



SERVICE BULLETIN

2011-2022 MY CONVENTIONAL EXTERIOR
MIRROR STAY

SUPERSEDES SB-22-027

GROUP: 61-CAB AND BODY
SERVICE BULLETIN NO: SB-24-004
DATE: 12-8-2022
REF: HMM-221206-F1 R1

SUBJECT VEHICLES:

- Certain 2011-2021 Model Year Conventional Trucks Equipped with a J08 Engine.
- 2022 Model Year Hino L-Series vehicles equipped with a Cummins B6.7 Engine.

OVERVIEW:

In the event that a customer experiences one of the following concerns listed below, this publication will guide the technician through repairing the vehicle. While, based on the model year, the subject vehicle may experience a slightly different concern, the repair direction will be similar.

- **2011 MY through 2021 MY** vehicle may experience an exterior mirror stay that is loose or drifts slightly from its position. In these rare conditions an enhanced mirror stay, mirror stay mount, related fasteners and revised torque specifications have been released to correct this condition. This procedure provides directions for installation of the enhanced components.
- **2022 MY** vehicle may experience cracking of the door structure around the lower mirror base on the driver side or passenger side. In these rare conditions, the effected door needs to be replaced. In addition, an enhanced mirror stay, mirror stay mount, related fasteners and revised torque specifications have been released to correct this condition. This procedure provides directions for installation of the enhanced components.

NOTE: Reports of looseness have accompanied reports that vehicle operators have folded exterior mirrors inward. As clearly stated in the Hino owner's manual, the structure of the mirror stay does not allow for folding.



PARTS:

PART NUMBER	PART DESCRIPTION	ADDITIONAL NOTE	QUANTITY
SZ20108028	Washer, Plain	Small Washer	2
SZ20108027	Washer, Plain	Large Washer	8
87913E0010	Bushing, Outer Mirror	Norglide Washer	2
SZ20408006	Lock Washer	-	2
SZ17708011	Nut	-	2
87093E0103	Stay Sub-Assy, Outer RR View Mirror, RH	Black, Without Heater	1
87094E0033	Stay Sub-Assy, Outer RR View Mirror, LH		1
87093E0573	Stay Sub-Assy, Outer RR View Mirror, RH	Black, With Heater	1
87094E0863	Stay Sub-Assy, Outer RR View Mirror, LH		1
87093E0115	Stay Sub-Assy, Outer RR View Mirror, RH	Chrome, Without Heater	1
87094E0045	Stay Sub-Assy, Outer RR View Mirror, LH		1
87093E0583	Stay Sub-Assy, Outer RR View Mirror, RH	Chrome, With Heater	1
87094E0873	Stay Sub-Assy, Outer RR View Mirror, LH		1
67002E0430	Door Shell - LH	-	As Needed

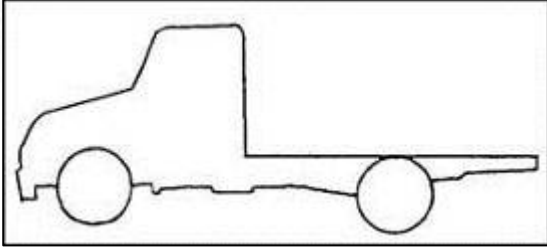
BEFORE YOU BEGIN:

- Read and understand all instructions before you begin the work.
- Park the vehicle on a flat, level and solid surface.
- Place the gear shift lever in "Neutral" or "Park".
- Apply the parking brake firmly and confirm parking brake activation.
- Turn off the engine and remove the key from the ignition switch.
- Always wear safety glasses or goggles to protect your eyes.
- Place wheel chocks in front of and behind all the wheels to prevent the vehicle from moving.



VEHICLE PREPARATION:

1. Park the vehicle on a level and solid surface. Confirm the engine is stopped, the starter switch is in the off (LOCK) position, and the key is removed.



2. Apply the parking brake. Chock all of the wheels.



REPAIR PROCEDURE:

1. Remove the lower stay cover by releasing the (4) retaining tabs. Retain the cover for later assembly.

NOTICE: Care should be taken to prevent damage to the door paint and lower stay cover.



2. Remove the lower and upper mirror covers by releasing the (10) retaining tabs. Retain the covers for later assembly.

NOTICE: Care should be taken to prevent damage to the mirror housing and related covers during removal.



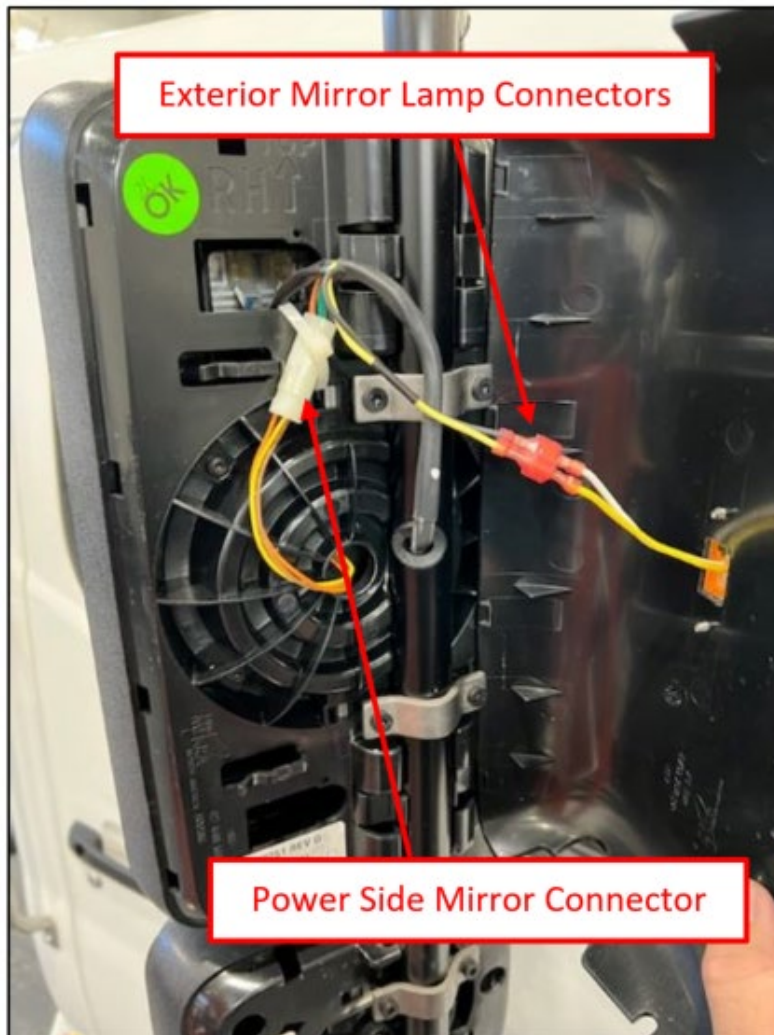
3. Is the vehicle equipped with power side mirrors and/or exterior mirror lamps?

No – Skip step 3 and proceed with step 4.

Yes – Continue with step 3.

As equipped, disconnect the power side mirror connector and the 2 wire connectors for the exterior mirror lamp.

NOTICE: Take notice of the exterior mirror lamp wire colors during disassembly so that during reassembly, the wires can be reconnected in the same orientation.

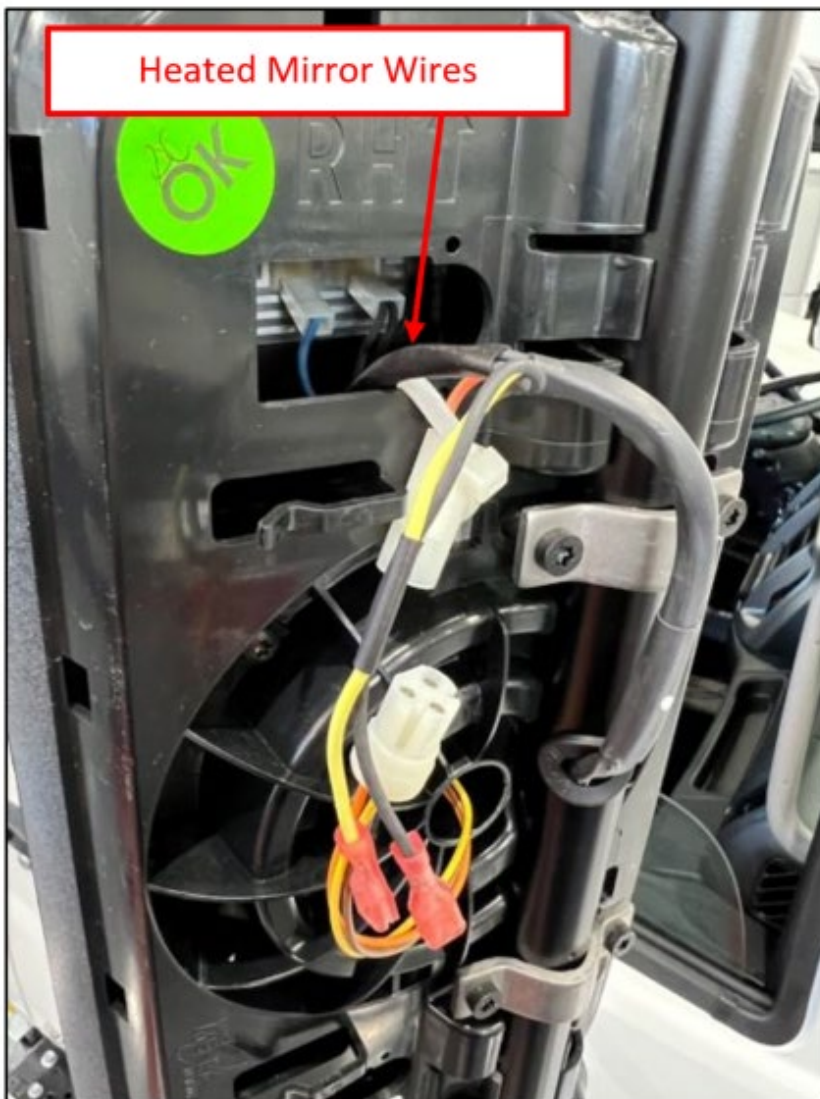


4. Inspect the back side of the upper mirror and mirror glass. Is the vehicle equipped with a harness for the heated side mirror option?

No – Skip step 5. Proceed with step 6.

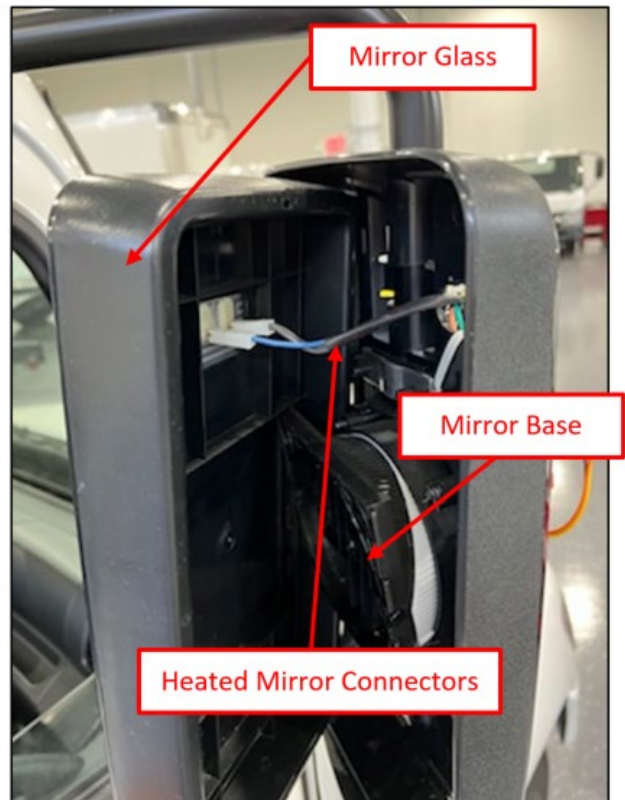
Yes – Continue with step 5.

If the vehicle is equipped with a wiring harness for the heated mirror option, the mirror glass must be removed.

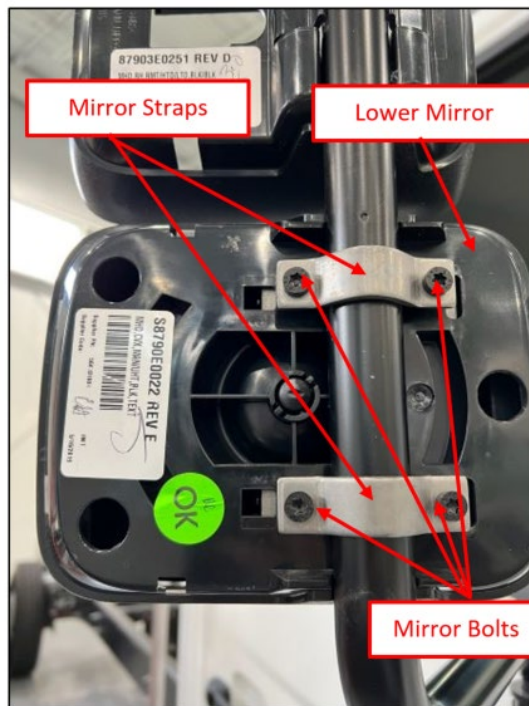


5. Position the mirror so that the bottom of the mirror is pushed in and the top is pushed out. Pressing on the lower portion of the mirror glass, apply an upward pressure to unclip the mirror glass from the mirror base. Once the mirror glass is unclipped from the mounting base, disconnect the heated mirror connectors. Retain the mirror glass for later reassembly.

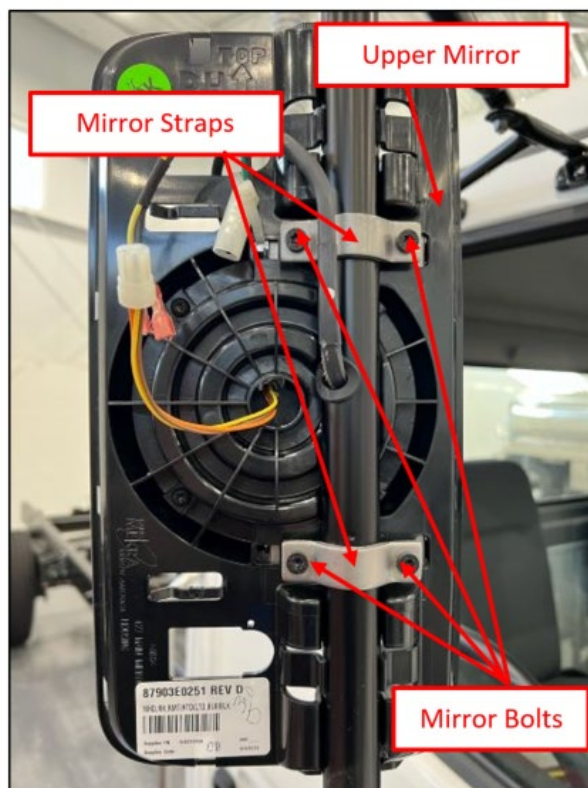
NOTICE: Take notice of the heated mirror wire colors during disassembly so that during reassembly, the wires can be reconnected in the same orientation.



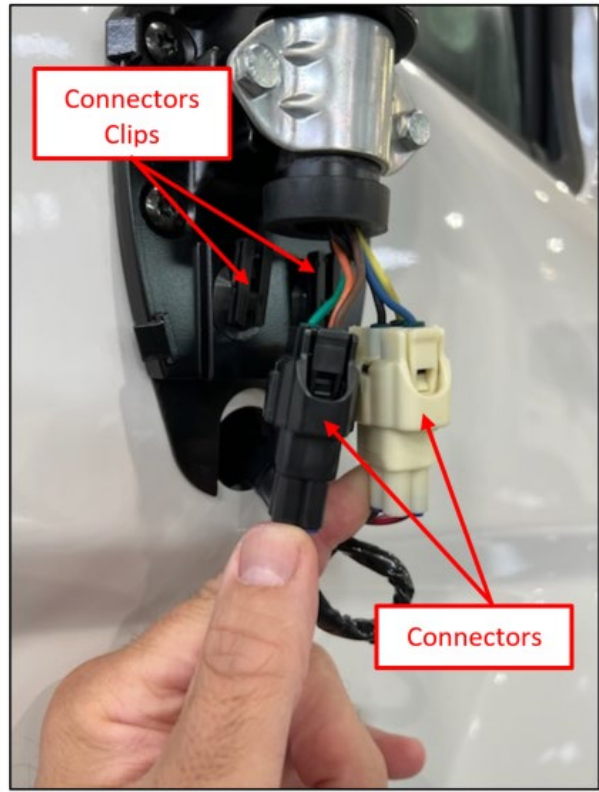
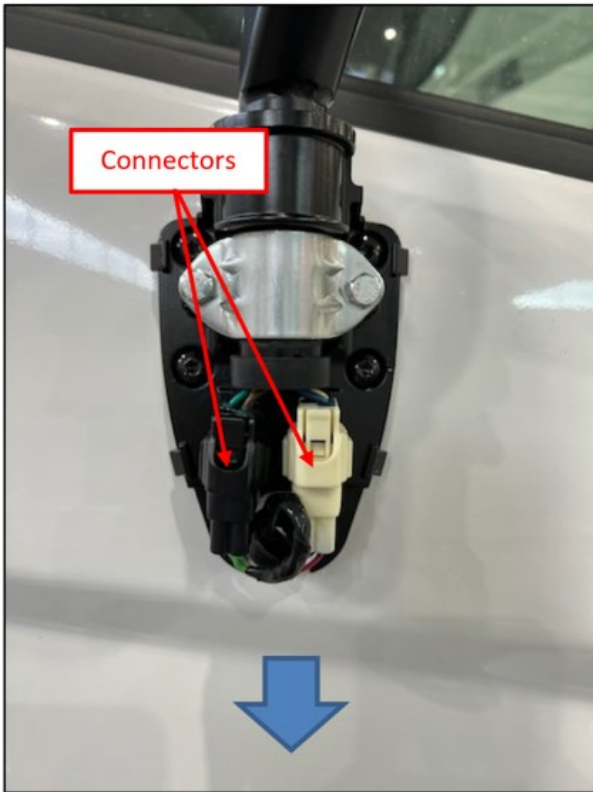
6. While holding the lower mirror, removed the (4) bolts and (2) mirror straps. Retain the lower mirror, bolts and straps for later reassembly.



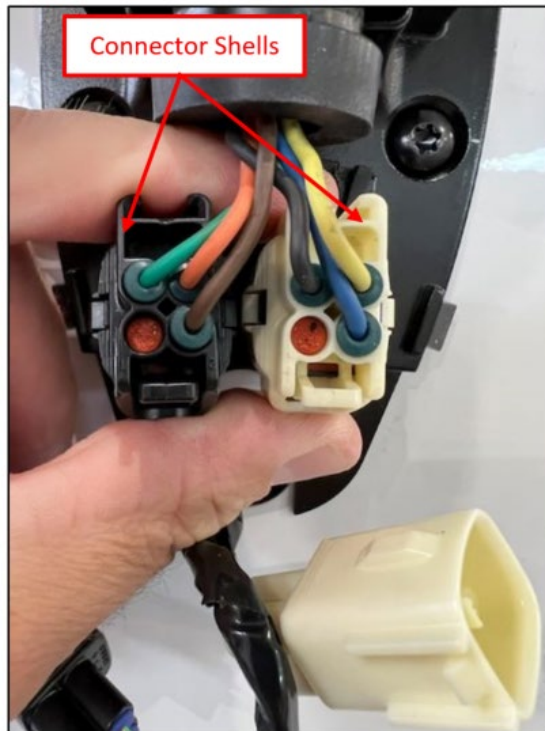
7. While holding the upper mirror, removed the (4) bolts and (2) mirror straps. Retain the upper mirror, bolts and straps for later reassembly.



8. Remove the connectors from the connector clips and disconnect the (2) connectors.

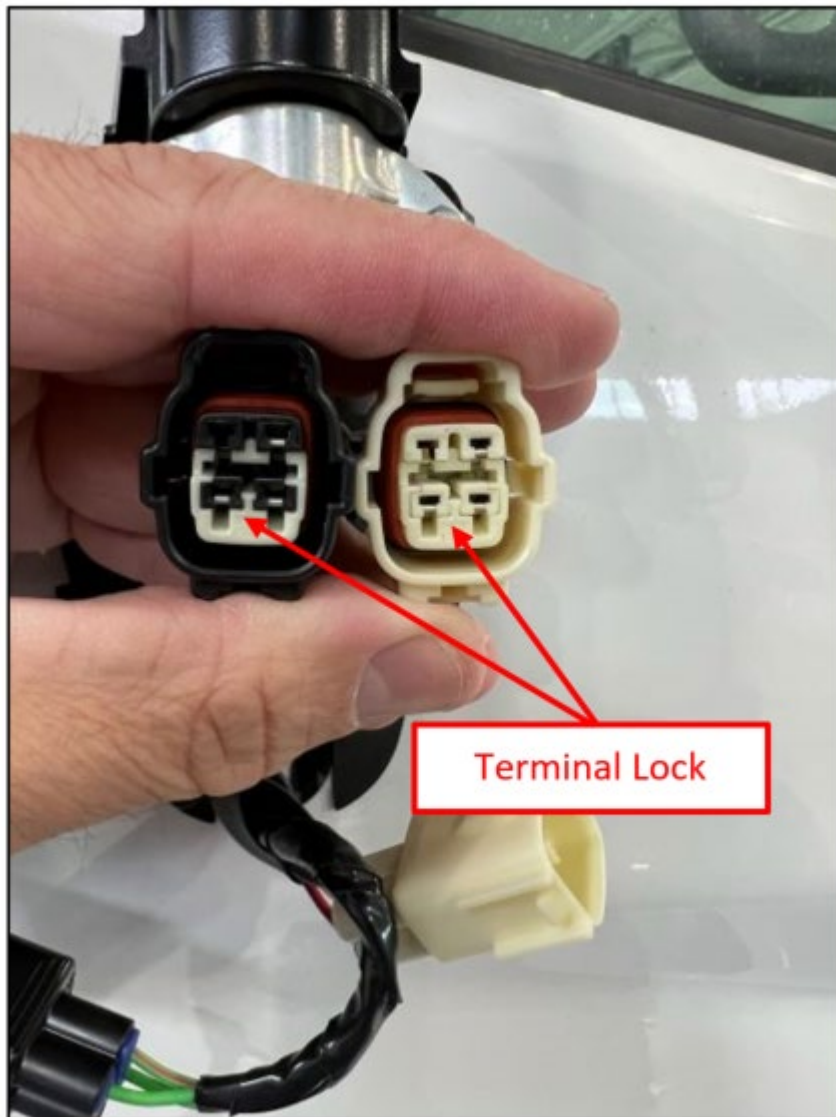


9. Record the wire color for each of the connector shells cavities.



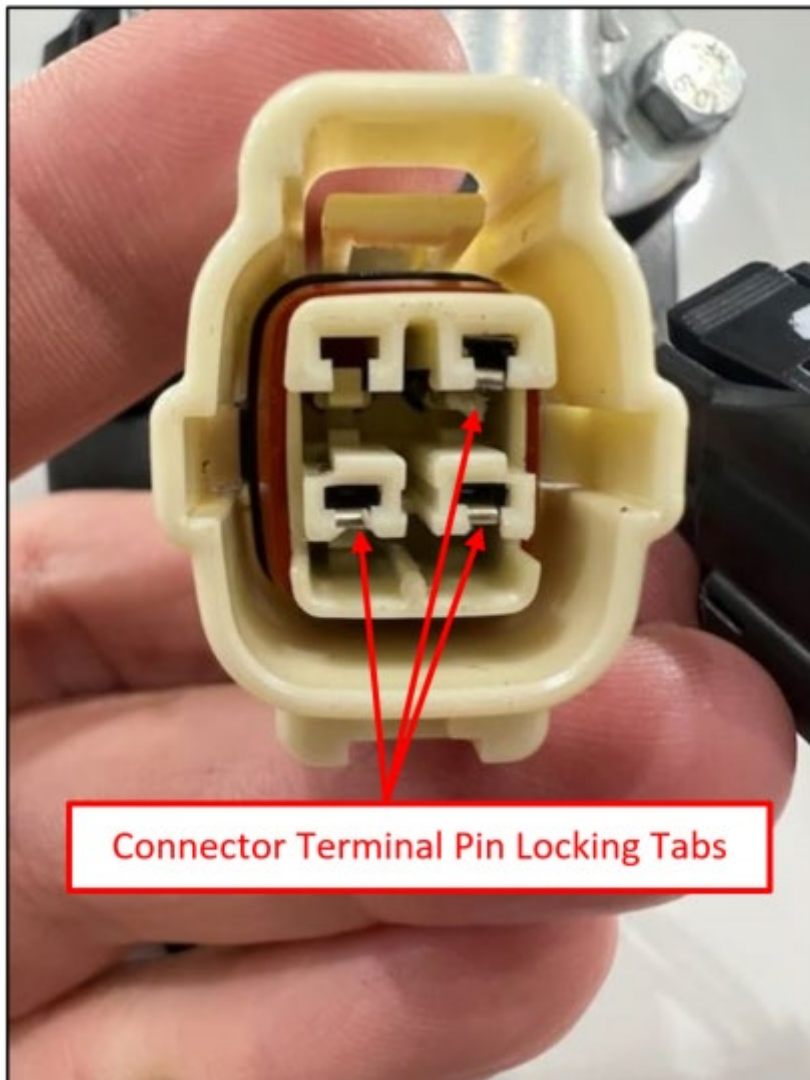
10. Remove the terminal lock for each of the (2) connector shells. Retail both terminal locks for later reassembly.

NOTICE: Care should be taken to prevent damage the terminal locks or connector shells.



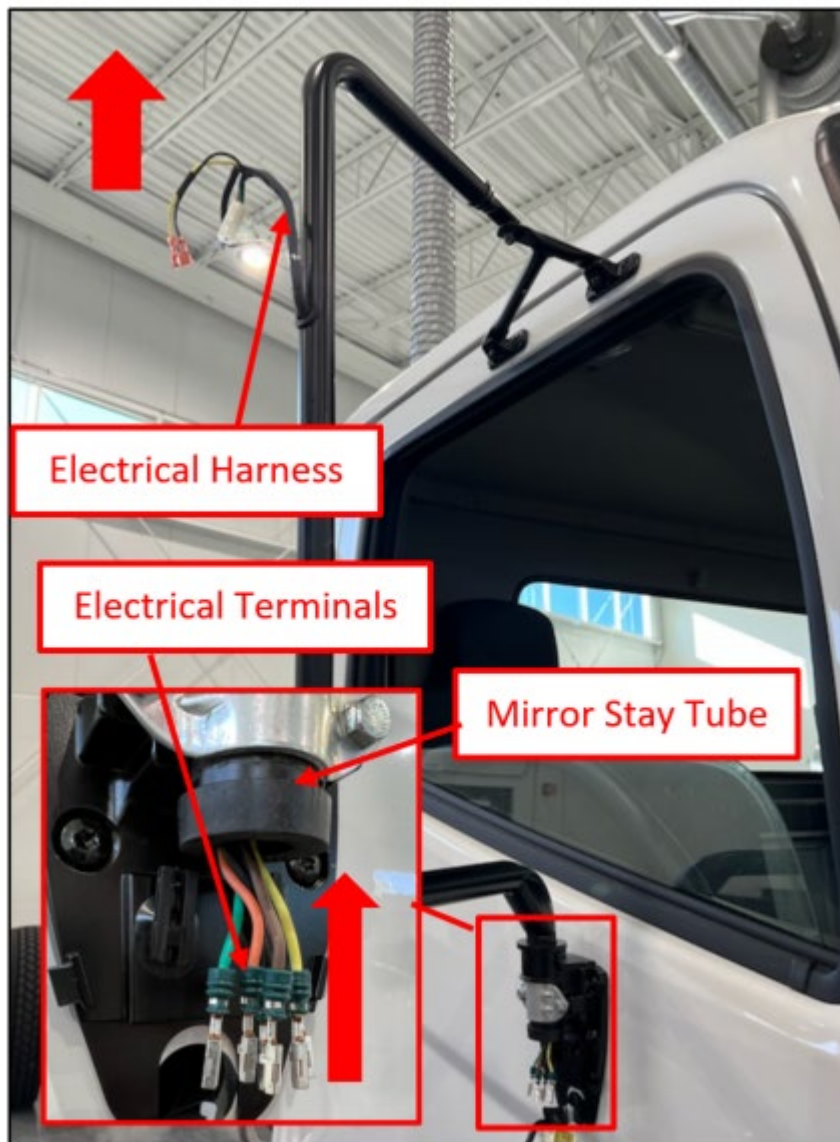
11. Depress the locking tab for each terminal pin and remove the terminal pin from the connector shell. Repeat for all terminal pins for both connectors coming from the mirror stay. Retain both connector shells for later reassembly.

NOTICE: Care should be taken to prevent damaging the plastic terminal pin locking tabs during this step.



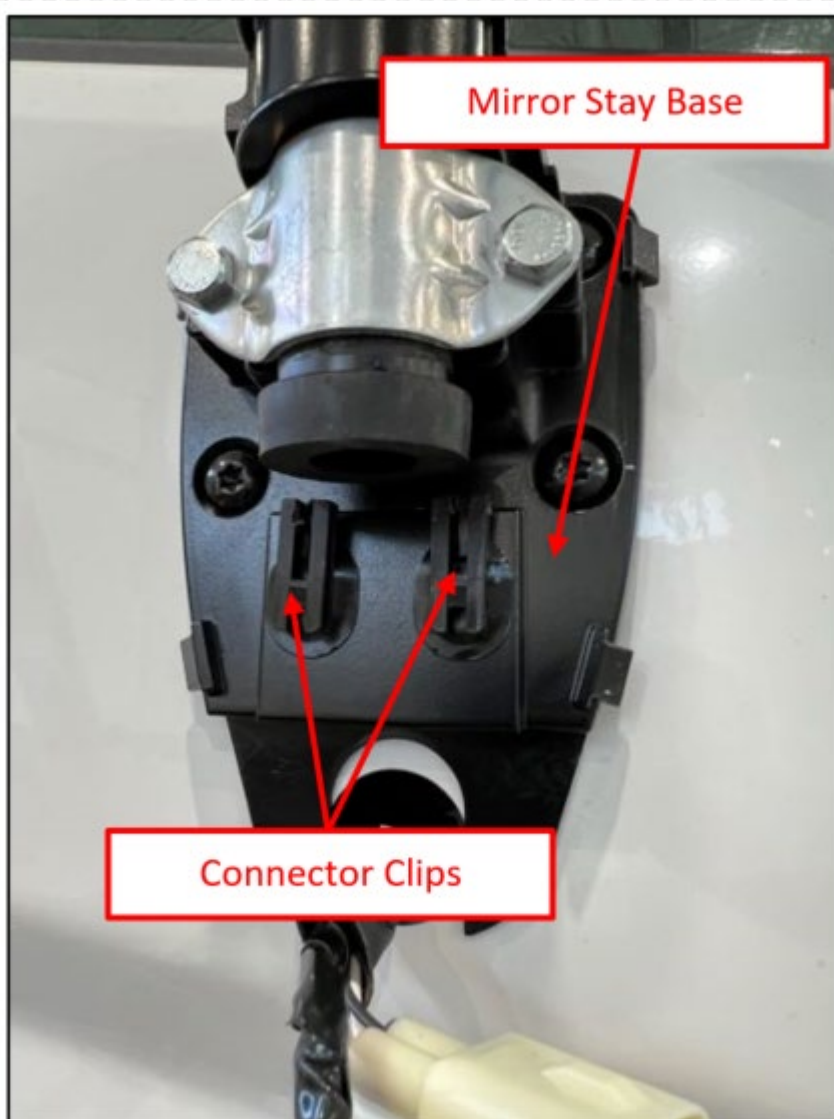
12. Remove the mirror stay electrical harness by wiggling and gently pulling the harness from the top of the mirror stay. While pulling the harness up, guide the electrical terminals into the bottom of the mirror stay tube to prevent damaging them.

NOTICE: Care should be taken to prevent damaging the electrical harness or the electrical terminals as pulling the electrical harness out of the mirror stay.



13. Remove the (2) connector clips from the mirror stay base. Retain for later reassembly.

NOTICE: Care should be taken to prevent damage the plastic connector clips.



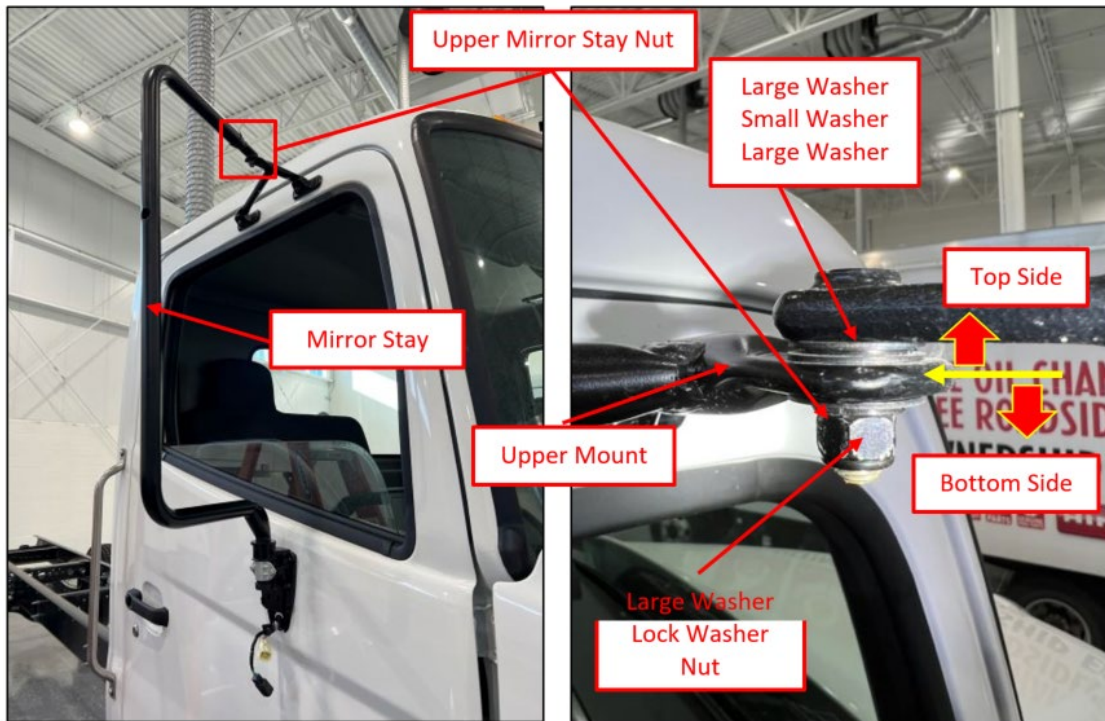
14. From the bottom side of the upper mount, removed the following:

- upper mirror stay nut
- lock washer
- large washer

Discard the nut, lock washer and large washer. These will be replaced with new ones upon reassembly.

NOTICE: As a reference, the original orientation of the washers of the upper mount are as follows:

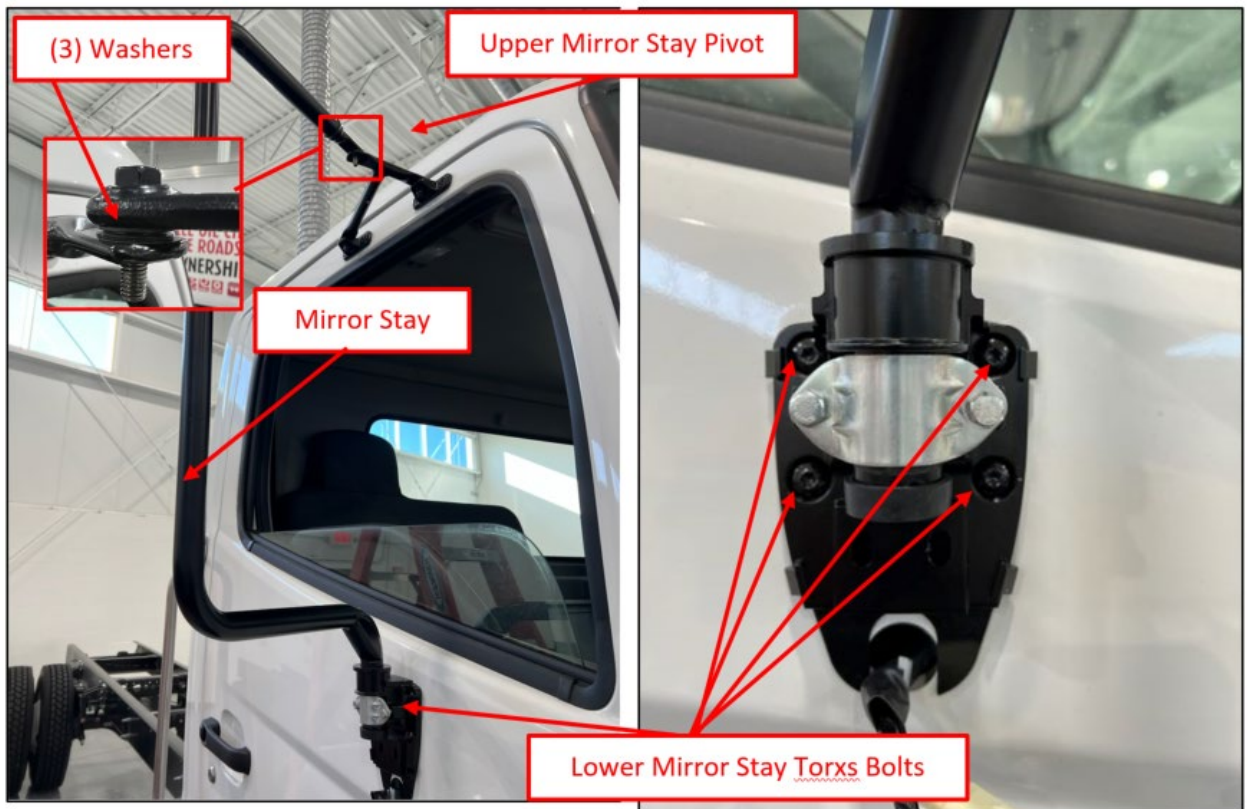
- **Top Side of Mount** → Larger Washer, Small Washer, Large Washer
- **Bottom Side of Mount** → Large Washer, Lock Washer, and Nut



15. Remove the (4) lower mirror stay Torx bolts and mirror stay. When removing the mirror stay, as a reminder, there are (3) washers that are on the upper mirror stay pivot stud (reference step 14). Ensure that these (3) washers are removed and discarded. Retain (2) of the (4) lower mirror stay Torx bolts for later reassembly. Discard the mirror stay and (2) of the lower stay Torx bolts.

NOTICE: Care should be taken to prevent damage to the painted surface of the door.

NOTICE: The new mirror stay comes with (2) new lower mirror stay Torx bolts.



16. Inspect the door shell for cracking around the lower mirror stay. If cracks are found, door replacement is necessary for the effected door.

Reference the on-line workshop manual for removal and installation procedures.

- 2022 MY L-Series Chassis Workshop Manual Volume 2
- Cab, Section CA02-1
- Door, Section CA02-23 thru CA02-32

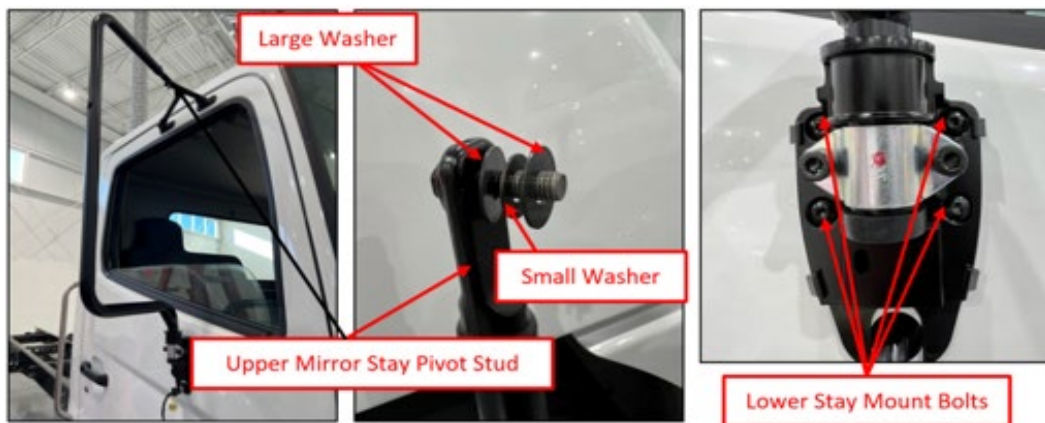
NOTICE: Only doors that exhibit cracking around the lower mirror stay should be replaced.

17. Using (2) new large washers and (1) new small washer, install them onto the new mirror stay upper pivot stud in the following orientation.

Orientation: Large washer-Small washer-Large washer

Then install the new mirror stay onto the upper mirror stay mount. Align the lower mirror stay mount with the (4) holes on the door and install the (4) Torx bolts. Tighten then to the specified torque.

Specified Torque: 70.0 in/lbs (8.0 Nm)



NOTICE: Care should be taken to prevent damage to the painted surface of the door.

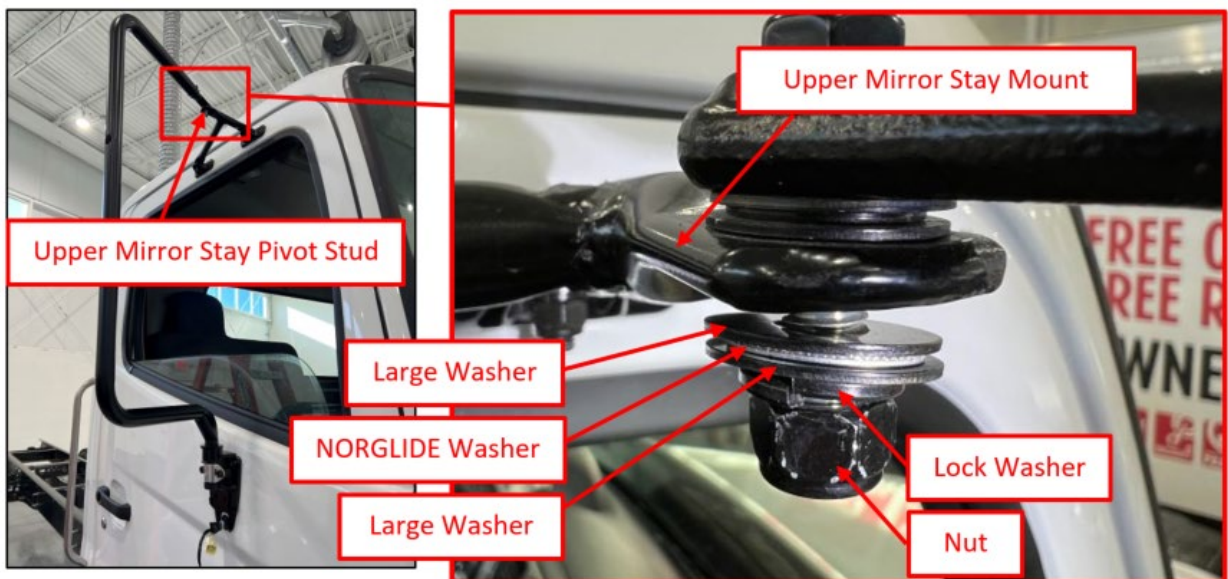
18. For the bottom side of the upper mirror stay mount, install (2) new large washers, (1) new Norglide washer, (1) new lock washer and (1) new nut onto the upper mirror stay pivot stud in the following orientation and tighten the nut to the specified torque.

Orientation

- Large washer
- Norglide washer
- Large washer
- Lock Washer
- Nut

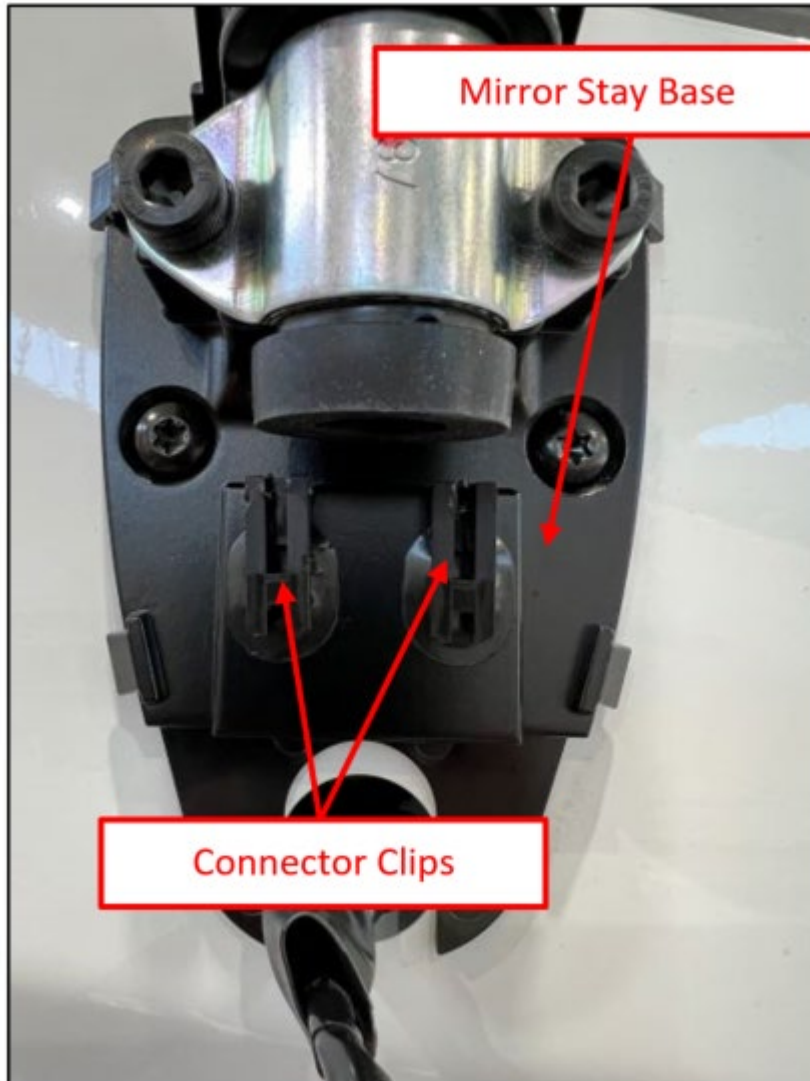
Specified Torque: 15.5 ft/lbs (20.5 Nm)

NOTICE: The Norglide washer has a silver side and black side. This washer can be installed with either side facing up, silver or black and has no effect on performance.



19. Install the (2) previously removed connector clips onto the mirror stay base.

NOTICE: Care should be taken to prevent damage the plastic connector clips.

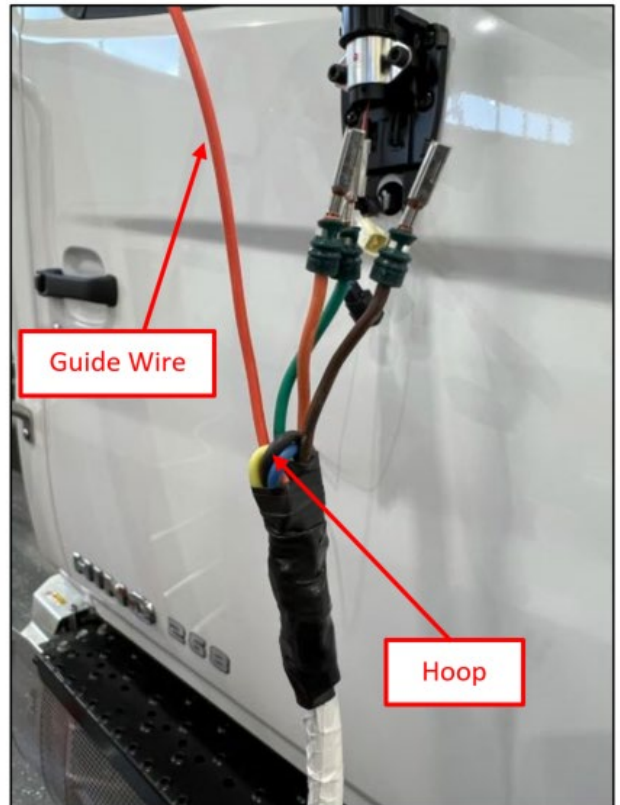
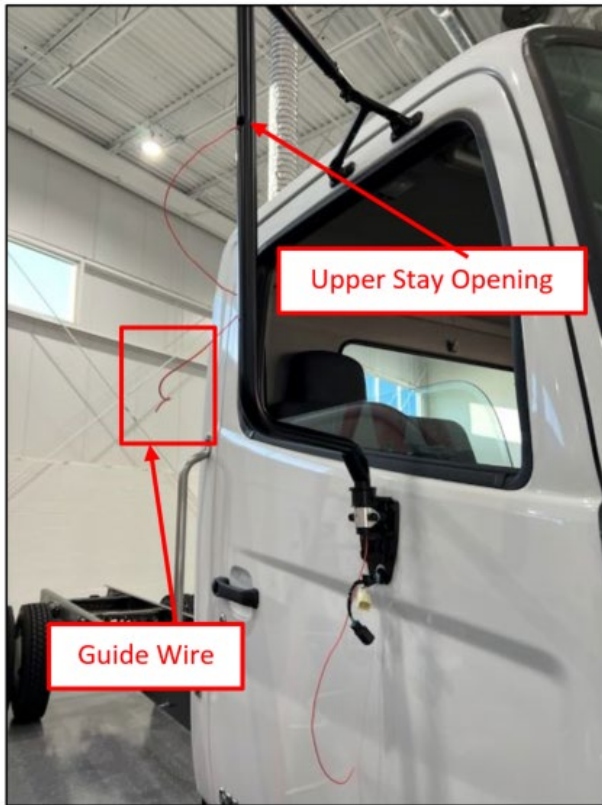


20. Run a piece of flexible guide wire through the new mirror stay. This will be used to help guide, wiggle and pull the original wiring harness back down through the new mirror stay.

NOTICE: Care should be taken to prevent damaging the electrical harness or the electrical terminals.

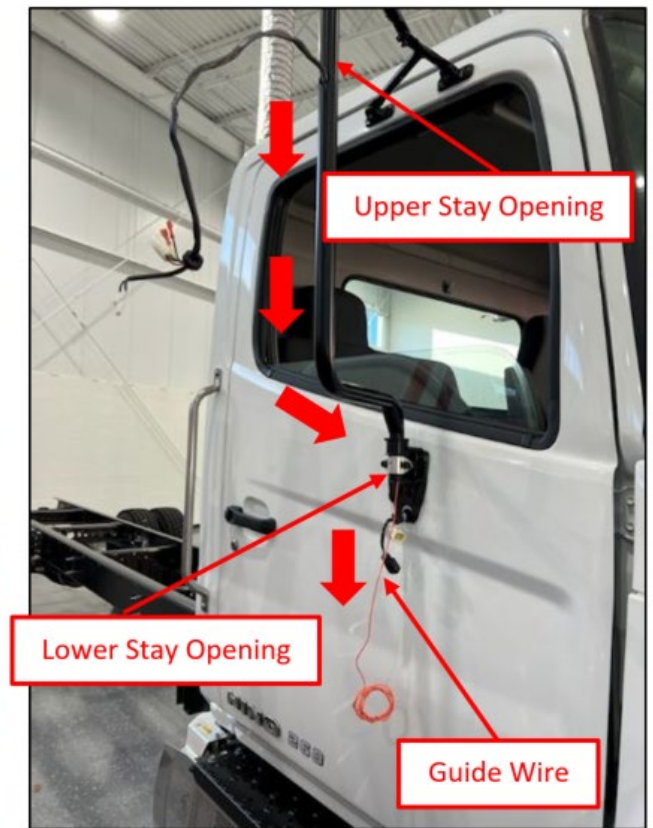


21. Using the guide wire coming from the upper stay opening, fold back half of the harness wires from the original mirror stay harness to make a hoop and then run the guide wire through the hoop and use electrical tape to secure the guide wire to the mirror stay wiring harness.

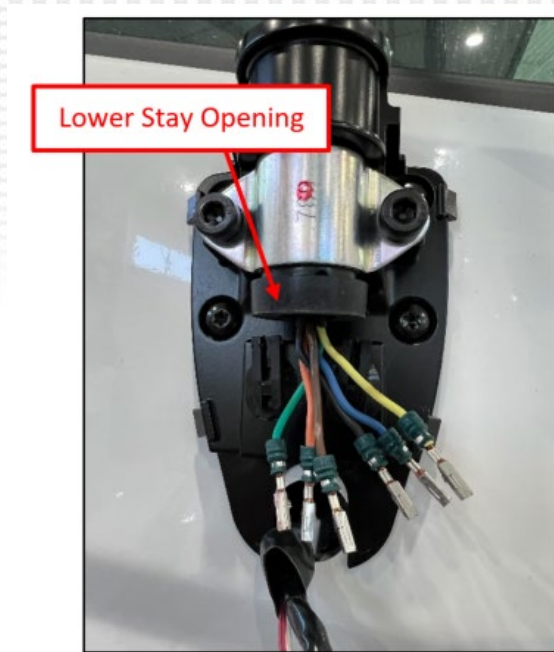


22. Route the original mirror stay wiring harness through the upper stay opening. Some of the wire terminals will need to face forward into the tube while the others will be folded back into a hoop. You'll need to wiggle and push the wiring harness at the upper stay opening in combination of gently pulling on the guide wire coming from the lower mirror stay opening. This will help guide the harness back through the new mirror stay.

NOTICE: Care should be taken to prevent damage to the electrical harness or the electrical terminals. Do not force or tug the harness, damage to the harness may occur.



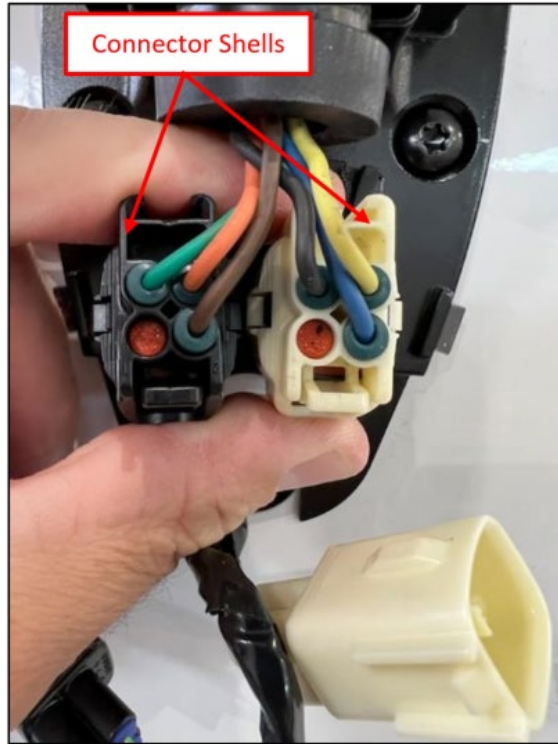
23. Removed the guide wire and separate the individual wires at the lower stay opening.



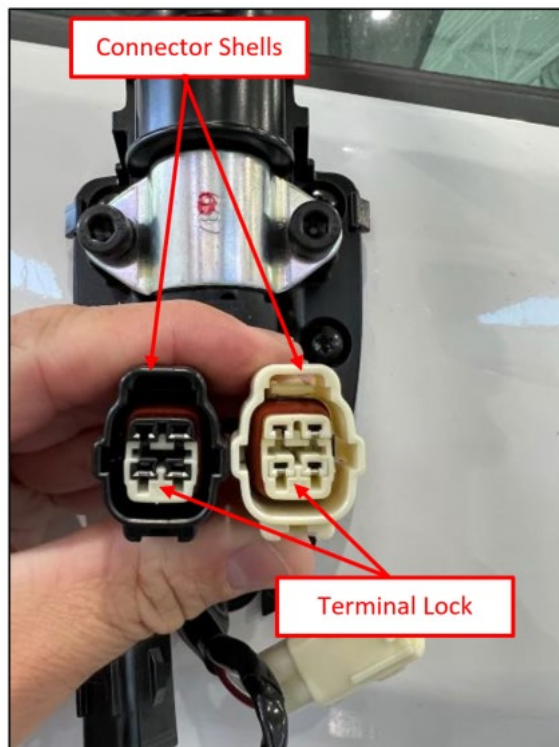
24. Position the mirror stay grommet into the mirror stay.



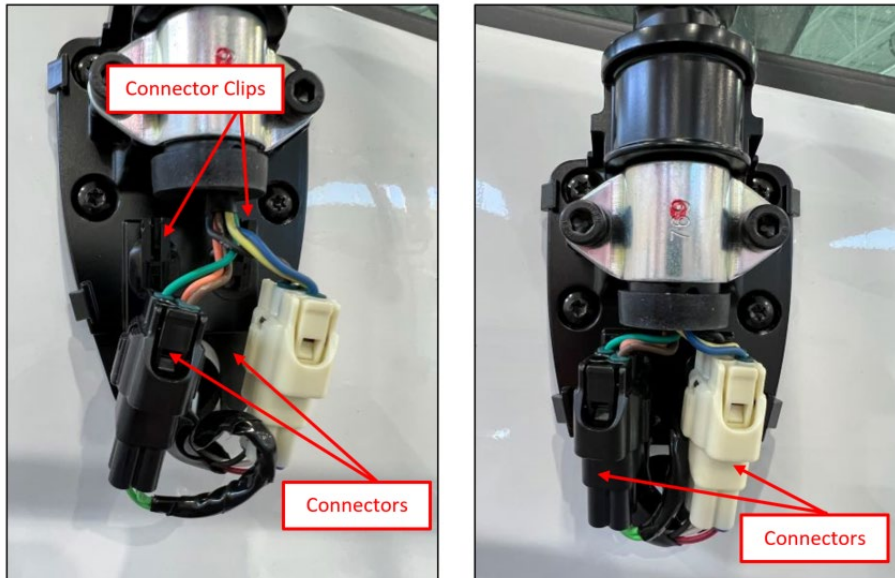
25. Reinstall the terminal pins into the corresponding connector shells. Reference your circuit color and cavity location based on what you recorded previously from step 9 in this publication.



26. Install the terminal lock for each of the (2) connector shells.

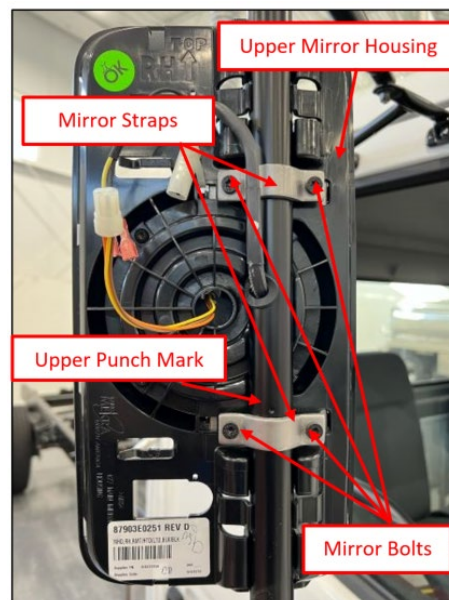


27. Connect (2) connectors and secure in each connector clip.



28. While holding the upper mirror housing, place it up against the mirror stay and confirm that the mirror housing has the word “TOP” positioned on top. Install the (2) mirror straps and (4) bolts. The mirror stay has 2 punch marks, one for aligning the upper mirror housing and one to align the lower mirror housing. Position the upper mirror housing so that the center top surface of the lower strap is 1mm below the upper punch mark of the mirror stay. Equally tighten the right and left bolts for each strap and then torque to the specified torque.

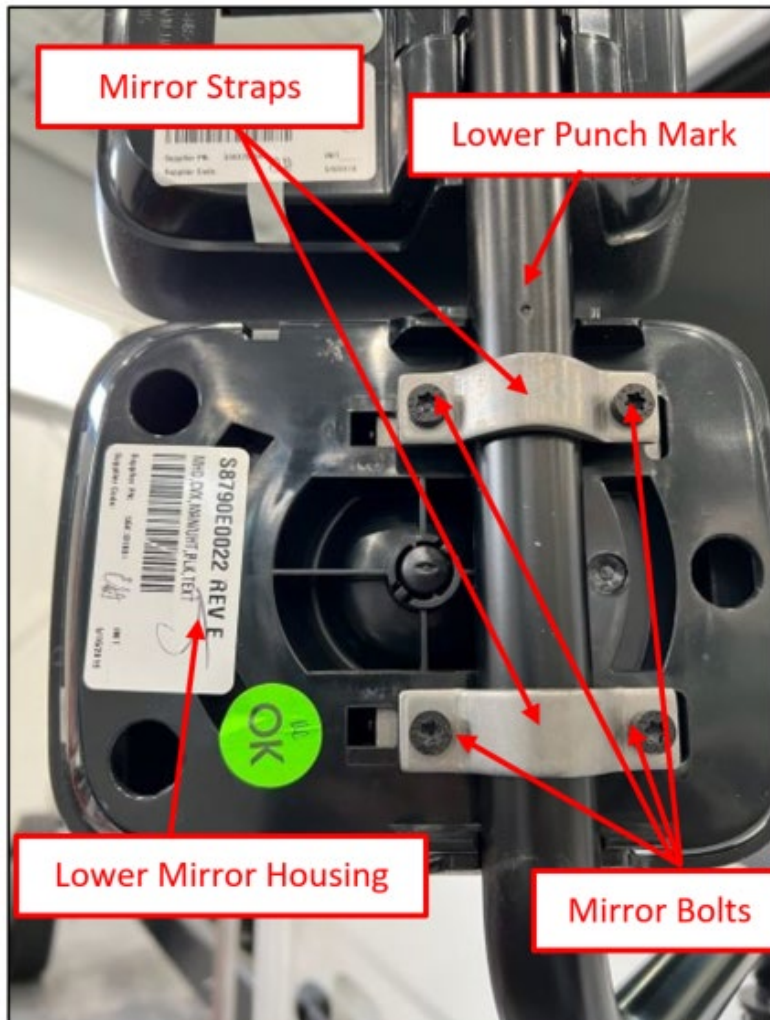
Specified Torque: 61 in/lbs (7.0 Nm)



29. While holding the lower mirror housing, place it up against the mirror stay. Install the (2) mirror straps and (4) bolts. Position the lower mirror housing so that the center top surface of the upper strap is 10mm below the lower punch mark of the mirror stay. Equally tighten the right and left bolts for each strap and then torque to the specified torque.

Specified Torque: 61 in/lbs (7.0 Nm)

NOTICE: Prior to tightening to the specified torque, confirm that the lower mirror housing is visually aligned with the upper mirror housing.

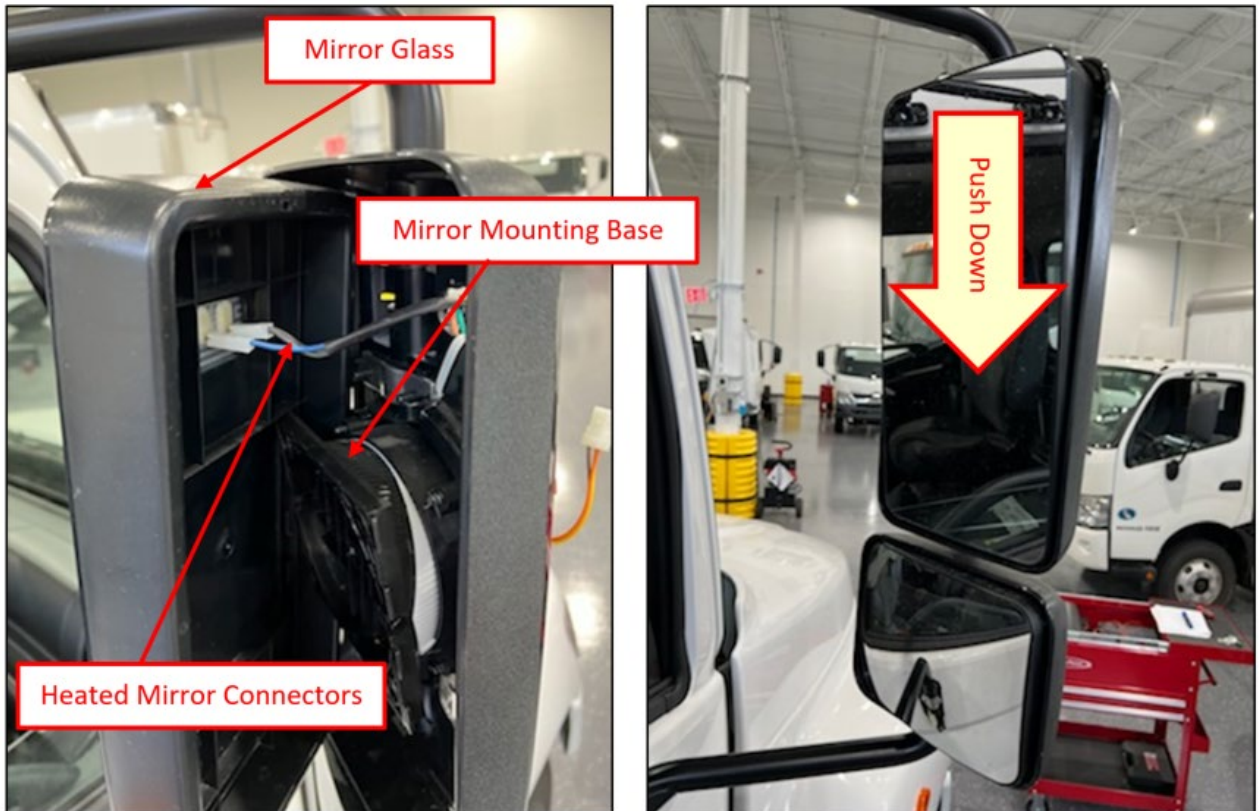


30. Is the vehicle equipped with heated mirrors?

No – Skip step 29 and proceed with step 30.

Yes – Continue with step 29.

Reference your notes taken from step 5 regarding heated mirror wire orientation and then connect the heated mirror connectors to the heated mirror terminals. Position the mirror glass so that it is flush with the mirror mounting base. Starting with the mirror glass in a vertically elevated position from its normal position, apply a downward movement to allow the mirror glass to clip into the mirror mounting base.

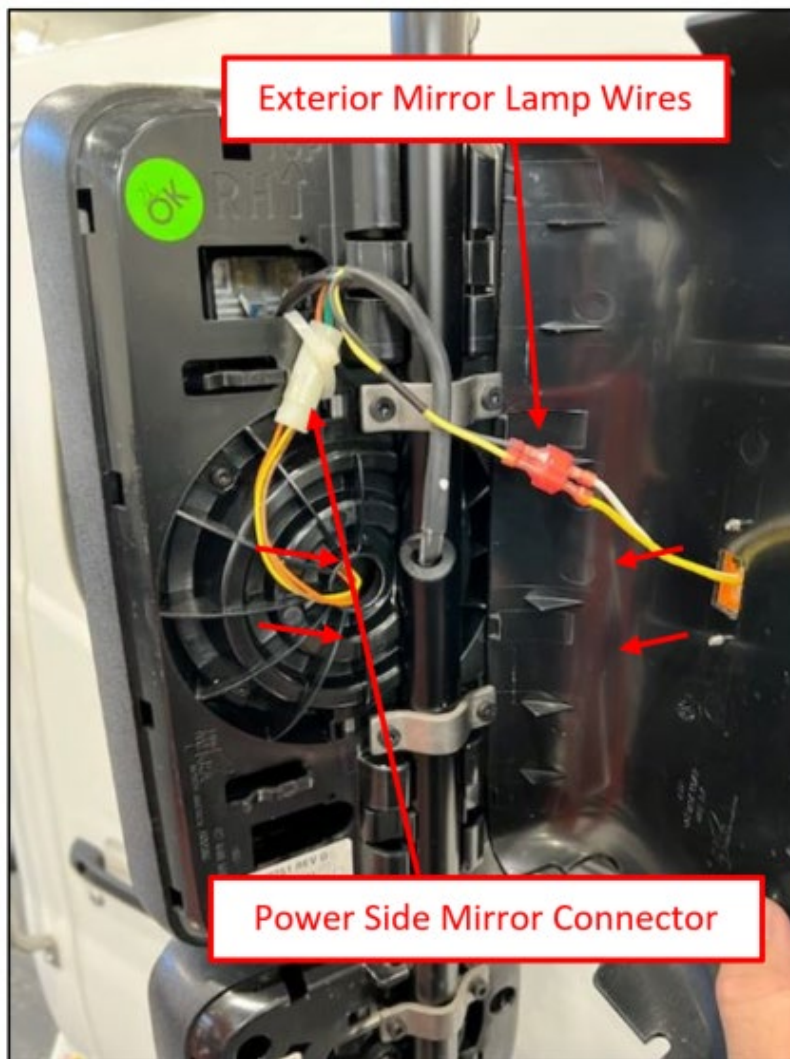


31. Is the vehicle equipped with power side mirrors and/or exterior mirror lamps?

No – Skip step 30 and proceed with step 31.

Yes – Continue with step 30.

Reference your notes taken from step 3 regarding the exterior mirror lamp electrical connections and connect each of the electrical connections. If the vehicle is equipped with power side mirrors, connect the power side mirror connector.



32. Install the upper and lower mirror covers by engaging the (10) retaining tabs.

NOTICE: Care should be taken to prevent damage to the mirror housing and related covers during installation.



33. Install the lower stay cover by engaging the (4) retaining tabs.

NOTICE: Care should be taken to prevent damage to the door paint and lower stay cover.



34. Repeat steps 1 through step 32 for the other exterior side mirror assembly. Once complete, proceed to step 35.



35. This bulletin is complete, proceed to the FINAL INSPECTION PROCEDURE.

FINAL INSPECTION:

1. To complete this technical service bulletin, review the bulletin and confirm the following:
 - If the upper mirror glass was removed, confirm the upper mirror glass was installed and secured correctly.
 - Confirm that the upper and lower mirror assemblies are properly aligned to each other on the mirror stays and do not move independently from the mirror stay.
 - Confirm the upper and lower mirror covers are installed correctly for both the driver side and passenger side mirrors and the 10 retaining tabs are engaged on each side of the vehicle.
 - Confirm the lower stay covers are installed on the driver and passenger side mirrors and the 4 retaining tabs are engaged for each mirror stay.
 - Confirm correct orientation of the large washers, small washers, NORGLIDE washers, lock washers and nuts as outlined in this bulletin.
 - Confirm the upper mirror stay pivot nuts are correctly torqued to the specified torque.
 - Confirm that, as equipped, the following items all function correctly.
 - Power sides mirrors
 - Exterior mirror lamps
 - Heated side mirrors
 - If the door(s) were replaced, confirm:
 - All related parts have been transferred from the old door(s) to the new door(s).
 - All fasteners have been torqued per the online service manual and the doors are aligned properly with the body.



CLAIM APPLICATION

Reimbursable in accordance within the terms and policies of the Hino limited warranties.

Two Exterior Mirror Stay's Replaced:

- a) Labor charge: 1.5hr
- b) Warranty code: 71513
- c) Trouble code: 99
- d) Operation code: 71523ARE
- e) Original failed part: 87093-E0103

One Door Replaced:

- a) Labor charge: 2.1hr
- b) Warranty code: 71310
- c) Trouble code: 51
- d) Operation code: 71315ARE
- e) Original failed part: 87093-E0103

Note: When replacing a door, the cost for any applicable painting should go in the sublet.

Two Doors Replaced:

- a) Labor charge: 4.2hr
- b) Warranty code: 71310
- c) Trouble code: 51
- d) Operation code: 71315ARE
- e) Original failed part: 87093-E0103

Note: When replacing doors, the cost for any applicable painting should go in the sublet.

