

## THE ECONOMIC ORGANIZATION AND MAINTENANCE OF THE FREIGHT CAR REPAIR YARD AT A TERMINAL POINT.\*

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The question of the proper maintaining of a repair plant of where there is from two hundred to two hundred and fifty cars repaired daily, is a very serious one, and calls for careful consideration, to not only handle the work expeditiously but also to handle it in an economic manner.

To take the yard itself: Its location must be carefully selected; when possible, select a position where you can have twelve tracks of a capacity of twenty-five to thirty cars; tracks must be at least sixteen feet apart, alternate tracks, have a supply track of standard gauge and a third rail to form narrow gauge, and each end of yard should be connected by a lead. Yard must be well drained and, if possible, equipped with sewer and water system, compressed air system, electric power and light, and yard should also be in the near vicinity of shops as possible.

For buildings would recommend a central building under one roof, accessible from all parts of the yard, consisting of the foreman's office, general office, time office, stores, carpenters' shop, paint shop, oil house, triple rack, blacksmith and machine shop, men's lunch room and toilet, also lumber racks, material platforms and racks, and wheel tracks for B.O. and serviceable wheels. The advantage of one building lays in the fact of one heating; this can be very economically arranged for by an old boiler, and fed by the scrap wood, etc., this overcoming to a great extent the danger of fire, account of having stoves.

By having a drive-over about the centre of the yard and a standard gauge track, with a third rail making a narrow gauge track with turn-tables at intersects, you can connect all supply tracks—this can be used for handling wheels as well as other material, and also as a means of keeping yard clean of scrap, etc.

The fact of supplying a repair yard with a sufficient supply of necessary tools, quick lifting jacks, etc., and machinery should not be lost sight of, as (supposing yard is equipped and wired for electricity) individual electric motor power is not only economical, but desirable for the running of machinery. It will be found economy to install cut-off and rip saw, band saw, buzz planer, little giant borers, drills, portable forges and riveting hammers for steel car repairs, with a capable man in charge and helpers, blacksmith's forges with electric power fans.

Oil house should have (underground if possible) tanks. This point should have air device for emptying of oil barrels; should contain waste bin, oil tanks for soaking and proper treatment of, and making of dope.

Paint room should have a galvanized-iron covered table for cleaning of stencils, rack for storing stencils, iron tanks for paint, oil, etc.

The store room should be fitted with drawers, pigeon-holes, racks, etc., for the proper storing of material and small supplies.

General office for use of assistant foreman, inspectors, clerks, etc., with a private office for foreman in charge. The efficiency of the organization depends on the executive and personal individuality of the foreman in charge; he should be a man of ability, an energetic nature and resourceful. His

staff should average, for the number of cars mentioned: Six assistant foremen on a monthly salary, one inspector, four car oilers, thirty freight carpenters, one hundred and seventy car repairers, thirty laborers, two painters, two assistant painters, one clerk, two boys, one storeman, one leading laborer, two checkers, one leading air cleaner and tester, eight cleaners and two testers, and one pipe man and helper. The duties of the assistant foreman should be to oversee the work, under the general supervision of the foreman; these men should be taken from the rank and file, who have proved themselves adapted to the general overseeing of men and work; they should be practical and thoroughly conversant with the details of their work. The duties of the car inspector consists of inspecting all cars leaving yard; this man must be thoroughly conversant with the M.C.B. rules. Records of all foreign cars should be kept, re repairs. Repair and defect cards must be made and affixed according to M.C.B. rules. Duties of leading air brake tester: This man should have charge of air brake cleaner, testers and pipe-man, and should be responsible, under the car inspector, for all air brake work. All triples should be cleaned and tested at the triple-rack, and a stock kept on hand for replacement. Duties of car oilers: It would be policy, although not recommended for a yard of this size, to have a leading car oiler; his duty would be to see that all dope is properly made, and a supply always on hand; he should inspect all boxes, and advise the oiler as to the re-packing. I recommend, in the matter of re-packing journal boxes, that a proper system be organized, and boxes re-packed and stenciled, and in the event of six months elapsing, pull box and renew packing, or, in other words, renew the packing every six months; packing removed to be treated and the oil and waste reclaimed. Two car checkers should be able to take record of repairs made to cars; same should be reported to foreman and fyled. Cars handled should be recorded by index system, and would recommend that a system be adopted to show time placed, time O.K., and dates; this can be handled by one of the boys. Carpenters and car repairers should be placed with assistant foreman as necessary, but recommend that any assistant foreman have not more than forty men. Painters should have well in hand the work of painting, etc.; all sheeting, roofing, etc., should be painted ready for use; the advantage in this is manifold, you have always something to keep your painters busy, your sheeting for patching is ready for the stencil, and finally your car is O.K.'d in one day instead of three. Laborers should be under charge of a leading-hand; his duties are manifold, from seeing that the scrap, etc., is gathered and placed in proper receptacles to seeing material placed at stores, also heavy material placed in a convenient position to handle. The storeman should have charge of supplies, and be directly responsible for their up-keep. The foreman should furnish the general storekeeper every day a list of material supplied, attaching requisitions received and furnish a list of requirements. Foreman should be in close touch with stores and be in a position to anticipate requirements; this would be of mutual benefit both to storekeeper and himself. The clerk: I prefer training a man from the ranks of car repairers, as, being familiar with the work, he can handle the position to advantage. The foreman should insist on a careful record being kept of all work, supplies and general conditions, as the work of wrecking naturally falls to the repair yard, it is up to the foreman to insist on maintaining an efficient staff, and the wrecking crew should not be less than twenty men, taken from the car repairers; from these men selected at least two of them should be first aid men, holding certificates, and who have become conversant with the work; the men should be selected as required, according to nature of wreck; they should be under the charge of an assistant foreman, this man

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