

## JEGSTER 910101 STRUT FRONT END

Please read all of the instructions and become familiar with the entire assembly before starting.

Remember that suspension and steering geometry -- and -- the way it drives when completed depend on assembly accuracy. Measure everything twice.

The first step of this front end installation is to determine ride height. Ride height is the position that the car will be relative to the track when the car is finished and all the weight is in the car, gas, oil, water, driver, -- everything. The finished ride height should be planned carefully before the present front end is removed from the car. When determining the ride height, tire clearance inside the body, head room, engine clearance under the hood, etc. should be considered as well as overall appearance. Remove the tires and support the car with stands - wood blocks - shims - at the exact desired finished ride height. After reference measurements of the desired height are taken at several points, and reference measurements of the front spindle location ( wheelbase ), disassembly and strut front end installation may begin.

The front frame positioning at ride height should be as shown in illustration A. The maximum tolerance from this height ( at the spindle location ) should be  $\frac{1}{2}$  inch regardless of front tire size. However the frame may be tilted from this level position if it better fits your application. If the frame is to be tilted from a level position, then  $2\frac{1}{2}$  degrees should be a maximum.

The frame may also be tapered, as seen from the top, if this results in a more straight forward connection to the rest of the car. If the frame is to be tapered then the width at the front crossmember should stay at  $22\frac{1}{2}$  inches outside to outside. Also be sure to check clearance for starter, oil filter, etc. ,

Illustrations B & C show the frame main rails level and parallel. Illustrations D & E show an installation with the rails angled, as seen from the side, and tapered, as seen from the top.

Remove the old front frame assembly from the car from the firewall forward. If the cage, floor structure need modified for header or muffler clearance, plan that change now. Note that illustrations B & D show a typical front outrigger and cage layout that provides exhaust system clearance.

Assemble the 2 front rails, the front crossmember, and a temporary crossmember, tack welding together only, with the desired taper, if any. Mark the shop floor at the measured center of the car, at the firewall and at the rear bumper. Connect these two points with a chalk mark and extend this mark forward for front frame alignment reference. Position the front frame at the planned ride height, and at the correct wheelbase location, and level as seen from the front of the car, and centered over your chalk mark and support with wood blocks, shims, etc. Some trimming of the present center frame or the rear of the new front frame may be necessary to get this positioning. Tack weld the new frame in place.

This front frame is designed around Strange struts with stud mount upper ends and Strange control arms. It could, however, be adaptable to most any drag racing struts. Bolt together the control arm rod ends, two flat washers, and two main control arm tabs and tack weld the tabs to the front rails as shown in illustrations A & F. Carefully size the length of the main leg of the control arm to correctly position the wheel - tire in the body. The rod end should be positioned in the center of its usable adjustment. Remember minimum thread engagement. Tack weld these control arm parts together. Assemble the control arm main leg, the strut assembly and the Jegster upper strut mount with the Strange supplied spring seat, bushings, washer, and nut in place. Jig these assembled parts in position with the control arm leg 90 degrees from the car centerline, 0 camber, 8 degrees caster, and at the proper height for the front tire. Do NOT depend on the tire label to locate the spindle height. Example -- a Goodyear 23 inch front runner will have a loaded radius of about 11 inches, not 11.5 as the label might indicate. Mount the tire, install on a car, let the car down on the pavement and measure the spindle centerline to the pavement.

One method of jiggling the strut is with a special cut and drilled piece of plywood. See illustration G. Make a U shaped shim, to be placed between the strut body and the rubber stop, of the proper thickness to hold the strut shaft at mid stroke. Remember that full stroke includes compression of the rubber stop. This shim will probably be only  $\frac{1}{4}$  to  $\frac{1}{2}$  inch thick.

Trim the upper strut mount tube as necessary and fit to the front frame, the roll cage front post, and the upper strut mount plate. Fit this tube slow and careful. This tube should rest against the strut mount

A

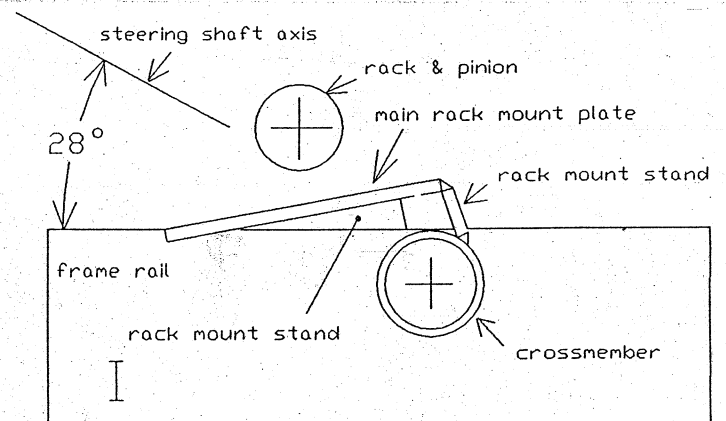
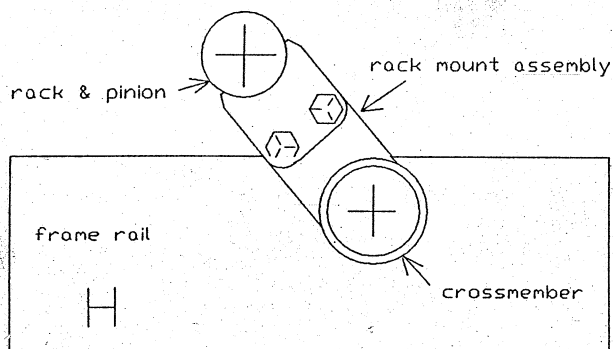
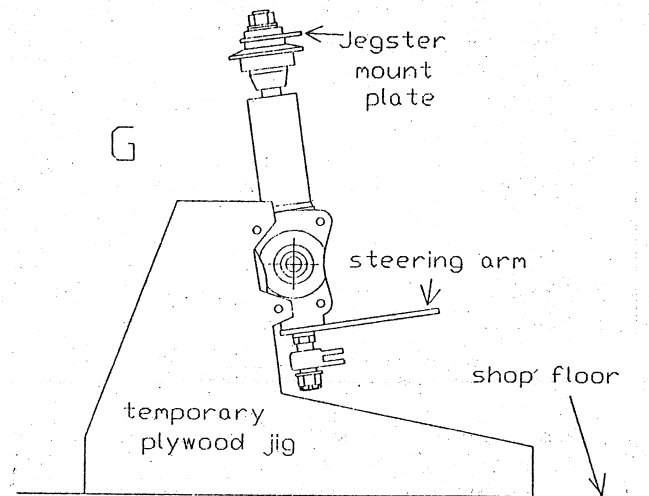
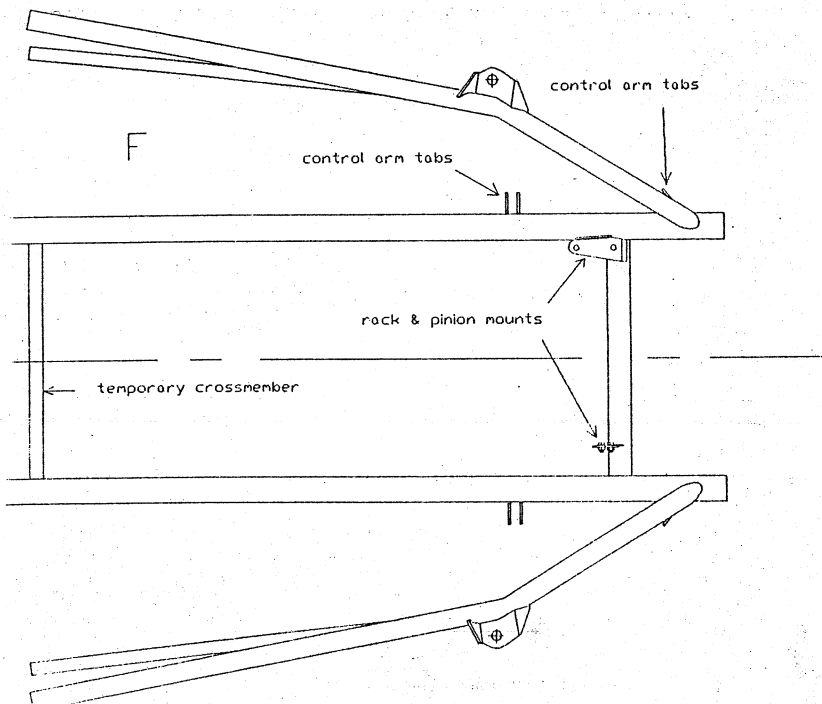
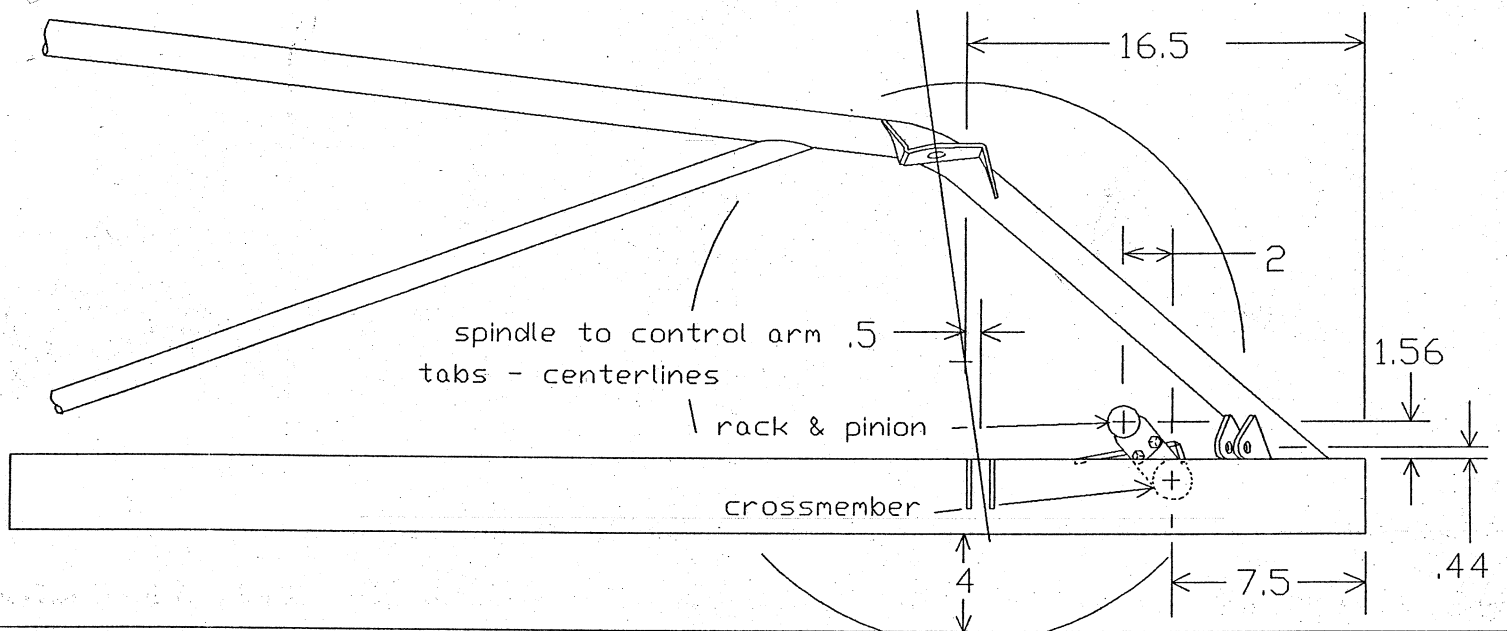


plate and clear the spring seat  $1/8$  to  $3/16$  inch at the closest point. The exact position of this tube at the cage post and at the front of the frame is not critical as long as the rack & pinion has clearance. Also this tube should not be higher at the strut mount than at the cage post. See illustrations A & B. Tack weld this tube in place.

Fit the strut mount plate gussets as shown in illustration A. Some trimming may be necessary. Tack weld in place. Fit the front leg of the control arm in position with the tabs located as shown in illustration A. Tack weld these control arm pieces.

Follow the same procedure with these parts on the other side of the car.

Fit the front diagonal brace tubes as shown in illustrations A, B, and C. Check tire clearance when turning. Tack weld in place.

Use an early Pinto rack & pinion. These are available from Jeg's. The rack & pinion axis should be as shown in illustration A. A common steering column angle is 28 degrees. See illustration I. However the rack position may be rotated a small amount on this axis to angle the steering column up or down for header or pedal clearance. Do NOT change the location of the rack axis. Center the steering rack travel and temporarily mount to the frame with shims, tape, etc. with the ends of the rack centered on the frame. Position the rack with the desired column angle. Fit the overlapping passenger side rack mount between the crossmember and the rack at about 7 inches from the car centerline. Tack weld in place to the crossmember and to the rack. See illustration H. Bolt the main rack mount to the rack casting. Trim and fit the 2 rack mount stands as necessary and tack weld in place. See illustration I. Both illustrations H and I are showing the inside wall of the drivers side frame rail as seen from the passenger side. Fit the rack end adapters, to be installed later, to the UNDERSIDE of the Strange steering arms.

When all of the rough assembly is done, remove heat sensitive parts, -- rod ends -- rubber bushings -- and finish all welds. It is not necessary to disassemble the rack & pinion to finish the passenger side mount welds.

This type of front frame MUST have strut type front motor plates. These motor plates attach to the upper strut mount tubes and will be an important part of the frame structure. Jegster 40102 or 40104 motor plates are the correct type.

Also recommended are 2 diagonal tube braces ( 1 or  $1\frac{1}{4}$  tubing ) from the area where the dash bar connects to front posts -- to the main rails just behind the mid plate.

DO NOT shortcut the spring height adjustment or final alignment. These operations must be done only after ALL the weight is in the car -- including driver. Set the spring height by turning the nuts under the springs until the strut travel is correctly positioned. Set camber at 0 degrees. Set caster at 8 degrees, plus or minus 1 degree. However the caster variance, left to right, must be much smaller,  $1/8$  of 1 degree maximum. Toe in is  $3/16$  inch total.

Please call Jeg's for help with strut kits, motor plates, mid plates, trans crossmembers, rack & pinion adaptors, steering columns, nose mount kits, etc.

