

Shoulder Seat Belts for a Model A

By: Archie Beyl
Longview, Washington

During the restoration process of my 1931 Slant Window Town Sedan, I decided to design and install shoulder seat belts for the car. Modern auto retractable belts would not work as there is no space for the retractors. Having once owned a 1970 VW bug, I remembered it had non-retractable belts. A visit to our local VW salvage yard yielded four sets. The purchase included buckles, plastic sliders, steel eyelets for bolting to floor and doorpost, and some old webbing attached.

After understanding how the webbing was strung, I cut off and discarded the old webbing. New seat belt webbing of a color matching the car interior (brown mohair) was purchased through an upholstery shop, 43 feet is adequate. The plastic covers on the buckles were all black and were repainted to match the car color.

FRONT SEAT

The lap buckle will be 14" long. Allow 3" extra length for sewing each eye. You will need to construct two lap sections.

Cut a slot 2" x 5 1/2" in the seat frame pan at center of car allowing for the belt to pass through to secure to the floor. A good idea is to bend over the edges 1/4" for a smooth edge. The seat belt will be bolted to the floor at the center crossmember using a 3/8" bolt.

The upper shoulder section will require the most work as it will be secured to the doorpost. Have no fear, the post is plenty strong to support a seat belt. The post is constructed of outer and inner sections spot welded together for strength. Remove the seat and seat frame, carpeting, and doorpost upholstery, and wood tack strip from doorpost. Drill a 1/2" diameter hole in the doorpost (inner liner only), measuring 38" up from the floor. Using a 1/16" cut off blade, cut a section 1" x 3" and bend toward inside of car. See diagram A.

As per diagram B, construct a plate of 1/16" steel, 1 1/4" x 3 1/2", drill a 1/2" hole in center, weld a 7/16" NF nut onto

one side. Insert this plate into the slot previously cut and spot weld into place. **Caution:** do not drop this plate into the inner part of the doorpost. Bend back into place the previously cut slot. The nut will be behind the inner section of the door post. Drill a 5/8" hole through the wood tack strip and install. The shoulder belt then should be secured to the doorpost with a 7/16" NF bolt.

REAR SEAT

Construct seat lap buckle sections same as front seat. Bolt to floor behind rear seat with 3/8" x 1 1/4" bolts and floor reinforcing plate made of 1/16" steel.

The upper rear shoulder belt will be secured to the rear body panel seam. This seam is actually very strong and is also strengthened by a body channel brace behind the rear backrest. You will need to construct a bracket upon which the belt is bolted to, see diagram C. Remove the rear seats and rear quarter panels to access the inside of the body.

Construct to fit, a bracket made of 1/8" flatstock, 1" x 15", drill 1/4" holes to match body seam bolt locations, construct an L shaped eye with a 1/2" hole, weld a 7/16" NF nut to the inner side, see diagram C. Securely weld this piece to the 15" plate. You will need to take some measurements before welding. The L shaped eye with nut should be located 33 1/2" from the floor when bolted into place. Secure this plate to the body by the matching four body seam bolts. Replace quarter panel and carefully locate and cut out a 1/2" hole in the quarter panel for the 7/16" x 1 1/2" NF bolt which will secure the seat belt eye to the car body. Depending on the fit of your quarter panel, you may need to make a spacer between the bracket and quarter panel for a proper fit. I made mine from a piece of pipe 1/2" long with a 7/16" hole and spot welded to the bracket.

The VW strap eyelets have large holes. I welded these closed and redrilled to fit the according bolts, 3/8" and 7 1/6" sizes. The eyelet angles must also be bent slightly for clearance under the front seat and doorposts. I primed and painted brackets before final installation, and also painted exposed bolt heads with matching color.

When stringing the new belt material through the buckles you will also need to

rivet the plastic slider onto one end of each belt.

Front seat belt lengths: shoulder 52" plus 3" for each eyelet (55" of material); the lap is 46" plus 3" for each eye (49").

Rear shoulder same as front seat. Rear lap 49" plus 3" each eye (52"). You can vary these lengths if so desired.

Some upholstery shops may not sew the belt material to the eyes, however, I did not experience that problem. If so, try another shop who can stitch the material safely.

As you will be welding on the doorpost you most probably will have some paint damage as I did, which will require paint touch up. Use a gas MIG welder, this can reduce damage.

The VW style belts were certainly not the most convenient to adjust compared to modern belts, however, once adjusted for yourself no further adjustment would be necessary.

This is a big project. Allow 2-3 weeks for the purchases, planning, welding, installation, etc. Work slowly and carefully and use your own judgment for changes that may be necessary to your car.

Originally VW had a plastic hook on the doorpost to hang the belt when not in use and over time this hook would break off. I constructed a small metal plate with a small brass hook brazed to it and secured this on the doorpost and in the rear seat area behind the side window.

Perhaps there are other models of the older cars that had non-retractables that may work just as well. I think this method could also be adapted to some of the other enclosed cars as well. Installation of mine was made easier as I had not yet installed any upholstery. My passengers and I certainly feel more secure with them.

ITEMS:

- 4 VW Buckles
- 8 VW Floor eyelets
- 4 VW Shoulder eyelets
- 4 7/16" x 1 1/2" NF bolts, nuts
- 4 VW Plastic sliders for adjustments
- 8 3/8" x 1 1/2" NF bolts, washers, nuts
- 1/16" plate for floor reinforcement.
- 43' new seat belt material.

Total Cost: approx \$125

FRONT SEAT

Diagram A

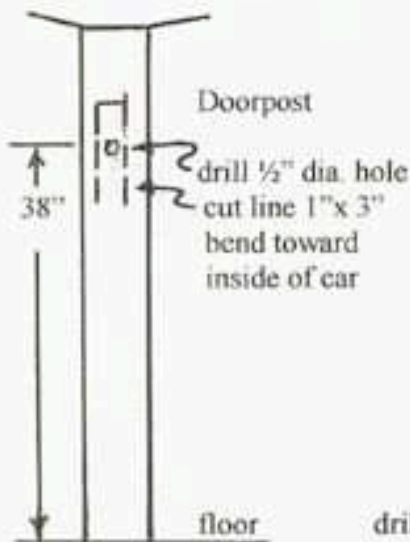
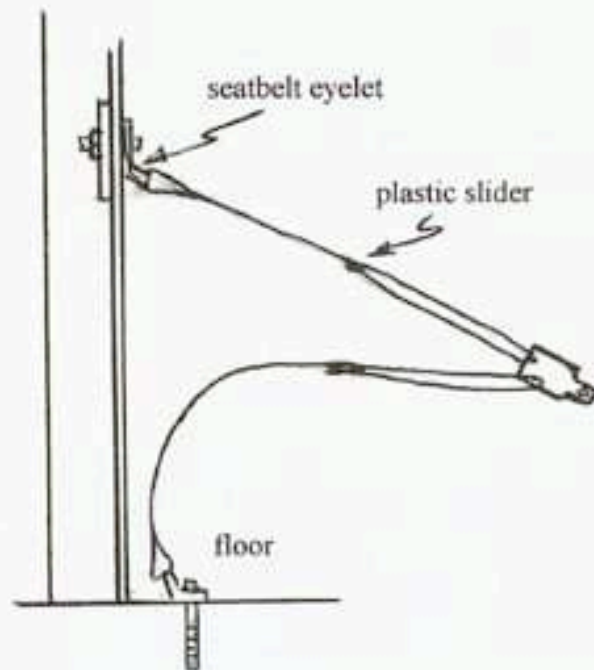
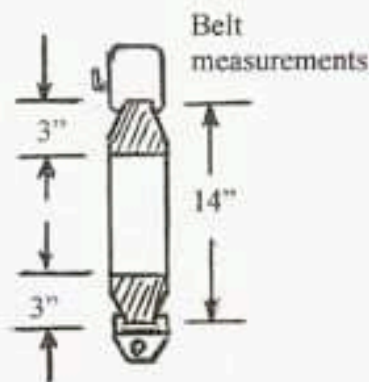
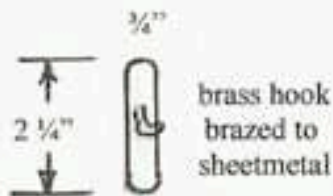
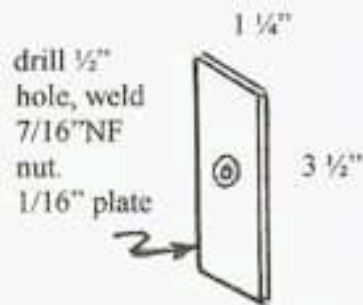
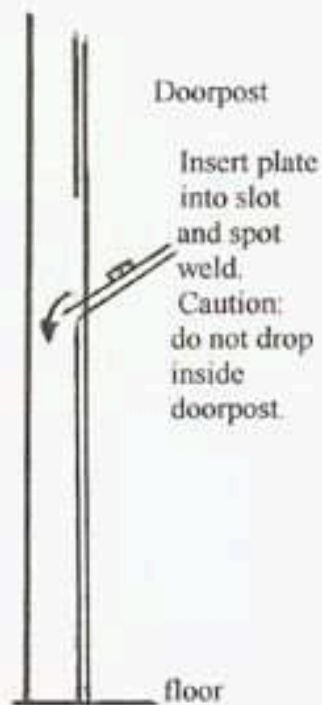


Diagram B



REAR SEAT

Diagram "C"

