DEPOT MAINTENANCE SCHEDULE of LHB

STC/SPJ

Examination of Trains

The examination is to be carried out as per RPC-IV as amended from time to time.

Examination of Originating Trains

i) All trains must be examined by the mechanical train examining staff before dispatch to ensure that all coaches on the train are in fit condition and without rejectable defects. On formation of a rake and after its placement for examination, washing, cleaning and watering, the Station Master (SM) shall pass necessary memo to the Engineer (C&W). After carrying out all necessary work, the Engineer (C&W) shall communicate fitness of the train to Station Master. The Station Master shall not dispatch the train unless the fitness certificate, in the prescribed form, is received from the Engineer (C&W).

ii) The level of the air pressure on the train engine and the brake van gauges and the percentage of operative cylinders should be recorded on a prescribed 'BPC' and signatures of the driver and the guard of the train should be obtained by the Engineer (C&W). No train should be allowed to leave with an inoperative/defective brake cylinder on any coach after pit attention. Trains which have been attended on pit line should have 100% brake power.

Enroute/Terminating Examination of Passenger Trains

i) Sr.DME/DME in charge shall nominate the site for carrying out rolling in/rolling out examination after personal inspection of site. While nominating the site following should be kept in view:

a) Site shall provide unobstructed view of under gear from both sides

b) Speed of the train shall not be more than 30 KMPH.

c) It should cover the entire length of train.

d) Should have adequate space for fixing the lighting arrangement and for staff.

ii) For rolling in examination of train it has to be ensured that proper lighting arrangement is provided on both the sides of the track at nominated spots for examination of under gear parts during night. Focusing of lights shall be done by keeping a coach on the line and adjusting the angle of light to illuminate under gear and bogie.

iii) C&W staff should take position at nominated rolling in place on both the sides of the track before the arrival of train.

iv) As the train passes the nominated point, C&W staff should watch out vigilantly for loose/hanging/broken under gear parts of the coaches, any unusual sound coming from the coaches or any other abnormality in the coaches.

iv) After train comes to halt, it should be ensured that the train is protected from both the sides (with the stop board/red flag during day time and red lamp during night time) before commencing the examination of the train. It should be ensured that a suitable indication board is placed at conspicuous location visible to the driver indicating that C&W staff is at work.

vi) Temperature of the axle boxes should be measured preferably with the help of the electronic temperature measuring device.

vii) Brake release shall be checked physically. Brakes of all coaches shall first be manually released .However, in case where train locomotive has to be detached, for avoiding the rolling of rakes, it should be ensured that brakes are not released in at least 3 to 4 coaches from the locomotive end and 3 to 4 coaches from rear, these shall be released after attachment of locomotive.

viii) Other under gear parts should be examined visually to ensure that the train is safe to run further. During night the lamps/search light shall be used for illumination.

ix) Repairs if required should be carried out promptly to avoid detention to train to the extent possible.

x) Lavatories of the coaches should be properly cleaned using High pressure water jet machine provided at nominated stations during halt of the train. Any complaint from passengers should be attended promptly to the satisfaction of the passenger.

xi) After attending to any required repairs stop board/red flag should be removed.

xii) Carriage controller (CCR) should be informed about any out of course work done.

xiii) CCR shall repeat the out of course work done to the Primary Maintenance (PM) depot after corrective action.

xiv) At the train examination stations where locomotives are changed on through trains, the level of air pressure created on the locomotive and brake van gauges should be recorded on the certificate to be issued to the guard and driver on prescribed form. The inoperative/blanked cylinders, if any, should also be written in the certificate for their information. This certification should be an endorsement on the original brake power certificate; no fresh brake power certificate needs to be issued.

MAINTENANCE SCHEDULES

Coaching Depot Schedule

- Schedule D1 : Every Trip/Weekly
- Schedule D2 : Monthly ± 3 days
- Schedule D3 : HalfYearly ± 15 days

Shop Schedule

- Shop Schedule I : 18 months/ 6 lakh Kms whichever is earlier
- Shop Schedule II : 36 months/ 12 lakh Kms whichever is earlier
- Shop Schedule III : 72 months/ 24 lakh Kms whichever is earlier

Schedule D1 (Every Trip/Weekly)

The following items shall be attended during schedule D1.

Bogie Frame and Bolster Assembly

- Check on longitudinal beams, cross beams & bolster for cracks, damages and corrosion.
- Check on brake supports, damper supports, traction centre supports and anti roll bar supports for cracks, damages and corrosion.
- Check bogie bolster sub-assembly and brackets for cracks, damages and corrosion.

Brake Equipments

- Check Air Brake and Hand brake equipment. Check flex ball cable arrangement for proper working.
- Check on Brake cylinders/ brake levers and Hand brake equipment for damage, cracks and corrosion.
- Test on pneumatic brake system. Make sure that no leaks are present.
- Check operation of passenger emergency valve & pull box.
- Check on hoses for cracks/damages.
- Visually inspect steel piping for cracks/ damages/ ballast hitting and leakages, Repair/ replace as necessary.
- Check on brake discs for damage/wear/broken ribs. Verify absence of axial movement along the axle.

Axle Bearing Instruments

- Check on all grounding cables & WSP equipment cables for breaks/ damages.
- Check equipment for absence of damages, cracks, and corrosion marks.
- Check functioning of WSP equipment. Verify that the signal arrives correctly to the diagnostic equipment.

Primary & Secondary Suspension

- Check springs for cracks, damages, corrosion or foreign objects presence.
- Check miner pads for cracks, damages and ageing.
- Check safety cables for damages, cracks and corrosion.

Primary/Secondary/Yaw dampers

- Check on dampers for damage, cracks and oil leaks.
- Check on all fixings for loosening and/or missing components.
- Check on rubber elements for cracks and ageing.

Bearings

- Carry out bearing feeling for detection of hot bearing.
- Check bearings for grease leakage.

Wheel & Axle

- Check on wheels for cracks, damages and tyre defects.
- Check the profile by wheel profile gauge.
- Check axle for cracks and signs of corrosion, if any.

Control Arm

- Check on all fixings for loosening and / or missing components.
- Check control arm parts for damages, cracks or corrosion marks.
- Inspect the rubber joint until it is visible for cracks, damages and ageing.

Anti Roll bar Assembly

- Check on Anti roll bar, links and brackets for cracks, damages and corrosion.
- Check on rubber joints for cracks, damage and ageing.
- Visually inspect for grease oozing out of anti roll bar bearings, which may result in bearing failure.
- Check on all fixings for loosening/missing fittings.

Traction Centre

- Check on the traction centre lever and on the rods for cracks, damages and corrosion.
- The assembly should be free to move, and not blocked by any foreign objects.
- Check on all fixings for loosening.
- Check on rubber joints for cracks/damages.

Rotation Limiter

- Check of rotation limiter- components.

Rubber and Rubber/Metal Bonded Parts

- Check on rubber and rubber/metal bonded parts for cracks, damages and ageing.

Schedule D2 (Monthly)

All the items of schedule D1.

Bogie Frame

- Wash the bogie frame thoroughly with water jet in washing line, making sure that water is not directed towards pneumatic / electrical connections and axle bearings.

Brake Equipment

- Verify that the clearance between each pad and disc surface is 1-1.5 mm.
- Check wear of brake pads/ brake discs. If groove depth is reached, it is necessary to replace the discs.
- Lubricate the brake levers, fixings and all moving parts using prescribed grease (Autol Top 2000 spray).

Axle Bearing Instruments

- Inspect the Earthing equipment for wear of slip assembly / carbon bars.
- Monthly / Quarterly inspection of WSP equipment to be carried out as per schedule given by OEM.

Wheel & Axle

- Check treads diameter and wear of wheel profile. If necessary, perform reprofiling.

Pins and Bushes

- Lubricate all pins and bushes.

Schedule D3 (Half Yearly)

- All the activities of schedule D2. In addition to this, perform the activities, as given below

Bogie Frame

- Examine the bogie frame for corrosion / damages, especially at critical locations.
- Carry out paint touch up with high built epoxy primer and paint.

Wheel & Axle

- Check wheels offset on axle (1600 mm± 1 mm)

Control Arm

- Renew protection treatment with Tectyl / Cortec VC 1368 on the rubber joint on visible areas.

Axle Bearing Instruments

- Replace all carbon brushes on earthing devices.