

REAR WIPER/WASHER SYSTEM

id091900002000

Outline

- The rear wiper and washer system operates the rear wiper and rear washer by operating the rear wiper and washer switch.

Function

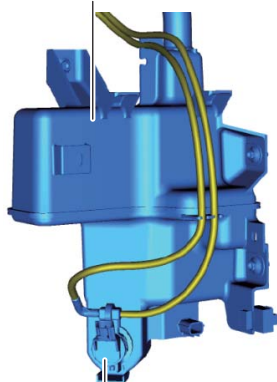
- The rear wiper and washer system is equipped with the following functions.
 - Continuous wiper function
 - Auto-stop function
 - Intermittent wiper function
 - Synchronized washer function

Structure/Construction

System structure

WITHOUT WASHER FLUID LEVEL WARNING SYSTEM

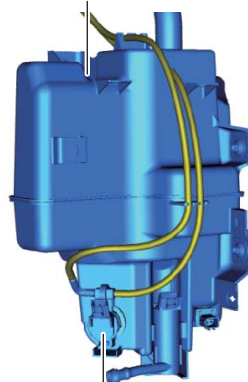
WASHER TANK



WASHER MOTOR

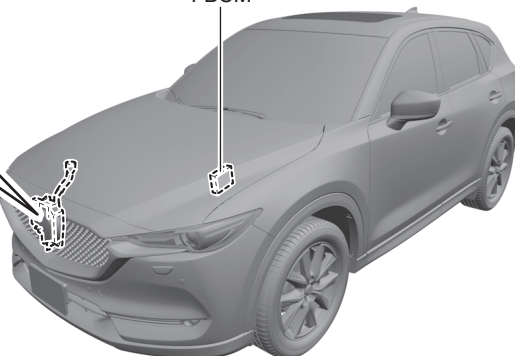
WITH WASHER FLUID LEVEL WARNING SYSTEM

WASHER TANK



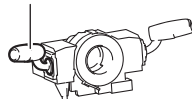
WASHER MOTOR

FBCM



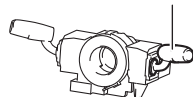
WITH WIPER AND WASHER SWITCH ON LEFT SIDE

WIPER AND WASHER SWITCH

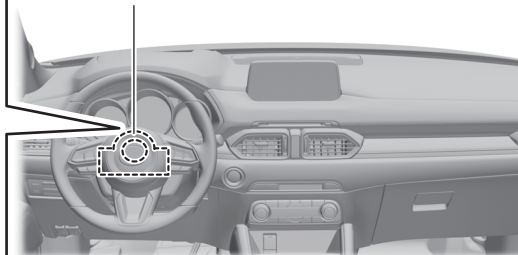


WITH WIPER AND WASHER SWITCH ON RIGHT SIDE

WIPER AND WASHER SWITCH



START STOP UNIT



RBCM

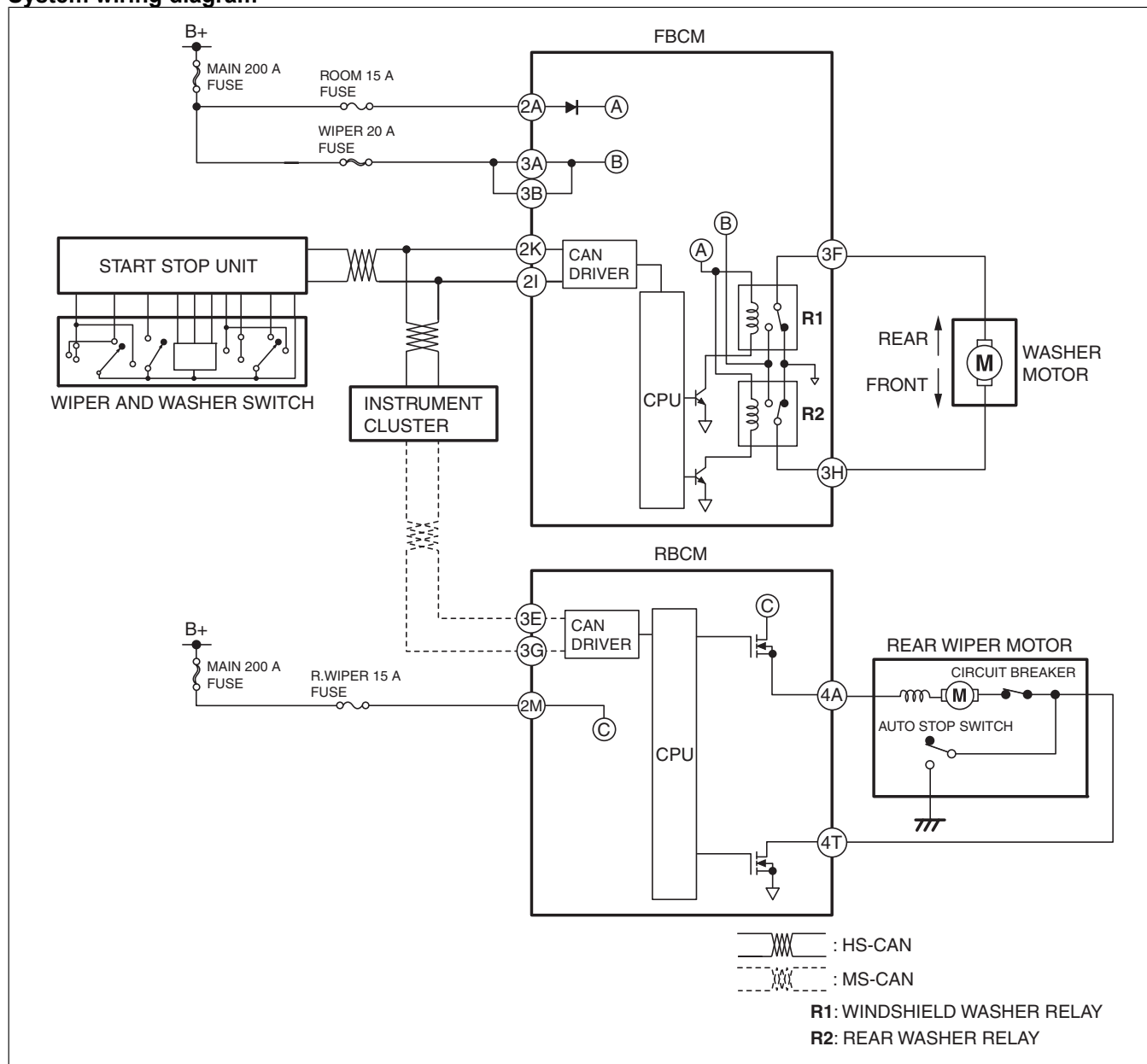
REAR WIPER ARM AND BLADE

REAR WIPER MOTOR



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System wiring diagram

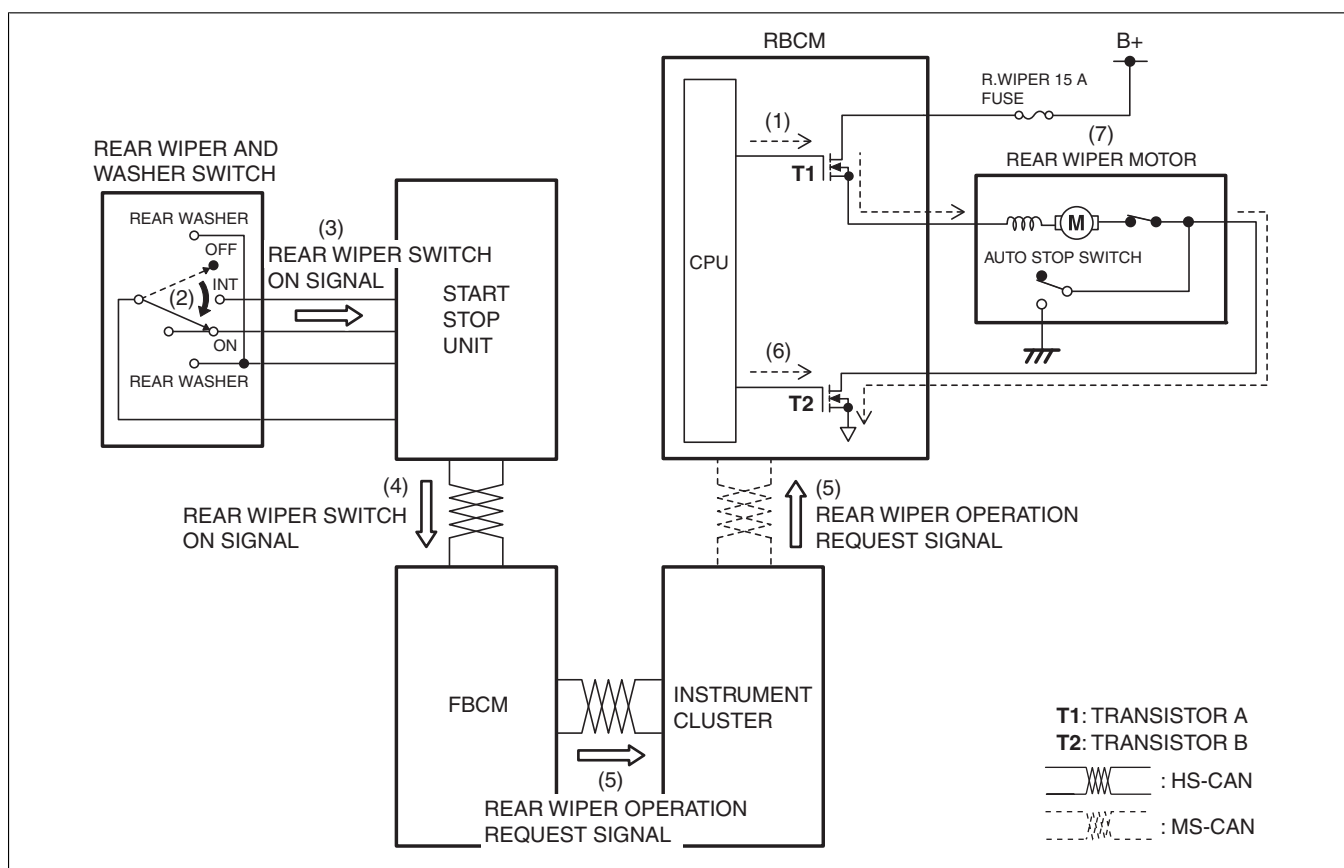


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Operation

Continuous wiper operation

1. When the ignition is switched ON (engine off or on), the rear body control module (RBCM) turns (1) transistor A on.
2. When the rear wiper and washer switch is in the ON position (2), the start stop unit detects (3) the rear wiper switch ON signal.
3. When the start stop unit detects the rear wiper switch ON signal, the rear wiper switch ON signal is sent (4) to the front body control module (FBCM) by CAN communication.
4. When the front body control module (FBCM) receives a rear wiper switch on signal, it sends (5) a rear wiper operation request signal to the rear body control module (RBCM) via the instrument cluster as a CAN signal.
5. When the rear body control module (RBCM) receives the rear wiper operation request signal, it turns (6) transistor B on.
6. When transistors B turn on, the rear wiper operates (7) continuously.



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Auto-stop operation

Note

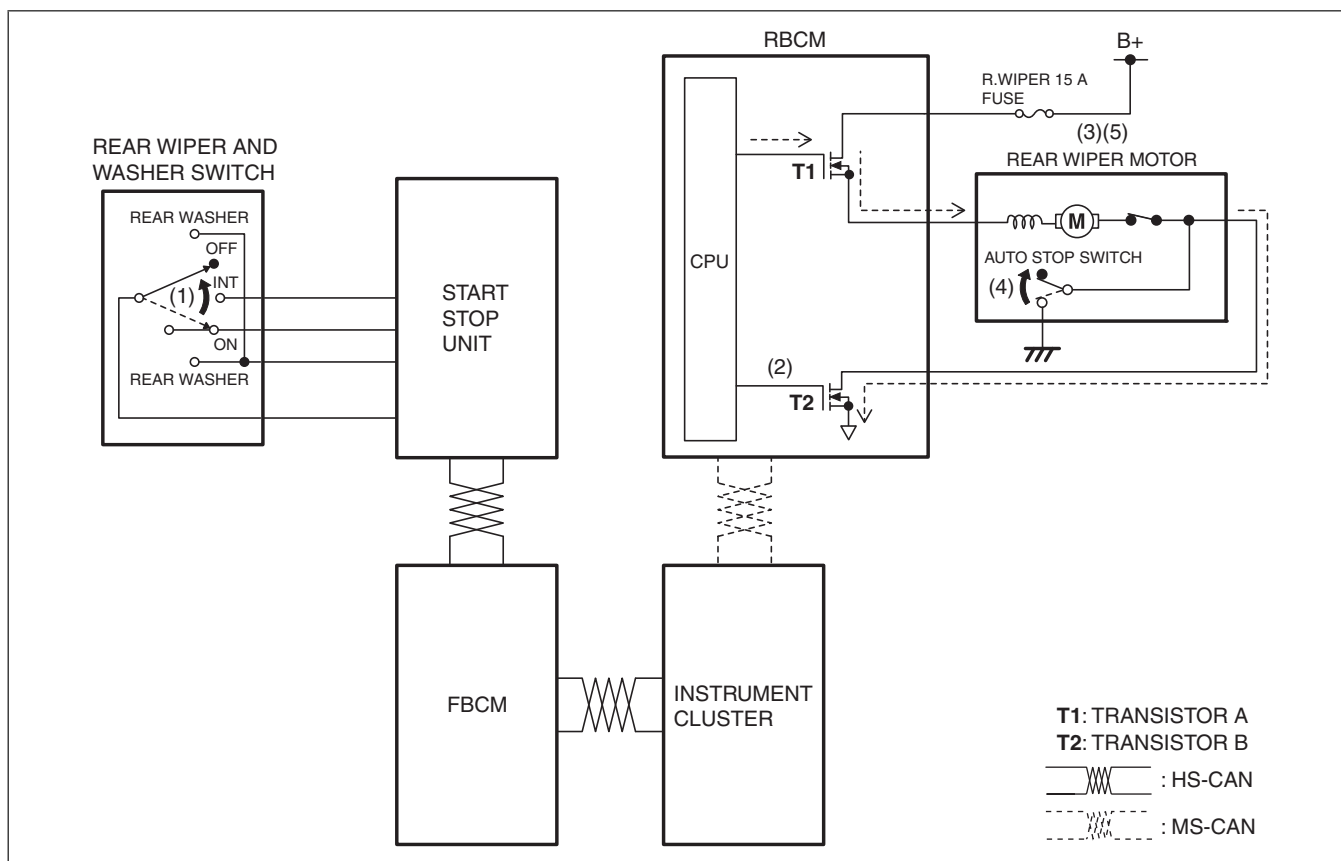
- The auto stop switch in the rear wiper motor operates as follows according to the operation position of the rear wiper.
 - Rear wiper in park position: Off
 - Rear wiper in position other than park: On

Operation conditions

- Rear wiper and washer switch turns off during continuous wiper operation

Operation

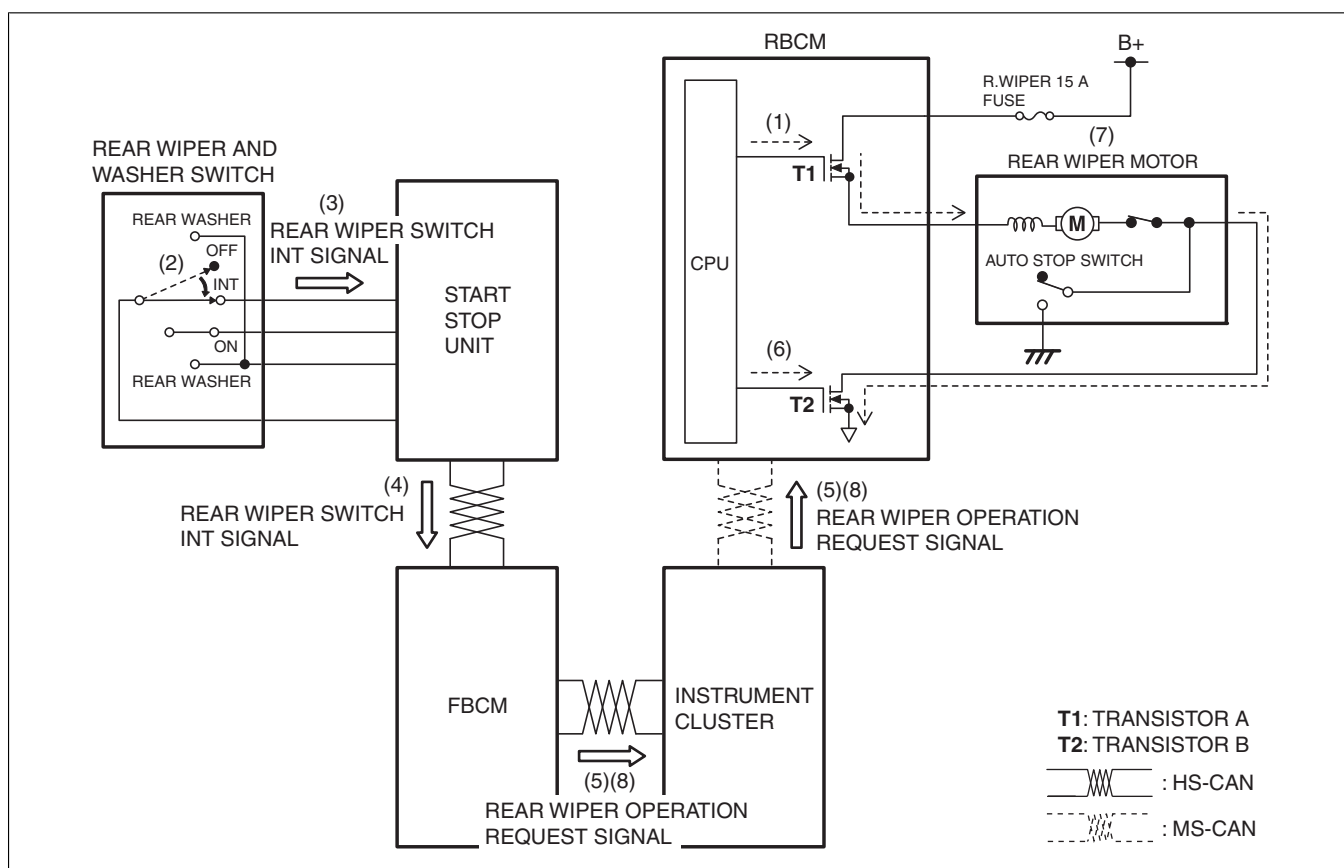
- If the rear wiper and washer switch is switched to the OFF position (1), the rear body control module (RBCM) turns (2) transistor B off.
- The rear wiper is operated continuously (3) because the auto stop switch is on.
- The auto stop switch turns off (4) when the rear wiper operates to the park position.
- When the auto stop switch is turned off, the rear wiper is stopped (5).



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Intermittent wiper operation

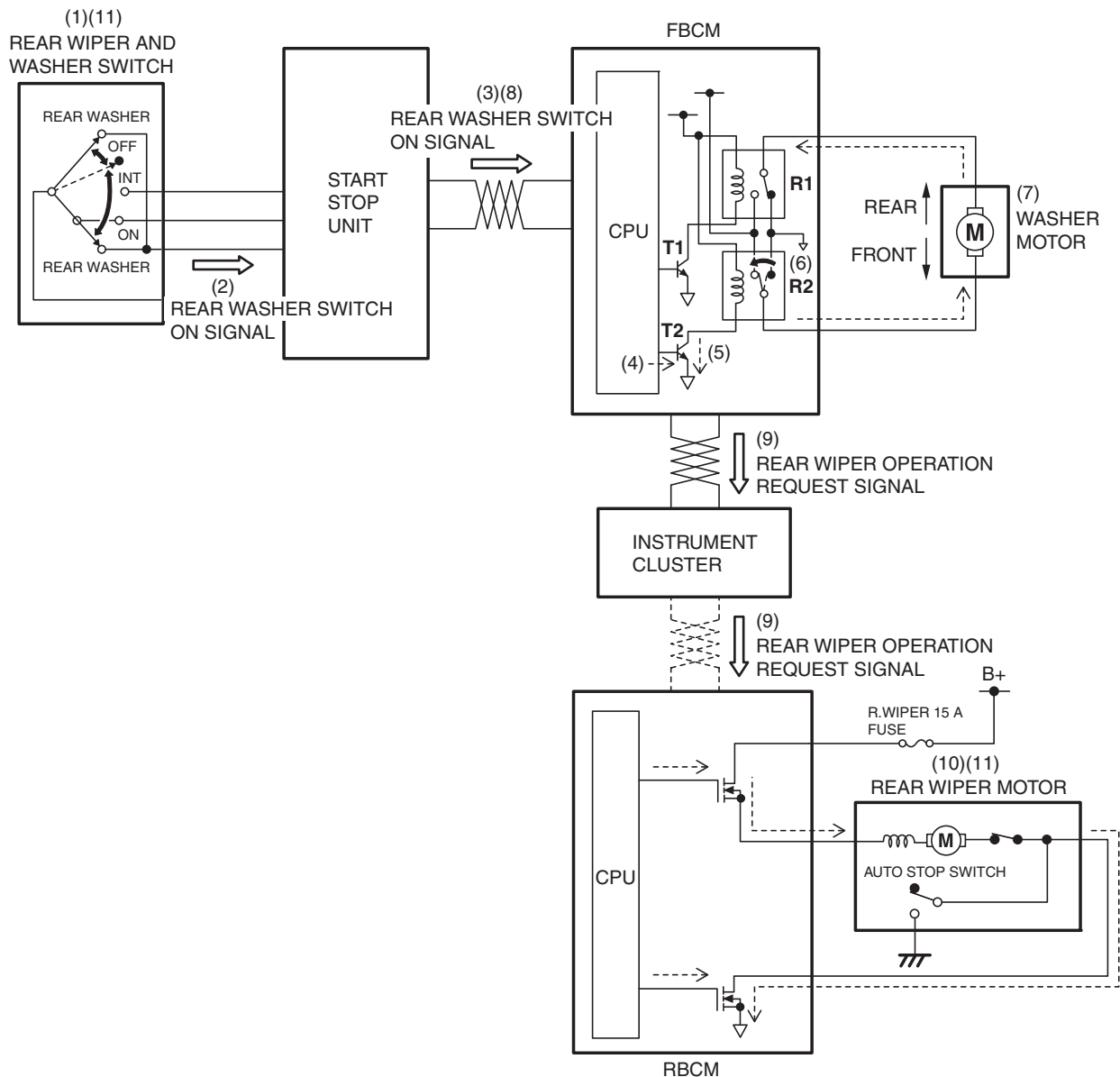
1. When the ignition is switched ON (engine off or on), the rear body control module (RBCM) turns (1) transistor A on.
2. When the rear wiper and washer switch is in the INT position (2), the start stop unit detects (3) the rear wiper switch INT signal.
3. When the start stop unit detects the rear wiper switch INT signal, the rear wiper switch INT signal is sent (4) to the front body control module (FBCM) by CAN communication.
4. When the front body control module (FBCM) receives a rear wiper switch INT signal, it sends (5) a rear wiper operation request signal to the rear body control module (RBCM) via the instrument cluster as a CAN signal.
5. When the rear body control module (RBCM) receives the rear wiper operation request signal, it turns (6) transistor B on.
6. When transistors B turn on, the rear wiper operates (7).
7. The front body control module (FBCM) sends (8) a rear wiper operation request signal to the rear body control module (RBCM) via the instrument cluster at regular intervals. Due to this, the rear wiper operates intermittently.



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Synchronized washer operation

1. When the rear wiper and washer switch is in the rear washer position (1) with the ignition switched ON (engine off or on), start stop unit detects (2) the rear washer switch on signal.
2. The start stop unit sends (3) the rear washer switch on signal to the front body control module (FBCM) via CAN communication.
3. When the front body control module (FBCM) receives the rear washer switch on signal, it turns transistor B on (4).
4. When transistor B turns on, a ground circuit with the rear washer relay is established (5), and the rear washer relay turns on (6).
5. When the rear washer relay turns on, the washer motor is driven (7) and washer fluid is sprayed from the rear washer nozzle.
6. When the front body control module (FBCM) receives (8) the rear washer switch on signal for a certain period of time, it sends (9) a rear wiper operation request signal to the rear body control module (RBCM) via the instrument cluster as a CAN signal.
7. When the rear body control module (RBCM) receives the rear wiper operation request signal, it operates (10) the rear wiper.
8. When the rear washer switch is turned off, the rear wiper stops (11) after it operates for **approx. 2.6 s**.



— : HS-CAN

- - - : MS-CAN

T1: TRANSISTOR A

T2: TRANSISTOR B

R1: WINDSHIELD WASHER RELAY

R2: REAR WASHER RELAY