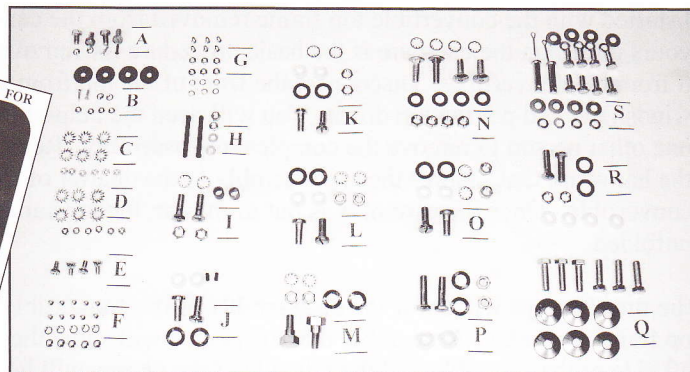




Convertible Top Assembly – 1959 & 1960 Disassembly, Restoration, and Assembly

By Denny Williams

Photos by Denny Williams



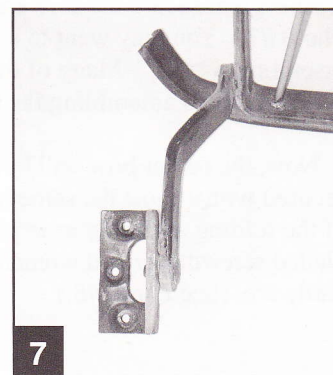
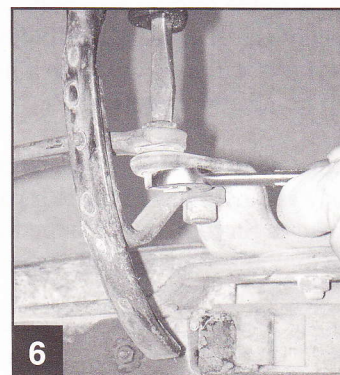
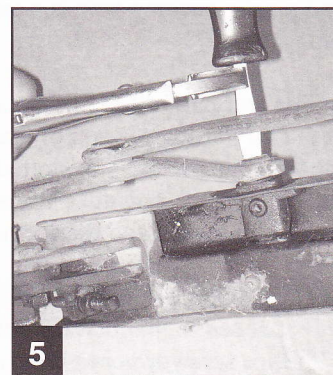
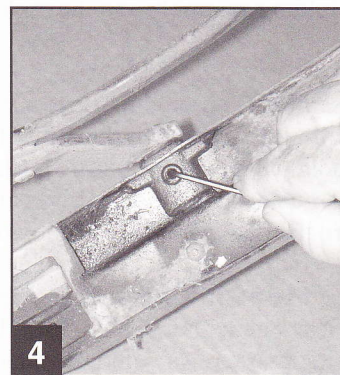
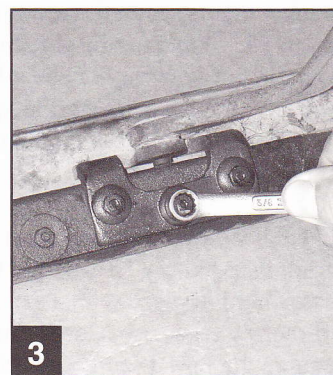
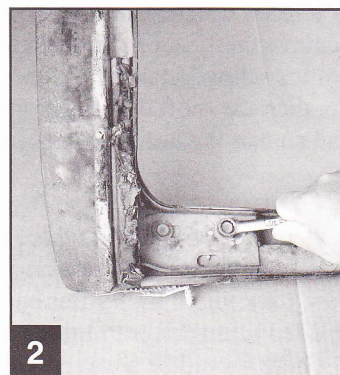
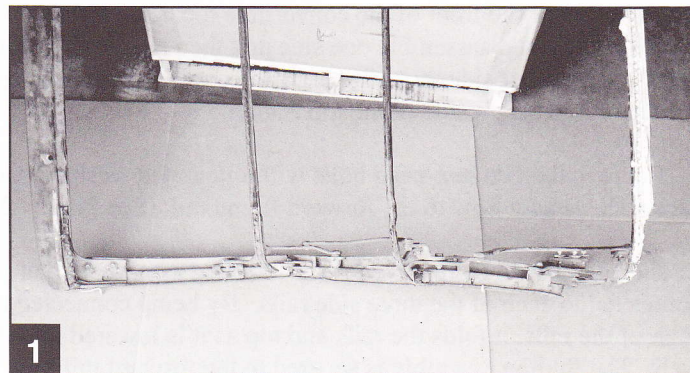
Go to a car show and look at convertible top frames. If you look closely, you will see a great variety of restorations of parts and hardware. A couple of years ago a convertible lost a First Place by 2 points at one of our conventions because the correct hardware was not available at that time. The car was missing many hardware pieces and many of the bolts and screws were from the local hardware store. You cannot find all of the parts you need and what you can find does not look good or original. Well, that is no longer true. There is now available a great hardware kit from Shafer's Classic Reproductions that contains all of the hardware required to restore and install the 1959/1960 convertible top frame. Order **Part #40-52** for this great Shafer's kit! Using this kit will save you time, money and you will end up with a great looking top frame. The hardware for the top frame is very complicated and confusing, thus it is so helpful that Shafer's has produced this hardware and bagged it in such a straightforward way.

This article will show and explain the disassembly, restoration, and re-assembly of the 1959/1960 convertible top frame. If the top frame has been restored, but does not have the correct hardware, you could follow this article and replace the old hardware with new hardware without removing the top assembly.

This introduction will tell you the basic procedure and give you some very helpful hints that will save you time and headaches! Make a rough sketch for the top assembly for future reference, but most likely, everything you will need to know will be in this article. As you disassemble the top, mark as many of the parts as possible. I suggest using an etching tool to mark as "left" and "right" the main pieces of the top assembly. You could mark the rails where the roofrail weatherstrip will cover the marks when the weatherstrip is installed. It is sooo easy to get pieces mixed up and you can waste a lot of time figuring out which is the correct piece you need for a particular assembly. Also, bag and tag the old hardware.

There are 12 main parts of the convertible top frame. The following is a list of those parts and what names they will be referred to in the article:

- a. Side Rails or Frame Rails – six pieces (there is a left and right side rail assembly with each side is made up of three rails-forward, middle, and rear)
- b. Header or Header Bow – one piece (forward assembly at the windshield)
- c. Forward Bow – one piece (flat bow with tacking material at the ends and felt material across the top)
- d. Center Bow – one piece (the smallest bow - tube-style bow which has a permanently attached arm assembly that bolts to the inn quarter)
- e. Rear Bow – one piece (largest bow – large area of tacking material)
- f. Folding Assembly – two pieces (right and left – each assembly attaches to all three rails on a side)



I started with the convertible top frame removed from the car. If yours is still on the car, here is the basic procedure for removing it from the convertible. Disconnect the front of the top from the windshield and put the top down. You will need the help of at least one other person to remove the complete top assembly. Remove the hardware that secures the top assembly to the quarter of the convertible. Once the assembly is out of the car, the top can be unfolded.

The first 18 steps will show the disassembly of the convertible top frame assembly. Remember that the photos will show the left side of the assembly and the left side of the photos will be in the direction of the front of the convertible top. (See Photo #1.) I suggest that you disassemble one side and then repeat all of the steps for the other side; but after each step, you may want to repeat the step for the right side of the top frame.

1. Remove the two hex-head bolts with integrated washers that secure the header bow to the forward frame rail. (See Photo #2.)

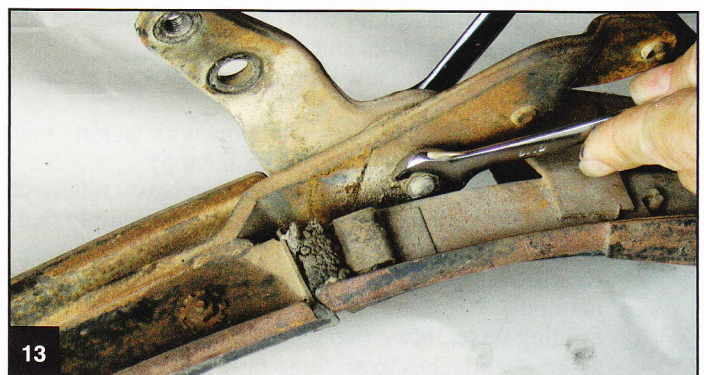
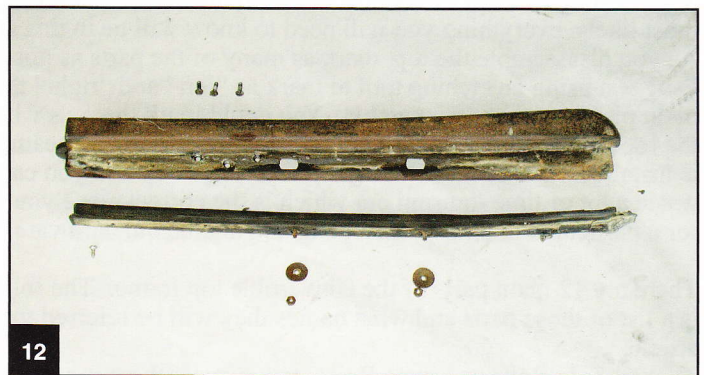
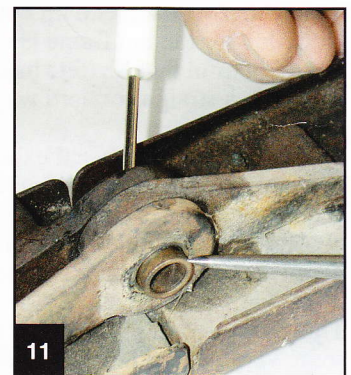
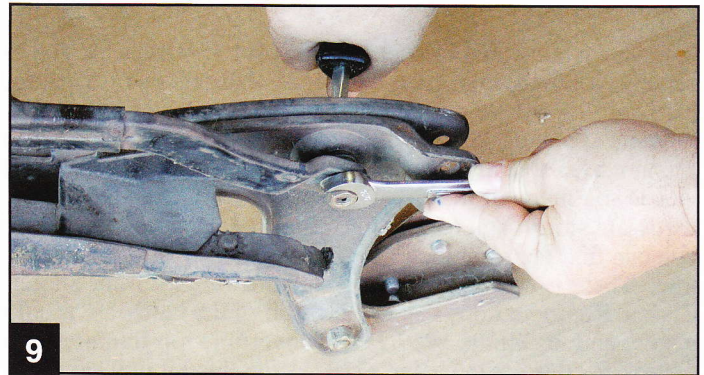
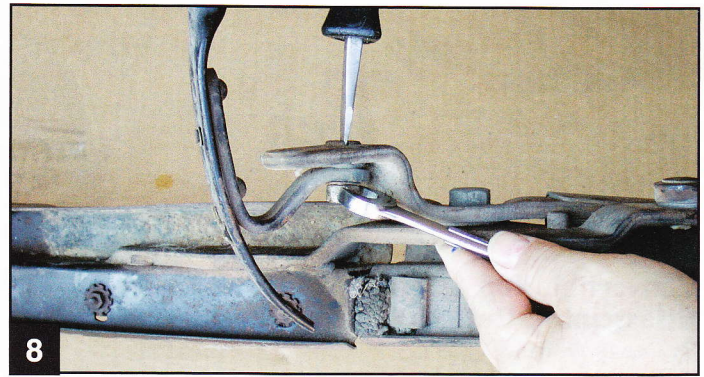
2. The next part to be removed is the “folding assembly” that is connected to each of the three side rails. By being connected to each of the rails, it folds the rails and top as it is lowered into the well. The folding assembly is secured to the forward rail by a bracket that is secured with three screws, washers, and nuts. (See Photo #3.) You may be able to remove these using just a small wrench, but you might need a Phillips screwdriver to hold the screws. If the screws start to spin, then the roofrail weatherstrip must be removed from the first rail so that the heads of the screws can be accessed.

3. After removing these, move to the middle frame rail where the “folding assembly” is secured to the middle rail with a slotted bolt that is held in place with a setscrew. (See Photo #4.) After backing off the setscrew, use a large flat-bladed screwdriver to loosen and remove the bolt. (See Photo #5.) There should be a wave washer and plastic bushing between the folding assembly and the middle rail.

4. The rear part of the folding assembly is secured to the rear rail at the forward/upper end of the rail. It is secured to the rail with the following hardware: slotted bolt, wave washer, plastic bushing, locking washer, and nut. Use a large flat-bladed screwdriver and wrench to loosen and then remove the hardware. (See Photo #6.)

5. The folding assembly should be free of the (left) side rails, but is still attached to the forward bow (the one with the thick felt). Use a Phillips screwdriver to remove the two screws with integrated washers that secure the forward bow to the folding assembly. (See Photo #7.) You may want to somehow label or mark the folding assembly as “left.” Many of these parts will look the same when you go back to assembling the top frame after restoration.

6. Now, the center bow will be removed from the rear rail. It is secured with almost the same hardware that secured the rear part of the folding assembly as explained in Step #4. Use a large flat-bladed screwdriver and wrench to loosen and then remove the hardware. (See Photo #8.)



7. Next, the rear bow will be removed from the rear rail. (Notice that the center and rear bows are both attached to the rear rail.) It is secured with the same hardware that secured the center bow as explained in Step #6. Use a large flat-bladed screwdriver and wrench to loosen and then remove the hardware. (See Photo #9.)

8. At this time, the left side frame rail assembly should be free of the rest of the top assembly. If you have been doing just one side, repeat Steps #1-#7 for the right side frame rail.

9. I suggest disassembling each of the frame rails into the pieces. Each side consists of three main rail pieces that will be referred to as: forward, center, and rear rails. Since the photos will show the left side, start with the left side.

10. Disassemble the forward rail from the center rail by using two wrenches to loosen and remove the jamb nut and then removing the hex head bolt that secures the two rails. (See Photo #10.) After removing the bolt and internal star washer, use a small screwdriver to push the brass bushing out of the two rails. (See Photo #11.) Remove any convertible top roofrail weatherstrip that is attached to the forward rail. Most of the roofrail weatherstrip is attached with hex nuts with over-sized external star washers. The correct-sized nut driver works very well for removing the roofrail weatherstrip. (See Photo #12.) At this point, the forward rail is completely disassembled and ready for restoration. Set the forward rail aside for now.

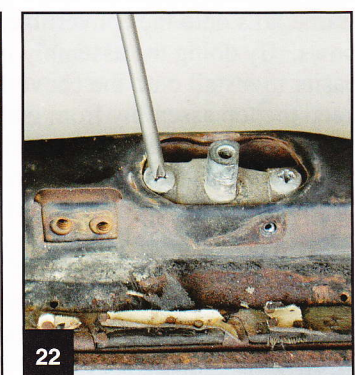
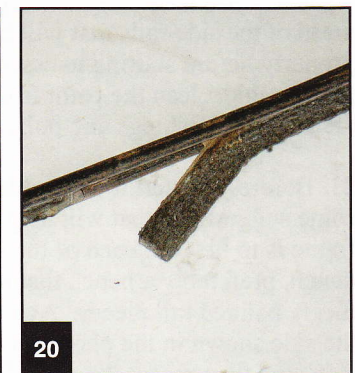
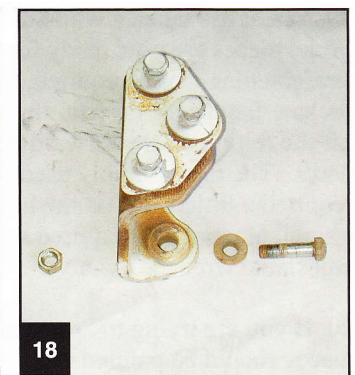
11. The center rail is secured to the rear rail with: hex head bolt, wave washer, internal star washer, and nut. Again use two wrenches (1/2-in & 9/16-in) to loosen and remove the jamb nut. (See Photo #13.) Remove the hex head bolt and wave washer. The wave washer is under the head of the bolt. Notice that the center rail has a permanently attached "arm" at the rear part of the rail. You will not remove this arm or the triangular bracket that is also permanently attached to the arm.

12. Toward the front of the center rail is a 2-inch long square-headed bolt, lock washer, and jamb nut that acts as a stop/adjustment. Use a wrench to loosen the jamb nut, then another wrench to remove the bolt from the rail. (See Photo #14.) Remove any roofrail weatherstrip that is attached. (See Photo #15.) At this point, the center rail is completely disassembled and ready for restoration.

13. Remove any roofrail weatherstrip that is attached to the rear rail. (See Photo #16.) At the rear of the rear rail is the hinge/bracket assembly that attaches the top assembly to the inner quarter of the convertible. This assembly is secured to the rear rail with: a bolt, wave washer, plastic bushing and locking jamb nut. Use two wrenches to remove the locking jamb nut. (See Photo #17.) The top that we disassembled did not have a wave washer, but it would have gone under the head of the plastic bushing. (See Photo #18.)

14. At this time, the left side frame rail assembly has been disassembled. If you have been doing just one side, now repeat Steps #10-#13 for the right side frame rail.

15. Now the six side rail pieces are completely disassembled and ready for the restoration process to start. Set the rails aside and next get the header and the three bows disassembled.



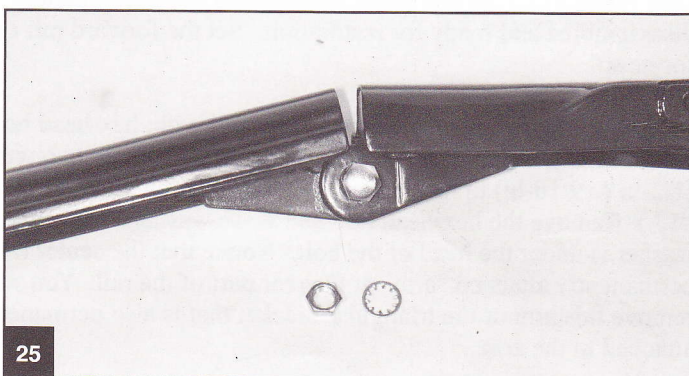
16. Using a set of diagonal cutters, remove all of the tacks and remaining canvas material from each of the bows and header assembly. (See Photo #19.) Check the tacking material to make sure that when the convertible top material is installed that the tacks and staples will hold. Replacing the tacking material is not easy, but must be done if the material is really bad. (For more information, check with your top shop. Replace only the material that is required.) We carry a plastic-type synthetic tacking material kit for the convertible top assembly; you can order it as Part #40-21. On our top, the thick felting on the forward bow was coming out on one side so we had to glue it back into place. (See Photo #20.) Check the felting on your bow and repair if required.



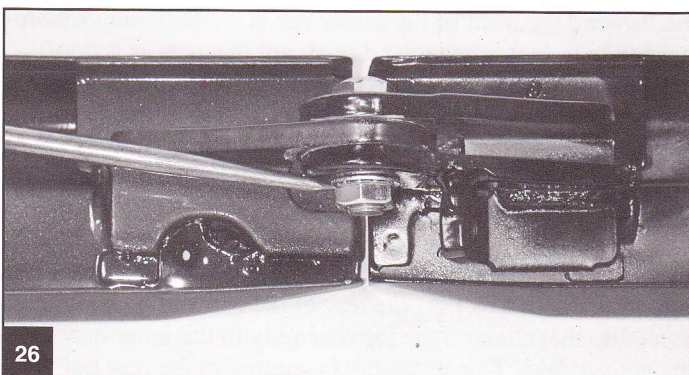
17. The last piece to disassemble is the header bow. Using a Phillips screwdriver, remove the screws that secure the bracket for the header seal. One of these brackets can be found on both ends of the header. (See Photo #21.)



18. Using a Phillips screwdriver remove the single screw that secures the latch cover. Remove the two screws that secure the latch assembly to the header, and then remove the latch assembly. Notice that the latch assembly spring goes to the rear of the header. (See Photos #22 & #23.) Mark the latch assembly as a "right" or "left." Repeat this procedure for the other latch.

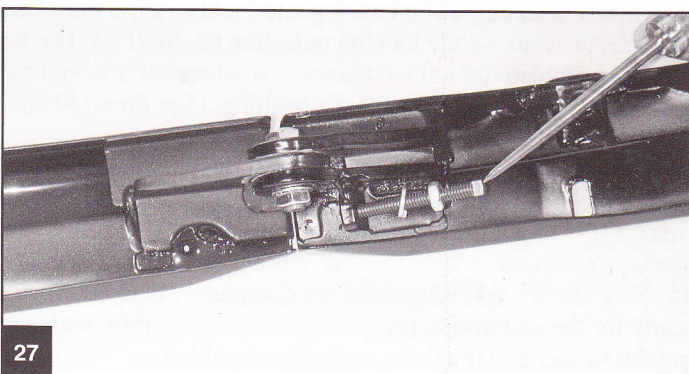


19. Yes, it has taken a while to disassemble everything, but all of the pieces are now ready for restoration. Do any repairs or straightening that is required. Do any metal work that is required to prepare the pieces for painting. Where possible, I suggest masking off the felting on the forward bow and the tacking material on all bows. The top assembly used for this article was very nice, but required a little work on the header. Also, the last bow was twisted a small amount and required some "muscling" with a couple of large adjustable wrenches.



20. If you are trying to keep the top assembly original, all of the pieces should be painted semi-gloss black, otherwise paint them whatever you want. Try to keep the paint from building up on those areas of the side rails that will be put together. Let the pieces dry properly before starting to assemble the top frame. Before you start to assemble, clean the paint from the surfaces that go together and areas where bushings and bolts will be installed.

21. Before you start to assemble the top frame assembly, here are some suggestions that will help you. The best way to assemble the frame is to first put each of the side rail assemblies together on the bench, preferably a bench that has a piece of carpet to protect your nicely painted rail pieces. Again, start with the left side since that is the side shown in the photos. Go through Steps #22-#29 for the left side, and then repeat the steps for the right side. Next, install the frame rails onto the convertible, and finally install the header and bows. By doing the assembly in this order it is easier to handle and easier to install onto the convertible. Also, this approach will help keep the top assembly from getting dinged up. Another important suggestion is to remove the hardware you need for one side out of a particular bag and leave the remaining hardware in the marked bag for the other side. It is pretty easy to get some of this hardware mixed up and waste time that you need to spend concentrating on getting all of the pieces correctly assembled. Also, remember this rule of thumb - all of the bolt heads will be seen from the inside of the convertible - never installed with the head towards the outside of the car.



22. Select the left forward rail and the left center rail. (Refer back to Photo #10.) These two rails will be assembled with the hardware in Bag I. Clean any paint required to slide the two rails together. (See Photo #24.) Apply a small amount of lithium grease to the areas that will make the hinge for these rails. Install the brass bushing and then thread the bolt into the assembly. Tighten until the two rails bind at this hinge location and then back off 1/8-turn. (See Photo #25.) Install the internal star washer and nut. Tighten the jamb nut. (See Photo #26.)

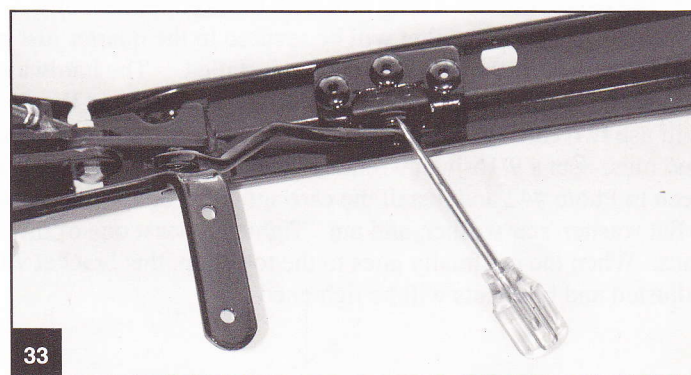
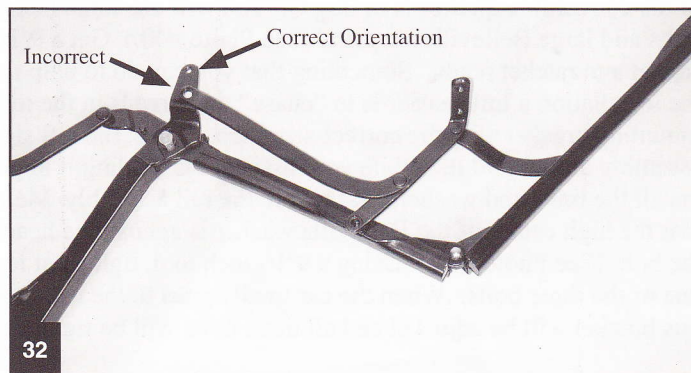
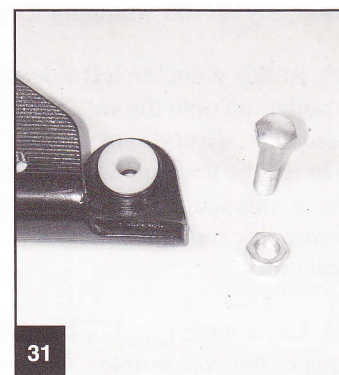
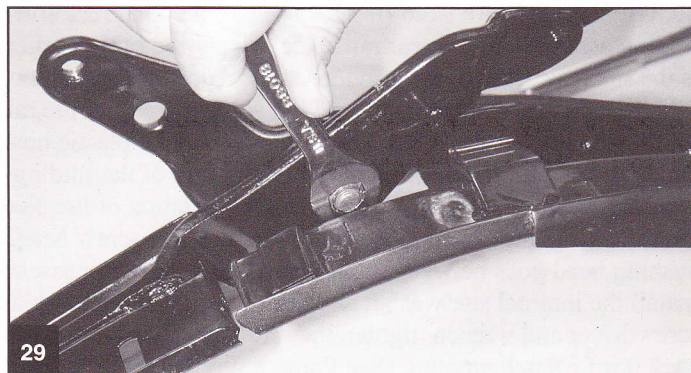
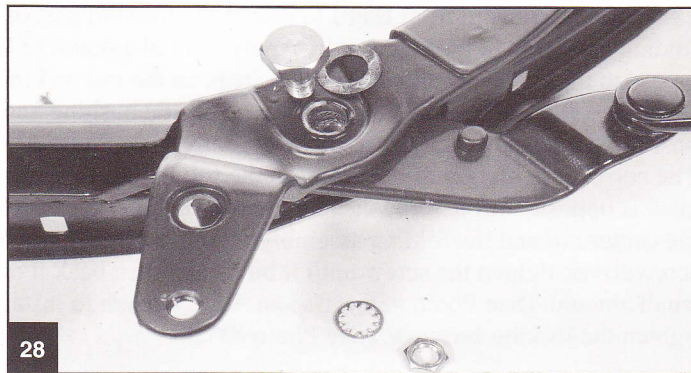
23. From Bag H, install one of the nuts onto the square-headed bolt and then slide a lockwasher onto the bolt. Install into the center rail as seen in Photo #27. I would not thread this square-headed bolt very far. This is an adjustment/stop that will be dealt with when the top frame assembly is adjusted and secured into final position at the top shop.

24. Now the rear rail will be attached to the center/forward rail assembly. The hardware that will be used is found in Bag M. Apply a small amount of lithium grease to the areas that will make the hinge for these rails. Since you can easily put these two rails together incorrectly, carefully position the rear rail into the center rail. Look closely at Photo #28 for the correct orientation. Position the wave washer under the head of the bolt and begin to thread the bolt into place. Once the threads of the bolt exits, position the internal star washer and start threading the nut. (Because of the restricted space, you cannot thread the bolt all the way in and then install the washer and nut.) Continue to thread the bolt with 3/4-inch wrench until the rails begin to bind, and then back off 1/8-turn. Now, tighten the nut and lockwasher. (See Photo #29.)

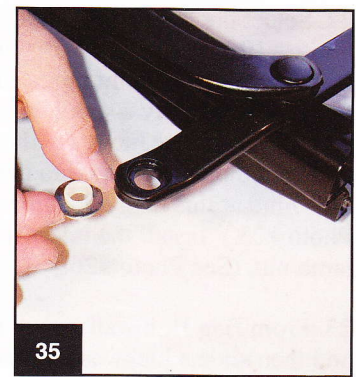
25. The main mounting bracket will now be installed onto the back of the rear rail. The hardware that will be used is found in Bag P. Selecting the correct bracket (left) and getting everything orientated and secured is critical. (See Photo #30.) Apply a small amount of lithium grease to the areas that will make the hinge for this assembly. The wave washer goes under the head of the plastic bushing and then positioned into the bracket. (See Photo #31.) Position the bracket into the lowest hole in the rear rail and then install the bolt and locking nut. The head of the bushing goes to the inside of the car (which is also the side for the bolt head) and the locking nut goes to the outside of the car. Tighten the bolt and locking nut until the bracket binds and then back off 1/8-turn.

26. The "folding" assembly will now be attached to the side rail assembly. The folding assembly is the part that was removed in Step #5. Remember, this assembly attaches to every one of the three side rails. Basically: it is attached to the forward rail with three screws & nuts (refer to Photo #3), it is attached to the center rail with a large screw (refer to Photo #5), and it is attached to the rear rail with a large screw and nut (refer to Photo #6). Select the correct folding assembly for the left side and position it into the left side set of rails. Photo #32 shows the basic orientation of the parts. Notice that the arm in the photo is lined up with the incorrect hole. (See arrows.)

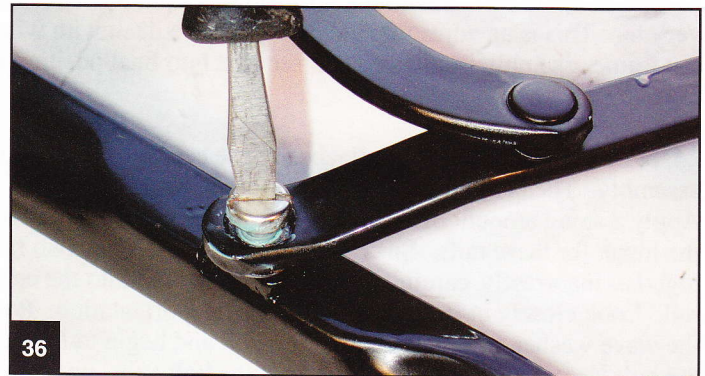
27. Use the hardware from Bag G to secure the forward part of the folding assembly to the forward rail. Apply a small amount of sealer under the heads of the three flat-head screws (#10-24) that secure the bracket assembly to the forward rail. (See Photo #33.) Install the lockwashers and nuts. Use a wrench and Phillips screwdriver to tighten each of the nuts. (See Photo #34.)



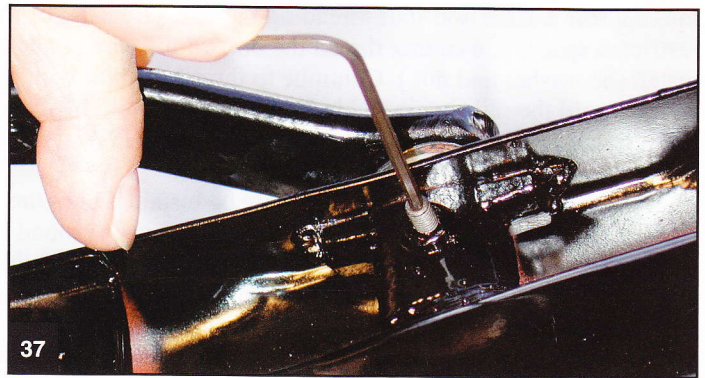
28. Use the hardware from Bag J to secure the forward part of the folding assembly to the center rail. Apply a small amount of lithium grease to the hardware and the contact areas on the rail and folding assembly. Place the wave washer onto the plastic bushing and then position the bushing into the folding assembly. (See Photo #35.) The correct orientation of the pieces is the following: the bushing head is opposite of the screw head, the bushing head goes between the center rail and the folding assembly. Using a large flat-bladed screwdriver, tighten the screw until it binds and then back it off a small amount. (See Photo #36.) Use an Allen wrench to install and tighten the locking setscrew. (See Photo #37.)



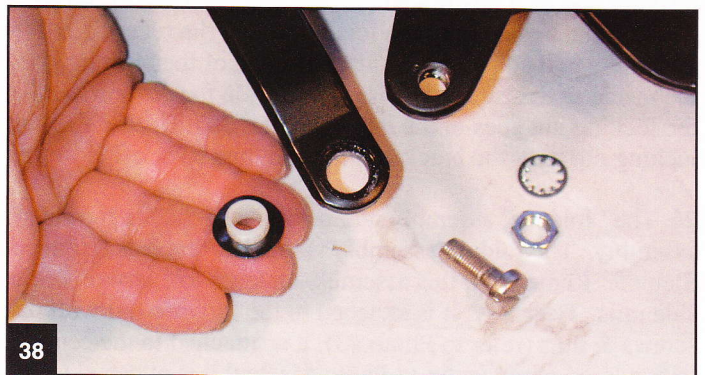
29. Use the hardware from Bag K to secure the long rear arm of the folding assembly to the rear rail. The orientation of these pieces is the same as those in the previous step. Apply a small amount of lithium grease to the hardware and the contact areas on the rail and folding assembly. Place the wave washer onto the plastic bushing and then position the bushing into the long arm of the folding assembly. (See Photo #38.) The correct orientation of the pieces is the following: the bushing head is opposite of the screw head, the bushing head goes between the rear rail and the folding assembly. Install the internal star washer and nut. Using a large flat-bladed screwdriver and wrench, tighten the screw until it binds and then back it off a small amount. (See Photo #39.) I suggest folding the assembly up and wrapping it in a soft blanket for safekeeping.



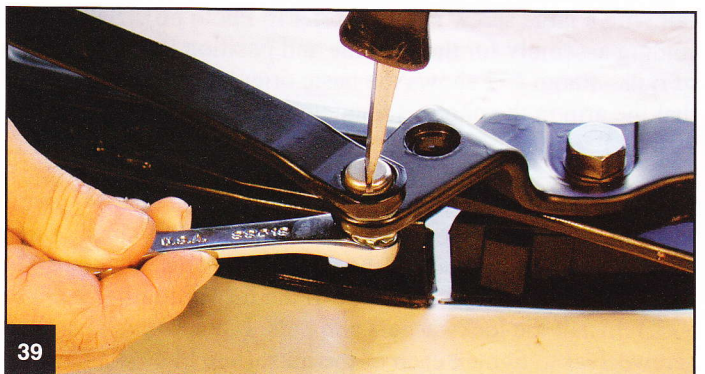
30. At this point the left side rail assembly is finished and ready for installation onto the car. Repeat Steps #22-#29 for the right side rail assembly. Everything is now ready for the final assembly. I suggest that this be done on the car. (You will need someone to assist you.) As mentioned in Step #21, now the basic procedure is to install the frame side rails onto the convertible and finally install the header and bows.



31. Lay a large towel or blanket across the windshield and dash area of the convertible. The hardware to secure the rail assembly to the convertible quarter is in Bag Q. You will use three hex head bolts and large Belleville washers. (See Photo #40.) Get a 9/16-inch socket and ratchet ready. Something that you can do to help make the installation a little easier is to "chase" the threads in the main mounting bracket with the correct-sized tap. Select the left side rail assembly and unfold it. While your assistant is holding it in place, install the bolts and washers that secure the rail assembly. Make sure that the high center of the Belleville washer is against the head of the bolt. (See Photo #41.) Using a 9/16-inch tool, tighten at least one of the three bolts. When the car finally goes to the top shop, this bracket will be adjusted and all three bolts will be tightened.



32. The center rail has a long arm with bracket permanently attached. This arm/bracket will be secured to the quarter just below and to the rear of the bracket you just installed. The hardware to secure the arm assembly to the convertible quarter is in Bag N. You will use two carriage-head bolts, flat washers, internal star washers, and nuts. Get a 9/16-inch wrench ready. Position the bracket as seen in Photo #42 and install the carriage-head bolts. Secure with a flat washer, star washer, and nut. Tighten at least one of the two nuts. When the car finally goes to the top shop, this bracket will be adjusted and both nuts will be tightened.



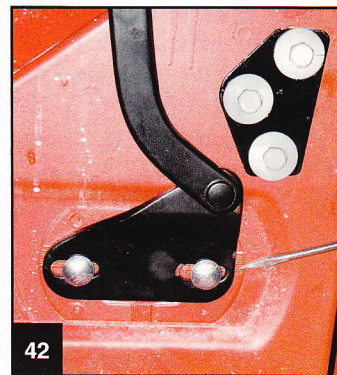
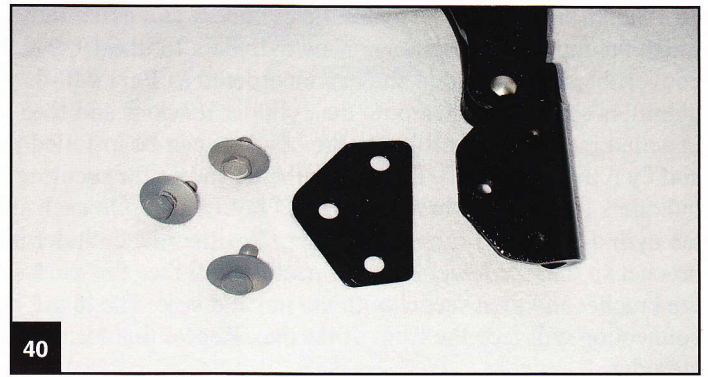
33. At this point the left side rail assembly is finished and ready for installation of the header and bows. Repeat Steps #31 & #32 for the right side rail assembly. Both of the top rail assemblies are now ready for the header and bows. All of the photos will show the left side installation.

34. Get the header ready for installation. Re-install the latch mechanisms. (Remember that there is a left and right mechanism. Refer to Step #18 and Photos #22 & #23.) On each side, install and secure the latch cover with the Phillips head screws found in Bag A. Position the header assembly on top of the two side rails. Bag A has the hardware for securing the header. Each side will use two bolts and two Belleville washers. There are some small screws that will be used when the roofrail weatherstrip and header seal are installed. Leave those in the marked bag for later. While your assistant is holding the header install all four of the bolts and washers that secure the header. Again make sure that the high center of the Belleville washer is against the head of the bolt. (See Photo # 43.) Tighten the two bolts at each side of the header.

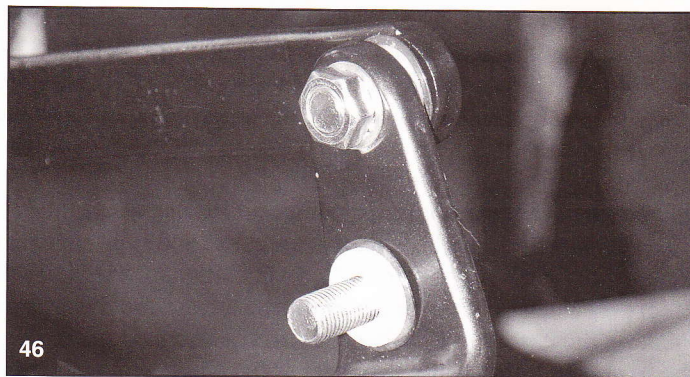
35. Position the forward bow (the one with the heavy felt) across the top of the two side rails. The correct orientation of this bow will have the ends of the bow sweep toward the back of the car. Bag E has the four Phillips head screws for securing the bow. Each side will take two screws with built-in washers. While your assistant is holding the bow, install the screws that secure the bow. (See Photo # 44.) Use a large Phillips screwdriver to tighten both screws at each end of the bow.

36. Now the center bow will be installed to the front of the rear rail. The hardware to use for this bow is in Bag L and there is a bunch. I will go through the order of the hardware for the left side of the center bow. Apply a small amount of lithium grease to the hardware and the contact areas on the rail and bow assembly. From the inside of the car install the large slotted bolt into the correct hole of the rear rail. (See Photo # 45 that was taken from the inside of the car.) Place the wave washer over the shouldered bushing and then install them over the threads of the bolt and into the hole in the rail. (See Photo # 46 that was taken from the outside of the car.) Since this bow has threads, use a large flat-bladed screwdriver to screw the bolt into the threads of the bow while your assistant holds the bow in place. Repeat this procedure for the other end of the bow. Tighten both screws until the bow binds and then back off a little bit. Now install the internal star washers and nuts. For each end hold the screw in place and tighten the nut.

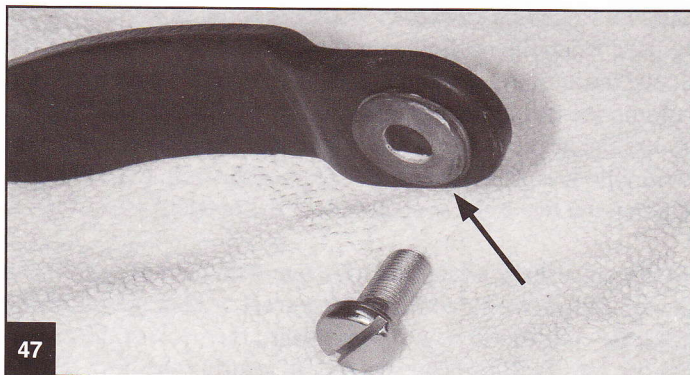
37. Now the rear bow will be installed to the rear of the rear rail. The hardware to use for this bow is in Bag O and again there is a bunch. I will go through the order of the hardware for the left side of the rear bow. Apply a small amount of lithium grease to the hardware and the contact areas on the rail and bow assembly. Place the wave washer over the shouldered bushing and then install them into the hole in the rail. (See arrow in Photo # 47.) Have your assistant position the rear bow into the rear bow and then from the inside of the car install the large slotted bolt into the correct hole of the rear rail. (See Photo # 48.) On the outside of the frame rail install the internal star washer and nut. (See Photo # 49.)



38. The installation of the hydraulic cylinders will essentially finish the top frame assembly. New cylinders for the 1959 & 1960 convertibles are available and can be ordered as **Part #40-4**. (The cylinders can be installed onto the cylinder brackets and then installed into the convertible or the brackets can be installed first and then the cylinders.) Bag X has the hardware for securing the cylinders to the lower brackets. (See Photo # 50.) On each side of the cylinder install a rubber grommet. Position the cylinder into the bracket so that the lower hose connection will face the short side of the bracket and then secure with the pin and key. The lower hose connection will face the front of the car. Repeat this for the other cylinder.



39. Position one of the cylinder/bracket assemblies into the convertible so that the long part of the bracket goes toward the rear of the car. Secure with four 5/16-24 x 3/4-inch bolts, flat washers, and lock washers.



40. Now the upper end of each cylinder will be secured to the top frame assembly. Each will be secured to the frame with hardware from Bag X. Install a bushing on each side of the cylinder and then position into the rear rail. (See arrow A in Photo # 48.) Secure with bolt and nut. Remember that the head of the bolt goes to the inside of the car. Repeat this procedure for the other cylinder.



41. You cannot believe how great this top frame will look when you have finished. Having this great hardware kit from Shafer's Classic Reproductions makes a huge difference. You should have four bags of hardware left over. Bags B, C, D & F are filled with hardware for installing the roofrail weatherstrip. The top frame is now ready for the roofrail weatherstrip kit. (Order **Part #35-32**.) Also, the top frame is ready to go to the top shop. Some information on adjusting the top assembly and installing the canvas material can be found in the *Shop Manual*, in the "Body" section and under the "Folding Top" subheading. Congratulations on a great job!

