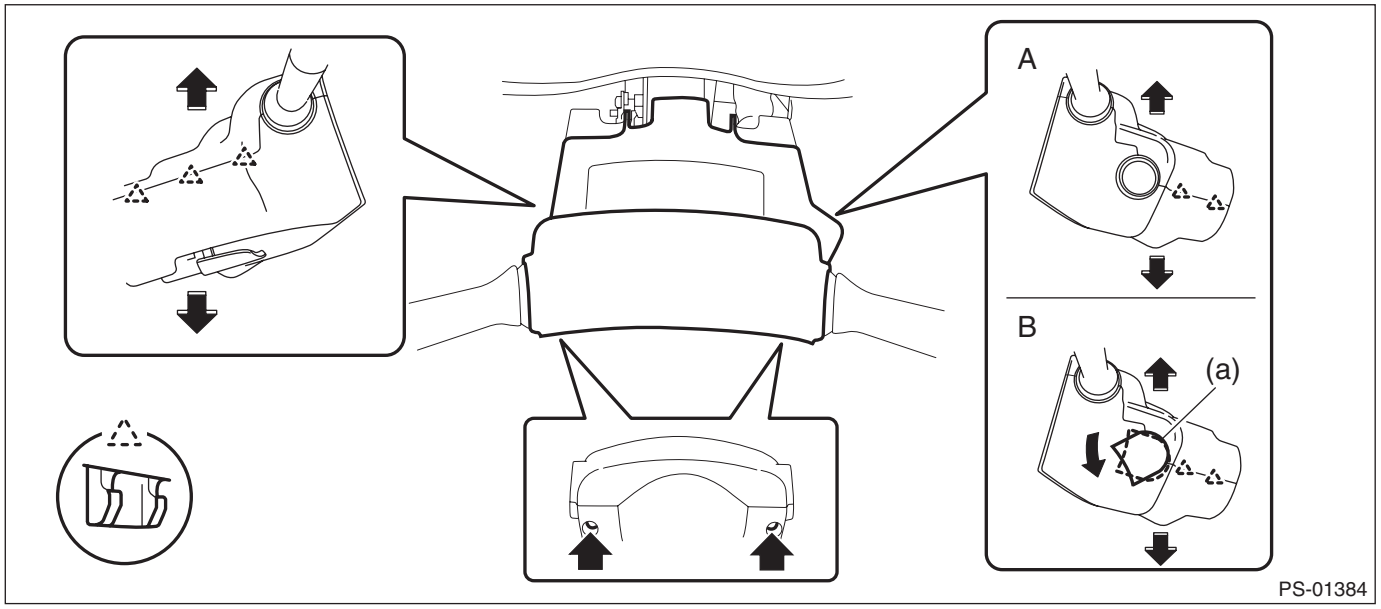
4. Combination Switch (Wiper)

A: REMOVAL

1) Disconnect the ground cable from battery. <Ref. to NT-5, BATTERY, NOTE, Note.>

NOTE:
For the 12 volt engine restart battery of HEV model, disconnect the ground terminal from 12V engine restart battery sensor.

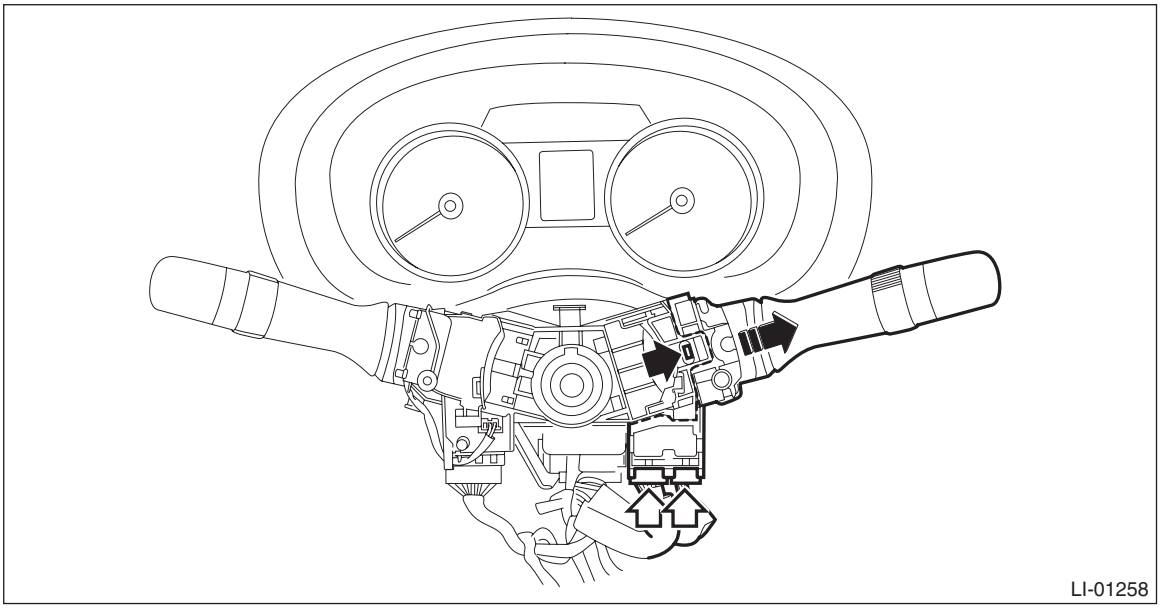
2) Remove the cover assembly - column.
   (1) Release the screws and claws.
   (2) Remove the cap - key cylinder (a). (Model with keyless access)
   (3) Remove the cover assembly - column UPR and the cover assembly - column LWR.



A Models without keyless access B Models with keyless access

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.



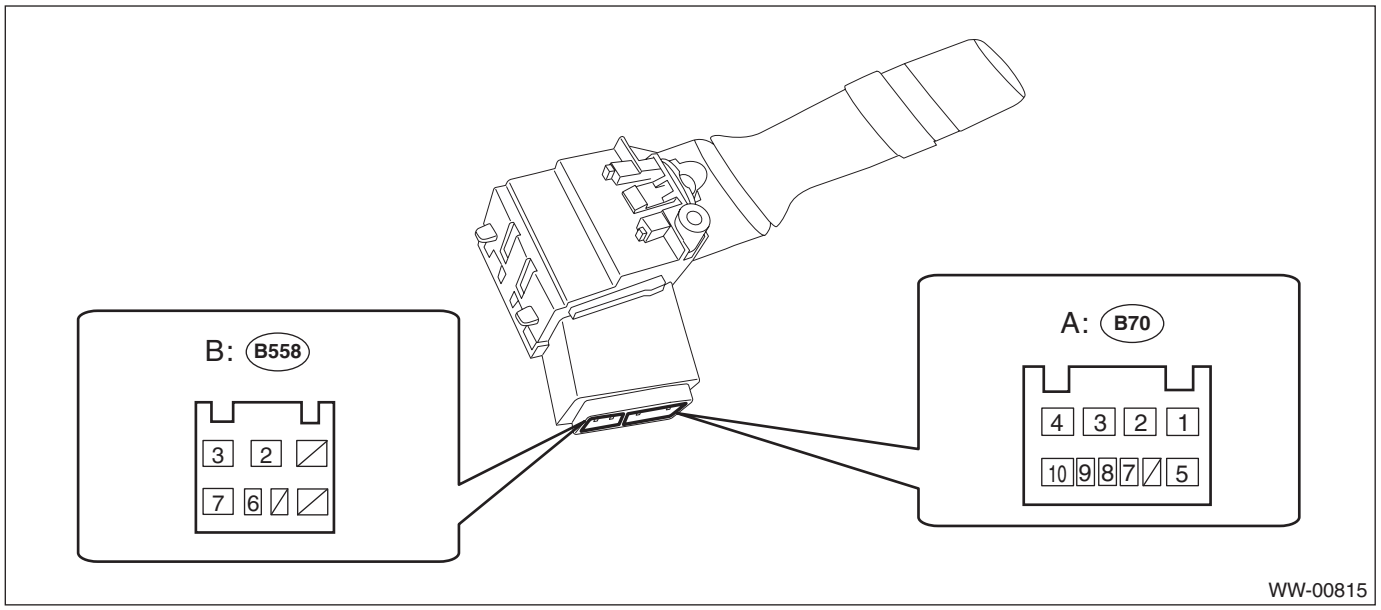
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. INSPECTION OF SWITCH UNIT

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



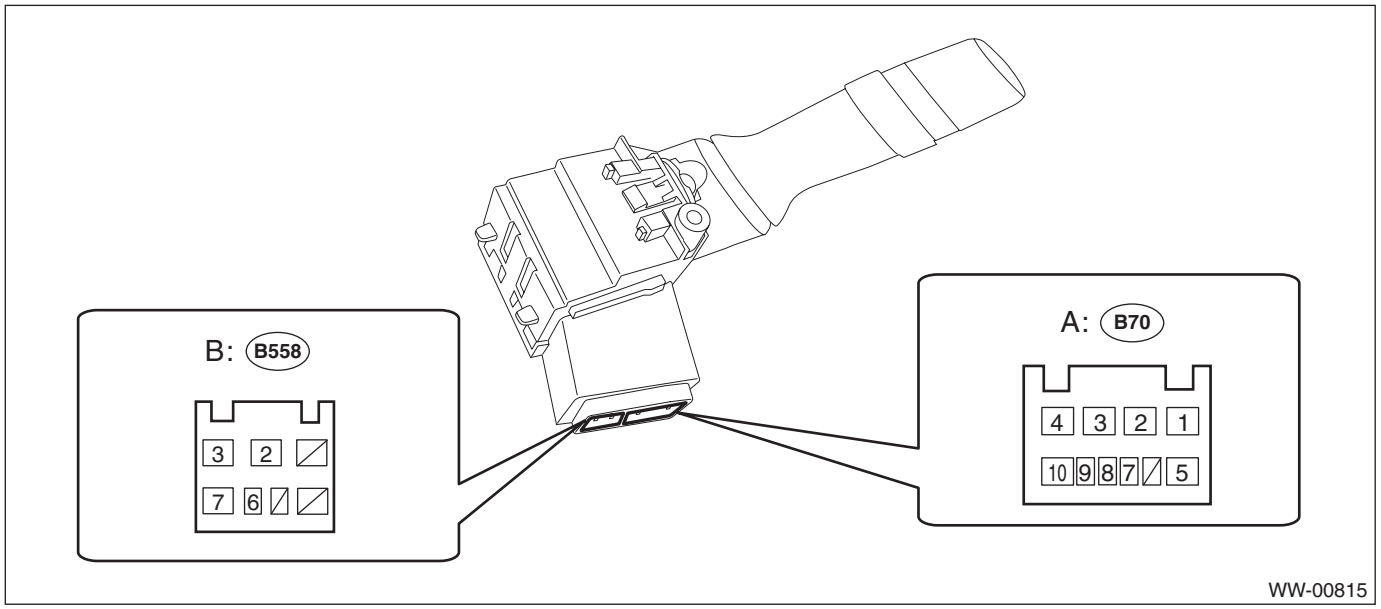
	Switch position	Terminal No.	Standard
Front	OFF	A1 and A3	Less than 1 Ω
	INT	A1 and A3	Less than 1 Ω
	LO	A2 and A3	Less than 1 Ω
	HI	A2 and A4	Less than 1 Ω
	Washer ON	B2 and B3	Less than 1 Ω
Rear	OFF	A5 and B2 B6 and B2 B7 and B2	1 MΩ or more
	LO	B6 and B2	Less than 1 Ω
	HI	B7 and B2	Less than 1 Ω
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

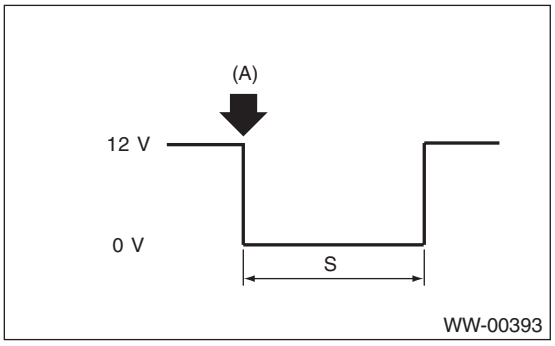
1) Check with Subaru Select Monitor
   (1) Check the input signal when the switch assembly - combination wiper select is turned to LO or HI, using the current data display.
   (2) Does the input signal change corresponding to the switch operation?
   - **Yes** → Finish the diagnosis.
   - **No** → Check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

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



   (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



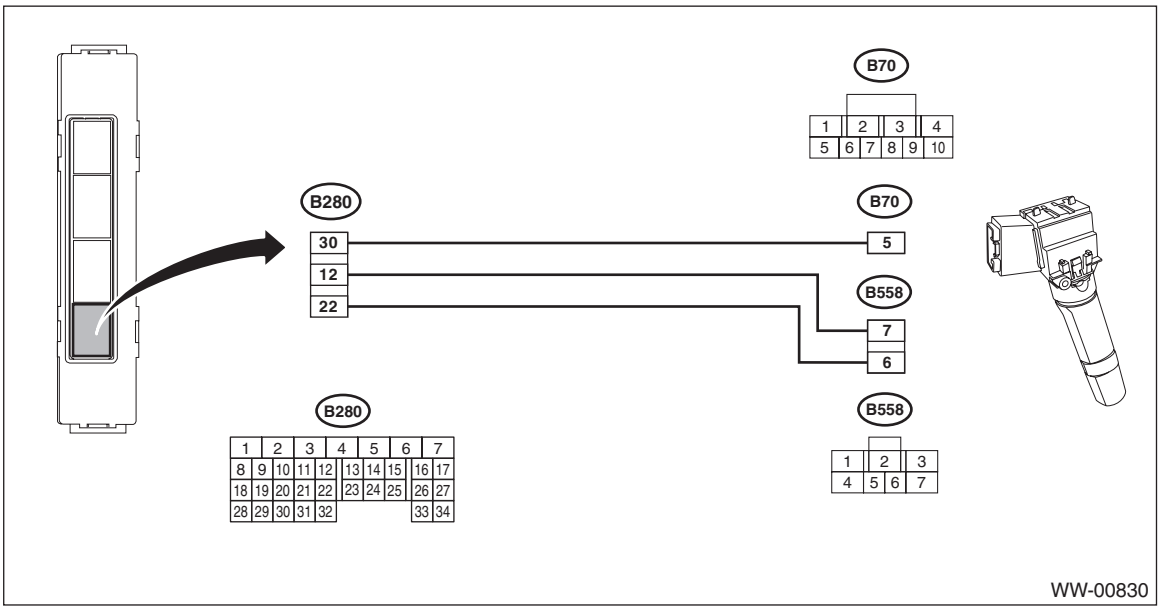
(A): Connect the battery (–) to the terminal No. B2.
S: Intermittent downtime (sec.)

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. <Ref. to NT-5, BATTERY, NOTE, Note.>

NOTE:
For the 12 volt engine restart battery of HEV model, disconnect the ground terminal from 12V engine restart battery sensor.
(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.

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-87, 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. <Ref. to NT-5, BATTERY, NOTE, Note.>

NOTE:
For the 12 volt engine restart battery of HEV model, disconnect the ground terminal from 12V engine restart battery sensor.
(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).

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-87, 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-50, 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