

|                     |                  |
|---------------------|------------------|
| REFERENCE:          | Nova Bus Manuals |
| SECTION:            | 01: Body         |
| RS N°:              | MQR 7621-852     |
| EFFECTIVE IN PROD.: | L850 (2015DE)    |

APPLICATION DEADLINE: 2018SE28  
CLAIM REFERENCE NUMBER: WB-3657

|                |                                                                       |
|----------------|-----------------------------------------------------------------------|
| SUBJECT:       | Driver's Road Side Mirror                                             |
| JUSTIFICATION: | Impact on the driver's road side mirror may damage the gelcoat panel. |

| LEVEL | DESCRIPTION                                                  | DIRECT CHARGES |          | TIME  |
|-------|--------------------------------------------------------------|----------------|----------|-------|
|       |                                                              | LABOUR         | MATERIAL |       |
| 1     | Install a stronger support on the driver's road side mirror. | Nova Bus       | Nova Bus | 6 hrs |
| 2     | –                                                            | –              | –        | –     |

**MATERIAL**

| QTY            | PART N°   | REV. | DESCRIPTION                    | REPLACES PART N° |
|----------------|-----------|------|--------------------------------|------------------|
| <b>LEVEL 1</b> |           |      |                                |                  |
| 1              | N83240    | –    | BRACKET STRUCTURE MIR.LH       | –                |
| 3              | N83320    | –    | SPACER STRUCTURE MIR.LH        | –                |
| 3              | N82301    | –    | SCREW M10X40 CAP HEX           | –                |
| 3              | N44892    | –    | NUT LOCKNYL M10 FL SS          | –                |
| 1              | N25262    | –    | SCREW M10 X 70 HEX SOCK.       | –                |
| 2              | N84630    | –    | SCREW M10X80 CAP SOC LOW HD SS | –                |
| 6              | N16645    | –    | WASHER FLAT M10 SS             | –                |
| 7 7/8 in       | N28083-03 | –    | FSlit convoluted tubing        | –                |
| 1              | N84119    | –    | SUPPORT MIRROR LH ASSY.        | –                |
| 1              | N78517    | –    | Mirror Gasket                  | –                |
| 1              | N78511    | –    | GASKET                         | –                |
| 1              | N85280    | –    | Mirror dove tail               | –                |
| 3              | N83351    | –    | BUSHING                        | –                |
| 3              | N20726    | –    | WASHER M10 OVERSIZE YP         | –                |
| 1              | N16914    | –    | Rivnut M6 cyl YP               | –                |
| 1              | N90195    | –    | PLUG PLASTIC 1-3/4"DIA BLK     | –                |
| <b>LEVEL 2</b> |           |      |                                |                  |
| –              | –         | –    | –                              | –                |

Materials will be available within 42 days. To order, please contact Prevost Parts by phone at 1-800-771-6682, by fax at 1-888-668-2555 or by email at [prevostparts.commandes@volvo.com](mailto:prevostparts.commandes@volvo.com). Specify document number, quantity of parts required and shipping address.

## SPECIAL TOOLS/JIGS KIT

| QTY            | PART N° | REV. | DESCRIPTION                     | REPLACES PART N° |
|----------------|---------|------|---------------------------------|------------------|
| <b>LEVEL 1</b> |         |      |                                 |                  |
| 1              | N84095  | –    | TOOL HOLCUTTER 7/8"             | –                |
| 1              | N84097  | –    | TOOL HOLCUTTER 1-1/16"          | –                |
| 1              | N83237  | –    | 1/4" DRILL BIT                  | –                |
| 1              | N83971  | –    | BUSHING FOR CUTSAW              | –                |
| 1              | N83244  | –    | JIG DRILL STRUCTURE MIR.LH LUC  | –                |
| 1              | N83964  | –    | JIG DRILL EXT. MIR.LH.LUC.      | –                |
| 3              | N82303  | –    | ROD M10X1.5 X 150MM SS DIN 976  | –                |
| 6              | N16648  | –    | NUT STD M10 SS CL70 D934        | –                |
| 2              | N11165  | –    | BOLT M8 X 60 YP GR8.8 DIN 931   | –                |
| 3              | N20726  | –    | WASHER M10 OVERSIZE YP DIN 9021 | –                |
| <b>LEVEL 2</b> |         |      |                                 |                  |
| –              | –       | –    | –                               | –                |

Material will be available through your Nova Bus service representative. The above parts list is for 1 Kit only. This campaign include a total of 6 Kits to meet the requirement for 187 vehicles.

## DISPOSAL OF PARTS

| REMOVED PARTS ARE: | DISCARDED * | RETAINED | * Dispose of the unused parts and the defective parts in accordance with local environmental standards in effect. |
|--------------------|-------------|----------|-------------------------------------------------------------------------------------------------------------------|
|                    | Yes         | –        |                                                                                                                   |

## REVISION HISTORY

| REV. | DATE     | CHANGE DESCRIPTION          | WRITTEN BY      |
|------|----------|-----------------------------|-----------------|
| NR   | 2016AL29 | Initial release             | Luc carignan    |
| R1   | 2017JL19 | Revised the procedure lines | Kumaraswamy K S |

APPROVED BY:

| CLIENT                           | ORDER | ROAD NUMBER |      | VIN (2NVY/4RKY...) |               | QTY |
|----------------------------------|-------|-------------|------|--------------------|---------------|-----|
|                                  |       | FROM        | TO   | FROM               | TO            |     |
| New York City Transit - New York | L841  | 8094        | 8175 | L82J2F4500959      | L82J2F4501075 | 82  |
| New York City Transit - New York | L842  | 8090        | 8213 | L82J4F4501076      | L82J7F4501170 | 86  |
| New York City Transit - New York | L843  | 8214        | 8230 | L82J9F4501171      | L82J1F4501195 | 17  |
| New York City Transit - New York | L843  | 8135        | 8136 | L82J5F4501197      | L82J7F4501198 | 2   |

**WARNING**

Follow your internal safety procedures.

**PROCEDURE**

- 1.1. Park the vehicle on an even surface with transmission in neutral (N) and apply the parking brake.
- 1.2. Set the Master control switch in the STOP position (see Figure 1).

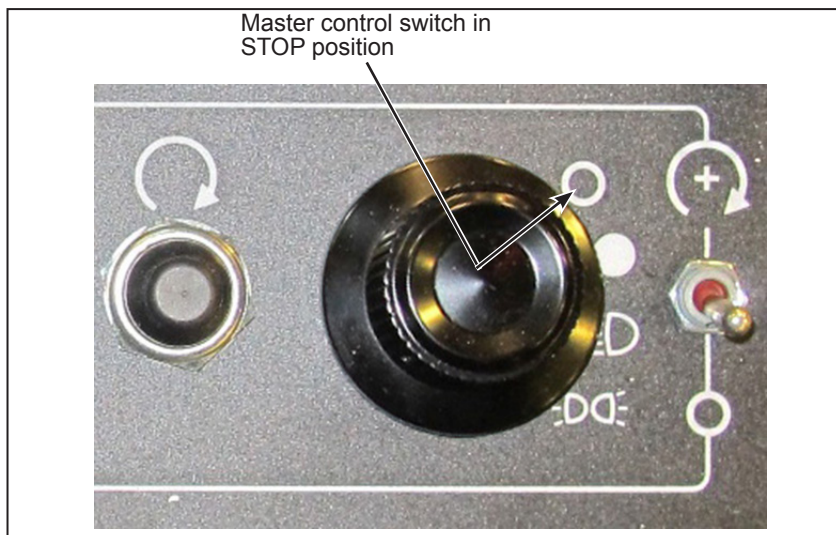


Figure 1 - Master Control Switch in STOP Position

**WARNING**

Before starting any work on the vehicle, make sure the vehicle is completely and securely stationary.

- 1.3. Open the battery compartment access door and turn the battery disconnect switch to the OFF position (see Figure 2).

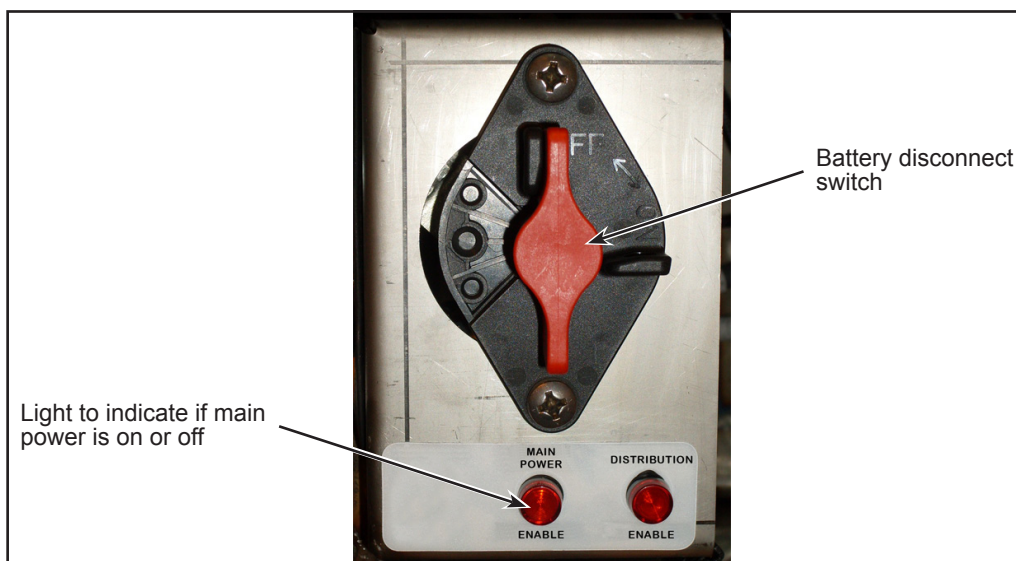


Figure 2 - Typical Battery Disconnect Switch

- 1.4. Remove and retain the driver's road side mirror assembly. (see Figure 3).

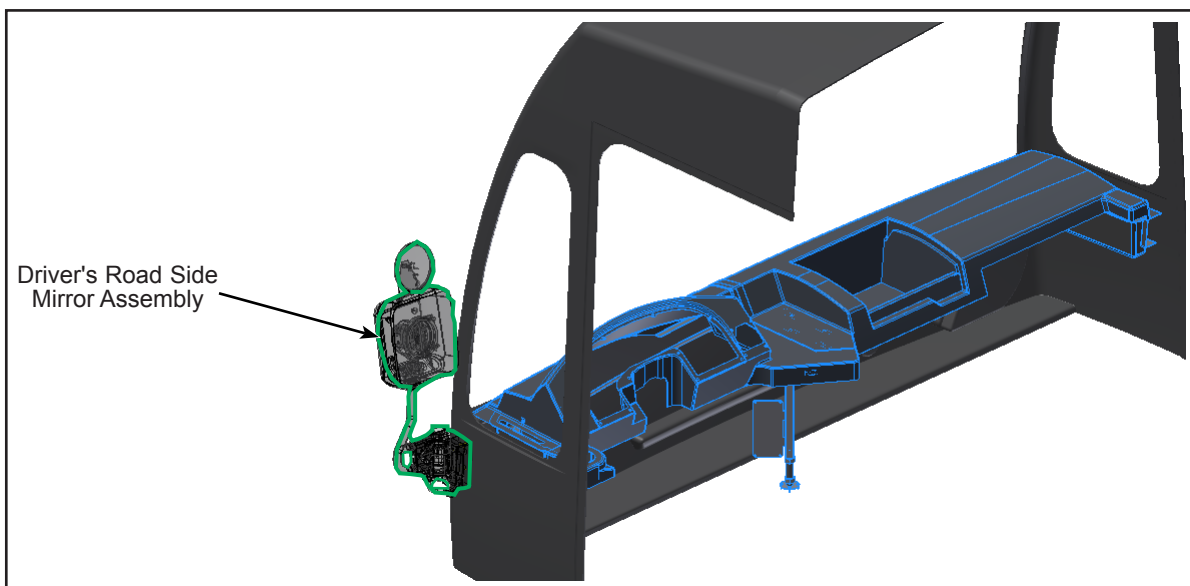


Figure 3 - Typical Mirror Assembly Location



**NOTE**

It is recommended to remove driver's seat not the dashboard. See SECTION 12-610.608 : SEATS (DRIVER & PASSENGERS) supplied by Nova Bus before removal of Driver's Seat.

Check to ensure that speak easy wire is secured.

- 1.5. Remove coolant pipe support, might require relocation of the rivnut depending on cutout and tolerance (See Figure 4).

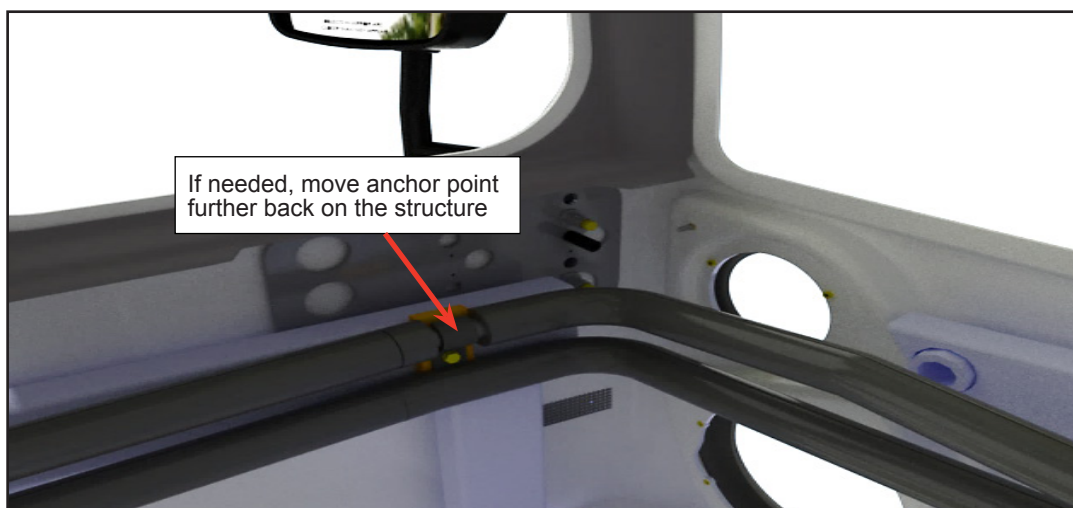


Figure 4 - Coolant Pipe Support Location

- 1.6. Remove rivnuts and discard (see Figure 5).

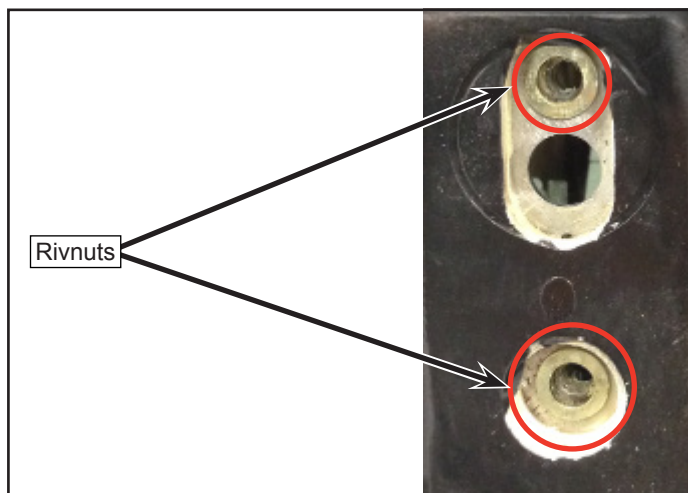


Figure 5 - Location of Rivnuts



#### CAUTION

Do not damage metal plate while removing rivnuts.

- 1.7. Place bushing N83971 inside the hole (see Figure 6).

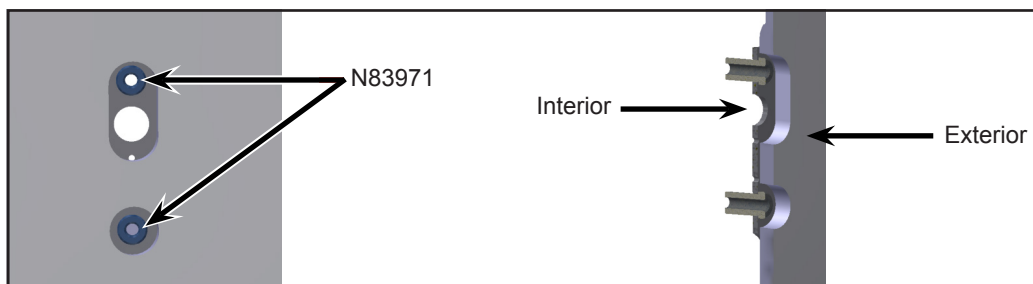


Figure 6 - Bushing Location with Interior and Exterior View

- 1.8. Drill holes using jig tool N84097 from the exterior through the fiberglass and the metal plate (see Figure 7).

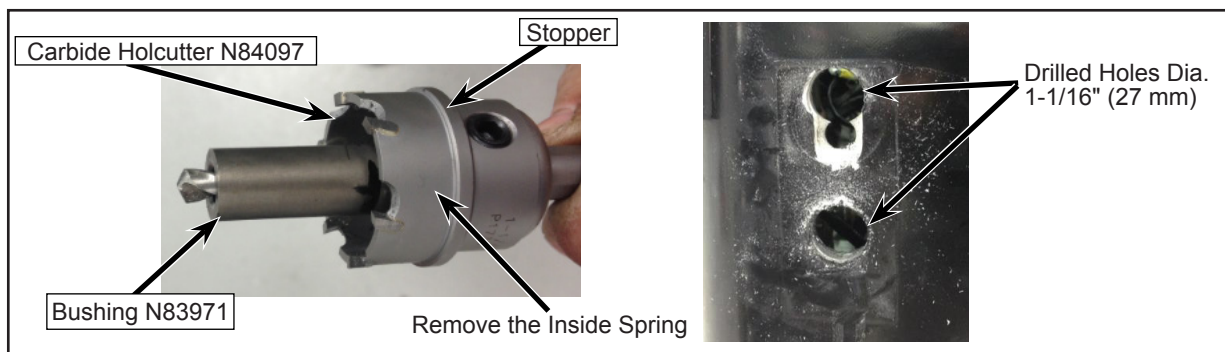


Figure 7 - View of Holes using Jig Tool Kit

- 1.8.1. Enlarge the existing top two holes to form a slot and debur the lower slot edges (see Figure 8).

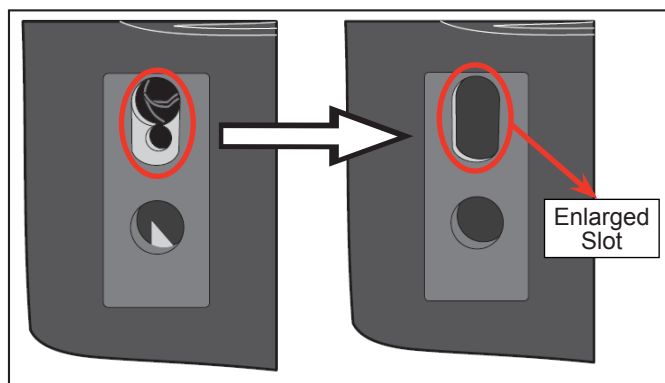


Figure 8 - Creation of Slot

- 1.9. Place exterior jig N83964 align to the two existing holes and trace contour with a marker. Remove and retain the N83964 and N83971 (see Figure 9).

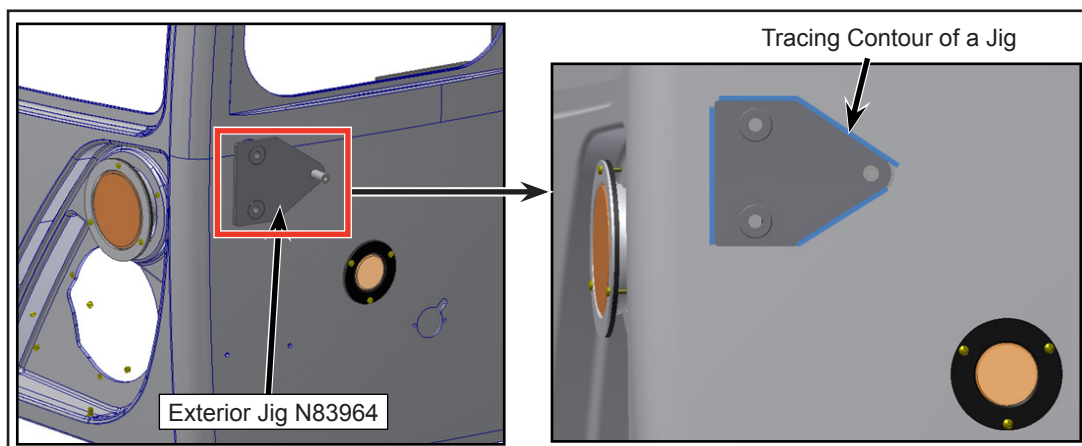


Figure 9 - Typical View of Tracing Contour

- 1.10. Drill a hole using tool N83237 and enlarge the slot using the N84097 tool holcutter. (see Figure 10).

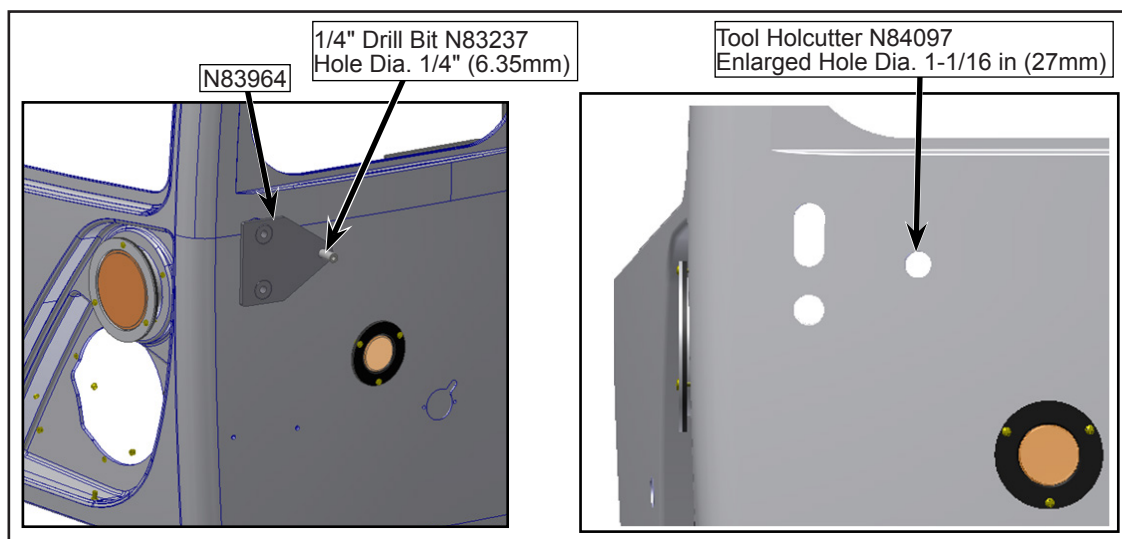


Figure 10 - Drilling Holes to Respective Diameters

- 1.11. Place LH mirror support assembly N84119, aligning with the contour traced and retain (see Figure 11).
- 1.12. Check that all the bushings protrude the fiberglass equally.

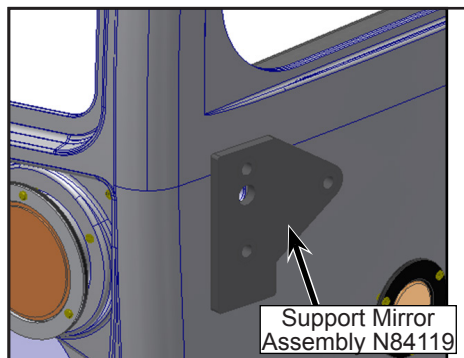


Figure 11 - Support Mirror Assembly alignment to Contour

- 1.13. Place exterior jig N83964 and insert threaded rod N82303 with nuts N16648 and washers N20726 (see Figure 12).

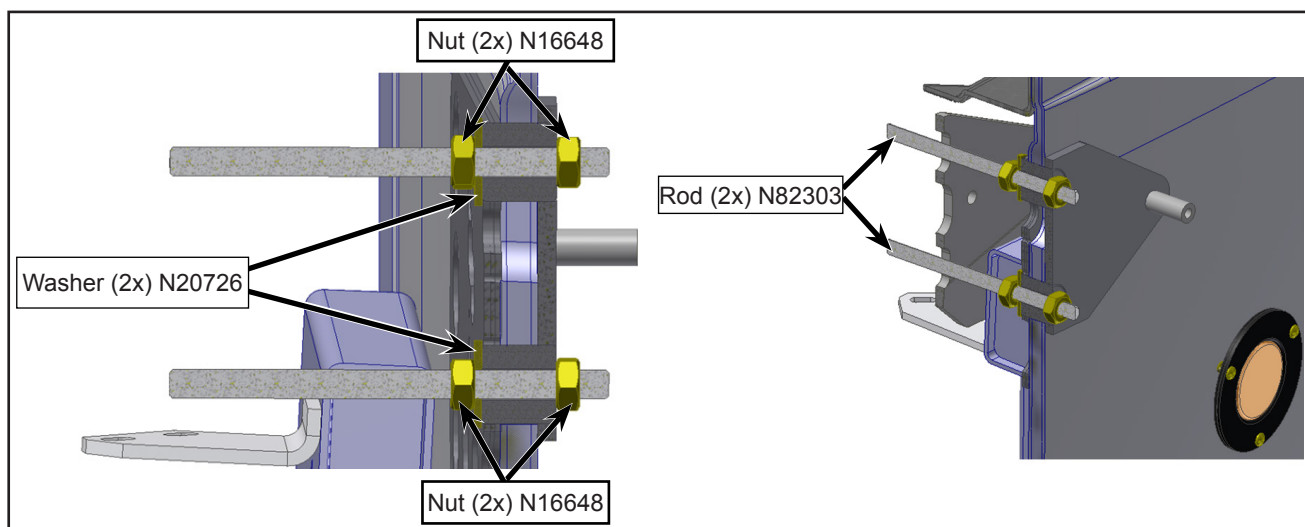


Figure 12 - Sectional View of Jig Kits

- 1.14. Insert interior jig N83244 (see Figure 13).

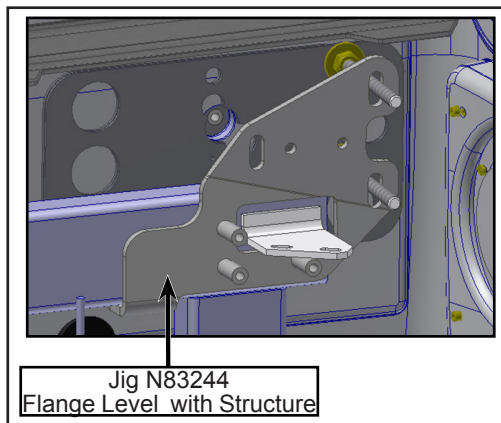


Figure 13 - Location of Interior Jig

- 1.15. Drill (3x) holes using drill bit N83237 through both walls of the tube (see Figure 14).

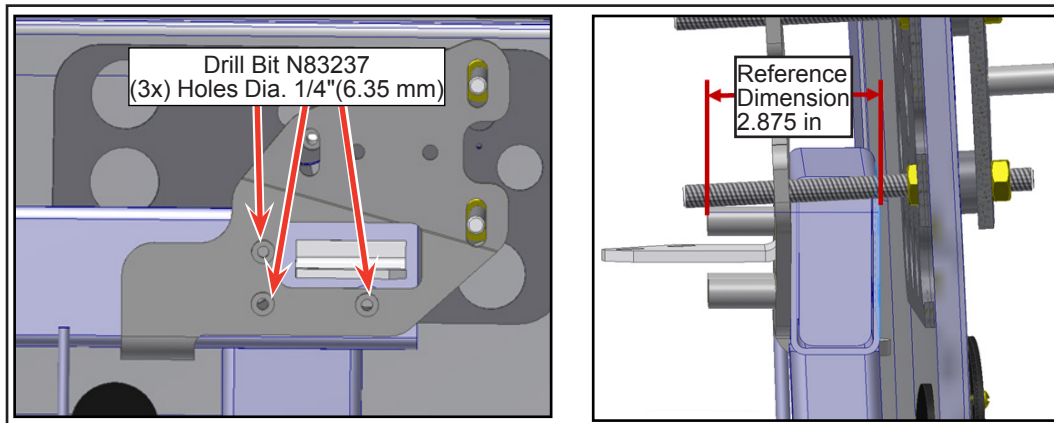


Figure 14 - Location of Drilled Holes through tube



**NOTE**

Drill bit N83237 should be blocked to a depth of 3" (76.2 mm) by a stopper.

- 1.16. Remove exterior jig N83964 with N82303, N16648 and N20726 and retain.
- 1.17. Enlarge the existing holes (3x) 1/4" (6.35 mm) to 7/8" (22.3 mm) using carbide holcutter N84095 only on the first wall of the structure (see Figure 15).

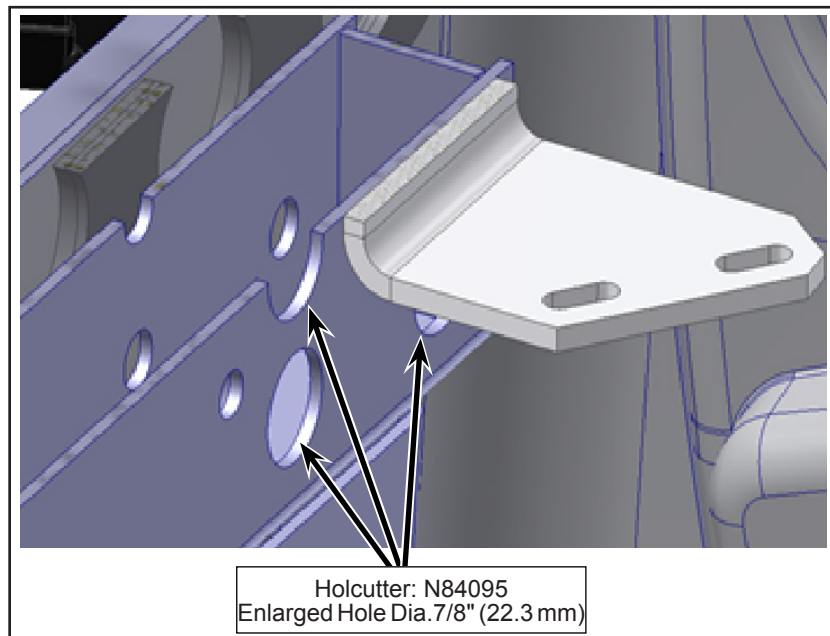


Figure 15 - Typical View of Enlarged Holes on the First Wall Structure

- 1.18. Enlarge existing (3x 1/4") holes in far side of the tube to 1/2" or 12mm dia using 1/2" or 12mm drill bit (see Figure 16). The use of bushing N83320 is permissible in order to ensure proper alignment.

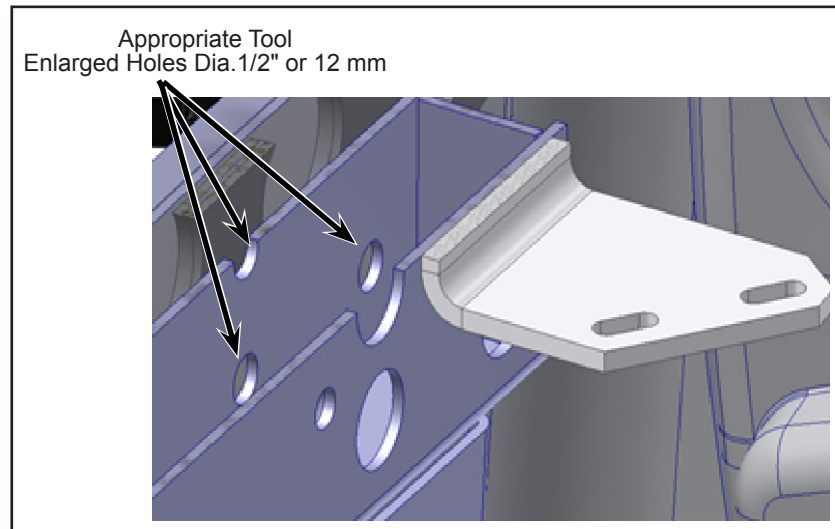


*Figure 16 - Typical View of Enlarged Holes on the Tube*

- 1.19. Place N83240 bracket structure on the coolant piping support bracket (see Figure 17).

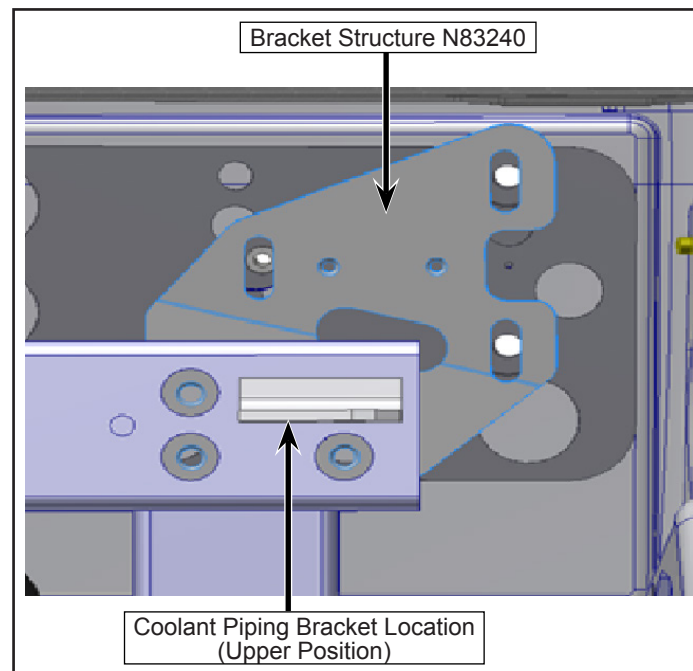


*Figure 17 - Location of Bracket Structure N83240*

- 1.20. Place LH mirror support assembly N84119 and insert threaded rod (3x) N82303 with nut (3x) N16648 (see Figure 18).
- 1.21. Locate the bracket with the help of a tool (see Figure 18).

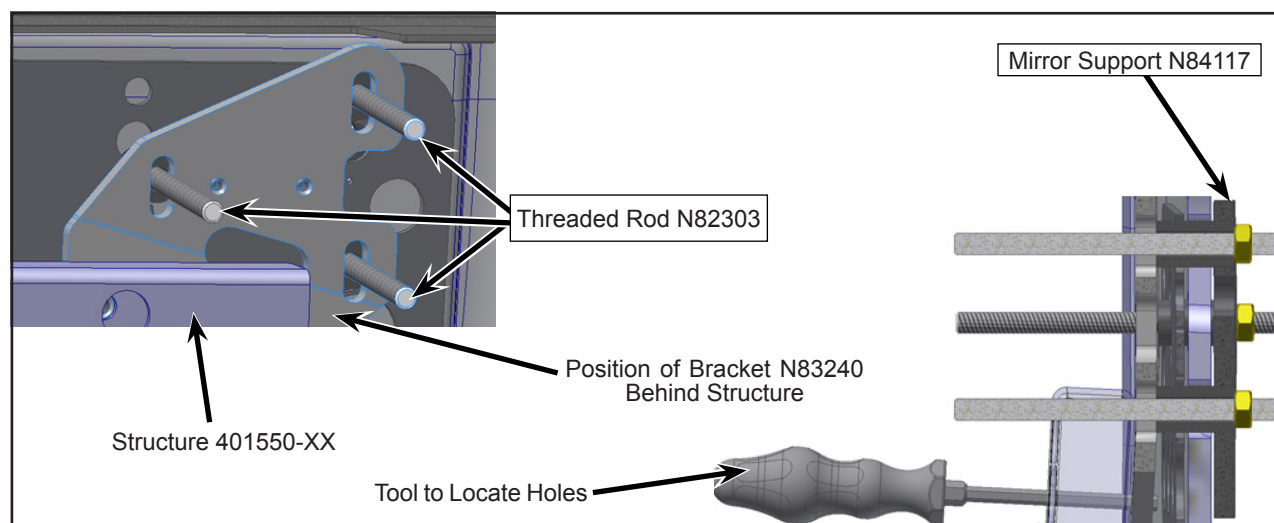


Figure 18 - Location of Tools and Jig Kit on the Structure



### CAUTION

**Do not damage threads of LH mirror support assembly N84117.**

- 1.22. Apply thread locker to screws (3x) N82301. Install bushings (3x) N83320 and torque as shown (see Figure 19).

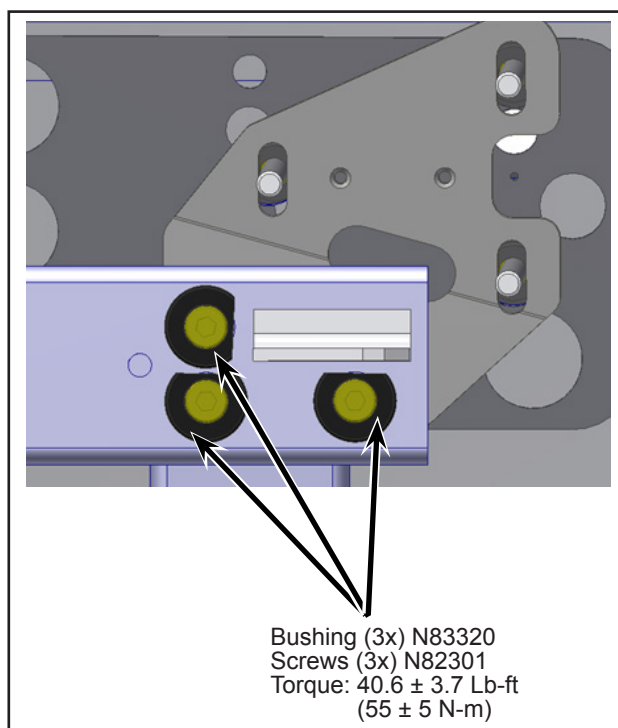


Figure 19 - Installation of Bushings and Screws

**NOTE**

Remove and retain tools and jig kits after installation of bushings.

- 1.23. Install nuts N16648 (3x). Validate contact between bushings and bracket. Measure gap (Gap MIN 0.12" (3mm) / MAX 0.19" (5mm) when bracket N84117 is in place and held with rods) (see Figure 20).

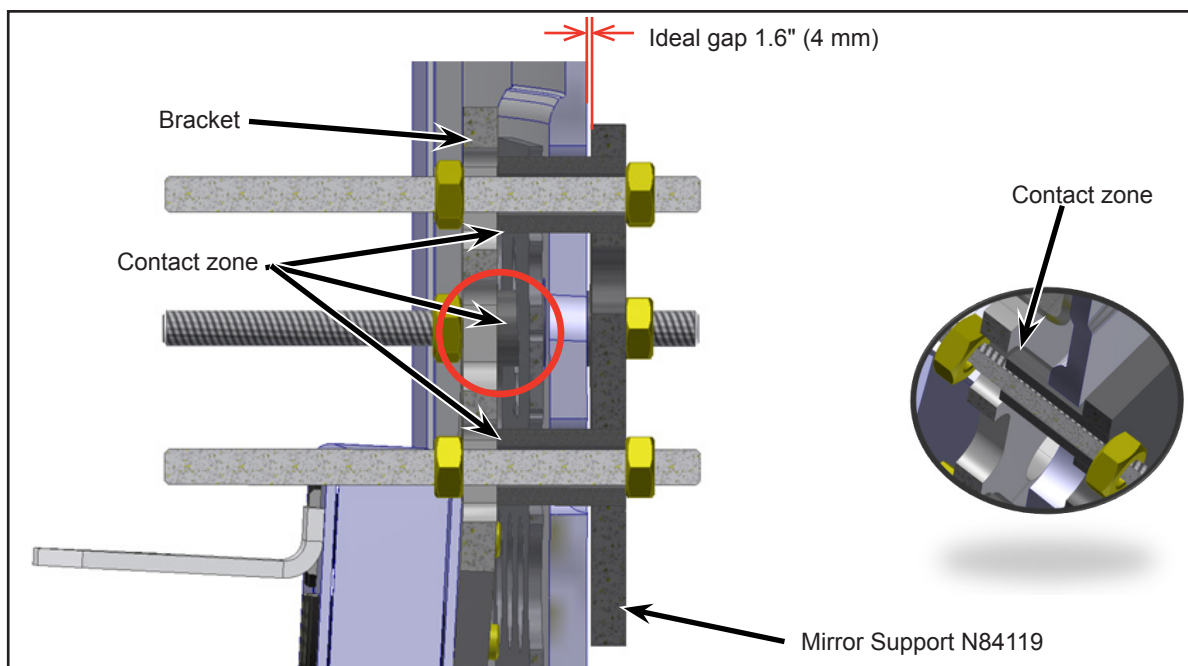


*Figure 20 - Ideal Gap Measurement Between Bushings and Support Mirror*

- 1.24. Measure gap between the fiberglass and bracket all around the perimeter. Add spacers if gap is less than 0.08" (2 mm).

- 1.25. Insert one of the following: Washers N16645 (2 mm) or Bushings N83351 (4 mm) at contact zone to achieve an ideal gap of 4mm (+/-1mm), typically in the three locations shown (see Figure 21).

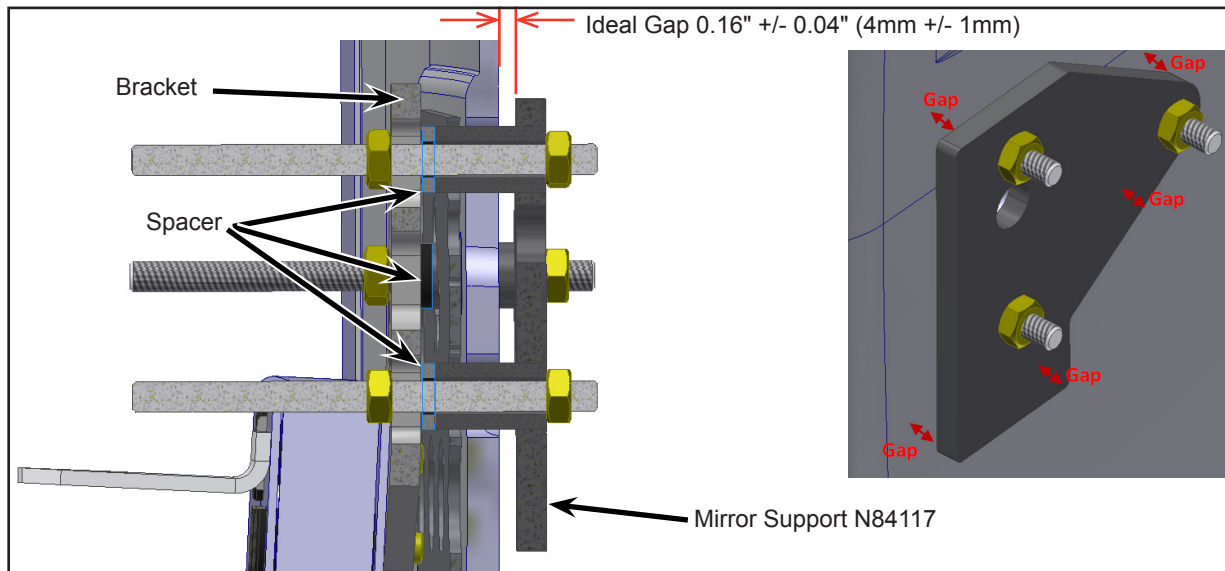


Figure 21 - Ideal Gap Measurement Between Fiberglass and Mirror Support



#### NOTE

Only one size of spacing item may be used in all three locations to ensure proper surface contact.

Gap may vary since fiberglass is contoured, therefore a gap of 3 mm to 5 mm is acceptable in any of the three locations.

Use Loctite or equivalent to hold spacers to bushings and secure the bracket structure N83240.

- 1.26. Apply Butyl 757 sealant or equivalent to both faces of gasket N78511 as shown (see Figure 22).

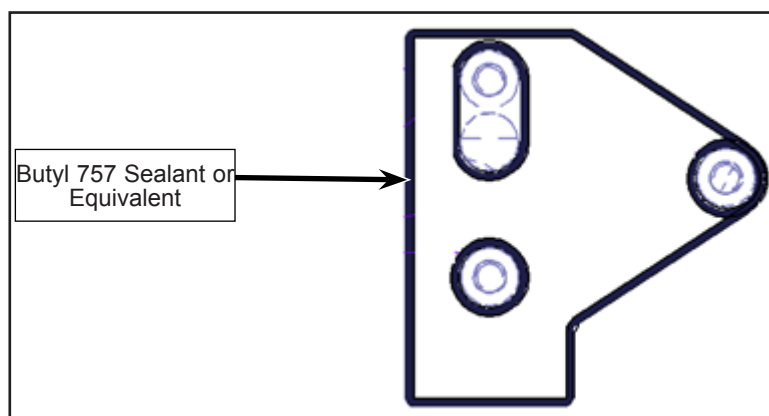


Figure 22 - Application of Sealant to Gasket

- 1.27. Install gasket N78511 on the gelcoat exterior and align with existing contour (see Figure 23).

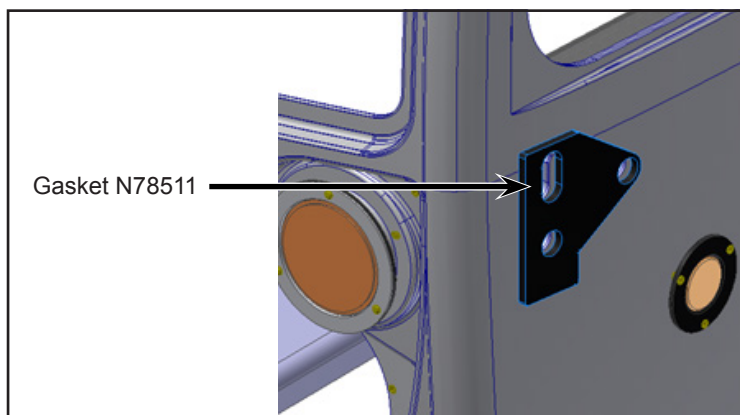


*Figure 23 - Installation of Gasket*

- 1.28. Install LH mirror support assembly N84117 onto the gasket (see Figure 24).

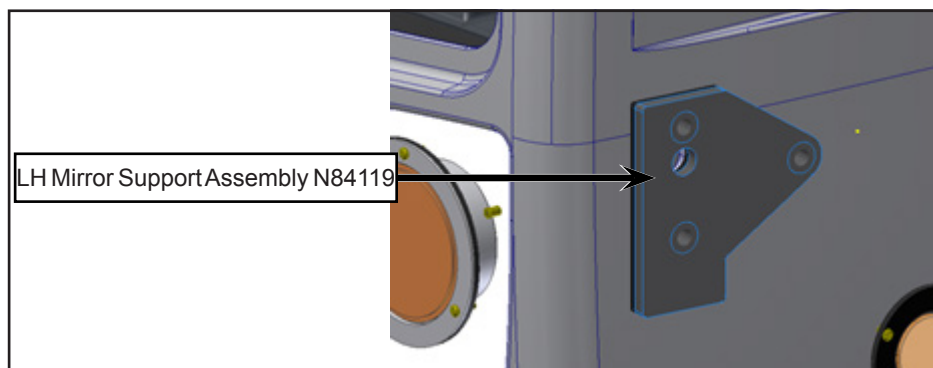


*Figure 24 - Installation of N84119*

- 1.29. Install gasket N78517 on N84119. No sealant is required (see Figure 25).

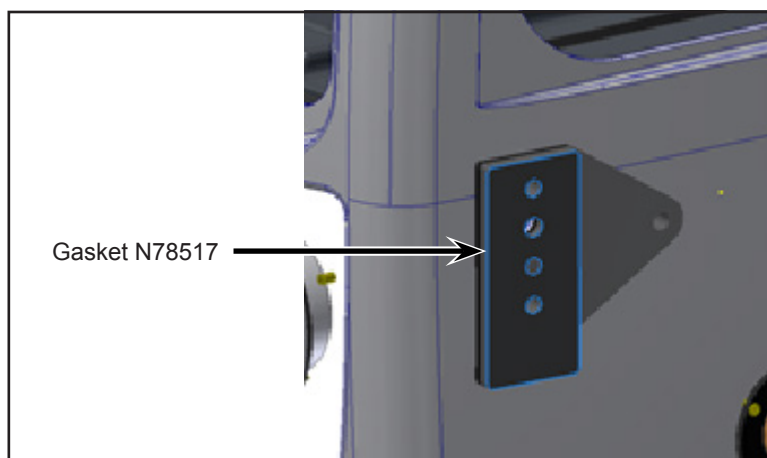


*Figure 25 - Installation of Gasket*

- 1.30. Install N85280 dovetail from retained mirror (see Figure 26).

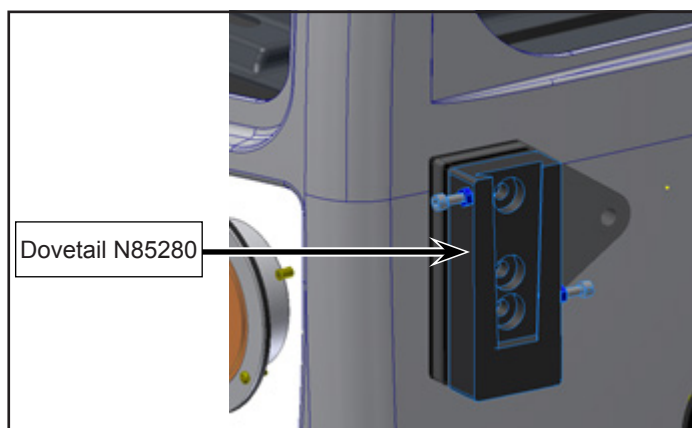


Figure 26 - Installation of Dovetail

- 1.31. Install following hardware and torque as shown (see Figure 27).

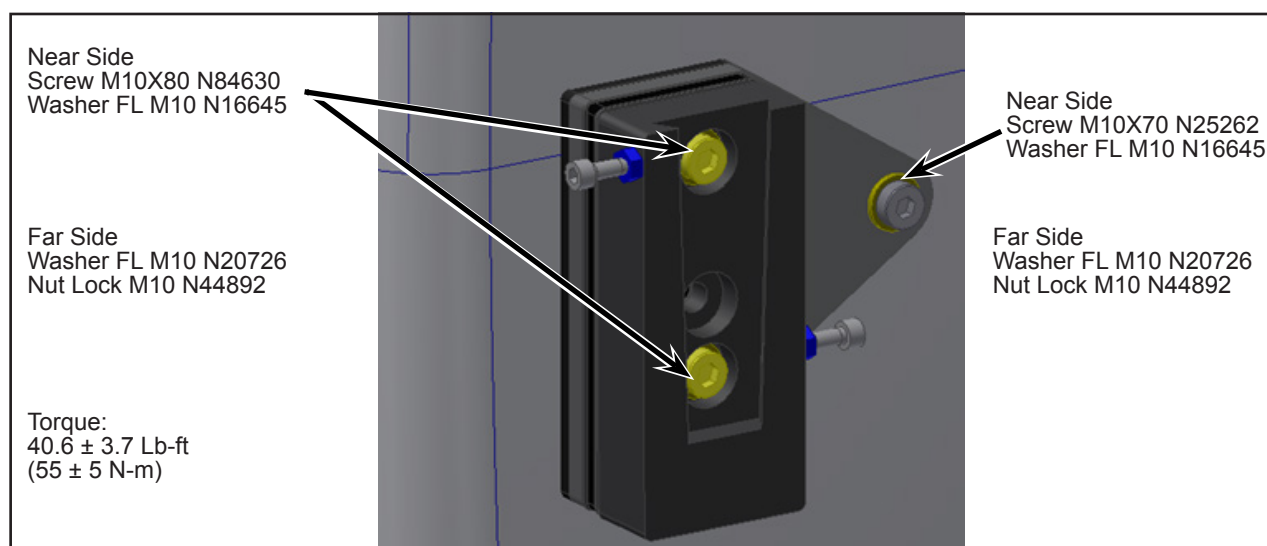


Figure 27 - Installation of Hardware



**NOTE**

Apply torque seal on all the torqued hardware.

- 1.32. Install original mirror onto dovetail. Typical location of dovetail is shown (see Figure 28).

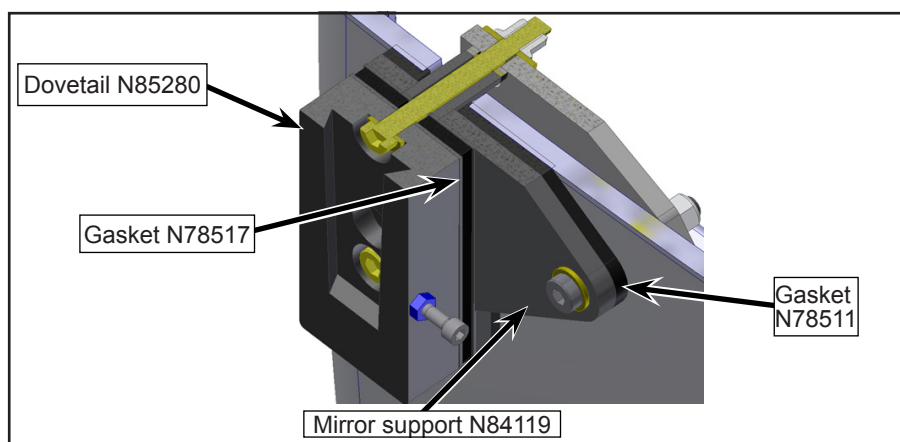


Figure 28 - Typical Location of Dovetail

- 1.33. Reinstall the retained driver's road side mirror assembly (see Figure 29).



Figure 29 - Installation of Driver's Road Side Mirror Assembly

- 1.34. Relocation of hole for speak easy wiring is explained in the subsequent steps.  
1.34.1. Install the plug (N90195) to cover the hole, which was previously used for speak easy wiring (see Figure 30).

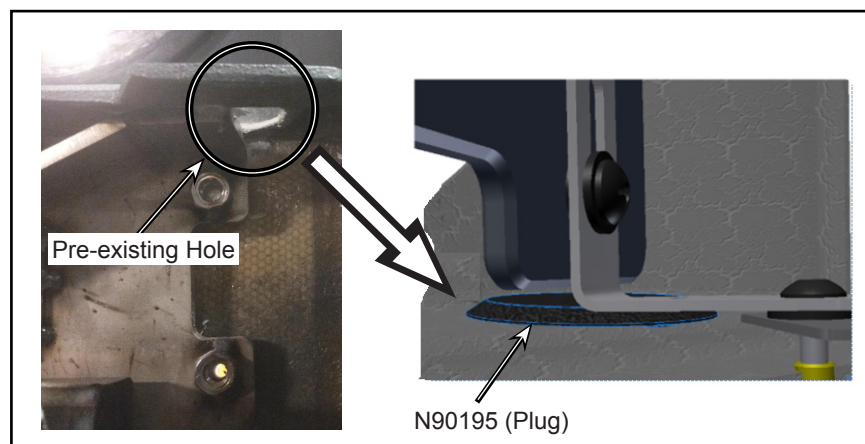


Figure 30 - Location of Pre-existing Hole for Speak Easy Wire

- 1.34.2. Mark the hole position on the forward left corner of the dashboard (see Figure 31).
- 1.34.3. Drill a new hole of 45 mm on the marked position using 45 mm hole saw drill and clean the inner surface(see Figure 31).

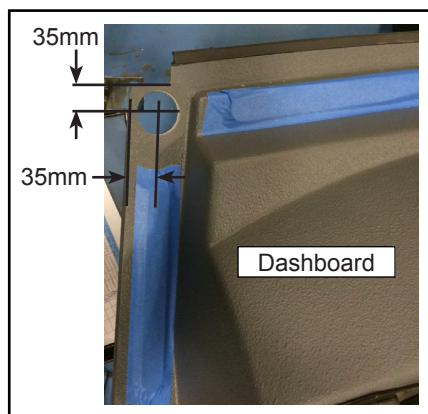


Figure 31 - Position of New Drilled Hole

- 1.34.4. Remove the existing screw on the left side most forward that holds down the dash and use it to hold the glare shield and the plate that covers the new hole and holds the wire in place (see Figure 32).



Figure 32 - Installation of Glare Shield and Plate that Covers the New Hole

- 1.35. Check for coolant leaks under the driver's window, dashboard and heater core areas.

- 1.36. Reinstall coolant pipe assembly and replace tie mounts N57807 if required (see Figure 33).

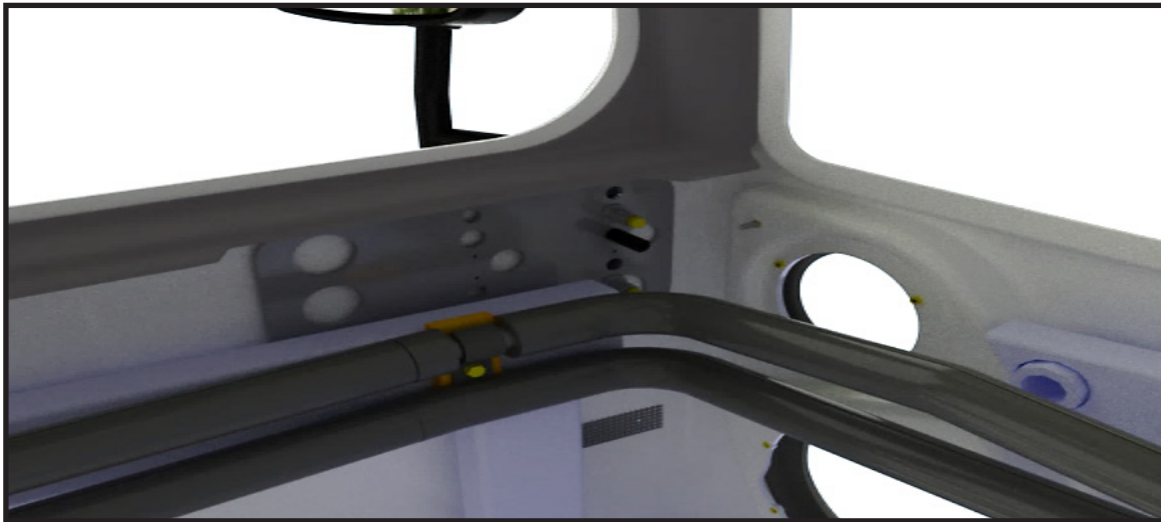


*Figure 33 - Coolant Pipe Installed*



**NOTE**

**Reinstall the retained driver's seat. See SECTION 12-610.608 : SEATS (DRIVER & PASSENGERS) supplied by Nova Bus before installation of Driver's Seat.**

- 1.37. Set the battery disconnect switch in the battery compartment to the ON position.  
1.38. Place the Master control switch in ON position.  
1.39. Road test of the vehicle.  
1.40. The vehicle may be returned to service.❖