



11 Mennonite Church Rd.  
Spring City, PA 19475  
(610) 948-7303

## **Installation Instructions**

**part # 10-505**

**78-83 Malibu**

**78-88 Monte Carlo, Grand National  
Welded Rear Frame**



**Please read all instructions in full before beginning installation.**

***CAUTION!!! - The most important requirement for a successful installation of this, or any, S&W chassis component is that you take your time and use good common sense. Check & recheck all measurements before cutting or welding. If at any time before or during the installation - STOP - and call our tech line at 610-948-7303 and we will gladly explain in more detail any step in the installation.***

**Please read all instructions in full before beginning installation.**

**Preparation:**

Installing the S & W RACE CARS frame unit into a clean car is a relatively easy job, although there are certain precautions that should be taken for your safety and to insure that the finished product is aligned properly. It is recommended that you wear eye protection during the removal, welding and fabrication of the stock floor, suspension and other components. Proper supports and jack stands must be used, not only for construction purposes (such as keeping the chassis level), but also for safety reasons. This work should be performed in a dry, well lit shop with a level or near-level floor.

While installing your frame unit, remember that the quality of your workmanship will directly affect the ultimate strength of the entire race car structure. It is important that all areas to be welded are clean, free of oil, slag, paint, undercoating and, of course rust.

Quality work requires the proper tools. Here is a list of some of the tools you will need.

- A. Common hand tools - for removing the stock suspension components and car interior.
- B. Jack stands - for supporting the car and new frame rails.
- C. Floor jack - for raising the car, removing the front frame section.
- D. Measuring tools - 12' tape measuring, level, inclinometer, plumb bob, string, builders square, large square felt tip pen or soap stone.
- E. Cleaning tools - gasket scraper and wire brush to remove undercoating.
- F. Cutting tools - oxyacetylene torches, hand-held reciprocating saw or rotary grinder with a cutting disc.
- G. Welding equipment - a MIG welder is recommended. TIG welding is acceptable, but is unnecessary for this type of work.

***Warning: Effective Jan. 1, 1995 stick welding will be prohibited by the NHRA. S&W Race Cars strongly suggests that these components not be stick welded!!***

- 1) With all the stock components still in the car and the car sitting on the floor at ride height measure and record the wheelbase.
- 2) Raise the car to a comfortable working height and level it from front to back and side to side. This can be done front to back by placing the level on the rocker panel. Leveling the car side to side by placing the level on the front crossmember and on a horizontal floor panel at the rear of the car.

**Note: from this step to the final step always be aware and maintain the car's level condition!**

- 3) In order to insure that your frame rails are centered in the car properly, you must first find the chassis centerline (C/L). The chassis C/L is the midpoint line that runs the length of the car. To find the C/L, drop a plumb line from the same two points on the opposite side of the car to the shop floor. Do this at the front and rear of the car. We suggest using the front control arm mounting points and the seam between the rear of the rocker panel and the quarter panel. Now measure half the distance between each set of plumb line marks on the floor. Each of these half distances can be connected and a straight line can be drawn on the floor running from front to back, which represents the center line of the car. It is a good idea to drop a plumb line to the C/L on the ground and transfer it onto the car by punching marks on a few crossmembers. Now if you have to move the car or when you do future work, the C/L can be quickly reestablished. The C/L can also be used for suspensions alignment work.

## Disassembly:

- 4) Remove all stock components such as front and rear seats, carpeting and insulation, interior trim panels, rear wheels and tires, rear axle assembly, rear springs and shocks, brake lines, fuel lines ( remove electric fuel pump if rear mounted ) and any rear mounted electrical components or wires.
- 5) Remove the upper control arm crossmember. **Note: do not remove the rest of the frame at this time.**
- 6) Remove spare tire well from trunk floor.
- 7) Notch floor at rocker

panel for access to the frame. Measure forward of the rear axle centerline and mark the floor/rocker at 32-1/4" and 38-1/2" Cut the inner rocker panel vertically on these marks. Cut horizontally, top & bottom between these cuts to create the access to the frame shown in the circle in photo #1.

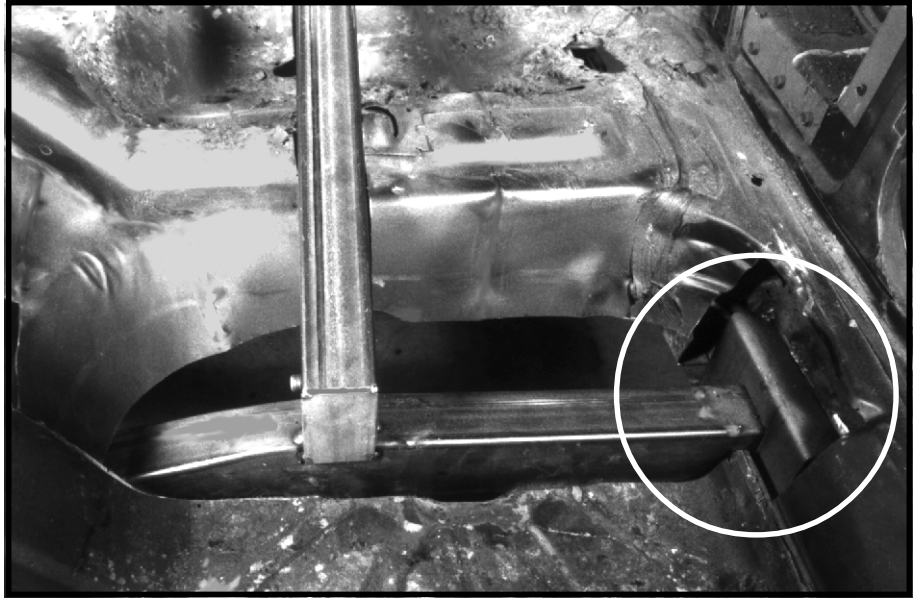


Photo # 1

- 8) Measure 36-1/2" forward from the rear axle center line and cut the floor from the inside of the OEM frame to the bottom of the transmission / driveshaft tunnel.

**See photo #1.**

- 9) Make a cut along the floor and trans tunnel and back to the frame access notch, for ladder bar crossmember clearance, **as shown in photo #1.**
- 10) Repeat steps 7-9 on opposite side of the car.
- 11) The next step is to notch the rear floor for frame rail clearance. Measure over from the top, inside edge of the stock frame 12" and make a cut parallel to the chassis centerline, from the opening you made in step 9 to the seat back area. Next measure over 2-1/4" from the cut and make a parallel cut. Remove the floor material between the cuts to make the frame rail clearance slot. **See circled area in photo #2.**
- 12) Repeat step 11 on the opposite side of the car.

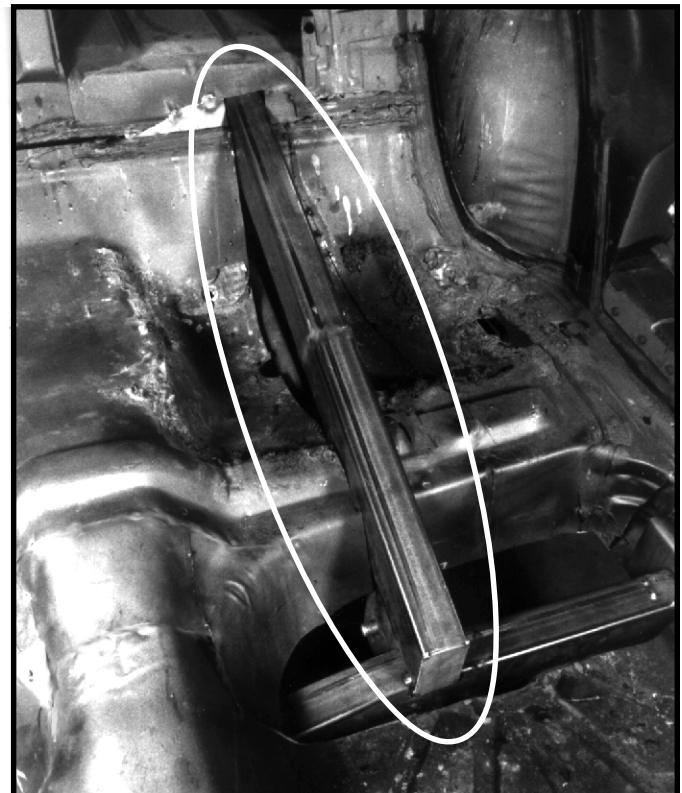
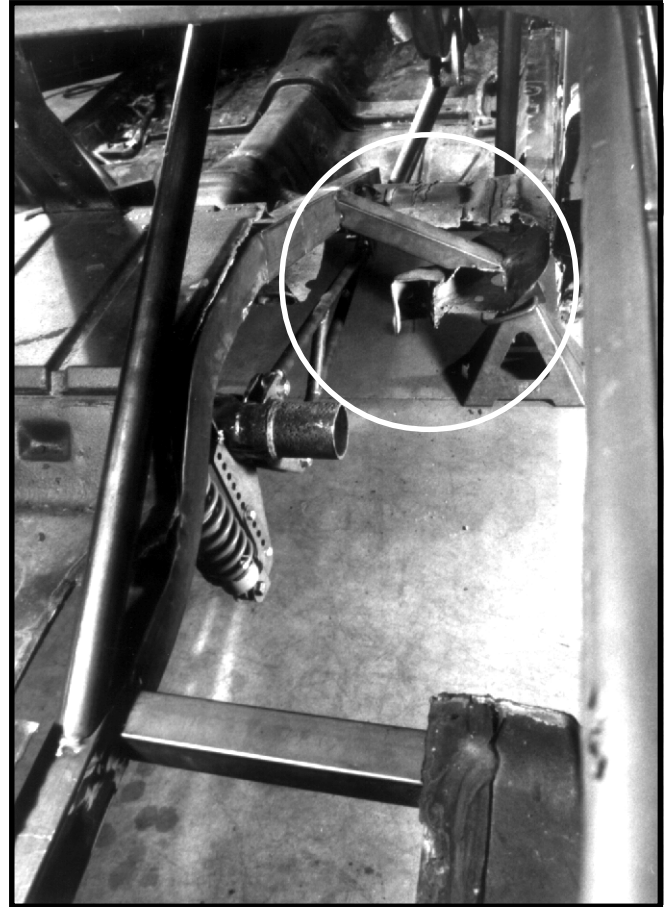


Photo # 2

**Note: when trimming or cutting the floor the neater the cuts the better the appearance will be on the rear floor, also cover all the windows to keep from damaging them when cutting or welding.**

### **Assembly:**

- 13) Place the front crossmember frame caps onto the frame as shown in photo #1 and tack weld in place.
- 14) Raise the welded frame into position under the car, with the back edge of the front cross member 34-1/2" forward of the axle centerline that you recorded in step 1. Also, with the front crossmember even with the bottom edge of the OEM frame, level the frame front to back and side to side and centering it in the car using the chassis C/L.
- 15) Tack weld the S & W frame unit to the factory frame.
- 16) Measure from the front edge of the front crossmember back 17 1/2". Position the two, angle cut out riggers at this location on each side of the car, connecting the top of the factory frame to the side of the S & W frame unit. Notch the floor for clearance. **See circled area in photo # 3.**
- 17) Install the front frame support tubes to the front crossmember and the inside of the stock frame rails on both sides of the car. Tack weld only at this time! **See photo # 4.**
- 18) Recheck the frame to make sure it is centered in the car and level front to back and side to side. If you are satisfied with the fit, finish welding the S & W frame unit to the factory frame.
- 19) Trim the factory frame as needed for the wheel tubs. Position the front of the wheel tubs 18" back from the front edge of the front crossmember. See wheel tub instructions for installation.



**Photo # 3.**



**Photo # 4.**

20) See the installation instructions for ladder bars, panhard bar or track locator and shocks, springs and mounts. Install all these components and the rear housing to the S & W welded frame unit.

**The installation of this frame unit does not result in a completed chassis!  
We recommend the installation of at minimum an eight point roll bar.**

The following parts are available from S & W Race Cars for 78-88 GM intermediate and are designed to work in conjunction with your newly purchased rear frame package.

- 11-012** 8-point roll bar
- 11-512** 10-point roll cage
- 45-1461** 9" ford narrowed rear housing

This rear frame package is designed to use wheels & tires with the following dimensions -  
Wheels - 14" wide with 4-1/2" rear spacing • Tires Pro/Street-M/T 21.5" x 33", Drag Race 15"x33" Goodyear  
The rear housing with axles should measure 38-1/2" axle flange to axle flange. Mount all bracket as shown below

