

SEAT WARMER SYSTEM

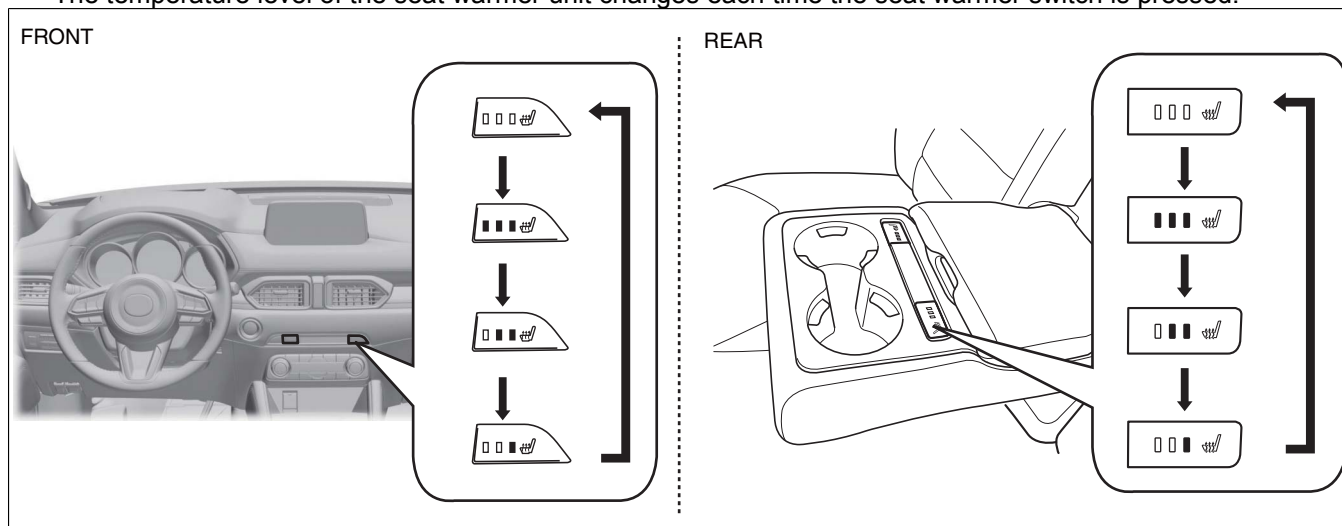
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Purpose

- The seat warmer system warms the front seat cushion and front seat back using the seat warmer unit.

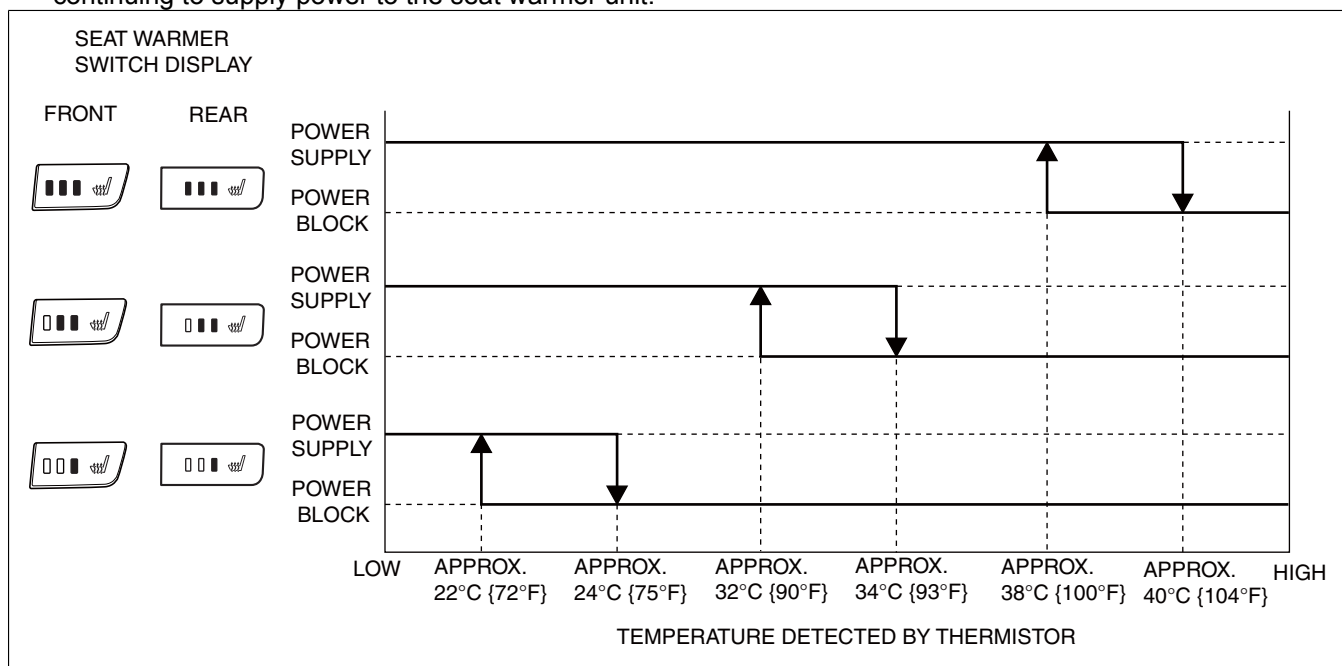
Function

- The seat warmer unit warms the seat cushion and seat back by supplying power to the built-in filaments.
- The seat warmer unit can adjust the temperature between 3 levels.
- The temperature level of the seat warmer unit changes each time the seat warmer switch is pressed.



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- The seat warmer control unit supplies power to the seat warmer unit and increases the temperature around the seat back and seat cushion up to the average temperature which is applied to the temperature level.
- The seat warmer control unit detects the average temperature around the seat warmer unit (seat cushion side) based on a signal from the thermostat (seat cushion side) to prevent overheating, cuts off the power supply to the seat warmer unit when the temperature reaches the specification, and decreases the average temperature below the specified temperature.
- When the seat warmer control unit detects that the average temperature around the seat warmer unit (seat cushion side) has decreased below the specified temperature based on a signal from the thermostat, power is supplied to the seat warmer unit again to increase the temperature up to the specified temperature.
- The seat warmer control unit maintains a constant average temperature around the seat warmer unit by continuing to supply power to the seat warmer unit.

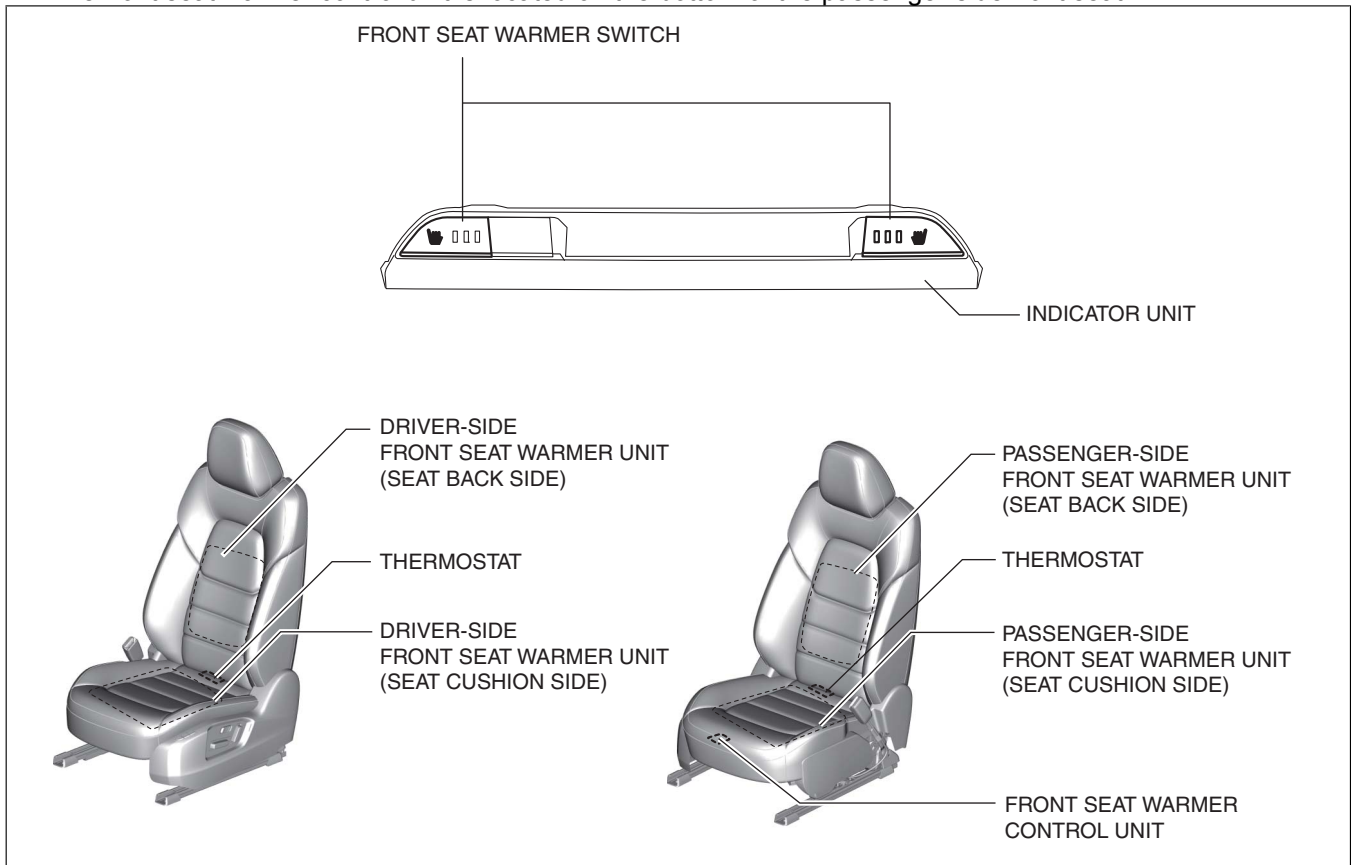


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Structural view

Front

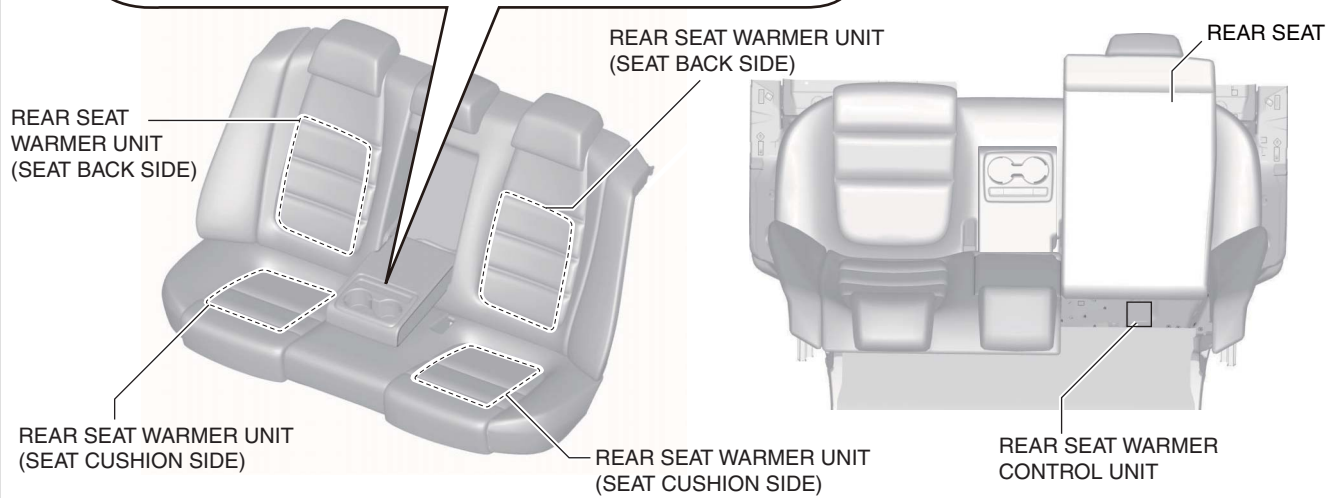
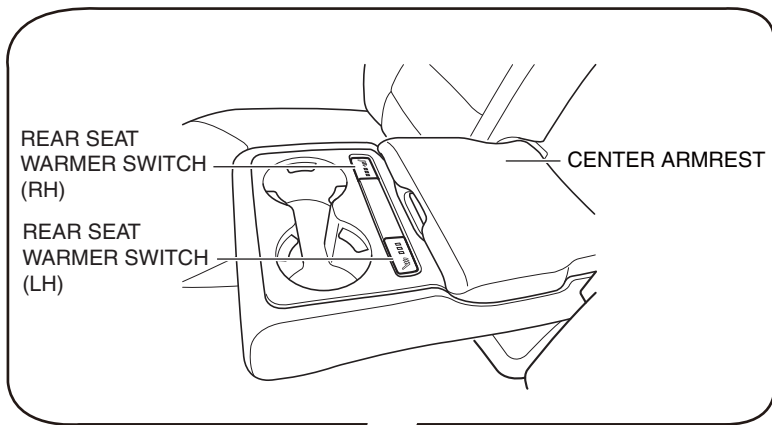
- The front seat warmer switch is built into the indicator unit.
- The front seat warmer unit is adhered to the front seat cushion and front seat back.
- The front seat warmer control unit is located on the bottom of the passenger-side front seat.



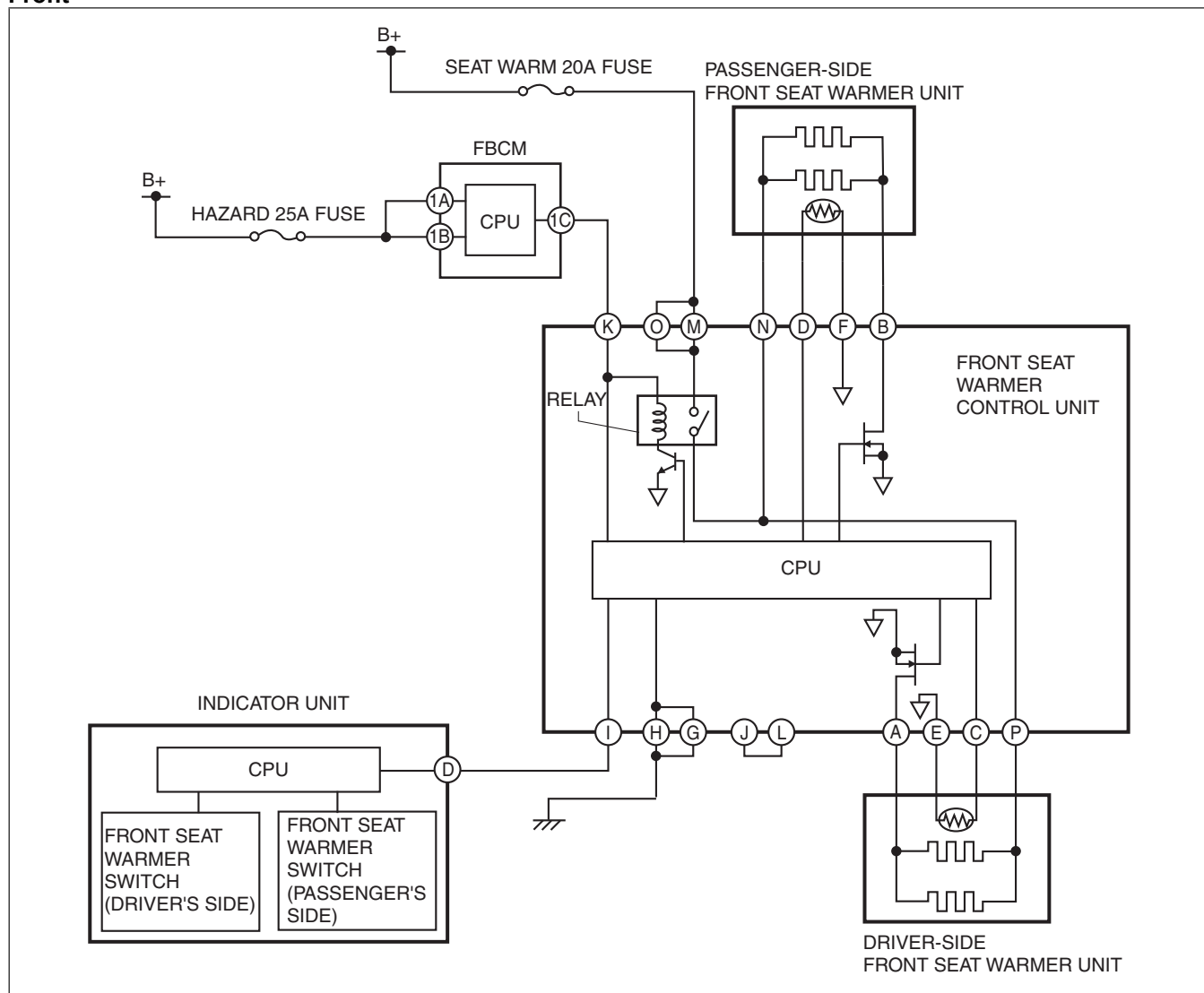
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Rear

- The rear seat warmer switch is integrated with the center armrest.
- The rear seat warmer switch has a built-in CPU for detecting the switch operation or temperature around the seat.
- The rear seat warmer unit is adhered to the rear seat cushion and the rear seat back.
- The rear seat warmer control unit is located on the rear floor front reinforcement.

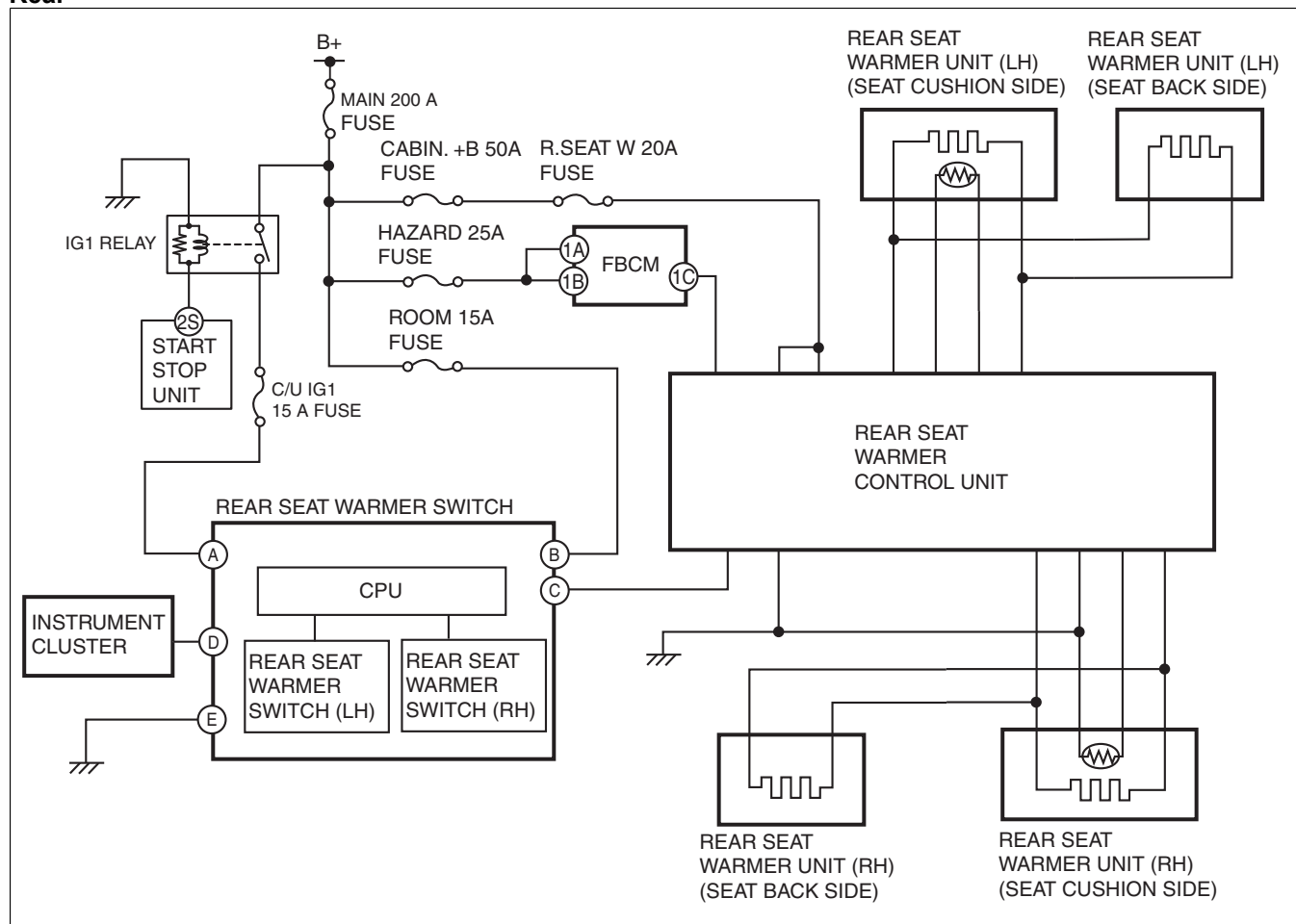


System wiring diagram Front



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Rear



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Operation

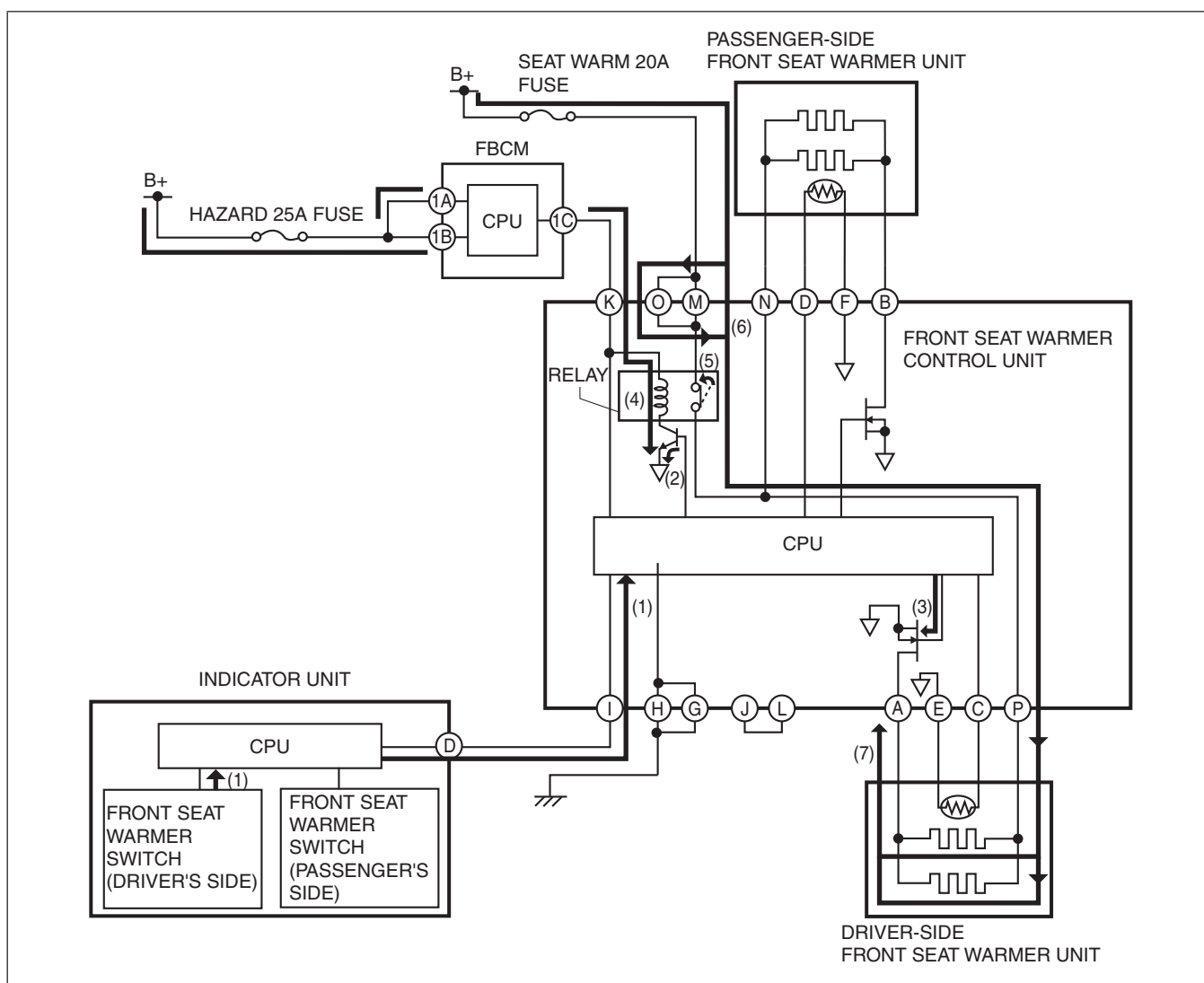
Front

Ex.) Seat warmer temperature level on cloth-type driver's seat is set at 3:

1. When the indicator unit detects the front seat warmer switch (driver's side) operation, it sends (1) a switch operation signal (temperature level "3") to the CPU of the front seat warmer control unit.
 2. When the CPU of the front seat warmer control unit receives the switch operation signal (temperature level "3") from the indicator unit, it sends current to the transistor to turn it on (2).
 3. Current flows (3) to the FET by turning the transistor on.
 4. The current flows (4) to the relay coil to turn the relay switch on (5).
 5. When the relay switch is turned on, the ground circuit is established and the current flows (6) to the front seat warmer unit in the driver's side seat cushion and front seat back.
 6. The heating wire warms up (7) by the current sent to the front seat warmer unit in the driver's side front seat cushion and front seat back.
- When the indicator unit detects that the temperature around the seat reaches **approx. 44°C {111°F}**, the power supply is cut off.

Note

- The indicator unit records the temperature level (number of indicators turned on) when the ignition is switched from ON (engine off or on) to off, and operates at the recorded temperature level (number of indicators turned on) when the ignition is switched ON (engine off or on) again.
- If the battery power supply is disconnected, the temperature level recorded by the indicator unit is eliminated.



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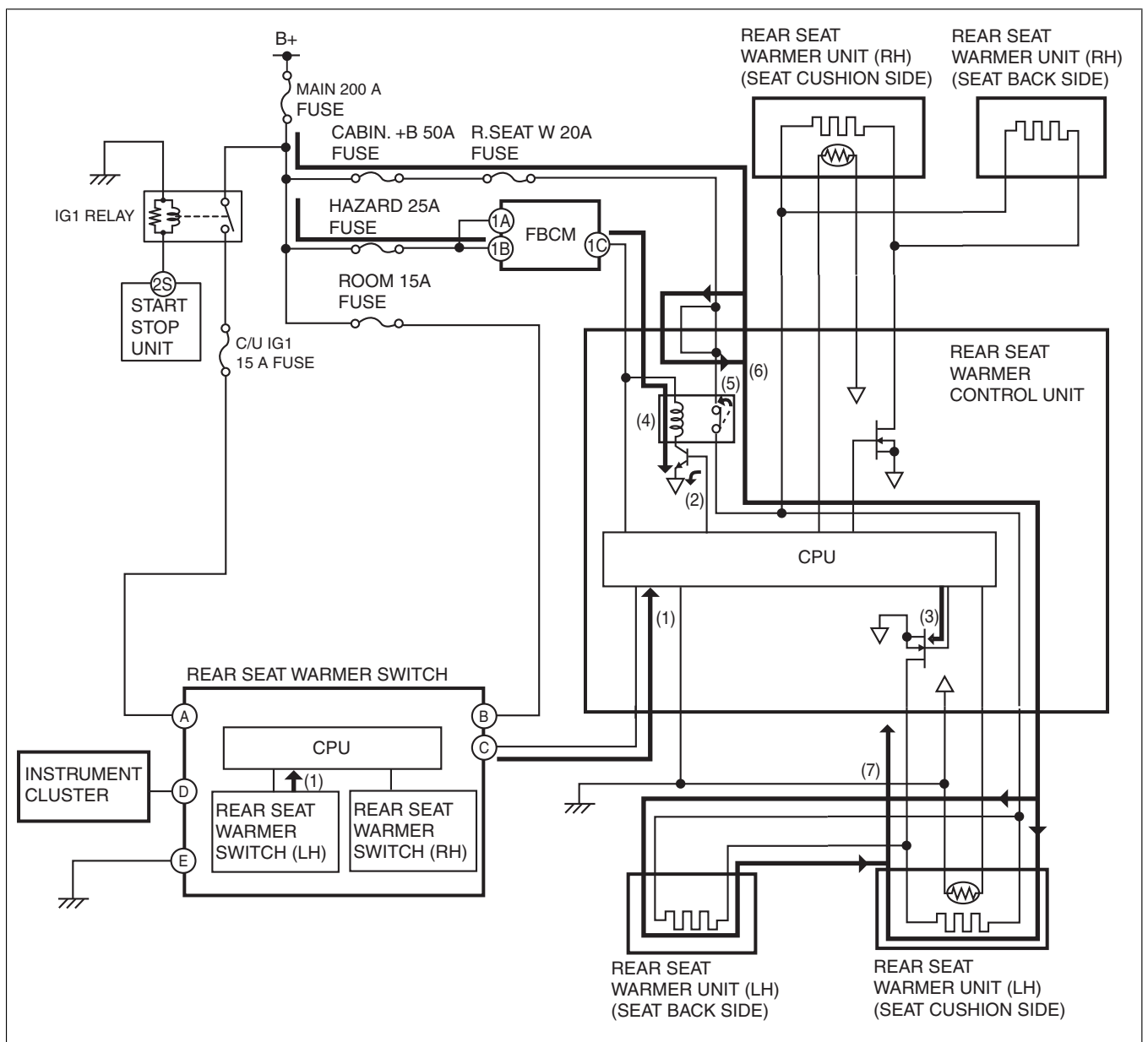
Rear

Ex.) Seat warmer temperature level on cloth-type left side rear seat is set at 3:

1. When the CPU of the rear seat warmer switch detects the rear seat warmer switch (LH) operation, it sends (1) a switch operation signal (temperature level "3") to the CPU of the rear seat warmer control unit.
 2. When the CPU of the rear seat warmer control unit receives the switch operation signal (temperature level "3") from the rear seat warmer switch, it sends current to the transistor to turn it on (2).
 3. Current flows (3) to the FET by turning the transistor on.
 4. The current flows (4) to the relay coil to turn the relay switch on (5).
 5. When the relay switch is turned on, the ground circuit is established and the current flows (6) to the rear seat warmer unit in the rear seat cushion (LH) and rear seat back (LH).
 6. The heating wire warms up (7) by the current sent to the rear seat warmer unit in the rear seat cushion (LH) and rear seat back (LH).
- When the CPU of the rear seat warmer switch detects that the temperature around the seat reaches **approx. 44°C {111°F}**, the power supply is cut off.

Note

- The CPU in the rear seat warmer switch does not store the temperature level of the rear seat warmer. When the ignition is switched OFF at the temperature level 1 to 3, and the ignition is switched ON again (engine off or on), the temperature level becomes "0".



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Fail-safe

- Function not equipped.