

# FRANKENLINER!

C4 UrS Wheel Well Liner Modification, Using a Vent From an Audi B5 S4 2.7tt

By Dave Forgie (originally done in 1999, revised in 2011)

## Day 1

I got the B5 S4 2.7tt wheel well liner (PN 8D0 821 171 G ) yesterday and got into the project after lunch today. Here is the B5 S4 liner and the UrS liner side by side (UrS on the left, B5 S4tt on the right)



The UrS4 liner comes out easily (once you see the single black screw on the upper wheel well lip). Once the liner is out you can see how poorly the airflow through the intercooler really is. There is no clear way for the hot air to get out of that area. I bet that whole area is slightly pressurized and there is very little flow of cool air through the intercooler.



Now I understand why people (at the time) were looking at the Euro S6 front bumper with an eye to mounting a larger intercooler beneath the bumper. (NOTE: In retrospect, the Euro bumpers actually offer less possibility for a front mounted intercooler (FMIC) than the North American DOT bumpers because the Euro bumpers are tighter to the body than the DOT bumpers).

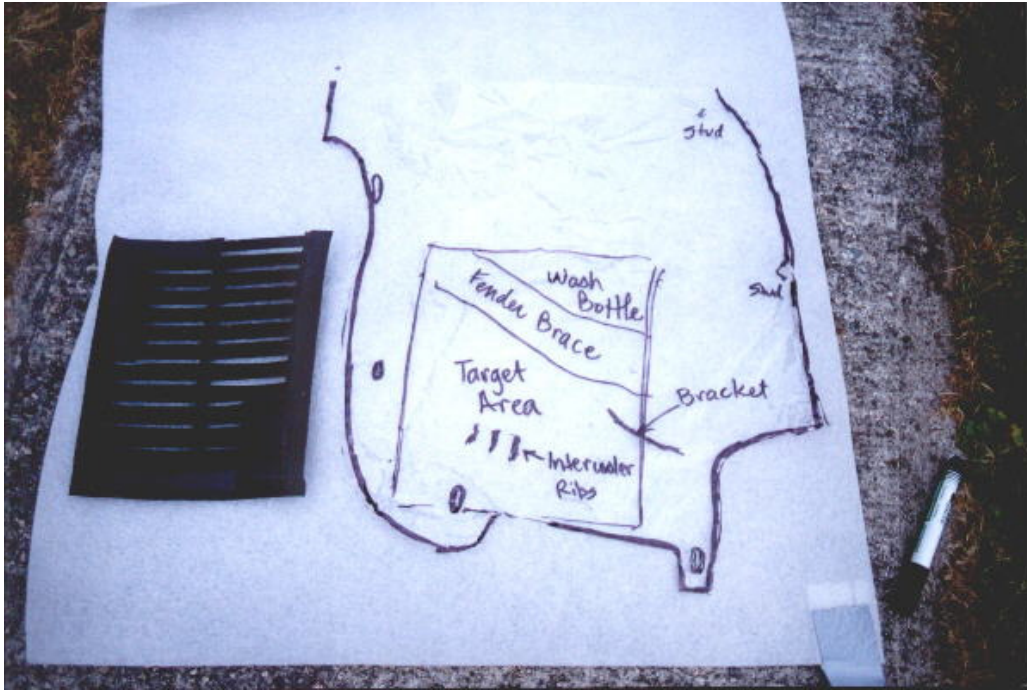
The S4tt liner doesn't fit without modifications. In addition, the vented area is much larger than will be functional in the UrS4. Unless you really think that you want to get hot air away from the windshield washer reservoir. On that basis, I am not using the small upper area of the S4tt vent (about 3" x 4"). The part that I am using is this (shown on front of the uncut UrS liner):



There are a few challenges to be met tomorrow. There are a couple of braces, e.g. a fender brace and an intercooler locator bracket that will conflict to some degree with the S4tt vent. I think I have figured out where to mount the S4tt vent area to avoid at least the intercooler bracket. The rest will be solved somehow (Dremel or less than flush mounting). At this point, I have not cut the UrS4 liner. I have also developed a respect for Frank Amoroso's cut and heat/bend solution. Even Jimmy Pribble's "Home Depot" solution shouldn't be dismissed. (It is too small though - Jimmy you need to go to Home Depot and see what else they have in the 4" x 6" range.)

## Day 2

Day 2 started with trying to figure exactly how much of the S4tt vent would be truly useable, i.e. it is too big as supplied for the UrS4 application. The trick to help with the decision was to cut some heavy gauge clear (flexible) vinyl to the template of the lower front half of UrS4 liner. With this done, the clear "liner" was tacked in place, in the wheel well, using the liner screws. A felt pen was then used to draw on the obstacles, i.e. the windshield fluid reservoir, the fender brace, the intercooler bracket and the ribs on the intercooler, right on the vinyl, as shown in the next photo:



This clear liner was then removed and the S4tt vent section was trialed over top, noting the marked obstacles. This led to some sizing and positioning decisions.

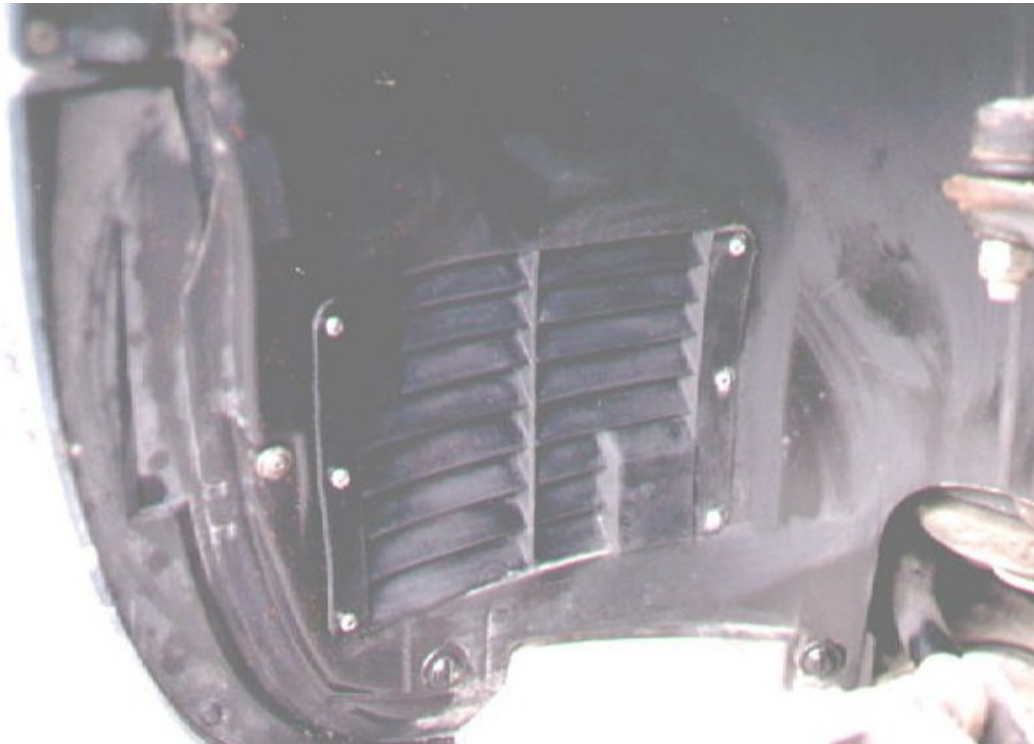
The major decision was to eliminate some more vent louvers. In the end, eight louvers (in two rows = 16 louvers), counting from the bottom most S4tt louver were kept. No extra plastic flange material was kept on either the top or the bottom of the louvers. However, a flange of about 0.75" was kept on both sides. The location was set relative to the outer most Dzus(-type) body-pan fastener: about 1.5" above the fastener and centered on the left row of louvers. An appropriate-size hole (roughly 6.5" high x 7" wide) was cut in the UrS4 liner using the trimmed S4tt louver set as the template and then cutting about 0.75" (the "flange" width) narrower on both sides but even at the top and bottom.



Here is the cut UrS liner installed back in the car, but without the B5 S4tt louvered piece.



After some minor trimming, six No. 8 panhead self-tapping screws (as short as you can get them, e.g. 0.5" or less) were used (3 per side) to fasten the S4tt louvers into the UrS4 liner. Pop-rivets would have worked fine too. The UrS4/Frankenliner was then reinstalled into the wheel well. End result,: Looks Good!! (Does it work? Time will tell).



## Frankenliner Installation Guidelines (USER BEWARE - make your own decisions)

1. Purchase B5 S4 2.7tt left front wheel well liner (**8D0 821 171 G**)
2. Using sharp utility knife and/or utility shears cut a section of the S4tt louvers from the S4tt liner. Make horizontal cuts at the bottom of the bottom-most louver and the very top of the eighth louver from the bottom (where the bottom louver is No. 1). Make the vertical cuts approximately 0.75" away from the outside ends of the louvers. Round the corners of the ends of these "flanges" (this is a "pretty" thing - not functional)
3. Remove left wheel well liner from UrS4/S6 (actually, if you are careful cutting in Step 7, this is not required - now that I think about it and know what is behind - again: USER BEWARE)
4. Trial the trimmed S4tt louver section over the UrS4 liner, keeping the bottom edge of louver No.1 (the bottom one) about 1.5" above the outer Dzus body pan fastener. Keep the top edge at what appears to be level (Note the bottom of the liner is not parallel to the ground - do not use it as a level guide). Keep the left section of louvers centered on the Dzus fastener.
5. Mark the position of the trimmed S4tt louver section on the UrS4 liner with a pencil or felt- tipped marker.
6. Mark cutting lines on the UrS4 liner as the top and bottom of the S4tt section but 0.75" narrower than the S4tt section, on BOTH sides.
7. Carefully cut the UrS4 liner on the cutting lines with a sharp utility knife. If you haven't removed the liner from the car, don't let the tip of your knife go through the liner more than 1/8th of an inch (remove liner if you are concerned you can't do this).
8. Trial fit the S4tt section into the UrS4 liner hole; trim hole as needed.
9. Fasten S4tt section to UrS4 liner using short pan head sheet metal screws, automotive screws and speed nuts, big Frankenstein bolts or (insert your technique here))
10. Reinstall UrS4 Frankenliner into UrS4/S6.
11. Enjoy: should be good for a least 50 horsepower (No!?)

UPDATE: 2011 – went FMIC in 2005 but kept the Frankenliner in place because I installed a multi-row power steering fluid cooler where the OE side mount intercooler was located.

Dave F. (UrS4boy) June 11, 2011.