



## SERVICE BULLETIN No.1156A

Circulate to listed addressees

<b>COACH MODEL</b>	: C2045 "Enhanced"
<b>BULLETIN TYPE</b>	: Field Change Program
<b>MANUAL SECTION</b>	: Chapter 11 - Body and accessories
<b>DATE</b>	: December 6, 2005
<b>SUBJECT</b>	: <b>Seamless type passenger window conversion</b>
<b>TERMS &amp; CONDITION</b>	: Refer to the Warranty Information in this Bulletin.

**THIS SERVICE BULLETIN SUPERSEDES VAN HOOL SERVICE BULLETIN #1156**

### **APPLICATION:**

1. Units eligible for this Field Change Program have been listed on page ... of this Bulletin. Procedure application charts per VIN have also been included.
2. Refer also to the on coach procedure application on page ....

### **DESCRIPTION:**

1. Passenger comfort has been further enhanced by addressing coach interior noise. To this end the passenger window installation has been revised and a number of changes have been introduced on newly manufactured coaches.  
VIN cut-in for this product improvement is:  
  
units with Cummins engine: #46047 →  
units with Detroit Diesel engine: #46673 →  
units with Caterpillar engine: 47061, and 47179 →
2. The purpose of this Bulletin is to provide customers with the information necessary to convert the field coaches listed in the application charts on page ... in order for them to comply with the new specifications.

*Description continued on next page.*

*Service personnel: please read, initial and circulate.*

<b>Service Manager</b>	<b>Parts Manager</b>	<b>Warranty Administrator</b>	<b>Workshop Foreman</b>	<b>Service Technician</b>

# Draft document - For review only - Do not distribute

Continued from page 1.

## 3. Following modifications are required to complete the conversion:

To address passenger window noise:

- Cover the hinges with fabric  
(all windows, if required → see procedure, part 8.1).
- Install guides between the window posts and the window frame  
(Cummins and Detroit Diesel units: all windows, Caterpillar units: fix-on-fail → see procedure, part 8.2).
- Install two hard rubber inserts into the window bottom seal molding  
(fixed and opening windows, if required → see procedure, part 8.3).
- Reduce the number of windows, which can be opened with an emergency handle, from six *per side* to four *per side* (see Figure 14).

**NOTE:** *As a preventive measure the passenger windows remaining operational on the coaches mentioned should have the emergency exit handles checked for pulling force after the jobs have been completed.*

*If the force required to pull this handle exceeds 20lbf (90 N), the window on which they are installed, should have new outer seals fitted.*

## 4. Should window trim molding noise occur, after the modifications have been introduced, reference can be made to the attachment to this Bulletin, which contains pointers to deal with this particular issue.

**NOTE:** *If you do not have the expertise to perform the procedures in this Bulletin, do not hesitate to go to your nearest ABC Customer Care & Parts Source dealership.*

**CONTENTS:**

<b>Section</b>		<b>Page</b>
Application		x
Description		x
Parts and products		x
Procedure:	<p>Part 1. General</p> <p>Part 2. Special tools, equipment or services</p> <p>Part 3. Preparations</p> <p>Part 4. On coach procedure application</p> <p>Part 5. To open an A-type window</p> <p>Part 6. To open a B-type window</p> <p>Part 7. To remove old window spacers (A-type window only)</p> <p>Part 8. To address passenger window hinge noise</p> <p>8.1 To cover the hinges with fabric</p> <p>8.2 To install guides between the window posts and the window frame</p> <p>8.3 To install hard rubber inserts in the window bottom seal molding</p> <p>Part 9. To check window catch installation</p> <p>9.1 To check window catch position</p> <p>9.2 To adjust window catch position</p> <p>Part 10. To remove the emergency handle</p> <p>Part 11. To check the emergency handle pulling force</p> <p>Part 12. To install new outer passenger window seals</p>	x
Disclaimer		x
Service information		x
Warranty information		x
Noise caused by interior trim moldings		x

# Draft document - For review only - Do not distribute

## APPLICATION:

Procedure:	Job	VIN
Part 1	General	All
Part 2	Special tools, equipment or services	All
Part 3	Preparations	All
Part 4	Procedure application	As required
Part 5	To open an A-type window	As required (not 45981)
Part 6	To open a B-type window	As required
Part 7	To remove old window spacers (A-type window only)	If installed
Part 8.1	To cover the hinges with fabric	See separate chart
Part 8.2	To install guides between the window posts and the window frame	See separate chart
Part 8.3	To install hard rubber inserts in the window bottom seal molding	As required
Part 9.1	To check window catch position	See separate chart
Part 9.2	To adjust window catch position	See separate chart
Part 10	To remove the emergency handle	See separate chart
Part 11	To check the emergency handle pulling force	When job complete
Part 12	To install new outer passenger window seals	As required

Model	Engine	VIN (Summary affected units)
C2045	Cummins	45440, 45441 → 45443, 45445 → 45446, 45449, 45452 → 45453, 45455 → 45500, 46001 → 46014, 46016 → 46017, 46019 → 46020, 46022 → 46037, 46039 → 46042, 46046
	Detroit Diesel	45930 → 45934, 45955 → 45979, 45981, 45983, 45985 → 45991, 46502 → 46503, 46505, 46508 → 46509, 46512, 46514, 46517, 46522 → 46541, 46543 → 46626, 46628 → 46659, 46661 → 4669, 46671 → 46672
	Caterpillar	47001 → 47141, 47143 → 47178

Model	Engine	VIN Procedure part 8.1 (To cover the hinges with fabric)
C2045	Cummins	45440, 45441 → 45443, 45445 → 45446, 45449, 45452 → 45453, 45455
	Detroit Diesel	45930 → 45934, 45955 → 45979, 45981, 45983, 45985 → 45991, 46502 → 46503, 46508 → 46509, 46512, 46514, 46517, 46522 → 46523, 46533
	Caterpillar	N/A

Model	Engine	VIN Procedure part 8.2 (To install guides between the window posts and the window frame)
C2045	Cummins	45441, 45445 → 45446, 45449, 45457
	Detroit Diesel	45930 → 45934, 45955 → 45979, 45981, 45983, 45985 → 45986, 45990 → 45991, 46503, 46508 → 46509, 46512, 46514, 46516 → 46517, 46522 → 46523, 46527 → 46528
	Caterpillar	47001 → 47141, 47143 → 47178

## Draft document - For review only - Do not distribute

Model	Engine	VIN Procedure part 9.1 (To check window catch position)
C2045	Cummins	45441
	Detroit Diesel	45930 → 45931, 45983, 46503, 46508, 46517, 46523
	Caterpillar	N/A

Model	Engine	VIN Procedure part 9.2 (To change window catch position)
C2045	Cummins	45441
	Detroit Diesel	45930 → 45931, 45983, 46503, 46508, 46517, 46523
	Caterpillar	N/A

Model	Engine	VIN Procedure part 10 (To remove the emergency handle)
C2045	Cummins	45441, 45445 → 45446, 45449, 45457
	Detroit Diesel	45930 → 45934, 45955 → 45979, 45983, 45985 → 45986, 45990 → 45991, 46503, 46508 → 46509, 46512, 46514, 46517, 46522 → 46523, 46527 → 46528
	Caterpillar	N/A

## **PARTS AND PRODUCTS:**

### **1. To check window catches:**

Part No.	Description	Qty. per coach
VH 660291200	Bolt, Allen,M6 x 30 mm	4
VH 660611605	Rivet, 4 x 18.3 mm	90
VH 10893950	Spacer for window catch, 1 mm thick by 62 mm wide	12
VH 10895595	Spacer for window catch, 1 mm thick by 82 mm wide	12
VH 10893956	Spacer for window catch, 2 mm thick by 62 mm wide	12
VH 10885729	Spacer for window catch, 3 mm thick by 62 mm wide	12
VH 10885730	Spacer for window catch, 6 mm thick by 62 mm wide	12
VH 10895195	Catch, window	2
VH Tool	Gauge, yellow	1
VH Tool	Gauge, red	1
VH 660193035	Sika® - 205, cleaner	#
VH 10877484	Sikaflex® 222, adhesive, U.V. resistant, black	#

### **2. To address window hinge noise:**

Part No.	Description	Qty. per coach
VH 660192813	Tape, fabric, black	1 roll
VH 660279942	Screw, self drilling tapping, 4.2 x 19 mm (3/4 inch)	56
VH 10723041	Guide, window	28
VH 10723095	Spacer for VH 10723041, 1.5 mm	#
VH 10723096	Spacer VH 10723041, 2.5 mm	#
VH 660050408	Insert, hard rubber for window bottom seal, 2 x 5/8 inch	#
VH 660864953	Adhesive, Loctite 424	#
VH Tool	Gauge, guide to window gap	1
VH Tool	Template, guide pre-drilling	1
VH Tool	Drill bit, 3 mm, for stainless steel	10

### **3. To remove the emergency handle and permanently lock a passenger emergency window:**

Part No.	Description	Qty. per window
VH 10914171	Clamp, cable	1
Local purchase	Loctite 2701, thread adhesive	#
VH 10903559	Molding, rubber	35-7/16 inch
Local purchase	Loctite 454, adhesive, rubber	#
VH 660284956	Bolt, M4 x 0.7 x 16 mm, stainless	1
VH 660209902	Nut M4	2
VH 660637501	Lock washer	2
VH 629101100	Spring	1
VH 660877053	Decal, emergency exit, pointing to the right	1
VH 660877052	Decal, emergency exit, pointing to the left	1

### **4. To install new outer passenger window seals:**

Part No.	Description	Qty. per window
VH 10909875	Seal, window outer, self-adhesive	#
Local purchase	Degreaser, isopropyl alcohol	#

Parts supply: refer to the Warranty Information in this Bulletin.

# Draft document - For review only - Do not distribute

Parts and products disposition: discard according to applicable environmental regulations.

## **PROCEDURE:**

### **1. General:**

- The jobs described should be executed by technicians experienced in body and trim repair.

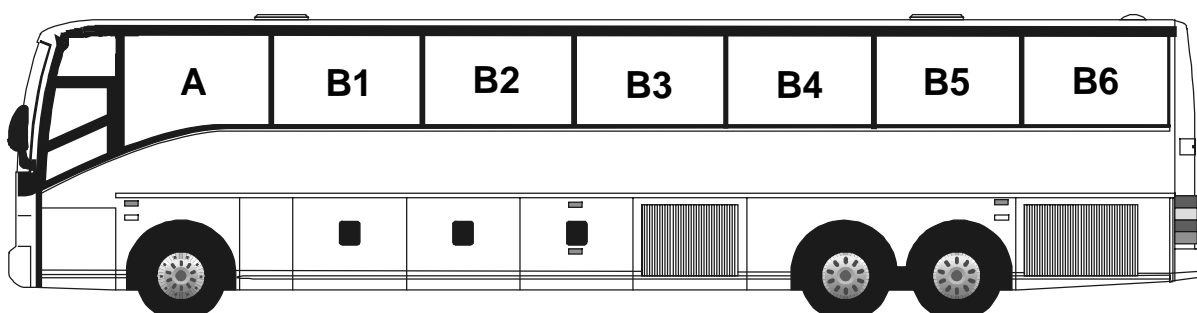
### **2. Special tools, equipment or services:**

- A scaffold or a scissors lift is required (minimum size 5 ft high x 10 ft long x 5 ft wide).
- Precision scales
- T-shaped Allen wrench, 3 mm

### **3. Preparations:**

- Park the coach on a level surface, apply the parking brake and shut down the engine.
- Switch off all systems and turn off the battery master switch.
- Put a "DO NOT OPERATE" tag on the instrument panel.
- Read the entire procedure before beginning to work.

### **4. On coach procedure application:**



**Figure 1: C2045 passenger windows – left hand side**

**A: Fixed window**

**B: Emergency windows, which can openend with a handle**

Job	Remove old spacers	Address noise			Check latches	Remove handle	Check tension	Replace seal
Procedure	Part 7	Part 8.1	Part 8.2	Part 8.3	Part 9	Part 10	Part 11	Part 12
Window	A	A*	A**	A***	A	-	-	-
	-	B1*	B1**	B1***	B1	-	B1	B1***
	-	B2*	B2**	B2***	B2	-	B2	B2***
	-	B3*	B3**	B3***	B3	B3	-	
	-	B4*	B4**	B4***	B4	-	B4	B4***
	-	B5*	B5**	B5***	B5	-	B5	B5***
	-	B6*	B6**	B6***	B6	B6	-	-

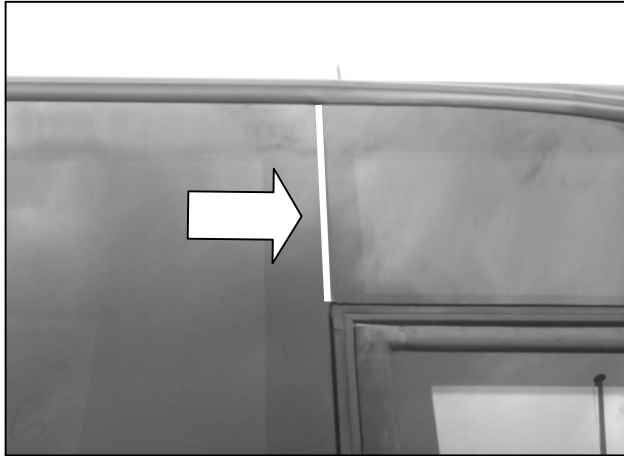
\* Verify and install as required

\*\* All windows (except CAT units, which are fix-on-fail)

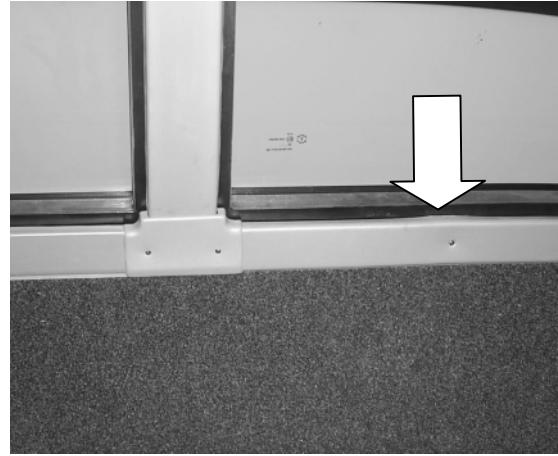
\*\*\* Check pulling force/noise and install as required

## 5. To open an A-type window:

- 1) In order to be able to open this type of window, on the outside of the coach, cut through the adhesive seal indicated in Figure 2.
- 2) To get access to the A-type window latches, inside the coach remove the bottom sloped molding (see Figure 3).



**Figure 2: Cut through A-type window adhesive seal (RH side window shown).**



**Figure 3: Remove A-type window bottom sloped molding**

- 3) A-type windows have no release cable.  
Remove the rubber molding from the bottom channel of the window frame (see Figure 4).
- 4) Undo and remove the retaining screws fixing the slider.  
Recover the hardware.  
The window can now be opened.
- 5) To close and lock the window, reinstall the slider retaining screws, making sure that the slider covers at least 2/3rds of the catch (See Figure 12). Close the window and reinstall the rubber molding.



**Figure 4: A-type windows have no release cable – remove retaining screws fixing slider.**

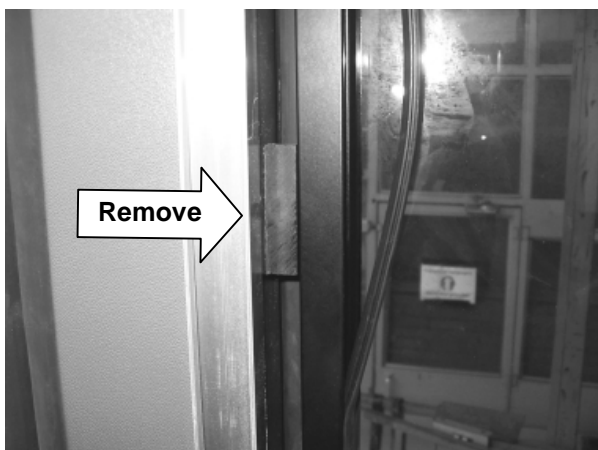


## 6. To open B-type window:

To open this type of window, simply pull the emergency handle.

## 7. To remove old window spacers (A-type window only):

- 1) Check if any spacers (see Figure 5) have been installed between the window posts and the window frame.  
If present, remove them.  
Seal-off the fastener holes with adhesive VH 10877484.



**Figure 5: Spacer installed between window post and frame**

- 2) Refer to part 8 of this procedure "To address window hinge noise" and follow the instructions.
- 3) Reinstall window trim and moldings as required.
- 4) Close the window.
- 5) Repair the exterior window seal as follows:
  - Mask-off the area next to the gap, using masking tape.
  - Using a scraper, remove all sealant from the affected seam.
  - Using a blowgun, remove any debris and dust from the gap.
  - Thoroughly clean the gap with VH 660193035 Sika® - 205, cleaner.
  - Wipe-off excess cleaner with a clean rag. Allow remainder to evaporate  
For the sealant to give maximum performance, it is imperative that the contacting surfaces are clean, dry, and free of dust, old adhesive, grease and oil.
  - Fill the gap evenly with VH 10877484 Sikaflex® 222 black UV resistant adhesive.
  - Using a clean plastic spreader, wipe-off excess adhesive and spillover.
  - Remove the masking tape. Wipe-off any adhesive remaining on the paintwork next to the gap with VH 660193035 Sika® - 205 cleaner.  
Allow adhesive to cure.

## 8. To address passenger window hinge noise:

**CAUTION:** Passenger windows have a considerable weight. To avoid personal injury and/or damage to the vehicle or component, use adequate lifting equipment and work with an assistant to handle them.

**CAUTION:** This part of the procedure involves working on a scaffold or scissors lift. Service personnel who do not feel confident about working on heights should abstain from doing so.

**CAUTION:** Observe safe shop practices at all times.

**NOTE:** Protect the surface surrounding the windows against scratches, nicks and dents.

## **8.1 To cover the hinges with fabric (all windows):**

- 1) Open the window and check that the hinge has been covered with fabric (see Figure 6). If none is present, proceed with step 2.

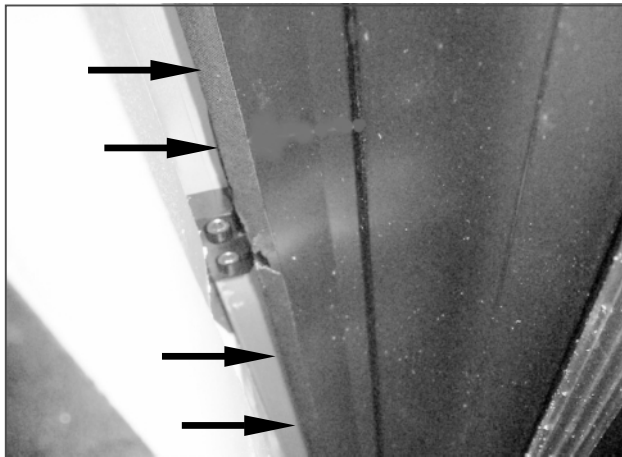


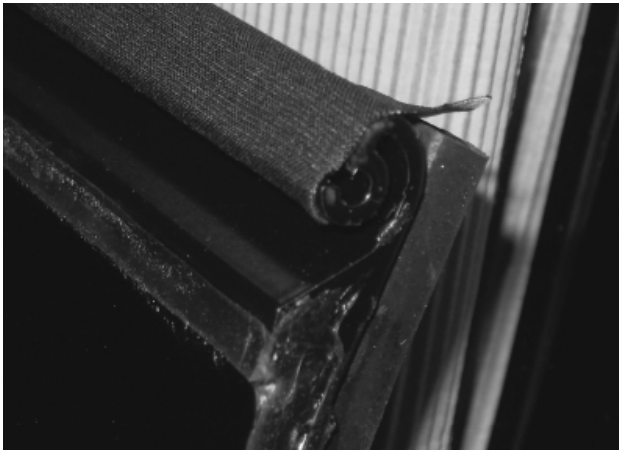
Figure 6: Hinge covered with dark fabric to address hinge noise

- 2) Unhinge and remove the affected window as follows:
  - Open the window.
  - Tilt the window outwards.
  - Using a long 4 mm Allen wrench, unscrew the two Allen bolts securing the keeper to the center of the upper window frame channel (see Figure 7). Remove the bolts and keeper.
  - Tilt, lift and withdraw the window from the body-mounted hinge.



Figure 7: Keeper securing passenger emergency window

- 3) Cover the hinge (part attached to window) with fabric tape (Figure 8).

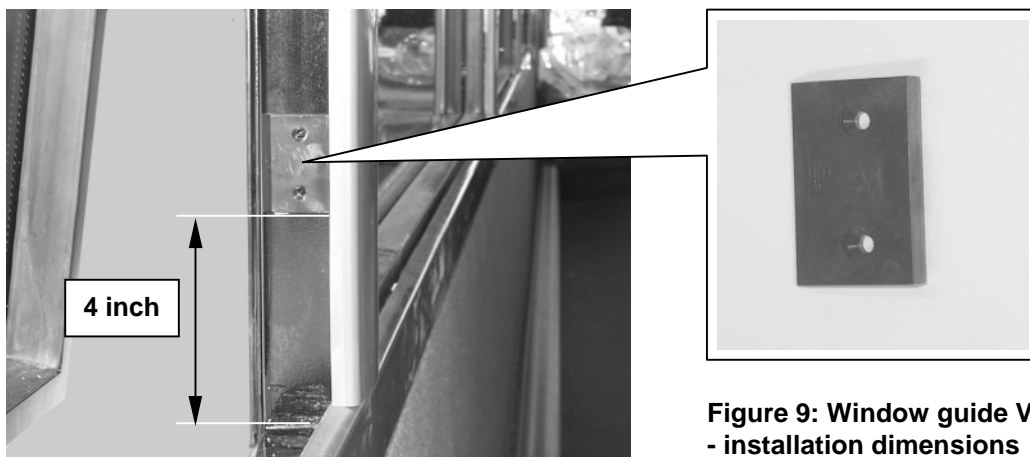


**Figure 8: Window hinge covered with fabric tape (window part)**

- 4) Reinstall the window in reverse order of removal.  
Secure window with keeper.  
Keep the window unlocked for further jobs.

**8.2 To install guides between the window posts and the window frame (all windows except Caterpillar units, which are fix-on-fail):**

- 1) Open the window and support it with a suitable stand.
- 2) Position the guide with the chamfered edge facing outwards against the window post as shown in Figure 9. Make sure the guide is fully up against the molding channel assembly. Window bottom rail to guide lower edge distance: 100 mm (4 inch).
- 3) Slip the pre-drilling template behind the guide, matching the holes in the template with those in the guide.  
Withdraw the guide and drill two 1/8-inch holes in the window post.  
Trial fit the guide using two self-drilling tapping screws VH 660279942.



**Figure 9: Window guide VH 10723041  
- installation dimensions**

- 4) Lower the window and measure the gap between the window frame and the guide using the gauge from the parts list.  
The gap should be approximately 9/32 inch (7 mm).  
Adjust the gap using spacers VH 10723095 and VH 10723096 as required.

- 5) Secure the guide and spacers to the post.
- 6) Fit a second guide to the opposite post repeating steps 1 through 5.

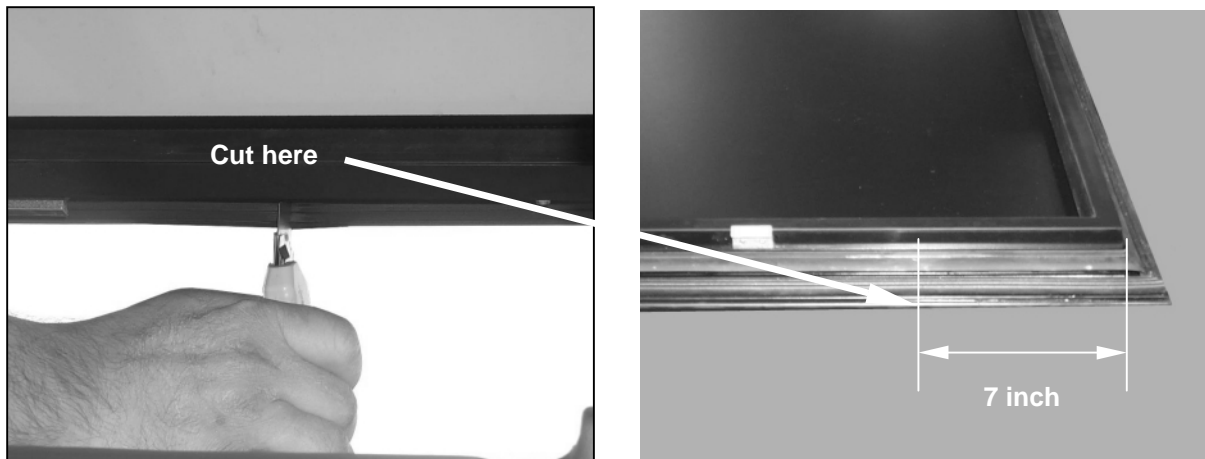
## **8.3 To install two hard rubber inserts in the window bottom seal molding (all windows, if required):**

### **NOTE:**

*Hard rubber insert can be used to address "catch to slider" noise on fixed and opening windows (see Figure 17).*

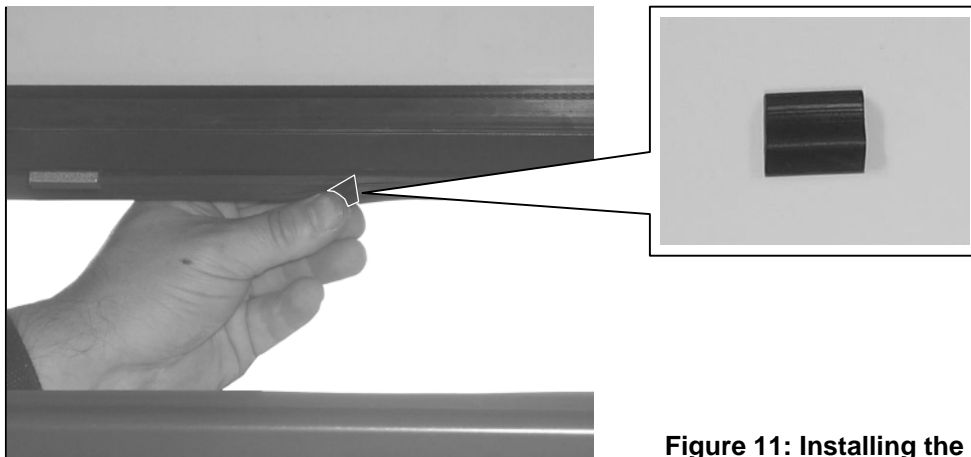
*After installing hard rubber inserts on opening windows, always check the emergency handle pulling force.*

- 1) Open the window and support it with a suitable stand.
- 2) With a utility knife make a vertical cut through the window bottom seal, approximately 7 inch from the window outer corner (see Figure 10).



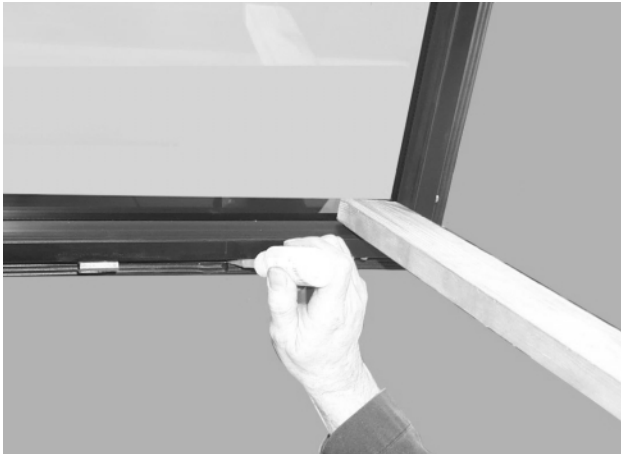
**Figure 10: Cutting the seal at 7 inch from the window corner**

- 3) From hard rubber stock VH 660050408, fabricate an insert approximately 5/8 inch long.
- 4) Place the insert into the bottom seal hollow (see Figure 11).



**Figure 11: Installing the insert**

- 5) Repeat steps 1 through 4 at the opposite side of the window.
- 6) On opening windows, check that the emergency handle pulling force is still as required. If the pulling force exceeds 20 lbf (90 N), reduce the insert thickness until the pulling force is within limits.
- 7) Apply adhesive Loctite 424 or similar to secure the inserts and close the cuts (see Figure 12). Allow adhesive to dry.



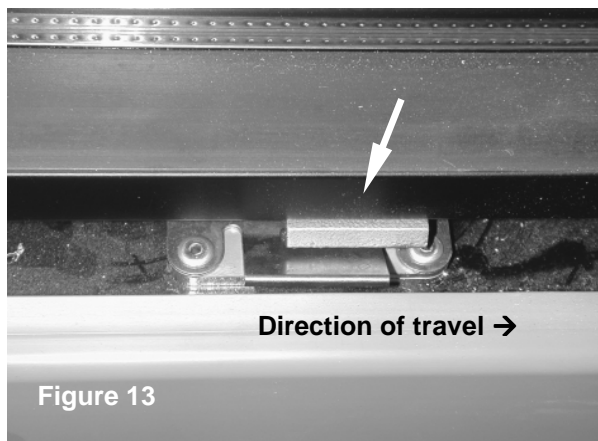
**Figure 12: Securing the insert in the bottom seal**

## **9. To check window catch installation:**

### **9.1 To check window catch position**

Make the following checks:

- 1) Inside the coach, standing in front of the window, check the window catch offset: the slider should cover at least 2/3rds of the catch (check with window open and emergency handle in the closed position – see Figure 13).



**Figure 13: Slider should cover at least two-thirds of catch when closed**

- 2) Check the catch installation height.

The yellow gauge (2 mm) should fit between the heads of the rivets securing the catch and the slider (see Figure 14)

The red gauge (3 mm) should not fit between the heads of the rivets securing the catch and the slider (see Figure 15)

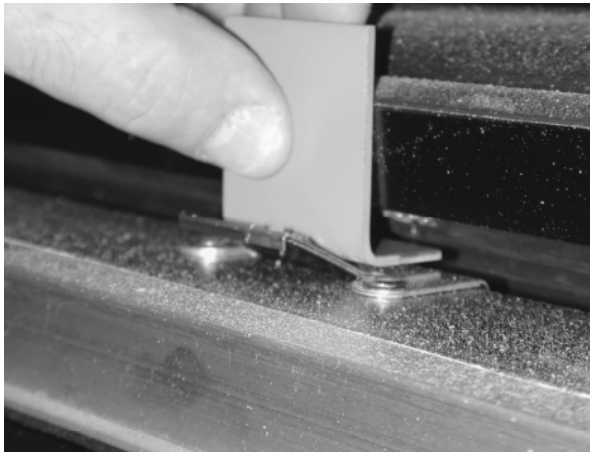


Figure 14: 2 mm yellow gauge should fit between the rivet heads and the slider

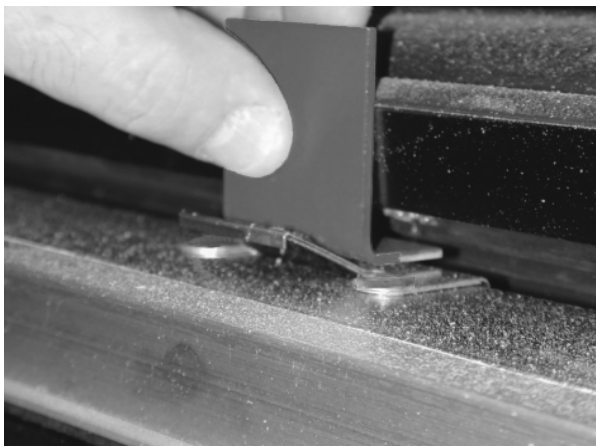


Figure 15: 3 mm red gauge should not fit between the rivet heads and the slider

## **9.2 To adjust window catch position:**

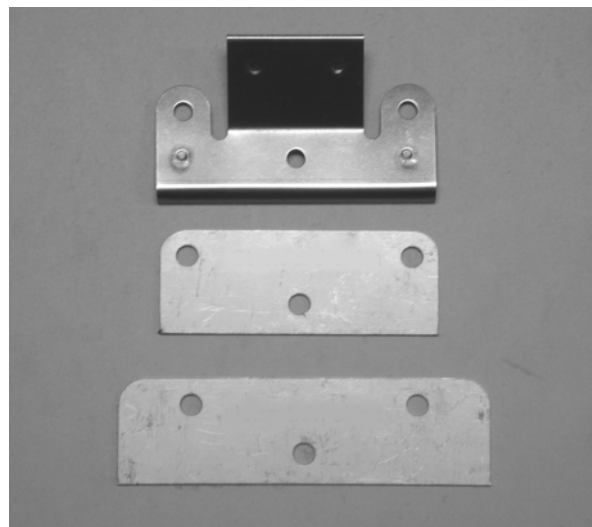
The three window catch offset possibilities have been listed below, with If the corrective measures to match.

### **1. Offset incorrect and installation height correct:**

Drill-out the rivets and relocate the catch replacing the OE installed spacers by 82-mm wide spacers VH 10895595 amounting to the same thickness (see Figure 16). Fill the obsolete rivet holes with adhesive. Secure the catch with rivets VH 660611605 to the coach frame.

Figure 16: Window catch hardware

Top - catch VH 10895195  
Middle - standard 62-mm wide spacer  
Bottom - 82 mm wide spacer VH 10895595



## 2. Offset correct and Installation height incorrect:

Drill-out the rivets securing the window catches.

Using 62-mm wide spacers, adjust the catch height until the red gauge (3 mm) fits between the slider and the catch base plate (no rivets installed).

Secure the catch with rivets VH 660611605 to the coach frame.

Re-check the catch position for the proper gap using the yellow and red gauge:

the yellow gauge (2 mm) should fit between the rivet head and the slider.

the red gauge (3 mm) should no longer fit between the rivet head and the slider.

## 3. Offset position and installation height incorrect:

Drill-out the rivets, relocate the catch and adjust height with 82-mm wide spacers VH 10895595 as explained above.

Fill the obsolete rivet holes with adhesive.

Secure the catch with rivets VH 660611605 to the coach frame.

Re-check the catch position for the proper gap using the yellow and red gauge.

10. To remove the emergency handle and permanently lock a passenger window:

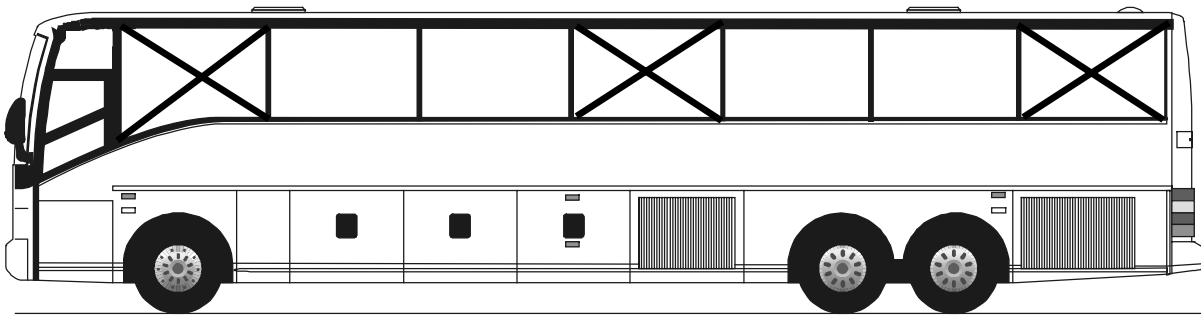


Figure 17: C2045 passenger windows –The windows, which are permanently locked according to the new spec, have been marked with a cross. Left hand side shown only. Both left-hand side and right-hand side windows should be converted

*NOTE: For maintenance purposes it remains possible to open a fixed window, but the window molding needs to be removed first to operate the locking mechanism.*

*NOTE: Opening windows, which have the hinge provided with tape can be converted to fixed windows without being removed from the coach.*

**CAUTION:** Passenger windows have a considerable weight. To avoid personal injury and/or damage to the vehicle or component, use adequate lifting equipment and work with an assistant to handle them.

**CAUTION:** This part of the procedure involves working on a scaffold or scissors lift. Service personnel who do not feel confident about working on heights should abstain from doing so.

*NOTE: Protect the surface surrounding the windows against scratches, nicks and dents.*

**CAUTION:** Observe safe shop practices at all times.

1) Unhinge and remove the window to be converted as follows:

- Open the window using the emergency handle.
- Tilt the window outwards.
- Unscrew the two Allen bolts securing the keeper to the upper window channel (see Figure 18). Remove the bolts and keeper.
- Tilt, lift and withdraw the window from the body-mounted hinge.

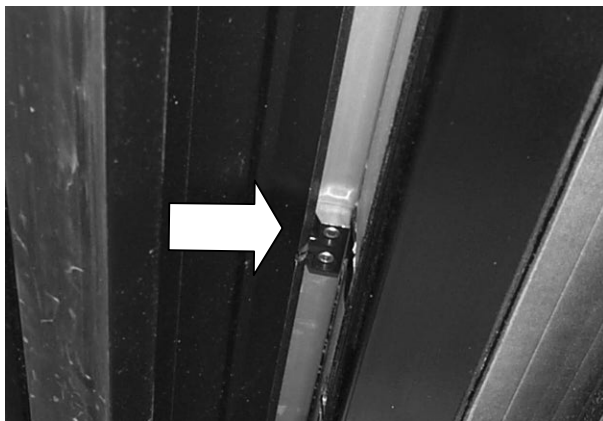


Figure 18: Keeper securing passenger emergency window

2) Install the window inside up on a clean and soft working surface.



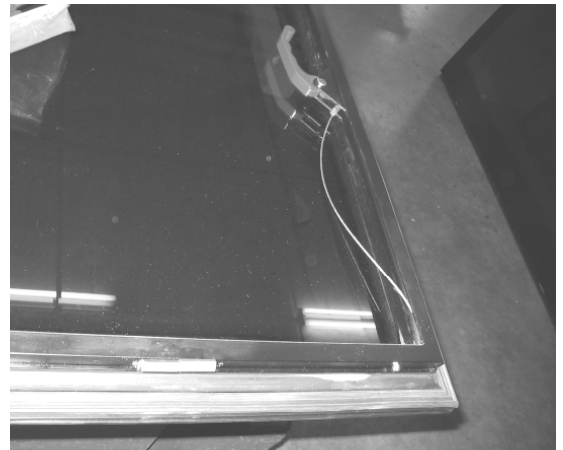
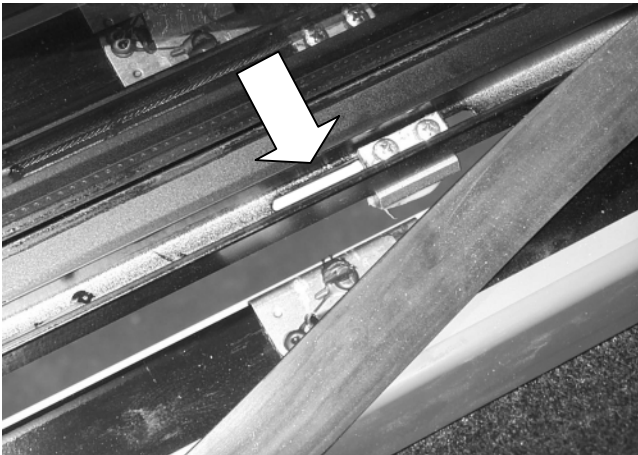
- 3) Working from the handle to the upper and lower corners, pry loose the rubber molding. Cut-off the molding at the upper and lower corners as shown in Figure 19.

Remove and discard the rubber, which has been cut off.  
Continue prying loose the bottom molding up to the first slider.



**Figure 19: Prying loose the molding above and below the handle and cutting it off at the corners**

- 4) Pull the emergency handle and install a wooden block in the slider slot to allow some slack at the handle (see Figures 20 and 21).



**Figures 20 and 21: Jam the slider in its slot to allow cable slack at the handle**

- 5) Undo and remove the two bolts and nuts securing the handle to the window frame (see Figure 22).



**Figure 22: Removing the bolts**



**Figure 23: Withdrawing the handle**

## Draft document - For review only - Do not distribute

- 6) Cut the cable at the handle, just below the eye, using good quality cutter pliers (see dotted line Figure 23). Withdraw the handle.
- 7) Assemble the cable end, spring VH 629101100, bolt, lock washers, nuts and cable clamp VH 10914171 as shown in Figures 24 through 27.



Figure 24



Figure 25

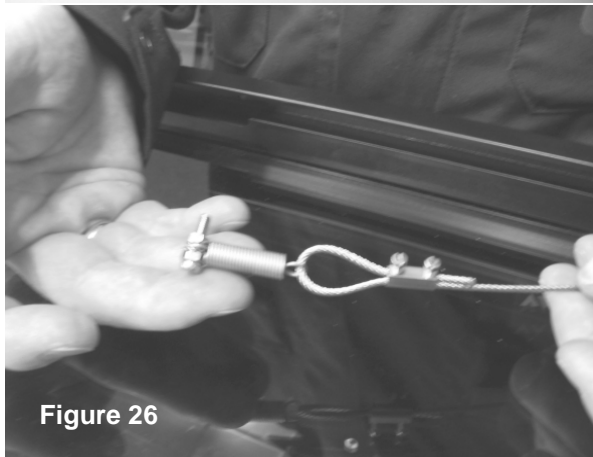


Figure 26

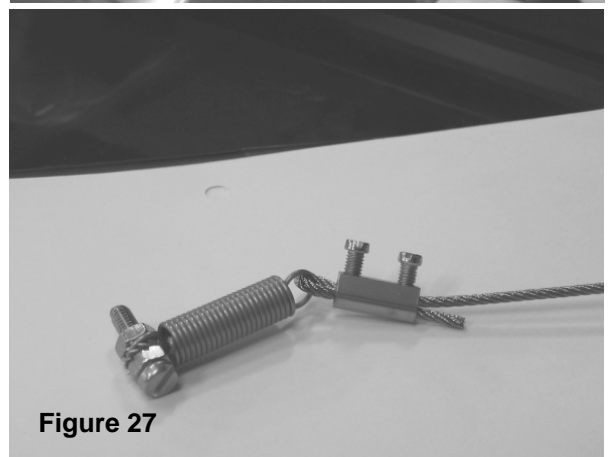


Figure 27

- 8) Apply some Loctite 2701 on the clamp bolts and in the clamp bore. Secure bolts hand tight.
- 9) Install the spring and cable assembly in the lower handle mounting hole (see Figures 28 and 29). Apply some Loctite 2701 on the thread, run-up a lock washer and nut and secure hand tight.

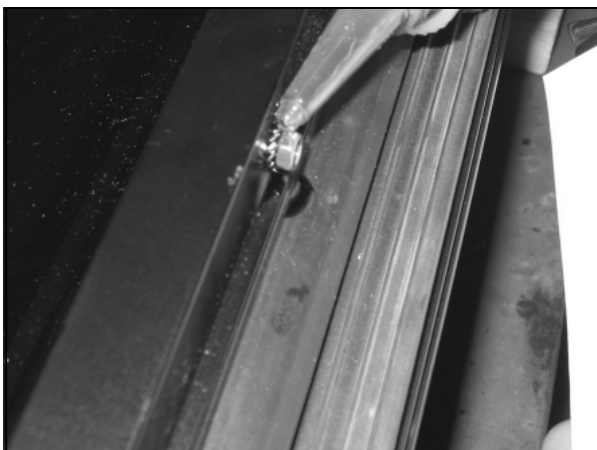
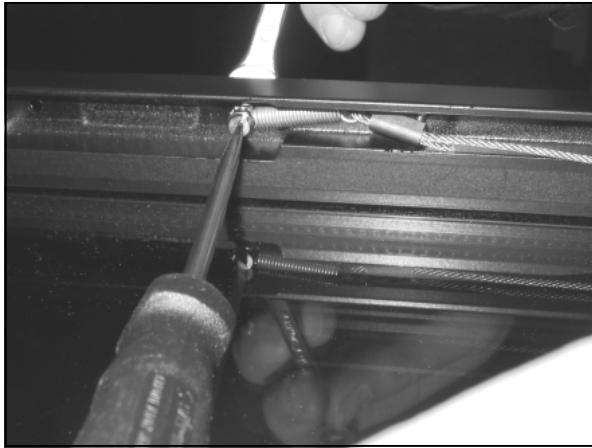


Figure 28: Installing the spring and cable assembly in the lower mounting hole



**Figure 29: Securing the spring and cable assembly**



**Figure 30: Spring and cable assembly straight in channel**

- 10) Remove the wooden block from the slider slot and check that the spring and cable assembly runs straight in the channel (see Figure 30).
- 11) Cut rubber molding VH 10903559 to length (approximately 35-7/16 inch (900 mm)). Apply some Loctite 424 adhesive in the lever mounting area. Starting at the upper corner, install the molding by pressing it in the channel. Cut-off excess rubber (Figures 30 through 33).



**Figure 31**



**Figure 32**



**Figure 33**



**Figure 34**

- 12) Reinstall the window and keeper in reverse order to removal.

13) Repeat steps 1 through 12 for the remaining windows as illustrated in Figure 17.

14) Re-label the emergency exit decals as required.

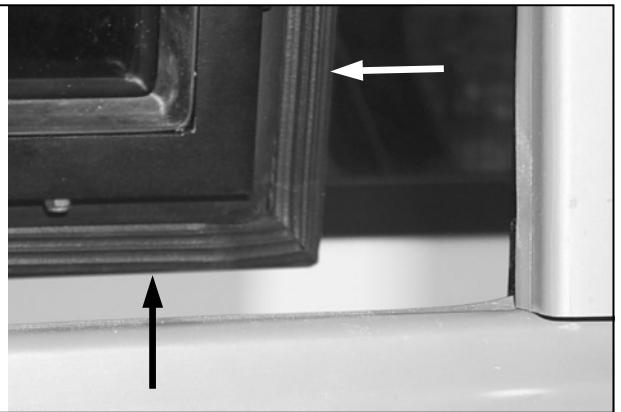
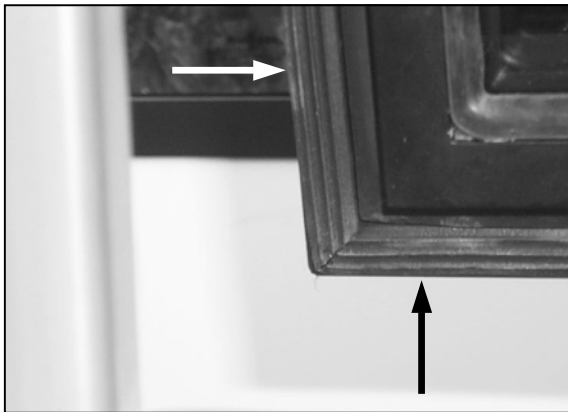
**6. To check handle pulling force:**

Using precision spring scales, measure the force required to pull the emergency exit handle to open the window as shown in Figure 35. Value should not exceed 20 lbf (90 N).

If the pulling force exceeds 20 lbf., the effort required can be lowered by replacing the window outer seals (see Figures 36 and 37) by seals which are thinner, more flexible and offer less resistance than the OE seals, without detrimental effect regarding noise and moisture ingress.



**Figure 35**



**Figures 36 and 37: Outer emergency window seals, left right and bottom**

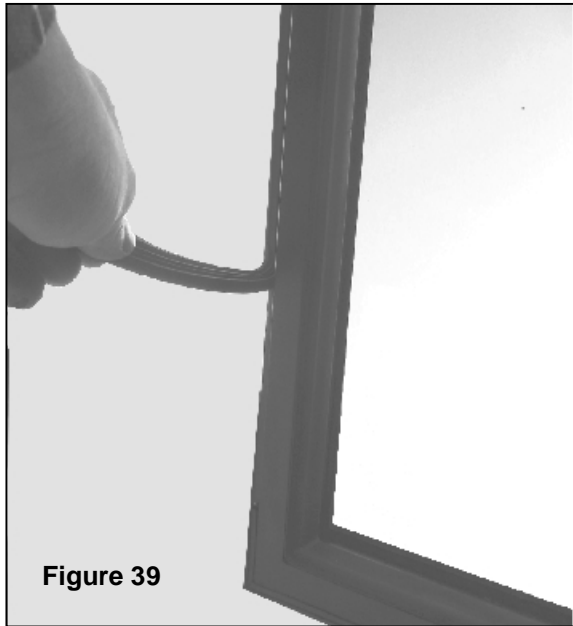
**7. To install new outer passenger window seals:**

- 1) Tilt the window until it's almost horizontal. Support the window with a suitable stand.
- 2) At the top of the window, about 2 inches from the outer edge, vertically cut through the outer seal (see Figure 38).



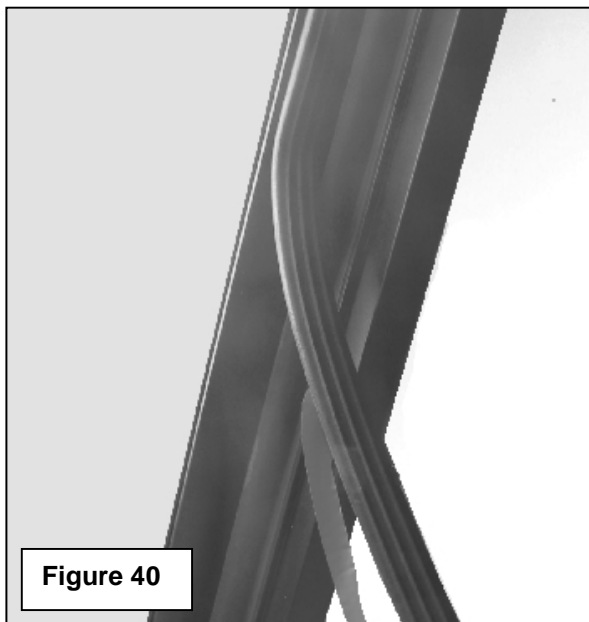
**Figure 38: Cutting the outer seal at the top of the window (LH side shown)**

- 3) Starting at the bottom of the window, peel off and remove the old seal.  
Remove any remains of adhesive and rubber.  
Degrease contact surface with isopropyl alcohol (see Figure 39).



**Figure 39**

- 4) Starting at the top, install the new, self-adhesive outer seal by pressing it on the window outer edge (see Figure 40).  
At the bottom, cut to size at a 45° angle.  
The left and right hand seals should make a perfect joint with the bottom seal.



**Figure 40**

- 5) Repeat steps 3 through 4 for the remaining OE outer seal.
- 6) Remove the window stand and close the window.
- 7) Check again the force required to pull the emergency exit handle.

*Procedure complete.*

## **DISCLAIMER:**

The procedures contained herein are not exclusive. Van Hool cannot possibly know, evaluate, or advise the transportation industry of all conceivable ways in which a procedure may be undertaken or of the possible consequences of each such procedure. Other procedures may be as good, or better, depending upon the particular circumstances involved.

Each carrier who uses the procedures herein must first satisfy itself thoroughly that neither the safety of its employees or agents, nor the safety or usefulness of any products, will be jeopardized by any procedure selected.

## **SERVICE INFORMATION:**

Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.

# Draft document - For review only - Do not distribute

## **WARRANTY INFORMATION:**

### **1. Claim references:**

- Causal part and job code: see labor allocation

### **2. Terms and conditions:**

Van Hool will accept warranty claims for this repair as follows:

#### **Parts:**

- Supply: parts will be supplied free of charge through regular channels.
- Disposition: discard parts according to applicable environmental regulations.

#### **Labor allocation:**

Procedure	Job	Job code	Causal part	Time		
				min	hrs	unit
Part 5	To open an A-type or fixed B-type window	O 08086N	VH 10697759	15	0.25	window
Part 6	To open a B-type window	O 08095N	VH 10663336	0	0.00	window
Part 7	To remove old window spacers (A-type window only)	O 08101N	VH 10699713	10	0.17	window
-	To remove and reinstall a passenger window	O 08068N	VH 10723041	15	0.25	window
Part 8.1	To cover the hinges with fabric	O 08110N	VH 660192813	5	0.08	window
Part 8.2	To install guides between the window posts and the window frame	O 08129N	VH 10895195	10	0.17	window
Part 8.3	To install hard rubber inserts in the window bottom seal molding	O 08138N	VH 660050408	5	0.08	window
Part 9.1	To check window catches	O 08147N	VH 10893950	10	0.17	coach
Part 9.2	To adjust window catches	O 08156N	VH 10895195	10	0.17	window
Part 10	To remove the emergency handle	O 08077N	VH 10928758	15	0.25	window
Part 11	To check the emergency handle pulling force	O 08165N	VH 629101100	15	0.25	coach
Part 12	To install new outer passenger window seals	O 08174N	VH 10909875	15	0.25	window

**Field Change Program expiration date:** Service Bulletin issue date + 2 years

**Claim submission:** Contact ABC Customer Care & Parts Source for guidance.

Attachment to Van Hool Service Bulletin 1156A:

## To address noise caused by interior trim moldings rubbing

### DESCRIPTION:

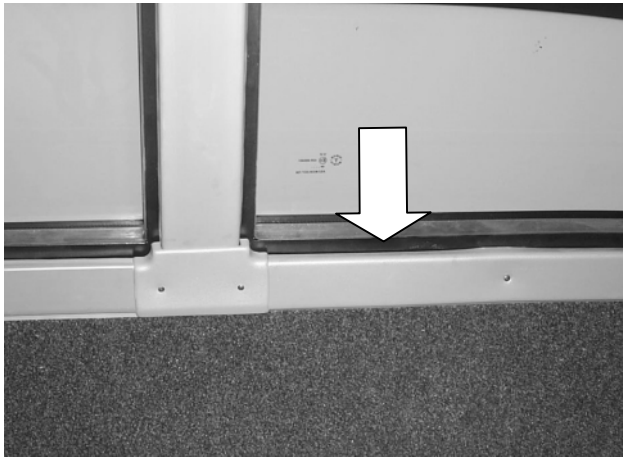
Field experience has shown that flexing of the coach body may cause the ABS interior trim moldings to rub against other trim or components and produce noise. Below are a few typical examples, and possible solutions.

#### **1. Sloped window molding:**

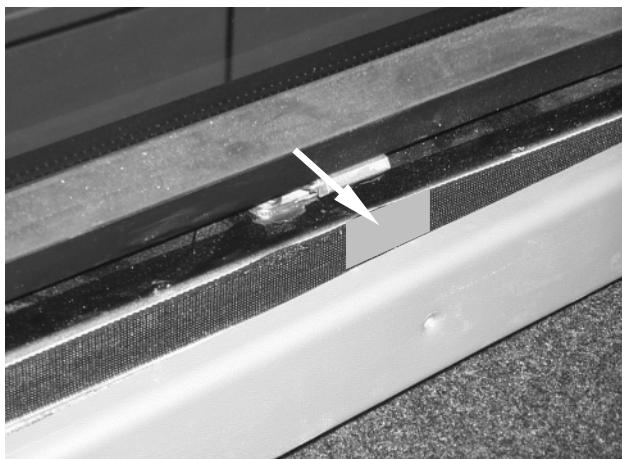
Cases have been reported where the sloped window molding (see Figure 1) rubbed against the window frame.

This problem can be addressed by installing 2.5-mm thick spacers VH 10723096. Fit them between the molding and the lower window channel (see Figure 2) and secure them with the same self-tapping screws that retain the molding.

Press the rest of the molding against the Velcro strip behind it.



**Figure 1: Noise caused by the sloped window molding rubbing against the window frame can be cured ...**



**Figure 2: By installing 2.5 mm thick spacers VH 10723096 behind it**

#### **2. Post T-cap:**

Sometimes the T-cap covering window post and horizontal moldings rubs against them. This leaves markings as the ones shown in Figure 3.

This too can be addressed by installing 2.5-mm thick spacers VH 10723096 behind the T-cap (see Figure 4). Again secure them with the same self-tapping screws that retain the moldings.





Figure 3: Telltale signs indicating that the T-cap rubs against the window post molding

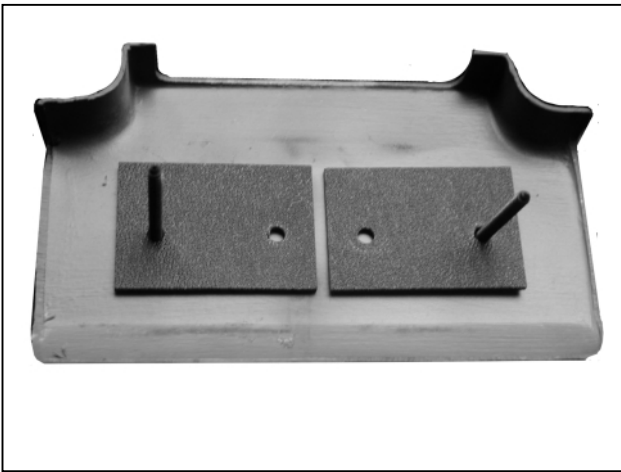


Figure 4: Spacers VH 10723096 provide the necessary clearance

### 3. Evaporator drain cover:

Another source of noise can be the covers that hide the evaporator drain tubes. There have been cases where they rubbed against the parcel rack.

Undo the screw that secures the cover to the window post. Using foam rubber strip VH 660065100 cover the edges that butt the parcel rack and reinstall.

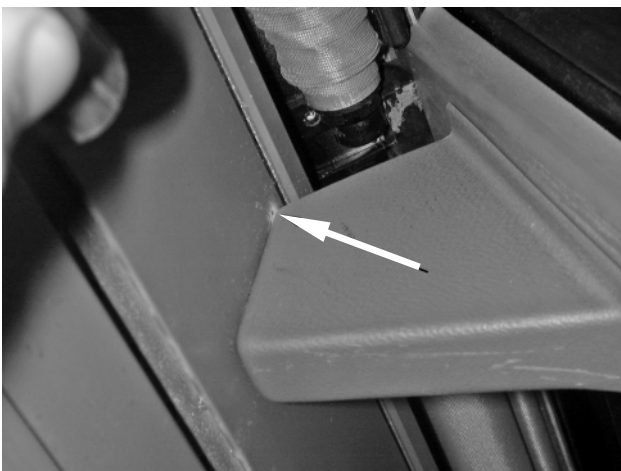
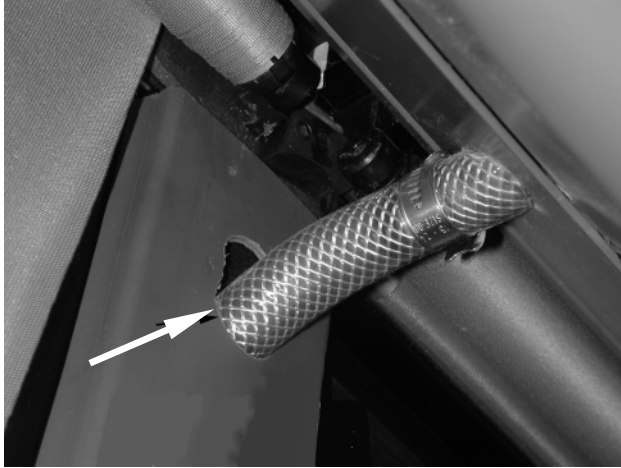


Figure 5: Evaporator drain cover rubbing against the parcel rack. Note the markings on the rack

## 4. Evaporator drain post cap:

While the evaporator drain covers are off, check that the tubing doesn't interfere with the window post molding (see Figure 6). If it does, open up and dress the hole in the molding as required.



**Figure 6: Evaporator drain tubing rubbing against the window post molding**

*Description complete.*

**THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY**