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2019 Mazda 3 Service and Repair Manual

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WINDSHIELD WIPER MOTOR AND LINK REMOVAL/INSTALLATION

SM2899561

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Oil and Chemical Type

Grease

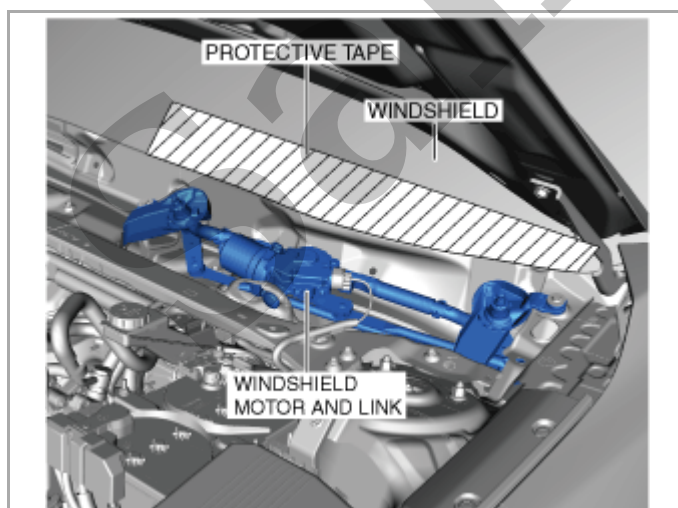
Type: Lithium grease

1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
2. Remove the windshield wiper arm and blade. (See [WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION.](#))
3. Remove the cowl grille. (See [COWL GRILLE REMOVAL/INSTALLATION.](#))

Caution

•Always affix protective tape to the windshield end. If the windshield wiper motor and link contacts the windshield, it could damage the windshield.

4. Affix protective tape to the area where the windshield end interferes with the windshield motor and link as shown in the figure.

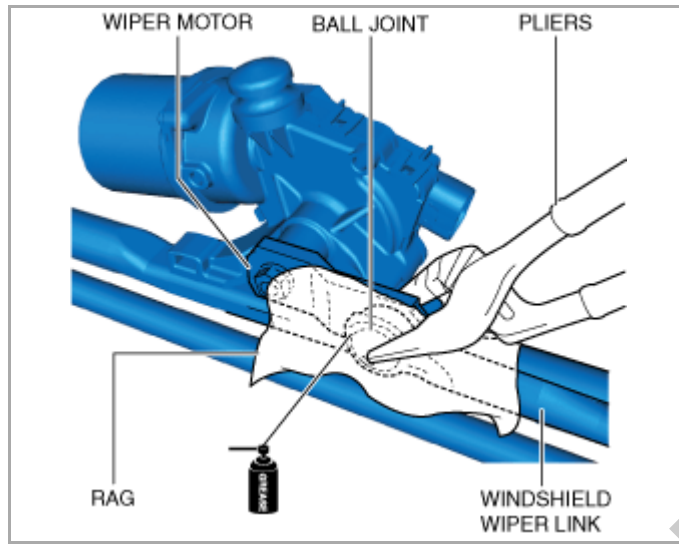


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5. Disconnect the windshield wiper motor connector.

Ball Joint Assembly Note

1. When assembling the ball joint, use a clean rag to protect the link and squeeze using a pair of protective tape-wrapped pliers.



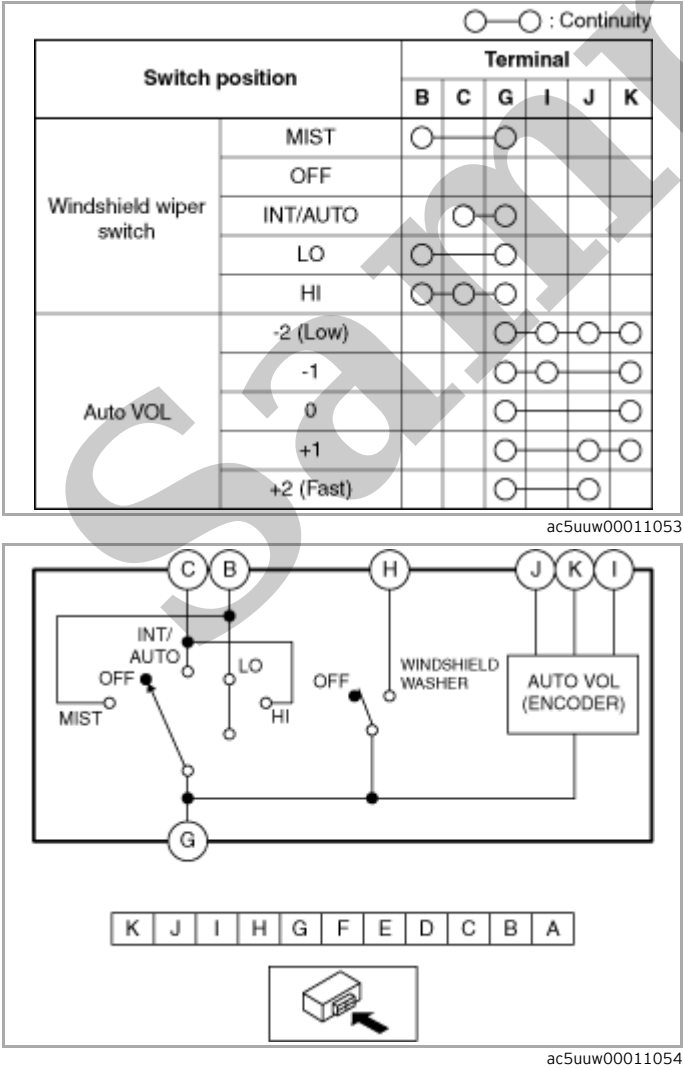
WINDSHIELD WIPER AND WASHER SWITCH INSPECTION

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Windshield Wiper Switch

- 1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 2.Remove the column cover. (See [COLUMN COVER REMOVAL/INSTALLATION.](#))
- 3.Remove the wiper and washer switch. (See [WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.](#))
- 4.Verify that the continuity between the wiper and washer switch terminals is as indicated in the table.



• If the continuity is not as indicated in the table, replace the wiper and washer switch. (See [WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.](#))

REAR WIPER AND WASHER SWITCH INSPECTION

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Note

- When removing the wiper and washer switch, it is necessary to turn the steering wheel. If the ignition is switched off with the driver's door closed, the steering wheel is locked. Perform Steps 1–3 to prevent the steering wheel from being locked.

- 1.Switch the ignition ON (engine off or on).
- 2.Open the driver's door.
- 3.Switch the ignition off.
- 4.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 5.Remove the column cover. (See [COLUMN COVER REMOVAL/INSTALLATION.](#))
- 6.Remove the wiper and washer switch. (See [WIPER AND WASHER SWITCH REMOVAL/INSTALLATION.](#))
- 7.Verify that the continuity between the wiper and washer switch terminals is as indicated in the table.

○—○ : Continuity

Switch position		Terminal			
		D	E	F	G
Rear wiper switch	OFF				
	R.INT	○			○
	ON		○		○
REAR WASHER 1				○	○
REAR WASHER 2			○	○	○

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RAIN SENSOR REMOVAL/INSTALLATION

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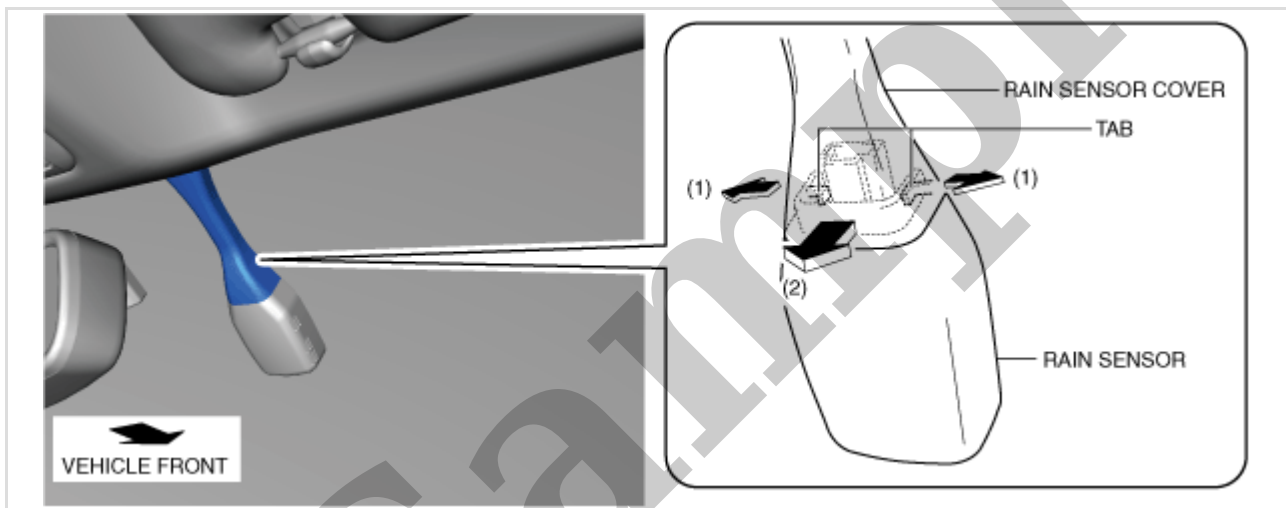
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Removal

Without forward sensing camera (FSC)

1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))

2. Open the rain sensor cover in the direction of arrows (1) shown in the figure and detach the rain sensor cover tabs from the rain sensor.



3. Remove the rain sensor cover from the rain sensor in the direction of arrow (2) shown in the figure.

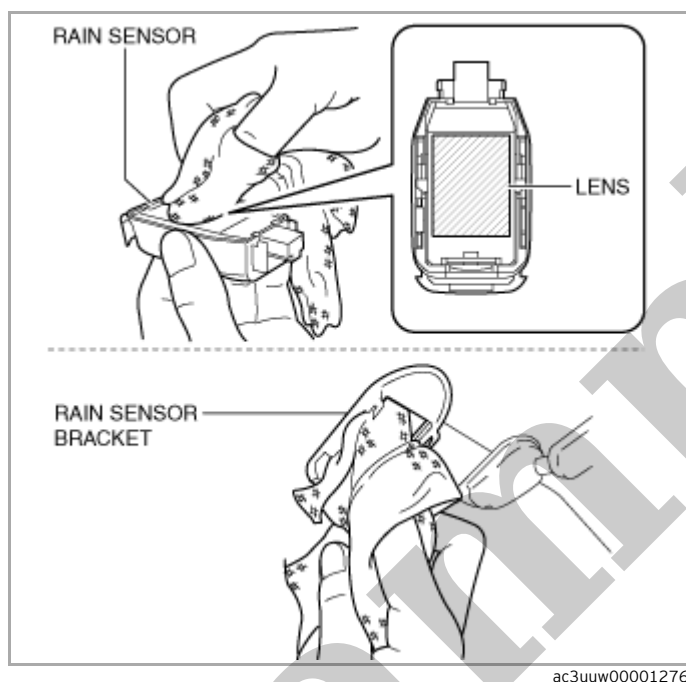
4. Disconnect the connector.

Caution

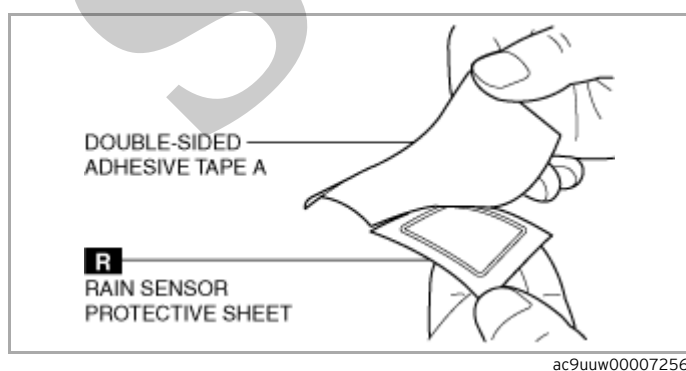
•If the rate at which the rain sensor reflects or transmits infrared light between the rain sensor and the windshield, or through the protective sheet, is changed, the rain sensor will determine that there is a problem in the rain detection function and stop the auto wiper system control. Be careful of the following when installing the rain sensor:

- Do not reuse the rain sensor protective sheet.
- Do not touch the rain sensor lens, rain sensor protective sheet, and sensor installation area on the windshield with your fingers.
- Verify that there are no air bubbles after installing the rain sensor.

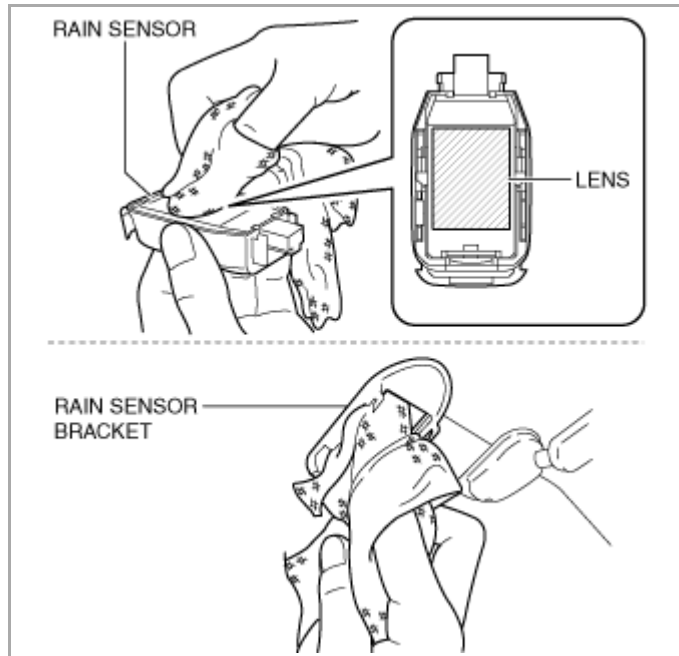
1.Wipe off any oil or dirt from the rain sensor lens and the windshield using a clean rag.



2.Peel off double-sided adhesive tape A from a new rain sensor protective sheet.

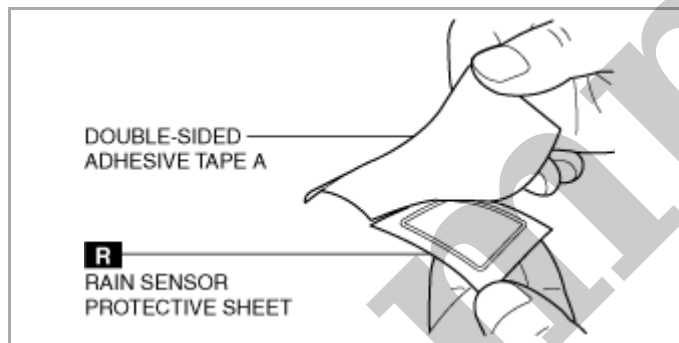


3.Adhere a new rain sensor protective sheet to the rain sensor lens.



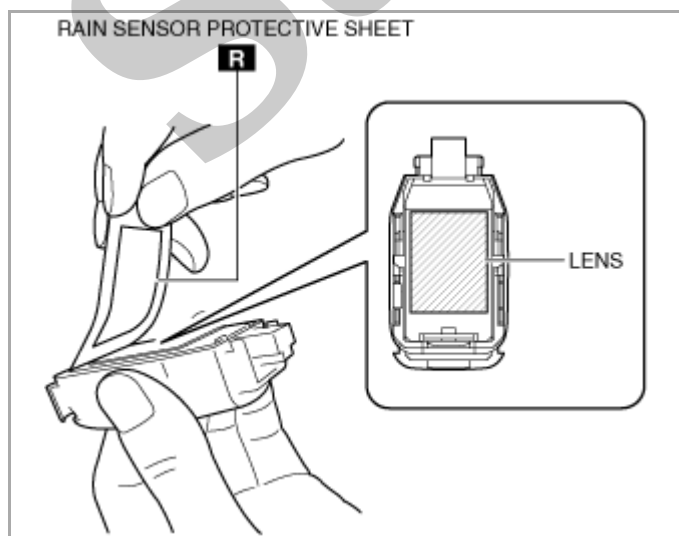
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2. Peel off double-sided adhesive tape A from a new rain sensor protective sheet.



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3. Adhere a new rain sensor protective sheet to the rain sensor lens.



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4. Peel off double-sided adhesive tape B from the rain sensor protective sheet.

WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION

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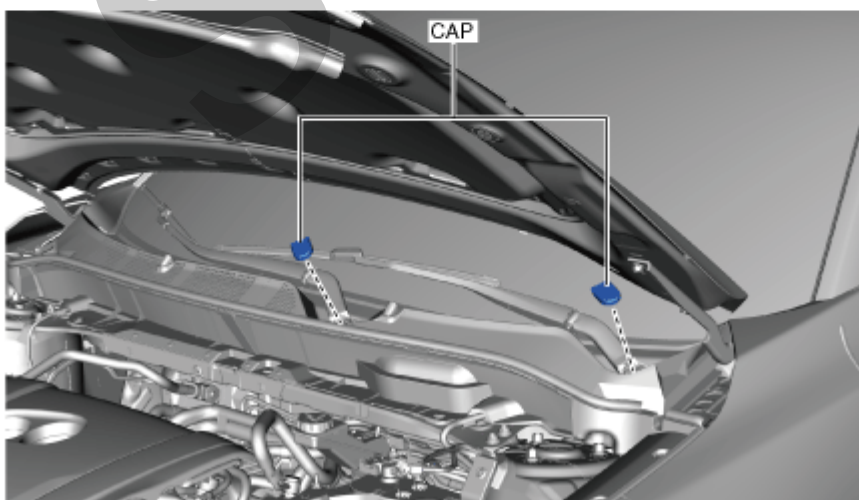
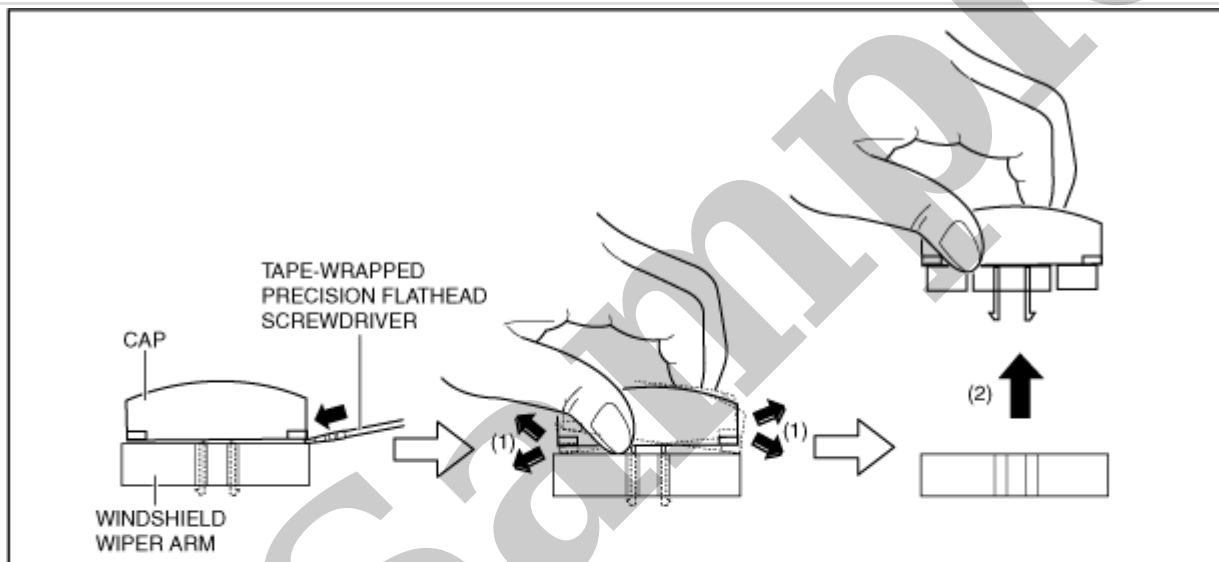
Windshield Wiper Arm

1. Open the hood.

Caution

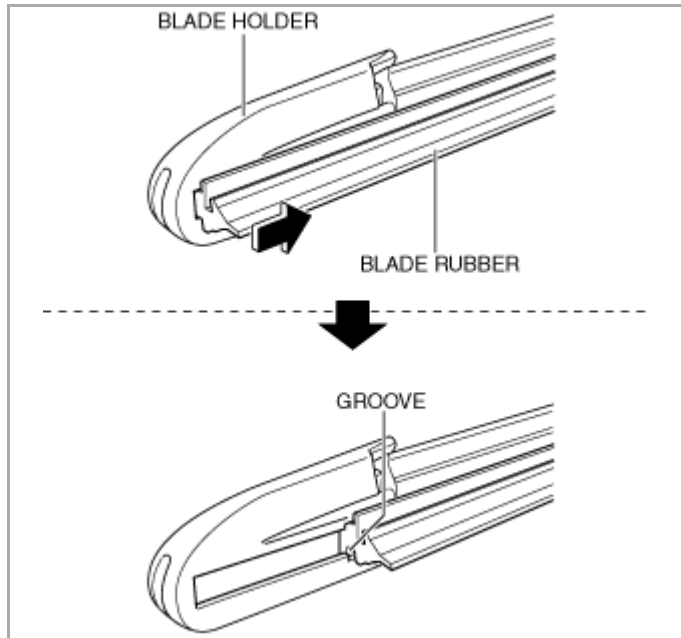
- If excessive force is applied when removing the cap, tabs could break. Carefully remove the cap.

2. Insert a tape-wrapped precision flathead screwdriver into the gap between the windshield wiper arm and cap, and slightly raise the cap.



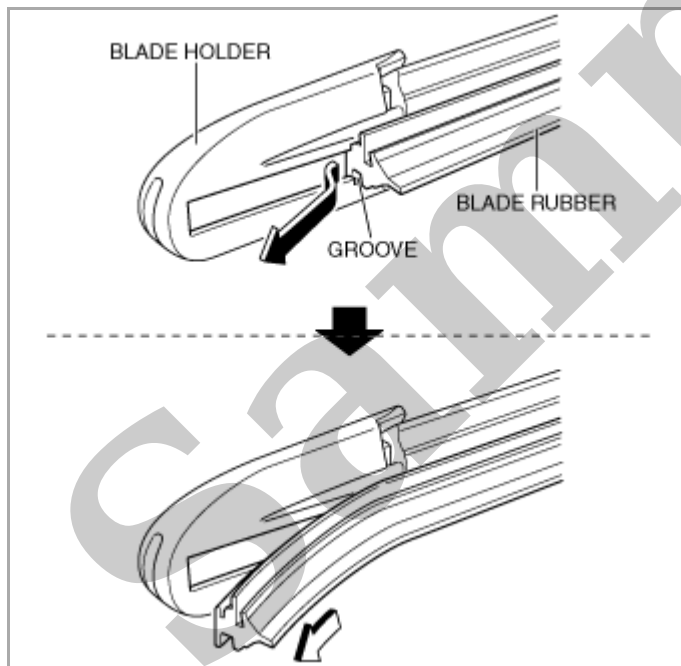
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3. Detach cap tabs from the windshield wiper arm while slightly moving the cap in the direction of the arrows (1) shown in the figure, carefully pull it up in the direction of the arrow (2), and remove it.



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3. Pull the end of the blade rubber from the blade holder groove in the direction of the arrow and remove the blade rubber from the blade holder.



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4. Insert the end of the new blade rubber into the groove of the blade holder until it contacts the end of the blade holder.