GROUP 9
FRAME AND BUMPERS

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SERVICE BULLETIN REFERENCE

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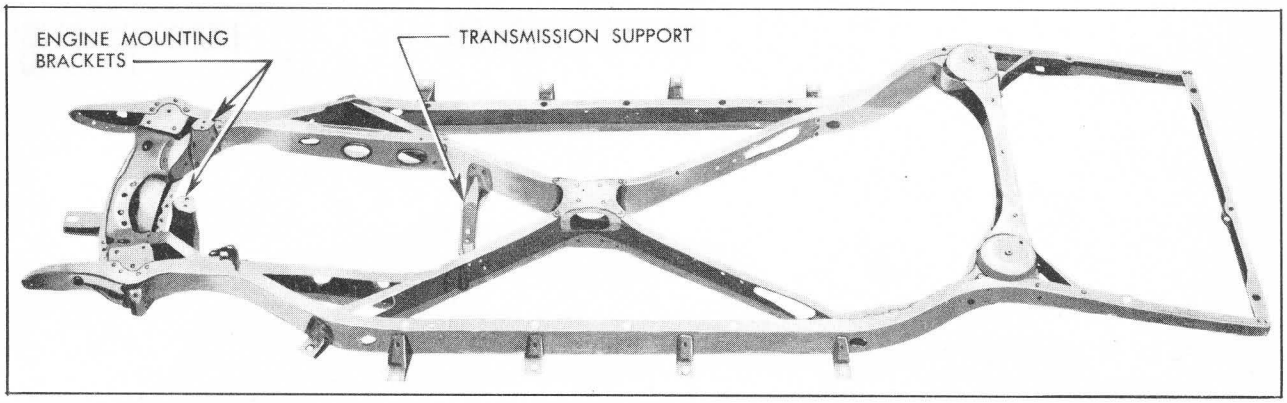


Figure 9-1—Frame—Series 40

9-1 DESCRIPTION OF FRAME

a. Closed Body Frames

All frames have high carbon pressed steel members riveted and welded together to form a rigid assembly. The outer and inner side rails, center diagonal cross members and rear cross members are of channel section. The front cross member is box type to form a strong support for the front suspension members. Upright brackets are bolted to the inner side rails to support the engine. See figure 9-1.

All series frames are very similar in design, relative parts being merely made longer or of thicker gauge, as the need rquires, to take care of longer wheelbase. The principal structural difference between series is in the cross member at the top of the rear kick-up. On *Series 40* and *1949 Series 50-70,* the chassis spring seats are formed in the cross member, while in the *1948 Series 50 and 70* the spring seats are formed in the reinforcing members located just forward of the cross member.

b. Convertible Coupe and Estate Wagon Frames

Frames for convertible coupes and estate wagons are identical in general design, number of cross members, and arrangement of parts with closed body frames, but additional reinforcement is added to compensate for loss of the inherent rigidity of closed bodies which does not exist in convertible coupe and estate wagon bodies. The front inner side rails, rear

kick-up reinforcements, and top and bottom plates at the junction of the center diagonal cross members are increased in thickness, and the center diagonal cross members are reinforced by four U-shaped reinforcements welded into the channel section near the center. Diagonal reinforcements welded to the side rails and rear cross member provide additional bracing at the rear corners of these frames.

can be clearly marked. *Apply brakes or block wheels so that car cannot move.*

1. Using a plumb bob, extend the following points to the floor and mark where point of plumb touches floor, as shown in figure 9-2.

A and A¹ at point of grease fitting in front ends of control arm shafts.

B and B¹ at point of grease fitting in front ends of lower pivot pins.

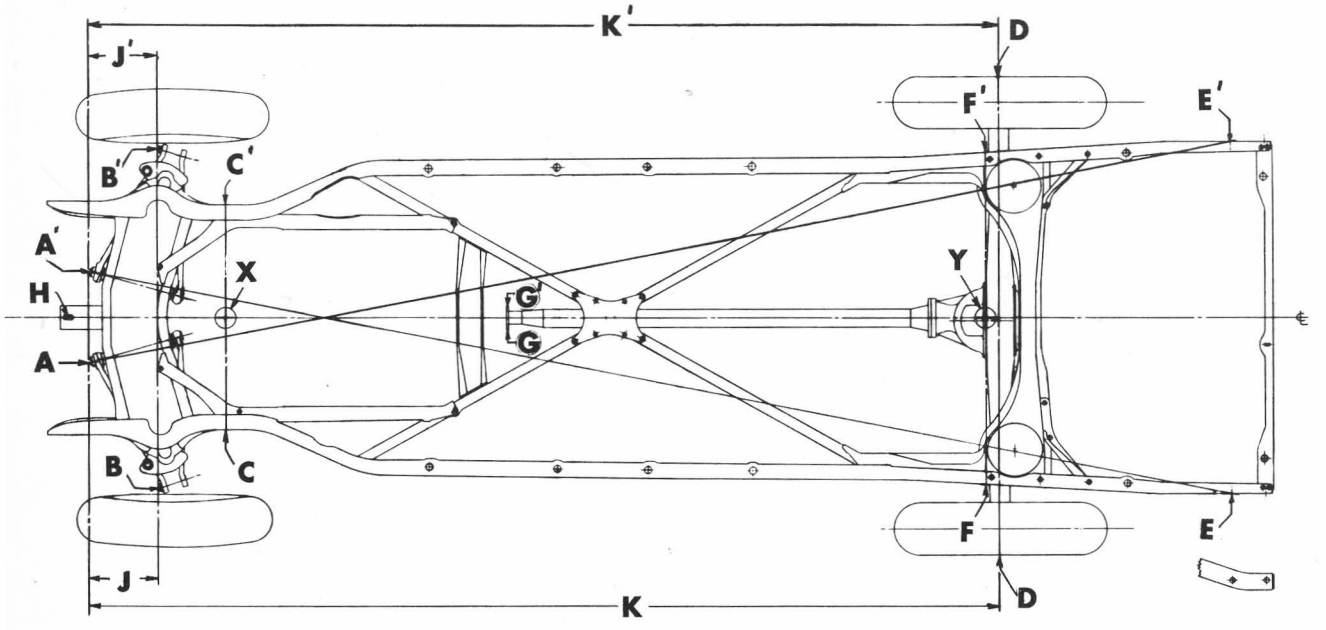


Figure 9-2—Checking Points for Frame and Suspension Alignment

9-2 CHECKING ALIGNMENT OF FRAME AND SUSPENSION MEMBERS

When a frame has been damaged by accident the following procedure may be used to check alignment of the frame, and the alignment of the chassis suspension members with the frame. This procedure should be used to check alignment after repairs to frame have been completed. If body was removed for repairs to frame, check frame as described in paragraph 9-3.

Checks are to be made with frame assembled with power plant, body, etc., and car resting on wheels. The car should be placed on a clean floor that is reasonably level. Both sides of the front ends of the frame must be the same distance from the floor; the same condition must exist at rear end of frame. Where points are to be extended to floor by use of a plumb bob, it is desirable to attach clean pieces of paper to floor with tacks or tape so that the points

C and C¹ at 5/8" jigging holes in side rails about 7" to rear of bumper frame stops, holding plumb line flat against side rails.

D and D¹ at center of rear axle shafts.

E and E¹ at center of forward bolts attaching rear bumper.

F and F¹ on side rails just forward of rear axle rubber bumper, *holding plumb line flat against side rails.*

G and G¹ at each side of torque tube flange.

H at center of slotted hole in radiator mounting bracket.

2. Move car out of the way. Using a chalked line, draw lines on the floor through the following points: A and A¹, B and B¹, C and C¹, D and D¹, F and F¹.

3. Divide the distance between C and C¹ and mark the center point X on line C-C¹. Divide the distance between F and F¹ and mark the center point Y on line F-F¹. Draw frame centerline through points X and Y.

4. Measure diagonal distances A to E¹. If

nected by a rail above the face plate. The front license plate bracket is attached to the lower flange of face plate.

The 1949 Series 50-70 rear bumper has a one-piece face plate with a large opening formed in the center. This opening is closed by a center plate which supports the rear license plate and the rear license lamp. The lamp is located in a protected position in the rolled upper edge of face plate above the license plate.

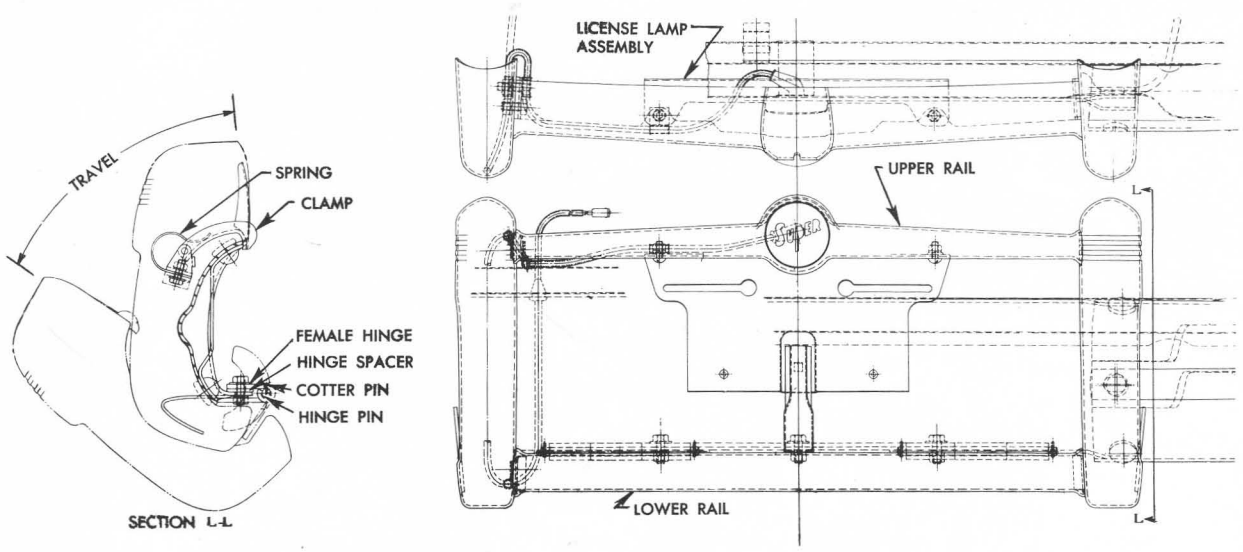


Figure 9-3—Hinged Section of Rear Bumper—1948 Model 59 & 79

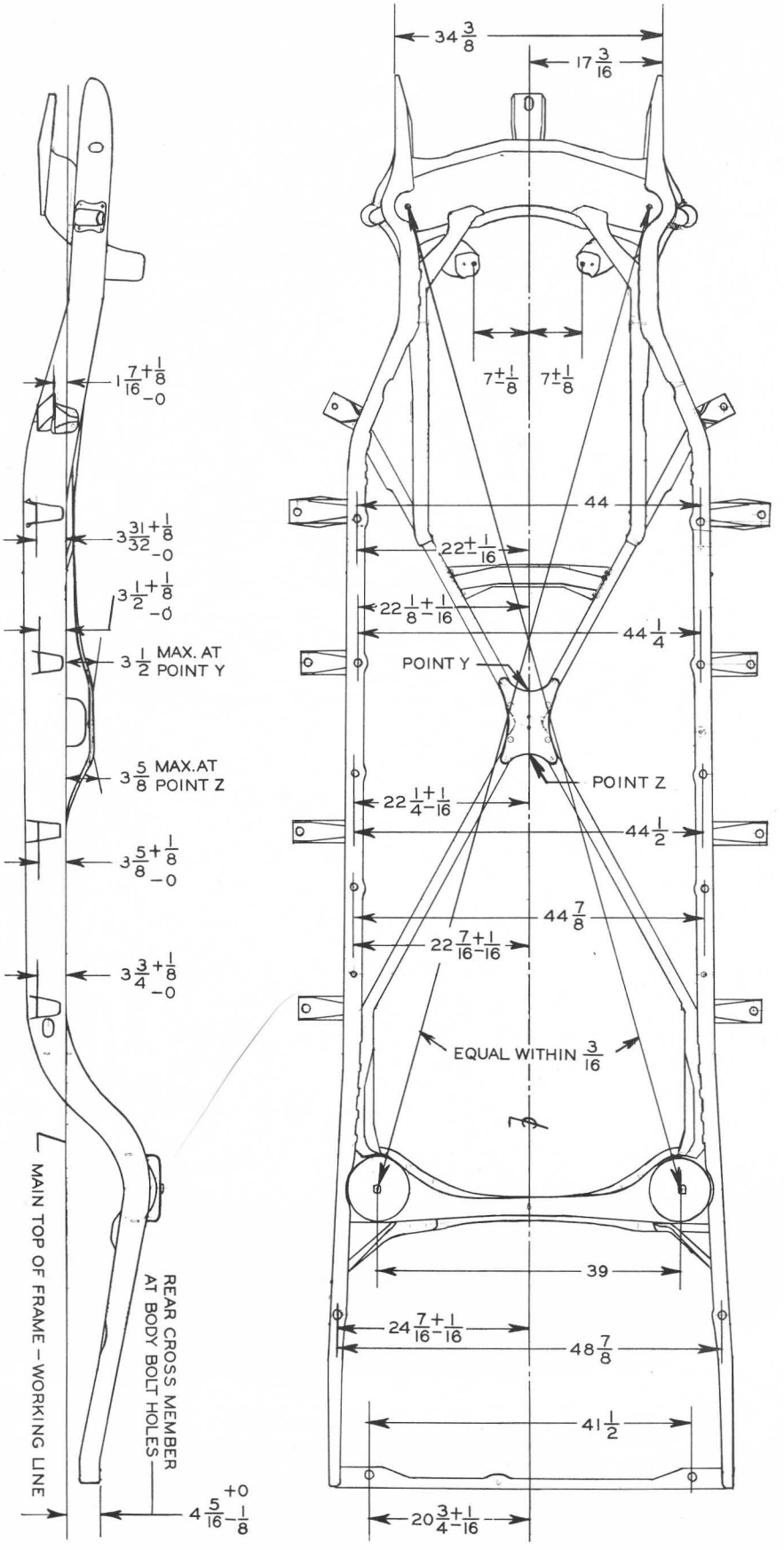


Figure 9-4—Frame Checking Dimensions—Series 40

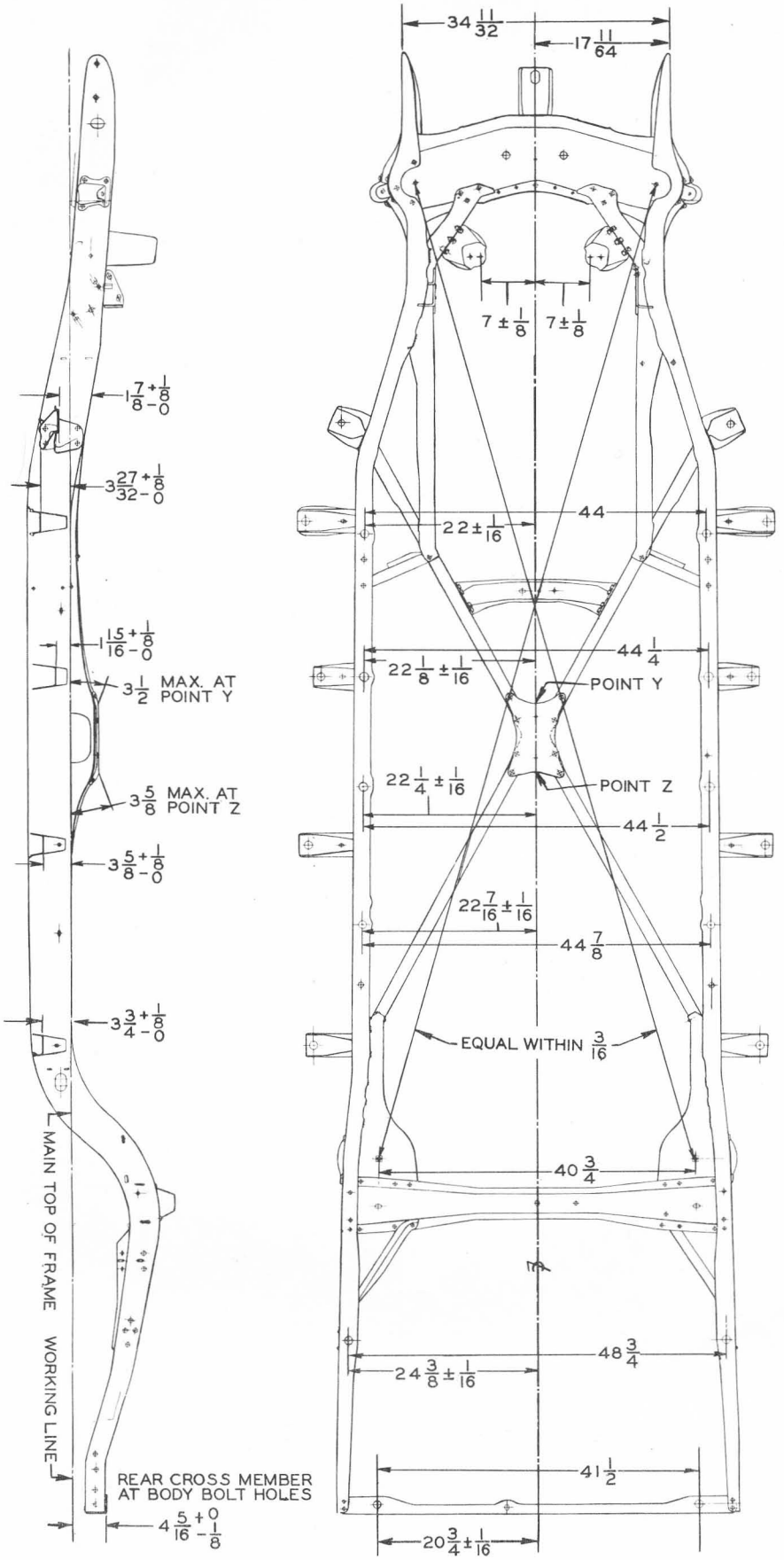


Figure 9-5—Frame Checking Dimensions—1948 Series 50

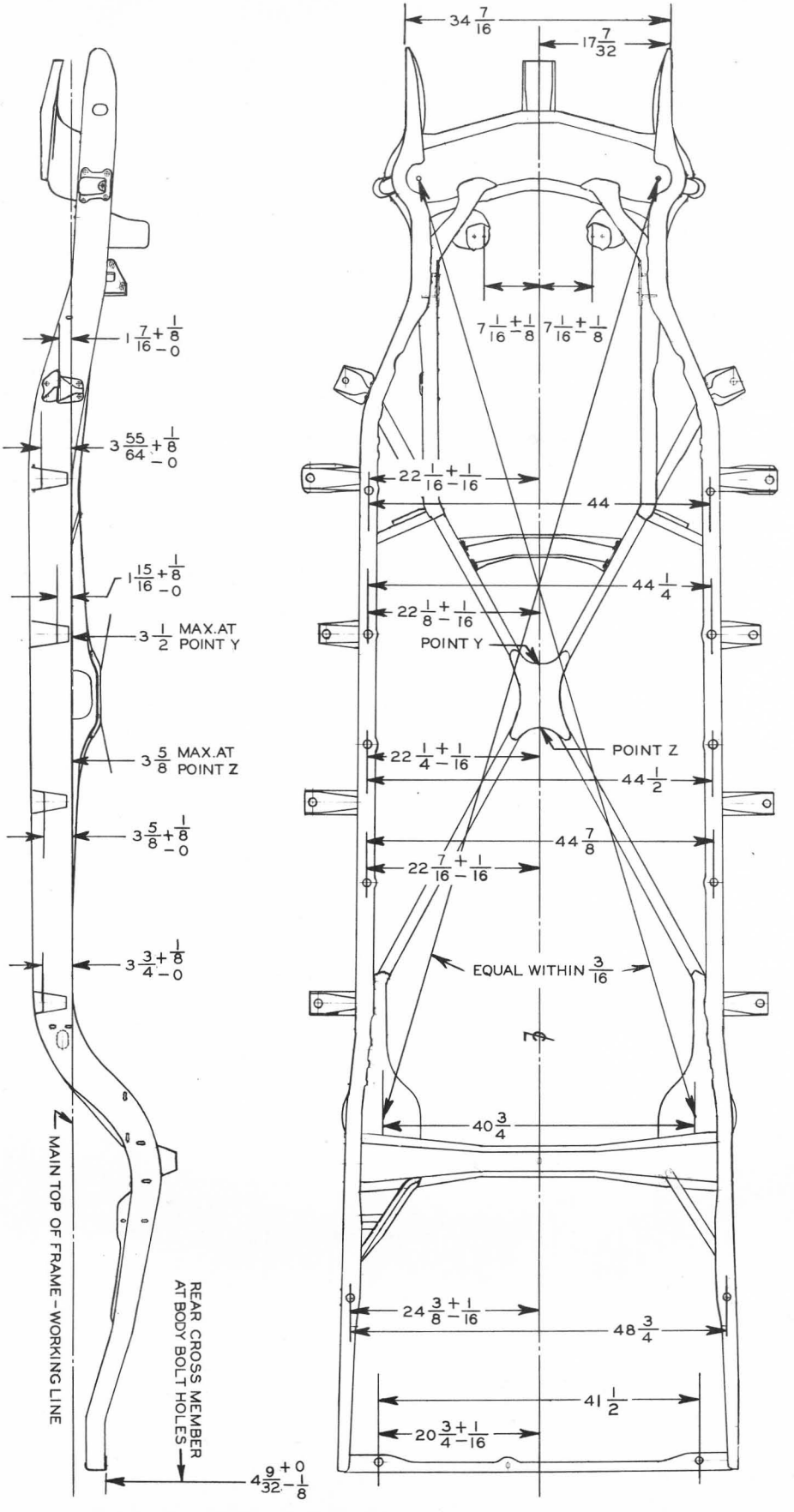


Figure 9-6—Frame Checking Dimensions—1948 Series 70

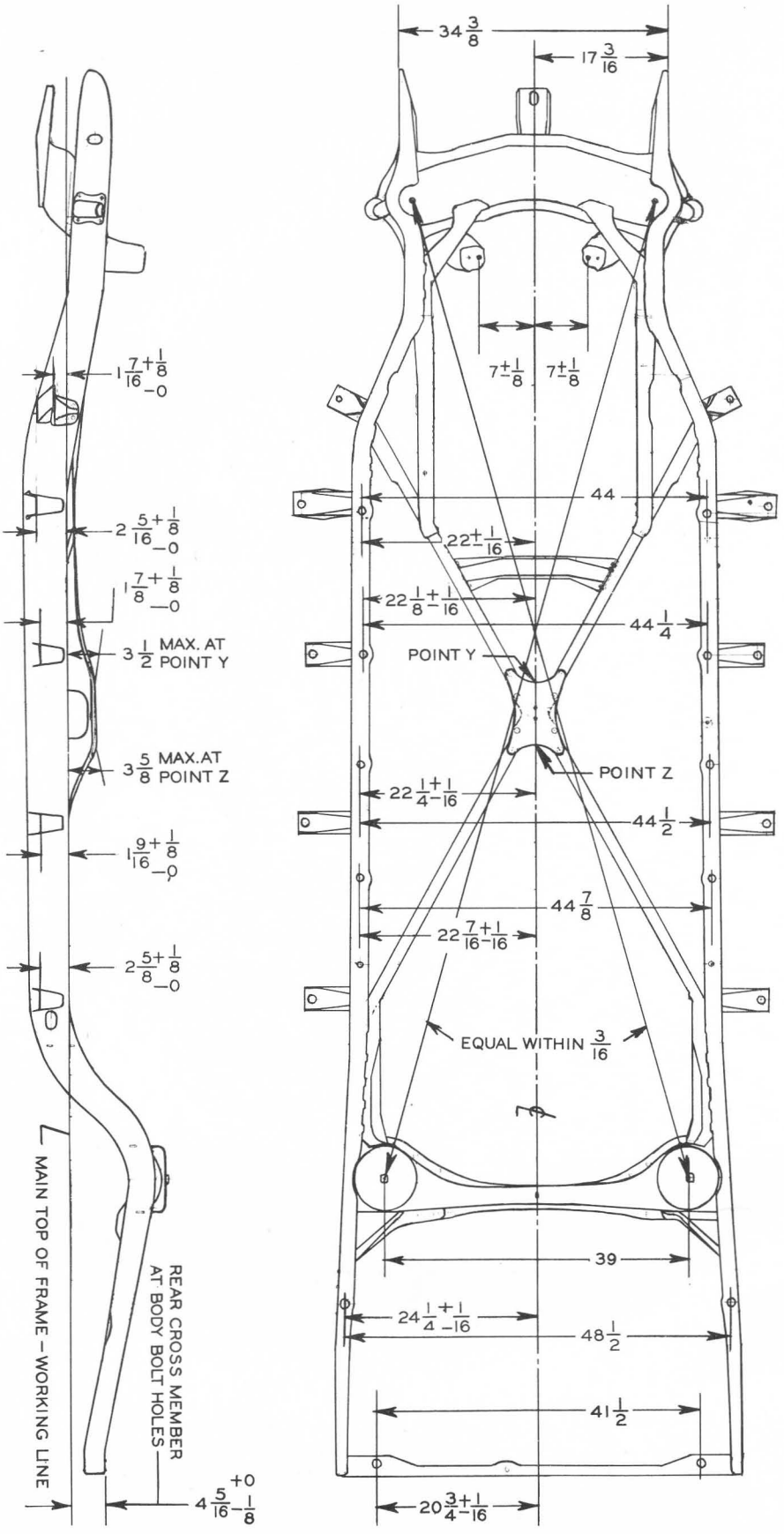


Figure 9-7—Frame Checking Dimensions—1949 Series 50

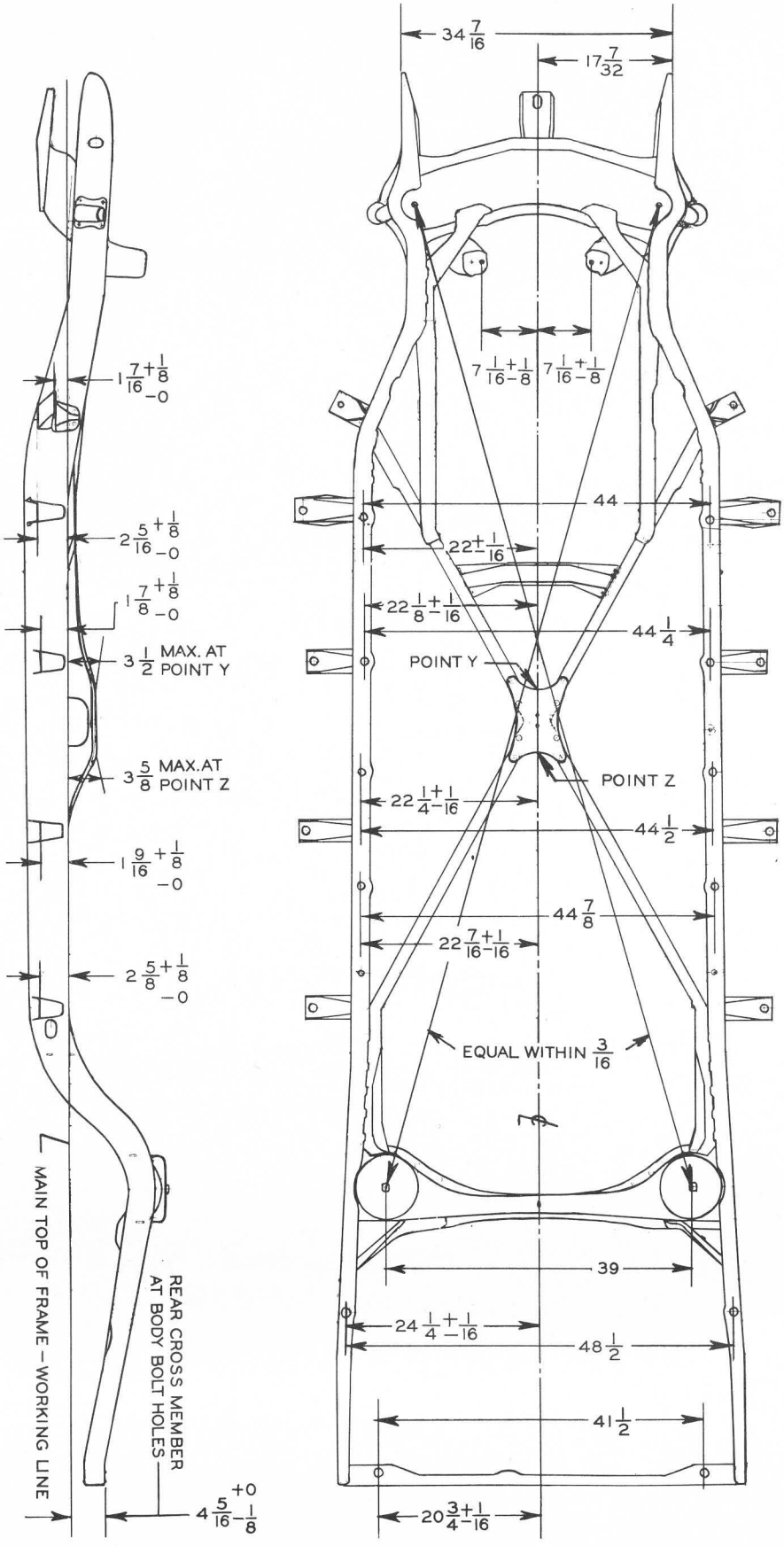
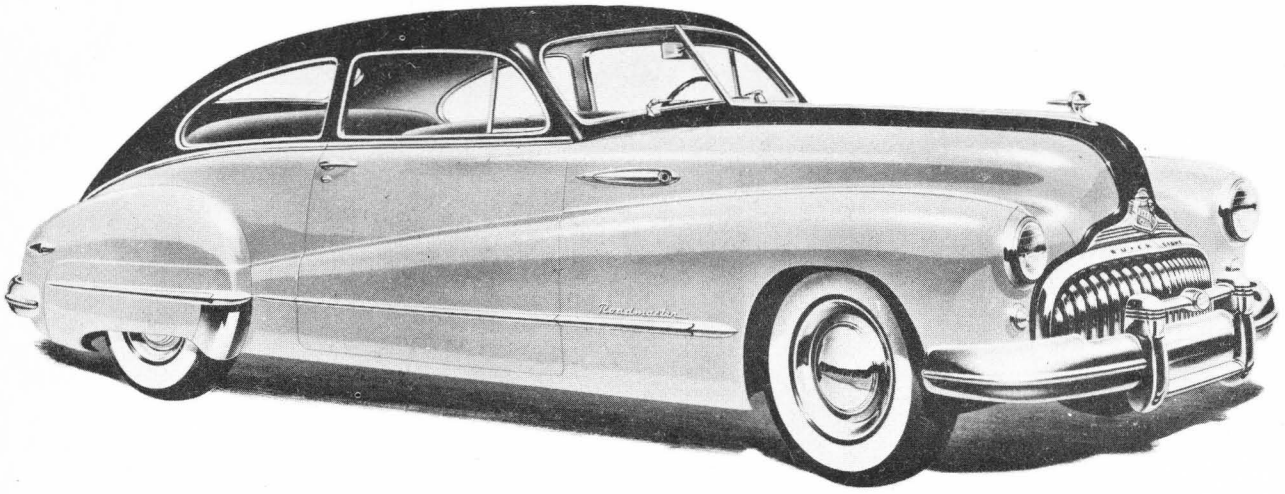
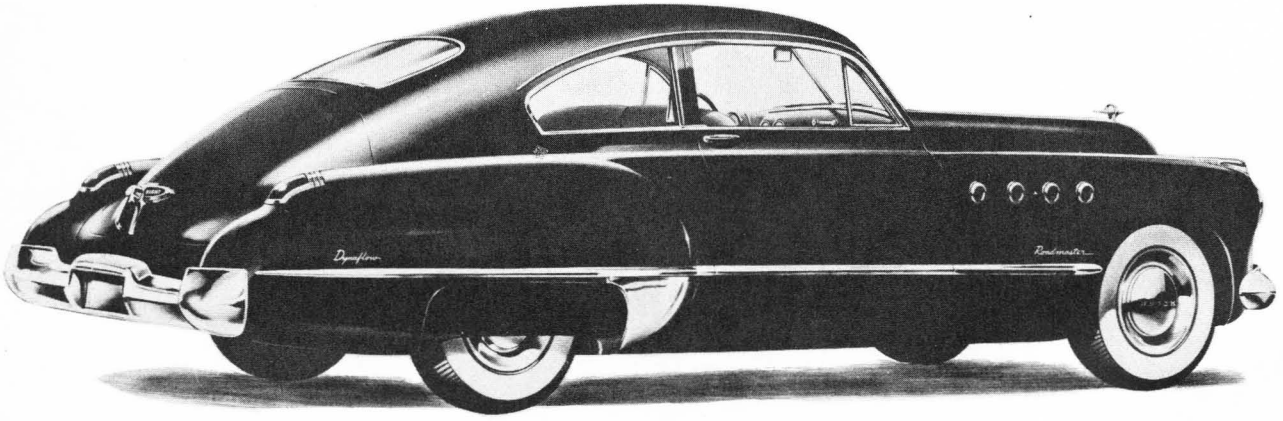


Figure 9-8—Frame Checking Dimensions—1949 Series 70



1948 Model 76-S



1949 Model 76-S