Hot Rod Innovators FAT MAN FABRICATION by SOUTHERN Rods & Parts

INSTRUCTIONS FOR 1978-88 MALIBU/MONTE CARLO (G-body) and 1982-03 S-10 PICK UP TUBULAR CONTROL ARMS

These arms duplicate stock alignment specs. The upper and lower ball joints are stock for these cars, MOOG #K-5208 or NAPA #260-1091 upper, and #K-6145 or NAPA #260-1130 lower. The upper shaft is a special "problem solver" offset shaft kit, MOOG # K-6218 or NAPA #280-5543, made to help solve the sagging problem common to these sub frames, which causes an inability to get proper caster adjustment. The shaft has a 3/16" offset built in that lets you change the length of the upper arm a total of 3/8". Start with the shaft facing the wheel side, as printed on the shaft. If you ever need to replace the upper bushings, they are MOOG # K-6176/NAPA 267-1350.

Lower arm bushings are different for the factory S-10 and G-body cars. The S-10 uses a larger 9/16" front lower bolt for increased strength. We feel that this is important to any performance vehicle, so we install the S-10 bushings, and supply the necessary 9/16-18 x 4" long bolt and nylock nut. You will need to drill your front bushing holes in the chassis to that size. If you don't have one, try borrowing from a machine shop, or buy one at a professional hardware store. The lower bushing kit is MOOG #K-6177 for a 2 piece set while NAPA sells them separate as #267-3349 and #267-3348.

Stock length arms accept your stock tie rods. Narrowed arms will require ½" removed from the threads of both inner and outer tie rod ends, as well as the same ½" removed from the tie rod sleeve ends. This will allow the tie rods to be screwed in further without running out of room. There is no factory made combination of tie rod ends that will do the job on narrowed arms.

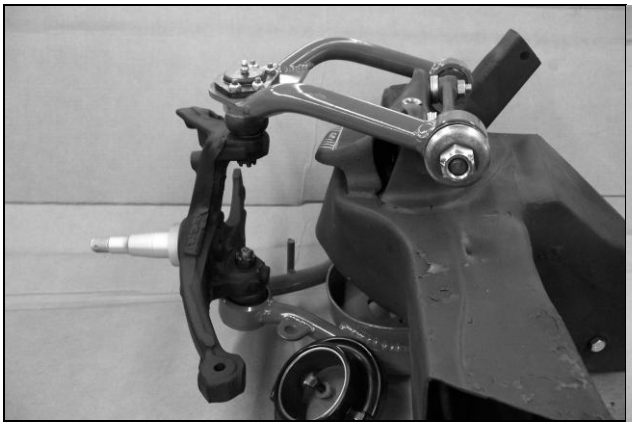
The special 3" lengthened control arms are used when S-10 chassis are put under early pickups. They will require using a longer tie rod adjuster sleeve with the OEM tie rod ends. The '83-'95 chassis has 5/8-18 threads requiring sleeve NAPA #269-1107 or MOOG #ES374S. The '96-'02 chassis has 11/16—18 threads and uses NAPA #269-1121 or MOOG ES440S.

The lower arms need a small trim made to their frame bracket on the rear bushing, as in the photo below. This will allow room for the arm to rotate up. Narrowed arms also require trimming the welded on upper bump stops from the frame itself in order to get the needed travel for the upper ball joint, as shown in the photo below. Be sure to check the upper arms for clearance on the mounting ears, as GM was very sloppy on the placement of the mounting holes in those ears. You may need to massage the ears back a little to ensure free upper arm travel.

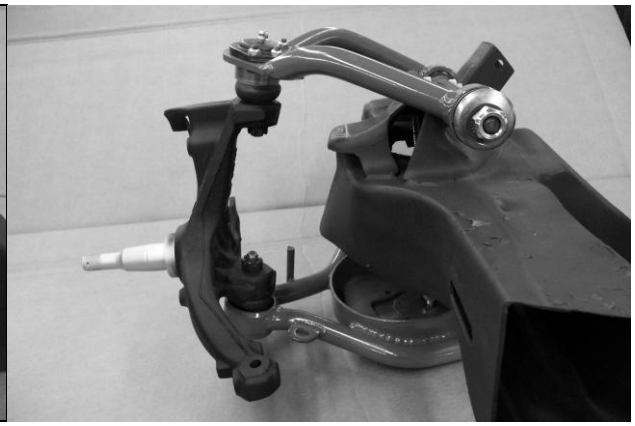
Stock ’78-’88 spindles can only be used on stock length arms. The stock length arms also accept the taller Camaro spindles for improved handling and brakes. **The narrowed arms require use of the taller ’70-’81 Camaro spindles detailed below, in order to allow clearance for the upper control arm.**

Sway bar tabs are provided on both stock and narrowed lower control arms.

You can use either the stock spindles, or ’70-’81 Camaro, and ’73-’77 Chevelle spindles in stock, or dropped versions. The Camaro/Chevelle spindles are taller, which creates a different camber curve thru suspension travel. The numbers we’ve seen indicate a 20% improvement in skid pad G numbers! They also use a full 11” rotor with a larger caliper and pad for much better stopping power. The studs are 7/16”, so you will need matching lug nuts, or you could drill the rotors for the larger ’82-’87 metric studs used on those rotors.



with stock G-body spindle



with taller Camaro/Chevelle spindle

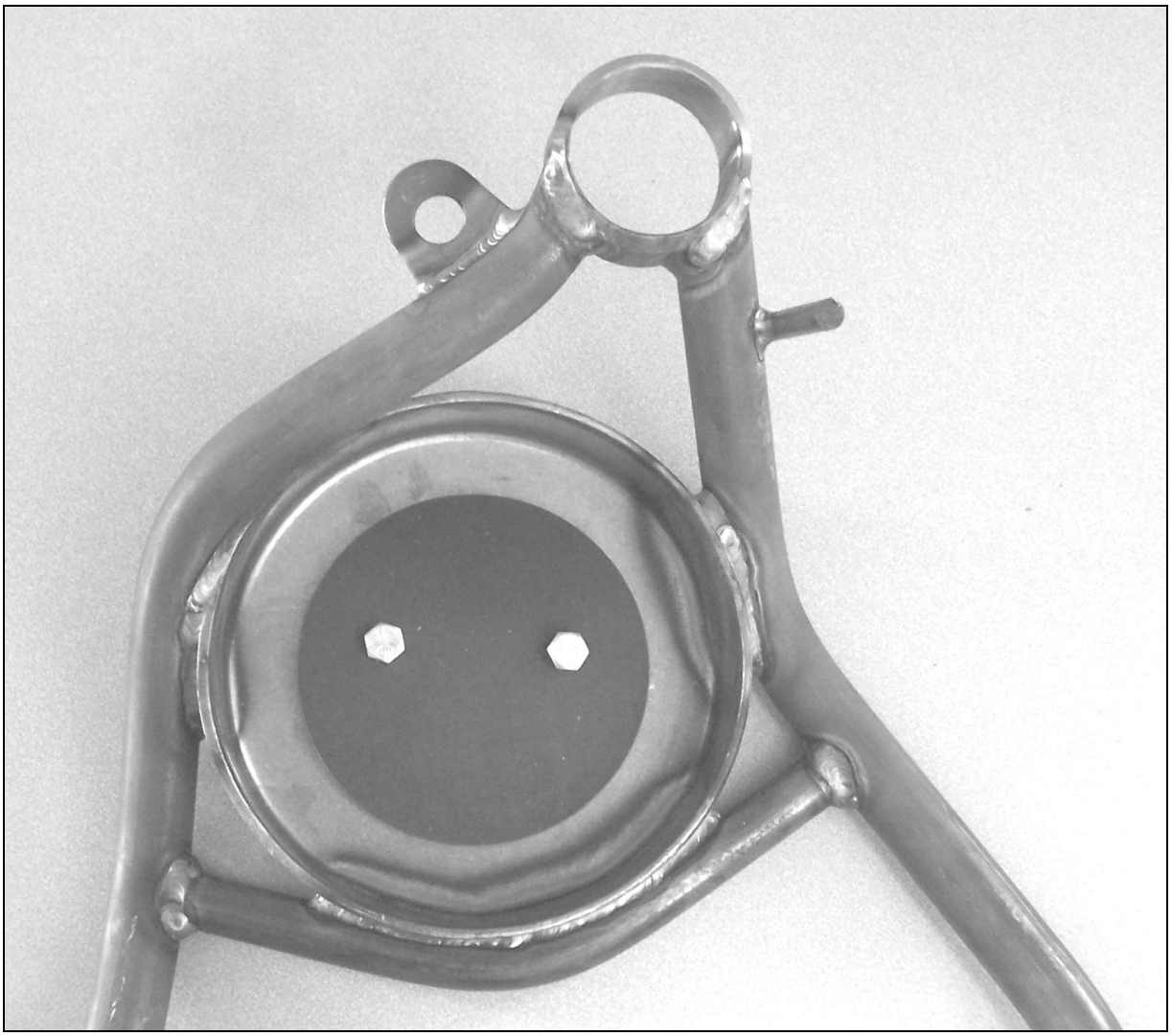
ALIGNMENT: use factory specs, going toward the positive side of the range on camber and caster. Your alignment shop will often tickle those specs for local road conditions.

Fatman’s tubular control arms are built on fixtures made from original GM parts. As such, they are normally a bolt on part. Occasionally, problems occur in obtaining proper camber and caster adjustment. As large as these crossmembers are, even the stock vehicles tend to sag in normal use. The problem is so common that we use the offset upper shafts discussed in the first paragraph in these instructions. If you have trouble, the first step is to loosen the upper bushing nuts, remove the camber bolts, and rotate the shaft in the bushings to change its length.

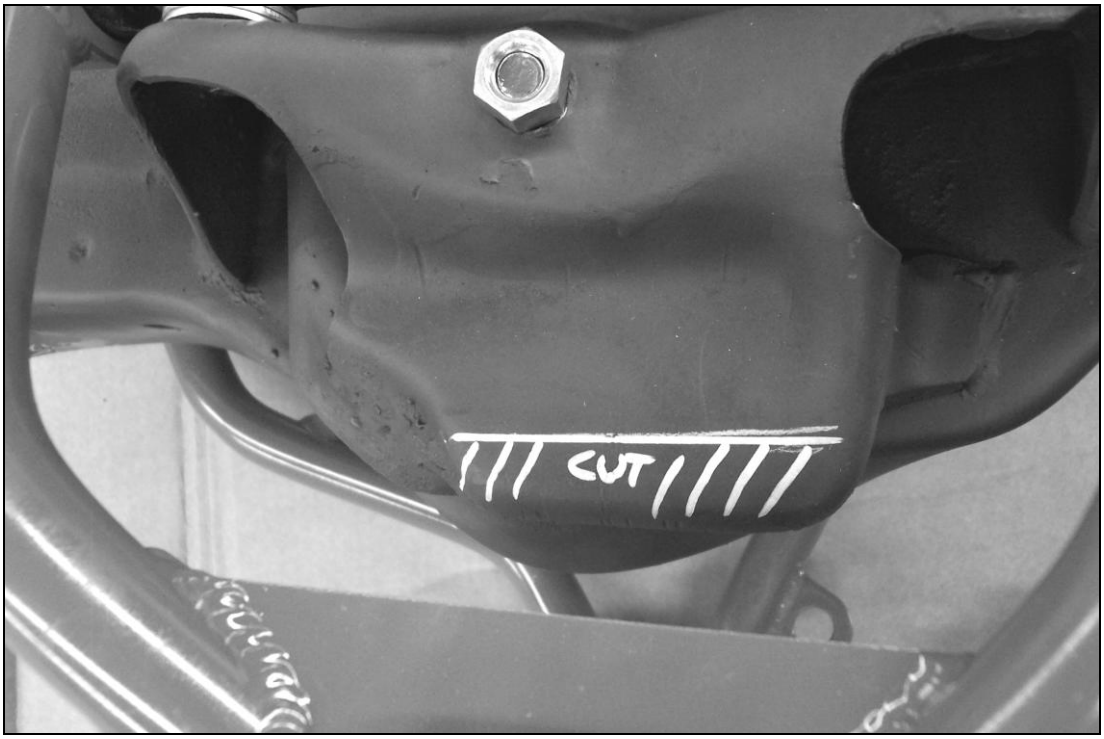
The second most common cause is a change in spindle height relative to the original GM design. When the spindle height changes the upper ball joint moves in and out as well as up and down, making the alignment dependent on that spindle height. Always leave the upper and lower pivot bushings loose until the weight is on the suspension. Tightening them with the car raised and the wheels dropped causes the bushings to act just like the rubber torsion bars used in small utility trailers, making the car sit too high.

Replacing or cutting the springs to change ride height, changing the engine, adding A/C, using narrowed control arms, or changing the load by putting the suspension in a hot rod all change the spindle height. Sometimes a sub frame installation has not been properly planned and the ride

Ridetech conventional air springs are mounted using a ½" thick disc we supply that also bolts into the shock holes in the spring cup welded into the lower arms. They are the same diameter as the inside of the lower mount Ridetech supplies with their mount kit for this application. The disc is normally mounted centered in the cup, but the ½" offset of the holes allows you to move the air spring outboard 1" if you need the extra clearance.



You will need to do two small trims to get full travel for these control arms. Both stock and narrowed versions need the lower rear arm bracket stamping trimmed, while the upper ball joint stop only needs trimming with the narrowed arms.



View from overhead, showing trim for narrowed arms only.