

FRAME

The frame is the structural center of any vehicle, for in addition to carrying the load, it provides and maintains correct relationship between other units to assure their normal functioning.

The frame is of rugged design and constructed of heavy channel steel side rails and cross members. Braces and brackets are used to maintain the proper longitudinal position of the side rails relative to each other, and at the same time provide additional resistance to torsional strains. Due to this rugged design the frame requires very little attention to maintain its dependability.

Vehicles which have been in an accident of any nature which may result in a swayed or sprung frame, should always be carefully checked for proper frame alignment in addition to steering geometry and axle alignment.

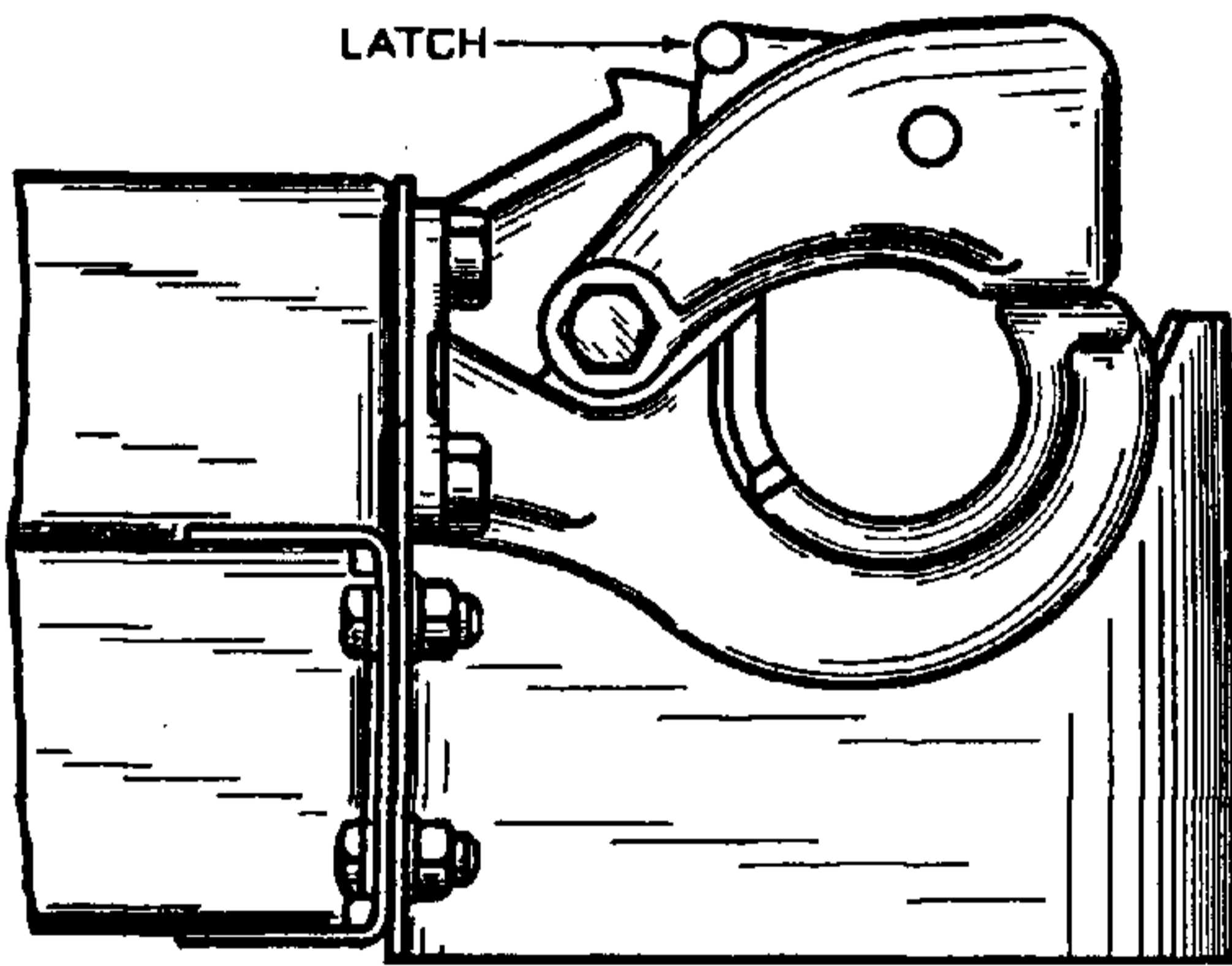


FIG. 1—PINTLE HOOK

A pintle hook for towing is provided on the rear frame crossmember. To open the hook lift up on the safety latch.

Checking Frame Alignment

When checking a frame for alignment Fig. 2, the most efficient method is "X" checking from given points on each side rail.

The most convenient way to check frame alignment, particularly when body is on chassis is by marking on floor all points from which measurements should be taken.

Select a space on the floor which is comparatively level. If cement floor, clean so that chalk marks will appear underneath the points of frame to be checked. If a wooden floor, it is advisable to lay a sheet of paper underneath the vehicle and tack in place, dropping a plumb-bob from each point indicated in Fig. 2, mark flooring directly underneath plumb-bob. Satisfactory checking depends

upon the accuracy of marks with relation to the frame.

To reach points shown that have been marked, have vehicle carefully moved away from layout on floor, and proceed as directed in the following paragraphs:

1. Check frame width at front and rear ends using corresponding marks on floor. If widths correspond to specifications given draw center line full length of vehicle half way between marks indicating front and rear widths. If frame width is not correct lay out center line as follows:

If center line cannot be laid out from checking points of ends of frame, it can be drawn through intersection of any two pairs of equal diagonals. If the extreme front end of frame is damaged, center of front end of frame can be located from point exactly midway between radiator support bolts.

2. With the center line properly laid out, measure distance from it to opposite point marked over entire length of chassis. If frame is in proper alignment, measurement should not vary more than $\frac{1}{8}$ " at any station.
3. To locate point at which frame is sprung measure diagonals marked "AB" "BC" "CD". If the diagonals in each pair are within $\frac{1}{8}$ ", that part of the frame included between points of measurements may be considered in satisfactory alignment. These diagonals should intersect within $\frac{1}{8}$ " of center line. Any variations of more than $\frac{1}{8}$ " indicates misalignment. If the measurements do not agree within the above limits, it means that correction will have to be made between those measured points that are not equal.

Straightening Frame

In the case where the bending or twisting of the frame is not excessive, the frame may straighten. This should be done cold, excessive heat applied to the frame might change the structure of the metal and weaken the frame. For this reason it is recommended that badly damaged frame parts be replaced.

Front Axle Alignment

After it has been determined that the frame is properly aligned, the front axle alignment with frame can be checked as directed below.

The front axle is square with the frame if the distance between the front and rear axle is the same on both sides, and the distance from center of the upper spring bushing to front axle on both sides are equal.

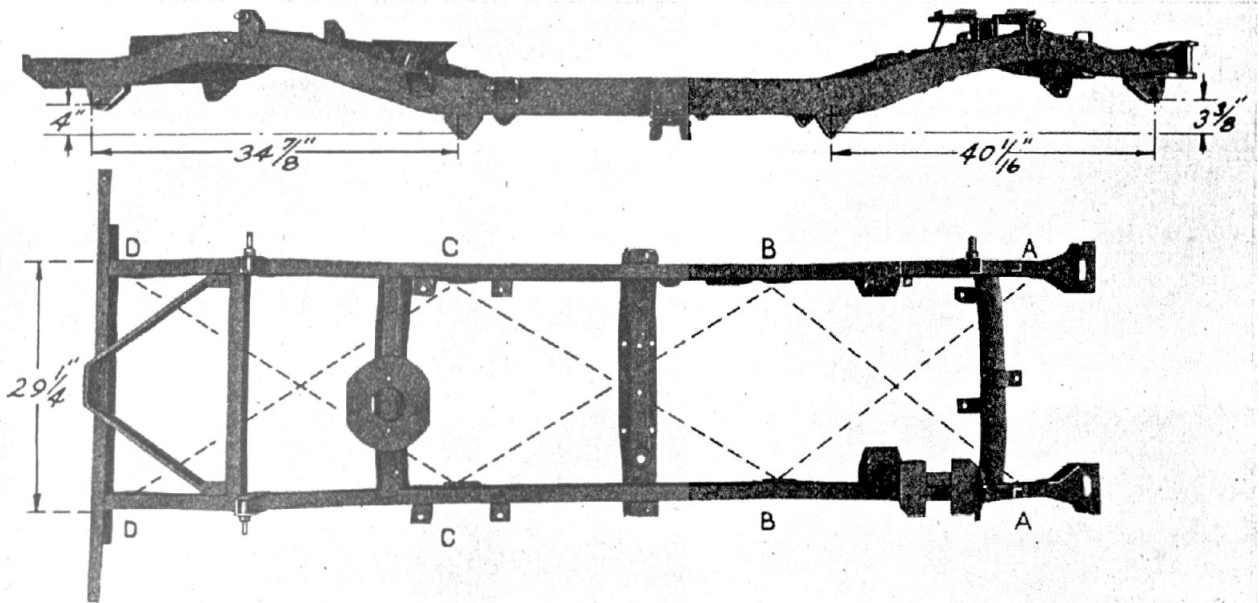


FIG. 2—FRAME ASSEMBLY

FRAME SPECIFICATIONS

Frame.....	SAE 1025
Depth Maximum.....	4.186"
Thickness Maximum.....	.083"-.093"
Flange Width.....	1 3/4"
Length.....	122 3/4"

Width

Front.....	29 1/4"
Rear.....	29 1/4"

Number Cross Members.....	5-"K" member at Rear
Weight.....	140 lbs.

Wheel Base.....	80"
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Tread

Front.....	48 1/4"-with combat wheels 49"
Rear.....	48 1/4"-with combat wheels 49"