

A-Arm Crossmember Worksheet Instructions

Before You Begin

This worksheet is for use with Chassisworks 4x2" front-suspension crossmember systems to determine the front-hub to front-hub width needed to fit your wheel and tire combination. **The wheel and tire combination you will be running is required for measurements necessary to complete the worksheet.**

Ride Height

Using a front tire with a rolling radius of 12 inches, measured from wheel center to ground, the crossmember ground clearance is 4-1/2 inches. The "rolling radius" takes tire compression from vehicle weight into account. A 12-inch rolling radius is common for a 25-inch diameter tire. A taller or shorter tire will alter the crossmember ground clearance proportionately.

Crossmember Width

A brief series of calculations is required to determine the correct crossmember width for your vehicle. Variables that influence this are the available room between the fenders, tire width, wheel offset, and suspension & brake package.

Taking Measurements / Completing the Form

Basically, we are adding a series of small measurements together, then subtracting to figure out the correct width for the suspension crossmember welded assembly. Each of the measurements and calculated dimensions are assigned a letter as a variable to assist in completing the form. We will describe each of the measurements and the procedure for obtaining accurate results. *Note the measurements in the space provided before completing the form.*

"A" - Wheel Mount Surface to Outside Tire Sidewall - "A" = _____

Lay the wheel with mounted tire on the floor with the outside sidewall facing down.
Measure through the wheel from the ground to the wheel mounting surface.

"B" - Outside Tire Sidewall to Inner Fender Lip - "B" = _____

Position the wheel centered underneath the front fender wheel opening at intended ride height. You will need to rotate the tire 30 degrees in each direction to simulate full steering travel. Leave a comfortable amount of clearance between the tire and fender lip with the tire at the "full-lock" position in both directions. This is approximately 3" from the fender lip when the wheel is straight. More or less clearance may be necessary depending upon tire size and performance application.
From this position, measure from the outside tire sidewall to the inner fender lip.

"C" - Wheel Mount Surface to Inner Fender Lip (Overall) - "C" = _____

Add dimensions A and B together, then multiply by two.

$$\text{"C"} = (A + B) \times 2$$

"D" - Inner Fender Lip to Inner Fender Lip (Overall) - "D" = _____

If there is no direct line of sight between the two fender lips, you will need a plumb bob for this step.
Measure the distance between the driver side and passenger side front fender inner lips at the same location when previously measuring to the outside tire sidewall; dimension "B".

“E” - Wheel Mount Surface to Wheel Mount Surface - “E” = _____

Subtract C from D.

$$“E” = D - C$$

“F” - Crossmember to Wheel Mount Surface (Overall) - “F” = _____

This dimension varies depending upon suspension, spindles and brake system.

Suspension Style	Brake Kit	“F” Dimension
<i>Steel Spindles</i>	8319-XX	25.75
	8324-XX	27.0
	8336	27.0
<i>Aluminum Uprights</i>	8377-XX	28.0
	8378-XX	28.0

“G” - Crossmember Outside Width = “G” = _____

This calculation gives the final dimension for the crossmember outside width.

Subtract F from E, then round up or down to the nearest full inch.

$$“G” = E - F$$

Crossmembers widths are available in one inch increments from 24 to 38 inches.

Additional Worksheet Fields

Tire Size - (e.g. 245/40R17)

Wheel Size - Diameter, width and backspacing (e.g. 17 x 8 - 4.5”)

Wheelbase (full-frames only) - Front axle centerline to rear axle centerline

Submitting the Worksheet

Complete and sign the worksheet before emailing or faxing to your sales person.

sales@CACHassisworks.com

Fax: (916) 388-0295

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SO#		CUSTOMER				DATE	
I HAVE PROVIDED THESE SPECIFICATIONS FOR MY A-ARM CROSSMEMBER. I ACCEPT RESPONSIBILITY FOR THEIR ACCURACY.					SIGNATURE		
TIRE SIZE			WHEEL SIZE			WHEEL SPACING	
CAR YEAR / MODEL			WHEELBASE (FULL FRAMES ONLY)		CROSSMEMBER WIDTH NEEDED (ROUNDED TO NEAREST 1 INCH)		
A	B	C = (A+B) x 2	D	E = D - C	F (Noted on page 2)	G = E - F	

