Installation of retractable seat belts for front bench seats of Greenbrier

This is how I installed seat belts in my 61 8-door Greenbrier. My goal was a very clean finish with reinforcing plates welded in place to allow easy removal of the belts in the future if necessary.

The belts are Andover restraints, Inc #8407E, 3-Pt Retractable with 18” buckle ends.

On the final page are exact size reproductions of the reinforcement plates and the modified seatbelt brackets. The reinforcement plates were cut from ¼” steel, onto which were welded the bolts that came with the belts. All reinforcement plates were inserted through access holes and plug welded in place. The the access holes were repaired and finished back to stock appearance.

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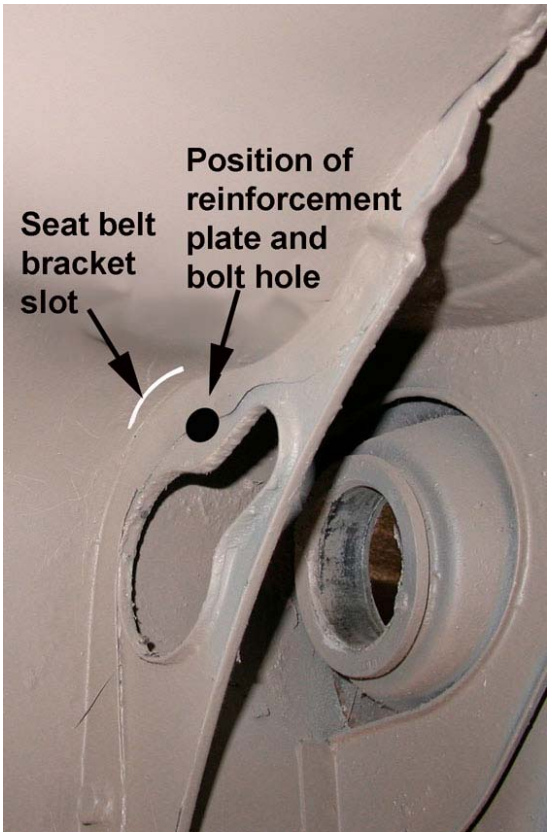
This composite image shows positions of the retractors and door post pivots. The retractors are just behind the furthest rearward position of the seats.

This shows the positions of the buckle ends. The bolt holes are about 3½” off center.

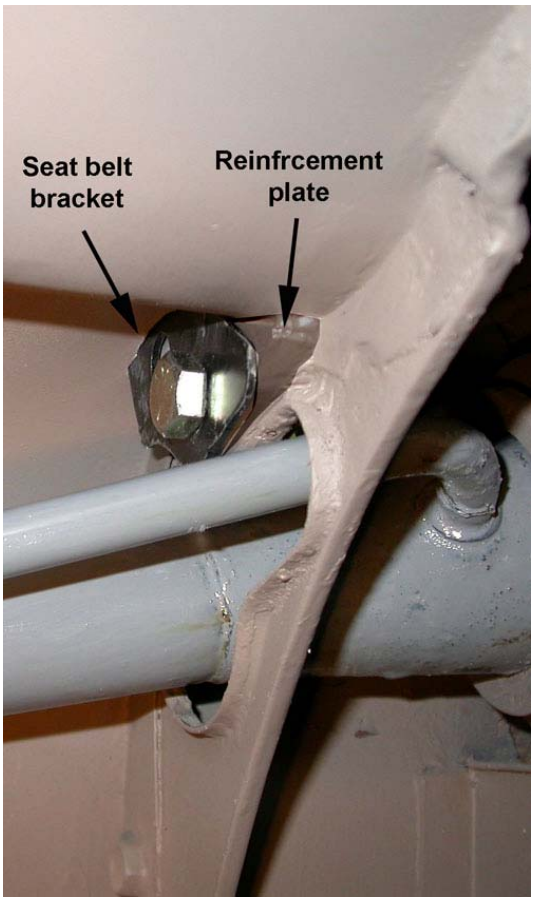
Here is the left side retractor unit. It's mounted behind the front seat furthest rearward position.

The left retractor mounting bracket passes through a ⅛" slot in the wheel well above the gas tank filler. The slot was cut with a dremel tool using a fiber cutoff wheel. The left side retractor mounting bracket was modified so that it would fit through a slot in the wheel-well to align with the strut to which it bolts.

Here is a view under the left wheel well, where the seat belt bracket will connect. The ½" bolt hole through the body strut can be drilled through the gas tank filler tube hole. Removal of the gas tank filler tube is necessary.



This shows the bracket bolted through the reinforcement plate and body strut. By adding an additional ⅛" steel, the left side retractor reinforcement plate was made ⅜" to completely fill the gap between the seat belt bracket and the wheel-well strut to which it was bolted. The reinforcement plate was plug welded in place. The bracket hole is sealed with a little silicon sealer.



Here is the position of the hole for the right side retractor.

Here is a view from inside the right side wheel well with the retractor bolted through the ¼" reinforcement plate, which was plug welded in place.

This shows installation of the ¼” reinforcement plates for the door post pivots. Using Dremel 409 cut-off wheels, the body skin and interior metal were cut away to allow inserting the reinforcement plate, which has the nut welded on the back side. The bolt hole must be drilled through the interior metal panel to allow the bolt to fully screw in.

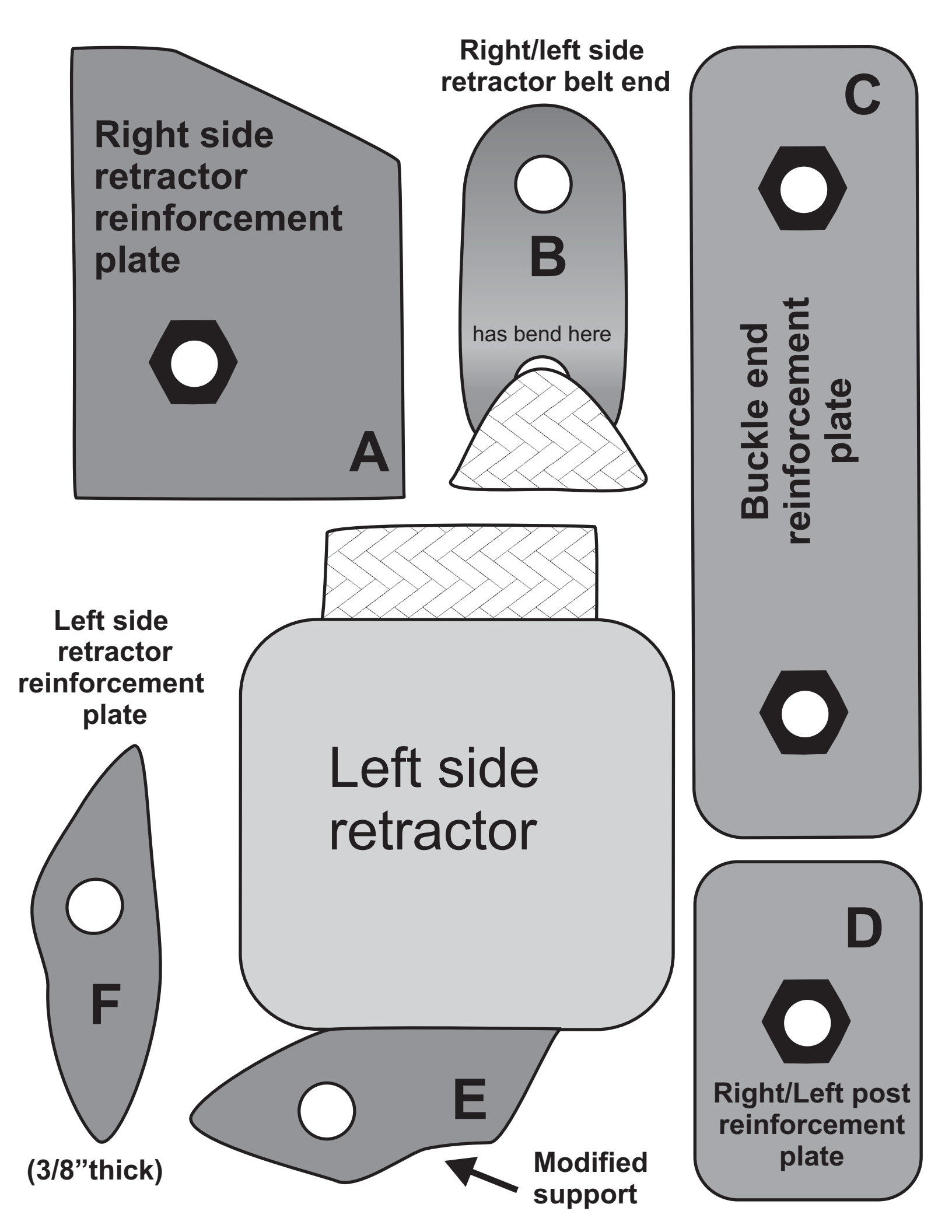
The plate was temporarily bolted and then plug-welded in place. By using the thin cut off wheels, the removed metal can be welded back in place and refinished.

The buckle end belts bolt through a ¼” reinforcement plate placed in the bulkhead under the seat. The 7” x 2” reinforcement plate is shown here. A small access hole was cut in the front of the bulkhead. Two spot welds had to be removed. To assure proper alignment, ⅛” pilot holes in the plate were used to drill matching pilot holes in the bulkhead; and then expanded to ½” diameter. Nuts were welded on back side of the reinforcement plate.

An improvised spatula was used to guide the reinforcement plate into position (very easy), and then the plate was temporarily bolted so that it could be plug welded into place.

A replacement plate for the access hole in the bulk head was welded into place and then finished.

The brackets at the ends of the retractor belts were also modified. From the factory they are designed to bolt behind the retractor unit; here they were shortened for mounting on the side bolts of the bench seat. They bolt on either side of the bench seat.


Right side retractor reinforcement plate
A
Right/left side retractor belt end
B
has bend here
C
Buckle end reinforcement plate
Left side retractor reinforcement plate
F
(3/8”thick)
Left side retractor
E
Modified support
D
Right/Left post reinforcement plate