

Technical Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922



Subject: POWER FOLDING DOOR MIRROR(S) DO NOT COMPLETELY FOLD IN AND/OR OUT WHEN NOT FROZEN IN PLACE BY ICE OR SNOW	Bulletin No.: 09-047/22
	Last Issued : 11/21/2022

BULLETIN NOTES

This bulletin supersedes the previously issued bulletin(s) listed below. The changes are noted in Red text.

Previous TSBs:	Date(s) Issued:
09-010/21	03/11/21
09-011/20	02/13/20

APPLICABLE MODEL(S)/VINS

2019-2020 CX-5 vehicles (equipped with power folding mirror) with VINs lower than JM3KF*****817199 (produced before Mar. 11, 2020)

2019-2020 CX-9 vehicles (equipped with power folding mirror) with VINs lower than JM3TC*****421002 (produced before Mar. 10, 2020)

DESCRIPTION

Some vehicles may exhibit power outer mirror(s) that do not completely fold in and/or out.

NOTE: This concern is unrelated to frozen mirrors in icy weather where snow or ice need to be removed for the mirrors to fold in and/or out.

This concern may be caused by the following:

- The space between the mirror frame and the inner base may be too tight to allow for proper movement.
- Due to insufficient water tightness, water enters the electric fold-in unit and results in corrosion damage.
- The friction around the folding mechanism shaft may become increased.

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To eliminate this concern, the following mass-production changes have been implemented:

- The hole (1) in the mirror frame connected to the inner base has been enlarged.
- The overlapping area (2) of the water-proof seal (inside electric fold-in unit) has been extended.
- The washer material has been improved and an additional washer has been added to the shaft.



Customers having this concern should have their vehicle repaired using the following repair procedure.

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REPAIR PROCEDURE

1. Verify the customer concern.

NOTE:

- This concern is unrelated to frozen mirrors in icy weather where snow or ice need to be removed for the mirrors to fold in and/or out.
- Disconnecting the negative battery terminal is not necessary because the repair is performed with the ignition OFF.
- Do not turn the ignition ON while the outer mirror assembly is removed.

REMOVAL NOTES:

- Removal of the outer mirror glass can be made easier by warming the back of the glass to approx. 50 - 60 degrees C {122 - 140 degrees F} using a hair drier or heat gun.
- Be careful not to overheat the outer mirror. Temperatures higher than 60 degrees C {140 degrees F} could deform it.
- To prevent mirror breakage during removal of the outer mirror glass, it is recommended that a suction cup be used to pull out at the two areas shown below (red arrows).



2. Replace the electric fold-in unit(s) with a modified part using the removal/installation procedures below.

- For CX-5, go to "**CX-5 - REMOVAL PROCEDURE**"
- For CX-9, go to "**CX-9 - REMOVAL PROCEDURE**"

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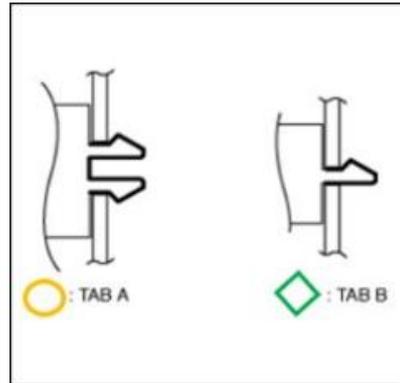
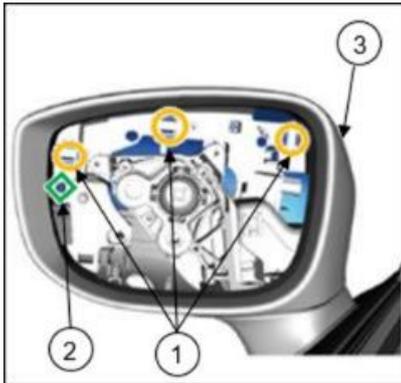
CAUTIONS WHEN REPAIRING POWER OUTER MIRROR FOLDING MALFUNCTIONS

1. There are two different tabs located in the mirror when replacing the mirror garnish (TAB A & TAB B). When removing the garnish, follow the instructions in MGSS ([OUTER MIRROR GARNISH REMOVAL/ INSTALLATION]) to ensure the tabs are not damaged during repair:

CX-9 - ([OUTER MIRROR GARNISH REMOVAL/ INSTALLATION])

CX-5 - ([OUTER MIRROR GARNISH REMOVAL/ INSTALLATION])

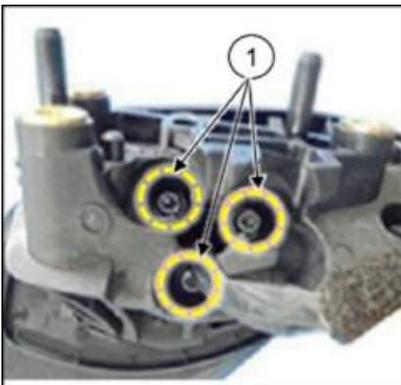
Illustration indicates the left side of CX-5 (KF)



- (1) TAB A
- (2) TAB B
- (3) Upper outer mirror garnish

2. Screw in the outer mirror base and the inner base, then tighten the screws after placing the inner base on the outer mirror base.

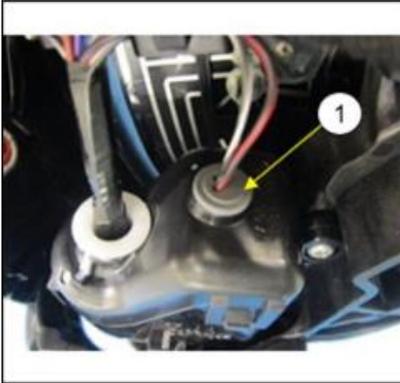
CAUTION: DO NOT use electric tools to tighten the screws (1) as they may be damaged if over tightened and may cause the outer mirror to malfunction while folding. When the tightening stops halfway, loosen the screw once, and then tighten it again.



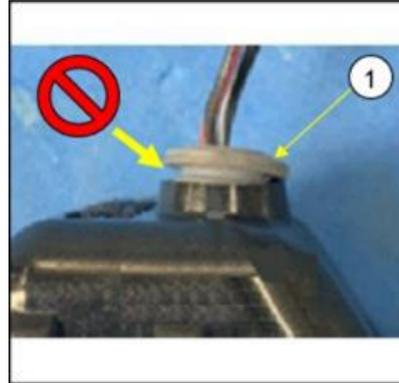
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3. Install the grommet (1) properly.

CAUTION: Improper grommet installation may cause the motor to malfunction due to water intrusion.



(1) Grommet



Improper installation

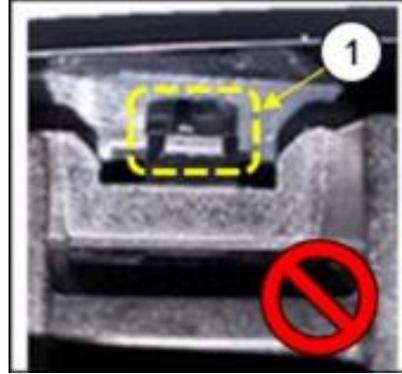
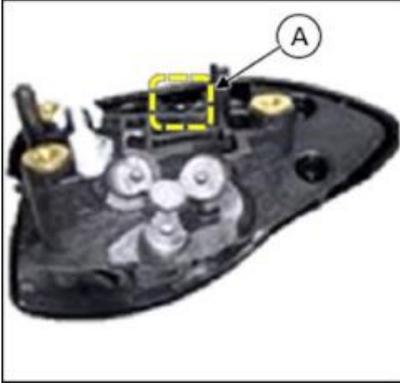


Rust occurs and progresses from the upper area of the motor.

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4. Replace the upper base cover with a new one as mounting tabs will be deformed or damaged when the original cover is removed.

CAUTION: Using the original upper base cover may cause the outer mirror to malfunction while folding due to insufficient tab engagement (part interference).



DETAIL A
(1) Damaged tab

5. Install the base cover to the inner base properly.

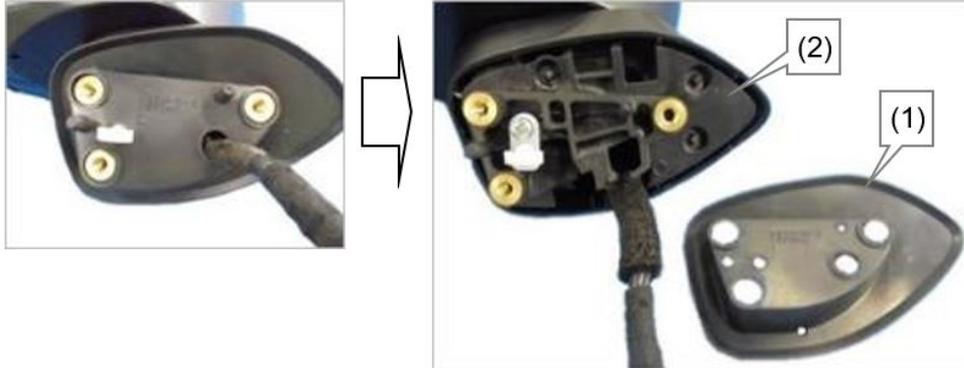
NOTE: There have been cases of improper installation (1), resulting the outer mirror to malfunction while folding (part interference).

6. Install the screws in the reverse order of removal.

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CX-5 - REMOVAL PROCEDURE

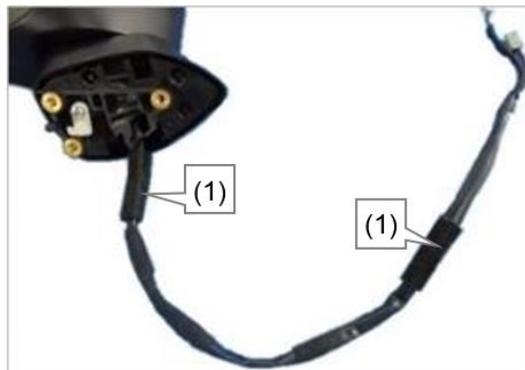
1. Remove the outer mirror garnish according to the instructions on MGSS online (OUTER MIRROR GARNISH REMOVAL/INSTALLATION).
2. Remove the power outer mirror according to the instructions on MGSS online (POWER OUTER MIRROR REMOVAL/INSTALLATION).
3. Remove the rubber seal (1) from the base (2) of the mirror.



4. Pull out the lower base cover in the direction of the arrow shown below.



5. Peel off the two seal packing (1) from the harness.

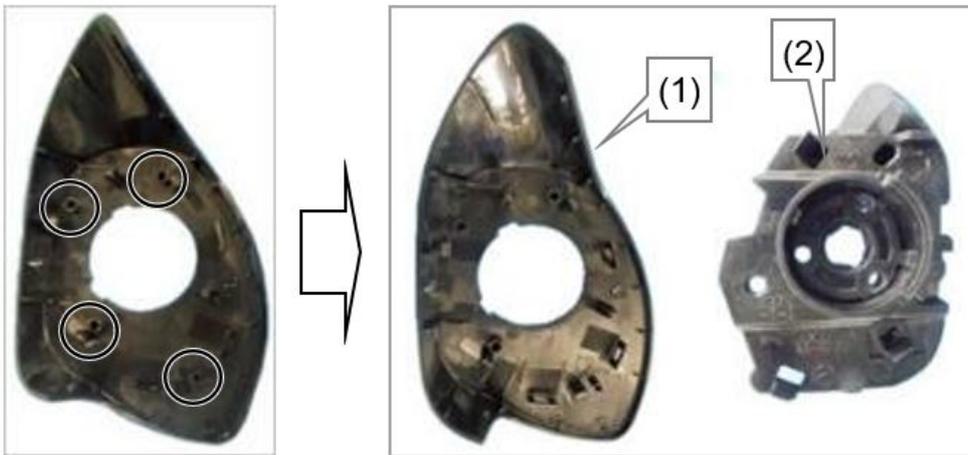


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6. Remove the three screws circled below.



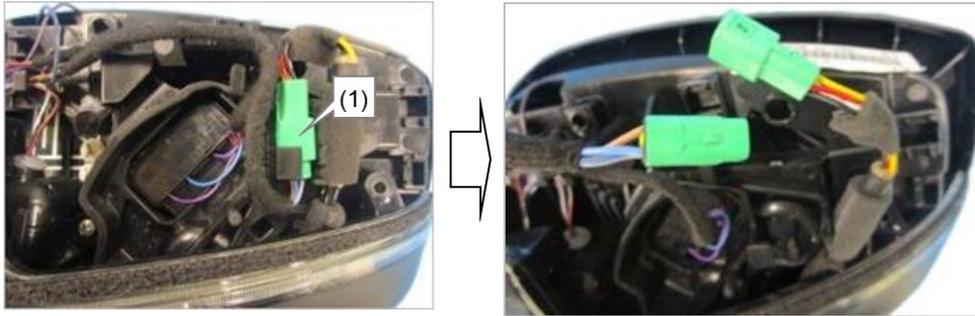
7. Separate the upper base cover (1) from the inner base (2) by removing the four hooks circled in the image below.



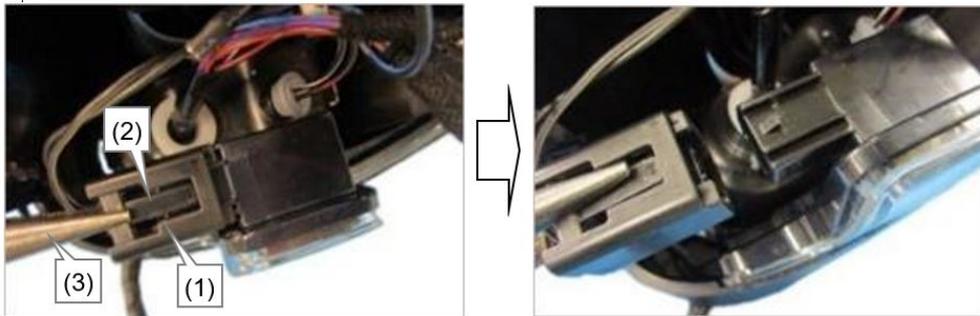
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8. Remove the mirror harness.

a. **For outer mirror with side camera only:** Disconnect the connector (1).

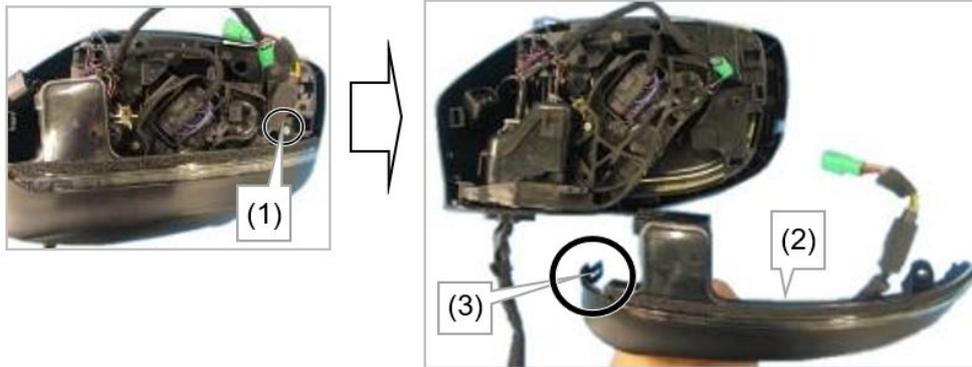


b. **All models:** Using needle-nose pliers (3), pull out the side turn light connector (1) while pushing the lock (2).

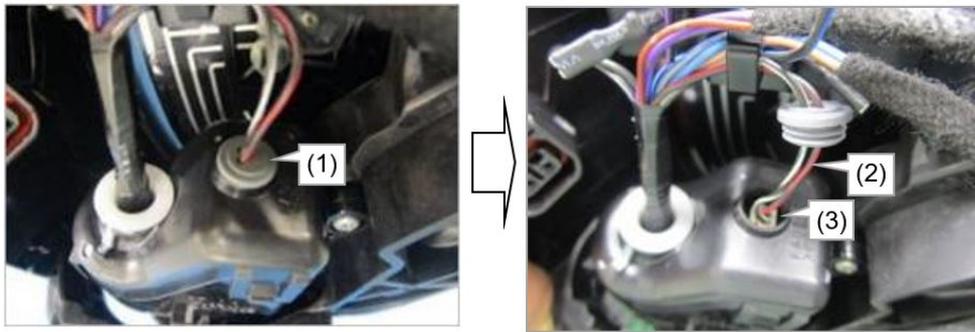


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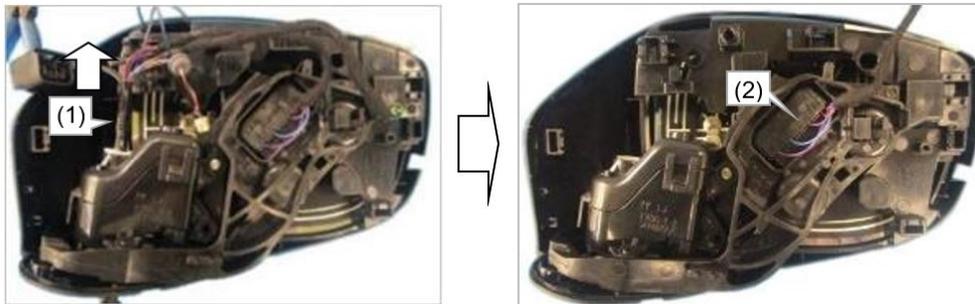
- c. Remove the screw (1) then remove the lower outer mirror garnish (2).
CAUTION: Be careful not to damage the hook (3) during removal.



- d. Remove the grommet (1) then pull the mirror harness (2) out while pushing the lock (3) with a small flat-blade screw driver.



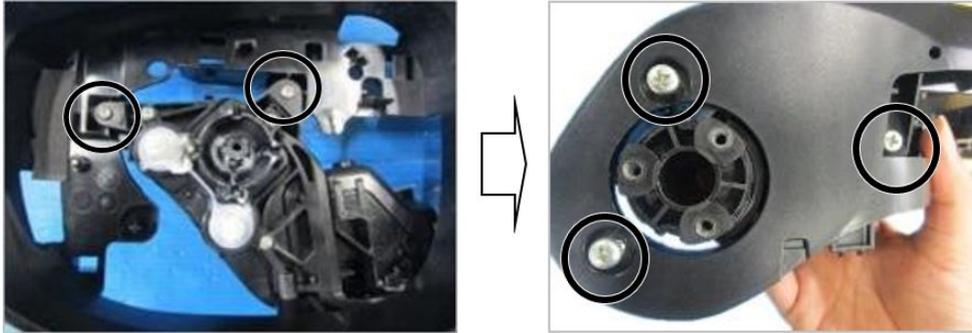
- e. Pull the mirror harness (1) out then remove the connector (2).



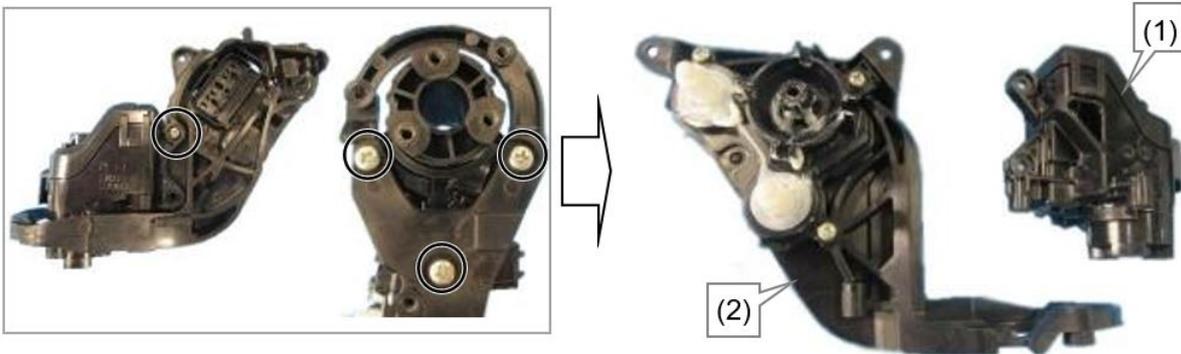
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9. Remove the electric fold-in unit from the mirror body.

- a. Remove the screws circled in images below, then remove the electric fold-in unit and the frame assembly as one unit.



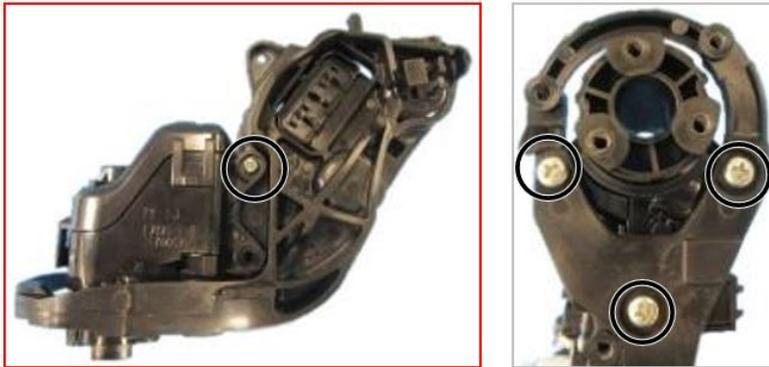
- b. Remove the screws circled in the image below, then separate the electric fold-in unit (1) from the frame assembly (2).



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CX-5 - INSTALLATION PROCEDURE

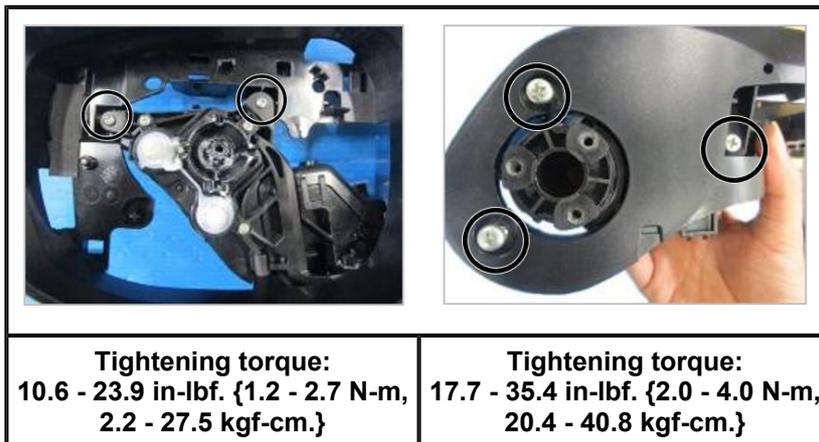
1. Install the new electric fold-in unit to the frame assembly and tighten the screws circled below.



Tightening torque:
10.6 - 23.9 in-lbf. {1.2 - 2.7 N-m, 12.2 - 27.5 kgf-cm.}

Tightening torque:
17.7 - 35.4 in-lbf. {2.0 - 4.0 N-m, 20.4 - 40.8 kgf-cm.}

2. Install the electric fold-in unit and frame assembly to the mirror body and tighten screws circled below.

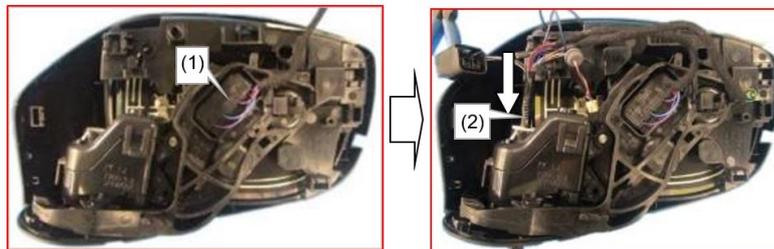


Tightening torque:
10.6 - 23.9 in-lbf. {1.2 - 2.7 N-m,
2.2 - 27.5 kgf-cm.}

Tightening torque:
17.7 - 35.4 in-lbf. {2.0 - 4.0 N-m,
20.4 - 40.8 kgf-cm.}

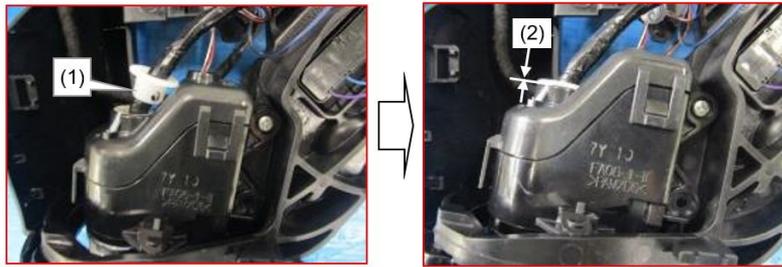
3. Install the mirror harness.

a. Install the connector (1) and mirror harness (2).

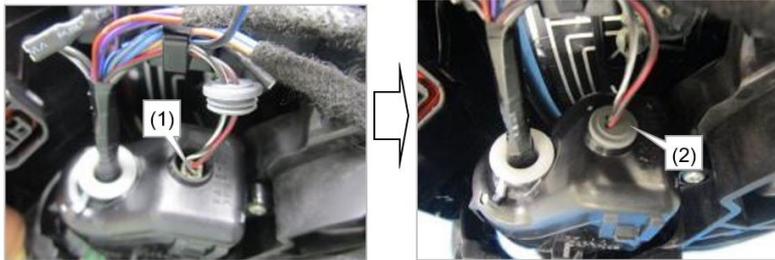


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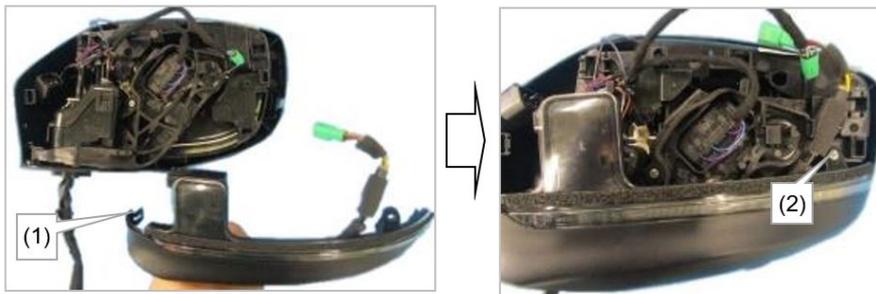
b. Install the harness cap (1) without any clearance (2) remaining between the electric fold-in unit.



c. Connect the connector (1) and install the grommet (2).



d. Install the lower outer mirror garnish engaging the hook (1) and tighten the screw (2).



Tightening torque:
10.6 - 23.9 in-lbf. {1.2 - 2.7 N-m, 12.2 - 27.5 kgf-cm.}

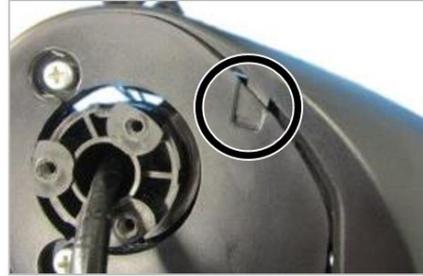
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NOTE: Install the lower outer garnish in the correct position.

Examples of INCORRECTLY installed garnish

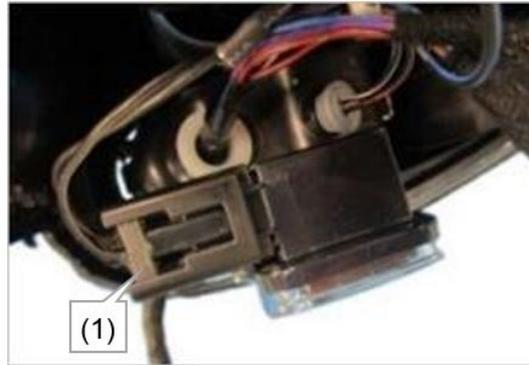


NO GOOD

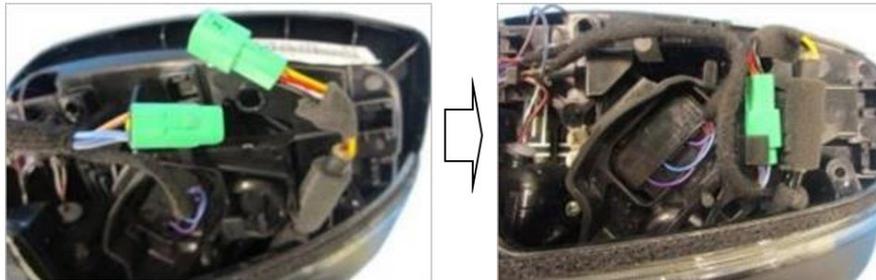


NO GOOD

e. Install the side turn light connector (1).



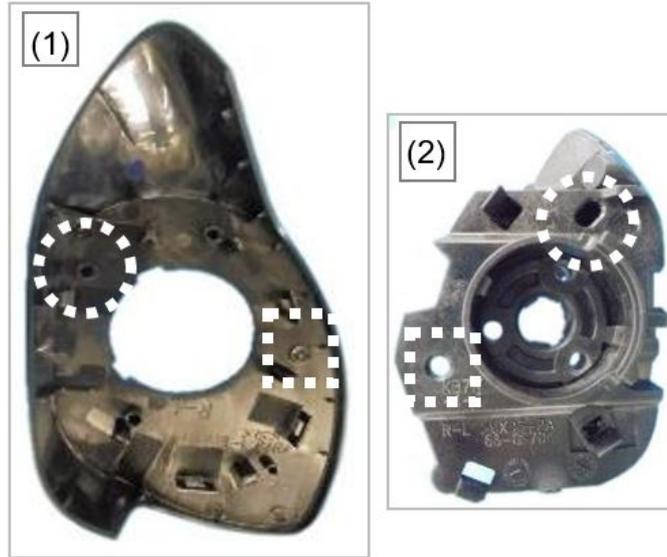
f. **For vehicles with side camera only:** Install the connector.



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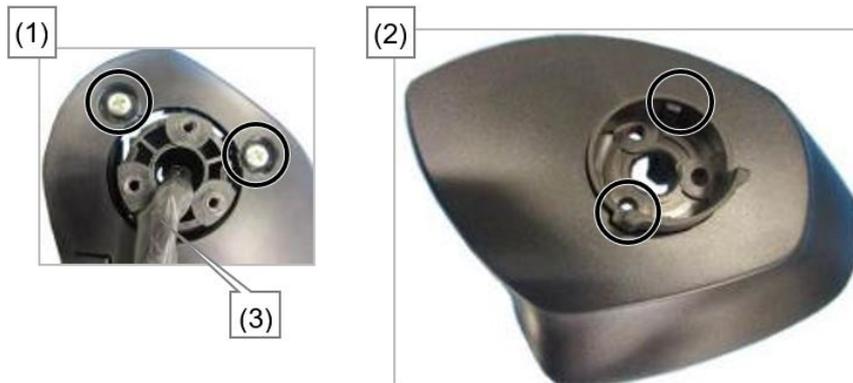
4. **All vehicles:** Install the mirror base.

- a. While aligning the locators circled below, install a new base cover (1) to the inner base (2).



- b. Install the inner base (1) to the mirror (2) while aligning the locators.

NOTE: DO NOT pinch the harness (3).



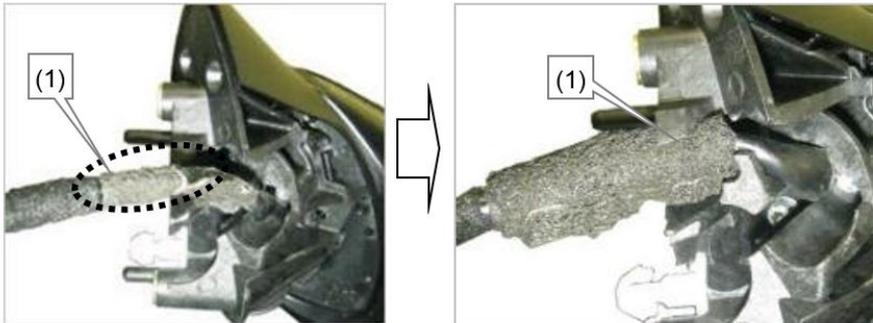
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c. Tighten the three screws circled below.

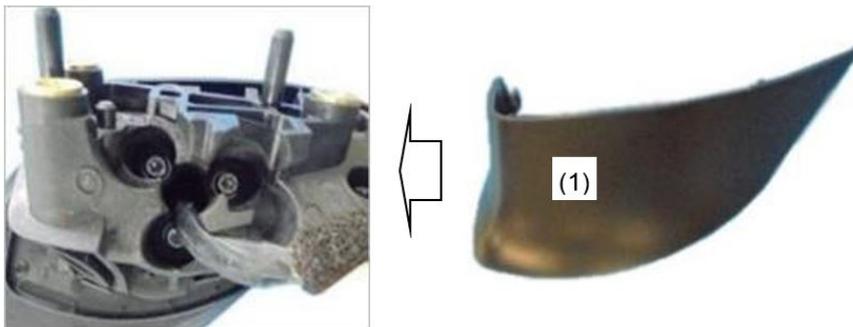
- Tightening torque: 53.1 +/- .9 in-lbf. {6.0 +/- .1 N-m, 61.2 +/- 1.0 kgf-cm.}



5. Install new packing where the old packing (1) was attached, then clamp the harness.



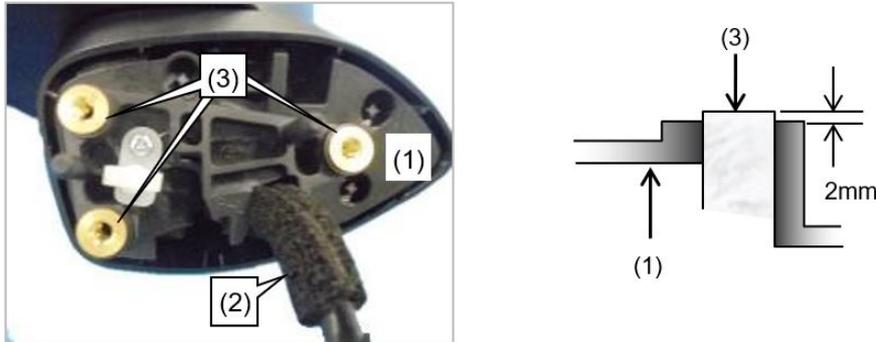
6. Install the base cover (1) to the inner base without any clearance.



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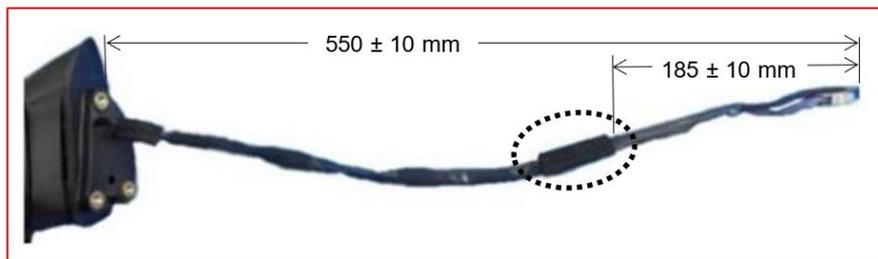
7. Install the rubber seal (1) passing the harness (2) through it.

NOTE: If the seal rubber is correctly installed, the three bosses (3) on the inner base are 2mm above than the rubber seal (1).



8. Install the new packing onto the mirror harness (185 ± 10mm from the end) where the old packing was removed.

NOTE: Confirm that the length of harness is 550 ± 10mm.



9. Install the power outer mirror according to the instructions on MGSS online (POWER OUTER MIRROR REMOVAL/INSTALLATION).

10. Install the outer mirror garnish according to the instructions on MGSS online (OUTER MIRROR GARNISH REMOVAL/INSTALLATION).

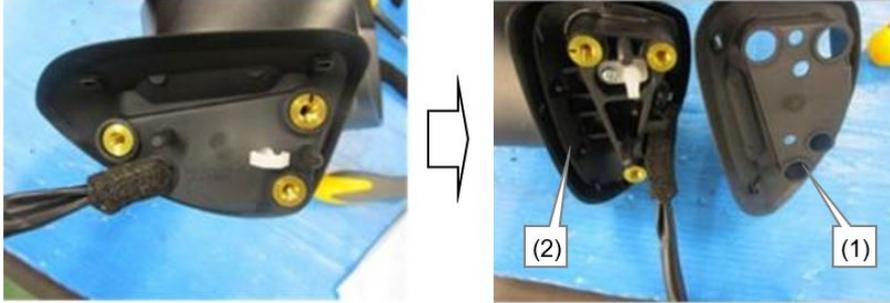
11. **For power outer mirror with side camera:** Perform 360°view monitor system aiming according to the instructions on MGSS online (360°VIEW MONITOR SYSTEM AIMING).

12. Verify the repair.

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CX-9 - REMOVAL PROCEDURE

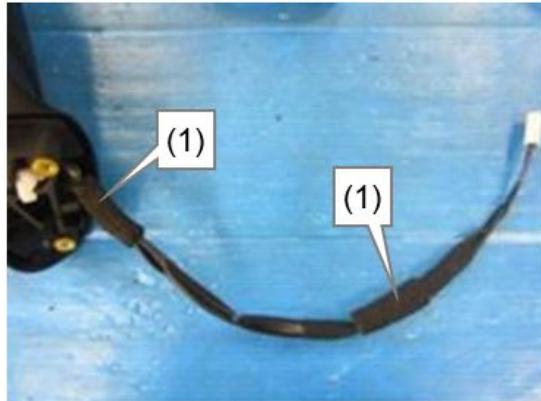
1. Remove the outer mirror garnish according to the instructions on MGSS online (OUTER MIRROR GARNISH REMOVAL/INSTALLATION).
2. Remove the power outer mirror according to the instructions on MGSS online (POWER OUTER MIRROR REMOVAL/INSTALLATION).
3. Remove the rubber seal (1) from the base (2) of the mirror.



4. Pull out the lower base cover in the direction of the arrow shown below.

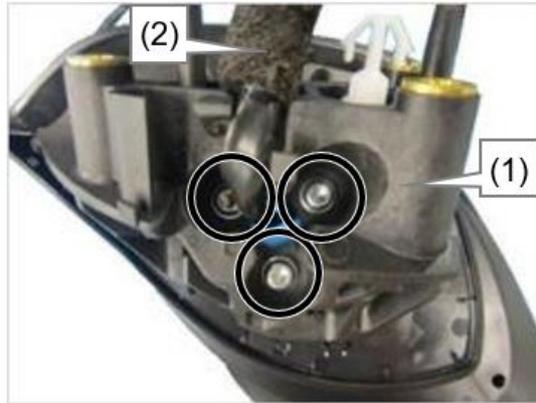


5. Peel off the two seal packing (1) from the harness.

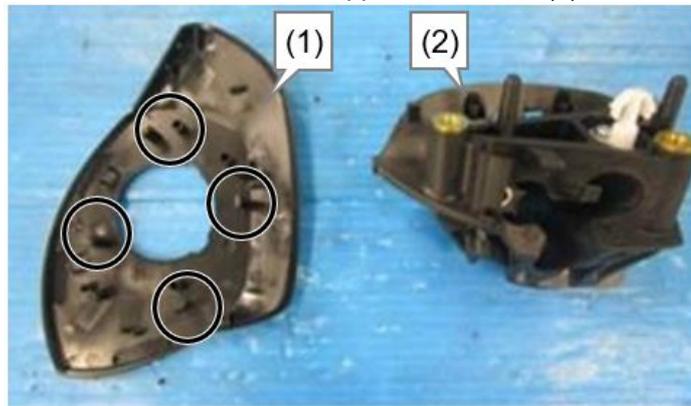


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6. Remove the three screws circled below, then remove the inner base (1) passing the harness (2) through it.

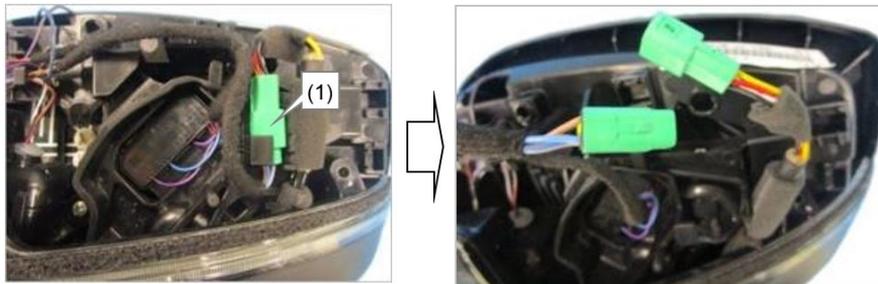


7. Disengage the four tabs circled below, then remove the upper base cover (1) from the inner base (2).



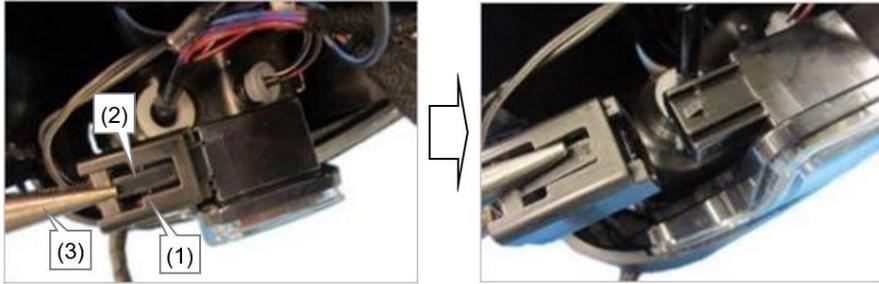
8. Remove the mirror harness.

a. **For outer mirror with side camera only:** Disconnect the connector (1).

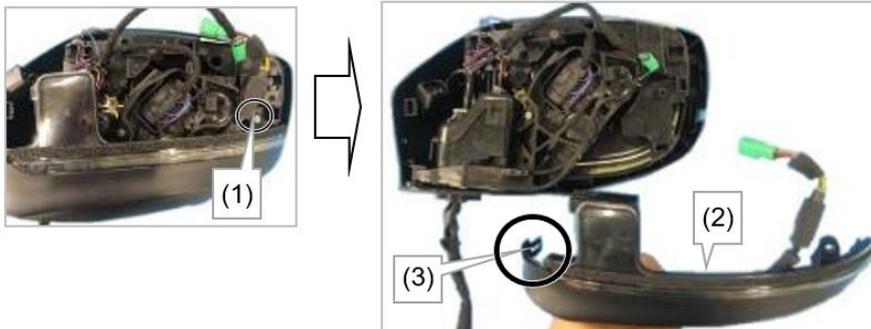


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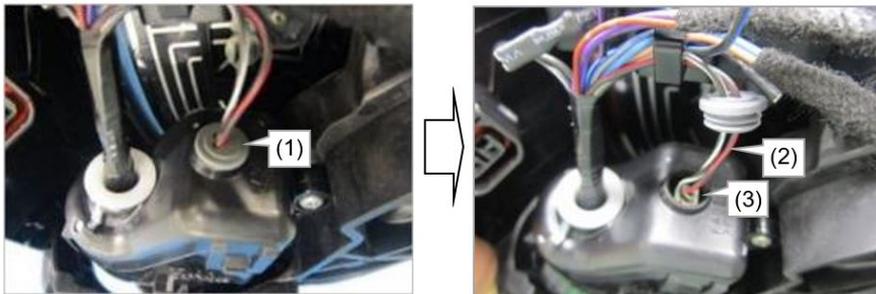
b. **All models:** Using needle-nose pliers (3), pull out the side turn light connector (1) while pushing the lock (2).



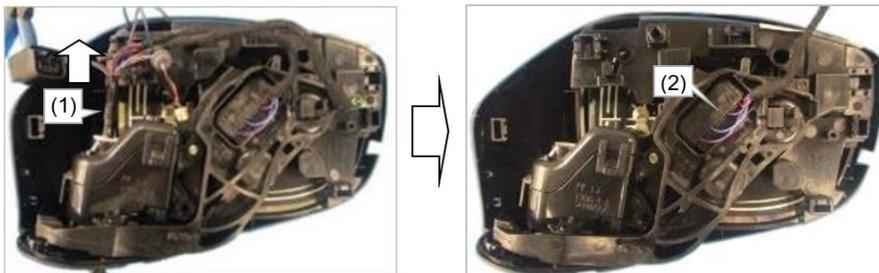
c. Remove the screw (1), then remove the lower outer mirror garnish (2).
CAUTION: Be careful not to damage the hook (3) during removal.



d. Remove the grommet (1), then pull the mirror harness (2) out while pushing the lock (3) with a small flat-blade screw driver.



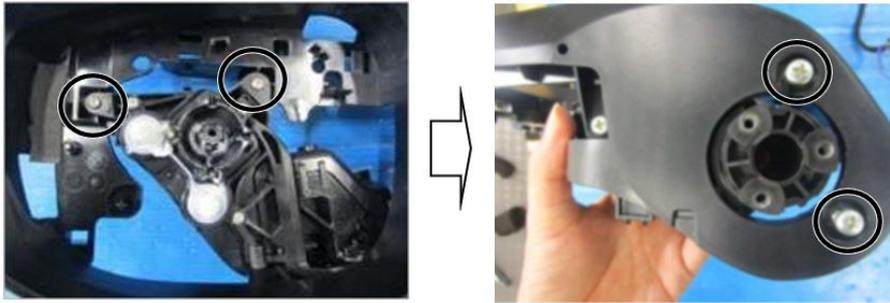
e. Pull the mirror harness (1) out, then remove the connector (2).



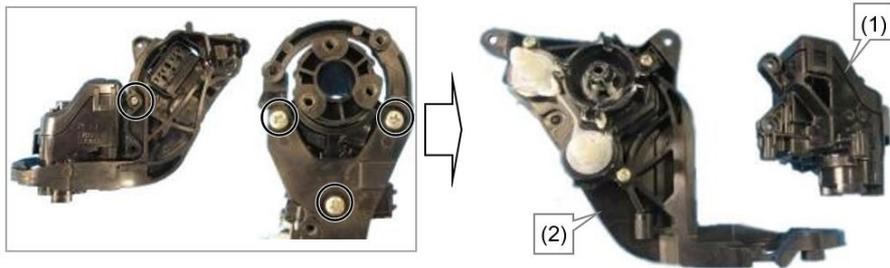
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9. Remove the electric fold-in unit from the mirror body.

a. Remove the screws circled in images below, then remove the electric fold-in unit and the frame assembly as one unit.



b. Remove the screws circled in the image below, then separate the electric fold-in unit (1) from the frame assembly (2).



CX-9 - INSTALLATION PROCEDURE

1. Install the new electric fold-in unit to the frame assembly and tighten the screws circled below.

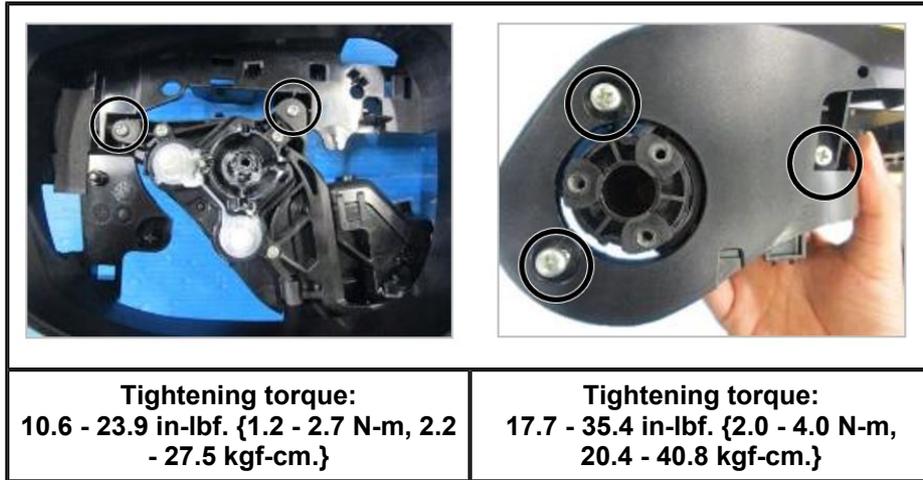


Tightening torque:
 10.6 - 23.9 in-lbf. {1.2 - 2.7 N-m, 12.2 - 27.5 kgf-cm.}

Tightening torque:
 17.7 - 35.4 in-lbf. {2.0 - 4.0 N-m, 20.4 - 40.8 kgf-cm.}

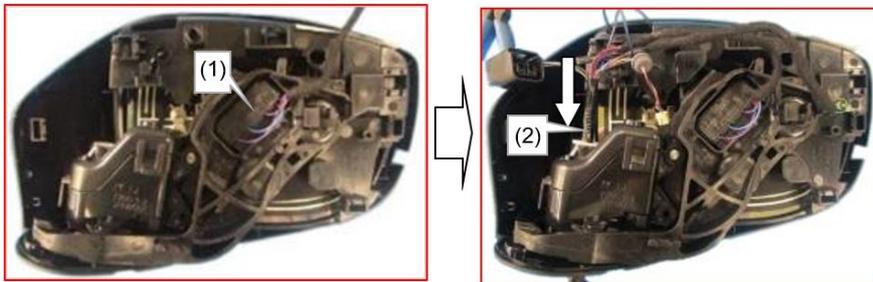
2. Install the electric fold-in unit and frame assembly to the mirror body and tighten screws circled below.

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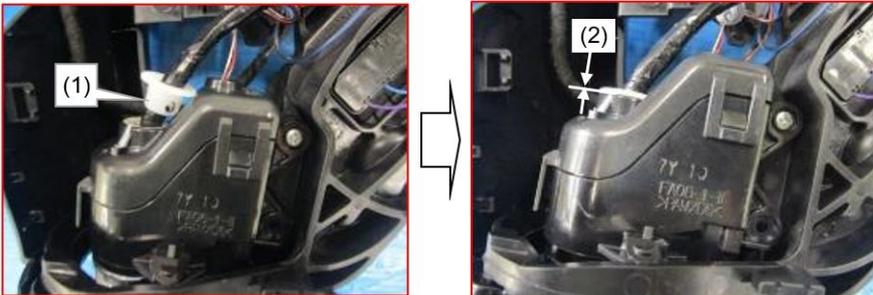


3. Install the mirror harness.

- a. Install the connector (1) and mirror harness (2).

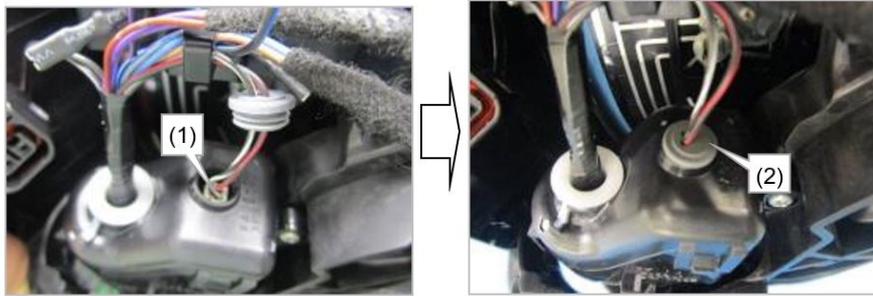


- b. Install the harness cap (1) without any clearance (2) remaining between the electric fold-in unit.

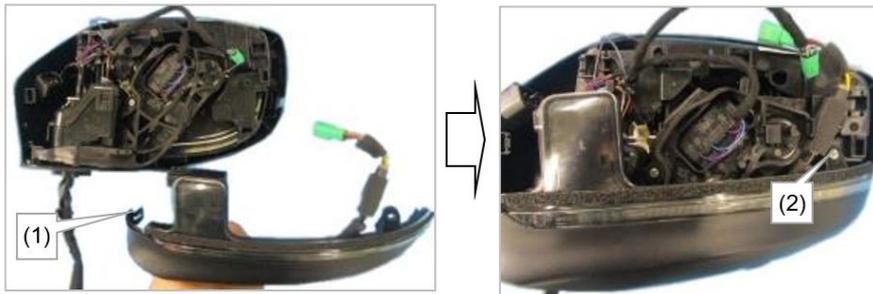


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c. Connect the connector (1) and install the grommet (2).



d. Install the lower outer mirror garnish engaging the hook (1) and tighten the screw (2).



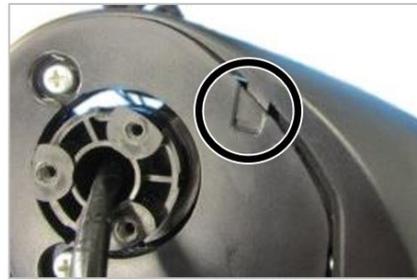
Tightening torque:
 10.6 - 23.9 in-lbf. {1.2 - 2.7 N-m, 12.2 - 27.5 kgf-cm.}

NOTE: Install the lower outer garnish in the correct position.

Examples of INCORRECTLY installed garnish



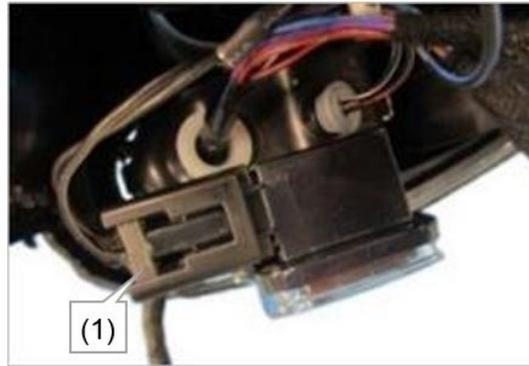
NO GOOD



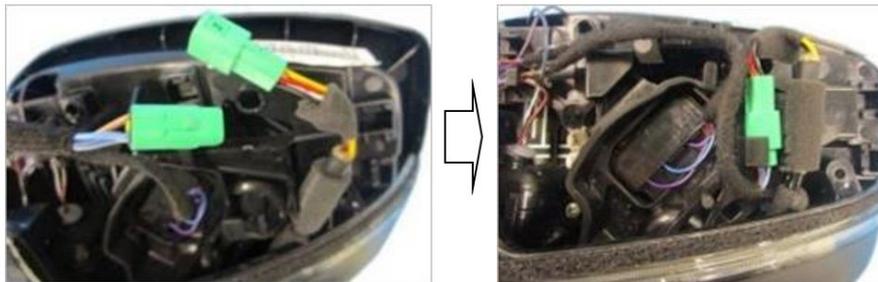
NO GOOD

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e. Install the side turn light connector (1).

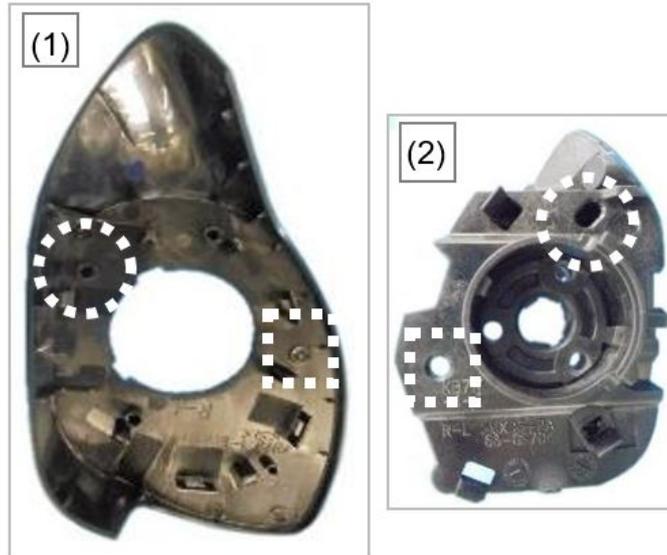


f. **For vehicles with side camera only:** Install the connector.



4. **All vehicles:** Install the mirror base.

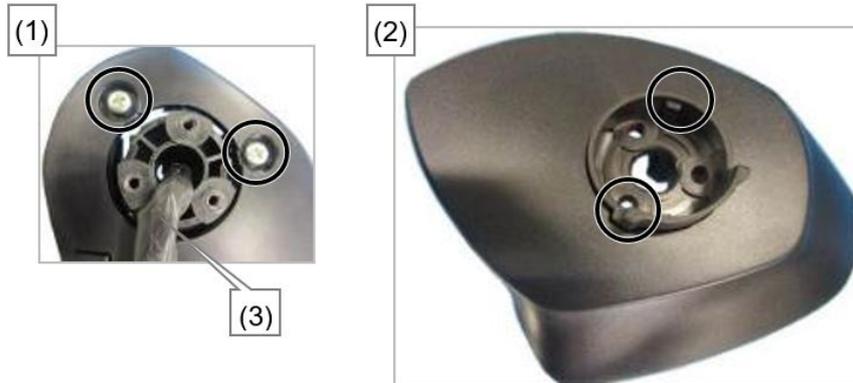
a. While aligning the locators circled below, install a new base cover (1) to the inner base (2).



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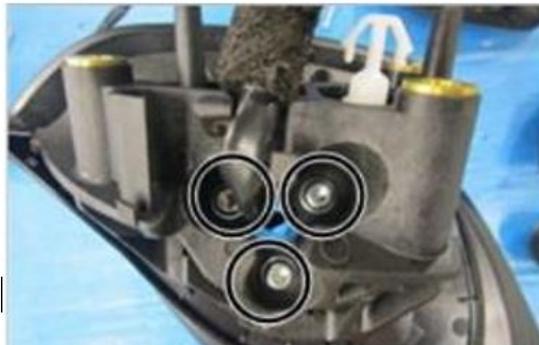
b. Install the inner base (1) to the mirror (2) while aligning the locators.

NOTE: DO NOT pinch the harness (3).

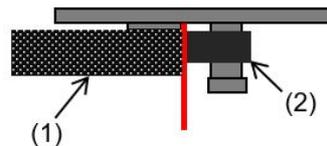
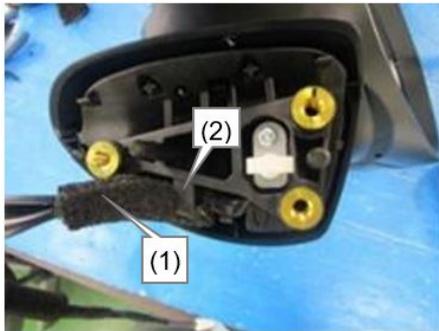


c. Tighten the three screws circled below.

- **Tightening torque: 53.1 +/- .9 in-lbf. {6.0 +/- .1 N-m, 61.2 +/- 1.0 kgf-cm.}**

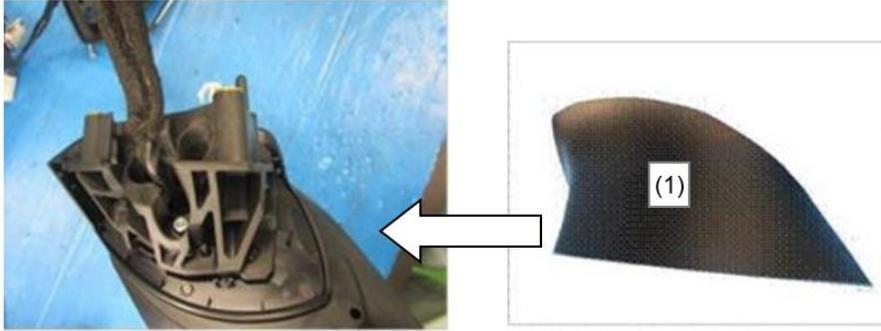


5. Install new packing where the old packing (1) was attached, then clamp the harness (2).



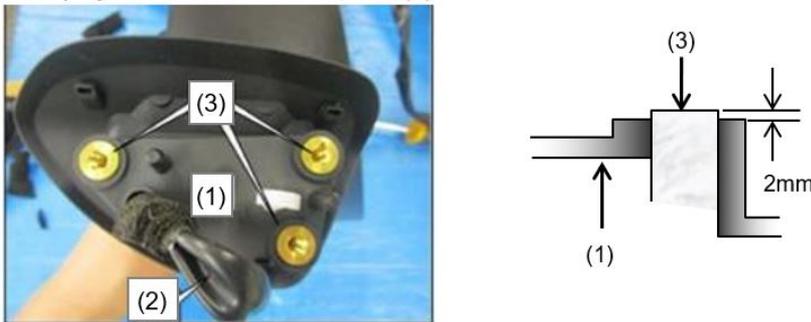
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6. Install the base cover (1) to the inner base without any clearance.



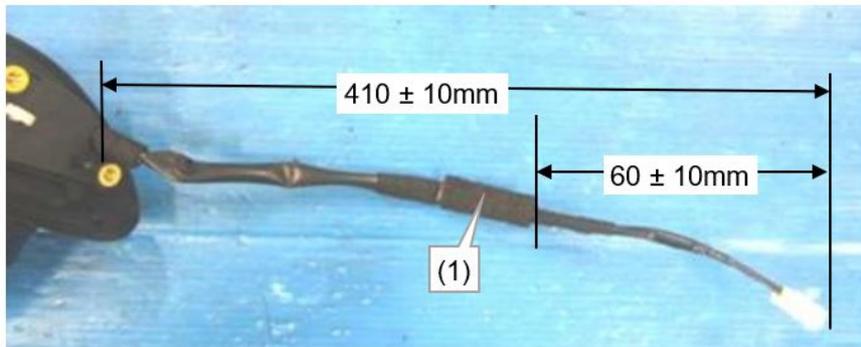
7. Install the rubber seal (1) passing the harness (2) through it.

NOTE: If the seal rubber is correctly installed, the three bosses (3) on the inner base are 2mm above than the rubber seal (1).



8. Install the new packing onto the mirror harness (60 ± 10mm from the end) where the old packing was removed.

NOTE: Confirm that the length of harness is 410 ± 10mm.



9. Install the power outer mirror according to the instructions on MGSS online (POWER OUTER MIRROR REMOVAL/INSTALLATION).

10. Install the outer mirror garnish according to the instructions on MGSS online (OUTER MIRROR GARNISH REMOVAL/INSTALLATION).

11. **For power outer mirror with side camera:** Perform 360°view monitor system aiming according to the instructions on MGSS online (360°VIEW MONITOR SYSTEM AIMING).

12. Verify the repair.

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PARTS INFORMATION

Parts Number	Description	Qty.	Model	Notes
KBY0-69-16ZC	Electric Fold-in Unit Kit (Left Side)	1	CX-5	Kits also include: Seal Packing Base Cover #1 Base Cover #2
KBY0-69-15ZC	Electric Fold-in Unit Kit (Right Side)	1		
TNY0-69-16ZC	Electric Fold-in Unit Kit (Left Side)	1	CX-9	
TNY0-69-15ZC	Electric Fold-in Unit Kit (Right Side)	1		

NOTE: For dealers with shelf stock of "B" level parts, they may be able to be used for this repair. Since the modifications were made during the production of the "B" level parts, check the LOT number of the parts according to the tables below. Parts with Lot numbers of "0B20" or after can be used for this repair.

Part Number		Repair Notes
CX-5	CX-9	
KBY0-69-1*Z	TNY0-69-1*Z	DO NOT use parts for the repair
KBY0-69-1*ZA	TNY0-69-1*ZA	DO NOT use parts for the repair
KBY0-69-1*ZB	TNY0-69-1*ZB	Check the LOT number before using parts
KBY0-69-1*ZC	TNY0-69-1*ZC	Can use parts without checking the LOT number

LOT Number	Repair Notes
0B19 or before	DO NOT use part for the repair
0B20 or after	Use the part for the repair

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NOTE: The LOT Number is printed on the label (as shown below).



Lot Number format: **YMDD**

Y - Last digit of the year

M - Month code A-L (A: Jan., B: Feb., C: Mar...).

DD - Date

Example: Lot Number 0C16 = 2020, March 16

Month Code	Month	Month Code	Month
A	January	G	July
B	February	H	August
C	March	I	September
D	April	J	October
E	May	K	November
F	June	L	December

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WARRANTY INFORMATION**NOTE:**

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda's New Vehicle Limited Warranty term.
- Additional diagnostic time cannot be claimed for this repair.

CX-5 - OPERATION: ELECTRIC FOLD-IN UNIT, R&R

Warranty Type	A
Symptom Code	64
Damage Code	9W
Part Number Main Cause	KBY0-69-16ZB, KBY0-69-15ZB, KBY0-69-16ZC or KBY0-69-15ZC
Quantity	1
Operation Number / Labor Hours:	<p>1) Without Side Camera:</p> <p>XXP3AARX / 0.7 Hrs. (One side) XXP3ABRX / 1.2 Hrs. (Both Sides)</p>
	<p>2) With Side Camera / Without 360° view monitor system:</p> <p>XXP3AERX / 0.9 Hrs. (One side) XXP3AFRX / 1.4 Hrs. (Both Sides)</p>
	<p>3a) With Side Camera / With 360° view monitor system:</p> <p>NOTE: When camera aiming adjustment is completed by performing 360° view monitor system screen display verification procedure.</p> <p>XXP3AGRX / 0.8 Hrs. (One side) XXP3AHRX / 1.3 Hrs. (Both Sides)</p>
	<p>3b) With Side Camera / With 360° view monitor system:</p> <p>NOTE: When camera aiming adjustment is completed by performing 360° view monitor system screen display verification procedure & Side Camera Aiming Procedure.</p> <p>XXP3ALRX / 1.0 Hrs. (One side) XXP3AMRX / 1.6 Hrs. (Both Sides)</p>

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CX-9 - OPERATION: ELECTRIC FOLD-IN UNIT, R&R

Warranty Type	A
Symptom Code	64
Damage Code	9W
Part Number Main Cause	TNY0-69-16ZB, TNY0-69-15ZB, TNY0-69-16ZC or TNY0-69-15ZC
Quantity	1
Operation Number / Labor Hours:	1) Without Side Camera: XXP3GARX / 0.7 Hrs. (One side) XXP3GCRX / 1.2 Hrs. (Both Sides)
	2a) With Side Camera / With 360° view monitor system: NOTE: When camera aiming adjustment is completed by performing 360° view monitor system screen display verification procedure. XXP3GERX / 0.8 Hrs. (One side) XXP3GGRX / 1.3 Hrs. (Both Sides)
	2b) With Side Camera / With 360° view monitor system: NOTE: When camera aiming adjustment is completed by performing 360° view monitor system screen display verification procedure & Side Camera Aiming Procedure. XXP3GJRX / 1.0 Hrs. (One side) XXP3GLRX / 1.7 Hrs. (Both Sides)

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