Chapter 35 - Convertible Top Installation (Video Clip 35)

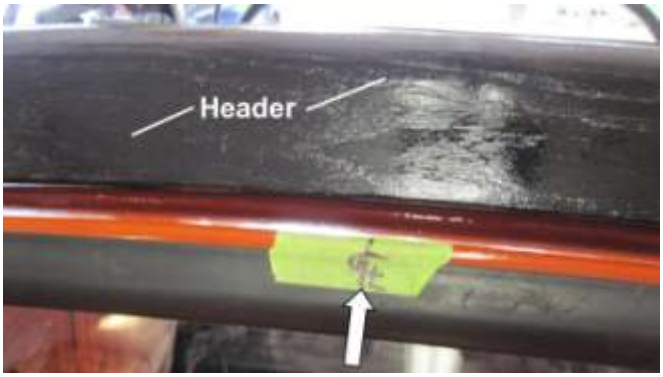
1312. The new (1) top, (2) padding, and (3) liner was purchased from M & T Manufacturing. Their instructions were used for installation which were written in the 60's and cover all beetles and the black and white photographs aren't up to par so I have better photographs and discuss only my 1970 model in this simplified version.

1313. Oil all moving parts of the top frame and lower all windows.

1314. Make sure the frame is centered on the body.

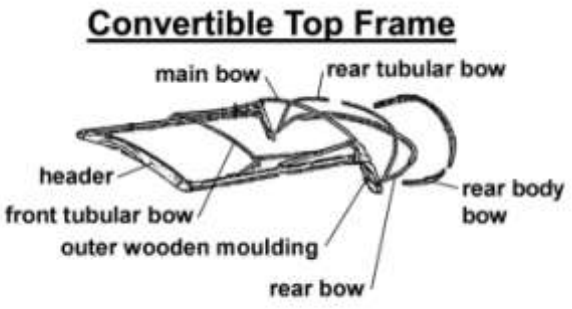
1315. Make sure that the header is 6-8mm in front of the windshield frame because the top linkage curves slightly, after the top cover has been fitted and tensioned, and this pulls the header back slightly.

1316. Cover the car body so that the spray adhesive will not get on the newly painted surface.



1317. On the front of the car mark the center of the top, by marking the body centerline above the front window on a piece of tape, as shown.

1318. On the rear of the car mark the center of the top, by marking the body centerline above the hood on a piece of tape, as shown.



1319. The hardest part to understand in the M & T instruction was the frame structure nomenclature, since these parts are not in your everyday vocabulary. The detail at the left should help.

1320. Same frame nomenclature as the previous detail, but shown on the VW frame.

Installing Leatherette:

1321. Fold the top back and add paper coverage to protect the body and spray D12 adhesive on the back side of the header. From step 1340 below you can see that I used Carmie 313 adhesive.

1322. Cut a strip of leatherette as shown, and spray the back side with adhesive.

1323. When the adhesive becomes tacky place the leatherette strip on the back side of the header as shown.

Note: Trim the leatherette as needed for the ends and around the pins.

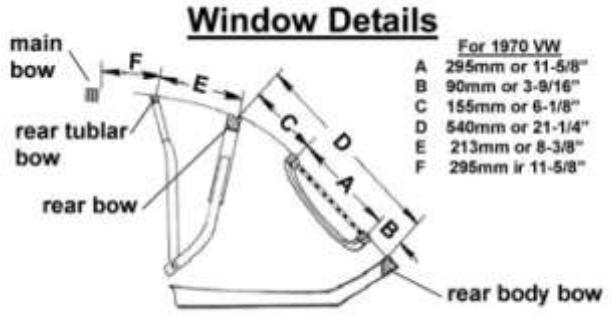
1324. Cut a smaller strip of leatherette as shown and spray the back side with adhesive and apply to the bottom side of the header as noted above. Again, trim, as needed, around the edges.

1325. Locate the outer wood molding on the main bow.

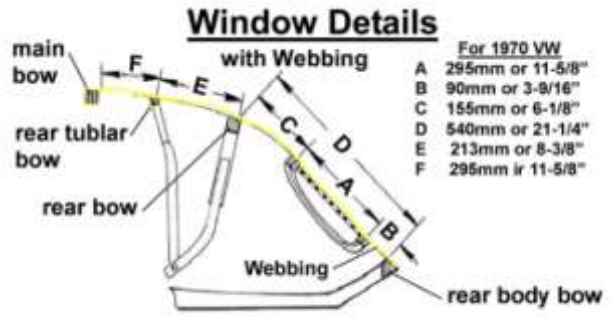
1326. Cut a piece of vinyl about 4" x 18" and spray adhesive on the back of the vinyl and the front face of the outer wood molding. Allow about 5 minutes for the adhesive to become tacky and apply the vinyl as done before. Trim and remove any excess material.

1327. The outer wood molding after the vinyl has been applied.

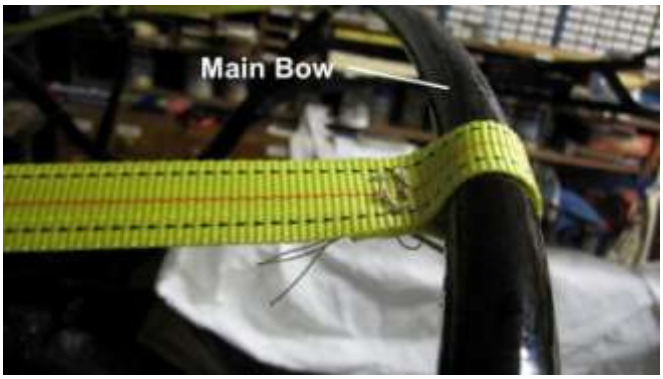
Note: this is not a factory item, but I cover the wood to make it look better.



1328. For a 1970 VW the window and frame dimensions are shown in the detail to the left. Use a small wire, in the center of the top to tie each unit and achieve the proper dimensions prior to installing the webbing below.



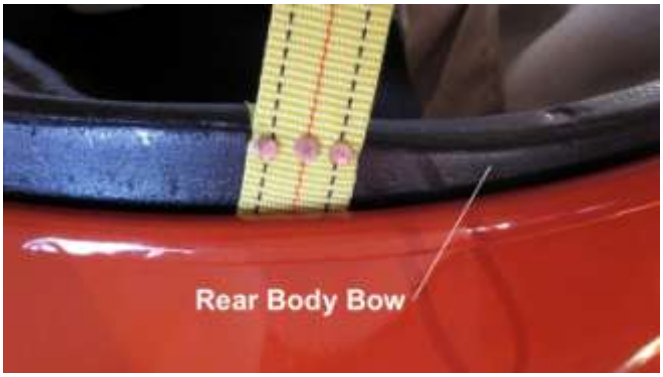
1329. An alternate view of the window detail with webbing shown.



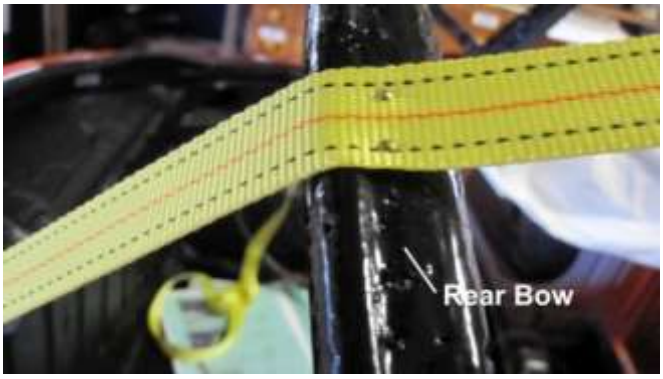
Installing Webbing Straps:

1330. Close the top and fasten the catches. Wrap a piece of webbing around the main bow, as shown, and hot glue the ends together.

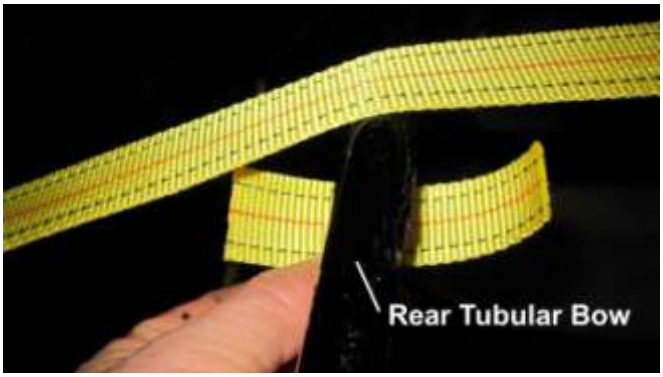
Note: Do not glue the webbing to the bow since it will need to rotate. Glue it to itself, and sew the webbing, as shown.



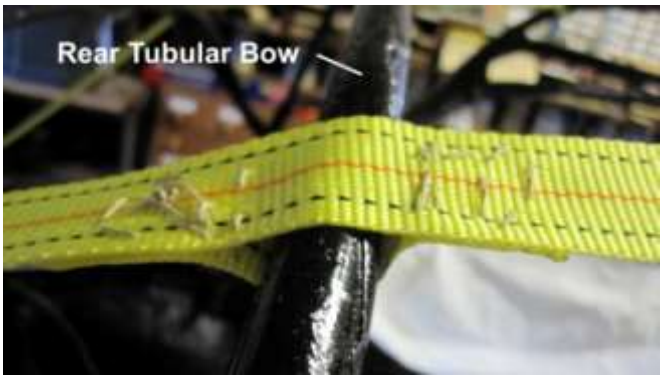
1331. Pull the webbing across the rear tubular bow, rear bow (webbing in the grove) and down to the rear body bow. With brass or copper tacks, tack the webbing to the rear body bow as shown, making sure the window and frame dimensions noted above are maintained.



1332. Move up to the rear bow and tack it into place, making sure the webbing is in the small groove in the rear bow and window and frame dimensions are maintained.



1333. Cut a piece of webbing about 3" long and hot glue it to the webbing as shown. Again do not get hot glue on the bow since the webbing will need to rotate.



1334. Sew the two pieces of webbing together with carpet thread and a sharp needle, through the hot glue portions.

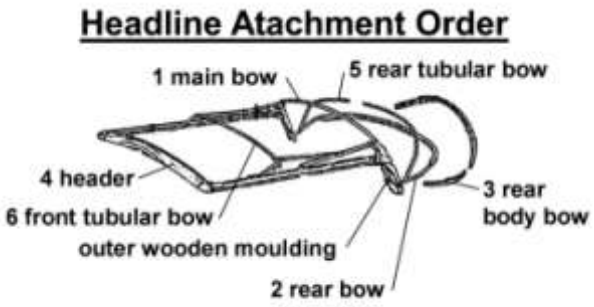
1335. View of the rear after the webbing has been installed on both sides.

1336. The spacing from the center of the rear body bow to the webbing is 450mm or 17-11/16 inches, as shown.

Work effort this section - 6 hours

Installing Headliner:

1337. The headliner should be attached in the order shown in the detail at left.



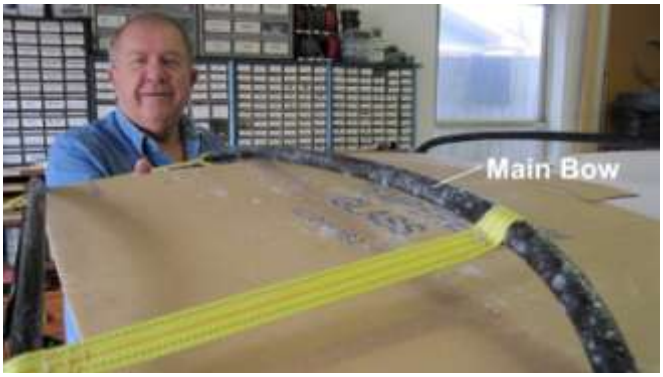
1338. After centering the headliner, temporary tack the headliner to the front bow, through the seams to prevent tearing.

1339. Attach the headliner screw to the main bow on each side as shown.

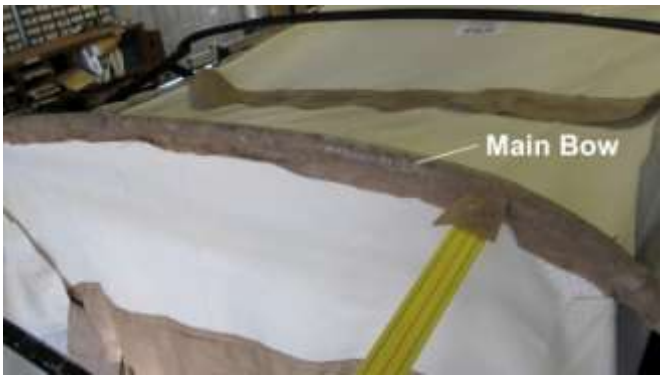
"Carmie 313"

Upholstery Adhesive

1340. The upholstery adhesive as shown was used to spray each bow, one at a time and both sides of the attachment flap, on the top side of the liner. The liner then was pulled tight and uniform along the underside of each bow utilizing the attachment order shown above. *Note it is much easier with two people.*



1341. Vic Diabin after the main bow (1) has been sprayed with adhesive. Cardboard was used to keep from getting the adhesive on the back side of the liner since we were afraid the adhesive would show through the pinholes in the liner.

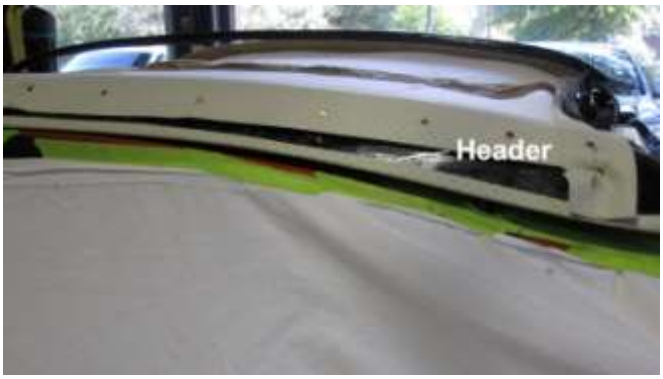


1342. Main bow (1) flap attached..

1343. The rear bow (2) ready for attachment.

1344. The rear body bow (3) after attachment.

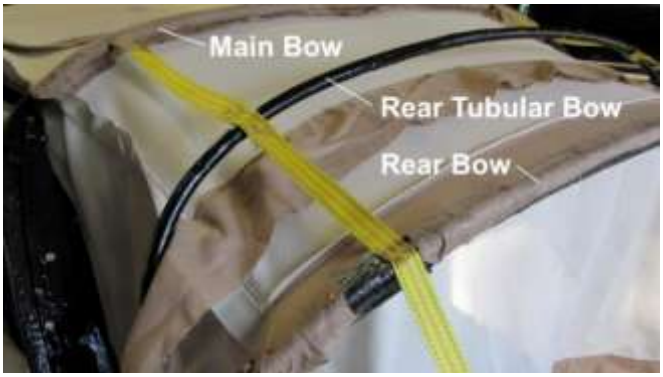
1345. The headliner was pulled uniformly and a first row of tacks were installed on the header (4).



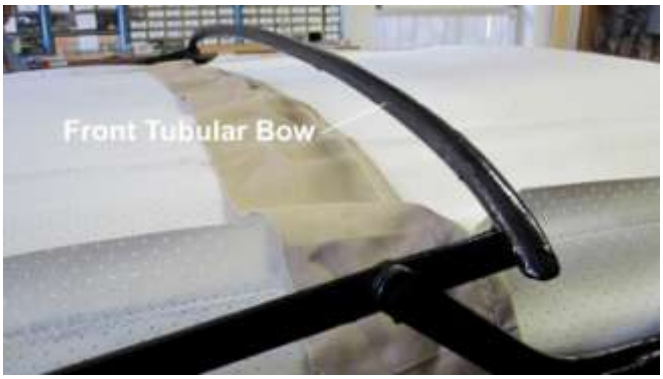
1346. The header (4) after the first row of tacks have been installed.

1347. The header (4) after the second row of tacks have been installed.

1348. The header (4) after excess liner was cut off.



1349. The rear tubular bow (5) ready for attaching.



1350. The front tubular bow (6) ready for attachment.

1351. The front tubular bow (6) after attaching and after tucking the flap material tight on the bow.

Note the headliner should hang down approx. 10mm below each roof frame.

1352. View of headliner front.

1353. View of the headliner rear.

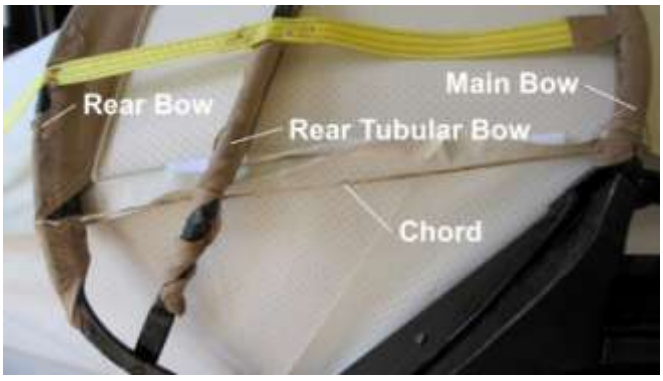
Work effort this section - 3 hours

1354. Cut two pieces of vinyl 4" x 18", as shown, and spray the back side with adhesive. Also carefully spray the top frame area with adhesive.

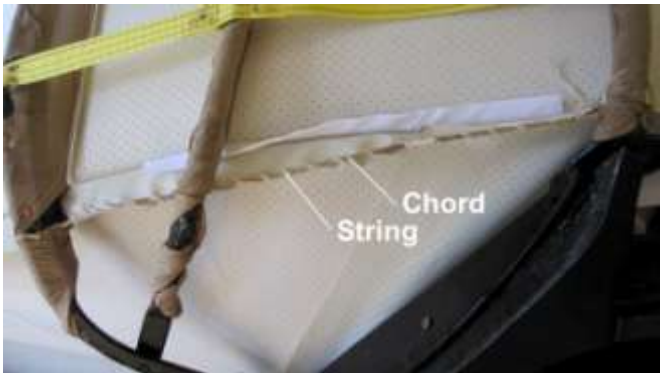
1355. Slowly apply the vinyl covering to the frame and rub out any air pockets.

1356. Frame side shown with vinyl cover attached.

1357. Frame bottom shown with vinyl cover attached.

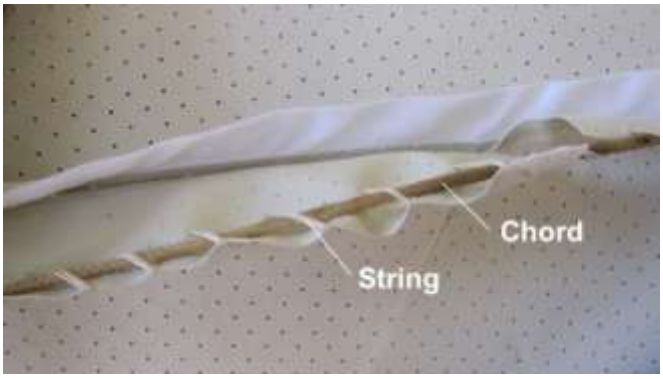


1358. Tie a length of 4mm diameter chord to the main bow and loop it around the rear tubular bow and tack the end to the rear bow.



1359. Sew the chord to the headliner side seam with the chord/string under tension.

Note: I sewed through the existing holes in the liner.



1360. Close up of the chord and string

Installing Rear window Frame:

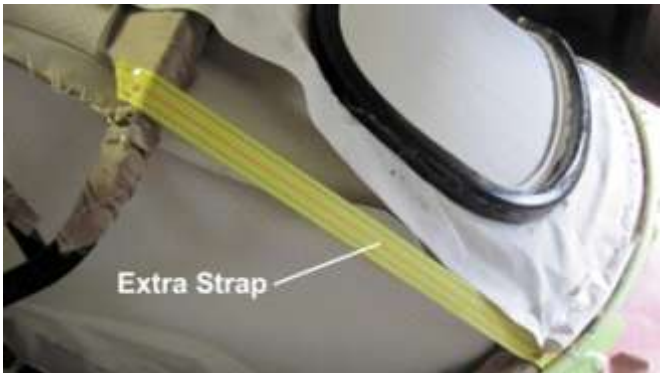
1361. Screw and hot glue the window insert to the window frame.

1362. Cut a piece of netting material 38" wide x 26" high and locate the window frame as shown. Glue the window frame to the attachment cloth.

1363. Locate the attachment cloth and window frame in position on the rear top as shown. Make sure the B & C Dimensions are maintained accordingly to step 1328 above. Use spray adhesive on the rear body bow and the rear bow to attach the attachment cloth and widow frame.

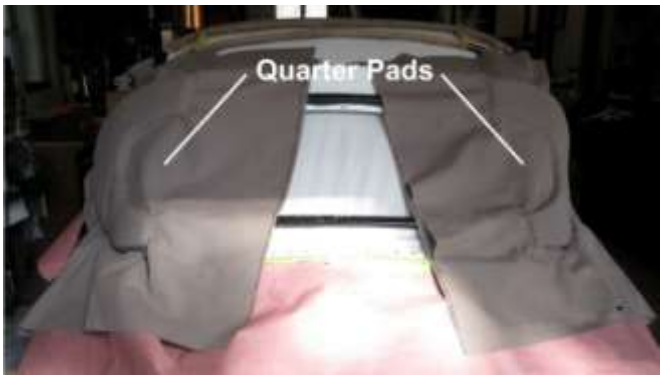
1364. Fold the corners of the attachment cloth over as shown and tack to the rear body bow.

Work effort this section - 6 hours



1365. Add an extra strap on each side from the rear bow to the rear body bow for extra protection, as shown.

Installing the Top Padding:



1366. Lay out quarter pads and arrange them for best fit approx. in the position, as shown.

1367. Glue and staple the quarter pads to the rear body bow and the rear bow. Cut out the window frame and along the rear body bow.

1368. With the waste material, cut out a fill in piece and glue and staples, as shown.

Note: if you can find stainless steel staples, then use them.

1369. A view of the rear quarter padding installed.

1370. A foam filler material was added to the interior of the side panel.

1371. Side panel after filler material was added.

1372. Lay out the top pad on a flat surface and wrap the covering around the foam, then glue and fold.

1373. Lay out and position the top pad on the frame. Glue and staple to the main bow and cut off any excess material.

1374. Then pull the top pad tight and staple to the header.

1375. Apply a second row of staples to the header then cut the waste material off.

1376. A rear view of the padding.

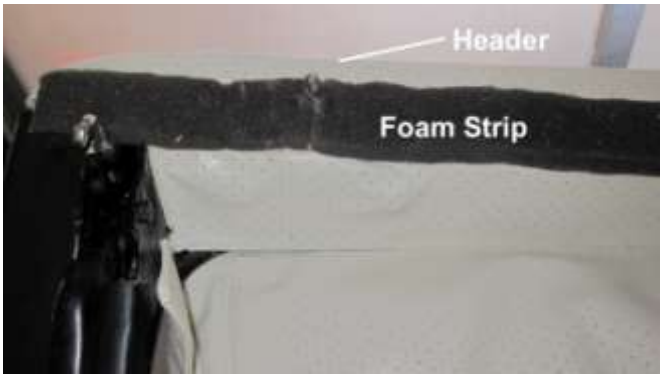
1377. The right side panel shown after sewing to the top panel.

1378. The left side panel shown after sewing to the top panel.

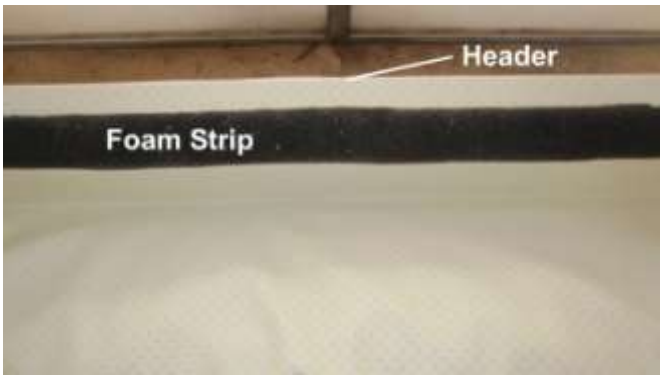
1379. A rear view of the padding.

1380. Lay the new fabric top over the padding and knock off a few days for New Year.

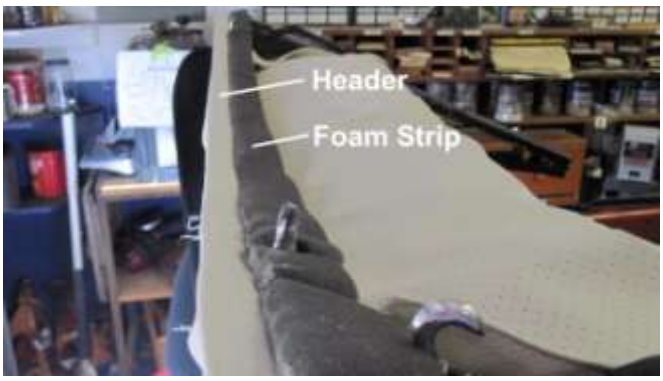
Work effort this section - 6 hours



Installing the Foam Strip on Header:
1381. Cut the foam strip to length and perform a trial fit and then glue the foam to the header. Wait about 5 minutes for curing time, then press the foam strip into place as shown.



1382. A view of the foam strip glued in place.



1383. Looking down the length of the header with the foam strip glued in place.

Liner cut out for Rear Window:

1384. Mark a cut line inside the rear window about 1/2" from the window frame edge.

1385. Carefully cut along the cut line with a sharp razor blade.

1386. With a pair of scissors, snip the corners, as shown.

1387. Spray glue on both the edge of the window frame and the liner fold up area.

Note: Be careful not to get the adhesive everywhere.

1388. Carefully fold the liner over the window frame as shown. Start in the center of the window and work your way out symmetrically.

1389. Liner folded over and glued to the window frame.

1390. Rear window shown with the liner cut out and folded over the window frame.

1391. Put duct tape over the seam and nail/staples to protect the top.

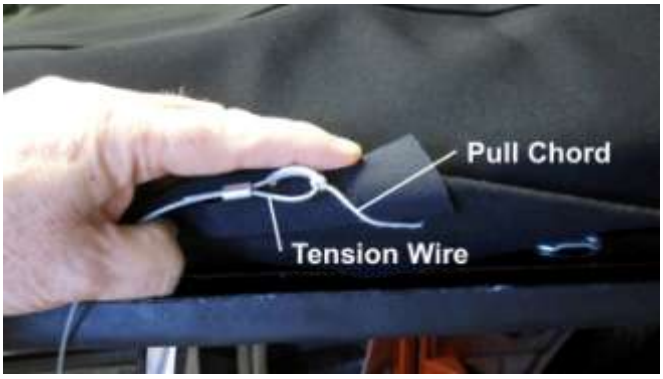
Note: The AU duct tape is suggested but not a requirement.

Top Cover Installation:

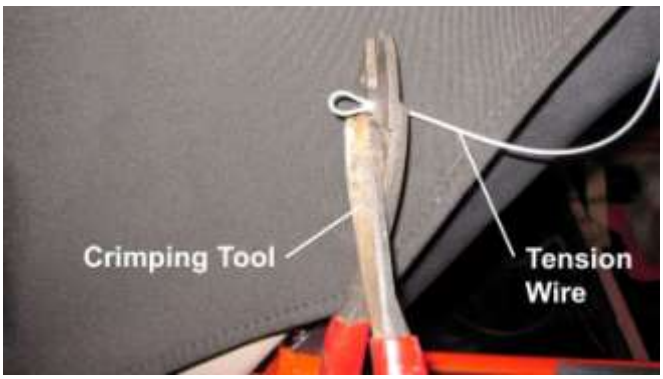
1392. Rough fit the top pocket over the header.

1393. Carefully check the fit as you go, especially at the corners.

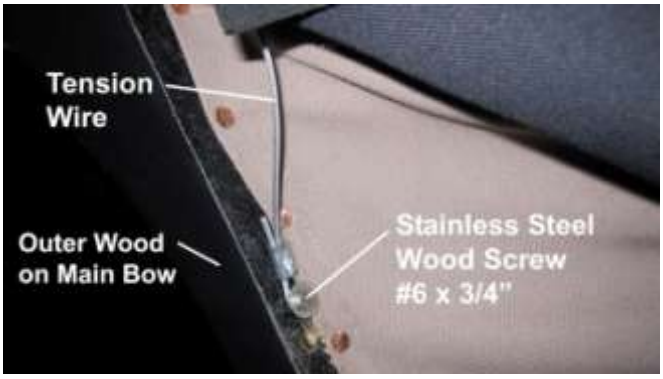
Note: The green tape is temporary to protect the paint from the top pin.



1394. Connect the top pull chord to the tension wire in the front and pull the wire/cable through to the rear of car.

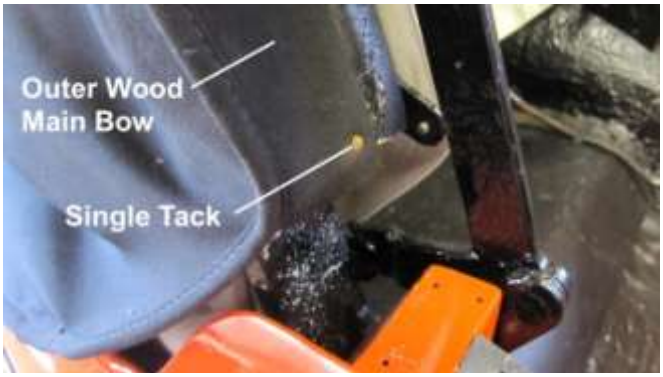


1395. With a crimping tool crimp the end of the tension wire/cable.



1396. Fasten the tension wire/cable to the outer wood on the main bow with a stainless steel wood screw as shown. Follow the same procedure for the tension wire on the opposite side of the car.

Work effort this section - 3 hours

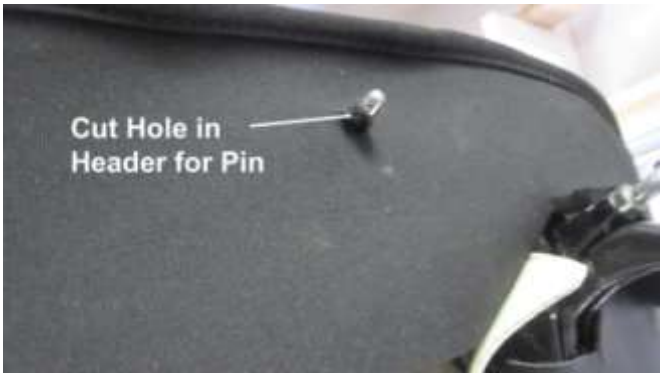


1397. Secure the top cover on the outer wood molding on the main bow, with a single tack, on the lower edge for both sides. Fold the top down and check for fit.

1398. Front view of the top.

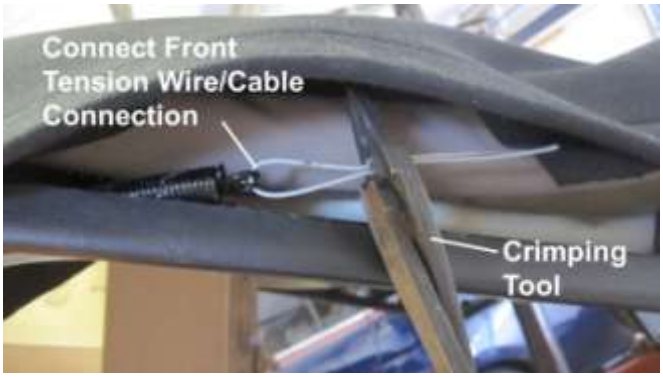
1399. Rear view of the top.

1400. If satisfied with top fit, then fold the top back and add additional tacks, while keeping top tight on the wood edge.



1401. Raise the top again and cut a hole for the header pin.

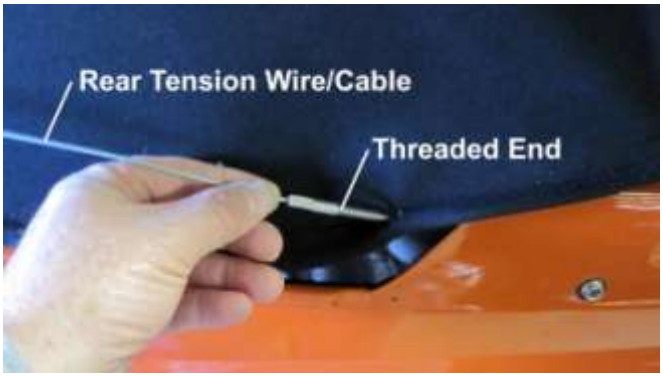
1402. Cut out area for the latch connection.



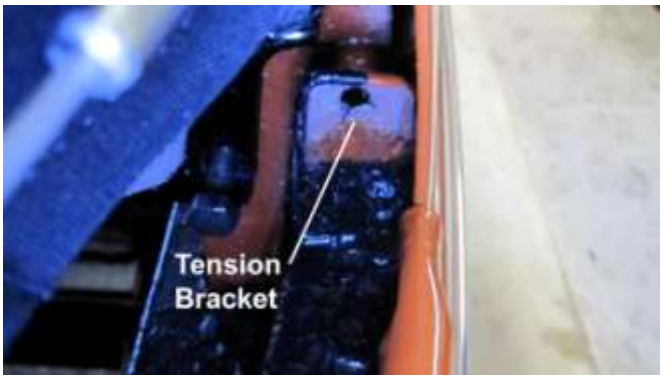
1403. With the top raised approximately 12 inches, connect the front tension wire/cable to the spring. Use a crimping tool to fasten the cable tie.

Work effort this section - 3 hours

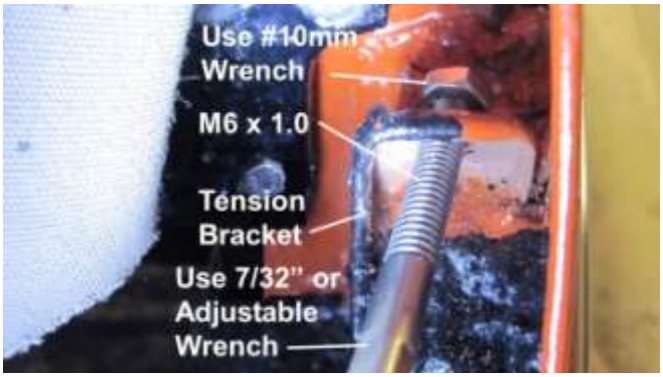
1404. If weather permits, move the car outside in the sun for a few hours prior to moving to the next step.



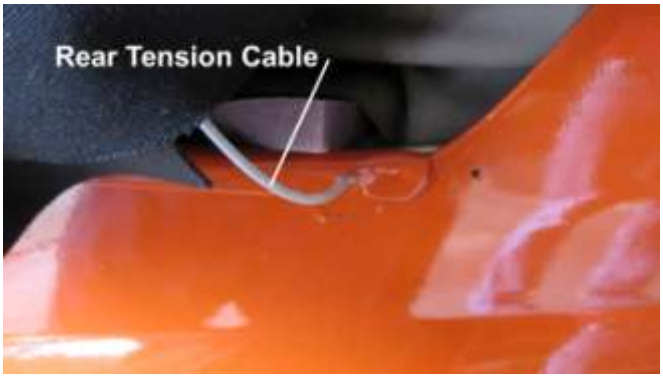
1405. Insert the tension wire/cable through the holes in the top cover on each side of the car and insert the threaded end of the tension bracket through the hole in the body as shown below.



1406. The tension bracket, shown prior to inserting the tension wire/cable.



1407. Tension wire/cable inserted into the tension bracket. Use wrenches shown to tighten each side of the cable uniformly.



1408. Tension wire through top and through hole in body as shown.

1409. Pull the top cover beading down so that it is level with the "U" channel.

1410. Starting on one side press the top cover and tension wire/cable into the "U" channel.

1411. One person presses the beading and the tension wire into the "U" channel and another person holds the side seam in the top cover in line with the cut-out in the "U" channel.

Tip: Use a bungee cord as a third hand to keep the tension wire taut.

1412. Prior to final tighten, close the top and tap the bead into position. The wire should not be visible from any position and there should not be any creases in the top.

1413.Top installation complete.

1414. Side view of completed top.

1415. Rear view of completed top.

Note the tension wire should not show.

Work effort this section - 3 hours

Work effort this chapter - 30 hours

Total hours - 578

1416. Rear/side view of completed top.