

## S & W RACE CARS P/N 35-371 RACK & PINION MOUNTING KIT

1. Remove the front crossmember and put the cap plate & new 1-1/2" diameter crossmember in place before removing the rear crossmember. Remove 20" from the center of the front crossmember. Align the top & back edges of the 1/4" cap plates with the top & back edge of the sectioned crossmember, tack weld in place. Install the 1-1/2" crossmember between the cap plates. Refer to the general arrangement drawing for dimensions. Check that the crossmember is square with the frame. Tack weld the crossmember to the cap plates. Tack the 1/8" gussets to the front of the crossmember & cap plates.
2. Carefully remove the rear crossmember. This crossmember has multiple layers. Cut away the outer section that the stock engine mounts bolt to. **Do not remove the section that the lower a-arms bolt to.** Study the attached photos and the crossmember before you start cutting. Note that a portion of the crossmember is left in place to gusset the a-arm mounting box. The small gusset provided with the kit is used to gusset the front of the a-arm box.



Photo A. OEM steering box & linkage, front crossmember & modified rear crossmember



Photo B. A-arm mounting box with crossmember removed

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Photo C. Passenger side a-arm mounting box

3. Install the 1" diameter diagonals. Find the center line of the frame and put a mark on the crossmember at the center line. Center the diagonals on the front crossmember with a gap between them. Fit the back of the tube to the front corner of the a-arm mounting box. Tack the diagonals in.



Photo D. Diagonal tubes, bolt in crossmember & tabs

4. Tack the removable crossmember mounting tabs in place. Bolt the 1/4" thick tabs to the clevis in the crossmember. The tapered end of the tab goes toward the front of the car. Place the crossmember and tabs between the diagonals. Position it so that it is parallel with the front crossmember. Tack the tabs to the diagonals.

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5. Attach the rack & pinion mounts to the front crossmember. This should be done using the rack & pinion to insure that the steering shaft clears the a-arm mounting box. Set the rack so that it is in the center of its travel. Put a mark on the input shaft & body so that you can reference it later. Find the center of the R&P and mark it. Note; use the ends of the tie rods to find the center. Bolt the R&P mounting brackets to the rack. The gussets on the brackets go toward the center of the car. Connect the steering shaft to the rack. Put the mounting brackets against the crossmember and line up the center line marks. Rotate the rack until there is about a 1/4" of clearance between the shaft & the a-arm box. Tack the rack mounts to the crossmember.



Photo E. Note location of 1/8" plate gussets



Photo F. Locate R&P so that steering shaft does not rub A-Arm mount

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Photo G. All components installed



Photo H. Tie rod ends & steering arms

6. Install tie rod ends. Bolt your after market steering arms to the spindles. The front spindles should be at ride height and pointed straight ahead with 0 – 1/8” toe in, the rack should be at the center of its travel. Screw the jam nuts and tie rods to the rack & pinion. Screw the tie rod in or out so that they are bolt up to the steering arms. Bolt the rod ends to the steering arms with a half moon on each side. Move the rack through its full travel in both directions and check for interference. Repeat this with the suspension at both ends of its travel.

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7. When you are satisfied with the installation unassemble and weld all the components except the bolt in crossmember. After the crossmember & diagonal tubes & mounting tabs are completely welded install the bolt in crossmember and adjust the length if required. Tack the clevises and crossmember tube, remove and weld.



*After final assembly front end alignment should be checked.*

