

Installing Seat Belts in my Tudor

August 2009

My '29 Tudor was restored about 25 years ago by my brother-in-law. He restored it to close to original, but made a few changes that many will claim are for safety reasons: halogens with the accompanying switch to 12v, turn signals and hydraulic brakes. A couple of years ago when my sister and BIL needed to downsize their life, I bought the A in order to keep it on the family. Since then I have become a part of a wonderful club, have made a lot of new friends, and am greatly enjoying working on and driving the old car.

One thing that was a bit discomfoting was the lack of seat belts. Both Sandra and I feel better when buckled in, even if it's just a lap belt. I have been driving for well over 50 years and EVERY car I have ever had had seat belts: either self-installed or from the factory. And we ALWAYS use them.

I did a bit of reading on the 'net and found too many examples of crashes involving an old car. Where seat belts were in use, they most often were attributed in keeping the folks alive. It has been strongly encouraged in the Model A magazines to add them, and Les Andrews' books even have a significant section devoted to how to do it for various different models. So I started the process.

First off: what to install. I wanted the belts to be as unobtrusive as possible but yet easy to use. To this end I wanted the type with automatic retractors. These are available from many sources, but I chose to buy them from Juliano's Hot Rod Parts in Connecticut. (I have no affiliation with them other than as a customer.) Their website is

<http://www.julianos.com/>

When you get there you will need to navigate to their Seat Belt page and then to the type of seat belt of your choice. In my case, I wanted retractable lap belts, and, because there isn't a lot of space between the front seats, I did NOT want the type that had a hard casing on the end that is located there. In other words: push button retractable lap belts designed for a bench seat (NOT the bucket seat). I chose the "Starburst early GM style" as it seemed to be closest to what I wanted. Cost was about \$120 for two belts, one for each seat.

I also ordered their seat belt anchor plate kits, one for each side, but they were not suitable for my A since their reinforcement plates were too large to fit where the belts would be anchored. I made my own anchors using some 2" angle iron and 1-1/4" strap. Bought it along with grade 8 1/2" bolts/nuts/washers at Tractor Supply. (Would have preferred 2-1/4" angle, but they didn't have any.) I used

- 2 - 1/2"x1" grade 8 bolts
- 3 - 1/2"x1-1/2" grade 8 bolts
- 5 - 1/2" grade 8 nuts and lock washers
- 3 - 7/16 flat washers

The flat washers were just for spacing and are 7/16 since their hole is just slightly over 1/2" diameter instead of almost 1/16" oversize for the 1/2" washers.

Once the parts all came, I started the process of installing them.



First off you have to tear everything out of the inside to get access to the sheet metal of the car itself.

The seats are easily removed. On the Tudor, they are attached to the mounts by two pins held in place with a couple of clips. In my car I also removed the carpet that extends from the seat front edge to the back seat. This exposes the metal rail that crosses the Tudor body under the rear seat edge.

You can see the extra metal floor plate that allows access to my master cylinder, and the seat adjusters for the driver's seat.



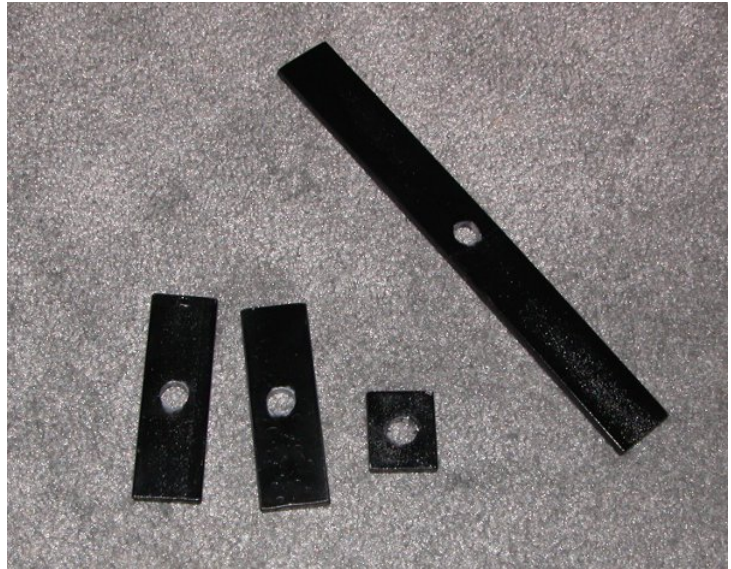
After removing the rear floor board, I lifted the rear seat up out of the way. (I didn't remove the seat since it was not necessary to get it out of my work space.) As you can see, access to the needed areas is very easy from inside the car. I had the A on jack stands but never did crawl underneath.



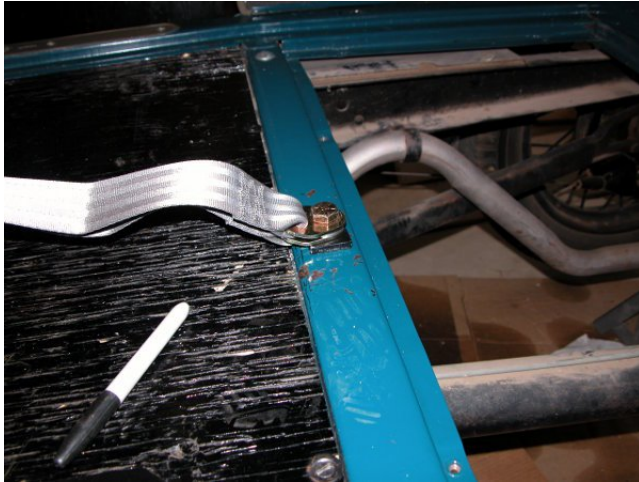
The outer ends (the end with the retractors) are mounted to the body sill. I measured a point 14" forward of the face of the rear seat and made a mark. (Well, actually, I made two, but the first one was too far forward. :-))



A hole was then drilled through on each side. Same for the cross member. Measure to the center and drill a 1/2" hole there as well.



Here are the parts I fabricated. The L-brackets are the side mounts and the flat pieces (except the small one) are the reinforcing straps that go underneath the metal of the body channels. The L-brackets are 2" high and 1-3/4" across the bottom, and 2" wide. The hole in the base is centered, the hole in the side is 1-1/2" from the bottom. The reinforcing straps are made from 1/4" flat stock and are 1-1/4" wide. The shorter reinforcing bars are 4" and the longer is 10". More on the shortest one (1-1/2" long) later.



These two pictures show the installation of the center mounted belts.

Both belts have a metal end that is bent slightly to allow the belt to be bolted to the floor. But if you want to 1) have them above the carpet, and 2) using the same bolt, you have to insert some spacers.

The second picture shows the small spacer that was illustrated in the previous page. It lifts the two belts off the floor and allows the carpet to slide underneath the attachment parts of the belt.



Between the two belts I used three of the flat washers to space the two belts apart just a bit so that the fabric of the belts would not interfere with tightening the belts down.

The 10" reinforcement strap is located up underneath the center body channel.

On the Tudor, the rear support of the front seats rests on the metal channel when the seats are in their stock position. My driver's seat is shifted back a couple of inches.



The brackets on the side are bolted through the body sill using the 4" reinforcing straps underneath. You have to get creative in getting your fingers in under the body (from the outside above the running board), holding the strap in place, getting a bolt down through and then getting a lock washer and nut started onto the bolt. Sandra as a third hand worked wonderfully!

Once you get the nut started, you will need to use an open end or box wrench, again up underneath the sill from the outside, while you tighten the bolt from the inside. Don't forget the mounting bolt for the seat belt since you can't get it in after the bracket is bolted in place. (Ask me how I know! :-) Use the 1"bolts here. (Yes, I know, that's a 1-1/2" bolt!)



Now the seat belt with the retractor can be bolted to the mounting brackets. Probably a good idea to just loosely mount it now since you will need to adjust it after you get everything back together.

All that's left is to reinstall the floor boards and the carpet. On my A, I cut a 1-1/2" x 1-1/4" hole in the carpet where the center mount is located. You can poke the buckle end of the seat belt through that hole and then slide the carpet down under the attachment points. It really gives a neat installation without having the seat belt clamping the carpet between the mount and the floor. (Sorry, no picture.)



Once you have the seats back in, have someone sit in each seat and adjust the angle of the retractors so that the belt pulls straight out of the unit, then tighten their attachment bolts.

This is how it ends up looking.

Any questions or comments, you can contact me at Bill@WRLee.com

Regards,

Bill Lee