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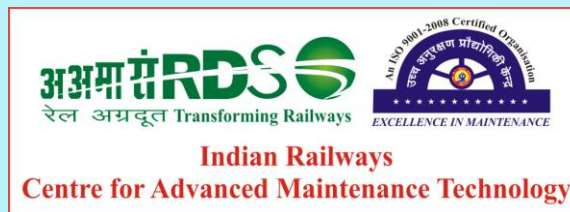
(Govt. of India)
(Ministry of Railways)

Check Lists for Inspection of Coaching Stock [ICF & DEMU]



IRCAMTECH/2017/Mech/Check List _Rolling Stock/1.0

Sept- 2017



MAHARAJPUR, GWALIOR -474005

महाराजपुर, ग्वालियर

(DRAFT)

CHECK LISTS

FOR

OPEN LINE

INSPECTIONS

OF

ROLLING STOCK

*** COACHING MAINTENANCE**

*** COACHING DEPOT INSPECTION**

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INSPECTION OF COACHING DEPOT

Following areas to be inspected by the Supervisors/Officers to ensure general upkeep and smooth functioning of Coaching Depots.

SN	Description	Status
01	<p>PIT EXAMINATION AND CLEANLINESS</p> <p>A. Infrastructure availability and adequacy:</p> <ol style="list-style-type: none"> a. Condition of catwalks b. Water logging in pits c. Arrangements of cleaning of pit lines, adjoining areas and effectiveness thereof d. Pest controlling of the pit lines and adjoining areas e. Availability of garbage disposal system f. Availability of lights in the pit and illumination level at the pit, bogie and catwalk level g. Availability of water storage and watering facilities. h. Availability of high pressure pipe line for cleaning. i. Availability and proper working of coach washing plant. j. Mechanized Coach Cleaning: Availability of Dosing machine for dispensation of chemicals. k. Availability of Surveillance cameras in all Coaching Depots for monitoring the maintenance activity. l. Any other deficiencies observed. <p>Pit Examination and Cleanliness</p> <ol style="list-style-type: none"> a. Condition of catwalks b. Water logging in pits c. Arrangements of cleaning of pit lines, adjoining areas and effectiveness thereof d. Pest controlling of the pit lines and adjoining areas e. Availability of garbage disposal system f. Availability of lights in the pit and illumination level at the pit, bogie and catwalk level g. Availability of water storage and watering facilities. h. Availability of high pressure pipe line for cleaning. i. Availability and proper working of coach washing plant. j. Mechanized Coach Cleaning : Availability of Dosing machine for dispensation of chemicals. k. Availability of Surveillance cameras in all Coaching Depots for monitoring the maintenance activity. l. Any other deficiencies observed. 	
02	<p>B. Train Maintenance</p> <ol style="list-style-type: none"> a. Whether all items prescribed for monthly / quarterly schedule, including intensive cleaning are carried out (check few coaches and comment on the discrepancies observed) b. Check few rakes / coaches and give specific comments on the quality of repairs with respect to: <ol style="list-style-type: none"> 1. Cleaning / amenities 2. Safety / under gear 3. Air brake testing. 	

	<ul style="list-style-type: none"> c. Whether rake cleaning and attention to passenger amenities items is adequate, whether all items as mentioned in the contract are carried out, whether mechanized cleaning of coaches with high pressure jet is ensured. d. Availability / proper functioning of automatic coach washing plant, ETP, water recycling plant. e. Whether the prescribed procedure for rake maintenance is known to the staff and is followed. f. Availability of Standard tool kit and Portable lights for the staff working in Pit lines g. Comments with regard to maintenance of LHB coaches. h. Testing of WSP (LHB coaches) during each trip. i. Functioning of bio-toilets. j. Quality of washing of Linen in departmental / BOOT laundries available in the depot. k. Comments on the proper functioning of service contracts. l. Effectiveness of Cleaning contracts. m. Effectiveness of Pest and Rodent control contracts. n. Examination and certification of LPG pipe line system in pantry cars. o. System of record keeping p. System of monitoring complaints / feedback 	
<p>03</p>	<p>C. Performance Indices</p> <ul style="list-style-type: none"> a. Review the performance indices of the depot, identify areas of weakness & strength. b. Stock detained for long periods c. Whether coach failures analysis, enroute detachment, punctuality loss, etc. is done. d. System of communication, reporting and follow up e. Analysis of unscheduled detachments at the primary end. f. Whether the coach failures are maintained in a data base to enable analysis. g. System of communication of defects in secondary / other end trains to the primary depot. h. Coaches running overdue schedules. i. Rake Links <ul style="list-style-type: none"> 1. Whether the rake links are as per provisions of RPC 4. 2. Coach holding vs Actual requirement. 3. Adequacy of pit examination time for various rakes. 4. Whether adequate berthing slot are available. 5. Whether any train gets continuous night maintenance. 6. Whether any train is being maintained in two or more parts. j. Any other comments 	
<p>04</p>	<p>D. Sick Line :</p> <ul style="list-style-type: none"> a. Adequacies of infrastructural facilities for IOH b. Road access and availability of material handling equipment. c. Availability of air dryers for compressors in pit line and sick line. d. Quality of repairs during IOH (check few coaches and give specific comments of deficiencies observed). e. Whether “must change” items are replaced during IOH f. Quality of over hauled trolleys received from Workshops for IOH of Mail / Express coaches. g. Adequacy of lifting facilities h. Comments on the welding practices, particularly earthing, and training of welders. i. Steps taken for system improvement and innovations. 	

	<ul style="list-style-type: none"> j. Availability of units exchange spares. k. Comments on various certifications, quality audits by 3rd party, etc. l. Display of flex boards / banners containing relevant instructions, etc. m. Availability of standard tools and gauges and their usage. a. Knowledge of staff /supervisors. b. Whether policy letters, TSO's are known to the Supervisor / Staff and system of communication thereof c. House keeping d. Are old files disposed off? Are the files kept properly in a readily retrievable condition? n. Availability of personal protective equipment for staff. o. System of Record keeping, whether data of wheels, DV, CBC, Bearings, etc. in the depot coach holding is available in form of a data base. p. Status of execution of works related to improvement in infrastructure. q. Any other comments 	
05	<p>E. Train Duty on Platforms / Other End Attention</p> <ul style="list-style-type: none"> a. Whether all facilities prescribed vide Board's letter No.95/M(C)/141/1 dated 31.01.2007 for other end attention on platform / stabling lines are available. b. Whether adequate halt is available for other end attention c. Quality of Terminal examination/attention in stabling lines/platforms (Check few trains and give specific comments). d. Whether the rakes are properly locked and stabled at secure locations. e. Adequacy of watering facilities, whether booster pump is available and is automatically operated. f. System of rolling-in examination of terminating and passing through trains (availability of adequate lights and huts for rolling-in examination). g. Availability of adequate number of non-contact type axle box temperature gauge with storage feature h. Availability of standard tools and gauges, portable lights, etc. i. Availability of proper means of communication (CUG /Walki Talkie sets) j. Availability of adequate spares, and display of the list k. Comments on the trouble-shooting of passing through trains and maintaining records of the same. l. Any other comments 	
06	<p>F. Materials / Store</p> <ul style="list-style-type: none"> a. Important item out of stock / in short supply. b. Whether the AAC's of different items is adequate. c. Proper storage of rubber items d. System of raising warranty complaints. e. Comments regarding housekeeping and disposal of scrap. f. Any other comments 	
07	<p>G. IT Based Systems</p> <ul style="list-style-type: none"> a. Whether proper systems are available for the maintenance of IT based systems that are progressively being provided in coaches such as GPS based passenger announcement and passenger information system; Infotainment system; Fire detection and fire suppression systems; Automated door closing arrangement; EP 	

	<p>brake system; Brake system of LHB coaches; LED destination boards, CCTV based surveillance system in the coaches; Micro processor based controls; On-board condition monitoring systems; RFID tags, etc.</p> <p>b. Whether staff are conversant in these systems.</p> <p>c. Whether AMCs are in place and operational.</p> <p>d. Whether at least 1 staff / supervisor deputed full time on CMM and IT based systems.</p> <p>e. Whether the different functionalities of CMM are being used, any issues thereof.</p> <p>f. Internet access and speed thereof.</p> <p>g. Adequate availability of computers, printers, UPS etc.</p> <p>h. Any other comments</p>	
08	<p>H. Establishment</p> <p>a. Whether adequate number of staff deputed for various activities</p> <p>b. Comments on vacancies and action taken thereof.</p> <p>c. Staff grievances</p> <p>d. Staff amenities</p> <p>e. Level of staff motivation and steps taken to increase the same.</p> <p>f. Any other comments</p>	
09	<p>I. Training Needs / Staff Awareness</p> <p>a. Method of imparting training and review of its effectiveness.</p> <p>b. Whether stimulation soft ware and audio visual training aids are utilized.</p> <p>c. Level of knowledge and motivation of the instructors.</p> <p>d. Training of staff / visits to other depots.</p> <p>e. Training calendar of BTC.</p> <p>f. Availability of Working Models.</p> <p>g. Availability of all coach and wagon components and cut sections for training purpose.</p> <p>h. Availability of all Gauges.</p> <p>i. Availability of all latest manuals, Hand Books, Pamphlets and instructions.</p> <p>j. Complete profile of staff and their details of training, whether data base of staff trained and overdue is available.</p> <p>k. Categorization of welders as per their skill set.</p> <p>l. Record of training conducted/courses organized.</p> <p>m. Seminars/Sessions organized in collaboration with respective filed experts.</p> <p>n. Any other comments</p>	

Date : **Name of the Officer** :

Station : **Designation** :

Check Sheet for Audit of Infrastructural Facilities required in Coaching Depots

(ICF Manual Correction Slip No.1 CAMTECH/2002/M/C/CMM/1.0/CS-01, July-2006 Annexure-IV)

S N	Descriptions	Remarks
1.0	<p>Classification of Coaching Depots</p> <p>Minor depot - Below 100 coaches Medium depot - 100 to 250 coaches Major depot - Above 250 coaches</p>	
2.0	<p>Covered accommodation over a sick line</p> <p>i. Every Depot should have heavy repair and sch. bay (sick line) with covered accommodation capable of min 04% of base stock.</p> <p>ii. For easy placement and removal, the length of one line under covered accommodation should not be more than 4 coach length.</p> <p>iii. The covered accommodation should normally consist of 15 meter wide bay covering 2 tracks under it.</p> <p>iv. Minimum of 50% of the covered lines should have examination pits.</p> <p>v. The examination pit should have efficient and effective drainage.</p> <p>vi. 2 Ton capacity hoists to cover entire and wheel park tracks.</p> <p>vii. For lifting bogies and movement of heavy material 20 T EOT Crane be provided.</p> <p>viii. Entire covered shed should have proper industrial lighting arrangement.</p>	
3.0	<p>Flooring</p> <p>i. The No. of washing lines should be adequate to provide minimum 6 hrs. maintenance slot for every rake.</p> <p>ii. The washing line design and facilities should be as standardised vide CAMTECH drawing No. RDSO/M/00006/R2/1 & 2 ,October 2011.</p> <p>iii. Pit examination of under gear, Air pressure supply water pipe line, elect outlets for hand tools, coach battery charging, pre-cooling of AC coaches, drainage for pit & surrounding, paved pathway for material trolleys, Good illumination level are required for watering line.</p> <p>iv. Facilities for placement and removal of rakes from both ends of the washing line is desirable.</p> <p>v. Well designed and constructed drainage system, collection pits and drain pumps where water logging occurs.</p>	

4.0	<p>Washing line</p> <ul style="list-style-type: none"> i. The No. of washing lines should be adequate to provide minimum 6 hrs. maintenance slot for every rake. ii. The washing line design and facilities should be as standardised vide CAMTECH drawing No. RDSO/M/00006/R2/1 & 2 ,October 2011. iii. Pit examination of under gear, Air pressure supply water pipe line, elect outlets for hand tools, coach battery charging, pre-cooling of AC coaches, drainage for pit & surrounding, paved pathway for material trolleys, Good illumination level are required for watering line. iv. Facilities for placement and removal of rakes from both ends of the washing line is desirable. v. Well designed and constructed drainage system, collection pits and drain pumps where water logging occurs. 	
5.0	<p>Sick line yard.</p> <p>The No. and length of yard lines should be sufficient to hold coaches equal to 3 times the number for which covered accommodation is required to be provided.</p>	
6.0	<p>Machine and plant.</p> <p>M&P's for the 3 classes of depots should be followed as given in this correction slip.</p>	
7.0 7.1	<p>Work and office accommodation</p> <p>Double storied building is preferable</p> <p>a) Ground floor:</p> <ul style="list-style-type: none"> ○ Store room with adjoining fenced yard. ○ Tool room, ○ Spare/Vacant room ○ carpentry room ○ fitting room, ○ painting room, ○ trimming room, ○ machine room, ○ welding room, ○ lister room, ○ compressor room, ○ Brake cylinder overhauling section ○ linen section, ○ TL and AC repair Room ○ OBHS staff room ○ Staff locker room with working facilities ○ Water cooler ○ Time office. 	

	<p>b) First floor</p> <ul style="list-style-type: none"> ○ Sr CDO/CDO room with attached toilet ○ Supervisor's room ○ SSE Sick line room ○ Depot office ○ Computer room, ○ Tender/Contract cell ○ Model room ○ Training cum conference room ○ Record room ○ Stationary store room, ○ Canteen if required ○ CMMS Room. ○ Two nos. toilets 	
7.2	For More than 500 coaches, protection by a boundary wall.	
8.0	<p>Communication facilities.</p> <ul style="list-style-type: none"> i. Railway Telephone nos. & P&T phone ii. Internet Facilities iii. Walkie talkie sets iv. Mobile phone Sim provision if approved by division 	
9.0	<p>Coach Depot Information system.</p> <ul style="list-style-type: none"> i. Sufficient computer with printers & UPS ii. LAN networking iii. Software packages etc. 	
9.1	<p>5.0 Rolling in examination lights at platform receiving end.</p> <p><i>(CAMTECH Report No. CAMTECH/ 2009/M/C/Terminal attention/1.0 March-2009.)</i></p> <p>Lux level required : 300 to 500 lux, Min. 30 Watt LED light fitting required.</p>	
9.2	<p>Minimum Infrastructure Required at platforms and Yards for other end examination.</p> <p><i>(Railway Board's Letter No. 95/M©/141/1 dated 31.01.2007.)</i></p> <p>Minimum Infrastructure required at platform from where trains are returned without secondary maintenance -</p> <ul style="list-style-type: none"> i. One storage room for essential safety & passenger amenity items ii. Road transportation from main depot to platform iii. Adequate high pressure jet cleaning machines or high pressure water pipe line running along the platform/yard line iv. Washable apron on the platform lines with covered drains for movement of staff. v. Walkie talkies/Mobile phones vi. Standard watering hydrants as per CAMTECH report vii. Rolling in examination light viii. 110 V inspection lights along the side of track for night examination of under gear. 	

9.3	<p>Detailed facilities required at platforms <i>(CAMTECH Report No. CAMTECH/2009 /M/C/Terminal attention/1.0 March-2009.)</i></p> <p>Minimum Infrastructure required at platform</p> <ul style="list-style-type: none"> i. Washable apron with proper sump & pumping arrangement at platform as per camtech drg. M/S-1. ii. Watering facilities at platform iii. To provide proper drain & pathway, both have been integrated. Indicated in drg. No. CAMTECH/M/S-1. iv. One room size 5mx4m at platform for storage of material. v. Lighting arrangement at opposite side of platform for under gear inspection if required. Annexure-"A' vi. Mobile water jet machine – 2 per platform vii. Dry & wet vacuum cleaner – 2 per platform viii. Floor scrubber – 2 per platform ix. Storage almirah, pigeon racks & other furniture x. Mobile phones xi. Tool bag with tools as per Rly Bds Letter No.2014/M(C)/141/2 dated 28.04.2017. xii. One vehicle for movement of material and staff xiii. Swivel moper and other cleaning tools as per requirement. 	
9.4	<p>Minimum Infrastructure required at Stabling Line –</p> <ul style="list-style-type: none"> i. Washable apron with proper sump & pumping arrangement at stabling line as per Camtech drg. IRCAMTECH/M/S-2. ii. GI water pipe line at stabling line should be of 4" dia at ground level with hydrants at a distance of 6 meters- CAMTECH drg. No. IRCAMTECH/M/S-2. iii. 01 meter wide concrete pathway as per specs. on both side of track iv. To provide proper drain & pathway, both have been integrated. Indicated in drg. No. CAMTECH/M/S-1. v. One room size 5mx4m near stabling line for storage of material. vi. Detailed electrical facilities for night maintenance as per Annexure-"A' vii. Mobile water jet machine – 2 per stabling line viii. Dry & wet vacuum cleaner – 2 per stabling line ix. Floor scrubber – 2 per stabling line x. Walkie-Talkie/Mobile phones for communication xi. Tool bag with tools as per Rly Bd Letter No..... xii. One vehicle for movement of material and staff xiii. Swivel moper and other cleaning tools as per requirement. 	

10.0	<p>Carriage Watering System <i>[CAMTECH Report No. CAMTECH/2008/M/C/Watering/1.0 October-2008]</i></p> <ul style="list-style-type: none"> i. Dedicated water tank – Store atleast 1.5 days of water requirement. ii. Minimum distance between centre to centre of adjacent tracks where new pipe/hydrants to be installed should be 4.9 meter. iii. Main header should be GI pipe line of 6” dia at a height of 2.3 meter from rail level with supporting structure at a distance of 6 meter each. iv. Water hydrant at a distance of 2 meters each. v. The length of TPU pipe shall be 1.9 meter. vi. 3 booster pumps of 40 HP each for simultaneous working on 3 lines vii. Booster pumps of 40 HP with flow rate of 200 M3/per hour each viii. Automatic operation of all pumps ix. Remote operation by providing control panel at the end of platform x. Valves should be ball cock type with SS body xi. Path way of 1 meter width for ease of carriage watering xii. Time to be taken for filling one train of 24 coach – 3.91 minutes Time to be taken for filling two trains of 24 coach – 5.23 minutes 	
11.0	<p>Enhancement of IOH periodicity to 9 Months <i>[CAMTECH Report No. CAMTECH/2008/Coach-POH/1.0 January-2008]</i></p> <p>Recommendations:</p> <ul style="list-style-type: none"> 1.4 Coach will undergo 2 quarterly sch. Before IOH & 2 quarterly sch. between IOH & POH. 1.4 The work should be carried out during IOH is given in Appendix “C” & “D”. 1.5 CMIs/SMIs & Technical circulars issued by RDSO should be followed. 1.7 The layout of bogie exchange facilities for IOH has been shown in Annexure-E-1 & E-2. 1.7 The list of additional M&Ps for coaching depot is given in Annexure-”F”. 1.8 Sufficient no. of buffer plungers be kept for unit exchange with workshops. 1.13 Overhauling of cast iron body DV is every POH with change of entire kit. RDSO to explore possibility as alternate POH. Aluminium body DV be overhauled in every 3rd POH 1.14 Railway may enter in to contracts for zero deficiency 	

	<p>passenger amenity on the pattern of SC division</p> <p>1.15 Provision of V-Belts should be continued with fool proof securing arrangements.</p> <p>1.17 Brush less carriage fans should be ensured</p>	
12.0	<p>Must change items during IOH [Mech.] [CAMTECH Report No. CAMTECH/2008 /Coach-POH/1.0 January-2008]</p> <p><u>Appendix 'C':</u></p> <p>6.1 Check & replace damaged/missing split pins//cotters/rivets.</p> <p>6.3 Check screw coupling components and replace if required.</p> <p>7.2 Check buffer plunger face plate, if worn out by more than 5 mm, it should be replaced.</p> <p>13.2 Inspect passenger amenity fittings, replace if damaged/missing.</p> <p>14.6 Check & replace damaged/missing mirrors/shelves/soap dishes</p>	
13.0	<p>Must change items during IOH [Elect.]</p> <p><u>Appendix 'D':</u></p> <p>1.5 Provide new nylon bushes and secure nuts and bolts with new split pins.</p> <p>1.7 Check lock nut, if damaged, replace it.</p> <p>1.9 Replace tension rod sleeve. Replace spring if belt loose</p> <p>3.1 Replace all existing V-belts with new V-Belts.</p> <p>4.2 RRU: open cover and change sealing sponge rubber gasket.</p> <p>6.1.4 Check cell container, if needed replace defective cell.</p> <p>6.1.8 Check all vent plugs & float guides, replace defective ones.</p>	
14.0	<p>House Keeping of Coaches and Coaching Depots. [CAMTECH Report No. IRCAMTECH/M/C/House keeping of coaches September-2010]</p> <p>Guidelines for -</p> <ol style="list-style-type: none"> 1. External cleaning <ol style="list-style-type: none"> a. External cleaning process by Automatic Coach Washing Plant b. Internal cleaning /washing procedure, other than ACWP 2. Internal cleaning <ol style="list-style-type: none"> a. Internal cleaning of AC & Non-AC reserved coaches b. Internal cleaning of GS, Generator car / SLR, Parcel/luggage van c. Cleaning of toilet d. Cleaning of door ways e. Cleaning of pantry cars f. General cleaning 3. Cleaning Tools/Equipments (Manual) 	

	<ul style="list-style-type: none"> 4. Cleaning Tools/Equipments (Mechanised) 5. On Board House Keeping Services [OBHS] 6. Clean Train Station [CTS] 7. Cleaning Materials 8. Coaching Depot Cleaning 	
15.0	<p>Maintenance of Bio-Toilet fitted Coaches <i>[CAMTECH Doc. No. IRCAMTECH/M/GWL/Compendium on Bio-Toilet/1.0 December-2015]</i></p> <ul style="list-style-type: none"> 1. M&Ps required for dismounting/mounting & evacuation of Bio-Toilet tanks (Para 25.0 A,B,C,D) 2. Transportation facilities for Inoculum 3. Infrastructure for storing Bio-Toilet tanks 4. Infrastructure for Unit Exchange in Sick lines for Bio-Toilets 5. Bio-Toilet Lab (Para 26.0 A) 	
16.0	<p>Other proposed Infrastructure for Coaching Depots</p> <ul style="list-style-type: none"> 1. Provision of Automatic Coach Washing Plant 2. Provision of Water Recycling Plant 3. Provision of all weather covered shed for pit line 4. Infrastructural facilities proposed for primary maintenance depots (EOG LHB Coaches) 5. Provision of Personal Protective Equipments[PPEs] 6. Provision of Mobile lifting platform 	

Clean Train Station (CTS) Check List

SN	ITEM(S) TO BE CHECKED DURING CTS OPERATION AUDIT	Remarks	
		YES	NO
1.	Has the firm installed & commissioned the site within the delivery period ?		
2.	If not, Did the firm take the proper delivery extension to complete the commissioning work.		
3.	Is the firm carrying out the work with their own staff OR sub-contracted ?		
4.	If Sub-contracted , Has the firm informed Railways about sub-contracting ?		
5.	Is the firm OR its sub-contractor engaged qualified supervisors ?		
6.	Has the firm or its sub-contractor provided cleaning equipments as per specification ?		
7.	Has the firm or its sub-contractor provided cleaning equipments as per required nos with standby units in place ?		
8.	Is the firm or its sub-contractor using all the cleaning agents as per specifications?		
9.	Has the firm or its sub-contractor labeled all cleaning agent bottles with dilution ratio ?		
10.	Has the firm or its sub-contractor installed new DG sets as per specs ?		
11.	Has the firm or its sub-contractor installed electrical cabling and socket arrangements as per specs ?		
12.	Has the firm or sub-contractor laid electrical cabling with proper earthing of each line ?		
13.	Is the firm or its sub-contractor making payments to its staff as per labour laws ?		
14.	Is the payment being made in presence of Railway nominated officers ?		
15.	Has the firm obtained a valid labour license to execute the work ?		
16.	Has the firm or sub-contractor employed staff as per the required No. ?		
17.	Has the firm or sub-contractor constructed a machine room at site as per specs ?		
18.	Has the firm or its sub-contractor provided and maintained inspection registers and records at site?		
19.	Has the firm or its sub-contractor taking signatures of its staff on payments made ?		
20.	Has the firm or its sub-contractor provided any first aid box at site for minor injuries of its staff ?		
21.	Has the firm or its sub-contractor covered its staff under accidental insurance as per workers compensation Act ?		
22.	Is the firm or its sub-contractor doing medical check up of its staff periodically as per specs. ?		
23.	Has the firm or its sub-contractor engaged all its staff above 18 years of age ?		
24.	Has the firm or its sub-contractor provided uniform to all its staff as per specs ?		
25.	Has the firm or its sub-contractor provided 2 or 3 sets (as per Specs) of uniform to all its staff ?		
26.	Has the firm or its sub-contractor provided 2 sets of uniform to Railway staff ?		
27.	Has the firm or its sub-contractor provided Gum boot and gloves to all its staff as per specs ?		
28.	Has the firm or its sub-contractor provided I-card to all its staff as per specs ?		
29.	Has the firm or its sub-contractor constructed a machine room at site as per specs ?		
30.	Is the firm or its sub-contractor using tap coupling for drawing water from coach toilets ?		
31.	Is the firm or its sub-contractor using Bio-degradable poly bags for waste collection ?		
32.	Has the firm or its sub-contractor installed required No. of glow sign boards at station platforms?		

SN	ITEM(S) TO BE CHECKED DURING CTS OPERATION AUDIT	Remarks	
		YES	NO
33.	Has the firm or its sub-contractor installed glow sign board s as per specs?		
34.	Has the Railway given electrical connection to these glow sign boards as per specs ?		
35.	Has the firm or its sub-contractor provided musical jingles to Railway for PA system?		
36.	Is the Railway playing musical jingles on PA system as per specs?		
37.	Is the firm or its sub-contractor using posters or stickers pasted on toilet doors after cleaning?		
38.	Is the firm or its sub-contractor carrying out passenger awareness program through Scouts periodically?		
39.	Is the firm or its sub-contractor taking passenger feed back 1000 to 1500 every month?		
40.	Is the passenger feed back forms used by firm or its sub-contractor serially numbered?		
41.	Is the firm or its sub-contractor submitting monthly reports to Railway on quantity and quality as per specs?		
42.	Is the firm or its sub-contractor following wages register as per labour law?		
43.	Is the firm or its sub-contractor following attendance register as per labour law ?		
44.	Is the firm or its sub-contractor ESI register as per labour law?		
45.	Is the firm or its sub-contractor depositing PF for each staff as per labour law?		
46.	Is the firm or its sub-contractor obtained ESI cards for each of its staff?		
47.	Has the firm or its sub-contractor filed returns for PF account of its staff?		
48.	Is the contractor following deployment of specified staff for cleaning activity		
49.	Is "X" marking being recorded properly during checking		
50.	Is "O" marking being recorded properly during checking		
51.	Is the contractor using recommended and requisite amount of cleaning consumables		
52.	Is the contractor using specified deodorant/mosquito repellent		
53.	Is the contractor using all equipments specified in the contract		
54.	Is the contractor maintaining the work record properly or not		
55.	Is the contractor doing analysis of passenger feed back forms		
56.	Whether Railway supervisors are checking the work as per scope of work or not		
57.	No. of Railway staff available during CTS work		
58.	Whether Railway staff was in uniform or not		
59.			
60.			

Any other remarks:

Date :

Name of the Officer:

Station :

Designation :

CHECK LIST FOR LINEN MANAGEMENT

S N	ITEMS TO BE CHECKED DURING INSPECTION OF LINEN ROOM	STATUS
1.	Has the firm installed Mechanized cleaning machines like - Industrial washer (Front loading), Industrial washer. Industrial washer cum dry cleaner, Hydro extractor, Drying tumbler, High pressure boiler, Pneumatic pressing plant, water storage tank, Borewell fitted with motors, Transportation, Calendaring machine., water softener, & cloth drying arrangement.	
2.	Is the firm using standard cleaning agent like Bajaj Chemicals Pvt. Ltd. and Johnson Chemicals Pvt. Ltd. Or other reputed agency and mixing it in proportion as recommended.	
3.	Is the firm maintaining hygienic condition in the factory.	
4.	Is the firm premises being inspected once in a month by ADME.	
5.	Conditions of linens items i.e. bed sheets, hand towels, pillow covers, blankets, shawls, bath towels & cleaning upto the mark.	
6.	Whether linen items being cleaned separately or being mixed with other depot linens/hospital linens.	
7.	Whether linen items being washed properly or not.	
8.	Whether linen items being Ironed properly or not.	
9.	Whether linen items being folded neatly or not.	
10	Is the firm using Eco friendly carry bags for packing of linens.	
11	Whether linen items are being transported in the canvas bags from trains to factory and factory to trains.	
12	Whether standard quality carry bags are being used or not.	
13	Whether stains/Bad spots are being removed completely during washing.	
14	Whether firm is habitual to supply torn linen or maintaining the linen in good fetal.	
15	Whether contractor is segregating torn linen while collecting from depot.	
16	Whether contractor is providing tag indicating date of dry cleaning on the blankets/ Shawls and perfume is being used on these linen items.	
17	How the contractor staff is behaving with railway staff.	
18	Whether contractor has provided identity cards to their staff for easy identification.	
19	Whether contractor is providing only our linen or feeding other railway linen also	
20	Whether handing over and taking over system of linen is exist in the depot or not.	
21	Whether record of newly allotted linen to contractor is being maintained by SSE (Linen) or not.	
22	Whether age wise record of linen is being maintained by SSE (Linen) for timely replacement/recoupment of linen items.	

S N	ITEMS TO BE CHECKED DURING INSPECTION OF LINEN ROOM	STATUS
23	Whether weekly test checks are being conducted by ADME (Cog).	
24	Whether compliance of linen inspection noted in Register being ensured by SSE (Linen).	
25	How many complaints of linen have been recorded during the month and action taken on it.	
26	Delay in supply of Linen is properly recorded or not.	
27	Receipt of linen is tallying with delivery made.	
28	Storage of linen in the room is proper or not.	
29	Record of random check by SSE (Linen) is available or not.	
30	Torn/ Condemn linen is stacked separately or not.	
31	Timely disposal of condemn linen is being done promptly or not.	

Any other remarks:

Date :

Name of the Officer:

Station :

Designation :

INSPECTION OF IOH

Coach No:	Class:	Railway:	IOH'D	:
Station/Date of POH:			Base	:
Date of release from sick line:			Train No.	:
Build date			R/Date	:
Last IOH -	Base:		Date	:
Brake system-:BMBC/Conv:			Sick Date	:
		Work started date -----	Time-----	
		Release date-----	Time-----	
		Removal date-----	Time-----	

No.	I t e m	Details of examination and repairs	Remarks of Supervisor
1.	Washing and cleaning	a) Internal b) External c) Lav. and floor	
2.	Disinfestations of coach		
3.	Check working of	a) Main doors b) All sliding/rolling doors c) Window shutters d) All Safety latches, catches.	
4.	Ensure availability of 100% PA items	as per check list of each coach type. Ensure proper fitment & painting of C/chute	
5.	Check & repair vestibule thoroughly for	ease of operation and locking etc	
6.	a) Check and repair bunks, berths, upholstery,	cushion & curtains thoroughly. b) Lubrication of SLR Sliding doors	
7.	WATER TESTING		
7.1	Overhead water tanks	i) Flush water tanks ii) Fill water. Check leakages in water tank and plumbing pipe fittings (water pipe connections, flushing valves, cocks, shower hoses should not be leaking/choked).	
7.2	Under slung water tanks	i) Drain the under slung W/Tanks ii) Fill water and conduct visual check to detect cracks, damage, dents etc. Ensure pipe line is intact iii) Ensure WRA cap is intact and chain/wire rope is available (if comp. is available). Check working of WRA. iv) Check for leakage in pipe line v) Check for proper cut in cut out of WRA vi) Check the pressure reading in the gauge inside the coach and record cut in-cut out pressures. vii) Proper fitment & availability of safety strap/wire rope.	
8.	Clean and check pillars through turn	under opening for corrosion, check through floor & structure for corrosion.	

9. **Paint**

- a) Touch-up lavatory from in side.
- b) Touch up of paint surface from inside & outside

10. **BUFFERS**

- 10.1 Visual examination check for cracks, proper tightening of fasteners, missing of fasteners etc
- 10.2 Buffer alignment with head stock.
- 10.3 Buffer height (Maximum 1105, minimum 1090)
 - a) Before lifting
 - b) After lifting
- 10.4 Buffer projection (maximum 635, minimum 584 depot size 625)
- 10.5 Check buffer face profile with gauge, check buffer face wear and condition of spindle plug, change buffer plunger wherever required.
- 10.6 Lubrication Plunger Face.
- 10.7 Buffer stroke - 127mm
- 10.8 Buffer bolts
- 10.9 Buffer plunger should not rotate
- 10.10 Buffer casting

11. **DRAW GEAR & SCREW COUPLING**

- 11.1 Visual examination-check for deficient or crack or broken draw bar, draw bar hook draft link or any other part of draw gear arrangement and S/coupling.
- 11.2 Projection of draw bar shoulder hook (not more than **90 mm**)
- 11.3 Wear of draw hook at any section (not more than 10mm)
- 11.4 Check for worn out/damaged/ perished rubber pads and replace, if necessary.
- 11.5 Proper bending of draft cotter
- 11.5 Check for correct size of draw bar nut and cotter
- 11.6 Check for d/bar wearing plate with lug broken/deficient.
- 11.7 Check for availability and proper fastening of suspension hook with adequate depth.
- 11.9 Check wear on screw coupling shackle pin, trunion nut pins shackle/link holes and draw hook holes (maximum wear allowed 3 mm)
- 11.10 Lubricate screw coupling

12. **SIDE BEARER ARRANGEMENT**

- 12.1 Check for broken, bent, damaged, leaking side bearer oil bath and its parts.
- 12.2 Check wear and physical condition of wearing plate (replace if thickness is less than 8.5 mm)
- 12.3 Check wear and physical condition of wearing piece (replace if wear is more than 3 mm i.e. wearing piece height less than **43.5 mm**) use go/no go gauge.
- 12.4 Securing of oil filling plug with chain
- 12.5 Ensure requisite oil level in bath

13. CENTRE PIVOT

- 13.1 Check for broken pin, cotter and/or deficiency of nut/bolt or any other parts
- 13.2 Availability of locking plate
- 13.3 Tack welding of nut at the bottom
- 13.4 Condition of silent block

14.0 AXLE BOX GUIDE ARRANGEMENT(If bogies overhauled in cog. depot)

- 14.1 Clean bogie frame with wire brush and scrapper. Visual examination for cracks/damaged/broken/bent parts.
- 14.2 Check for condition of guide bushes for bent damaged guides. Proper fitment of guide bushes
- 14.3 Check condition of rubber items, dust shield & its spring, circlip etc. Replace parts wherever necessary.
- 14.4 Ensure proper securing of guide cap.
- 14.4 Check condition of lower spring seat, protection tube, upper & lower rubber packings and replaced wherever necessary

15. WHEEL & AXLE

- 15.1 Wheel gauge(1600+2,-1mm)
- 15.2 Wheel diameter – **915 – 825 mm**
- 15.3 **Wheel tyre profile should be checked with defect gauge.**
- 15.4 Check for grooved wheels
- 15.5 Check for loose/cracked/broken tyres/Disc.
- 15.6 Whether wheels shifted or loose on axle.
- 15.7 Visual examination of axle check for any notch formation on axle.
- 15.8 Record roller bearing tag No.& dt., **month & overhauling workshop**
- 15.9 Check for any broken/deficient parts of axle box, split pin with seal on axle box front cover. Check for loose bolts and w/out threads of nuts/bolts.
- 15.10 Check for any oozing out of grease out of axle box.
- 15.11 Check canting of axle box.

16. BRAKE GEAR

- Bushes & Pins
- 16.1. Visual examination-Check for cracks/breakage/worn out items Replace bush / pin if radial clearance exceeds 1.0 mm
 - i) Collar bushes
 - ii) Block hanger bushes & pins
 - iii) Bk. shoe head bushes and pins
 - iv) F/lever bushes and pins
 - v) Lever hanger bushes & pins
 - vi) Pull rod bushes and pins.
- 16.2 Check the fastening arrangement with proper cotters/split pin and split of 45 degree. The cotters and split pins should be tight and not slack. Non standard fittings not to be used.
- 16.3. **Anchor link**
 - i) Check for broken parts, deficiency of pin or free to work out.
 - i) Availability of standard size of studs with locking plate, loose studs not to be allowed.
 - iii) Condition of silent block

- 16.4 **Equalizing stay assembly**
- i) Check for broken/deficient parts.
 - ii) Proper fitment of bushes (radial clearance not exceeding 1.0 mm)
- 16.5 **Brake beam Assembly**
- i) Check for rusted broken/ deficient parts
 - ii) Proper securing with pins, washers, cotters and split pins of standard size.
 - iii) Visual examination of block hanger for crack/oval/ elongated holes.
 - iii) Check for journal for availability and wearing.
- 16.6 **Brake shoe head**
- i) Check for w/out and crack heads & replace if necessary.
 - ii) Check for proper fitment and alignment of brake shoe bolt assembly, slack adjuster and split pin.
- 16.7 **Safety Brackets**
- i) Check all safety wire ropes and brackets.
- 16.8 **BSS Hanger & Blocks (If bogies overhauled in Chg. Depot)**
- i) Remove Hangers and check for cracks.
 - ii) Inner length of hangers (max. allowed is 387 mm)
 - iii) Check wear of each hanger block (Max. wear allowed 1.5mm condemning size = 9.0 mm)
 - iv) Check wear of BSS pin (condemning dia 36 mm)
- 16.9 **Axle Box springs.**
- i) Visual Examination, check for crack, dents, breakage etc. **Free height (in mm)**
 - ii) Axle Box spring height under tare **condition – 267 – 284mm (same colour in same Bogie)**
 - iii) Tag No. & date
- 16.10 **Bolster springs**
- i) Visual examination – Check for cracks, dents, breakage etc.
 - ii) Colour code (if available)
 - iii) Bolster spring Tag No.& Dt.
- 16.11 **Shock absorber**
- i) Check for breakage/damaged/ bent parts, replace absorber if necessary.
 - ii) Proper fastening on bolster with standard fasteners
17. **Crown clearance (A Dimension)** CNY/GS/SLR = 50+0/-3 mm, **CNY= 31±3 mm, GS= 47±3 mm**
ACCN/ACCW= 34+0/-3 mm
18. **Bolster clearance(B Dimension)** 40+5-5 MM
- 18.1 Trolley corner height 690±4 mm
19. **AIR BRAKE SYSTEM**
- 19.1 Visual examination of complete system for cracked/broken/ deficient parts, attend wherever necessary.
- i) Brake pipe and feed pipes and their hoses.
 - ii) Angle cocks
 - iii) Isolating cocks
 - iv) PEASD
 - v) PEAV
 - vi) Dirt Collector
 - vii) Drain cocks
 - viii) Auxiliary reservoir
 - ix) Brake cylinder.
 - x) Distributor valve
 - xi) Air Hoses tested under **7.0Kg/cm2 pressure** (BP& FP)
 - xii) Guard emergency valve

- xiii) Flexible hose of BMBC
- xiv) Train pipes BP&FP
- 19.2 i) DV make & date, Sr.No.
- ii) SAB make & date
- 19.2 Single car testing as per para 4.4 of Maintenance Manual (Page 133).
Format of testing to be enclosed duly signed by Engineer.
- 19.3. **Under frame**
 - (i) Head stock
 - (ii) Trough Floor
 - (iii) Sole bar
 - (iv) Cross members
 - (v) Main Transom
 - (vi) Inner head stock
 - (vii) Train pipe and joints
 - (viii) Dummy carrier and dummy plug

20.0 AMENITY FITTINGS

- 20.1 Mirrors
- 20.2 Mirror shelves
- 20.3 Commodes
- 20.4 Squatting pans
- 20.5 Commode seat & cover
- 20.6 Commode chute
- 20.7 Push cocks
- 20.8 Flushing valves
- 20.9 Turn over latches
- 20.10 Tower bolt
- 20.11 Shower Rose
- 20.12 Coat hook
- 20.13 Glass shutters
- 20.14 Lower shutter
- 20.15 Safety latches
- 20.16 Window bars
- 20.17 Main door handles and latches
- 20.18 Berths/back rest/seats
- 20.19 Cushions
- 20.20 Rexene
- 20.21 Vestibule – UIC/conventional
- 20.22 Vestibule fall plates
- 20.23 Vestibule door locking /latches
- 20.24 Emergency exit window
- 20.25 Centre Buffer coupler

FORMAT FOR FINAL CHECKING OF IOHed COACH

[MUST CHECK ITEMS]

S.N	Item	Observations	Action Taken/Remarks
01	Condition of commode chute		
02	Brake Beam Hanger pin		
03	Brake Beam Hanger pin cotter		
04	Safety brackets		
05	Safety wire ropes/Chains		
06	Wheel profile		
07	Thermal defects of wheel		
08	Condition of equalizing stay rod		
09	Condition of anchor link		
10	Centre pivot locking plate, its nut and bolt		
11	Condition of SAB safety brackets		
12	Check of leverage ratio of horizontal (Mod/Non-modified)		
13	Buffer height		
14	Auxiliary Reservoir safety brackets		
15	Check condition of safety wire rope of Bio-Toilet tanks		
16	Check J-Brackets & C-Brackets		

*** All the above items are checked carefully and ensured in all respect before releasing the coach**

Signature of Supervisor

Signature of SSE/SE/JE

Depot:

Check List for Vulnerable welding locations in the trolleys and under frame of coaching stock

SN	Bogie	STATUS
1	Dashpot spring seat lower, 16 per bogie.	
2	Dashpot spring seat upper, 16 per bogie.	
3	BSS hanger bracket, 4 per bogie.	
4	Equalizing stay bracket in the bogie bolster, 2 per bogie.	
5	Equalizing stay bracket in the lower spring plank, 2 per bogie.	
6	Brake beam hanger brackets, 8 per bogie.	
7	Mounting plate for BMBC, 4 per bogie.	
8	Z-Lever blocks over bogie frame, longitudinal 8 per bogie.	
9	Welding joints at bogie head stock to bogie sole bar.	
10	Bracket for Axle box safety strap, 8 per bogie.	
11	Bolster safety loop bracket, 4 per bogie.	
12	Bracket for Anchor link, 2 per bogie.	
SN	Under frame	STATUS
1	Suspension brackets for AR, Battery Box, Alternator.	
2	Suspension bracket for DV.	
3	Draw bar yoke assembly.	
4	Welding of stiffeners between outer head stock and auxiliary head stock.	
5	Brackets for BP & FP pipe line.	
6	Brackets for horizontal levers.	
7	SAB Pull rod cradles.	
8	Suspension bracket for spare screw coupling	
9	Defects in wheel and axle.	

Signature of IOH Depot Incharge

Check List for Wheel defect analysis of coaching stock

SN	Bogie	Action Taken
1	Type of brake blocks used on said wheel i.e. whether modified or non modified,.	
2	Whether brake block is high friction or low friction	
3	Manufacturer's Name with lot/year	
4	Whether same kind (same manufacture) Bk. block were used on all wheels or not.	
5	Bk. gear problem: a. Working of Bk. cylinder and max pressure b. Working of SAB c. Working of other Bk. Rigging.	
6	Wheel disc lot/Axle manufacture in years	
7	Releasing time with rate of leakage (DV performance) (Bk. cyl. draining time and leakage rate of pressure in system)	
8	Whether repeated failure/problem of said location of wheel	
9	Any other defects	
10		
11		
12		

Signature of Sick Line Incharge

CHECK LIST FOR PANTRY CARS

SN	Description	Recommended Quantity	Observations
A	Gas Room Equipments		
1	Angular manifold	2 nos.	
2	Manifold valve (Bottom)	1 no.	
3	Manifold valve (top)	1 no.	
4	Pressure gauge with control valve	1 no.	
5	Click on adopters	12 nos.	
6	Flexible cylinder pigtail	12 nos.	
7	First stage regulator	1 no.	
8	Copper cylinder pigtail	1 no.	
9	Main line valve	1 no.	
10	Over flow valve	1 no.	
11	Flash back adopter	1 no.	
12	Main line valve	1 no.	
13	Safety clamp for Gas cylinder -		
14	Availbilty of flame arrester	1 no.	
B	Kitchen Equipment		
1	Burner	1 no.	
2	Niddle control valve	1 no.	
3	Copper burner pigtail	1 no.	
4	Post stove (Double Burner)	1 no.	
5	Burner	2 no.	
6	Niddle control valve	3 no.	
7	Copper burner pigtail	2 no.	
8	Flexible burner pigtail	1 no.	
9	Pipe assembly	1 no.	
10	Stock pot stove (Single burner)	2 nos.	
11	Burner	2 nos.	
12	Niddle control valve	4 nos.	
13	Copper burner pigtail	2 nos.	
14	Stock pot stove single burner	2 nos.	
15	Flexible burner pigtail	2 nos.	
16	Pipe assemble	2 nos.	
17	Dosa stove	1 no.	
18	Niddle control valve	2 nos.	
19	Copper burner pigtail	2 nos.	
20	Flexible burner pigtail	1 no.	
21	Pipe assembly	1 no.	
22	Vertical drop of pipe line	3 nos.	
C	<u>No. of Main door blocked</u>		
	<u>Fire extinguisher</u>	4 nos.	
1	Kept at proper location or not		
2	Quantity		
3	Refilling due date		

SN	Description	Recommended Quantity	Observations
D	<u>No. of staff available in Pantry</u>		
1	Trained in fire fighting		
2	Trained in first aid		
3	Medical certificate		
E	<u>No. of Exhaust fan in Kitchen</u>	4 nos.	
F	<u>Fans Provided</u>		
1	Kitchen	4 nos.	
2	Corridor	7 nos	
3	At service board	2nos.	
4	Manager Room	2nos.	
5	Staff room	(2 nos.each)	
G	<u>Gas cylinders</u>	12	
1	Location as per Drg.		
2	15 Kg cap. 12 nos		
3	Exhaust opening in flooring		
4	Rakes of Robust construction in two tier for 12 nos. of gas cylinders provided or not		
5	Double leaf door out side opening with inspection window provided with wired glass.		
6	Gas equipment testing certificate and validity.		
7	Date of last attention to gas system		
8	Any leakage in gas pipe line		
9	Condition of store room		
10	General cleanliness		
11	Disinfestations status and date		
12	Quality of food		
13	Availability of rate list		
14	Any complaint lodged by passengers		

Any unusual:

Name of the Pantry Car manager:

Cleanliness :

Other observations:

Signature of Inspecting Officer

Name:

Designation:

CHECK LIST FOR FIRE PREVENTION IN PANTRY CARS

SN	Description	Remarks
1	Date/Train No./Checked at (station)	
2	Pantry Car No./Rly.	
3	Operated by railway/Contractor	
4	Name of the Contractor	
5	Gas pipe line and equipment - location as per drawing, testing certificates & Validity, Leakages, flame arrester	
6	Gas Manifold -Validity of master regulator, safety clamp, gauge	
7	Gas Burner -Validity and location as per drawing/instructions. Condition of burners, Cleanliness etc. in Primary & Secondary examination points.	
8	Fire Extinguishers (Dry Chemical powder type) - Validity, quantity, refilling due date, location	
9	Staff training – Training in fire fighting and first aid	
10	Hot Water Boiler - Its functioning and condition.	
11	Exhaust Fans - Working condition, quantity as per requirement	
12	Condition of electrical wiring in Primary & Secondary examination points	
13	Is there any trained staff available in pantry to attend the LPG equipments in emergencies	
14	Any other deficiency noticed	

Signature of Inspecting Officer

Name:

Designation:

Format No. Rev. No. –		SUPER CHECK OF PANTRY CAR			Inspection - Date:
		DETAILS OF PANTRY CAR			
Train No:	No:	P:	I:	R/Date:	
Management of pantry car (Departmental/Contractor) -					
Name of Contractor }			Contract No.: Dated:		
SN	Description	Specified Qty.	Observations		
1.	No. of fire extinguisher with details.	04 Nos.	Available- , Over due: Date of refilling: - (1). (2). (3). (4).		
2.	No. of staff present in the pantry.	--			
3.	No of staff trained on fire fighting.	All staff			
4.	Availability of gas manifold.	02			
5.	Availability of Gas Cylinders	12			
6.	Availability of pressure gauge in manifold.	02			
7.	Availability of pressure regulator in manifold.	08			
8.	Availability of flame arrestor.	01			
9.	Working of needle control valve.	--			
10.	No. of canteen burners/ stoves in the pantry car.	04			
11.	Date of last attention to gas system.	--			
12.	Any leakage in gas pipe line.	--			
13.	Condition of Storeroom.	--			
14.	General cleanliness.	--			
15.	Disinfestations status and Date.	--			
16.	Quality of food.	--			
17.	Availability of rate list.	--			
18.	Any overcharging case noticed.	--			
19.	Any other abnormality noticed during the Inspection.	--			
20.	Any other complaint lodged by passenger.				

Signature of _____ : _____
Inspecting authority

Name: _____

Design: _____

Check list for Coaching Stock for Primary Maintenance

SN	Item	Description	Trip	A	B	C	Status
01	Under frame	1) Visually examine center pivot mounting bolts and attend if needed. 2) Check condition of head stock sole bar. 3) Check trough floor, turn under for corrosion. 4) Visually examine inspect center pivot cover.	Y	Y	Y	Y	
02	Bogie	1) Examine visually condition of bogie side frame, transom longitudinal & all welded locations. 2) Examine rubber stopper of axle box crown for damage/broken/mis. 3) Check bolsters safety straps /loops for damages/broken/missing. 4) Check brake hanger brackets for damage. 5) Check visually B.S.S. hanger bracket, anchor link bracket, brake hanger pins Brackets. 6) Check wearing piece and wearing plates.	Y	Y	Y	Y	
03	Primary suspension	1) Visually examine axle box springs for breakage. 2) Visually examine axle box clearance. 3) Check oil leakage in Dash pot through defective seals. 4) Check and attend axle guide assembly.	Y	Y	Y	Y	
04	Secondary suspension	1) Visually examine bolster spring for breakage /damages. 2) Visually examine bolster lower spring beam. 3) Visually examine BSS hanger , blocks and BSS pins. 4) Check bolster clearance. 5) Visually examine equalizing stay rod & pin ; anchor links. 6) Visually examine equalizing stay brackets. 7) Check & attend safety loops of equalizing stay rod. 8) Examine vertical shock absorber for damages.	Y	Y	Y	Y	

SN	Item	Description	Trip	A	B	C	Status
05	Brake rigging	1) Check brake rigging & adjust piston stroke. 2) Check brake beam for damages. 3) Check brake beam safety wire loops & safety straps. 4) Check & attend brake shoe head & key & replace if necessary. 5) Check & replace worn out Brake blocks 6) Visually inspect brake gear pins, cotter pins. 7) Visually examine damaged /missing brake gear bushes. 8) Check & attend brake block adjuster. 9) Examine and attend floating lever suspension brackets. 10) Examine lever hanger pins. 11) Examine and attend brake levers. 12) Examine wheel thickness and gauge if reqd	Y Y Y Y Y Y Y N N Y N N	Y Y Y Y Y Y Y Y Y Y Y N	Y Y Y Y Y Y Y Y Y Y Y N	Y Y Y Y Y Y Y Y Y Y Y Y	
06	Brake system	1) Conduct brake test and attend leakages & defective components. 2) Visually examine damage on B.P. & F.P. suspension Bkt, Anti pilferage device. 3) Check passenger alarm by pulling chain. (Minimum 3 coaches) 4) Service application, release check of every coach to be carried out. 5) Adjust brake power for proper piston stroke. 6) Change worn out brake block in set. 7) Carry out guard van valve test to ensure proper functioning. 8) Examine slack adjuster for damage & malfunctioning.	Y Y Y Y Y Y Y Y	Y Y Y Y Y Y Y Y	Y Y Y Y Y Y Y Y	Y Y Y Y Y Y Y Y	
07	Draw gear	1) Check and replace damaged /missing split pin/cotter/rivets. 2) Check condition of screw coupling and its components. 3) Examine draw bar hooks, draw bar, rubber pads for damages. 4) Check draw bar hook for wear. It should not exceed more than 10 mm .Examine draft key locking pin visually.	Y Y Y Y	Y Y Y Y	Y Y Y Y	Y Y Y Y	
08	Buffing gear	1) Visually examine buffer plunger for damage/dropping / stroke length. 2) Ensure the length within 584- 635 mm. 3) Inspect buffer plunger face plate for wear & profile. 4) Examine Visually buffer casing for crack / damages.	Y N N Y	Y N N Y	Y N N Y	Y Y Y Y	
09	Running gear	1) Examine visually axle box for grease oozing out ,warm box if any. 2) Visual examination of axle box cover. 3) Inspect wheel for tyre defect ; shattered rim, spread rim, shelled tread ,Thermal cracks and heat checks .	Y Y Y	Y Y Y	Y Y Y	Y Y Y	

SN	Item	Description	Trip	A	B	C	Status
10	Seats & Berths	1) Examine middle and upper berth chain. 2) Examine holding brackets. securing brackets for seats & berths and attend if req. 3) Examine and repair damaged upholstery cushions and curtains. 4) Wooden seats & frames should be cleaned. 5) Disinfect the seat and frames. 6) Cushions to be cleaned with duster, oil or head stain and dirty spots.	Y Y Y Y N Y	Y Y Y Y Y Y	Y Y Y Y Y Y	Y Y Y Y Y Y	
11	Doors	1) Examine doors for proper functioning and security with hinge pivots .Door should not graze with floor. 2) Examine door locks; latches. 3) Visually examine windows shutters for smooth & proper working. 4) Examine visually rolling shutters/ sliding doors of vestibule and SLR.	Y Y Y Y	Y Y Y Y	Y Y Y Y	Y Y Y Y	
12	Windows	1) Windows frame on non AC coaches should not be broken. 2) Check lavatory banjo shutters for damages / missing. 3) Examine sealed windows of AC coaches, replace broken/damaged glasses.	Y Y Y	Y Y Y	Y Y Y	Y Y Y	
13	Flooring	1) Inspect & attend torn damaged PVC floor. 2) Examine & attend open PVC joint.	N N	N N	N N	Y Y	
14	Interior fittings	1) Examine laminated panels & mouldings for cracks /damages. Visually inspect passenger amenity fittings replace if found damaged/missing. 2) Examine door closer in AC coaches. 3) Examine tower bolt of back rest in non AC coaches. 4) Examine luggage racks/bunks for breakage.	Y Y Y Y	Y Y Y Y	Y Y Y Y	Y Y Y Y	
15	Lavatory & lavatory fittings works	1) Check Lavatory hinge doors for proper function. 2) Examine lavatory door latches / tower bolts for proper function. 3) Examine push cock & flusher valve for proper functioning. 4) Examine squatting pans and foot rest for damages. 5) Clean and replace damaged / missing mirrors/Shelves / Soap dishes. 6) Intensive cleaning of lavatory pans and commode with cleaning agent. 7) Thorough flushing of water tanks.	Y Y Y Y Y Y N	Y Y Y Y Y Y N	Y Y Y Y Y Y Y	Y Y Y Y Y Y Y	
16	Washing	1) Coach should be washed from out side & inside. 2) Disinfect & spray insectide at corners & crevices of coaches after washing all coaches. Intensive cleaning of coach.	Y N	Y Y	Y Y	Y Y	

Date :

Name of the Officers :

Depot:

Designation :

**FORMAT FOR ASPECTS TO BE CHECKED DURING DRIVE FOR PREVENTING FIRE
ON TRAINS(✓ Tick Mark where applicable)**

SN	Description				
	Date				
	Train No.				
	Station				
1.	Check on Carriage in Passenger Carrying Trains				
	Gas Cylinders	Found		Not found	
	Explosive Materials	Found		Not found	
	Crackers	Found		Not found	
	Petrol/Diesel/Kerosine	Found		Not found	
	Stove/Sigri	Found		Not found	
	Other Inflammable materials	Found		Not found	
2	Unauthorized hawkers and vendors using following items on train				
	Sigris	Found		Not found	
	Stoves	Found		Not found	
3	Random/Surprise checks for inflammable material before loading in SLRs	Train	Station	Luggage	Parcel
	With GRP				
	With RPF				
4.	Whether Prevent smoking of labour while loading/unloading in SLRs	Cotton Bales		Textile Packages	Bidi of dry leaves
	During Loading				
	During Unloading				
5.	Check adequate and proper maintenance of Electric Devices	Train lighting		AC Coaches	
a)	Earth using double lamp method for positive and negative earthling				
b)	Condition of cable insulation				
c)	Air clearance between live part and points of opposite polarity.				
d)	IR of 110 V- Cables				
	Whether Preventive devices are functioning properly -				
a)	MCBs				
b)	Fuses				
c)	Proper size & Capacity of HRC & re-wireable fuses				
d)	Battery boxes for spillage of electrolyte to avoid tracking				
	Check any unusual on -				
a)	high voltage on alternators				
b)	Fans for sign of burning/overheating				
c)	Rewiring of coach (as per the cable life of 12 yrs)				
d)	Battery boxes whether protected against corrosion from battery acid by providing two coats of acid resistance paint				
e)	PVC/FRP used for coach wiring with non inflammable properties				

SN	Description			
f)	Whether all connections are clean and well tight in junction boxes			
	Writing Instructions - No smoking/non carriage of inflammable articles by passenger			
	Provision of emergency window			
6.	Check Proper maintenance and use of equipment in the pantry cars			
	Fire Extinguishers			
	Gas pipe line testing and certificate with validity			
	Fridge			
	Defridge			
	Hot water boiler			
	Exhaust fan in kitchen			
	Alarm signal chain			
	Flame proof light			
	Hot case for meal			
	Gas store room exhaust opening in floor			
	Rake of robust construction in two tier for 12 nos. of gas cylinder rack			
	Double loaf door outside opening with inspection window provided with wire glass			
	Flame arrestor			
	Gauge			
	Master regulator			
	Safety clamps			
7.	Whether adequate fire extinguishers are available and in working order at-			
	Stations	Yes	No	
	Guard's brake vans	Yes	No	
	Air conditioned coaches	Yes	No	
	Pantry cars	Yes	No	
	Locomotives	Yes	No	
	Whether concerned staff are trained in operation of fire extinguishers	Yes	No	
8.	Check alertness on the part of staff for exchanging alright signals and safe passage for trains-	Total No. checked		
	Station staff			
	Cabin staff			
	Gatemen			
	Loco Pilots			
	Assistant Loco Pilots			
	Guards			
9.	Counseling to public against the hazards of carrying inflammable and explosive materials-	Total no.		
	Counseled At Stations			
	Counseled In Trains			
	Pamphlets/hand bills distributed			

Date :

Name of the Officer :

Designation :

CHECKLIST FOR ANALYSIS OF BP AIR HOSE UNCOUPLING

SN	Description	Std.dimensions	Remarks
01	Whether the length of Rubber hose is 660 mm	660 mm	
02	Whether the length of complete BP air hose(including palm & nipple) is 835 mm	835 mm	
03	Condition of crimped clamps & their availability at both the ends of rubber hose	--	
04	Condition of check nut on nipple and its availability	--	
05	Condition and availability of MU washer	--	
06	Condition of palm locking pin and its diameter in mm.	--	
07	Condition of palm lugs. Check for worn out lugs	--	
08	Check for any dashing/scratch marks on the bottom of palm ends	--	
09	Check make of air hose and stamping particulars	--	
10	Whether BP hose found torn, twisted or normal	--	
12	Check geometry of BP Metallic pipe for proper positioning.	--	
14	Check worn out palm end lug edges and leakage of air	--	
15	Check position of ball lever of coupling in case of coaching stock	--	
16	Screw coupling ball lever modified or not in case of coaching stock	--	
17	Ensure correct fitting of BP air hose with angle cock.	--	
18	Ensure correct fitment of spare screw coupling in suspension hook in case of coaching stock.	--	
19	Any ballast unloading is observed in the section where air hoses uncoupled.	--	
20	Ensure condition of Nipple of BP air hose for worn out threads.	--	
21	Ensure condition of angle cock for worn out threads.	--	

Signature :
Name :
Depot :

Check List to avoid Brake Binding in ICF Coaches for Maintenance Depots

SN	Parameters to be checked	OK/ Not OK/ Remarks	Periodicity
1	All equipments and assemblies of air brake system are properly positioned on each coach of the brake.		<p style="text-align: center;">Round trip</p> <p style="text-align: center;">Note:</p> <p>1. Audit on monthly basis by CDO (C&W)</p> <p>2. Audit on quarterly basis by Dy.CME (C&W)/ Sr. DME</p>
2	All worn out brake blocks are changed		
3	All the brake rigging pins should be intact and of correct size		
4	Hose coupling for brake pipe on consecutive coaches are coupled to one another		
5	Hose coupling for feed pipe on consecutive coaches are coupled to one another		
6	All cut off angle cocks are kept open except those at the rear end of the train.		
7	Brake pipe and feed pipe hose coupling at the rear end of the train are placed on their respective hose pipe coupling supports.		
8	Isolating cock of distributor valves of all the coaches are in open position.		
9	Isolating cocks placed before the auxiliary reservoir, brake cylinders and the passenger emergency alarm valve are in open position.		
10	Pressure gauges for brake pipe and feed pipe are provided in brake van.		
11	No leakage from the auxiliary reservoir, brake cylinder, control reservoir and dirt collector.		
12	Ensure brake cylinder stroke and clearances between brake block and wheel.		
13	Conduct rake test as per coaching manual.		
14	Release brake and see that all the brake cylinder pistons are fully inside.		
15	Guard's emergency brake valve provided in brake van is working properly.		
16	Visual inspection of the rake/ coach is carried out to check any damage on the brake or feed pipe hose coupling or hanging hose pipe, the suspension brackets of air brake equipment and anti-pilferage device provided on the components are also checked for any defects.		Monthly
17	The air brake sub-assemblies of coaches are cleaned thoroughly from outside. The moving parts such as slack adjuster and brake rigging system are greased.		
18	Leakage test is done for brake pipe, feed pipe and its connecting pipes.		

19	Service application and release test of the rake is performed to ensure full brake power.		<p>Note:</p> <p>1. Audit on monthly basis by CDO (C&W)</p> <p>2. Audit on quarterly basis by Dy.CME (C&W)/ Sr. DME</p>
20	The manual brake release test is carried out on every coach of the rake, to ensure proper functioning of the release lever, fitted below the distributor valve.		
21	Micro switch Test is performed to ensure that the Cam operated Micro Switch provided on the end wall near passenger Emergency alarm Signal device for the audio-visual indication, functions properly.		
22	The guard van valve test is carried out on a coach to ensure functioning of the Guard van valve during every alternate A- schedule.		
23	The passenger emergency alarm valve and device test is carried out on a coach to ensure the passenger emergency alarm valve (PEAV) and passenger emergency alarm signal device (PEASD) work properly in conjunction.		
24	Thorough inspection and repairs of brake gear components.		<p>Tri -Monthly Note:</p> <p>1. Audit by CDO (C&W)</p> <p>2. Audit on half early basis by Dy.CME (C&W)/ Sr. DME</p>
25	The alarm chain pull test to ensure proper working of passenger emergency alarm system for partial application of brakes.		
26	Through checks of slack adjusters for any damage and malfunctioning and subsequent replacement.		<p>Half yearly</p> <p>Audit on half early basis by Dy.CME (C&W)/ Sr. DME</p>
27	Testing of pressure gauges and replacement of the defective or inaccurate gauge (for SLR/Guard compartment)		

Signature :

Name :

Depot :

Brake Binding Study in Southern Railway

[Implementation of important suggestions of Task Force Teams]

SN	Observations of Task Force Teams	Directions from Southern Railway to Workshops	Remarks of Depot/Workshop
01	Braking takes place in a taper. BMBC fitment and level maintenance should be ensured	(a) During Single Car Test the movement of brake piston in level with the brake ringing should be checked and recorded (b) If required, the level of brake ringing should be adjusted with the suitable shim at BMBC seat. (c) The mounting bolts of BMBC should be tightened fully and ensured.	
02	Overhauling of Dirt collectors and Common Pipe Brackets of DV is to be compulsorily undertaken during POH	Dirt collectors and common Pipe Brackets of DV should be overhauled with fresh kit mandatory during POH.	
03	New DVs are overhauled at Workshops after serving five years. Fitting a four and half year old DV is not advised during POH	Fitments of DVs during POH should be planned in such a way that the date of overhauling should not expire during the field service.	
04	Stainless steel wire ropes of short and long are better for use as the material is user friendly for fitment and operation.	Workshop shall replace existing mild Steel release wires to Stainless steel during POH.	
05	Availability of dowel pins in common pipe bracket of DVs should be ensured.	Availability should be ensured during POH and recorded.	
06	For easy identification of AC arch line (4.12mm) from the group of Non- AC link (405MM) – yellow paint identification to be done.	To be done at workshops while stocking a material to prevent in inter mixing.	
07	Dirt collector could not be opened from Top due to want of space with the trough floor.	Workshop should include in their inspection check sheet regarding the availability of working space between the top end of dirt collector and trough floor and corrective action taken during POH	
08	To prevent twisting of flexible rubber hoses, the swivel nut end should be connected only after connecting with the Brake cylinder.	To be ensured during POH	

SN	Observations of Task Force Teams	Directions from Southern Railway to Workshops	Remarks of Depot/Workshop
09	High density yellow Teflon tape of industrial standard should be used in place of white for better seating of air pipe lines.	Yellow Gas tapes should be tried as a trial measure for thread sealing during POH.	
10	Hand brake indication showing ON-OFF position should be provided in all SLRs below hand brake wheel in the lead screw housing box .This will show the applied /non applied condition to be ensured from outside	To be done during POH in addition to ON-OFF making near the hand brake wheel	
11.	Endurance test of BMBC should be conducted during IOH and endurance testing gadget could be adopted.	(a)To be carried out during IOH in depots. (b) Endurance Test Gadget of CBE model should be implemented in all depots.	
12.	Overhauling of Dirt collector should be done during schedule maintenance and overhauling of Common Pipe Brackets of DV is to be compulsorily undertaken during IOH.	To be done mandatory in all depots.	
13.	Stainless steel wire ropes of short and long are better for use for DV as the material is user- friendly	Division should replace existing mild steel release wires to stainless steel.	
14.	To detect minor crack in Common pipe bracket of DVs and leak in rigid BP/FP joints-soap solution testing during IOH should be followed.	To be implemented in depots during Single car test and recorded.	
15.	Release chokes should not be removed in open line	Removal of release chokes from DV in open line is not permitted.	
16.	A test may be incorporated during rake testing in which the FP should be charged fully and pressure build up in BP line should be observed. Any build up of pressure indicates leak in DV.	To be implemented in all depots	
17.	For easy identification of AC arch link (412mm) from the group of Non-AC link (405mm) - yellow paint identification to be done.	To be done in depots while stocking the material to prevent inter -mixing.	
18	Releasing of air from AR should be meticulously followed after placement of rakes in pitline as during the activity – (a) Moisture from AR is vented out and (b) No air from AR tank in the symptom of defective NRV.	The vital activity of release of air from AR should be recorded in RS resistor by the duty supervisor indicating any symptom of defective NRV noticed.	

SN	Observations of Task Force Teams	Directions from Southern Railway to Workshops	Remarks of Depot/Workshop
19	To prevent twisting of flexible rubber hoses the swivel nut end should be connected only after connecting with the Brake cylinder.	To be ensured during train examination and while replacing hoses in pit lines/sick lines/platforms/yards/midsections	
20	Crown clearance in SLR and GS coaches to be maintained strictly so that excessive downward movement of bogie frame can be prevented.	To be ensured in depots without fail	
21	Hand brake indication showing ON-OFF position should be provided in all SLRs below hand brake wheel in the lead screw housing box to be ensured from out side	To be done in depots in addition to ON-OFF marking near the hand brake wheel.	
22	Automatic moisture separator and hygrometer to be provided near the rake testing	All divisions should ensure and complete the task	
23	Stop watch fitted to a clip board shall be used to take the timings during single car testing to ensure accuracy.	All divisions should ensure and complete the task.	
24	Sticker depicting trouble shooting of brake binding trouble shall be provided in SLRs for guidance to Guards.	All divisions should implement with immediate effect.	

Signature :

Name :

Depot :

Check List for inspection of Bio-Toilet System

Train No..... Rake No..... Coach No. Date.....Name of SE/ JE(R/Mint).....

SN	Items
01	Check whether J-brackets is in sound condition & all fasteners are intact.
02	Check sound condition of Rubber connector and availability of 120 mm dia SS clamp.
03	Check intactness of chlorinator unit & its pipe.
04	Check whether chlorine jacket is free from scale formation. Clean it, if required.
05	Check availability of chlorine/Kmno4 tablets in each trip. Provide if required.
06	Check condition of 8/10 mm dia SS Safety wire rope for proper securing and any damage near edges of Bio-Toilet tank. Maintain 5 mm gap between wire rope & tank body.
07	Check leakage of fecal material from Rubber gasket/ Sealing due to blockage of inner pipe of chlorinator.
08	Check leakage in joints/ connections of water pipe line including Bio-Toilet tank etc.
09	Check functionality of flush buttons/ lever & water taps
10	Check adequacy of flushing in the pan. Functionality of Flush valve, Flush pipe & fish tail for proper flushing
11	Check any foul smell/ stench in the pan/Toilet.
12	Check overall cleanliness level of the Bio-Toilet.
13	Check Stickers/Notices for Users and Maintenance staff in Hindi/English & regional language of the originating & destination station.
14	Note down maintenance required in toilet/tank with coach no. date & time taken for maintenance.
15	Check choking of P-Trap/S-Trap, if yes, attend it and give reason for choking.
16	Check operation of Ball valve in each round trip for proper opening & closing.
17	Check non functioning of Ball valve opening mechanism
18	Check leakage of effluent from PTFE seal of ball valve. Check 3/6 bolts of ball valve
19	Check whether “sufficient choke Remover devices” are available in Depot & Passenger stations for P-Trap/S-Trap choking.
20	Check whether Lab Testing facilities are developed in Coaching Depot & prescribed tests are being carried out.

SN	Items
21	Check availability of “Hand Book on Testing Scheme for effluent” and “Compendium of Instructions on IR-DRDO Bio-Toilet” are available with SSE/Rake maintenance & CDO.
22	Check whether Trial monitoring is done as per Instructions given in CAMTECH Bio-Toilet Hand Book.
23	Check whether Evacuation machine is available in working order in Coaching depot & evacuation record of tanks is being maintained properly.
24	Check whether Dust bins are provided in each Bio-Toilet as per RDSO Drg. No. CG-13031 & CG-13021.
25	Check Broad-casting of short video film on Bio-Toilet at passenger station for awareness of passengers.
26	Check provision of SS Jali/(Cross wire mesh) to avoid bottles/Garbage etc. in to commode pan.
27	Check whether sufficient garbage picking tongs are available for easy removal of garbage and being used to avoid manual scavenging.
28	Check whether universal foot pedal required in coaching depot for operation of jammed ball valves.
29	Check whether foul smell is coming in rolling-in and rolling-out examinations. Attend toilet in depot.
30	Check whether lab sample of any toilet failing frequently in 3 consecutive testings. Recharging of 60 Lts. Inoculum should be ensured.
31	Check whether Bio-Toilet maintenance Proforma, Lab sample test Proforma-Annex-I & Field trial Proforma-Annex-II are being filled for each rake.
32	Check whether sufficient staff have been given training for bio-toilet maintenance at CAMTECH/GWL.
33	Check Bio-Toilet tank height from Rail table is approx. 220 mm. Ensure Bio-Toilet tank is secured properly.
34	Check condition of corrosion of head stock near welding joint of J-Bracket
35	Wear gloves while handling bacterial culture (Inoculum).
36	Clean hands with detergent/soap after handling of the bacteria.
37	During storage of bacteria in containers, lid should be kept loose sothat gas generated inside the container can escape easily.
38	Check whether AMOC guidelines are being followed strictly in the depot as recommended in CAMTECH Doc. IRCAMTECH/GWL/M/Bio-Toilet/AMOC/1.0-Aug-2015.
39	Check whether consolidated Test Reports are being sent to Sr DME for further communication to Railway Board & RDSO by zonal Railways on 6 monthly basis.
40	Check whether facilities required in coaching depot for maintenance of Bio-Toilet coaches are available as per para 25.0 of hand book for open line staff on Bio-Toilets.

DON'Ts:

SN	Items
01	Do not mix detergents/Acids with Bacteria at any stage during use.
02	Do Not allow Bio-Toilet fitted coaches without ensuring charging of Inoculum
03	Do not allow choked Bio-Toilet tank in service
04	Do not allow by-passed bio toilet tank in service
05	Do not allow leakage from Rubber connector/colonized rubber gasket

Date of Inspection :

Name of the Officer :

Name of Coaching Depot :

Designation :

Check List for Inspection of DEMU

Inspection should be done as per check list by the officers & inspectors and availability of all standard equipments as well as any additional equipments, which may have been provided on DPC should be ensured.

S N	Descriptions	Remarks
01	<p><u>General:</u></p> <ol style="list-style-type: none"> 1. Check Flasher Light, Head light, Marker light and tail light. 2. Check condition of buffers. 3. Check availability of screw coupling. 4. Check condition of Rail guard and Cattle Guard. 5. Check Working of wipers. 	
02	<p><u>Oil Levels</u> (Check before starting)</p> <ol style="list-style-type: none"> 1. Check Lube oil level by dipstick gauge. 2. Check Compressor oil level by dipstick gauge. 3. Check Hydraulic oil level in (up to 3/4th of glass.) 4. Check Water level in water glow rod gauge 5. Check Fuel oil level in glow rod gauge. 6. Check brake releasing and ensure sufficient gap between brake block and wheel (5-6 mm). 	
03	<p><u>Driver's cabin:</u></p> <ol style="list-style-type: none"> 1. Put battery Isolation Switch in ON Position. 2. Put 24 V Isolation Switch in ON Position. 3. Put LCC MCB in ON Position. 4. Check cab light by putting switch in ON position. 5. Before starting of DPC, priming of fuel pump to be done near main engine to avoid fuel oil locking, till indication comes. 6. On engine block, FSD device should be in "Mechanical" but after starting, it should be put in "Electrical". 7. After priming, fuel lifting pump cock again to be put in closed position. 8. 24 V MCB and 110 V MCB to be put in ON position before pressing start button. 9. Now, push start button, till rpm reaches to 300 in tachometer at back panel. 10. Now press reset button for resetting safety devices (Indication LED). 11. Ensure MR pressure 5-7 Kg/Cm² & BP pressure 5.0 Kg/Cm² on Driver's control panel. 12. Now check B.C. pressure up to 1.6 kg/m² on brake application (E.P). 13. DCS key, BIVS key, Master controller key should be applied. 	

	<p>14. Now check Red colour indication lamp for glow of lights, normally it should be in off position.</p> <p>15. Check functioning of Dead Man handle by putting reverser key in forward direction,</p> <p>16. Check continuity of brake application by dropping B.P. pressure to zero.</p>	
04	<p><u>Safety Material</u></p> <p>01. Ensure availability of 4 nos. wooden wedges in each DPC.</p> <p>02. Ensure availability of safety instructions in Driver's cabin for detaching coaches in case of fire.</p> <p>03. Ensure availability of 03 nos. fire extinguishers in each DPC.</p> <p>04. Ensure availability of 01 set BP & FP hose pipes & its extensions</p>	
05	<p><u>Before Starting Train</u></p> <p>1. Check functioning of horn by pressing foot pedal.</p> <p>2. Ensure presetting of speed recorder by pushing display button.</p> <p>3. Before starting, check availability of caution order and BPC.</p> <p>4. Check the Driver's repair book for any previous booking and its compliance.</p> <p>5. Note down Driver's name and Guard's name.</p> <p>6. Note down Driver's particular, safety category, PME details, last counseling/Monitoring and training particulars, learning particular etc.</p> <p>7. Note down maintenance schedules of DPC and Trailer car.</p> <p>8. Ensure cleanliness of Driver Cabin.</p>	

Date:

Name of Officer:

DPC Depot:

Designation:

CHECK SHEET FOR SUPER CHECKING OF DEMU

DPC No.

Link _____

Date _____

Shift _____

Items checked	Observations	Action taken
Radiator Room : a. Check water leakage from water tank, pipe line and radiator cores b. Check abnormal sound from radiator fan. c. Check cleanliness, oil & water spillage. d. Check hydraulic oil leakage from hydraulic motor and flexible hoses. e. Check radiator room for hydraulic oil spillage and cleanliness of hydraulic tank. f. Ensure proper locking of radiator compartment door.		
Engine Room : a. Check condition of lagging on air compressor outlet pipe, its clamp condition and support welding of air compressor. b. Ensure that oil tray below engine sump is cleaned, there should be no muck or oil accumulation c. Check vent motors for proper working and any leakage. d. Ensure that there is no leakage from exhaust pipeline. e. Check exhaust pipeline for cladding and TSC for exhaust bellow. f. Ensure that fuel actuator is electrically operated. g. Check condition of belts of alternator, auxiliary generator, air compressor h. Check fire extinguisher for expiry date.		
Driver Cab : a. Check driver cab for proper sealing of doors b. Check driver cabin light. c. Check driver seat for firm foundation. d. Check look out glass for securing and condition for cleanliness e. Ensure that no TM is isolated.		
Under Gear : a. Check air dryer for working b. Ensure that after cooler underneath floor is properly cleaned c. Check axle box, gear case and MSU bolts for sealing. d. Check helical springs for any crackness by hammering. e. Check dashpot for oil leakage. f. Check cattle guard for proper fitment.		
Safety items : a. Check Dead-man valve working b. Check Head lights, Flasher lights, Tail light for proper working. c. Check Horn for proper working. d. Check rail guard for proper fitment, height above rail level (100mm) e. Check wiper for proper working. f. Check speedometer and parking brake for working.		
Deferred repairs :		
General : a. Staff booked for maintenance b. DEMU rake time in DEMU rake time out c. Check schedule form		

**Signature
Name & Designation**