



## Reupholstering TR6 Seats

I reupholstered the seats in my TR250 over 15 years ago. I don't remember much about the project except that seats were in very bad shape, the job wasn't too bad and I was very satisfied with the results.

Winter is a good time to work on inside projects such as seats. I'm in the process of prepping my '76 TR6 for repainting. I plan to have it done in white again and have obtained a new red interior. The seats were so bad that I replaced them with a set from a '73 that I junked; thus the seats from the '76 were in storage ready for reupholstering.

I decided to do one seat at a time so that I could refer to an assembled seat if required during the reassembly. The following photos show the driver's side seat as it was disassembled. The padding had disintegrated in many places and made a real mess in the workshop. Note that the diaphragm was broken, which probably is responsible for the low ride. The workshop is also the residence of two cats. One is checking out the seat frame while meowing about the mess (obviously a female).



There was a rubber type cement on much of the frame and the under side had quite a bit of surface rust. I cleaned much of the cement off using lacquer thinner and an old wood chisel. I then took it outside and sandblasted it. Sandblasting doesn't have much effect on the soft cement residue. I attacked the cement residue again and got the rest of it off. Another bout with the sandblaster cleaned it up quite nicely. I then painted it with a spray can of Rustoleum Gloss Black. The next photo shows the (LH) frame in a reclined position. Note that the back is asymmetric; the inside of the back is vertical (when the back is upright) and the outside slopes inward. The seat bottom appears to be symmetric.

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I also sandblasted the clips that hold the upholstery under the seat. I slid the small clips on the edge of a scrap sheet of aluminum and the large clips on a piece of plastic tubing. The next photo shows the clips after sandblasting and the first coat of paint (I did two coats on both the frame and clips, waiting about 15 minutes between coats).



I had purchased a Seat Foam Kit, Seat Reupholstery Kit and a pair of diaphragms from TRF during one of their sales. The foam came in two packages taped together; one package had a sticker labeling it RH and the other had a similar sticker marked LH with the LH crossed out with a pen. There was also a sticker indicating that there was a pair of foam kits in the package. I'm going to assume one is RH and the other is LH even though the LH was crossed out. The upholstery kit had all the parts in one package. Upon close examination I found that the backs were marked LH & RH on the inside. There were no markings on the other parts indicating that both sides are the same (I hope). The kits (for one seat) are shown in the following photos.

Those of you that download this from the website will see the pictures in color and notice that the red is the orange red of the earlier TRs ---- not the darker red of the TR6 interior. You may also note the shade differs some from photo to photo. That is due to my messing with the photos on the computer to try to make them clearer. The orange red was my choice; I think it goes well with the white exterior. I was able to obtain the entire interior in this shade of red excepting the fuzzy door seals. These seals really clash with the rest of the interior when viewed under florescent lighting but don't look so bad when in sunlight.



The two brown fiberboard stiffeners that fit in the bottom of the sides of the back upholstery are missing metal clips that must be removed from the old upholstery. The clips are held in place by split rivets that I was able to salvage with the clips. The two sides are mirror images as shown in the next photo.



The first reassembly step I attempted was to reinstall the rubber buffers on the bottom of the seat frame. When I took the buffers off before painting the frame I noted that one side had two washers under the buffer and the other side had none. I didn't bother recording which was which since I had the other seat for reference. So, I turned the other seat upside down and looked at it ---- both buffers had two washers under them. Further -- that seat (the RH one) had the web type seat bottom.

The TRF catalog indicates that the web seat bottom was used only on the latest model seats. So, the RH seat is probably from the '76 and the LH is probably from the '73. I now suspect that I put the '73 seats in the '76 at some point and then later, as the LH seat deteriorated further, switched it out for the original '76 seat. It now appears I'm going to end up with rebuilding one of each since I'm not too interested removing the RH seat in the cold weather.

The catalog indicates that the frames, etc are identical (other than the seat bottom) from '73 through '76. They do say that there were some differences in which seat had switches for the seat belt alarms. I'm leaving the switches out -- they seem to have contributed to the failure of the diaphragm. Also, the previous owners of both vehicles had cut the switch wires.

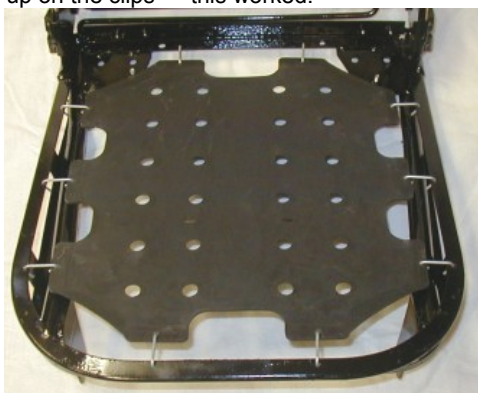
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I braved the cold and checked out the RH seat in the car --- it has the earlier diaphragm and two washers under each buffer. I can't imagine this buffer coming off in use or someone taking it off. Suspect the missing washers were a factory assembly error. No matter how much we love our TRs, most of us must admit that the designs are lacking in many areas and, **British Quality** is clearly an oxymoron.

Before starting the rest of the project, I made sure I had appropriate adhesive to cement the foam and upholstery material to each other and to the frame. I found I had a full and a partial can of 3M Super Trim Adhesive, part number 08090. I use this cement on the front edge of the soft top and I'm pretty sure I used it on the TR250 seats I did previously. This cement is available from automotive paint dealers. TRF sells a similar product; part number TRFC101. I also have a good supply of lacquer thinner to clean adhesive from myself and other areas where it is not wanted



The next step was to install the diaphragm (smooth side up) using the new hooks provided. I started with the back followed by the front. I used a pair of pliers on the front clips to stretch the diaphragm so that the clips can be slipped into the holes. One side was fastened with no trouble but the last side was more difficult since I couldn't hold the frame and pull on the clips on the same time. I finally set the frame on one side on the floor, sat on the top edge and pulled up on the clips --- this worked.



The next step was to install the seat bottom border pad. I couldn't figure which side went in and which side went out on this piece --- I don't think it matters. I sprayed the trim adhesive liberally on a ½ inch strip on both edges of the pad and also on the mating surfaces on the frame. The instructions on the adhesive can talks about spraying once, letting it set for a few minutes, and spraying again a second and then a third time. That's probably OK for a vinyl top. For this stuff, spray it once and then wait till it gets good and sticky and then press the stuff together. Next photo shows the installed border pad.



The seat bottom foam pad was installed next. I sprayed the top of the frame around the outer edge and a half inch strip around the outer edge of the under side of the foam. The sides of the pad are beveled resulting in the top surface being bigger than the bottom surface (that's how you tell which side is top & bottom). The next photo shows the installed pad.



I had a problem securing the rear flap of the seat bottom upholstery. While editing this note I realized that it would be much easier if I did things in a slightly different sequence. At that time the second seat frame had been stripped and painted and I was waiting for the paint to dry. When I reassembled the second seat bottom I took photos and it is that second seat (RH) that is described next. I'm sure some of you with sharp eyes will notice the difference in the frame. There was one difference in the frames; some new holes had to be drilled in the late frame to attach the diaphragm in place of the web seat bottom.

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The next step was to cut a slit in each side of the seat bottom upholstery so that it will fit around the area where the back and bottom parts of the frame connect. The slit should be parallel to and about 2 inches below the bead. The slit should extend to a point opposite the middle of the first full stripe in the seat bottom as shown in the next photo.



The rear flap was attached to the rear of the frame bottom next. The flap goes over the bottom half of the hairpin torsion bar. The upholstery was cut to accommodate the looped end of the bar as shown in the next photo (that happens to be of the LH seat).



Adhesive was sprayed on the underside of the rear flap and the mating frame surface. I then used a sharp punch to pierce the upholstery for the control rod bracket screw holes and screwed the brackets into place – see next photo. These served to hold the back flap in position while the adhesive dried and later when the upholstery was stretched over the front. I took a break at this point to allow the adhesive to dry.



Next, the cloth strips on the under side of the seat upholstery (one at front and one on each side) were cemented to the seat bottom foam – see next photo. The long strip at the front was stretched over the front and held while the adhesive set.



Next, the U shaped edge roll was cemented into place on the bottom foam over the cloth strips attached in the previous step as shown in next photo.



The upholstery is then pulled down over the front and sides and the small clips installed to hold it in place. I use a small hammer to drive the clips home. Bruce Miles had stopped over to observe the seat project and provided a lot of help with stretching and holding the upholstery as shown in the following photo.



The final step on the bottom was to trim the upholstery in the area where the tubular clips go in the rear and then cement the upholstery in place. The tubular clips were then installed to hold it in place while the adhesive dried. The under side with clips installed is shown in next photo.

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The back was next. (Those of you with sharp eyes will note that we're back working on the LH seat --- the first one.) I reinstalled the straps first and then sprayed adhesive on the areas of the back frame that contact the back foam and also on the matching areas of the foam. The bottom strap was also coated with adhesive. I then pressed the foam against the frame back --- see next photo.



While this was drying I inserted the fiberboard stiffeners into the back upholstery. The original upholstery had these stiffeners stapled to the upholstery. I decided to just let them ride in the pockets at the bottom of the sides. I trimmed around the clips to ease attaching the clips to the frame.

There is a cloth strip called the tensioner strip sewed about midway down the inside of the front of the upholstery. This strip feeds through the slit in the middle of the back foam. On my new upholstery, this strip was sewed partway up one side in error. I cut the strip free from this seam. I then fed the strip through the slit as I slid the upholstery on the back. (When I disassembled the second seat I found that this strip was balled up under the upholstery and had never been pulled through the slit in the foam or fastened down; more of that **British Quality**.)

Next, a hole was cut for the angle control rod. This hole is in the same spot as the notch in the fiberboard stiffener. I waited until the upholstery was part way on the back so that I was sure I was cutting the hole in the correct place. I then adjusted the seat for full recline, stood it on the front and pulled the back upholstery down into position. Next, I stretched the sides down till the tab on the stiffeners slid behind the mating part on the frame locking them in place. I did the side with the hole first as more slack is required on that side.

Next, I stretched the tensioner strip around the back lower frame member and secured it with a couple clips as shown in next photo.



While still in the fully reclined position, I applied adhesive to the inside of the end of the front upholstery and also to the angle control rod. I then warped the end around the rod. I used some wood shims wedged between the control rod and the adjacent back frame member to hold everything in place as shown in next photo.



The seat was adjusted to the full upright position after the last joint set. I then trimmed about an inch off the end of the flap at the bottom of the back upholstery except for about a half-inch strip on each side that will extend to under the tubular clips. The ends of the beads from the front side of the back upholstery were then threaded through the gap between the back and the bottom and positioned near the tubular clips. The control rod brackets that had been screwed down when the bottom was assembled were removed. Adhesive was then applied to the mating surfaces and the end of the rear side of the back was secured to the rear frame of the seat and the beads are secured under the tubular clips as shown in the next photo. The control rod was then attached which further secured the joint just glued as shown in the subsequent photo. This completed the assembly of the back.



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The headrest was easily to assemble. First, adhesive was sprayed on the headrest frame and the mating surface of the headrest foam and the foam was then slid on the frame, making sure the thick side was to the front. Next, the upholstery was slid over the foam, making sure that it is positioned correctly. The seam at the bottom was then tacked shut and the trimmed finisher screwed into place. The following photos show this process. Note that I decided to paint the trimmed finisher black. The finisher was painted to match the upholstery on the original equipment. If I can find red paint that matches the upholstery I might repaint them.



The angle control arm was polished and installed together with the headrest to complete the job. The finished product is shown in the last photo.



The seat slides are heavily corroded. I think I'll sandblast them and then paint them with aluminum paint. Won't be original, but is bound to look better than rust.

I used the TR6 Spare Parts Catalogue, Volume 2 from TRF to identify the correct name for the various parts. This is also a good source on how the parts fit together. While scanning the catalogue after the job was finished I noted that I hadn't installed the stud on the inside of the RH seat for the tonneau cover strap. There was none on the seat I rebuilt but I know I have the stud on seats in one of my cars so I'll be able to tell exactly where it goes.

**Update, July 2002:** I finally got around to installing that tonneau strap peg in the right seat. The stud listed in the TRF TR250 and TR6 catalogs seems to be NA, but a replacement, part number 552669 shown on the right is available. The stud is installed in the left side of the right seat as shown below. There is a hole in the steel frame for the stud so it was a simple matter to shove a pointed object through the hole from the inside to pierce the vinyl in the correct spot. .



