

SECTION N

CHASSIS FRAME REPAIRS

GENERAL DESCRIPTION.

This section deals with the repair of the MG type box sectioned chassis frame, damaged in accident, where the facilities used by the frame manufacturers are not available. The manufacturers, naturally, have the benefit of their production equipment, but the methods adopted by them, particularly where the use of assembly jigs and welding equipment is concerned are outside the scope of the average repair organisation.

These instructions will, therefore, deal mainly with methods of repairing damage to chassis frames without dismantling the component parts, i.e., breaking down welds, more than is absolutely necessary to eliminate torn or badly buckled metal or deformed cross-members which are damaged beyond economic repair.

Repairs carried out in this manner fall into two categories:—

- (a) Repair of the frame in position in the vehicle, which may be regarded as an emergency repair, and
- (b) Repair of the frame out of the vehicle, in which complete rectification of the chassis frame is undertaken.

In general, chassis frames with considerable damage may be restored into serviceable units, but the skill and experience of the repairer and the extent of the equipment available will, naturally, determine whether any particular frame is repairable. Bearing in mind that certain fundamental accuracies must be restored, also that the cost of labour and material involved in effecting a complete repair is not economically justified if it exceeds the cost to the user of replacing the entire frame assembly.

Checking Chassis Frame Alignment.

Although in most cases of accident the resulting primary damage to the frame is readily apparent. There are cases where the damage may only be slight and is masked by the wings and body structure. In such cases it may be necessary to carry out a complete check of the chassis alignment, including the front suspension and the rear axle, to determine the full extent of the damage.

When checking cars damaged in accident, it is most essential to do the checking on a flat surface large enough to receive the complete car. It is preferable to use a large iron slab, but a concrete slab, carefully prepared and hand-surfaced will be suitable. The car may then be checked directly by comparative measurements or the chassis may be suitably blocked up and a centre line dropped down from the front and rear centre of the frame and parallel track lines laid out. From these lines the squareness of the car may easily be checked.

In a further check for distortion, diagonal measurements may be taken without removing the body from the chassis, by using a plumb-bob as follows:—

Place the car on a level surface and block up the car equally at each wheel approximately 1 foot high with all tyres properly inflated.

Perform the measuring with accuracy and care.

Suspend the plumb-bob from various corresponding points on the frame. The plumb-bob should be suspended slightly above the floor. When the plumb-bob comes to rest, mark the floor directly underneath it. The marks made on the floor will represent the various points of the frame to be checked diagonally.

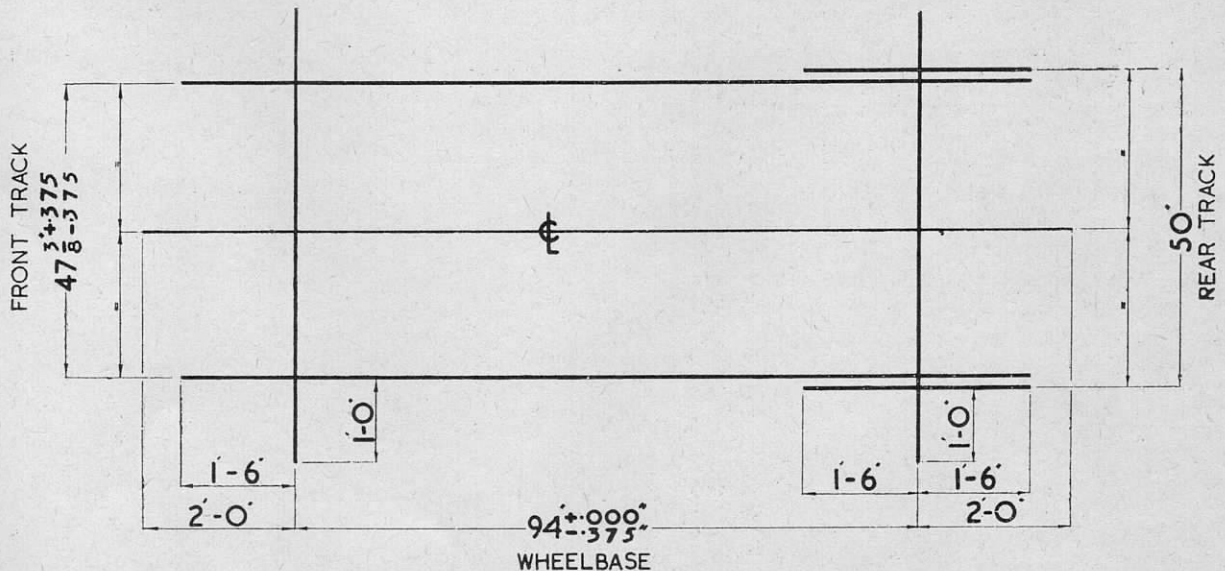


FIG. 48.—Layout for track and wheelbase lines.

