

TRU-WAY Bottom View Body-Frame Dimension Charts

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by
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The TRU-WAY BODY FRAME DIMENSION CHARTS are working charts of the automobile chassis as the repairman sees it. We attempt to provide usable dimension for all sections giving particular attention to critical areas and to those sections most commonly damaged. Tru-Way charts are the result of actually measuring and averaging any variation of the dimensions of hundreds of assembled automobiles. In addition, those dimensions used by the various manufacturers in construction and inspection are shown whenever we feel they will be of value and when it is possible to check these dimensions on the assembled automobile with available shop equipment.

MEASURING INSTRUCTIONS found with each chart are intended to simplify and eliminate error in establishing the location of exact measuring points on the frame chart. Dimensions are given in inches and millimeters. Where more than one model or body style of each make is shown on the same chart, dimensions are the same for all except as noted. Most special bodies will be found combined with closed model charts as general dimensions are the same. All measuring instructions referring to length dimensions, read from the front check point to the rear check point.

INSTRUCTIONS FOR THE USE OF THE TRU-WAY FRAME CHART

TOLERANCES—For practical purposes a $\frac{1}{8}$ inch tolerance ($\frac{1}{8}$ inch plus or minus) is recommended on most dimensions. This may be exceeded in some instances as manufacturing tolerances are more flexible in certain non critical portions of the frame. The $\frac{1}{8}$ inch tolerance is a good guide as the dimensions used on the Tru-Way charts are the average of three or more vehicles at points where any amount of variation is found.

SPECIAL TERMS USED IN MEASURING INSTRUCTIONS

We have attempted to standardize the wording of the measuring instructions, thus avoiding any confusion as the points we are referring to. Listed below are some of the terms used and their definition as applied on the Tru-Way charts.



Measure from edge of hole, rivet or bolt.



Measure from center of hole, rivet or bolt.

LENGTHS—WIDTHS—DIAGONALS—Most horizontal dimensions on the bottom view charts are direct and may be measured direct from point to point with a tape or tram between dimension points. The exceptions to this are indicated on the chart or in the measuring instructions. These will be referred to as tram dimensions. They are measured with the tram pointers extended from the tram bar so that the bar is parallel to the datum line or level plane of the body. Tram dimensions can be checked by suspending plumb bobs from frame and transferring dimension points to floor layout for measuring.

Ⓣ Ⓟ This tram dimension is an exception of the regular Ⓣ (tram) dimension. Ⓣ (tram) is with the tram pointers equal length and the tram bar level or parallel to the plane of frame or body.

Ⓣ Ⓟ is a tram with unequal pointer length and the measurement taken between pointer tips.

DATUM LINE—An imaginary line from which dimensions are given in inches to establish the correct height of a given point on the automobile frame or body above this datum line. The datum gauges establish this line and provide a means of measuring any section of the frame being repaired or checked against the correct specifications for that particular automobile. These datum checks

It is essential that the vehicle be supported either on its wheels or front and rear suspensions for all datum line checks.

Center lifts such as a frame contact hoist, floor stands, ect., will allow reverse deflection resulting in false datum line dimensions.

may also be made from any level work surface. The two × points are the base line and all height dimensions are established above this line.

REAR CONTROL ARM PIVOT BOLT—This is the bolt or pin that the rear axle torque arm bushing pivots upon and attaches the rear axle arm to the frame. Dimensions to this bolt are to the end of bolt.

REAR SPRING FRONT BOLT—The bolt, pin or stud that goes through the front eye and bushing of the rear spring and secures it to the frame or body.

FRONT SUSPENSION DIMENSION POINTS—For checking front suspension location in relation to frame, all charts show a dimension from a definitely established point at the lower suspension control arm (A frame), to a given point on the frame proper.

BALL JOINT POINTS—We use as a dimension point on various cars the ball joint stud. This dimension is measured from the center of the tip of ball stud that attaches and protrudes through spindle or knuckle support. Some charts will use the ball joint grease fitting or the center of the ball joint plug as the dimension point where it is found to be more accessible than the stud.

WE WISH TO EXPRESS OUR THANKS TO THE VARIOUS MANUFACTURERS, BOTH DOMESTIC AND FOREIGN FOR THEIR COOPERATION AND ASSISTANCE IN PROVIDING MATERIAL FOR USE IN THE PREPARATION OF THIS MANUAL. THE MANUFACTURERS AND THEIR RESPECTIVE DIVISIONS TO WHICH WE EXPRESS OUR GRATITUDE ARE THOSE WHOSE PRODUCTS ARE INCLUDED IN THIS MANUAL.