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If racing in sanctioned events, make certain that wheelbase is within legal limits before removing rear suspension.

1. Remove entire rear suspension except front spring hangers.
2. Make template of existing longitudinal next to front spring hanger. Carefully locate the front eyebolt hole (spring bolt) on template as this will be your only measurement for the new boxes.
3. Make template of new boxes and lay this along side longitudinal as close to floor as possible and as far forward as possible. Etch the outline of template onto longitudinals. See Fig. 1.
4. Support rear of car to prevent sagging of chassis when cutting begins.
5. Cut the outlined area of longitudinals out with either torch, air chisel or saw. See Fig. 2.
6. With longitudinals now cut, place new boxes in frame to see if opening is big enough; if it is, place template made in sentence 2 alongside new boxes and carefully locate new bolt hole.
- 6a. If you are using the same rear springs that are presently in your car, drill the front eye bolt hole at this location. Also drill a hole 1" above and below this hole which will allow you to adjust ride height of your vehicle along with suspension rise in a race car application. Continue to step 7 If you are changing rear springs, you must first determine the difference between your old springs and the new springs. See Fig. A. You must measure along the arc of the spring as per the diagram. If the "A" dimension of your old spring is longer than the new spring, you must move your new hole back the difference. If the "A" dimension of your old spring is shorter than the new spring, you must move this hole forward the difference. The "B" dimension should be recorded for later use. Continue to 7.
7. Place completed box in frame cut-out and keeping inboard as far as possible for more tire clearance, tack weld in place when boxes are in and appear correct, finish welding all around making sure not to concentrate too much heat in one area. See Fig. 3.
8. To install rear shackles, mark the position of existing rear shackle mount and scribe a vertical line onto longitudinals. As in stop 6a, if your "B" dimension is shorter on your new Spring than on your old, move this scribe mark forward the difference. Likewise, if it is longer than you're old spring, move it back the difference.

In 1970-1974 "E" bodies; Challengers & Barracudas, another shackle mounting location pad must be constructed. See Fig. b. Using your old front spring hanger built, as per diagram can do this. Your rear shackle can be mounted from this bracket. See Fig. C. If you decide to mount rear shackle tubes under frame, be sure springs are perpendicular to axle before welding and gusseting them. See Fig. 4. If you install rear tubes in frame you will need a 1" holesaw for "A" bodies and 1-3/16 for B and E bodies. If placed in frame weld all around.



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9. With new shackle mount installed, raise spring into car and bolt front eye into box and install rear shackles.
 10. Cut old spring pads from axle and grind smooth.
 11. Install new spring pads onto springs; place axle on pads and center in car using the drum or axle flange face as reference to wheelwell opening, bolt axle down snugly.
 12. Set pinion angle at 5-6 degrees; (see diagram D)
Preferred angle for auto S degrees nose down
Preferred angle for stick 6 degrees nose down.
 13. With angle set and axle centered in car, tack weld axle to spring pads. Recheck -- if all is well, finish welding being sure not to concentrate too much heat in one area so as to prevent warping housing.
- * * Pinion angle must be set with the rear suspension loaded the axle must be resting on its tires or on jackstands and at it's normal ride height (race height or street height).

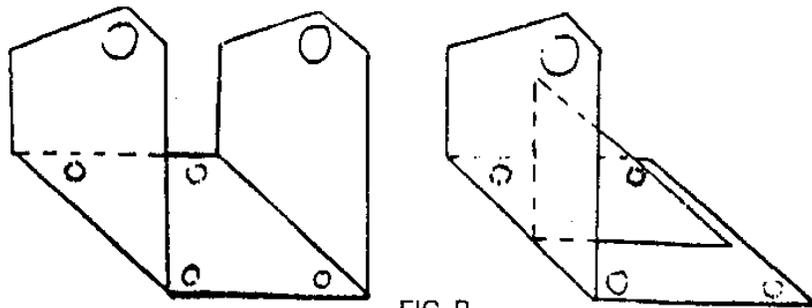


FIG. B

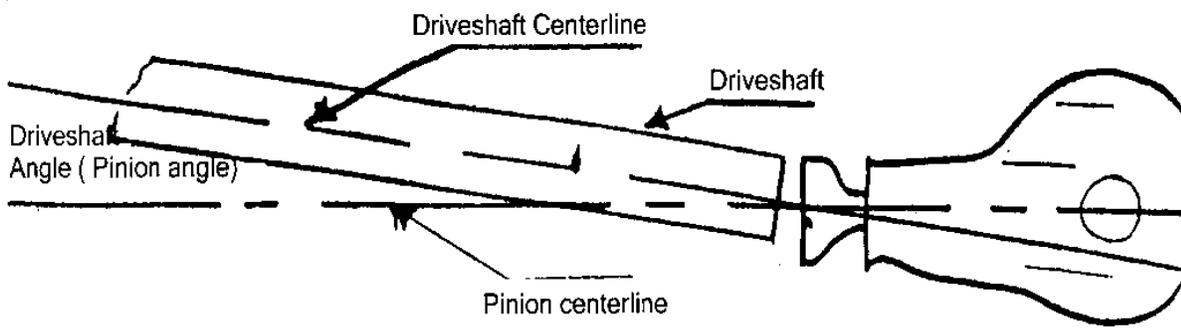


FIG. D

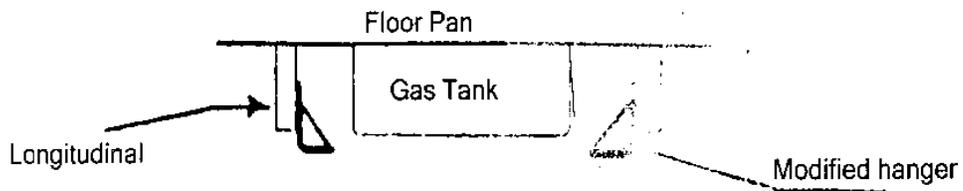


FIG. C

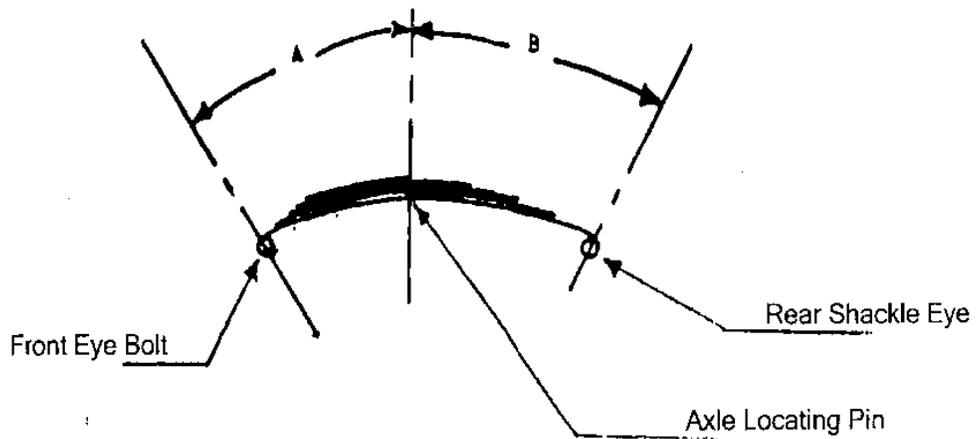


FIG. A

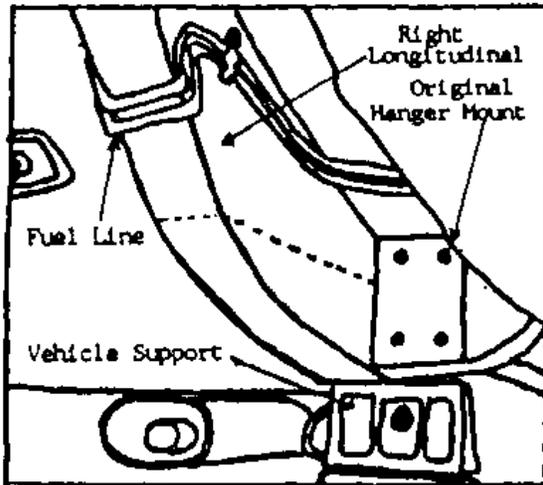


Figure 1
Right side, suspension removed,
mark longitudinal,

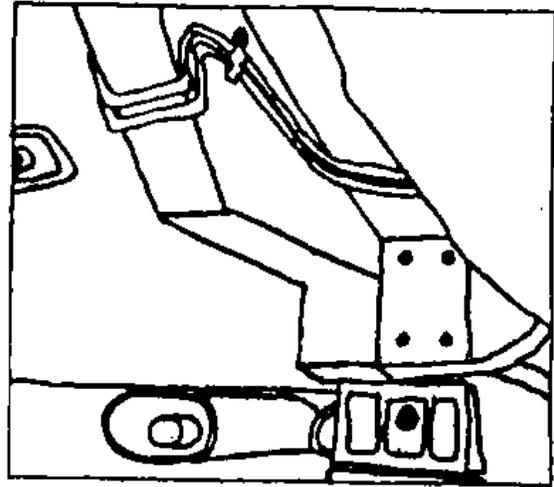


Figure 2
Longitudinal cut out.

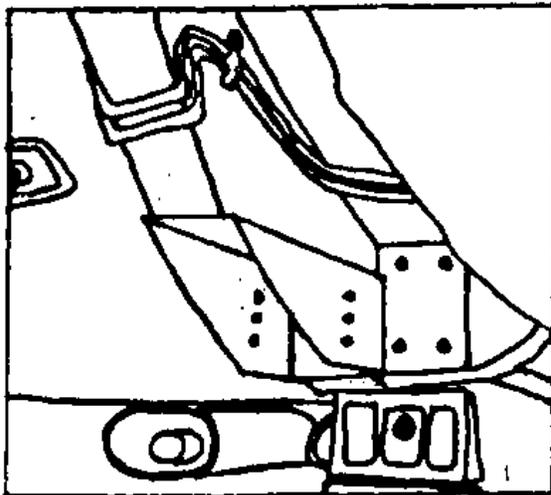


Figure 3
New mount box welded in place.

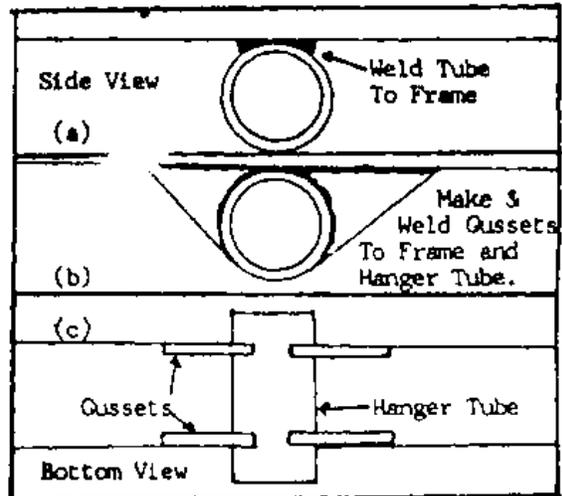


Figure 4
Rear shackle mounting.
(a) Weld all the way across the hanger tube, both sides, on the longitudinal
(b) Fabricate gussets and weld to hanger tube and longitudinal.
(c) Gusset both ends of the hanger