

ROLE OF DIESEL SHEDS IN INDIAN RAILWAYS

Diesel locomotive shed is an industrial-technical setup, where repair and maintenance works of diesel locomotives is carried out, so as to keep the loco working properly. It contributes to increase the operational life of diesel locomotives and tries to minimize the line failures. The technical manpower of a shed also increases the efficiency of the loco and remedies the failures of loco. The shed consists of the infrastructure to berth, dismantle, repair and test the loco and subsystems. The shed working is heavily based on the manual methods of doing the maintenance job and very less automation processes are used in sheds., especially in India.

The diesel shed usually function as-

1. Maintenance of Diesel Locomotives
2. Maintain Punctuality by assisting in Trouble Shooting while Loco is Online.
3. Assisting in Accident Investigation
4. To carry out I O H of Diesel Locos

OBJECTIVES: To carry out the maintenance of Diesel Locos with the available resources without violating Railway Board Regulations. And to increase the Shed Outage.

ORGANISATION:

A Diesel Shed is controlled by Chief Mechanical Engineer (PHOD) at Zonal Level and by Divisional Railway Manager (SAG) at Divisional Level.

It is headed by a Sr.DME (JAG)/DME (Sr Scale) at shed who is assisted by ADMES (Jr Scale) and SSEs and other supervisory staff.

A Diesel Shed is provided with the following in general :

1. Washing And Cleaning
 - Washing Apron & Pit
 - Provided With Concrete & Good Drainage
 - Suitable Hydrant Points & Adequate Supply Of Water
 - Automatic Washers With Mechanised Sprays, Brushes
 - Provision Of Boiler To Give Steam Jet
2. Fuel Supply Installation
 - Provision Of Fuel Oil Storage Tanks
 - Provision Fueling Points
3. Lubricating Oil
 - Lube Oil Storage Tanks
 - Dispensing System
4. Cooling Water For Locos
 - Treated Water Should Supply (D.M.Water Plant)
5. Repair Area
 - Generally Two Parts
 - I)Light Repair Bay (Up To Half Yearly)

- A) Mail Locos Repair Bay
- B) Goods Section Repair Bay Including Quarterly & Hyly

II) Heavy Repair Bay (With Overhauling Sections)

- Separate Areas Should Be Demarcated For Sub-Assembly Overhauling
- Diesel engines, Electrical Rotating M/C, Turbo,
- Express, Cooling Equipments & Radiators,
- Under Gearing Components,
- Speedometer And Millright Section

6. Shed Building

- Should be Besides The Repair Area
- Battery charging And Storage Room –
- Instrument Repair And Testing Room
- Fuel Injection Repair And Testing Room –
- Engine Governor Repair And Testing Room
- Brake Testing Room
- Flaw Detector Room (Magnetic And Zyglo)
- Filter Storage
- Tool Room
- Lockers & Washing Room
- Laboratory
- Booking Office
- Supervisors Office Room
- Shed officers Rooms
- Office Room And Recordroom
- Library
- Lecture /Meeting Room
- Fire Fighting Equipments
- Rpf Post
- Load Box Room
- Pit Wheel Lathe Area

7. Shed Stores

- Shed Store Should Have Approach By Rail As Well As Road
- Proper Bins And Racks Should Provided
- Adequate Lifting Facilities To Be Provide
- Special provision For Storage of rubber Components

8. Lifting And Material Handling Facilities

- Over Head Crans 40tons, 10tons & 3 Tons
- Heavy Duty High Lift Electrical Operated Jacks 10
- Tram Beam
- 3 Ton Cranes – 6
- Forklift Truck – 2
- Plat Form Truck- 2
- Trolleys-04

9. Auxiliary Buildings

- Under Floor Wheel Lathe M/C
- Load Box Room
- Compressor Room

10. Illumination

- Fluorescent Light Or Mercuryvapour Lamps (Min 200 Lux)
- On Pit Area Bulkhead Fittings should be Provided (Min 200 Lux)
- Low Voltage Plug Points Should be Provided

11. Laboratories

- Spectrograph For Lube Oil Testing
- Magnaflux Testing m/C
- Rubber Tensile Testing M/C
- Zygo Testing M/C
- Ultrasonic testing M/C

12. Cleaning And washing Of Components:

- Cleaning Of Components Immediately After Their Dismantling
- For Degreasing And Cleaning
- Should Provide Special Cleaning Plants With Spray Jet Type M/C

13. Training School:

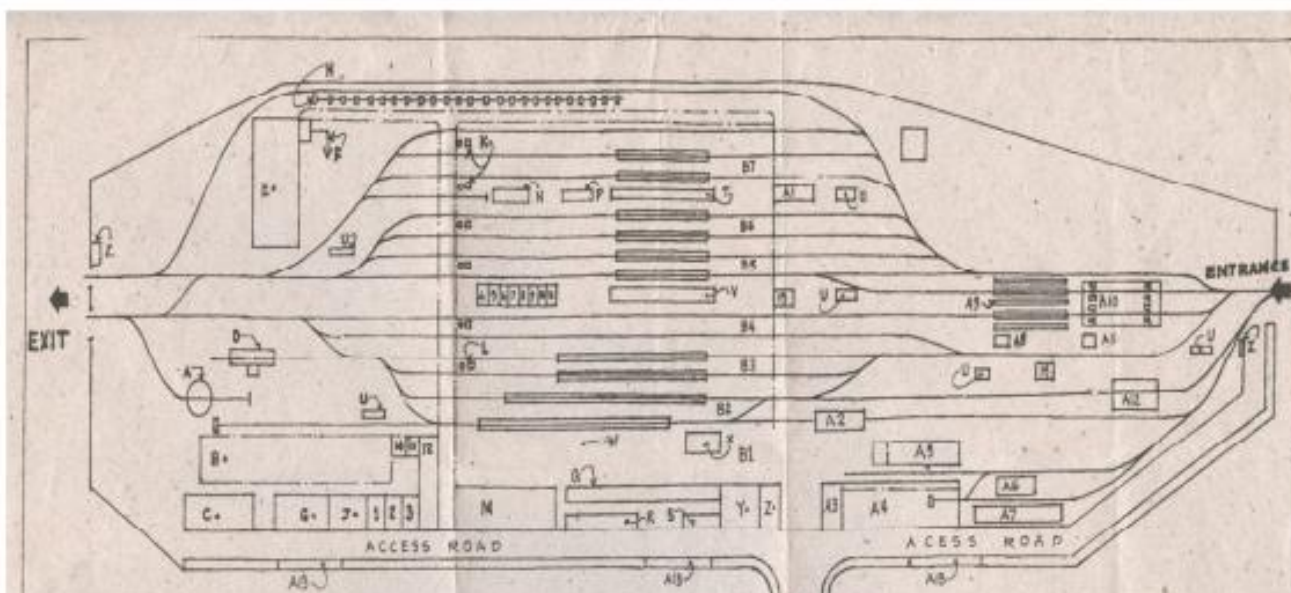
- Theoretical And Practical training To Various Categories Of Staff

14. Staff Amenities:

- Water Coolers Should Be available At working Area
- Cleaning Agents Are Necessary Against Dermatitis
- Staff Lockers Room, Toilets
- Cycle & Scooter Stand Staff Canteen

15. Environment Friendly Equipments:

- Incinerators To Dispose off Waste Material
- Effluent Treatment Plants (ETP)



LEGEND

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| <ul style="list-style-type: none"> A- TORN TABLE B- SCRAPPED CYL HD & LINERS. C- TRAINING SCHOOL. D- LOAD BOX. E- FUEL STORAGE DEPOT. F- FUEL CHECKER ROOM. G- CANTEEN. H- FUEL DECANTING LINE. J- POWER SUB-STN. K- FUELLING POINTS & NOS. L- LUBE OIL DISPENSING POINTS & NOS. M- SUB-STORE FOR UNIT EXCHANGE SPARES. N- LUBRITORIUM. P- LO ISSUE. Q- LAB & REPAIR ROOMS. R- OFFICE COMPLEX. S- CAR SHED. T- REPAIR ROOMS. U- URINALS. V- PLE. LVL. OFFICES. W- REPAIR SECTIONS & MJ SHOP. X- AXLE BOX GREASING. Y- FIRE FIGHTING OFFICE & EQUIPMENT. | <ul style="list-style-type: none"> Z- SECURITY OFFICE RPT. A1- GARBAGE. A2- WHEEL STABLING SHED. A3- TIME OFFICE. A4- MAIN STORE. A5- LUBRICANT STORE. A6- OPEN STORE. A7- OPEN STORES ENCLOSURE A8- SAND HOUSES & SANDING EQUIPMENT. A9- SANDING & INSPECTION PLATFORMS. A10- HYDRANTS. A11- BOGIE WASHER. A12- PIT WHEEL LATHE SHED A13- CYCLE STAND. 1. TRUCK GARAGE & SERVICING. 2. LISTER TRUCK SERVICING. 3. TEEP GARAGE SERVICING. 4. COMPRESSOR ROOM. 5. BOILER ROOM. 6. WATER DEMINERALISING PLANT. 7. WATER DISTILLATION PLANTS. 8. BLACK SMITHY. 9. CARPENTER'S RM. | <ul style="list-style-type: none"> 10- PAINTERS RM. 11- GASHET RM. 12- BATTERY CHARGING RM. 13- COPPER & TIN SMITHY. 14- ANTI FIRE TREATMENT XM. 15- COMPRESSED AIR RECEIVERS. B1- REPAIR SECTION - DAY. B3-B6- THREE LEVEL WORKING FOR LIGHT REPAIRS B7-B7- WITHOUT PLATFORMS FOR HAISING & SHUNTING |
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**SCHEMATIC DIESEL SHED
LAY-OUT TO HOME
100-BG LOCOS.**

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