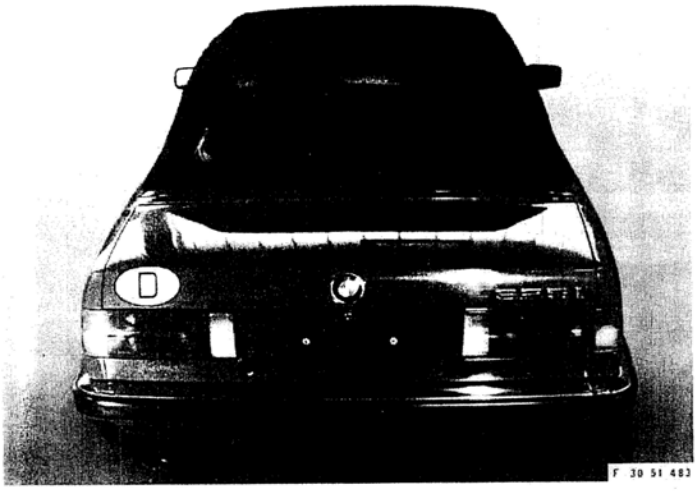
BMW Einbauanleitung Teile und Zubehör



Repair instructions for rear window
BMW 3 Series E 30 Convertible and BMW Z1

F30 51 483 The necessary tools and the other materials needed are contained in the repair kit.

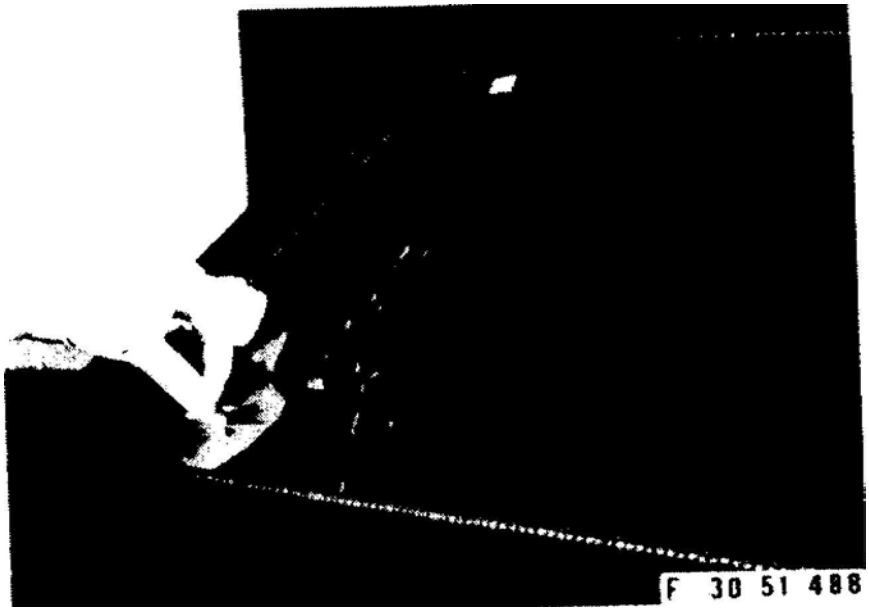
Hints by Gary (my own hints and additions to the original instruction sheet are in italics throughout the document. Nnote that the original has German captions with the English on a separate page, so I OCR'd the English and scanned the poor resolution pictures to create this):

Read this procedure all the way through several times trying to visualize the order that you will follow.

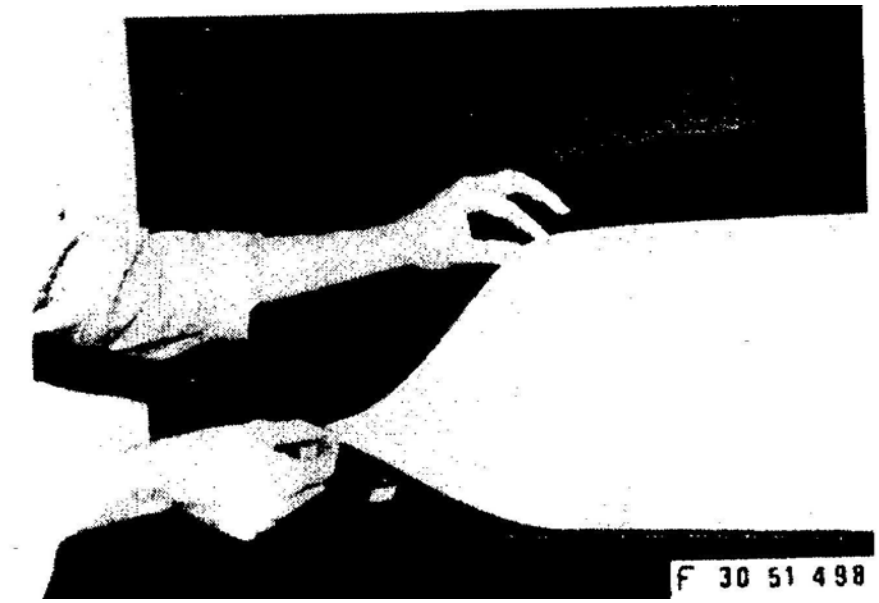
Set aside several days or weekends to do this. The gluing requires overnight drying on several successive glue lines. The sewing is incredibly monotonous with each stitch taking a minute or two and there being several hundred stitches.

Strongly consider removing the softtop and frame from the car, particularly if you can drive the car with a hardtop (unless you live in a dry climate and can go without any top). It is the only way you would want to do the sewing portion without a second person.

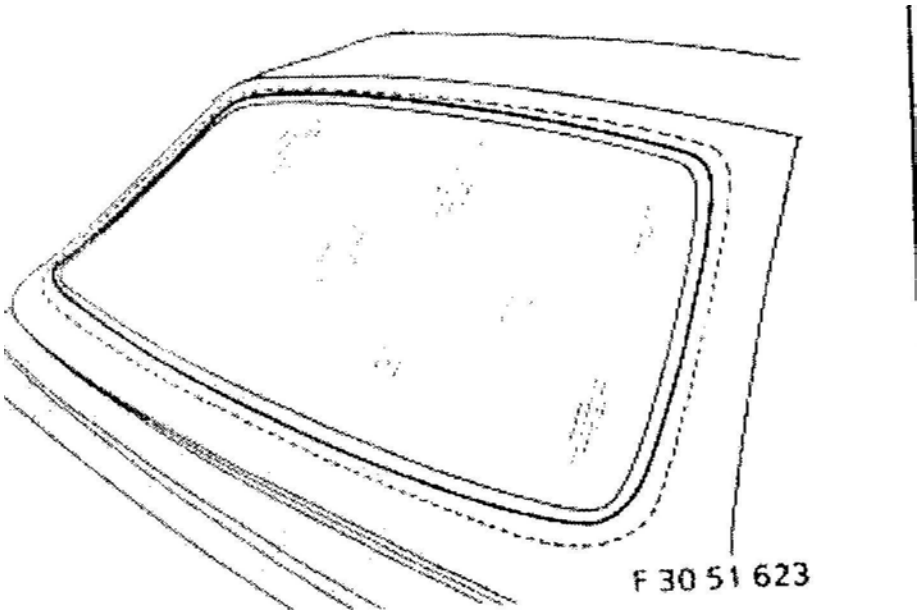
Yes, in the end it is a great feeling to have an incredibly clear new window and the satisfaction that you saved yourself hundreds of dollars.



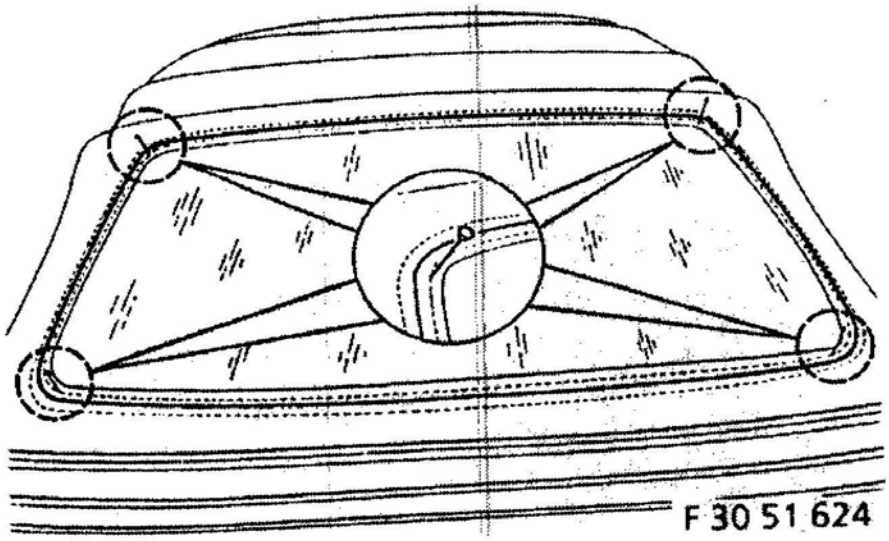
F30 51 488 Attach double-sided adhesive tape to the four corners on the outside of the *old* rear window.



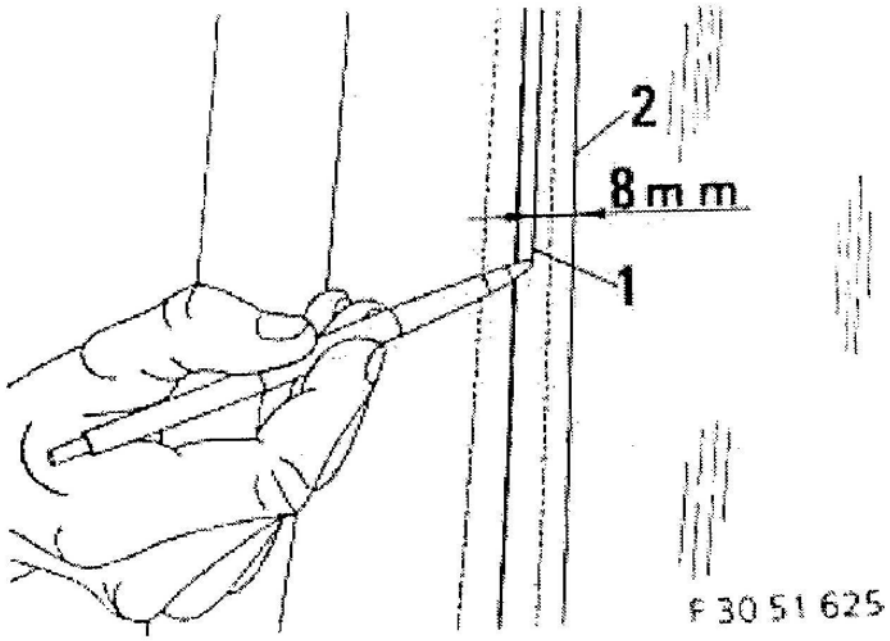
F30 51 498 Take fleece material (already shaped to fit) from the kit, place it in position and stick it firmly to the four adhesive points. *This will form a protective layer between the old and new windows. (I used a sheet of paper, but any fabric or paper should do.)*



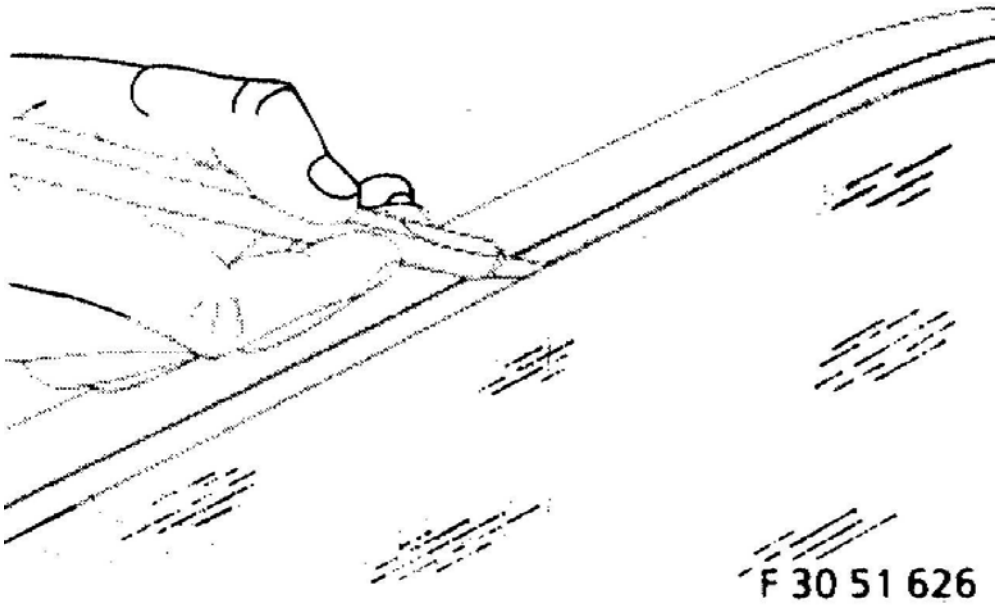
F30 51 623 *Check the size of the new window by* placing it on top of the *old* window and align.



F30 51 624 Locate rear window and fix down by sticking *stickpins* into stitching holes.

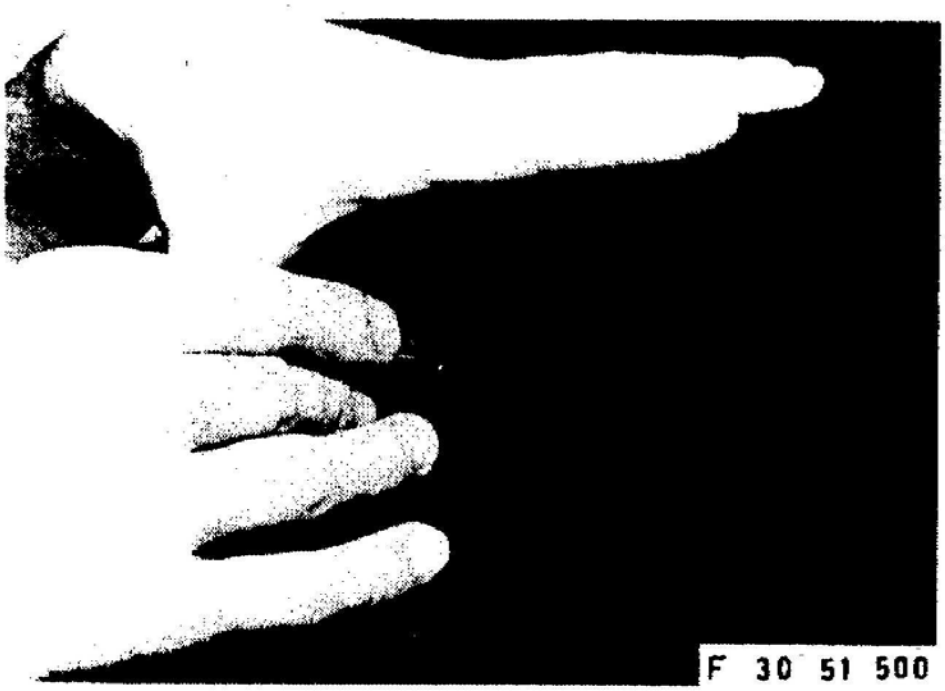


F30 51 625 *If the new window is not precut,* mark the *new* window by drawing a marking line (1) 8 mm from the soft top edge (2) on the new rear window. *Note that the marked size of the window will be larger than the first stitch line, but not larger than the second stitch line. For reference, the second line stays intact throughout the replacement. The first stitch line will be removed and re-sewn at a later step.*

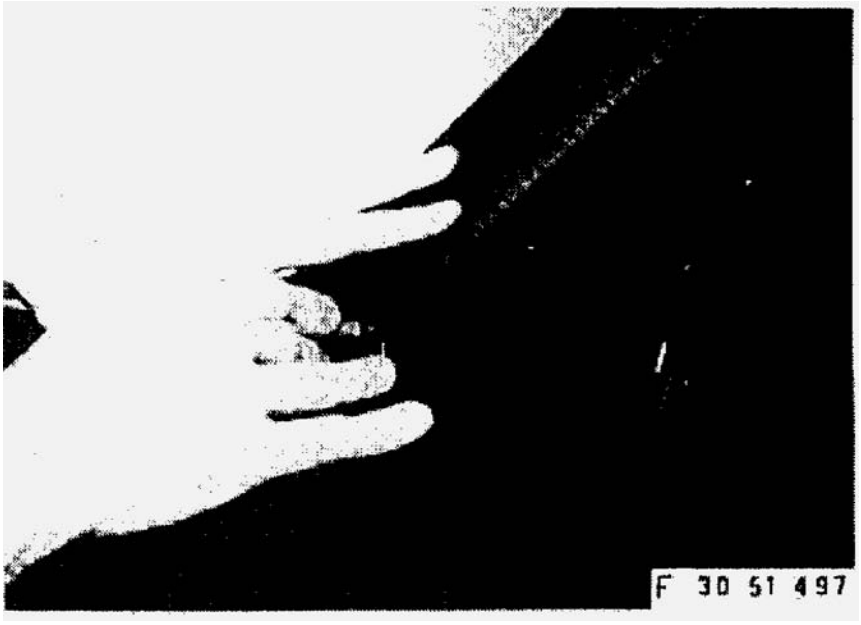


F30 51 626

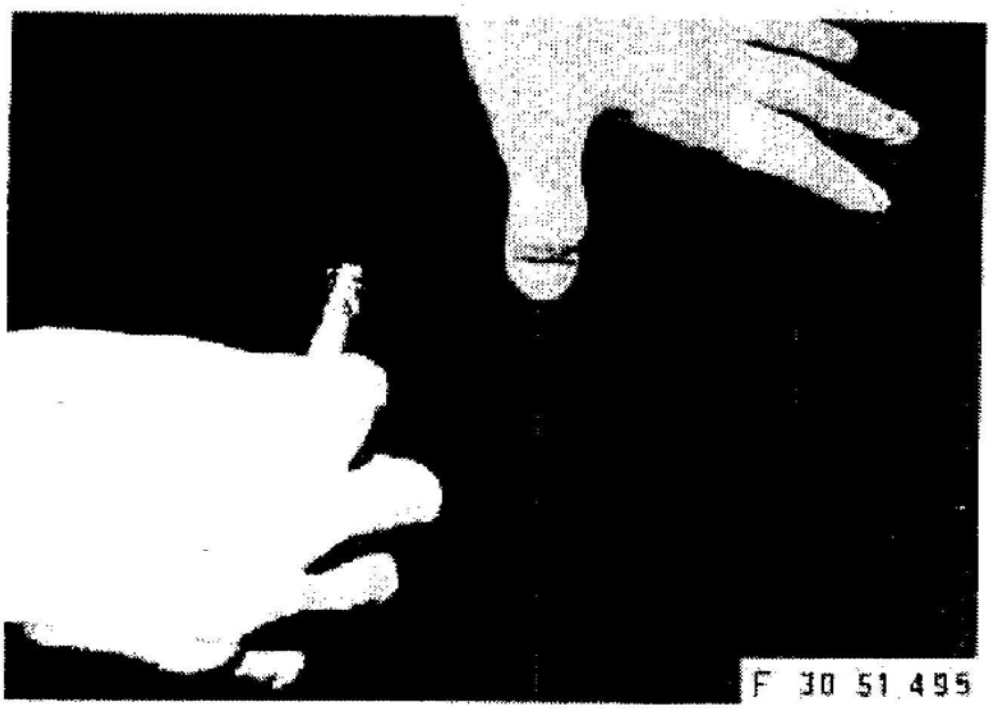
If not cut to the correct size, Cut rear window to required size.
Note Place rear window on a level, padded base In order to cut it out *using the accompanying razor/utility knife.*



F30 51 500 Cut through the old rear window at one rounded corner using the knife supplied. *This only needs to be for 5-10 cm (2-4 inches) so that you can later get a finger in to remove the old window (after the entire process is complete)*



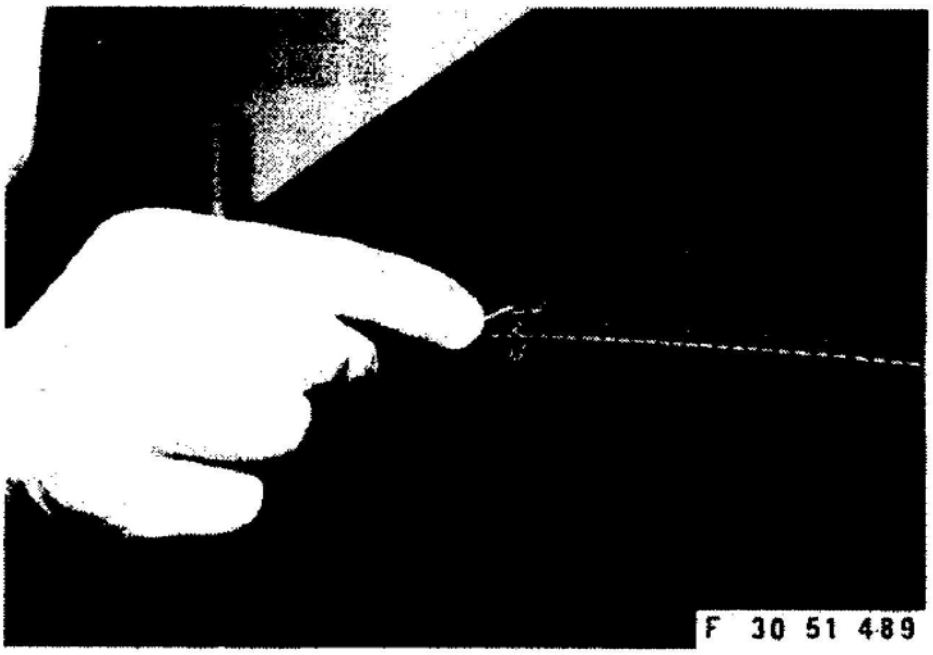
F30 51 497 Score the rear window along the soft top at all remaining edges as far as half-way through the window's thickness. *Attempt not to cut all the way through as the old window serves the purpose of holding the roof taut throughout the gluing and sewing procedure of the new window. The old window is not removed until the new window is completely installed.*



F30 51 495 Separate the first stitch line / seam using a knife.

A seam ripper can be useful too

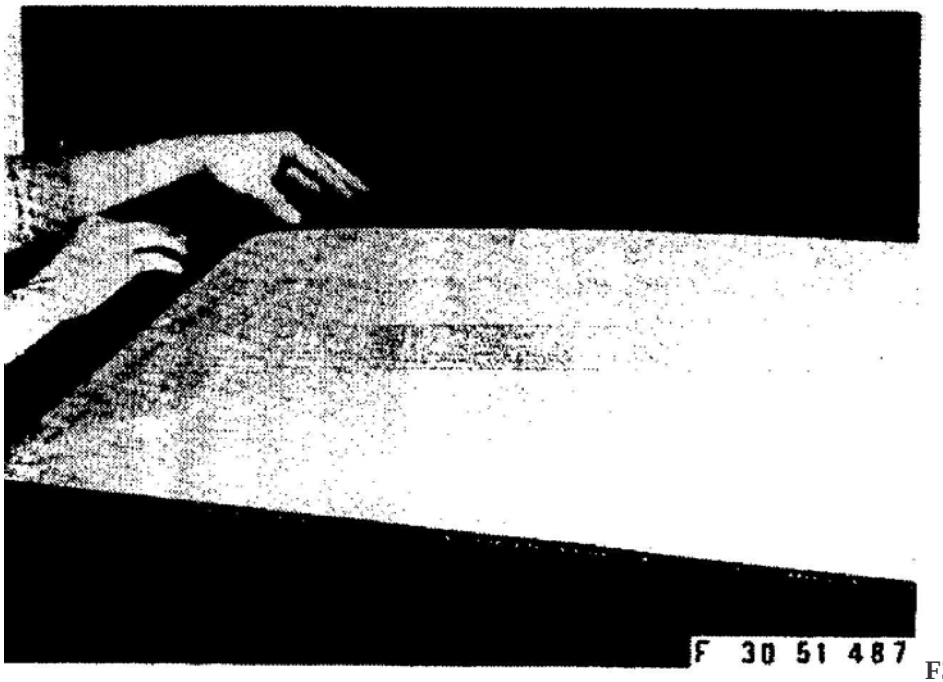
Note Be careful not to damage the soft top.



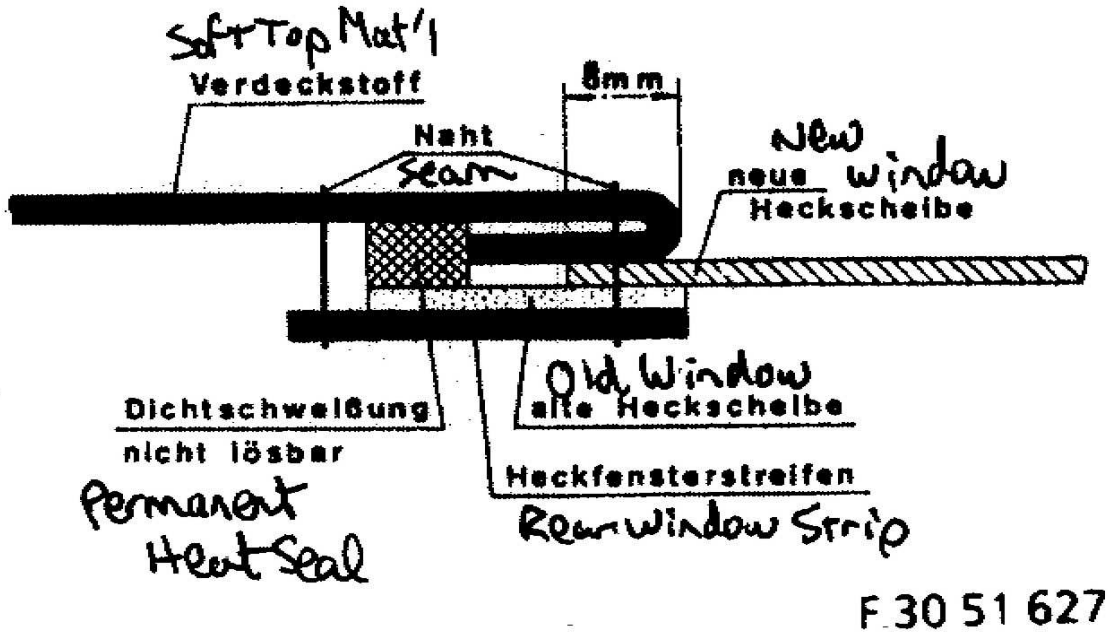
F30 51 489 Remove the cut threads from the inside and outside. *LEAVE the second stitch line intact.*

F30 51 486

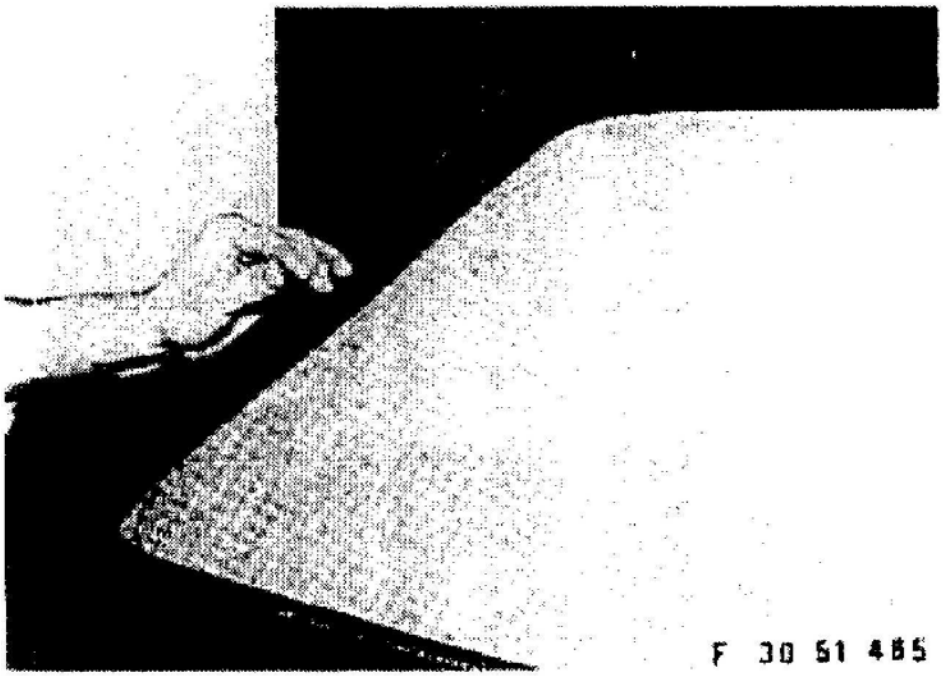
Mark the old stitching holes with the white marker pen. *This is time consuming but well worthwhile. In fact, if I was doing it again, I'd mark the holes on the inside too!!*



F30 51 487 Fit the trimmed rear window into the soft top. *You will now be able to open the seams and envelope the window into its installed position.*



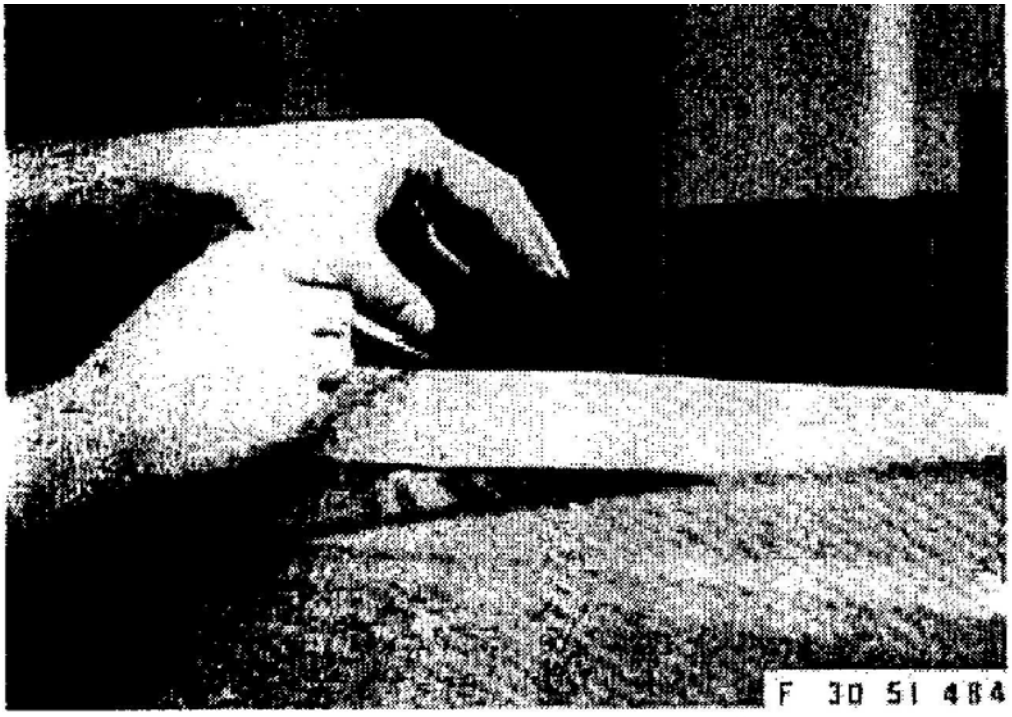
F30 51 627 Note Locate the new rear window carefully; it should be an exact fit. F30 51 485 Adjust rear window and securely stitch on with 10 stick pins. *Note from the cross-section that the part of the old window inside the envelope flaps will remain in place. Also that the second stitch line and heat seal will remain intact. The new window will insert only past the first stitch line.*



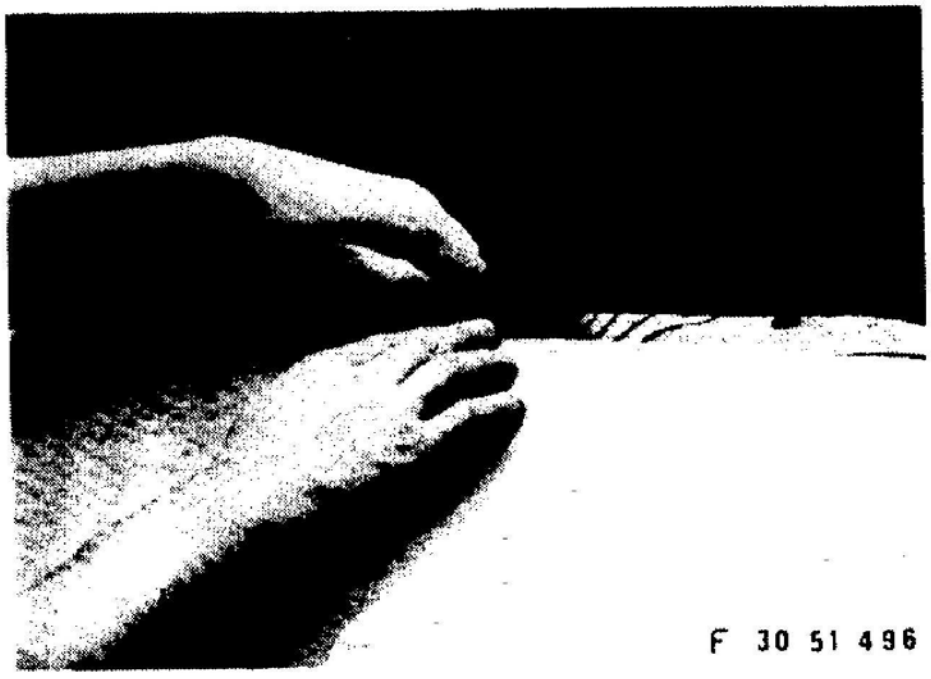
F30 51 491

Remove the needles in the upper area and apply adhesive to *the underside of* the top half of the new rear window ensuring that all adhesive is will be invisible *inside the cloth roof flap*.

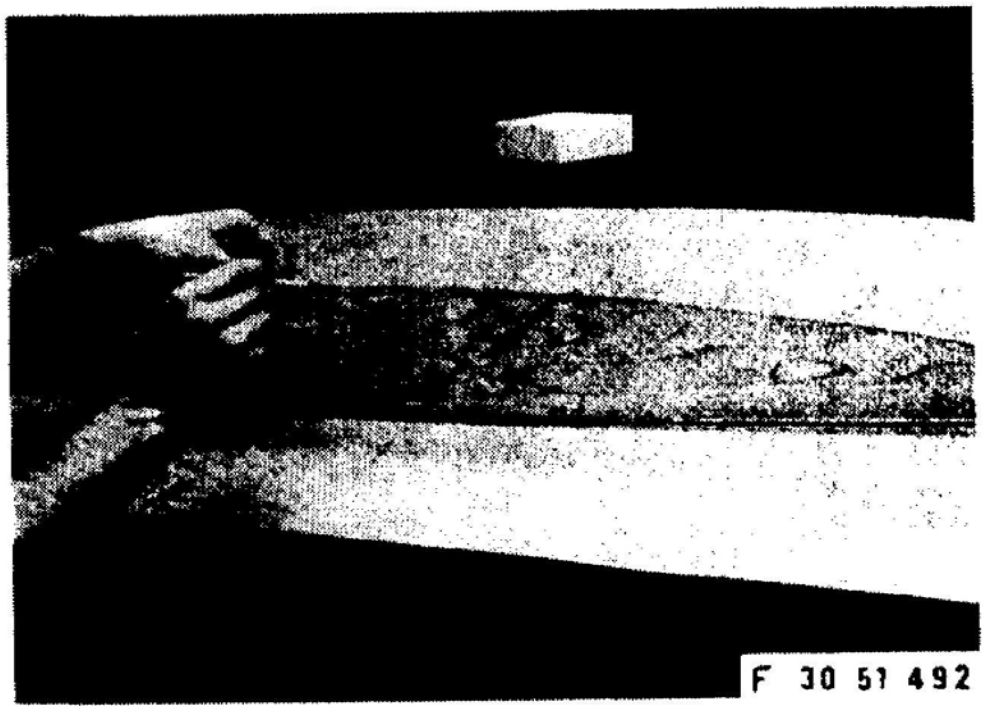
Note Adhesive mix ratio: 95% adhesive 5% hardener It takes 12 hours for the adhesive to harden completely. Ensure that no adhesive is applied to visible parts of the rear window, since it is impossible to remove this adhesive later.



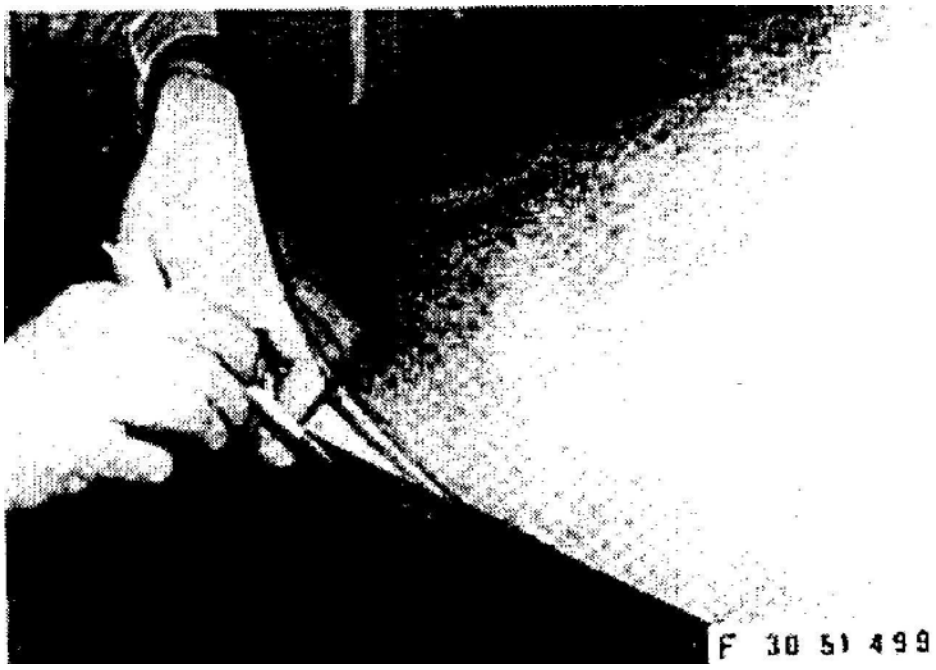
F30 51 484 Stick the upper section of the *new* rear window *to the old rear window* and close the top flap over the window. *You may wish to weight it or stick more pins in to clamp the window down.*
Note Allow adhesive to dry for 12 hours.



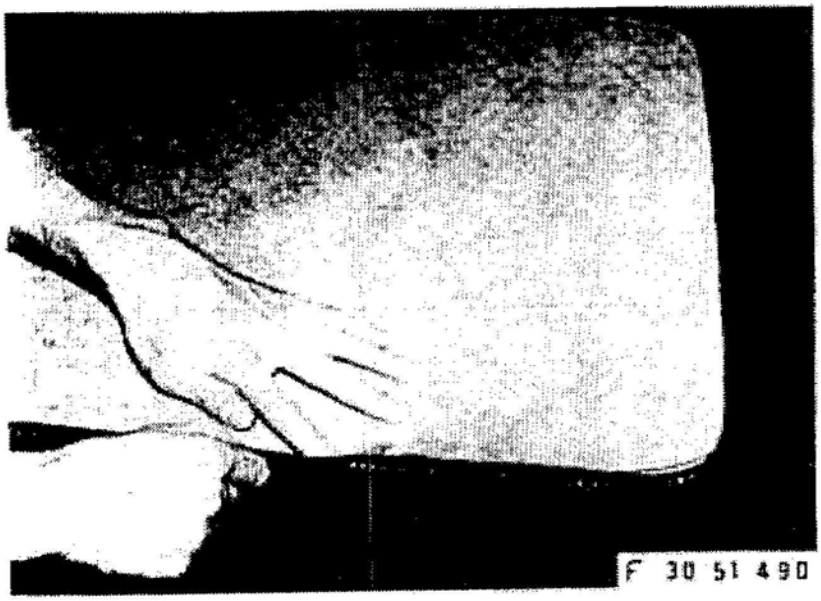
F30 51 496 Lift up soft top material and apply adhesive to *the topside of* the upper section of rear window by holding the flap up while applying adhesive. *Push flap down, weight and allow to dry for 12 hours.*



F30 51 492 Remove *stick* pins from the lower section and pull the *new* window out of the flap. Apply adhesive to *the underside of* the *new* rear window near the edge by folding it up. Do not let adhesive drip onto window where it will show.



F30 51 499 With the *new* window still held away, apply adhesive to *topside* of old window under flap, by lifting the flap as you move the glue nozzle along.



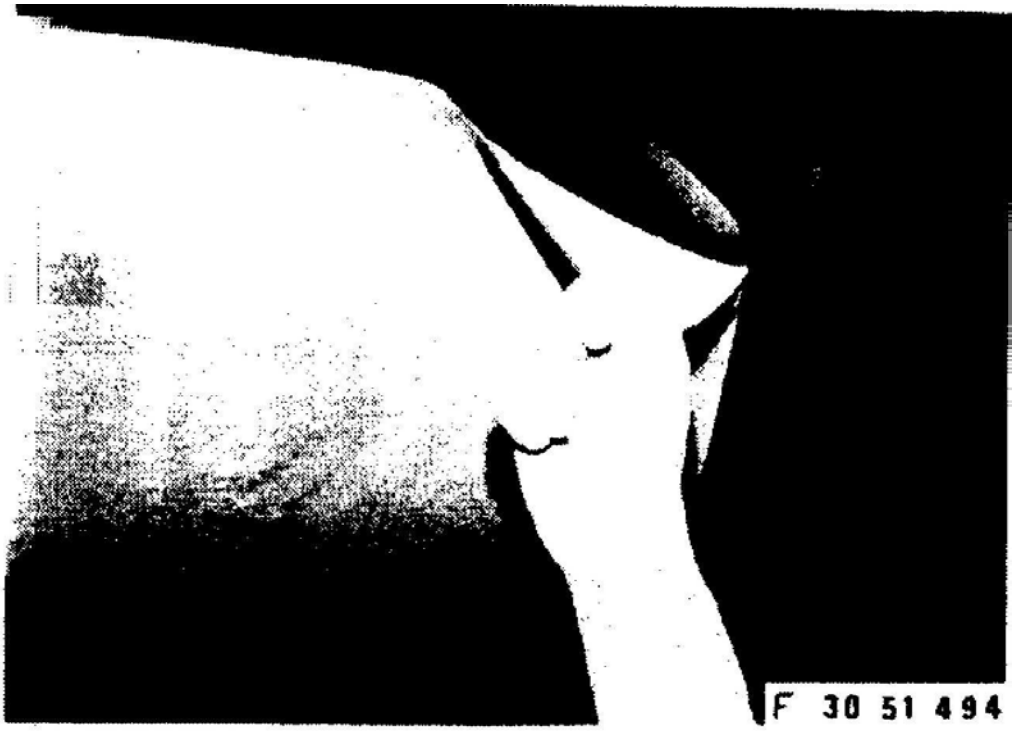
F30 51 490 Carefully, re-insert the new window into the flap and press down *to contact the two adhesive layers. Apply weights, put pins back in, or clamp to keep the new window material pressed against the adhesive*. Allow to dry for 12 hours. Stick lower section of rear window into soft top, and repeat *the gluing of the flap down onto the topside of the new window* as with the top portion. Allow to dry for another 12 hours.

F30 51 493 *- If you partake, go out and buy supplies: a case of beer or other sustenance. This next sewing task is very time consuming.*

If the roof is on the car, two people should do the stitching (one on the inside, one on the outside). *If the roof is off, one person can do it*

- The stitching holes can be made larger by using the awl.
- Two needles and two threads are used for stitching so that a seam of symmetrical appearance is produced.

See the instructions at the end of this guide as you may find other stitching methods that work better.



F30 51 494

Take hold of the old rear window with fleece cover material at the corner which has been cut through. and remove it.
Note The knife may have to be used at certain points to detach the old rear window *(but be very careful not to punch through to the new window.)*
Check the rear window later on for water leaking in.

(Note that this was the end of the original instructions, so what do you do if the water is leaking? Go buy another case of beer!)

Sewing Stitch Methods

Method 1 -My Preference for ease and same look – Single thread Back stitch

This method uses one thread by jumping two holes forward on the invisible underside of the fabric (inside the roof) and then backstitching one hole on the forward side. The result is a stitch that looks exactly the same on the top side as the original roof stitch. The only tricky part is that when you are moving forward two holes on the underside, you have to guess where the needle will come out…practice makes perfect. This is why I would try to mark the original stitch holes on the underside.

Here is the Wikipedia explanation but note from the last sentence that this is for an upside down piece of work. Reverse all the ups and downs when working from the outside of the roof.

> In sewing and embroidery, a **backstitch** is a series of stitches that each overlaps half of the previous stitch. It is often used decoratively to outline an embroidered design.
>
> The backstitch looks something like this (except dashes will be almost touching):
>
> **- - - - - - - - - - - -**
>
> To create a backstitch, imagine a series of positions, *a, b, c, d, e, f, g, h, i j, k, l* in the fabric and use the following sequence:
>
> 1. Insert the needle down into the fabric at *position c*.
> 2. Bring the needle up through the fabric at *position a*.
> 3. Insert the needle down into the fabric at *position f*.
> 4. Bring the needle up through the fabric at *position d*.
> 5. Insert the needle down into the fabric at *position i*.
> 6. Bring the needle up through the fabric at *position g*.
> 7. Insert the needle down into the fabric at *position l*.
> 8. Etc.
>
> Below is a visual representation of the above steps:
>
> Sequence: **2...1.4...3.6...5.8...7.**
> Positions: *a b c d e f g h i j k l*
>
> NB: to make **the top look attractive**, insert #1 from the bottom, switching all *up* and *down* instructions above. This works when crossstitching.

Method 2 - Most like the original - Hand Stitching a 2 thread Sewing machine style stitch

I invented this stitch when the Leather (method 3) Figure Eight stitch didn't work for me. I figured I could do the exact stitch that was originally machine sewn by using a sewing machine needle, but using it by hand.

You need to use a machine needle since it has the eyelet at the sharp end of the needle, allowing you to grab the thread once it is poked through, without pushing the needle all the way through. A standard hand needle has the eyelet at the back, so you can't get the thread to the other side without pulling the needle all the way through. I actually used this method for about a quarter of the stitches until some web surfing discovered the one thread backstitch method above, which is faster/easier, and looks just as good.

I poked the machine needle with a thread from the top, then pulled it back out just slightly to create a loop in the thread on the inside of the roof.

A second thread with a standard needle could then be aimed through the loop and the bottom thread pulled tight.

While still holding the bottom thread tight, the machine needle could then be pulled out, leaving the loop on the other side with the under-thread through it. The two threads pulled slightly would tighten the stitch.

Move onto the next stitch and repeat.

Double Stitch Sewing (from a How-to-sew-leather website)

I tried this for about two inches and gave up. Basically, you figure eight two threads in and out just like those powder skier tracks when two skiers cross each others turns. It seems like a good idea, but it is really hard to get the threads to go through the same holes when it is black thread on black fabric. Here's a description from the web.

1. See "How to Use a Stitching Awl in Leather Work" for information on marking and making holes for the stitches.

2. Make sure that the holes in the two pieces of leather line up evenly.

3. Thread one leather-stitching needle or harness needle with either waxed linen thread or artificial sinew. Do not knot the thread end.

4. Pass the threaded needle through the first two corresponding stitching holes from either right to left or left to right. Draw the threaded needle through far enough so that an equal length of thread protrudes from each hole.

5. Thread the free end of the thread with a second needle.

6. Insert the left needle from left to right all the way through the next pair of holes to be stitched.

7. Insert the right needle from right to left all the way through the same pair of holes. Pull both threads taut.

8. Repeat for each consecutive set of holes to be stitched.

9. Take two or three stitches backward as you near the end of your stitching. Move forward again and continue stitching until you reach the end of your stitching line.

10. Tie off the work with one or two overhand knots. See "How to Make an Overhand Knot" in the Related eHows for instructions.