DAS Bar

From: WFerch6687@aol.com
Date: Sat, 11 Aug 2001

John:
It is so nice to hear from you...I had a great time meeting and chatting with you at the Glen Trakquest event. How timely..I just finished putting the DAS bar in the car yesterday! Very nice, and a surprising amount of rear-view open area considering there is a diagonal cross brace. Truly amazing. I might do some fine tuning, as I am apt to do because I tend to be the perfectionist (hardly attained-however !).

1.) Whenever 3 of the 4 bolt holes match up, the fourth is out of position. So, you either start each nut loosely (as I did) and pre-load the bar, or you may want to elongate one (or all) of the holes. It ultimately fit, but I have a suspicion that I'm "tweeking" the chassis or the alignment by forcing the fit this way. Another reason I might elongate each hole is that the design usues "L" shaped feet, so the bar is in compression on the sill plate that it rests on during a crash. Right now, with the holes so perfectly drilled (and not slotted).. I believe the "L" isn't making full contact toward the bottom sill plate. So...to have the "L" touch bottom, and to lessen the twisting stress on the chassis, I will likely redo this by opening up the bolt holes. Not a biggie, the fit and finish of the unit is actually very good.

2.) I was able to install tha bar by only removing one seat, I'm my case ,
the psngr seat.

3.) The "loops" on the harness guide are too shallow to pass my harness belt (hardware) through. Hmmm. I might have to attach the shoulder harnesses directly to the cross bar, but I don't want to do that, even though the manufacturer says it's OK. Why? The rear mounts use one (1) bolt on each rear corner....the same size as the seat track mount bolts (M8 x 1.25 pitch x 30 mm long in this case). Although perfectly strong enough to hold me in-place for driving, I don't like this from a crash perspective. Better is the four (4) 7/16"-20 UNF bolts holding my shoulder straps as they are now, using the rear seat belt hard-points.

4.) The fire extinguisher can now be attached to the diagonal bar with padded hose clamps, avoiding the use of the BK bar that limits forward seat travel for the passenger. I also find that DE instructors, in their haste to get in, tend to kick the FE around a bit.

5.) Even with stock seats, I encountered the seat rail impact on the foot mount of the main hoop, as Greg Gulik did , and as he posted in his web-page. The more I look at the design, the more I am convinced that a good portion of this protruding "L" flange is simply hanging in air.(the horizontal portion).....doing nothing.....and trimming this flange as Greg did, is the answer...but I will do it much more aggresively and come closer to the bar tube diameter (this is hard to visualize in text....see Gulik's

web page) . My idea is that the "L" better make contact with the sill, over a large an area as possible, but the overhang does little good ...perhaps only adding a bit of bending resistance. See Greg's site here:

http://test.gagme.com/greg/911/hacks/rollbar.html

Let me know what you think...I'll post some of these DAS thoughts to the List , too, for advice. BTW, I'll likely talk to Colin Dougherty on a possible re-design of the hoop. I *think* that the main hoop can come down much more straight (instead of jutting forward in a "J" shape to mate with the seat belt threaded hole). An "L" piece foot can , and must still be used. In this redesign, the "flange" would then be much further back and has less chance of hitting the seat rail. It still contacts the sill, but at a point further back where the sill is a "bit" narrower. I think it would be a fair trade-off.

---- Wil

DAS Bar Musings

From: WFerch6687@aol.com
Date: Thu, 16 Aug 2001

Listers:
Attached fins some dialogue I'm having with Lister John Krzymuski on DAS bar installation. It seems there is some intersest on this topic.

John:
No problem on the response time...we all have things to do.

1.) I bought the bar second-hand from another Lister, and he already had it professionally painted in a semi-gloss black look. Very Nice..and looks like black powder coat, although I can't verify paint type.

2.) I haven't had time to look into taking the harness belt hardware apart, threading through the loops, and then re-attaching. I *think* this will be the only way it will work to fit through the DAS harness loops, but to be fair in my reporting, I haven't done it yet and so can't confirm success. I expect it to go OK. I did some *very* rough calculations , and I've convinced myself that attaching the shoulder harnesses to the roll bar's cross bar will be a mistake...because the full (accident) load imparted on the bar by 2 people...all held in the back by only 2 (!) 8mm bolts is too close to being too weak. Far better are the 4 x 7/16 bolts as used now, by retaining the rear seat belt threaded connections.

3.)Hoop? By this do you mean the main overhead hoop section of the bar? If so, it is

positioned well behind your head in normal seating situations. Don't know how far "back" the seat may bend during a crash, though, and if you mean how close does it come to your head during this scenario. I believe this won't be any worse than other designs. The main hoop follows the contour of the B-pillar nicely, to give you an idea of where it's located. Greg Gulik's various photos tend to show this well if you enlarge the thumbnails. Interesting thought about the seat being in the "full" rearward position. There is a conflict of sorts. I reported that I might get more aggressive in machining back the front foot mount flange..to allow a bit more rear seat travel, recall? This might gain another 1-1.5 " of rearward travel, if done aggressively as I suggest.

The associated problem is this: As it is right now, (even with the foot-interference), the seat-back, at a "nominal" recline angle, is very close to contacting the cross-bar. So...even if I can squeeze out an additional (say) 1.5" of rear seat travel, the seat back would have to be more upright...almost 90 degrees ...to take advantage of that extra legroom before it hits the cross-bar. This is with stock seats. Meaning? I might not machine off the flange after all, or only a little bit, because the seat back (at a "Slight and normal" angle of recline) is now very close to the cross-bar anyway, at the current rear-most position allowed. I am 5'-8" and this is not a problem for me, plus the psngr seat looks to have ample legroom, too, but it might be a different story for a tall and/or large person. Miscellaneous: Unlike Greg who mounted his fire extinguisher on the diagonal brace with hose clamps..I tried something different. I've located mine on the vertical main hoop bar on the passenger side, as low as I could go. This is a nice location (lower CG, out of the way if you stuff things in the back seat area, easily accessable by reaching behind the psngr seat, and the nozzle (and handle) nestles more snugly against the lower upholstery panel covering the stock seat belt spool.). In addition, as you open the psnger door, the stock seat belt drapes down and visually covers mot of the FE. Very nice and inconspicuous. To mount, I used two (2), 5/16" x 1.75" x 3", U-bolts , with SS nylock nuts. (This means the bolt thread is 5/16", the U-bend diameter is 1.75" to match the roll bar tubing used, and each leg of the U bolt is 3" long). I needed to trim the length of the bolts on both ends by 1/4" , for a cleaner fit that has less chance of puncturing the FE.

So, if I could have bought a 5/16 x 1.75 x 2.75" U-bolt...I would have saved a step. I slipped a (black !) 5/16" ID fuel hose around the U-bolt to act as a cushion to avoid scarring the nice paint job and to make that area consistently "black". Looks neat and sanitary, almost factory....a big thing for me, as you know, as I'm a stickler for details.

Again, I'd like your permission to post my response to you to the List, as I gather there is interest in this DAS bar thing lately. Hope you don't mind, and feel free to ask further questions.

Best Regards,
-- Wil Ferch