

PRACTICES OF POH IN COACHING WORKSHOP

Periodicity of POH of coaches in workshops

Type	Periodicity	Periodicity
	IOH	POH
New coach or MLR coach	12	24 months
Rajdhani/ Shatabdi coaches	9 months	18 months
Mail/Express /Passenger coach	9	18 months

Procedure for sending coaches

- Coaching depot shall book POH due coaches after conducting joint check by Mech, Elec & Security staff
- Deficiency list is prepared and sent to workshop

- On arrival in workshop, coach is to be checked jointly by Mech & Elec in the presence of RPF.
- Addl. Deficiencies to be noted
- Prem. Inspn is undertaken by Inspn wing and arrive at the extent of corrosion repairs
- Light corr < 500 man hrs
- Medium corr > 500 & upto 1000 man hrs
- Heavy corr > 1000 man hrs

Repair activities

- Pre inspn, stripping & lifting
- Bogie repairs
- Wheel set complete attention
- Body repairs, modification/alterations
- Fitment of water tanks, plumbing work
- Repairs to interior panels
- Fitment of shutters, doors
- Painting & fitment of berths/seats
- Fitment of axle pulley, tension rod & testing of coach wiring
- Testing of branch wiring & fitment of electrical equipments
- Air brake testing and final works
- Final inspn and despatch

Bogie repairs

Main components of bogie:

- Axle box guide with dash pot arrgmt
- Air vent screws
- Bogie bolster suspension
- Springs, centre pivot arrgmt.
- Side bearers, anchor links, silent blocks
- Brake rigging, equalizing stay, bolster suspension
- Hangers, shock absorbers

Sequence of activities in Bogie shop

- Coach lifting
- Bogie cleaning sand blasting
- Bogie dismantling
- Component cleaning
- Attention to components
- Repairs to components
- Bogie assembly
- Load testing and adjustment
- Lowering of coach
- Final adjustment in Outgoing shop

Attention to Bogie frame

- Check for cracks
- Check the square ness and alignment of BSS bracket and axle guides with trammel gauges
- Bent or damaged suspension straps to be attended
- Replace BSS bracket bushes and pins, if bent or damaged
- Replace anchor link brackets, if bent or damaged
- Replace brake hanger brackets, if worn or damaged
- Locations where repairs carried out shall be cleaned, painted with 2 coats of primer followed by 1 coat of anti corrosive paint

Attention to Bogie bolster

- Check the bolster for twist, crack or corrosion
- Check the equalizing stay bracket
- Check the anchor link bracket
- Ensure that there is no leakage of oil from side bearer
- Replace hand ground plate in the side bearer oil bath if worn more than 1 mm in thickness
- Replace anchor link , if worn or damaged
- Replace silent block, if rubber perished or loose
- Check lower spring beam for cracks, corrosion & repair/replace
- Check BSS hangers for cracks or wear , > 1mm replace
- Magna flux testing and tested with tensile load of 8 tonnes
- Replace hanger blocks if cracked, worn blocks can be built up

Wheel shop activities

- Removal of axle boxes
- Removal of RBs and rear covers RB cleaning
- UT of axles
- Wheel set cleaning
- Wheel set Re-discing/Re-axling
- Wheel set Re-profiling
- RB inspection
- RB fitment
- Axle box assembly

Coach body interior repairs

- Panel repairs
- PVC floor repairs
- All amenity fittings
- Water tank repairs
- Water pipeline repairs
- Lavatory fittings
- Underslung water tank attention
- Main & Lavatory door repairs
- Window shutter repairs
- CDTS & Bio-toilet attention

Corrosion repairs

- Corrosion diagram is prepared once extent of corrosion is known
- Intensive corrosion check is done on:
 - Under floor members
 - Trough floor
 - Head stock (both inner & outer)
 - Sloe bar, body pillar and turn under at Lav area
 - Sole bar, turn under and pillars above lifting pads
 - Sole bars and pillars at door corners
 - Tubular frame below lav
 - Under frame members

Corrosion repairs

- Side wall members
- Roof repairs & roof ventilation repairs
- Repair to door handles and door pivots
- Repairs to partition wall, seat pillar
- Repairs to draw and buffing gear support structure
- Repairs to body bolster
- Repairs to centre pivot
- Water tank support structure
- Repairs to floor channels

During corrosion repairs

- Repairs of cracks shall be gouging and welding
- Distorted and bent parts shall be heated and straightened
- Parts used for repair shall be given proper surface treatment and applied with protective coating
- Thick sections such as sole bars, cross bearers etc shall be grit blasted, given a coat of ROZ primer paint
- Qualified and certified welders shall be employed

Painting activities

If condition of paint is good,

undertake C schedule (5 days)

Cleaning with cleaning solution and wash thoroughly

Spot putty, Rub down Gr 120 & 220 silicon carbide water proof paper, apply one coat of finishing enamel

Rub down Gr 400 silicon carbide water proof paper, apply one coat of synthetic enamel finishing and Lettering

else A Schedule (9 days)

Remove old paint, one coat of ROZ primer, coat of filler followed spot putty, second coat of filler, Rub down Gr 120&220 silicon carbide water proof paper, coat of under coat, Rub down Gr 320 silicon carbide water proof paper with coat of enamel finish, Rub down Gr 400 silicon carbide water proof paper with second coat of synthetic enamel finish, Lettering

Trimming activities

- Repairs to cushioned seats
- Repairs to berths of all sleeper and AC coaches
- Provision of curtains in all AC coaches (new)

- ❖ Electrical /AC equipment attention & fitment

- ❖ Air brake testing and final inspection of coach

LHB coach shop schedules

S.No	Type of Schedule	Periodicity
1	Shop Schedule I /SS-I	18 Months/6 Lakhs Kms earned whichever is earlier
2	Shop Schedule II / SS-II	3 Years/12 Lakhs Kms earned whichever is earlier
3	Shop Schedule III /SS-III	6 Years/24 Lakhs Kms earned whichever is earlier

Shop schedules of LHB coach

25 days

Brief of Activity	Shop	Details of activities	No. of days
Pre inspection and stripping	CR(AC)	Stripping of partition and ceiling of pantry , pantry door, etc.	1 Day
Pre inspection and stripping	AC (Electrical)	Pre inspection of deficiency,	1 Day
--do--	--do--	Testing and analyzing of coach defects, panel equipment, AC plant, water Pump, transformer etc.	1 Day
		Stripping of all equipments.	1 Day
Lifting and lowering	CR(Lifting)	Before lifting of the coach dismantling of bogie components under pit under such as traction lever ,anti roll bar control arm etc.	1 Day
		Lifting of the coach and washing of bogie	1 Day
		Repairing of bogie, control arm fitting on wheel and lowering of coach.	1 Day
		Repairing of Air brake components on panel, fitting of silent blocks, fitting of bogie components under pit and air brake testing.	1 Day
		CBC and WSP system repair	1 Day

Intermediate tank cleaning And CDTS testing	Plumbing	Cleaning of the CDTS intermediate water Tank before lifting of coach on stripping line	1 Day
		Washing of intermediate water tank, bench testing of CDTS panel, valves etc. in CR/L shop.	1 Day
		Fitting of intermediate water Tank in the coach in lifting shop.	1 Day
Body repair and furnishing work	CR(AC)	Stripping of lavatory ceiling, repair of lavatory door, repairing of vestibule door, cushion stripping ,repair of reclining gear, foot rest, snack table stripping of the fittings Viz. Bottle holder, mirror etc.	4 Day
Fitment and testing of electrical equipments	AC (Electrical)	Loading of all equipments except RMPU	2 Day
		RMPU loading, loading of pantry equipment etc.	2Day
		Complete testing, fault diagnosis and their remedy.	2 Day
Other body repair works	CR(AC)	Stripping and Fitting of window glasses, Flooring work etc.	1 Day
		Repair and fitment of saloon sliding door, roller blinds etc.	1 Day
		Repair and fitment of entrance door ,electrical panel door etc.	1 Day
		Fitting of pantry partition, ceiling, pantry doors, lavatory ceiling, other fittings etc.	1 Day

Exterior Painting	Paint	Washing with suitable detergent	1 Day
		Application of Putty	1 Day
		Rubbing Down Putty and application of Surfacer	1 Day
		Window Masking, Roof Painting, End painting and painting of side Panels leaving down side area.	1 Day
		Masking of upper area and down side painting	1 Day
		Removal of masks, touch up, lettering, cleaning and other works.	1 Day
Interior Painting	Paint	Internal painting	2 Days
Fitting work	Fitting	Body panel repair, Stripped body repair, Repair of inner members like partition frames, Chair angles and seat supports etc.	2 Day
Trimming work	Trimming	Stripping of curtains on stripping line	1 Day
		Stripping of seats in Carriage AC shop	1 Day
		Fitting of seats and curtains in the coach	1 Day
		Cleaning of the seats and other activities	1 Day

Water tank testing	Plumbing	Testing of under slung/over head water tank in CR Body/CR AC section.	1 Day
		Repair and testing of water tank in Plumbing shop.	1 Day
		Fitting of CDTS panel in coach in CR Body/CR AC shop	1 Day
Final inspection	CR(AC)	Final inspection and despatch	1 Day
Air brake testing.	CR(Lifting)	Final Air brake testing	1 Day

Thank You