

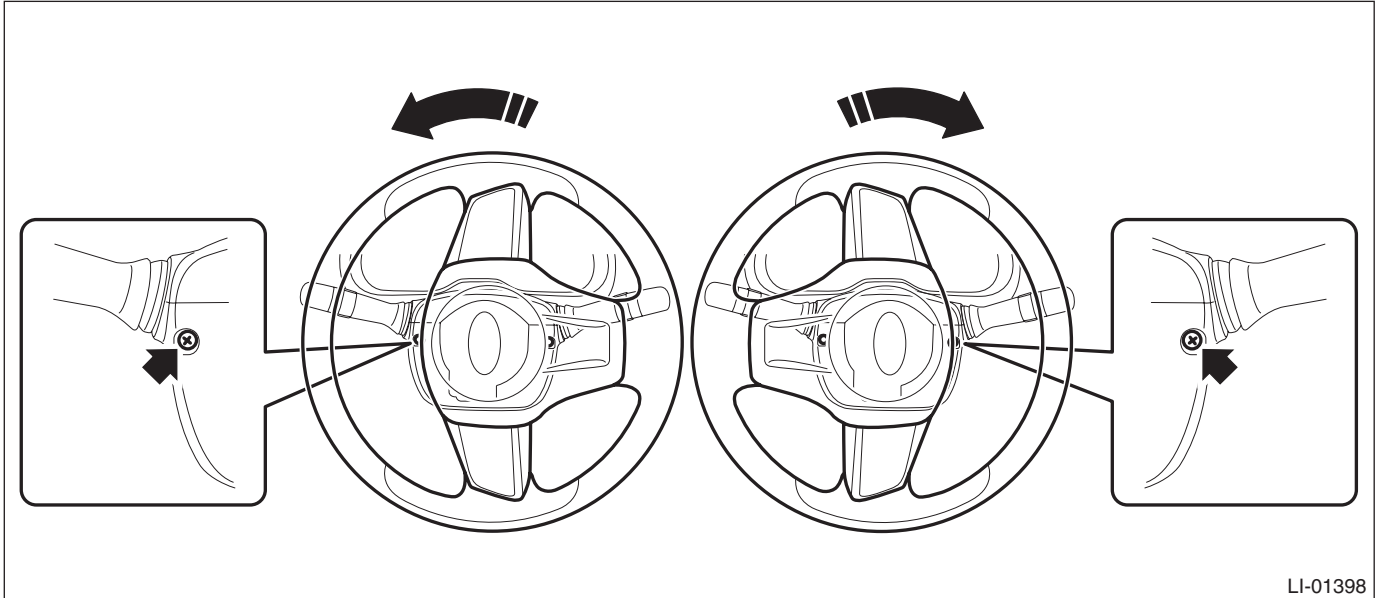
Combination Switch (Wiper)

WIPER AND WASHER SYSTEMS

4. Combination Switch (Wiper)

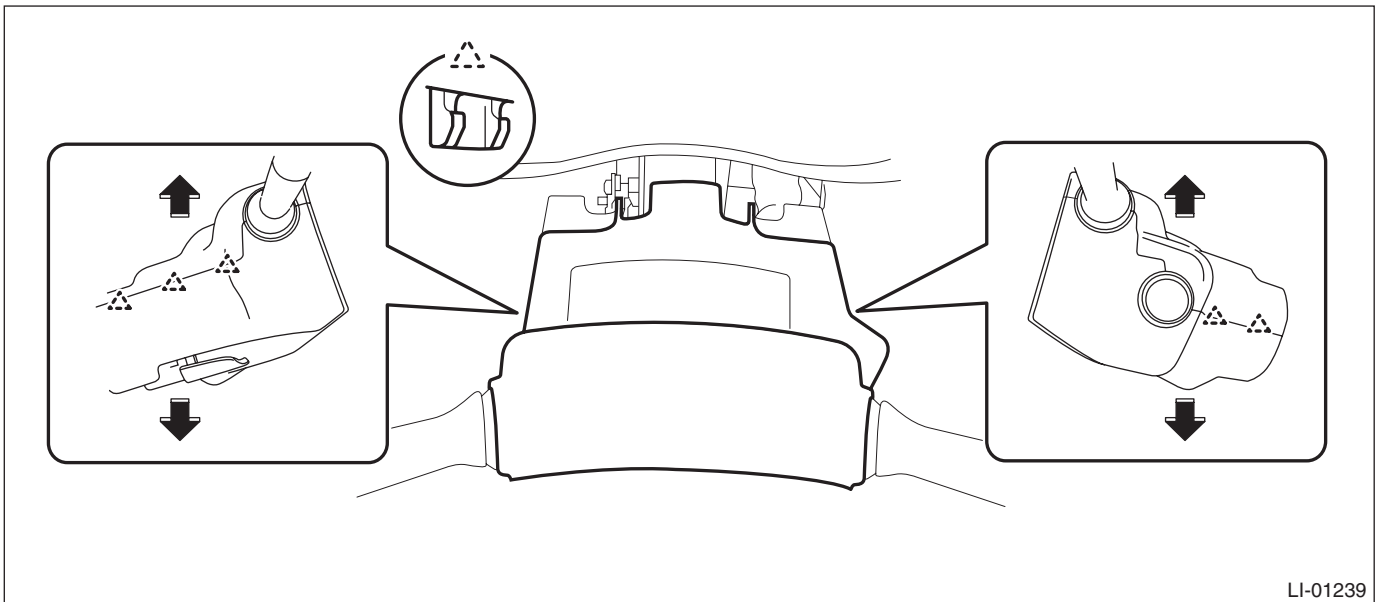
A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the cover assembly - column.
 - (1) Remove the screws by turning the steering wheel to right and left.



LI-01398

- (2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.



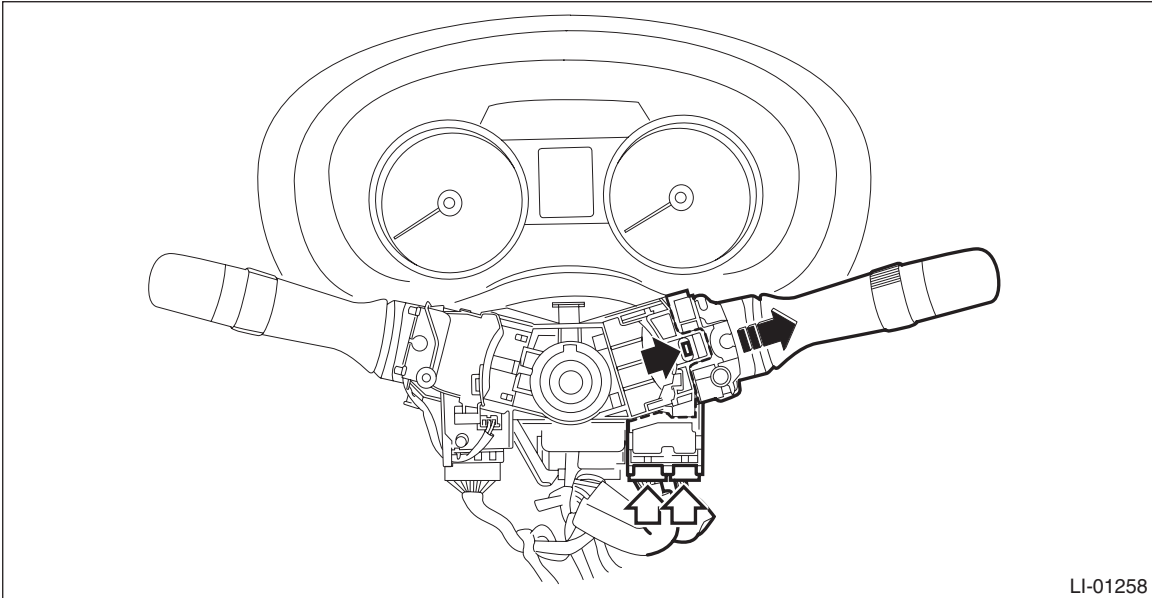
LI-01239

Combination Switch (Wiper)

- 3) Remove the switch assembly - combination wiper select.
 - (1) Disconnect the connector.
 - (2) Release the claws, and pull out the switch assembly - combination wiper select.

CAUTION:

Do not press the claws with excessive force. They may be damaged.



LI-01258

B: INSTALLATION

Install each part in the reverse order of removal.

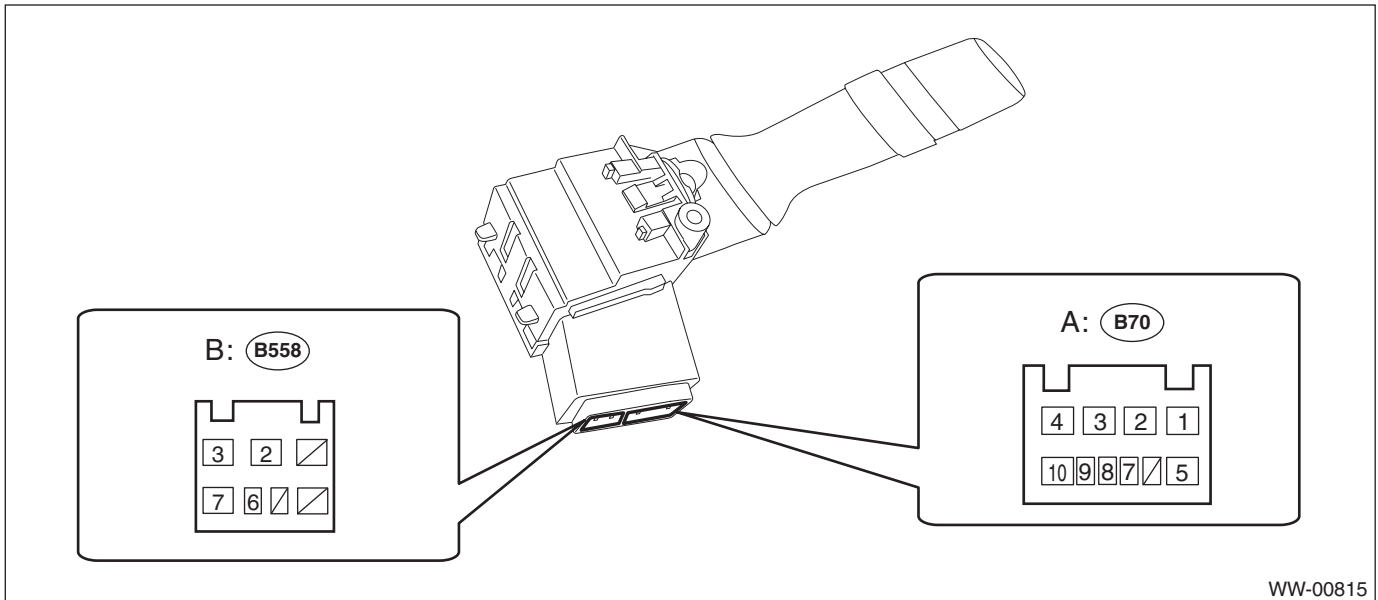
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C: INSPECTION

1. INSPECTION OF SWITCH UNIT

1) Operate the switches to check the continuity between terminals.



WW-00815

	Switch position	Terminal No.	Standard
Front	OFF	A1 and A3	Less than 1 Ω
	INT	A1 and A3	Less than 1 Ω
	LO	A2 and A3	Less than 1 Ω
	HI	A2 and A4	Less than 1 Ω
	Washer ON	B2 and B3	Less than 1 Ω
Rear	OFF	A5 and B2 B6 and B2 B7 and B2	1 M Ω or more
	LO	B6 and B2	Less than 1 Ω
	HI	B7 and B2	Less than 1 Ω
	Washer ON	A5 and B2	Less than 1 Ω

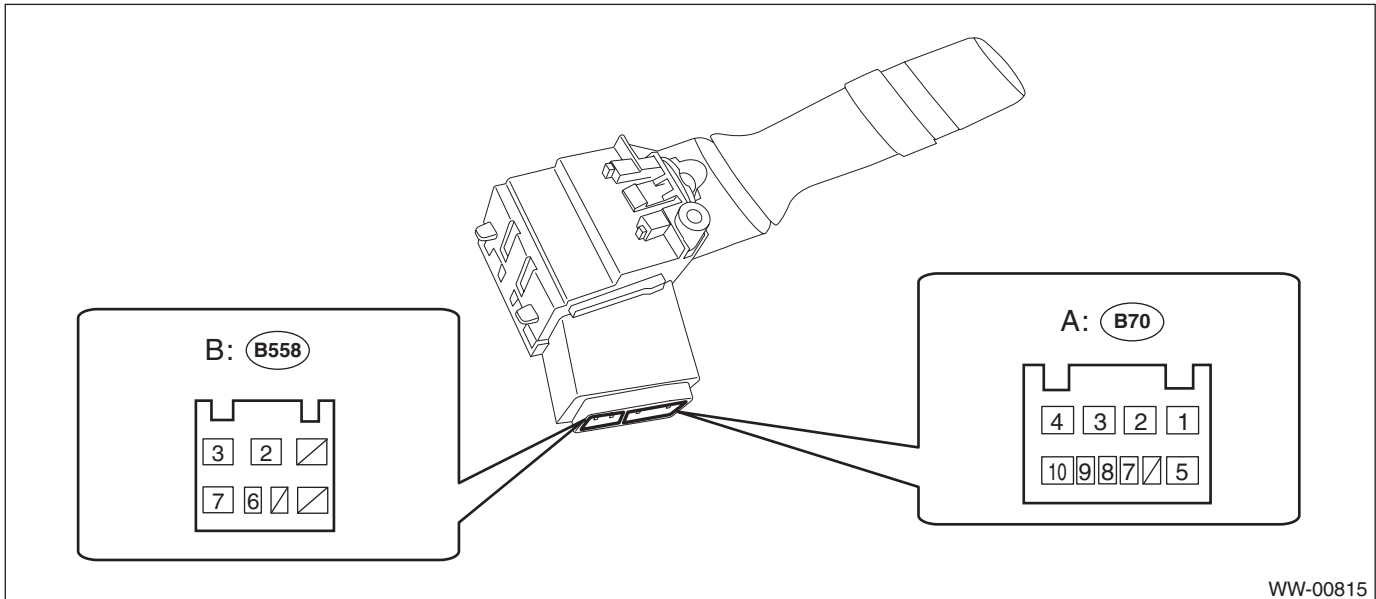
2) Replace the switch if the inspection result is not within the standard.

2. FRONT WIPER

1) Check with Subaru Select Monitor

- (1) Check the input signal when the switch assembly - combination wiper select is turned to LO or HI, using the current data display.
- (2) Does the input signal change corresponding to the switch operation?
 - **Yes** → Finish the diagnosis.
 - **No** → Check the harness.

2) CHECK THE INTERMITTENT OPERATION (INSPECTION OF THE WIPER SWITCH ALONE).



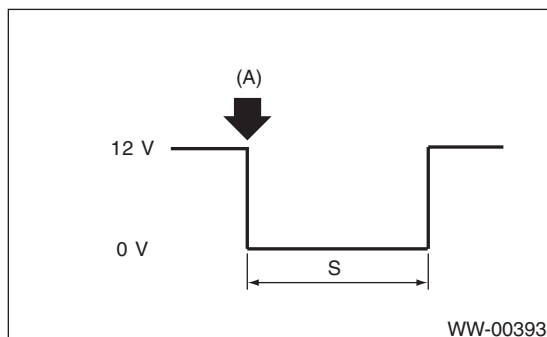
WW-00815

- (1) Set the voltmeter between terminals No. A2 (+) and No. B2 (-).
- (2) Connect the battery to connector. (Terminal No. A2 (+), terminal No. B2 & A3 (-))
- (3) Turn the switch assembly - combination wiper select to INT.
- (4) Connect the battery (+) to the terminal No. A2 for 5 seconds.
- (5) Connect the battery (-) to the terminal No. B2, and check the voltage between terminals No. A2 and No. A3 during intermittent operation.
- (6) Perform step (1) to (5) above when intermittent control switch is in MIN or MAX, and replace the switch if the operation is not as specified.

Intermittent stationary time

MIN: Approx. 2 seconds

MAX: Approx. 16 seconds



WW-00393

- (A): Connect the battery (-) to the terminal No. B2.
 S: Intermittent downtime (sec.)

Combination Switch (Wiper)

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3. REAR WIPER

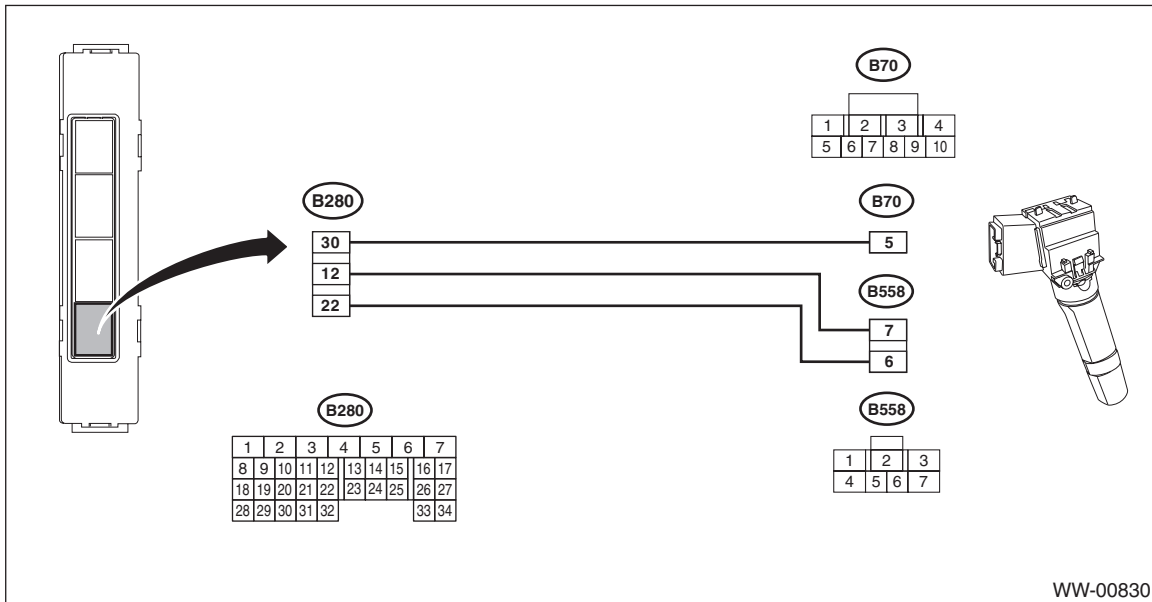
1) Check input of body integrated unit

Check the input signal when the rear wiper switch is operated using Subaru Select Monitor.

- (1) Turn the ignition switch to ON.
- (2) Operate the rear wiper switch to each position of ON, INT and Washer ON.
- (3) Does the input signal change corresponding to the switch operation?
 - **Yes** → Go to step 4.
 - **No** → Go to step 2.

2) Check harness

- (1) Turn the ignition switch to OFF, disconnect the ground cable from battery.
- (2) Disconnect the connector of body integrated unit and wiper switch.
- (3) Measure the resistance between body integrated unit and wiper switch.



Connector & terminal

(B280) No. 30 — (B70) No. 5:

(B280) No. 22 — (B558) No. 6:

(B280) No. 12 — (B558) No. 7:

(4) Is the resistance less than 10 Ω ?

- **Yes** → Go to step 3.
- **No** → Repair the harness between the body integrated unit and wiper switch.

3) Check input voltage of body integrated unit

- (1) Connect the ground cable to battery.
- (2) Turn the ignition switch to ON and check the input voltage of body integrated unit.

Connector & terminal

(i84) No. 6 (+) — Chassis ground (-):

(B281) No. 3 (+) — Chassis ground (-):

(3) Is the voltage 10 V or more?

- **Yes** → Go to step 4.
- **No** → Check the harness and fuse.

Combination Switch (Wiper)

4) Check output of body integrated unit

Check the output signal when the rear wiper switch is operated using Subaru Select Monitor.

- (1) Turn the ignition switch to ON.
- (2) Operate the rear wiper switch to ON and Washer ON.
- (3) When the operation in step (2) is performed, check the output signal of body integrated unit to rear wiper motor.
- (4) When the rear wiper switch is set to ON, is ON output continuous? Also, when the washer is set to ON, is ON output?
 - **Yes** → Go to step 5.
 - **No** → Replace the body integrated unit. <Ref. to SL-78, Body Integrated Unit.>

5) Check output of body integrated unit

Check the output signal when the rear wiper switch is operated using Subaru Select Monitor.

- (1) Turn the ignition switch to ON.
- (2) Set the rear wiper switch to INT.
- (3) When the operation in step (2) is performed, check the output signal of body integrated unit.
- (4) When the rear wiper switch is set to INT, is ON/OFF output repeated? (INT OFF time (when vehicle parked): 12 seconds)
 - **Yes** → Go to step 8.
 - **No** → Go to step 6.

6) CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND REAR WIPER MOTOR.

- (1) Turn the ignition switch to OFF, disconnect the ground cable from battery.
- (2) Disconnect the connector of body integrated unit and wiper switch.
- (3) Measure the resistance between the harness connector terminals of the body integrated unit and rear wiper motor.

Connector & terminal

(B280) No. 6 — (B97) No. 11:

- (4) Is the resistance less than 10 Ω ?
 - **Yes** → Go to step 7.
 - **No** → Repair the open circuit of the harness between body integrated unit and rear wiper motor.

7) CHECK STOP POSITION CIRCUIT OF THE REAR WIPER MOTOR.

- (1) Disconnect the harness connector of the motor assembly - rear wiper.
- (2) Check the continuity of the circuit of rear wiper motor stop position.

Connector & terminal

(D43) No. 1 (+) — (D43) No. 4 (-):

- (3) Is there continuity between terminals?
 - **Yes** → Go to step 8.
 - **No** → Replace the motor assembly - rear wiper.

8) CHECK POWER SUPPLY CIRCUIT OF THE REAR WIPER MOTOR.

- (1) Disconnect the harness connector of the motor assembly - rear wiper.
- (2) Turn the ignition switch to ON.
- (3) Measure the voltage between the rear wiper motor harness connector terminal and chassis ground.

Connector & terminal

(D43) No. 3 (+) — Chassis ground (-):

- (4) Is the voltage 10 V or more?
 - **Yes** → Go to step 9.
 - **No** → Check the fuse (No. 27 in main fuse box).

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9) CHECK GROUND CIRCUIT OF REAR WIPER MOTOR.

- (1) Turn the ignition switch to OFF.
- (2) Measure the resistance between the rear wiper motor harness connector terminal and chassis ground.

Connector & terminal

(D43) No. 4 — Chassis ground:

- (3) Is the resistance less than 10 Ω ?
 - **Yes** → Go to step 10.
 - **No** → Repair the open circuit of the rear wiper motor ground circuit.

10) CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND REAR WIPER MOTOR.

- (1) Turn the ignition switch to OFF.
- (2) Disconnect the harness connector of body integrated unit.
- (3) Disconnect the harness connector of the motor assembly - rear wiper.
- (4) Measure the resistance between the harness connector terminals of the body integrated unit and rear wiper motor.

Connector & terminal

(B280) No. 7 — (D43) No. 2:

- (5) Is the resistance less than 10 Ω ?
 - **Yes** → Go to step 11.
 - **No** → Repair the open circuit of the harness between body integrated unit and rear wiper motor.

11) Check output of body integrated unit

- (1) Connect the harness connector of body integrated unit.
- (2) Disconnect the connector of the motor assembly - rear wiper.
- (3) Turn the ignition switch to ON.
- (4) Measure the voltage between rear wiper motor connector and chassis ground.

Connector & terminal

(D43) No. 2 (+) — Chassis ground (-):

- (5) Is the voltage less than 1.5 V when the rear wiper switch is OFF, and is the voltage 10 V or more when the rear wiper switch is ON?
 - **Yes** → Go to step 12.
 - **No** → Replace the body integrated unit. <Ref. to SL-78, Body Integrated Unit.>

12) CHECK OPERATION OF REAR WIPER MOTOR.

- (1) Remove the motor assembly - rear wiper.
- (2) Check the rear wiper motor. <Ref. to WW-43, INSPECTION, Rear Wiper Motor.>
- (3) Does the rear wiper motor rotate normally?
 - **Yes** → Finished.
 - **No** → Replace the motor assembly - rear wiper.

NOTE:

Rear wiper intermittent time

Select lever position	Vehicle speed (km/h (MPH))	Intermittent stopping time (sec.)
		5 door model/XV model
Rev.	—	Continuous operation
Except for reverse mode	80 — (50 —)	3
	50 — 80 (31 — 50)	6
	20 — 50 (12 — 31)	9
	0 — 20 (0 — 12)	12