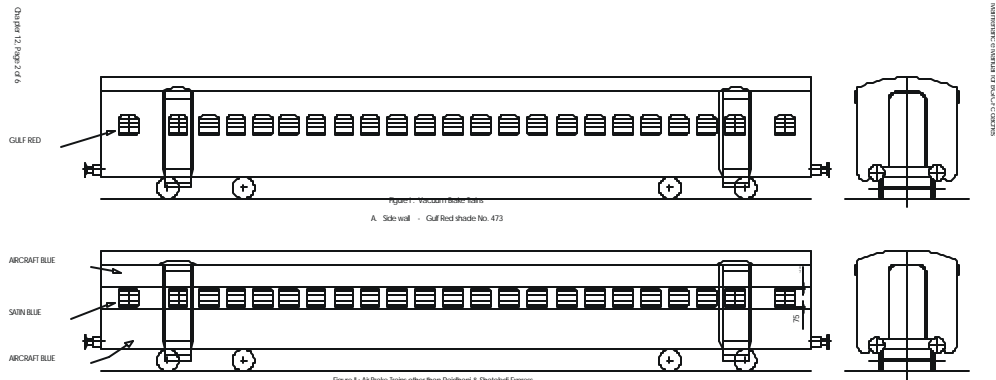


CHAPTER 12

PAINTING

1201	GENERAL	1202c	After allowing adequate drying time for primer, the entire coach should be applied with the first coat of brushing filler to IS 110-83 by spray/brush to a DFT of 30 micron minimum .
1201a	After the coach body is fully repaired and the flooring work completed, it should be swept and cleaned of all dust, shavings, etc., before the coach is placed in the Paint shop for painting and polishing.	1202d	(i) After hard drying of filler, apply the first coat of knifing stopper putty to IS:5083-88 followed by spot putty application and wet rubbing. (ii) After ensuring drying of water, apply necessary putty to get a uniform surface followed by wet rubbing. (iii) After drying of water, apply second coat of filler to IS:110-83 to a DFT of 30 microns minimum .
1201b	The condition of the paint on the inside and outside surfaces should be examined to decide whether the old paint should be removed to the bare metal. Usually, extensive corrosion repair work necessitates removal of old paint to bare metal and complete repainting of the coach.	1202e	The dry surface should be wet rubbed down with bone cuttle and silicon carbide water proof paper grade 120 and 220 . It should then be allowed to dry.
1201c	If the condition of the paint so warrants or at every 5th POH of a coach, the paint should be completely removed to the bare metal and the coach repainted as per paint schedule `A'. If the general condition of the paint is good, follow paint schedule `C'. These paint schedules cover the exterior painting of coaches with synthetic enamel paint system. RDSO Sketch No :CSC - 1723 gives the exterior colour scheme of the coaches (Sketch no. CSC - 1723 has been made into two parts i.e. figure 12.1a & figure 12.1b and attached at pages 2 and 3).	1202f	After ensuring that there is no trace of water on the surface, a coat of under-coating to IS 8662-93 should be sprayed or applied by brush to a DFT of 25 microns minimum.
1202	PAINT SCHEDULE `A' (Refer Annexure 12.1)	1202g	The entire surface should again be rubbed down smooth with silicon carbide water proof paper grade 320 and after drying, a coat of enamel finishing to IS 8662-93 should be applied to a DFT of 20 microns minimum .
1202a	The entire surface should be applied with a suitable paint remover and the old paint scraped off. Thereafter, the coach surface shall be swabbed with petroleum hydrocarbon solvent to IS:1745 to remove all traces of paint remover.	1202h	After the first coat of finish enamel has dried completely, it should again be flattened with silicon carbide water proof paper grade 400 and apply a second coat of synthetic finish enamel to IS 8662-93 to a DFT of 20 microns minimum .
1202b	After the surface dries up completely, it should be sand papered to make it slightly rough and a coat of red oxide zinc chromate primer to IS 2074 -92 to a DFT of 25 microns minimum should be applied by spray/brush immediately. Where facilities exist, the entire coach body should be sand blasted and the primer coat of red oxide zinc chromate should be applied by spray/brush immediately thereafter.	1202i	The door handles, if not chrome plated, should be painted with golden yellow to IS 8662-93. The foot steps, roof, etc., should be painted as per prescribed colour scheme.
		1202j	Standard lettering, as specified, should be done with golden yellow to IS 8662-93. Similarly, all standard schedule charts, signs, etc., should be stenciled/painted as prescribed.



- NOTE:
1. For special sites, instructions as per Ry. Board's letter No. 76/M/IC/137/31 dated 5.6.1986 shall be followed.
 2. Postal portion of postal vans shall be painted with postal red.
 3. Detailing procedures for roof and end wall painting, lettering and color marking, continue unchanged.
 4. All finishing paints should be to specification No. 5.8662/93 and colours to specification No. 5.5-94

EXTERIOR COLOUR SCHEME FOR MAIN LINE COACHES

RESO Sketch No. CSC-1723. Approved vide Railway Board's letter No. 97/M/IC/137/20 dated 23.6.98
FIGURE 12.1a

1202k Finally, the window glasses, etc., should be cleaned well and all paint marks removed. Any damage to the paint should be touched up before the coach is turned out after POH.

1203 PAINT SCHEDULE `C'

- The portions where paint has flaked or is damaged, should be scraped off of all the loose and damaged paint. The coach should then be washed thoroughly with soap and water and allowed to dry. Then a coat of red oxide zinc chromate primer to IS 2074-92 should be applied by brush at the places where metal surface is visible.
- After the primer dries up completely, it should be puttied and a coat of under-coating to IS 8662-93 should be applied at these portions.
- The complete coach shall thereafter be painted in the manner described in paragraphs 1202g to 1202k above.

1204 INTERIOR PAINTING

- Newly built coaches with laminated plastic panels require painting only on the steel mouldings. The mouldings should be cleaned in every POH and repainted with one coat of synthetic enamel to IS:133-93 of appropriate colour. Sketch 90068 gives the interior colour scheme of coaches.
- If the condition of the paint on the mouldings has deteriorated or become thick, the complete paint should be removed by the paint remover. The moulding should then be washed thoroughly, allowed to dry and repainted with one coat Red-oxide zinc chromate primer to IS:2074 -92 followed by synthetic enamel to IS 133-93 of appropriate colour.
- Aluminum window frames should not be painted, but should be thoroughly cleaned of all stains in position. If they are very dirty, they should be removed and cleaned with oxalic acid. FRP windows should be painted with polyurethane paints to RDSO specification No. M&C/PCN/100/ 96 (Chapter IV).

- Laminated panels should be polished with silicon paste or similar suitable polish to restore luster and also to provide a protective coating.

- Coaches other than those fitted with laminated plastic panels should be cleaned with soap solution or suitable detergent and thereafter cleaned thoroughly with wet cloth so that all head stains, oily marks, etc., are completely removed. Then a single coat or, if required, a double coat of synthetic enamel to IS:133-93 should be applied by brush/spray.

- In case where the old paint has become thick due to repeated painting or where the paint has deteriorated or cracked, the wooden panel should be removed and replaced or reused after completely removing the old paint and repainting it.

1205 PAINTING OF PARTS

- The laminated plastic seats or moulded seats of synthetic materials require no painting. They should only be thoroughly cleaned with soap solution or suitable detergent.

- In case of seats made of wooden battens, the battens which have been replaced should be sand papered smooth and a coat of filler should be applied. Then, entire surface including old painted surface should be sand papered smooth and the seats should be repainted with a coat of enamel finishing of the prescribed colour to IS 133-93.

1206 MARKING OF COACHES TOGETHER WITH EXTERIOR

All lettering on coaches should be according to the sizes prescribed in the marking diagrams for the type of coach to which they pertain (refer RDSO drawing number CSC-970). Anti telescopic coach end walls should be marked with yellow stripes as sketch no. 77356. Each should be marked with following details:

- i) Coach No., Owning Railway, and Mechanical code if any.
- ii) Name of base station for primary maintenance

- iii) No. of compartments and seating capacity as prescribed for the type of coach
 - Specific gravity (at full charge)
 - Corrected to temperature
 - iv) Notices for use of alarm signal, safety precautions etc. if separate notice plates for these are not placed.
 - Cell watered on
 - Cell examined on
- 1207 **TOOLS AND PLANTS FOR PAINTING**
- 1207a **Types of brushes**
- i) **Round brushes nos. 1/0, 2/0, 3/0 & 4/0.**
 - ii) **Flat brushes nos. 25 mm, 38 mm, 50 mm, 63 mm, 75 mm, 100 mm**
 - iii) Lettering brushes:
 - **Flat brushes nos. 1 to 12**
 - **Round brushes nos. 1 to 12**
 - iv) Stencil brushes
 - v) Cleaning brushes for LP sheets with soda ash
- 1207b **Putty knife**
- i) Pallet knife
 - ii) Falling knife
 - iii) Haking knife

Table 12.1

Schedules	Station code	Date
Disinfected		
Alarm chain periodical examination done		
Dash pot oil checked		
Side bearer oil level checked		
Over head tank flushed		
Intermediate lifting		
DA valve examined		

Note: Size of letters should be 10 mm and the block 350x250mm.

- xi) The capacity of the dynamo and light/fan loads to be stenciled on the end panels.
 - xii) The following legends should be stenciled on battery box covers to enable stenciling of necessary particulars against each.
 - Make
 - Type
- 1207c **Scrapers**
- i) Shave tukes
 - ii) Triangular
 - iii) Semi circular
 - iv) Diagonal
- 1207d **Abrasive papers**
- i) Silicon carbide **water proof paper grade nos. 120, 220, 320 & 400.**
- 1207e **Safety apparels**
- i) Goggles
 - ii) Helmet
 - iii) Gum boots
- 1207f Painting spray gun with air compressor plant for painting.

Annexure 12.1**A SCHEDULE (NINE DAYS)**

1st Day	:	Remove old paint
2nd Day	:	One coat of Red Oxide Zinc chromate primer.
3rd Day	:	One coat of brush filler followed by spot putty to fill up holes/dents where required.
4th Day	:	Filler second coat (including spot putty where necessary)
5th Day	:	Rub down with silicon carbide water proof paper Gr. 120 & 220
6th Day	:	One coat of under coat
7th Day	:	Flat with silicon Carbide water proof Paper Gr. 320 . One coat of enamel finishing.
8th Day	:	Flat with silicon Carbide water proof Paper Gr. 400 and apply a second coat of synthetic enamel finishing.
9th Day	:	Lettering with Golden yellow and miscellaneous work (cleaning window glasses etc.)

Annexure 12.2**POH PAINTING PROCEDURE "C" SCHEDULE**

1st Day	:	Cleaning with soap solution or any other cleaning solution and wash thoroughly with water touch up damaged portion with primer recommended under A schedule .
2nd Day	:	Spot putty if necessary and one coat of under coat.
3rd Day	:	Flat with silicon carbide water proof paper Gr. 120 & 220 , and apply one coat of finishing enamel.
4th Day	:	Flat with silicon carbide water proof Gr. 400 and apply a second coat of synthetic enamel finishing.
5th Day	:	Lettering with golden yellow and miscellaneous work.
