order to stop the operation of the motor.