TECHNICAL SERVICE BULLETIN
Soft Top Roof - Snow/Sand Accumulation Inside Vehicle During A Storm

23-2013
24 January 2023

Model:

Ford 2021-2023 Bronco

Issue: Some 2021-2023 Bronco vehicles equipped with a factory soft top roof may experience snow or sand accumulation on the vehicles' interior during a strong storm with high winds. To correct this condition, follow the Service Procedure to retrofit the soft top assembly.

Action: Follow the Service Procedure to correct the condition on vehicles that meet all of the following criteria:

- 2021-2023 Bronco
- Equipped with a factory soft top roof
- Exhibits snow or sand accumulation on the vehicle's interior during a storm with high winds

Parts

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity
M2DZ-78550B49-A	1	Soft Top Snow Entry Kit	1	1
PM-13-B	As Needed	Motorcraft® Anti-Corrosion Coating		
TA-25-B	As Needed	Motorcraft® Threadlocker		
Obtain Locally	1	Razor Blade		
Obtain Locally	1	4.2 mm (11/64 In) Drill Bit		
Obtain Locally	1	5 mm x 0.80 mm Tap		
Obtain Locally	As Needed	Gorilla® Fabric Glue		
Obtain Locally	As Needed	Fish Wire/Welding Wire		

Parts

Parts To Inspect And Replace Only If Necessary

Service Part Number	Quantity	Description	Unit of Issue
W790580-S900	If Needed	Soft Top Rivets	4

Quantity refers to the amount of the service part number required to repair the vehicle.

Unit of Issue refers to the number of individual pieces included in a service part number package.

Piece Quantity refers to the total number of individual pieces required to repair the vehicle.

As Needed indicates the amount of the part may vary and/or is not a whole number. Parts can be billed out as non-whole numbers, including less than 1.

If Needed indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2021-2023 Bronco: Follow The Service Procedure To Retrofit The Soft Top Assembly	MT232013	Actual Time

Repair/Claim Coding

Causal Part:	7852700
Condition Code:	42

Service Procedure

1. Place the soft top into the partially open position. Refer to the Digital Owner's Manual located in the vehicle's center display screen by selecting Features > Owner's Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

2. Remove the rear window and rear quarter window assemblies. Refer to the Digital Owner's Manual located in the vehicle's center display screen by selecting Features > Owner's Manual > Removable Vehicle Components > Removable Windows.

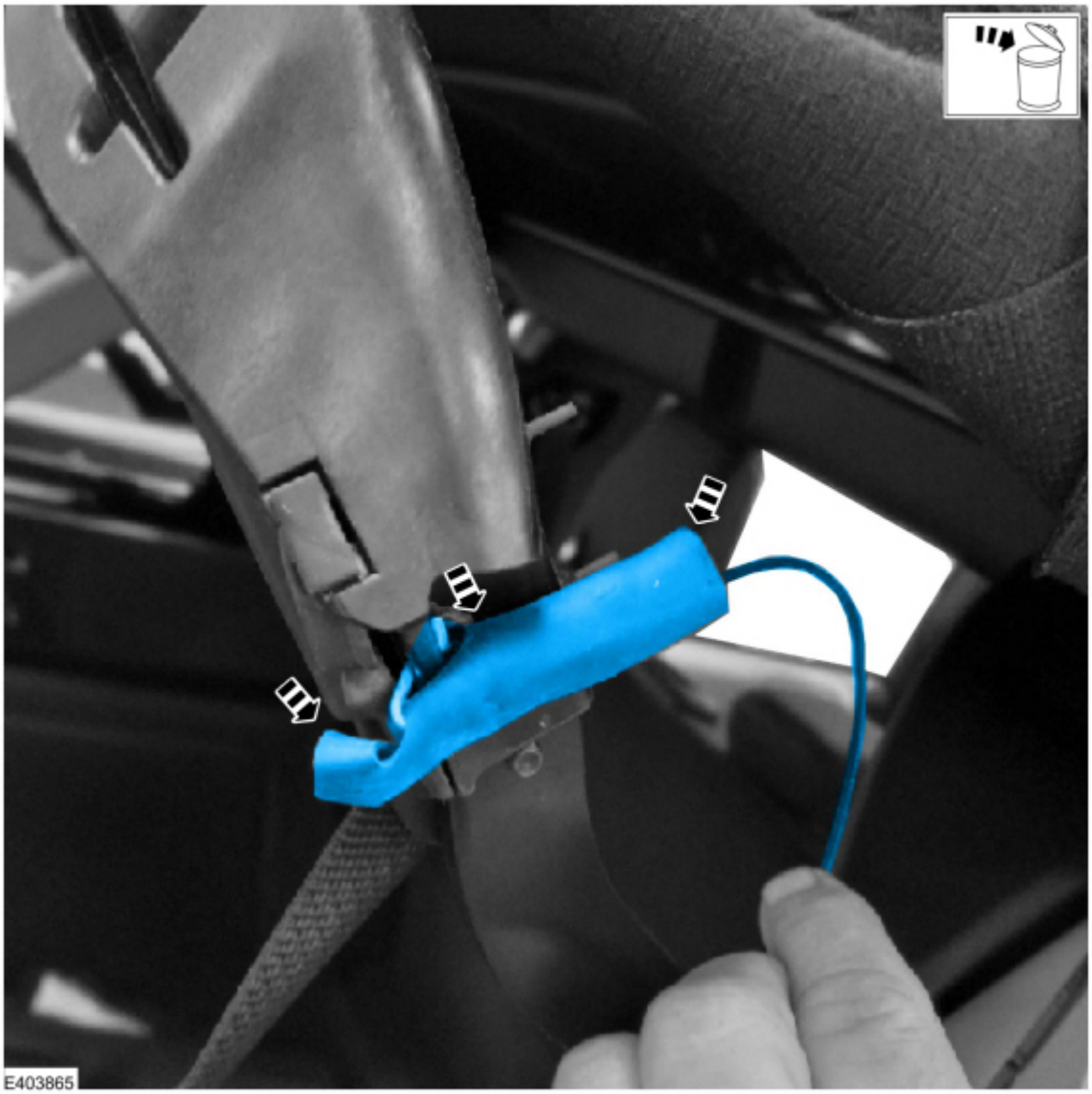
3. Remove and discard the rear tension cable.

(1). Cut the rear tension cable just above the C-pillar and to the rear of the front tension cable bracket. (Figure 1)

Figure 1 - Right side shown, left side similar

(2). Dislodge the rear spring and completely remove and discard the rear tension cable. (Figure 2)

Figure 2 - Right side shown, left side similar



4. Replace the front tension cable guide.

(1). Dislodge the rear seal retainer tree fastener by pushing it down. Be careful to not damage the tree fastener as it must be reused. Pull the rear seal down, creating separation between the metal bracket and the rear section of the seal. (Figure 3)

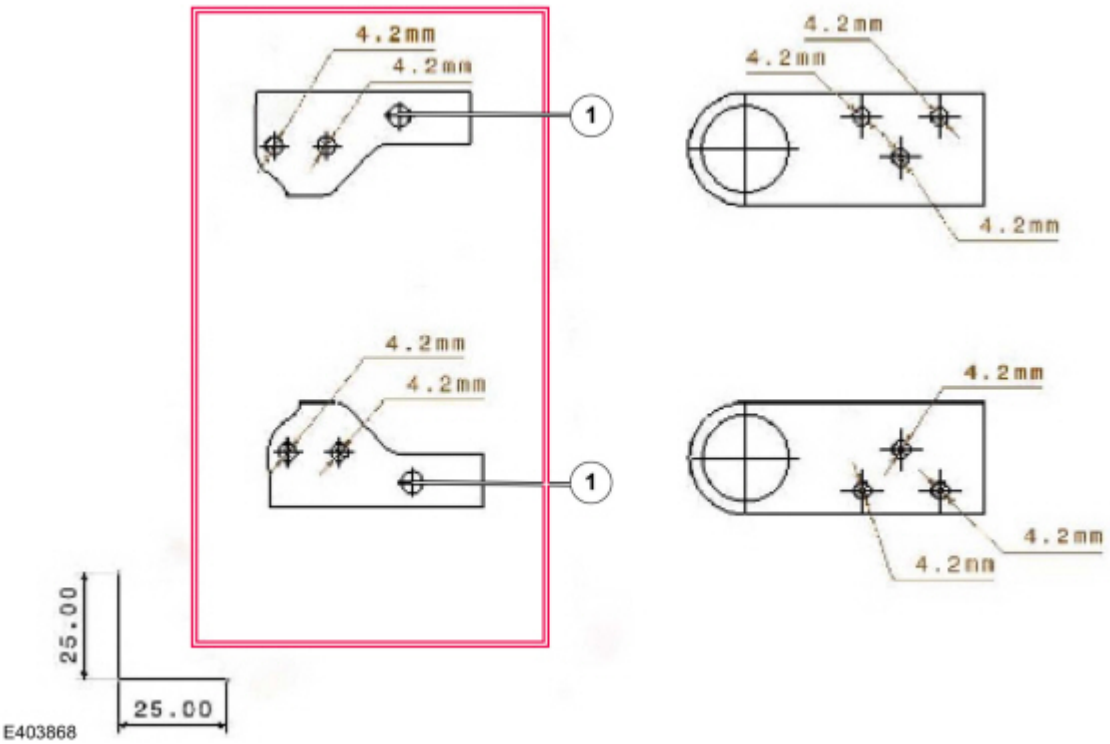
Figure 3 - Right side shown, left side similar

(2). Use wire cutters to cut the tension cable as indicated in Figure 4.

Figure 4 - Right side shown, left side similar

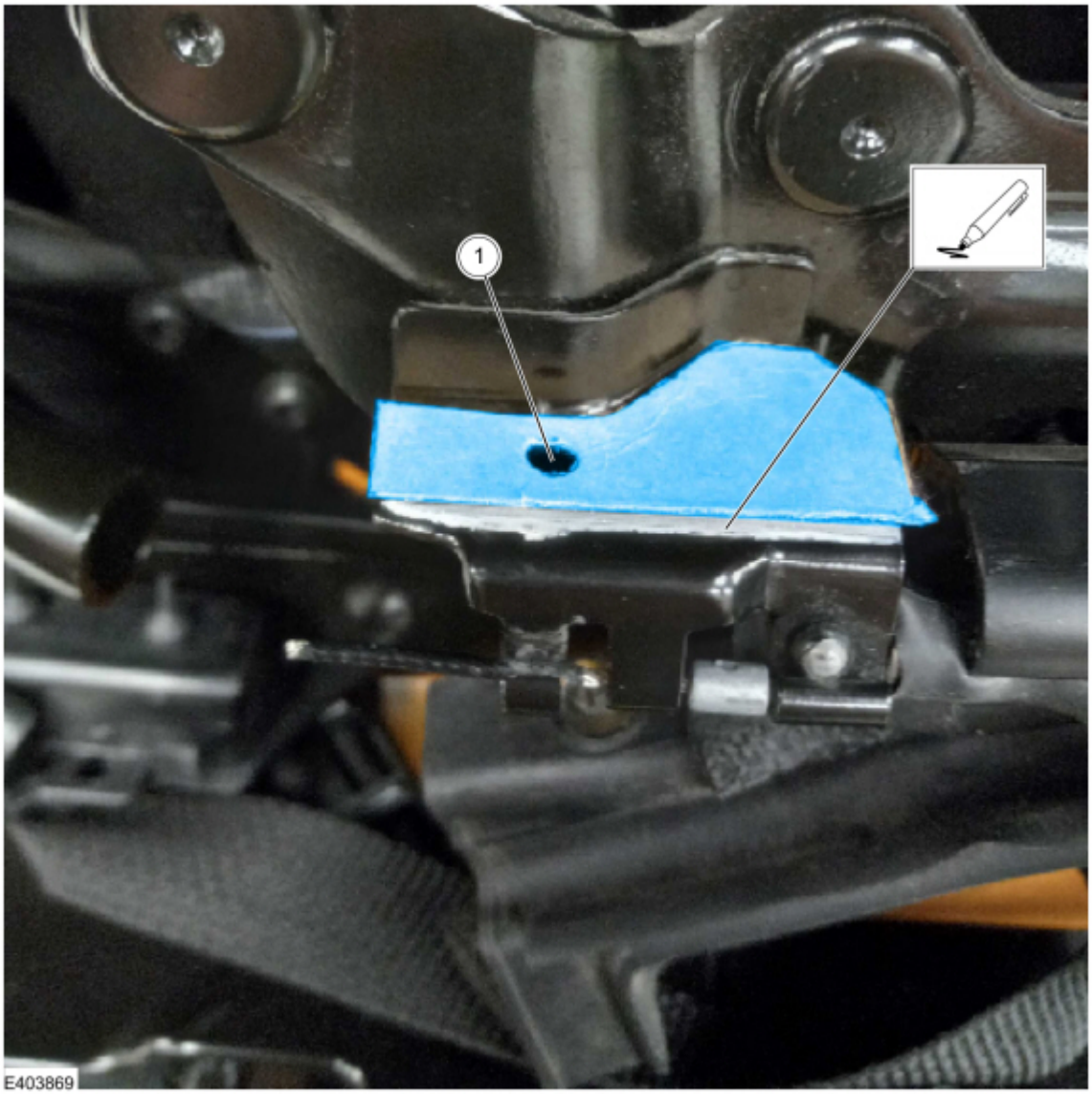
(3). Use scissors to cut out the correct template for the cable guide. (Figure 5) Use an 11/64 in. (4.2 mm) drill bit to drill a hole in the template. (Figure 5, Callout 1)

Figure 5



(4). Place the bracket template on top of the front tension cable guide so that it is in the furthest inboard location while keeping it completely flat on the horizontal surface. Align the previously drilled hole in the template with the hole in the bracket (Figure 6, Callout 1). With the template in place, use a grease pen to draw a straight line on the cable guide. Remove the template once a straight line is obtained. (Figure 6)

Figure 6 - Right side shown, left side similar

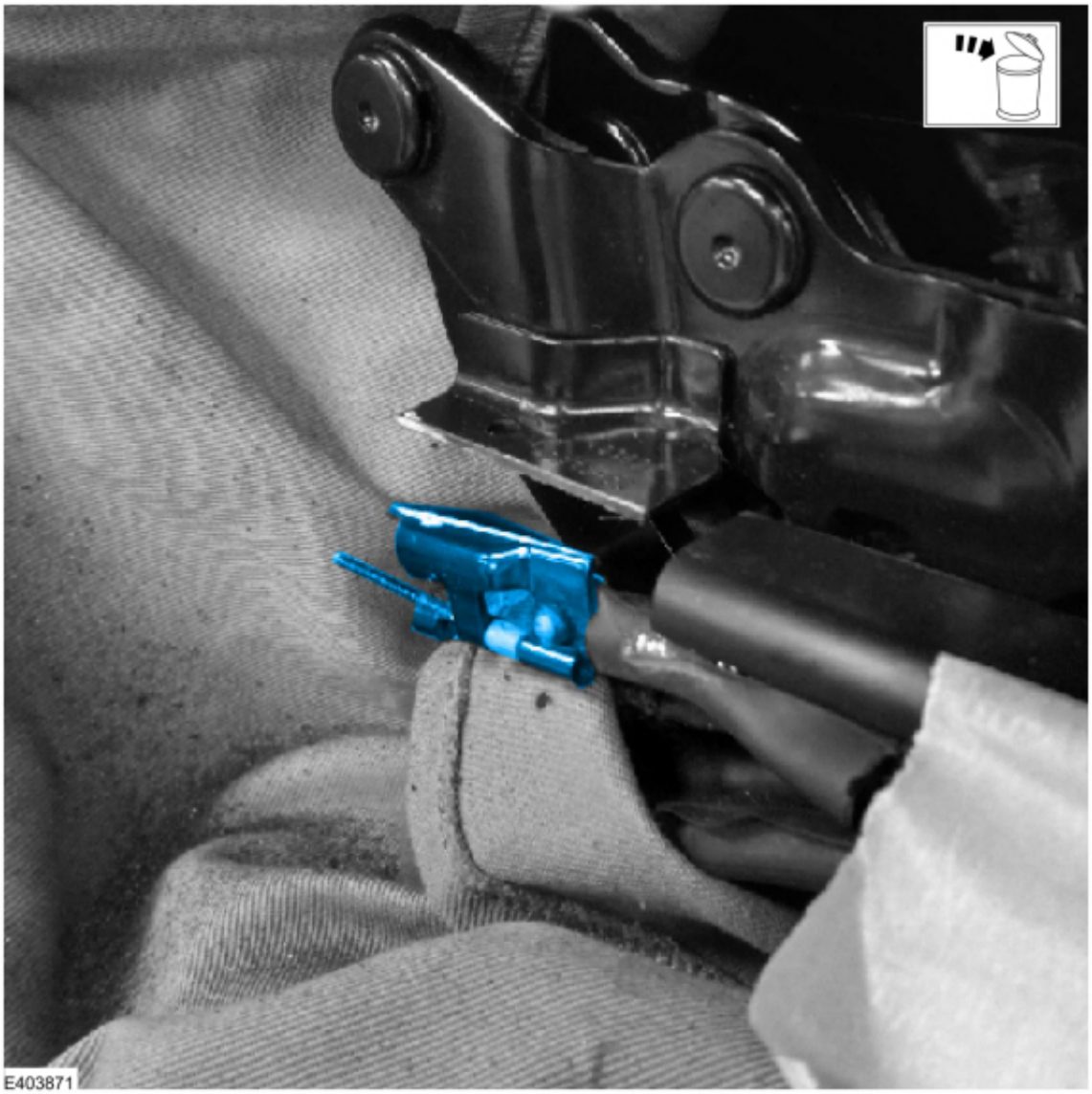


(5). Place protective material around the cable guide to prevent sparks and metal debris from contacting the vehicle. Be sure the soft top material is completely protected as any sparks that contact the material will cause damage.

(6). Use a cutoff wheel or similar tool to cut along the previously marked straight line. Remove and discard the outboard portion of the original cable guide once it is cut free from the vehicle. (Figures 7-8)

Figure 7 - Right side shown, left side similar

Figure 8 - Right side shown, left side similar



(7). Use a file to remove rough edges and/or burrs on the freshly cut edge of the frame.

(8). Fit the new cable guide onto the freshly cut edge of the frame. The new cable guide has alignment ridges on the bottom which should align with the freshly cut section of the frame. If the new cable guide does not align correctly, it may be necessary to perform additional modifications to the frame's surface until proper fitment is achieved. Once proper fitment is achieved, place a clamp on the rear portion the new cable guide and frame, holding the new cable guide firmly in place. (Figures 9-10)

Figure 9 - Right side shown, left side similar

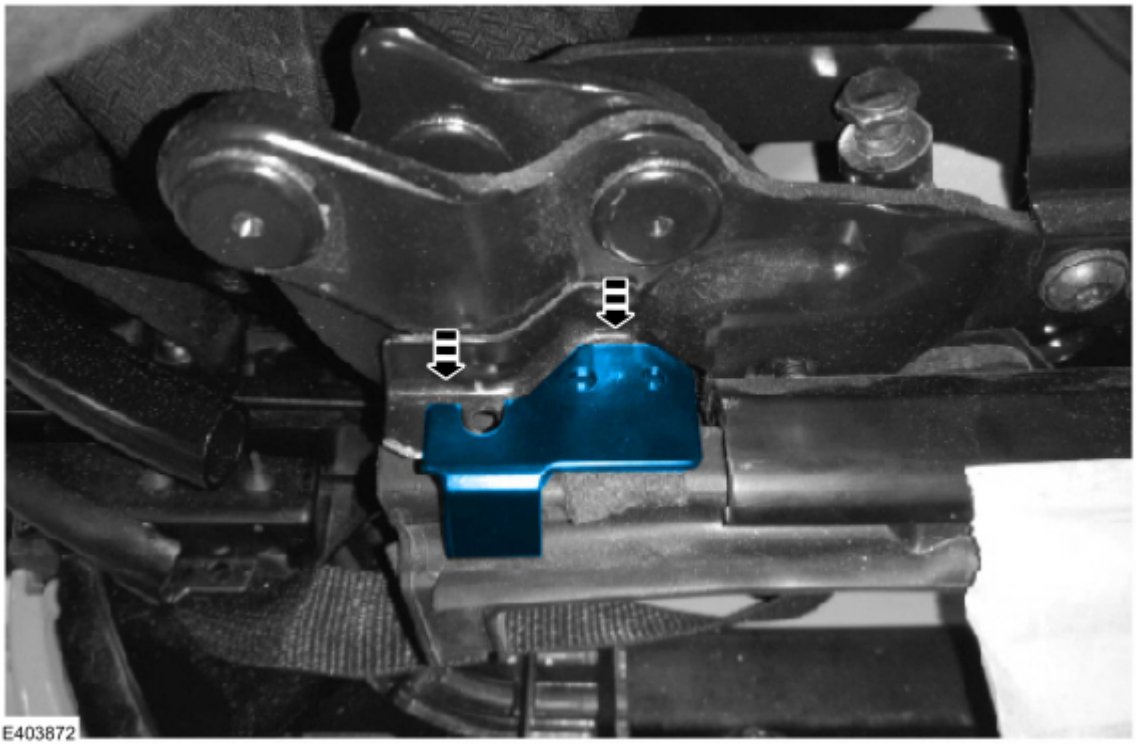
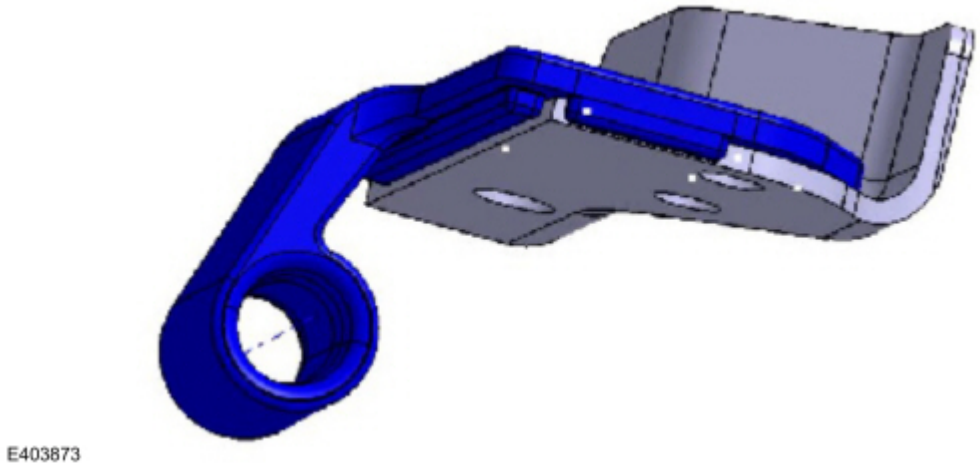


Figure 10 - Right side shown, left side similar. New cable guide in the correct position on the frame.



NOTE: Some technicians may find it easier to place the soft top in the fully open position. If this position is desired, refer to Step 1 for soft top operating instructions.

(9). Place a protective cover below the cable guide location to prevent metal shavings from collecting on and/or in the vehicle.

(10). The clamped, new cable guide will now be used as a drilling template. Use an 11/64 in. (4.2 mm) drill bit to drill 2 matching holes into the frame below the new cable guide. (Figures 11-12)

Figure 11 - Right side shown, left side similar

Figure 12 - Right side shown, left side similar

(11). Remove the clamp and new cable guide and set both aside.

(12). Clean the drilled locations using a file to remove any rough edges and/or burrs from the surface.

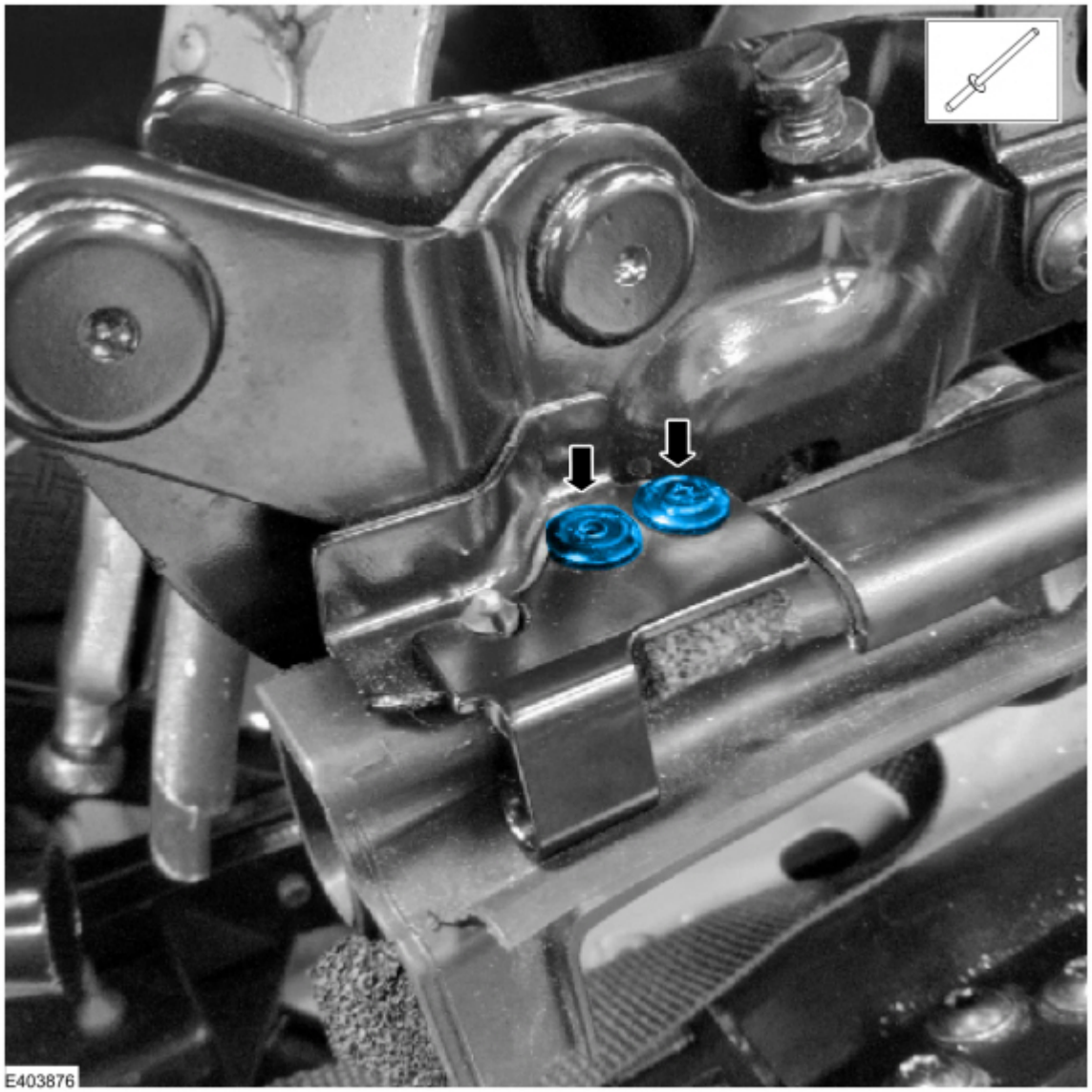
(13). Once the area is smooth, use isopropyl alcohol (minimum 90%) to wipe the frame and new cable guide clean of all contaminants.

(14). Apply Motorcraft® Anti-Corrosion Coating to all bare/exposed metal pieces of the frame and new cable guide. The freshly cut edge and the 2 drilled holes on the frame must not have any bare metal showing.

(15). Place the new cable guide back into position on the frame. Refer to Step 4(8).

(16). Use a rivet gun to install two rivets securing the new cable guide onto the frame. After both rivets are installed, check for cable guide looseness. If the cable guide exhibits looseness, use an 11/64 in. (4.2 mm) drill bit to remove the current rivets and install new ones. If needed, apply Motorcraft® Anti-Corrosion Coating to all bare/exposed metal pieces as a result of drilling. Repeat this step until the new bracket is held tight to the frame. (Figure 13)

Figure 13 - Right side shown, left side similar

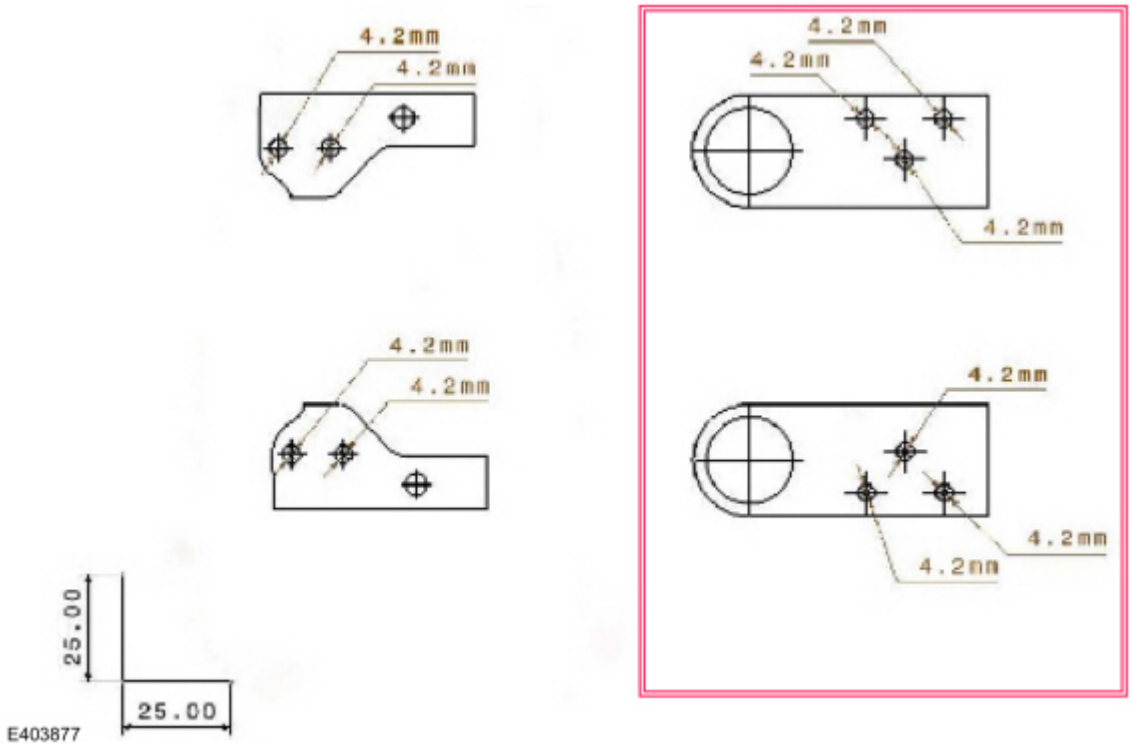


5. Install the front tension cable rear linkage.

(1). Place the soft top in the partially open position. Refer to the Digital Owner's Manual located in the vehicle's center display screen by selecting Features > Owner's Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

(2). Use scissors to cut out the correct template for the rear linkage. Use a razor blade to cut out the large, inner circle. The templates are unique for the left and right sides. (Figure 14)

Figure 14



(3). Place the template on the frame arm located approximately 6-8 in. (150-200 mm) to the rear of the new front tension cable guide. With the inner circle removed on the template, the template will fit onto the hinge of the frame allowing the template to hang in place. (Figure 15)

Figure 15 - Right side shown, left side similar

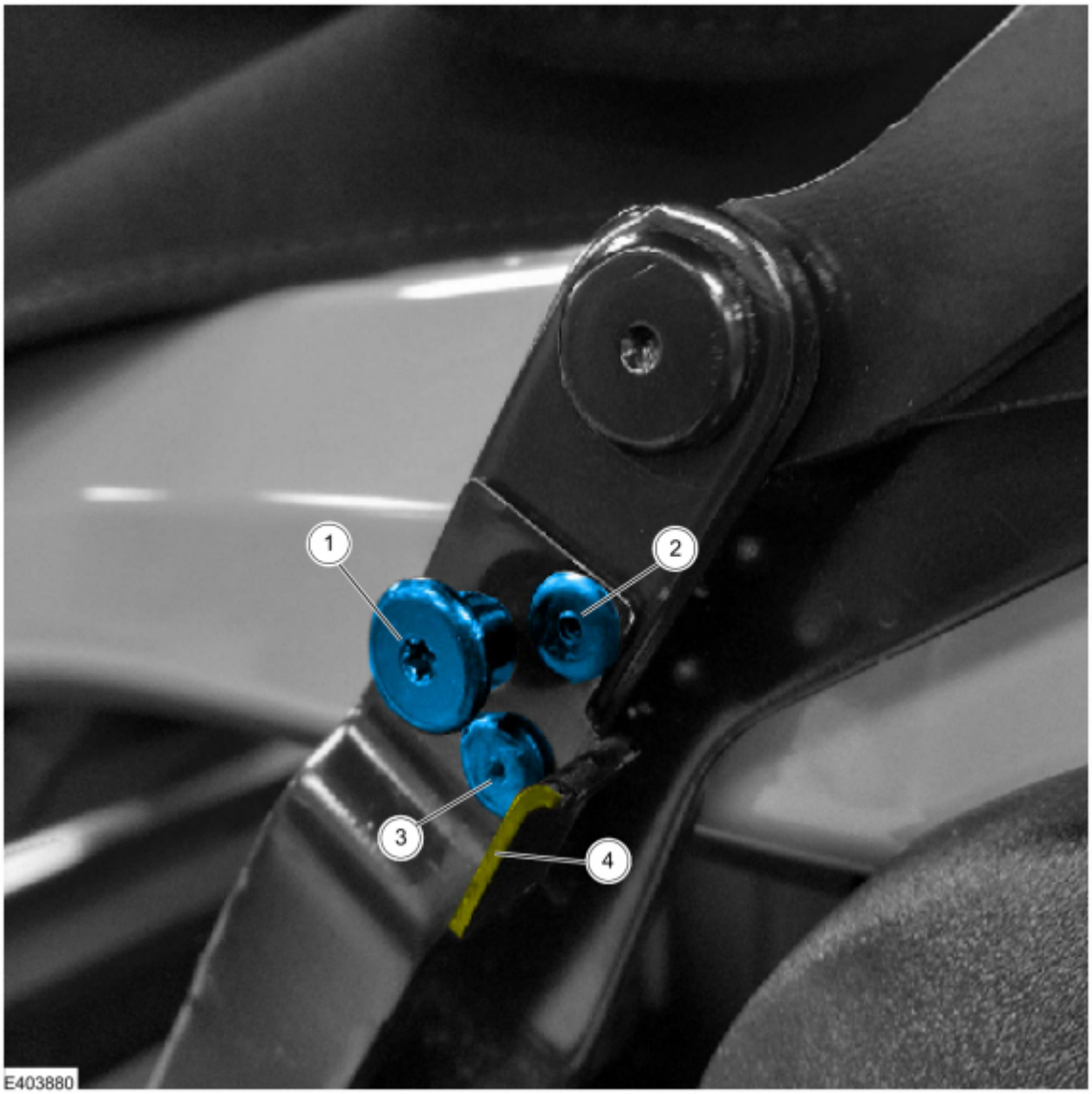
(4). Center the template on the frame. Use a hammer and center punch to mark the 3 locations on the frame to be drilled. (Figure 16)

Figure 16 - Right side shown, left side similar

(5). Remove the template from the frame then use an 11/64 in. (4.2 mm) drill bit to drill holes in all 3 marked locations. While drilling, do not allow the drill bit to contact other frame linkages located directly behind this area.

(6). Use a 5 mm x 0.80 mm tap to create a thread in the upper rear-most drilled hole. (Figure 17, Callout 1)

Figure 17 - Right side shown, left side similar



(7). Clean the drilled locations using a file to remove any rough edges and/or burrs from the surface.

(8). Once the area is smooth, use isopropyl alcohol (minimum 90%) to wipe the frame of all contaminants.

(9). Apply Motorcraft® Anti-Corrosion Coating to all bare/exposed metal on the frame. All 3 freshly drilled holes on the frame must not have any exposed bare metal. The inner threads on the bolt location (Figure 17, Callout 1) do not require application of the Motorcraft® Anti-Corrosion Coating.

(10). Place the new rear linkage in place on the frame so that the ledge which protrudes outward, is located on the bottom right of the bracket (Figure 17, Callout 4). Install the screw (Figure 17, Callout 1) into the threaded hole until it sits flush to the frame, but do not tighten. This screw does not secure the rear linkage, it fits through the hole in the linkage and secures tightly to the frame underneath.

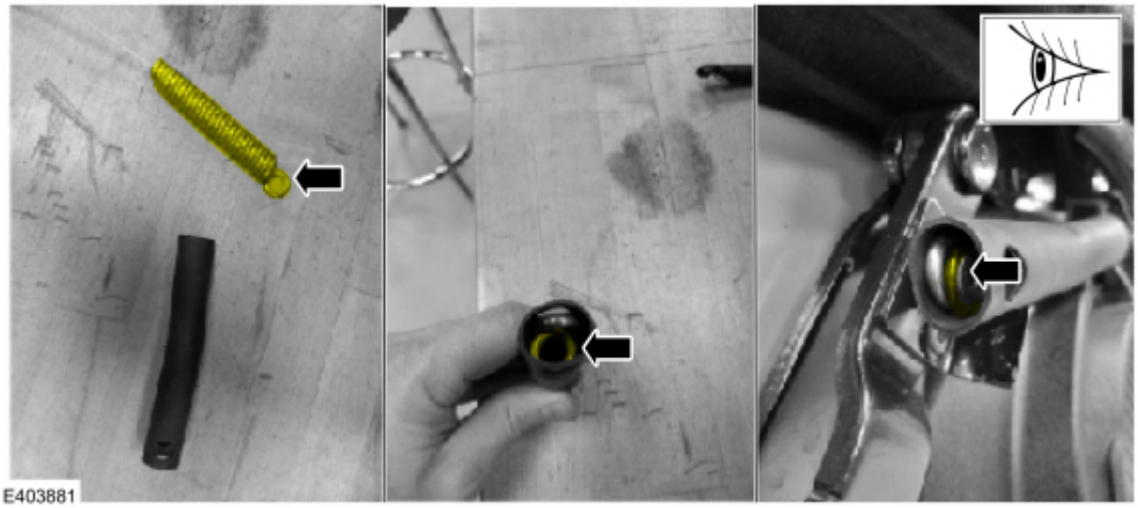
(11). Loosely insert the rivets into the remaining two holes (Figure 17, Callouts 2-3).

(12). Make sure the screw sits flush on the frame (without the linkage interfering) while both rivets are loosely installed.

(13). Use a rivet gun to install the 2 rivets, securing the rear linkage to the frame.

(14). Obtain the new front tension spring assembly and install the rubber boot over the spring. Align the holes in the boot with the loop on the end of the spring. (Figure 18)

Figure 18



(15). Remove the screw then place the new tension spring assembly on the linkage and secure it with the screw, tightening the screw to 88 in-lb (10 Nm). Let the rest of the new front tension spring assembly remain loose at this time.Figure 18 – Right side shown, left side similar

(16). Apply Motorcraft® Anti-Corrosion Coating to all bare/exposed metal on the linkage or frame. The linkage, fasteners and frame should not have any exposed bare metal.

6. Remove the K-seal from the soft top material.

(1). Place the soft top in the closed position, but do not secure the front roof latches. Refer to the Digital Owner's Manual located in the vehicle's center display screen by selecting Features > Owner's Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

(2). Flip the bottom edge of the material over to expose the K-seal. Use a razor blade to carefully score the k-seal along its entire length, about 0.25 in. (7 mm) down from the stitched seam that attaches it. Do not cut through the seal completely. Be careful to not contact the soft top material with the blade. (Figures 19-20)

Figure 19 - Right side shown, left side similar

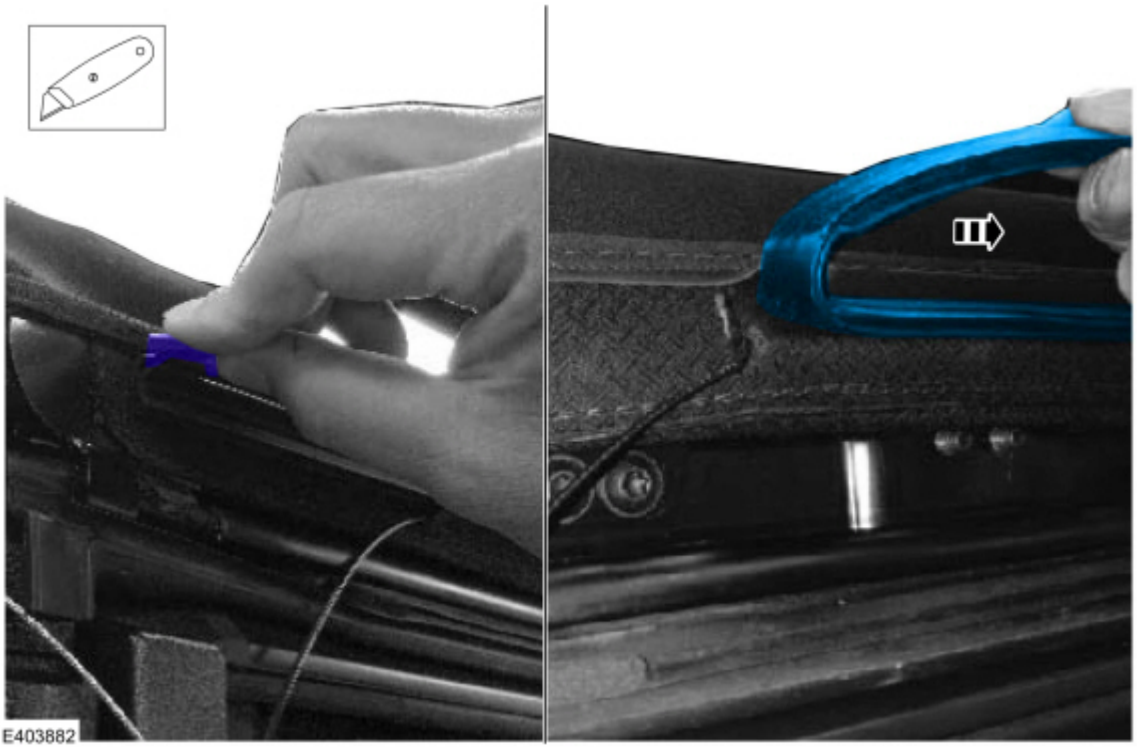


Figure 20 - Right side shown, left side similar. View of successful K-seal removal.

(3). With the entire length of the K-seal scored, pull the k-seal, separating it from the soft top material. The k-seal will tear along the previously scored line. If any large pieces of the seal remain, use the razor blade to carefully score those sections and remove them. (Figures 19-20)

7. Create a new tension spring entry point in the soft top material.

(1). Flip the bottom edge of the material over, just above the c-pillar, to expose the tension cable entry point. Measure 2.5 inches (65 mm) rear of the current cable entry point. Use a grease pen to mark a vertical line at this point. (Figure 21)

Figure 21 - Right side shown, left side similar

(2). Use a razor blade to cut a new vertical entry point at the location marked in the previous step. This entry point must be similar in size to the original entry point. Be sure not to damage the stitching (above and below the

cutting location) or cut through the hard plastic surface located just behind the fabric. Do not use a box cutter or similar tool for this step. These tools allow for too much pressure, resulting in too deep of a cut. (Figure 22)

Figure 22 - Right side shown, left side similar

8. Install the new front and rear seal retainers (4 total). Refer to the Workshop Manual, Section 501-18A, Removal and Installation > Soft Top Seals and Retainers. During replacement, transfer the original seals onto the new seal retainers, apply Motorcraft® Threadlocker to all seal retainer fasteners. Completely remove and discard the original tension cable assembly from the soft top material.

9. Install foam onto the soft top material.

(1). Flip the bottom edge of the material over, just above the C-pillar, to expose the same area addressed in Step 7.

(2). Apply Gorilla® Fabric Glue to the material fabric shown in Figure 23. Do not apply glue on the new entry point created in Step 7. It is not necessary to apply glue to the hard plastic section rear of the application area.

Figure 23 - Right side shown, left side similar

(3). Grab one foam strip (Figure 24, Callout 2) and peel the paper backing off, exposing the adhesive underneath. Install the foam onto the material. The foam must be installed just behind the new entry point created in Step 7. (Figures 24-25)

Figure 24

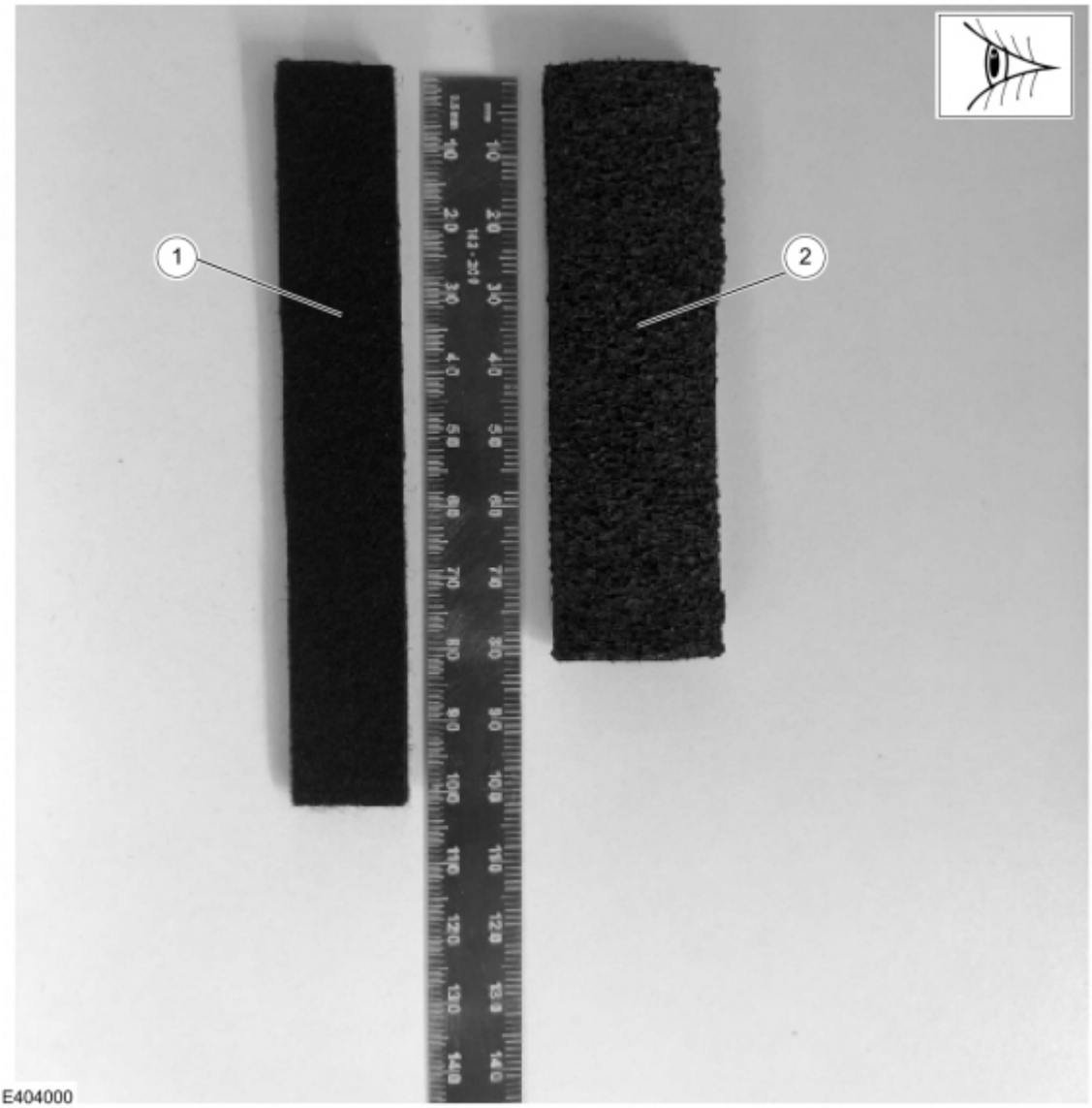
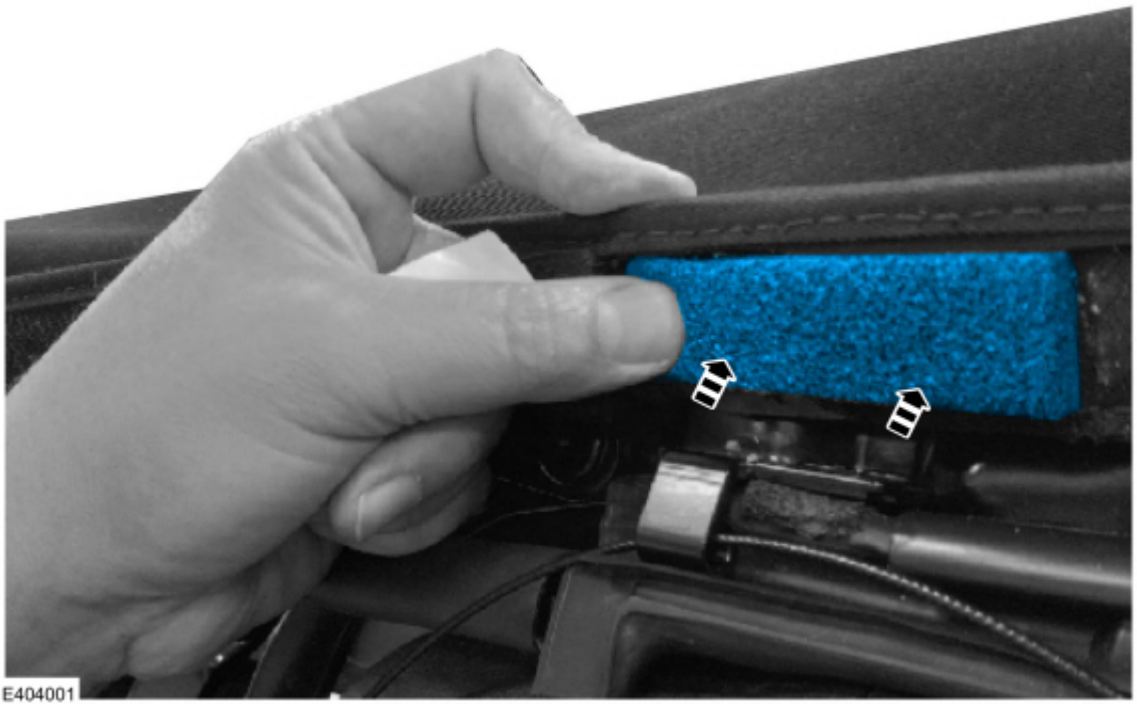


Figure 25 - Right side shown, left side similar. Successful foam installation shown.

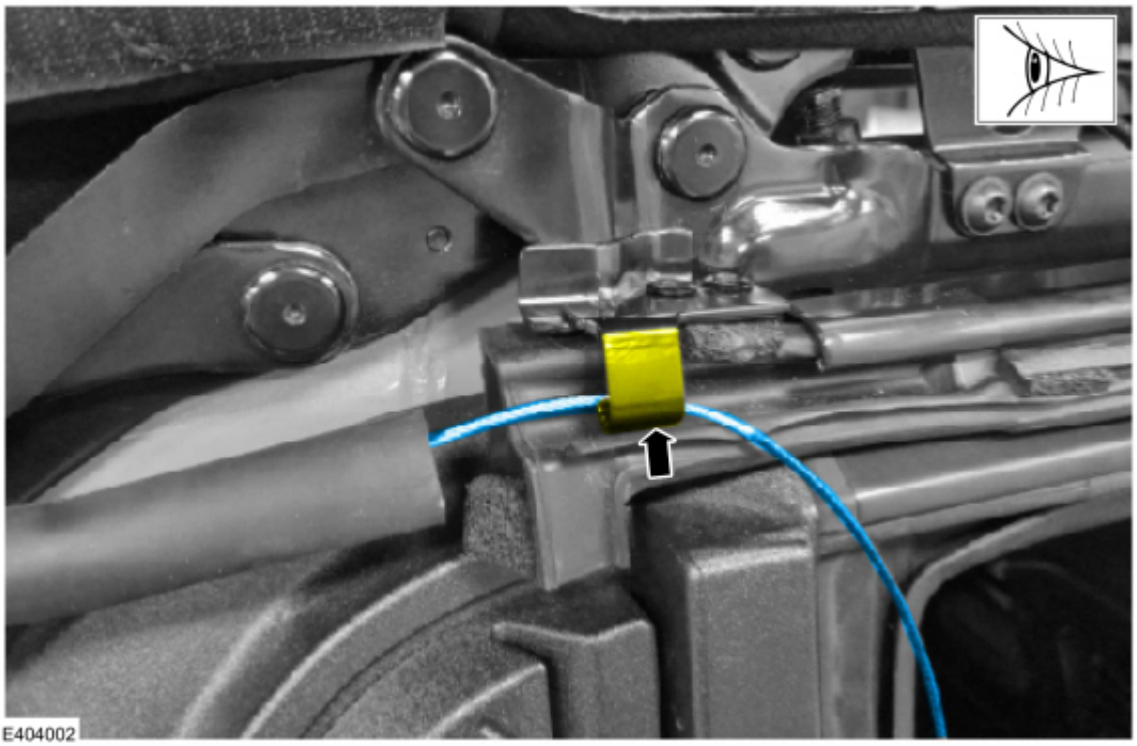


10. Complete the installation of the new tension cable.

(1). Place the soft top in the closed position, but do not secure the front roof latches. Refer to the Digital Owner's Manual located in the vehicle's center display screen by selecting Features > Owner's Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

(2). Route the new tension spring cable through the new cable guide loop. (Figure 26)

Figure 26 - Right side shown, left side similar

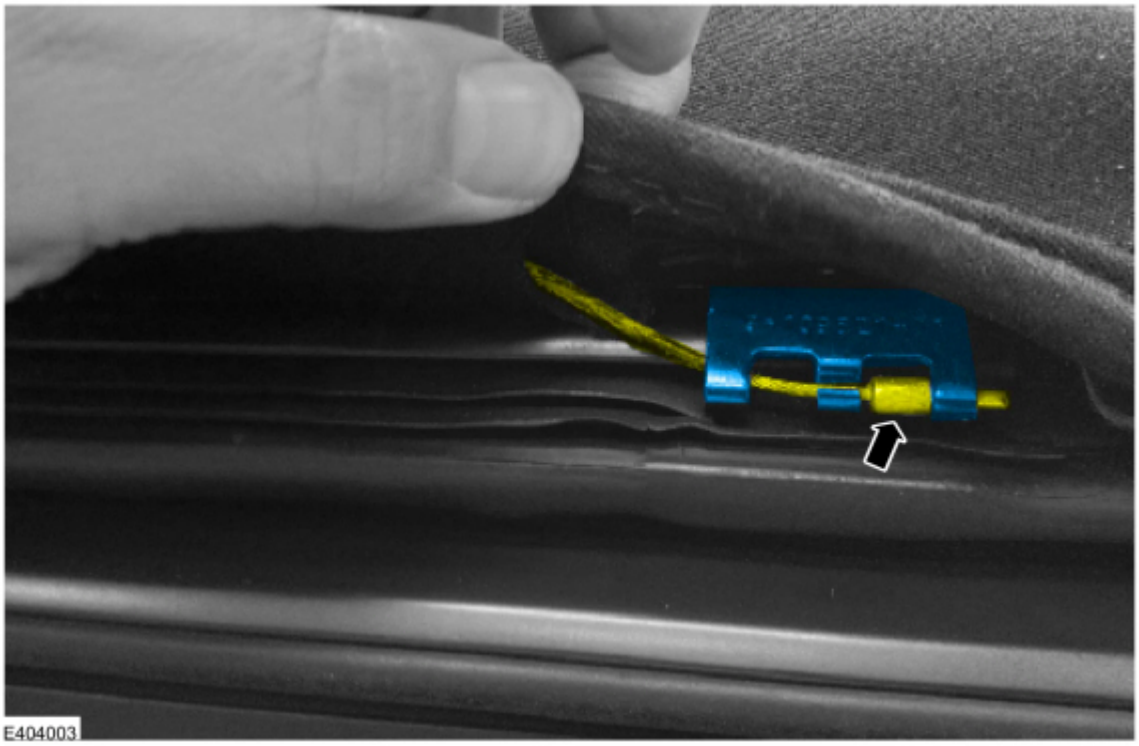


(3). Feed welding wire or fish wire through the soft top material starting at the front tension spring opening (above the A-pillar) and exiting out of the new entry point (located above the C-pillar) that was created during Step 7.

(4). Attach the new tension spring cable to the welding wire or fish wire and pull it through the soft top material until it comes out at the opening near the A-pillar.

(5). Attach the front tension cable lobe to the front bracket. (Figure 27)

Figure 27 - Right side shown, left side similar



(6). Install a section of clear tape over the front tension cable bracket. (Figure 28)

Figure 28 - Left side shown, right side similar

11. Install felt onto the rear quarter window.

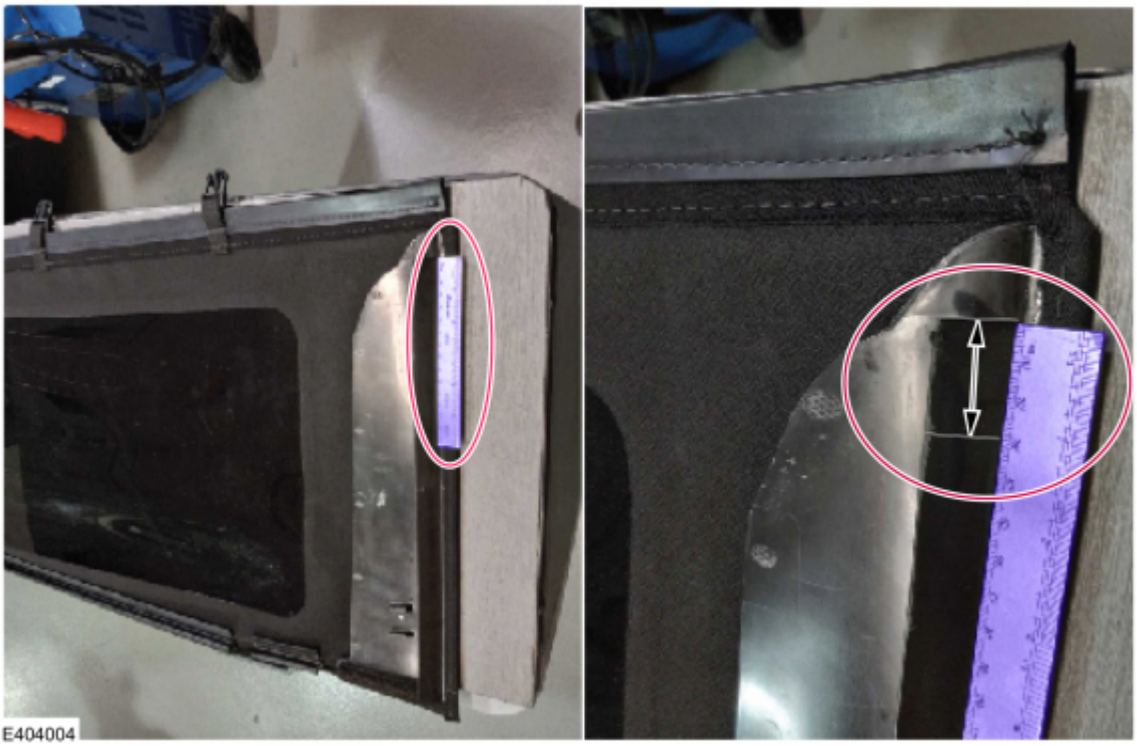
(1). Place the quarter panel window assembly upside down on clean, dry surface.

(2). Locate the hard plastic channel on the front/inner section of the rear quarter window. This hard plastic section is about 1 in. (25 mm) wide and is used to secure the window to the C-pillar.

(3). Use isopropyl alcohol (minimum 90%) to wipe the entire plastic channel clean of contaminants.

(4). Measure 0.6 in. (15 mm) down from the top of this section. Use a small piece of tape to mark this line. (Figure 29)

Figure 29 - Left side shown, right side similar



(5). Grab one felt strip (Figure 24, Callout 1) and peel the paper backing off, exposing the adhesive underneath. Install the felt on the previously marked line, keeping it centered on the channel. (Figure 30)

Figure 30 - Left side shown, right side similar. Successful foam installation shown.

12. Install foam on the C-pillar.

(1). Place the soft top in the fully open position. Refer to the Digital Owner's Manual located in the vehicle's center display screen by selecting Features > Owner's Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

(2). Locate the section on the C-pillar where the foam strip will be installed. Refer to Figure 31. Use isopropyl alcohol (minimum 90%) to wipe this area clean of contaminants. Once clean and dry, grab one foam strip (Figure 24, Callout 2) and peel the paper backing off, exposing the adhesive underneath. Install one foam strip as shown in Figure 31.

Figure 31 - Right side shown, left side similar. Successful foam installation shown.

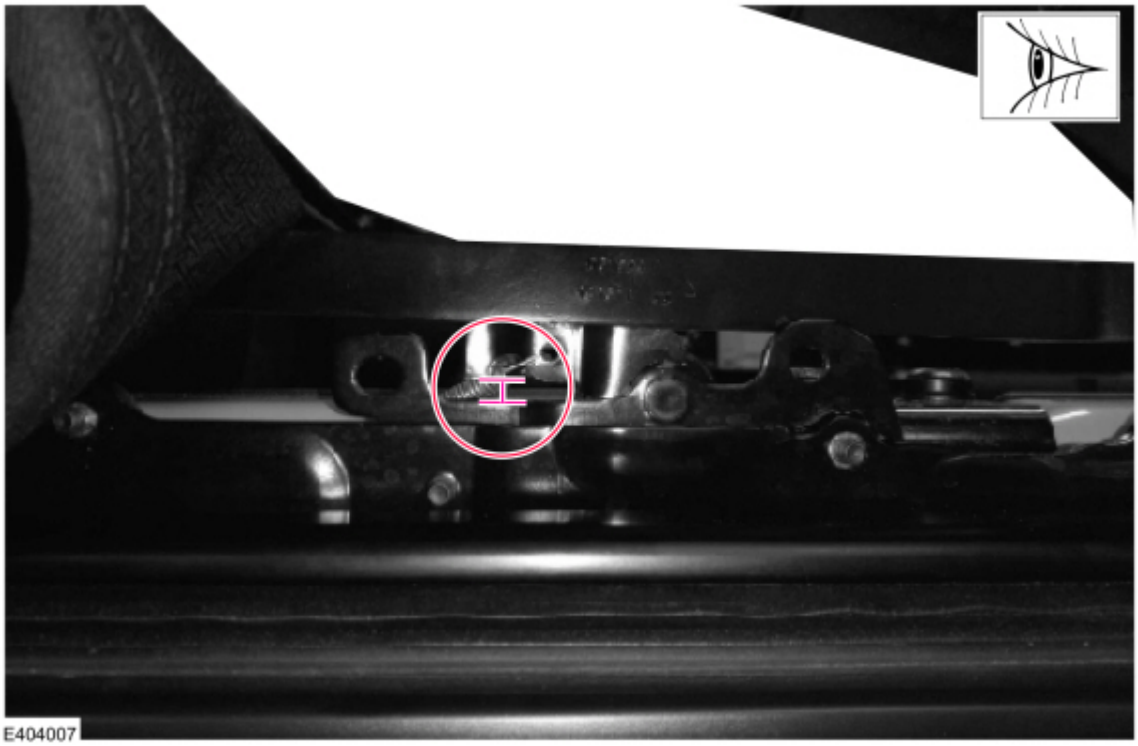
13. Perform Steps 1-12 of this article on the opposite side of the vehicle. Proceed to Step 14.

14. Inspect the position of the mid-latch and bracket.

(1). Place the soft top in the fully open position. Refer to the Digital Owner’s Manual located in the vehicle’s center display screen by selecting Features > Owner’s Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

(2). Access the soft top frame mid-latch, located on the right side of the vehicle (located above the c-pillar). (Figure 32)

Figure 32 - Right side shown.



(3). Measure the right-side mid-latch gap as shown in Figure 32.

15. Does the right-side mid-latch gap measure 0.08 in. (2 mm)?

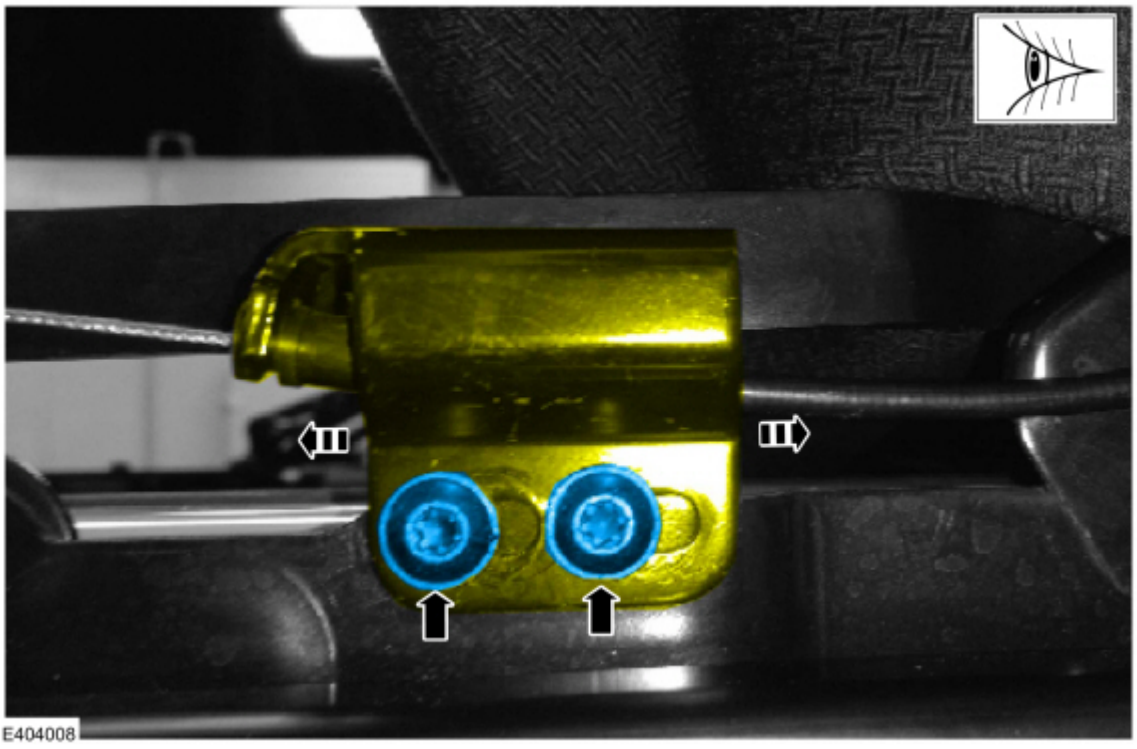
(1). Yes - proceed to Step 17.

(2). No - proceed to Step 16.

16. Adjust the mid-latch and bracket assembly.

(1). Locate the left side mid-latch. (Figure 33)

Figure 33



(2). Adjust the left-side mid-latch by loosening its 2 bolts and sliding the latch assembly forward (to increase the gap) or rearward (to decrease the gap). Perform this adjust to obtain the required gap of 0.08 in. (2 mm) then

tighten these bolts to 88 lb-in (10 Nm). (Figure 33)

17. Place the soft top in the fully closed position. Refer to the Digital Owner’s Manual located in the vehicle’s center display screen by selecting Features > Owner’s Manual > Removable Vehicle Components > Removable Soft Top > Opening and Closing the Soft Top.

18. Inform the customer that the new tension cables increase the amount of effort required to completely close and latch the soft top roof.
