

**PROFORMA OF BOOKLET  
ON IMPORTANT ASPECTS TO BE CHECKED  
DURING INSPECTIONS OF VARIOUS ACTIVITY  
CENTRES / EQUIPMENT  
FOR INSPECTING OFFICIALS**

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SOUTH CENTRAL RAILWAY**

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**PROFORMA FOR INSPECTIONS OF VARIOUS ACTIVITY CENTRES**

<b>OPERATING    Activity Centre – STATION</b>		
<b>S. No.</b>	<b>Items to be checked</b>	<b>Observations made</b>
<b>1</b>	<b>GR 3.38 (2)</b> – Reversing the points immediately on arrival of the train – whether the staff are in the habit of doing it or not? especially on a double line when a stopping train is received on a common loop where the SM is required to alter the points in rear and in front.	
<b>2</b>	<b>EXCHANGE OF ‘ALL-RIGHT’ SIGNALS WITH RUN THROUGH TRAINS</b> – By SM from platform side and by the Pointsman from ‘off’ side. Record maintained by the station staff, if any when any unusual noticed by them.	
<b>3</b>	<b>ENSURING COMPLETE ARRIVAL OF TRAIN:</b> <ul style="list-style-type: none"> <li>• Through BPAC indication on the panel or</li> <li>• where BPAC is not available / during its failure, by exchanging PNs with the Guard of the train</li> <li>• Record the same in the Train Signal Register.</li> <li>• For Goods trains without BV / Guard – separate register to be available at the station.</li> </ul>	
<b>4</b>	<b>SHUNTING ORDER (T.806):</b> <ul style="list-style-type: none"> <li>• Whether the station is exempted from issuing the shunting order by Sr. DOM, check for a copy of the</li> </ul>	

	<p>same in the SWR or in the form of a letter.</p> <ul style="list-style-type: none"> <li>• If no such exemptions are given, check whether Shunting Order is prepared in triplicate (one for LP, one for Guard and another for station record).</li> <li>• Also notice whether it is a signalled movement or not.</li> <li>• If it is not a signalled movement, whether the staff is locking the points?</li> <li>• Whether the SWRs prescribe any special precautions under Para 8, if so whether the same are known to the staff and followed by them or not?</li> <li>• Whether the staff is aware that permitting back movement over a wrongly set point which was trailed through by the LP/Shunter is prohibited?</li> </ul>	
<b>5</b>	<p><b>ESSENTIAL SAFETY EQUIPMENT:</b></p> <ul style="list-style-type: none"> <li>• Whether available as per SWR</li> <li>• Whether they are in working condition or not</li> <li>• Whether the prescribed equipment is adequate as per station layout or not?</li> </ul>	
<b>6</b>	<p><b>LC GATE REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether entries are separately made for UP / DN trains</li> <li>• Whether the PN is exchanged with Gateman of non-interlocked LC Gate?</li> <li>• Cross check the PNs of previous three trains.</li> </ul>	

7	<p><b>MONTHLY SAFETY MEETING REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether the acknowledgement of staff is obtained in two parts or not?</li> <li>• First part for those staff who is physically present on the day of the meeting and second part for those staff who resume duties after leave / sick / absent /another shift.</li> <li>• Ultimately, the acknowledgement shall be 100%.</li> <li>• Another important item to be checked in this is whether the Guards stationed to work at the station are acknowledging it or not.</li> </ul>	
8	<p><b>SURPRISE NIGHT INSPECTION BY SM:</b></p> <ul style="list-style-type: none"> <li>• Whether the schedule of 4 for supervisory and 2 for non-supervisory is followed or not?</li> <li>• Whether there is proper spacing between inspections or not? Whether the PN of SM and name of the SCOR is recorded or not?</li> <li>• Whether any shortfalls / irregularities, if noticed are highlighted in red ink or not?</li> <li>• Whether all the activity centres of the station such as Dy.SS office, Cabins, LC Gate, Goods Yard, Crew Lobby, etc., are covered on a rotation or not?</li> </ul>	
9	<p><b>TRAIN SIGNAL REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether the entries are clear and legible</li> <li>• 'Out' / 'In' report is written as per BWM guidelines or not by cross checking the timings with the</li> </ul>	

	<p>adjacent stations for at least 3 trains, direction wise</p> <ul style="list-style-type: none"> <li>• Whether Block Forward / Block Back entries are made in full and in red ink?</li> <li>• Whether the name &amp; designation of the Night Patrolman is written in red ink or not (if night patrolling is in force)</li> <li>• Whether the SM in-charge of the station is scrutinising the TSR daily or not?</li> </ul>	
<b>10</b>	<p><b>ROUTE CANCELLATION REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether reasons are correctly written or not?</li> <li>• If route cancellation is done for a departure signal/s, whether written memo was served to the crew or not?</li> <li>• If route cancellation is done for reception signal, whether any accident was averted, if so details?</li> <li>• Whether the time taken for route cancellation is being recorded or not to analyse the efficacy of timer relay?</li> </ul>	
<b>11</b>	<p><b>SWR:</b></p> <ul style="list-style-type: none"> <li>• Check for the currency</li> <li>• Whether it is in the new format or not</li> <li>• Check whether the layout is tallying with the rule diagram</li> <li>• Alternate power supply like IPS is incorporated or not</li> <li>• Whether any special precautions are prescribed under Para 7 for blocking / stabling of loads</li> <li>• Whether the station is situated on a steeper gradient (steeper</li> </ul>	

	<p>than 1 in 400), if so what special precautions are prescribed and followed by staff, etc.,</p>	
12	<p><b>SWR DECLARATION REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Cross check the details with the Attendance Register to see whether staff are acknowledging after 15 consecutive days of absence (before taking charge of duties)?</li> <li>• Whether acknowledgement is separately taken for SMs &amp; Pointsmen duly keeping an index with page number.</li> <li>• The acknowledgement register shall be divided in three portions, one for fresh SWR declaration, one for any amendment received to SWR, another portion for such staff who resume duties after 15 consecutive days of absence / staff of outstation.</li> </ul>	
13	<p><b>S&amp;T FAILURE REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether all Signal and Telecom failures are getting recorded or not?</li> <li>• In case of block failures, whether failure entry is made at both the stations or not?</li> <li>• Cross check the train passing documents such as T/A 1425 to T/D 1425 &amp; T. 369 (3b) and identify specific shortfalls including individual lapses.</li> <li>• Whenever trains are received on Calling-‘on’ due to Home Signal failures, whether SMs are entering the Home Signal failure entry in the failure register or not?</li> </ul>	

	<ul style="list-style-type: none"> <li>• Cross check the failure entries with failure memos issued to S&amp;T Official.</li> <li>• Whether any particular signal or point is repeatedly failing, if so whether S&amp;T Officials are closely monitoring that asset?</li> <li>• Calculate the average failure time for the month to comment on the efficiency and swiftness shown by the S&amp;T Official.</li> <li>• Cross check the Disconnection Register whether the S&amp;T Official has issued Disconnection Notice before attending such gear as per Group 'C' of Appendix XIII of G&amp;SR.</li> </ul>	
<b>14</b>	<p><b>ACCIDENT REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether all the accidents and unusuals are entered or not.</li> <li>• Whether complete details of the incident including D&amp;AR action initiated against the staff held responsible are entered in the register or not?</li> <li>• Identify similar type of accidents / unusual taking place on a particular line / point to suggest remedial measures.</li> </ul>	
<b>15</b>	<p><b>DISASTER MANAGEMENT DISPLAY BOARD:</b></p> <ul style="list-style-type: none"> <li>• Whether the board is available or not.</li> <li>• Whether contact telephone numbers including mobile numbers of Medical (Railway and Non-Railway), Civil, Transport, Voluntary Organisations, etc., are displayed or not.</li> </ul>	



	<ul style="list-style-type: none"> <li>• Whether the SM is making a random check to check the correctness of the telephone number once in a fortnight; and if so, record of the same.</li> <li>• Availability of fire extinguishers and the knowledge of the staff in using the same.</li> </ul>	
<b>16</b>	<b>STABLED LOAD REGISTER:</b> <ul style="list-style-type: none"> <li>• Whether the entries are properly made in the register as per the pro-forma.</li> <li>• Whether the exchange of PN with SCOR is followed or not, if so the details are written or not.</li> <li>• Whether the validity of BPC is written or not?</li> <li>• Whether the GLP check memo issued or not – if given, the record keeping of the same is correctly maintained or not.</li> <li>• Physically check the stabled load formation and ensure whether the written details are correctly written and followed or not.</li> <li>• Whether coaching rake stabling details are entered in the register or not.</li> </ul>	
<b>17</b>	<b>STATION DIARY:</b> <ul style="list-style-type: none"> <li>• Whether the SM in-charge is filling up the columns pertaining to him before 1000 hours of the day or not.</li> <li>• Whether all the columns are correctly filled or not.</li> </ul>	
<b>18</b>	<b>CAUTION      ORDER      MESSAGE REGISTER:</b>	

	<ul style="list-style-type: none"> <li>• Whether brought forwarding is done as per Appendix I of G&amp;SR.</li> <li>• Whether the Serial Numbers are properly maintained or not.</li> <li>• Cross check the details with the Caution Order copy issued to the Crew.</li> <li>• Identify such SRs which are not feasible to obey, for example 75 kmph + stop if required – to address the problem by writing to Engineering Officials.</li> <li>• Similarly, at certain locations we may find cancellation and imposition of caution orders under one and the same message number which is irregular.</li> <li>• Also identify such SRs which are given for two / three block sections instead of giving them individually to one block section.</li> <li>• Whether adequate space is left in between two SRs for interpolating any new additions given on emergency account.</li> </ul>	
<b>19</b>	<p><b>BIO-DATA REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Cross check the entries with the actual BCC / PCC, PME certificates possessed by the employees at the time of inspection.</li> <li>• Whether they are adhering to the instructions of IRMM Para 514, i.e., staff after attaining the age of 45 years are supposed to undergo PME as per their date of birth.</li> <li>• Ensure that RC / PME overdue staff are not utilised in direct train operation.</li> </ul>	

20	<p><b>WEATHER WARNING REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether the acknowledgement time and date is correctly written by the Officials who received the message.</li> <li>• Whether the SM is writing the actual weather condition at the time of receipt of the weather warning message?</li> <li>• Whether the beat books are deposited with the SM of the station or not. If available, cross check the entries of TSR &amp; Station Diary with the beat books or vice-versa.</li> </ul>	
21	<p><b>RELAY ROOM KEY REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Check whether proper reasons are written in the register?</li> <li>• Whether all the columns are correctly filled by the station staff?</li> <li>• Whether the name, designation of the employee who is handing over / taking over the key are legibly written.</li> <li>• Calculate the total number of times the key is taken in a month; and the total time the key is out of the box to comment on the unhealthy practices, if any.</li> <li>• Whether the opening of the Relay Room door or EKT is inter connected with the datalogger, if so whether the same is getting registered or not.</li> </ul>	
22	<p><b>DISCONNECTION &amp; RECONNECTION NOTICE (T.351):</b></p> <ul style="list-style-type: none"> <li>• By scrutinising the foils pasted in the register, identify such works</li> </ul>	

	<p>which involve joint works with Engineering Department. Further look for the remark “joint work with engineering” is passed or not as per SR 3.51.6.</p> <ul style="list-style-type: none"> <li>• Whether the S&amp;T Official is ensuring track ‘fit’ memo / remark from Engineering Official after completing such joint works.</li> <li>• In the course of regular maintenance of block instrument, whether the SM is passing a remark on the face of the Disconnection Notice that ‘no train in block section’ as per Para 5 of Appendix XIII of G&amp;SR.</li> </ul>	
<b>23</b>	<p><b>CRANK HANDLE REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether the entries are made by the officials whenever the crank handle is removed.</li> <li>• Whether the chain is properly connected to the EKT housed in the glass cage of SM Office.</li> <li>• Whether the S&amp;T Officials are testing the crank handle working as per the schedule of once in a fortnight by the ESM, once in a month by the JE/Signals and once in three months by the SE/SSE. In the course of testing, whether all the points that are connected to that crank handle are tested on a rotation or not?</li> </ul>	
<b>24</b>	<p><b>AXLE COUNTER RESETTING REGISTER:</b></p> <ul style="list-style-type: none"> <li>• BPAC axle counter resetting, direction-wise details are correctly recorded in the register or not.</li> <li>• Whenever resetting is done,</li> </ul>	

	<p>whether the failure entry is made in the Signal Failure Register or not?</p> <ul style="list-style-type: none"> <li>• Loop line Axle Counter resetting – whether the co-operation box is kept outside SM Office or not? Whether this failure entry is also made in the Signal Failure Register or not?</li> <li>• IBS Axle Counter resetting – before resetting, whether the SM is aware what precautions are to be taken. Check for the occasions when the same are reset and cross check with the Signal Failure Register entries and TSR.</li> </ul>	
25	<p><b>CALLING-‘ON’ ROUTE CANCELLATION REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether the Veeder Counter is separately provided for direction wise or not. If a common one is provided, write to the Signal Department officials to provide the same separately to correctly analyse as to how many times the cancellations (direction-wise) are made and to take corrective remedial action.</li> <li>• Check whether the reason for using the Calling-‘on’ is correctly written by the station staff or not.</li> <li>• If it is used due to Home Signal failure/s – whether Home Signal failure entry is made in the Signal Failure Register or not?</li> <li>• Whether the S&amp;T Officials schedule is correctly followed or not (by observing the entries in the register).</li> </ul>	

26	<p><b>TI INSPECTION REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether the schedule of one per month is followed or not?</li> <li>• Whether he is bringing out irregularities / shortfalls during his inspection, if so what action taken by the SMR / SM in-charge.</li> <li>• If identical shortfalls / irregularities are noticed by the TI – what action taken by the Divisional Administration.</li> </ul>	
27	<p><b>OFFICERS INSPECTION REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Action initiated by the SMRr / SM in-charge on the irregularities / shortfalls related to safe operations noticed by the officer/s.</li> <li>• Whether SMR / SM in-charge is putting any effort to get the copy of the inspection report from the division, if not received.</li> </ul>	
28	<p><b>STAFF GRADATION REGISTER:</b></p> <ul style="list-style-type: none"> <li>• Whether gradation is done once in 6 months (January and July) as per board guidelines or not?</li> <li>• Details of marks obtained by the staff are written or not?</li> <li>• By observing the details, identify the weak area of the employee/s and counsel the SMR / SM in-charge and TI of the section to concentrate on those subjects / topics.</li> </ul>	
29	<p><b>RUSTY RAIL COLLARS / CAPS:</b></p> <p>Whether the SWR stipulate special instructions regarding the usage of rusty rail collars / caps, especially at</p>	

	those locations such as Coastal Area, Cement Companies, Iron Ore / Coal loading stations; if so whether the staff are following those instructions, i.e., testing the point/s once in 24 hours and keeping a record of the same.	
<b>30</b>	<b>AVAILABILITY OF WHEEL CHAIR AND STRETCHER AT A STATION:</b> <ul style="list-style-type: none"> <li>• Whether the wheel chair is available or not?</li> <li>• If so, whether there is a display board to that effect or not?</li> <li>• Whether the wheel chair is in good condition or not?</li> <li>• Similarly, whether there is stretcher under the control of SM, if so its condition.</li> </ul>	
<b>31</b>	<b>PLCT WORKING:</b> <ul style="list-style-type: none"> <li>• During PLCT working, whether the failure entry is made at both the stations of block section made or not?</li> <li>• If the failure is continued for more than one hour, whether the S&amp;T Supervisor is attending the station or not, if 'yes' relevant record is maintained or not?</li> <li>• If the failure time is more than 3 hours, the section TI or SMR of the station is supposed to visit the station to oversee the safe working of PLCT , whether they are aware of it, if 'yes' whether any record is maintained or not?</li> <li>• If the failure time is more than 24 hours, whether SR of 30 KMPH is imposed or not?</li> <li>• Whether the SCOR is adhering to</li> </ul>	

	the laid down instructions of not arranging crossing on single line, not arranging precedence on single / double line sections.	
<b>32</b>	<b>GLP (GDR) CHECK:</b> <ul style="list-style-type: none"> <li>• Whether the GLP Check is effectively done or not?</li> <li>• Whether the GLP is checking the formation as per joint procedure order?</li> <li>• Whether the GLP check memo is prepared in triplicate or not, to be cross checked with the stabled load register.</li> <li>• Whether the staff aware of the new instructions, i.e., when the Goods train is without Guard; LP is responsible for the entire check and SM has to depute one Pointsman to assist the LP. And additional time of 30 minutes, i.e., 30+30 minutes is permitted.</li> </ul>	
<b>33</b>	<b>AVAILABILITY OF BV EQUIPMENT:</b> <ul style="list-style-type: none"> <li>• Whether the loading, locking and sealing of full complement of BV Equipment in all the SLRs of the formation are done or not?</li> <li>• Whether the spare 'OTL' is provided or not?</li> <li>• Whether the display sticker is pasted or not?</li> <li>• Whether there is lighting provision with control switch outside the cabinet in which BV Equipment is loaded?</li> </ul>	
<b>34</b>	<b>ANY OTHER OBSERVATION</b>	



## MECHANICAL INSTALLATIONS

Activity Centre: COACHING DEPOT		
ASPECTS TO BE CHECKED ON COACHING RAKE ON PITLINE		
1	Check whether the rake is secured by providing wedges and application of hand brakes in front and rear SLR are done or not?	
2	Check whether the point was set against blocked line, clamped and pad locked.	
3	Check whether the rake placement memo was issued on standard form T. 431 by Dy.SS on duty immediately after the placement and obtain the acknowledgement.	
4	Adequacy of Pit-examination time for various rakes as laid down in Policy Circular.	
5	Availability of berthing slots.	
6	<b>INFRASTRUCTURE AVAILABILITY AND ADEQUACIES OF THE FOLLOWING;</b> <ul style="list-style-type: none"><li>• Approach road</li><li>• Pathways for material movement</li><li>• General lighting</li><li>• Pit light for night examination.</li><li>• Availability and functioning of air-compressor and rake test rig.</li></ul>	

<b>7</b>	<b>QUALITY OF REPAIRS</b>  (i) Whether Wheel profile / diameter / gauge is measured and recorded in the schedule cards and gauge is calibrated or not?  (ii) Whether proper attention paid to maintenance of air hoses, DVs, BP & FP lines, Isolation Cocks, COCs and other under-gear/brake gear and suspension items.	
<b>8</b>	Whether coach failure analysis, reporting system and follow-up action is being carried out?	
<b>9</b>	Schedules done/arising/overdue including POH.	
<b>10</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON COACHES IN SICK LINE</b>		
<b>1</b>	Quality of repairs during sick attentions.	
<b>2</b>	Adequacy of lifting facilities.	
<b>3</b>	Attention to welding practices particularly Earthing.	
<b>4</b>	Brake Power Check by connecting Single Car Test Rig after repairs in	

	sickline.	
<b>5</b>	Road access and availability of material handling equipment.	
<b>6</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON COACHING RAKE ON PLATFORM</b>		
<b>1</b>	<p><b>SYSTEM OF ROLLING 'IN' EXAMINATION OF PASSING THROUGH TRAINS –</b></p> <p>a. Availability of powerful lights for conducting this examination on either side of all platforms.</p> <p>b. Check the availability of non-contact Thermometer, whether it is being used during rolling 'in' examination?</p> <p>c. Availability of shelter for the staff provided or not</p>	
<b>2</b>	Does JE/SE/SSE-C&W record correct levels of air-pressure on loco and SLR? Does he conduct checks for Passenger Alarm Device? Do the Fitters have proper tools, lights, etc.,?	
<b>3</b>	Whether padlocking of terminating trains was done?	
<b>4</b>	Any other observations	

<b>ITEMS TO BE CHECKED DURING IOH OF COACH</b>		
<b>1</b>	Infrastructure availability and adequacies of IOH / Sick line - covered Shed line capacity for IOH / Sick attention, availability of materials, Tools and Plants, Pathway and lighting facility.	
<b>2</b>	Check whether the Centre-Pivot bolt loose or worn out or silent blocks damaged were examined?	
<b>3</b>	Check whether the AR is drained out.	
<b>4</b>	Check whether the bogie frame alignment was checked with trammeling gauge.	
<b>5</b>	Whether the brake power of the coach was tested by connecting Single Car Test Rig with Air Compressor.	
<b>6</b>	Check availability of BV Equipment in Guard compartment and OTL with seal.	
<b>7</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON PANTRY CARS</b>		
<b>1</b>	Train No., Pantry Car No., Division / Depot	

<b>2</b>	Check for presence of any inflammable material like Gas Cylinders (kept outside the nominated room), Petrol, Kerosene, etc.,	
<b>3</b>	Check whether LPG connections are periodically checked and certified by authorized agent, daily and 15 day check certificates should be available with Pantry Car Manager.	
<b>4</b>	Check whether Gas Regulators, Fire back arresters and pressure gauge is in working order.	
<b>5</b>	Check whether the specified number of outlets only being used.	
<b>6</b>	Check whether the gas cylinders are kept on proper rack duly clamping.	
<b>7</b>	Check whether fire extinguishers (4 nos.) in Pantry Car are kept in proper location and not overdue for refilling.	
<b>8</b>	Check whether the Pantry Car Staff is having adequate knowledge in usage of fire extinguishers.	
<b>9</b>	Check whether ACP apparatus is working in Pantry Car.	

<b>10</b>	<b>Check the Exhaust Fans are available and are in working order.</b>	
<b>11</b>	<b>Check whether all main doors are free to open and the passage kept free for movement.</b>	
<b>12</b>	<b>Check proper rating and types of fuses are used for battery, fan circuit, light circuit in junction boxes. Re-wirable fuses are not to be used in place of HRC fuses.</b>	
<b>13</b>	<b>Check tightness of terminal connections at junction boxes, EFT terminals and battery terminals.</b>	
<b>14</b>	<b>Check for earth in wiring. If any earth is noticed, investigate and remove earth.</b>	
<b>15</b>	<b>Check if any excessive sparking is noticed in fans.</b>	
<b>16</b>	<b>Check whether Electrical equipment provided is as prescribed.</b>	
<b>17</b>	<b>Ensure no perished / damaged cables and no open wiring in the Pantry Car.</b>	
<b>18</b>	<b>Any other observations</b>	

<b>WAGON DEPOT</b>		
<b>ASPECTS TO BE CHECKED ON AIR-BRAKE RAKE (BOX'N' &amp; BCN)</b>		
<b>1</b>	Whether the air brake test rig is being used for testing of brake power and brake system by using the air compressor?	
<b>2</b>	Whether the brake power maintained 100% in case of CC rakes, 95% in case of Premium rakes, 90% in case of End-to-End rakes.	
<b>3</b>	Whether the in quick coupler for fitment of air pressure gauge was available in Guard BV and whether it is in working condition?	
<b>4</b>	Whether the condition of DV Isolating cock, cutoff angle cocks, load/empty device and hand brake wheels were checked and ensured for proper functioning?	
<b>5</b>	Whether the condition of CBC components, brake gear components, wheel profile, springs, elastomeric pads, brake beam, brake block, hangers, brake pins and split pins were checked and ensured for proper fitment and functioning?	
<b>6</b>	Whether all the Brake Cylinders are released manually and ensured the brakes released completely before handing over the rake for Traffic use?	

<b>7</b>	Any wagon is due for ROH/POH and allowed in the formation without detachment.	
<b>8</b>	Whether the train was tested for brake continuity before signing the BPC by the Guard?	
<b>9</b>	Whether the BPC issued is in proper format (CC rakes or Premium rake or End to End) and necessary log sheets enclosed?	
<b>10</b>	Whether the doors of empty wagons are in closed and secured condition?	
<b>11</b>	Running of CC-rake and Premium rake trains even after expiry of BPC, without offering for TXR Check at nominated Depot. Further such rakes placing for loading and moving trains on GLP Check by ignoring the JPO of 5/2008.	
<b>12</b>	In case of CC+8 /CC+6 loaded rakes, the individual wagon wise weight particulars copy required to be handed over along with the speed restriction memo.	
<b>13</b>	any other observations	
<b>ASPECTS TO BE CHECKED DURING ROH OF WAGON</b>		
<b>1</b>	Infrastructure availability and adequacies of ROH/Sick line-covered	



	Shed, line capacity for ROH/Sick attention, availability of materials, Tools & Plants, Pathway and lighting.	
<b>2</b>	<p><b>DURING ROH, THE FOLLOWING BOGIE COMPONENTS TO BE STRIPPED 'OFF', EXAMINED AND IF REQUIRED TO BE REPLACED/REPAIRED.</b></p> <ul style="list-style-type: none"> <li>a) Brake beam and brake-gear pins.</li> <li>b) Brake-gear levers and rods.</li> <li>c) Brake-gear pin bushes.</li> <li>d) Brake shoe and hanger.</li> <li>e) Brake beam safety straps.</li> <li>f) Springs and spring suspension arrangement.</li> </ul>	
<b>3</b>	Check whether the Centre-pivot was checked with gauge for worn out.	
<b>4</b>	Check whether springs free height measured and grouping made before replacement.	
<b>5</b>	Check whether the AR is drained out.	
<b>6</b>	Check whether the dirt collector filters cleaned.	
<b>7</b>	Check whether the bogie frame alignment was checked with trammeling gauge.	
<b>8</b>	Check whether the CBC components dismantled and examined.	

<b>9</b>	Check whether all the knuckles were subjected for Dye-penetrant test.	
<b>10</b>	Check whether all the wheels are subjected for UST and axle box cap bolts are tightened with torque wrench with proper torque and in no case old locking plates are to be reused.	
<b>11</b>	Whether the brake power of wagon was tested by connecting single car test rig with air compressor.	
<b>12</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON ART/MRV</b>		
<b>1</b>	Complete ART formation is to be stabled in one hook and the double entry facility to be made available for all ARTs to facilitate quick turn out.	
<b>2</b>	The full-fledged Disaster Management exercise to be organized periodically to have the practical experience to ART nominated staff.	
<b>3</b>	Hydraulic re-railing equipment, running of power pack under load and no load condition and test the jacks for its efficient working.	
<b>4</b>	Condition of wire ropes and rope test certificate.	

<b>5</b>	<b>Check LPG lamps whether they are properly burning, spare mantles available or not.</b>	
<b>6</b>	<b>Check working of hydraulic and electrical operated cold-cutting equipment, availability of spares and maintenance of tools, ask for demonstration and see whether staff is conversant with its usage.</b>	
<b>7</b>	<b>Fire extinguishers general condition and next refilling date.</b>	
<b>8</b>	<b>Check whether staff know as to how to use the fire extinguisher.</b>	
<b>9</b>	<b>Detonators availability and its due date.</b>	
<b>10</b>	<b>Check whether wooden/iron wedges are available in all the coaches.</b>	
<b>11</b>	<b>Check all the measuring instruments and gauges are kept as per the requirement. Check whether the calibration dates are due.</b>	
<b>12</b>	<b>Check whether standard items list display board is provided with location plan by the Mechanical, S&amp;T, Engineering, Electrical and Medical Departments.</b>	

<b>13</b>	Check the compliance of last inspections.	
<b>14</b>	Check AMC is available for critical items like HRE, HRD, and inflatable lights etc.	
<b>15</b>	Check whether joint inspections are carried out as per schedule.	
<b>16</b>	Check whether mock drills are conducted or not and number of staff present during mock drill	
<b>17</b>	Availability of spare kits for all types of jacks.	
<b>18</b>	Functioning of inflatable air-bags.	
<b>19</b>	Whether AMC is available for HRE & HRD?	
<b>20</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON 140 T CRANE</b>		
<b>1</b>	Check for cranes working, propping beam and its hydraulic piston jacks and its seals for leakage.	
<b>2</b>	Whether all maintenance schedules have been carried out.	

<b>3</b>	Check whether 'special safety precautions for operation of 140 T crane' are prominently displayed in the driver's cab both in English and Vernacular language.	
<b>4</b>	Availability of at least two sets of well trained staff who can operate the crane with valid competency certificate.	
<b>5</b>	Check for proper working of safe load indicator.	
<b>6</b>	Check all the systems lift/lower, derrick in/out, slew, haul and travel are working.	
<b>7</b>	Check whether AMC is available for main engine.	
<b>8</b>	Check whether joint inspections are carried out as per schedule	
<b>9</b>	Check whether mock drills are conducted or not and number of staff present during mock drill.	
<b>10</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON S&amp;T EQUIPMENT</b>		
<b>1</b>	Whether PA System is in working condition.	

<b>2</b>	VHF sets are in working condition or not.	
<b>3</b>	Walkie-talkie sets for its working, condition of dry cells and expiry date.	
<b>4</b>	Field telephones for its proper working and condition of cables.	
<b>5</b>	Any other observations	
<b>ASPECTS TO BE CHECKED ON ELECTRICAL EQUIPMENT</b>		
<b>1</b>	Check for the running of generators both fixed and portable and its related spares availability.	
<b>2</b>	Check all lighting equipment, stands, reflectors, condition of cables, switches, etc.,	
<b>3</b>	Check for the functioning of inflatable lighting towers.	
<b>4</b>	Any other observations	
<b>Activity Centre: LOCOMOTIVE</b>		
<b>DURING FOOTPLATE</b>		
<b>1</b>	Rest availed by crew before signing "on" as per eligibility.	
<b>2</b>	Whether crew in sober condition and whether they are in the list of prone alcoholic.	

<b>3</b>	Whether the LP/ALP are ensuring that proper authorities are issued by SM before starting their train during normal and abnormal conditions	
<b>3</b>	Endorsement by Mechanical staff where available or by the LP/GD on BPC after performing shunting operation about the air-continuity test is made?	
<b>4</b>	Referring the loco log book remarks after taking over charge of the train / loco	
<b>5</b>	Testing the brake power at the first block section.	
<b>6</b>	Whether personal mobile and CUG is switched 'off' by the LP?	
<b>7</b>	Availability of VCD in the loco, its functioning & position of isolation switch.	
<b>8</b>	Functioning of AFL & knowledge of the crew on testing the same	
<b>9</b>	VHF communication between Guard & Loco crew, whether working or not?	
<b>10</b>	Availability of valid competency both G&SR and technical; & PME certificates of LP and ALP	

<b>11</b>	Ensuring the validity of fire extinguishers in the loco by the crew	
<b>12</b>	Functioning of loco hand brake & ensuring the same by crew	
<b>13</b>	Functioning of loco parking brake (if provided)	
<b>14</b>	Whether caution order is legible and corrections, if any are signed and stamped?	
<b>15</b>	Habit of looking back frequently on curves to ensure safe running of train	
<b>16</b>	Whether the crew are ensuring the stoppage of passenger carrying train within the platform ends (duly ensuring fouling clearances); and in regard to freight trains and light engines the crew shall draw ahead upto the foot of the Starter Signal or not?	
<b>17</b>	Habit of exchanging 'all-right' signals with the crew of trains passing on adjacent line in block section and as well at stations.	
<b>18</b>	Whether any un-authorized person travelling in loco	
<b>19</b>	Habit of recording & repeating any	



	un-usual noticed related to track or signals or any other unsafe condition en-route	
<b>20</b>	Alertness of crew and their performance: does the ALP get down from the cab to take round of the loco, examine its under-gear visually, and take corrective action required, if any, at stations where the train has its schedule stoppage.	
<b>21</b>	LP/ALP safety consciousness & knowledge of safety rules	
<b>22</b>	Any other irregularities noticed during run related with other departments (like Operating, S&T, Engineering and Commercial)	
<b>CREW BOOKING LOBBY</b>		
<b>1</b>	<b>SIGN 'ON'/'OFF' ACTIVITY:</b> i. Whether through CMS or manual or both. ii. Whether the crew is subjected for BA test while signing 'on'/'off' duty and the same is ensured by on-duty Crew Controller.	
<b>2</b>	<b>BREATHALYZER INSTRUMENT</b> i. Whether available with printing facility along with spare unit ii. Whether spare unit in working condition available iii. RDSO approval unit or not	

<p><b>3</b></p>	<p><b>RECORDS:</b></p> <ul style="list-style-type: none"> <li>i. Crew bio-data &amp; due particulars of PME/RC</li> <li>ii. Whether crew are booked only after completion of their rest</li> <li>iii. Record of longer hours working at a stretch</li> <li>iv. Whether crew are getting sufficient no. of PRs.</li> <li>v. List of alcohol prone staff</li> <li>vi. Record of 'staff tested positive', if any; action taken on them.</li> <li>vii. Whether adequate number of speed guns is available?</li> </ul>	
<p><b>4</b></p>	<p><b>SAFETY LITERATURE:</b></p> <ul style="list-style-type: none"> <li>i. Availability of latest safety literature &amp; acknowledgement.</li> <li>ii. Availability of adjacent railway / division safety literature / circulars if our crew is entering other railway territory.</li> </ul>	
<p><b>5</b></p>	<p><b>AVAILABILITY OF REGISTERS:</b></p> <ul style="list-style-type: none"> <li>i. <b>TRACK DEFECT/SIGNAL DEFECT &amp; UN-USUAL REGISTERS:</b> Whether remarks are repeated immediately to the control under exchange of PN &amp; getting the feedback. (it was observed at many lobbies that the remarks are repeated once at 10hrs daily with a single PN).</li> <li>ii. <b>LR &amp; GRADATION REGISTER:</b> Whether total crew have taken proper LR; and gradation particulars along with nominated LI available and updating the same or not.</li> <li>iii. <b>OUT STATION CREW DETAIL</b></li> </ul>	

	<p><b>REGISTER:</b> Entries like staff arrival, off duty, total working hours and rest completion time and booked time. Is any crew booked under rest?.</p> <p><b>iv. G&amp;SR:</b> Availability of G&amp;SR with latest Amendment Slips posted up to date with CC/Lobby in-charge or not.</p> <p><b>v.</b> Whether crew are counseled by LIs as per their gradation?</p>	
<b>6</b>	Any other observations	
<b>RUNNING ROOM</b>		
<b>1</b>	<p><b>Registers:</b></p> <p><b>a. Complaint Register:</b> Action taken against complaints made by occupants and its compliance.</p> <p><b>b. Officers/Supervisors Inspection Registers:</b> Proper schedules are maintained by them and its compliance available are or not.</p> <p><b>c. Bed Occupancy Register:</b> Occupants are making entries proper or not and any crew waiting for bed and waiting period action taken.</p> <p><b>d. Standing Committee Report:</b> Standing Committee Inspection report of Running Room &amp; its compliance available with Running Room in-charge or not.</p>	
<b>2</b>	<p><b>Numbering of Beds &amp; Rooms:</b> Whether each room having two beds or cubicles available or not and whether each bed should be</p>	

	numbered and occupancy board shall be updated at frequent intervals.	
<b>3</b>	<b>Backup facility:</b> Whether power backup through standby DG Set is provided or not.	
<b>4</b>	<b>Meditation Room:</b> How many crew utilizing the same and entries are made in the register.	
<b>5</b>	<b>Reading Room:</b> Newspapers & magazines are available or not.	
<b>6</b>	<b>Frequency of changing linen:</b> a. Whether linen is changed for each occupant or not. b. Condition of linen and adequate space for storing the same available or not.	
<b>7</b>	<b>Drinking water:</b> Water purification system availability. Whether water filtering arrangement through RO Plant/Aqua-guard provided. Its periodical maintenance.	
<b>8</b>	<b>Medical Certification:</b> Possession of valid medical certificates by the Catering staff or not.	
<b>9</b>	<b>Uniform:</b> Whether Running Room staff is provided with uniform, laminated badges with their photographs and using apron by the kitchen staff.	

<b>10</b>	<b>Cooling System:</b> Whether centralized air cooling system provided. If not, adequate number of desert coolers provided or not.	
<b>11</b>	<b>Cooking facility:</b> Departmental or out sourced. Cooking facilities to meet the needs of Running Staff. If outsourced, check for the quality & quantity of food supplied to Running Staff and availability of menu card. Separate kitchen for Vegetarian & Non-Vegetarian is provided or not.	
<b>12</b>	<b>Availing rest by crew:</b> Whether staff could take proper rest or not; if not, reasons for not availing rest.	
<b>13</b>	Availability of mosquito nets for each bed, pesto-killer in the dining hall.	
<b>14</b>	Condition of toiles and cleaning arrangement.	
<b>15</b>	Availability of hot water supply with solar / geyser.	
<b>13</b>	Any other observations	

## Engineering Aspects

<b>ACTIVITY CENTRE – MANNED LC GATE (OPERATING OR ENGINEERING INTERLOCKED OR NON-INTERLOCKED)</b>		
<b>S. No.</b>	<b>Items to be checked</b>	<b>Observations made</b>
<b>1</b>	<b>AVAILABILITY OF ROAD SIGN BOARDS:</b> <ul style="list-style-type: none"> <li>• Double strip (200m)</li> <li>• Single strip (50-100m)</li> <li>• Road warning board (within railway boundary)</li> <li>• Speed breaker board (5-10m from Speed breaker) &amp;</li> <li>• Speed breaker (rail post to 20 m distance or within railway boundary) whether provided as per standards?</li> </ul>	
<b>2</b>	Provision of wicket gates (mandatory at manned LC Gates).	
<b>3</b>	Whether vertical clearances of lifting barriers (from bottom of lifting barrier to road surface) is between 0.8 - 1m.	
<b>4</b>	Lateral, Vertical clearances of check rails (lateral - 51 to 57mm; Vertical - >38mm).	
<b>5</b>	Whether length of check rail & road width is as per standards (length of check rail = road width + 2.0m).	
<b>6</b>	Whether the length of the safety chain is suiting the width of the LC, make the Gateman to physically put the chain across the LC Gate and	

	observe the length whether it is correct or not, also make the Gateman to padlock.	
<b>7</b>	Cross check the LC Gate Register entries with station – at least last 3 trains; in case if it is non-interlocked LC Gate, the PNs should be checked & in case of interlocked LC Gate, check for the availability of PN Sheet.	
<b>8</b>	Check for the availability of competency certificate and medical certificate of Gateman.	
<b>9</b>	Check the record for the last damages caused to lifting barrier – in case of interlocked LC Gate, whether PN was exchanged by Gateman with SM till the lifting barrier is restored / repaired.	
<b>10</b>	Check the general condition of the gate lodge with regard to Civil / fabricated structure and Electrical fittings, alternate power supply, water source, etc.,	
<b>11</b>	Test the efficacy of the interlocking in case of interlocked LC Gate by trying to lift the lifting barrier after transmitting the EKT.	
<b>12</b>	Knowledge of the Gateman during normal working and abnormal working.	

<b>13</b>	<b>Whether the check rail clearances are clean?</b>	
<b>14</b>	<b>Whether the Gateman are functioning as per official roster?</b>  <b>Whether Gateman are available in three shifts (in case of 'Special' class and class 'A' LC Gates only)?</b>	
<b>15</b>	<b>Whether GWR instructions are available in vernacular and English / Hindi languages.</b>	
<b>16</b>	<b>Observations made by Engineering / Traffic Officials in the LC Gate Inspection Register.</b>	
<b>17</b>	<b>Drainage facility is available and has clear passage or not.</b>	
<b>18</b>	<b>Fencing available in both ways, i.e., road and rail directions.</b>	
<b>19</b>	<b>General condition of the road within the track portion and on the approach locations.</b> <b>Road surface is level upto 15m or beyond in Special Class (class I road).</b> <b>In case of other class of roads, 8m surface shall be level.</b>	
<b>20</b>	<b>Availability of gate equipment as per the SWR and its condition.</b>	



<b>21</b>	<p>Whether sliding boom provision is available and in working condition which will be used during damages to lifting barrier.</p> <p>Whether the sliding boom is also having interlocking proving, if so, whether it is working or not.</p>	
<b>22</b>	<p>Whether the audio buzzer is properly functioning and audible while closing / opening the lifting barrier.</p> <p>Is the buzzer is interlinked with the movement of lifting barrier or to be switched on manually.</p>	
<b>23</b>	Whether the infrastructure is enhanced according to the class of LC Gate as per Annexure 9 of IRPWM?	
<b>24</b>	Any other observations	
<b>ACTIVITY CENTRE – UNMANNED LEVEL CROSSINGS</b>		
<b>1</b>	Check for the minimum visibility of 800m for both road & rail user. If not, whether any speed restriction is imposed or not.	
<b>2</b>	<p><b>AVAILABILITY OF ROAD SIGN BOARDS:</b></p> <ul style="list-style-type: none"> <li>• Double strip (200m)</li> <li>• Single strip (50-100m)</li> <li>• Road warning board (within railway boundary)</li> <li>• Speed breaker board (5-10m from speed breaker) &amp;</li> </ul>	

	<ul style="list-style-type: none"> <li>Speed breaker (rail post to 20 m distance or within railway boundary) whether provided as per standards?</li> </ul>	
<b>3</b>	Lateral, vertical clearances of check rails (lateral - 51 to 57mm; vertical - >38mm).	
<b>4</b>	Length of check rail & road width should be as per standards (length of check rail = road width + 2.0m). (road width for class – I 9.0m, class – II 7.5m, class – III 5.0m)	
<b>5</b>	<p>Whether “W/L” board is available at 600m.</p> <p>In case of single line sections, where the visibility is clear, whether the “W/L” board distances is reduced to 350m or not?</p>	
<b>6</b>	Whether the existing TVUs qualify for manning?	
<b>7</b>	Whether barricading is available for both road and rail side.	
<b>8</b>	Feasibility for closure by diverting or by providing limited height subway or for clubbing.	
<b>9</b>	Whether approach road gradient (beyond 8m) is 1 in 20 for Class III	

	roads; 1 in 15 for Class IV roads?	
<b>10</b>	Any other observations	
<b>ACTIVITY CENTRE / EQUIPMENT – POINTS &amp; CROSSINGS</b>		
<b>1</b>	<p>Check the gauge (-5mm to +3mm in straight portion) &amp; cross level (variation not permitted) at following important locations:</p> <ul style="list-style-type: none"> <li>• In switch portion, 450mm ahead ATS, at ATS, at 150mm behind ATS, at heel block.</li> <li>• In lead portion all the stations Versine, gauge &amp; cross-levels.</li> <li>• In crossing portion 1m ahead of ANC, 150mm behind ANC, 1m behind ANC, wear of crossing both wing rails &amp; nose.</li> </ul>	
<b>2</b>	Observe the housing of stock/tongue rails (for 1 in 12 -upto 4 sleepers, 1 in 8 ½ - upto 3 sleepers).	
<b>3</b>	Measure the throw of switch on both LH & RH (permitted 95 - 118 mm).	
<b>4</b>	Whether joints are gapless joints in crossing portion or not.	
<b>5</b>	Whether 'J' type ERCs are provided in prescribed locations or not.	

<b>6</b>	Whether clean cushion maintained or not (minimum 300 mm - maximum 350 mm).	
<b>7</b>	Whether ZMF is available in lead & crossing portions.	
<b>8</b>	<b>JOINT INSPECTION OF POINTS &amp; CROSSINGS:</b> <ul style="list-style-type: none"> <li>• Whether the schedule is being followed or not?</li> <li>• Deficiencies noticed during the inspection – whether they have attended and remarked to that effect?</li> <li>• If the nature of deficiency is similar type at similar location, whether any action plan is initiated for rectification of the same or not?</li> </ul>	
<b>9</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT – CURVES</b>		
<b>1</b>	Whether curve particular boards, TB, TE Rail posts etc., provided in prescribed locations or not.	
<b>2</b>	Whether joggled fish plates for the Themit welds on the outer rails of the curve provided with proper clamps or not (as per ACS 116 of IRPWM, Para 429)	
<b>3</b>	Whether greasing of ERC (inside every	

	one year & outside every two years in identified corrosion prone areas), gauge face corner (every fortnight) done as per schedule or not.	
<b>4</b>	Check the gauge & super-elevation in transition portion especially, (upto + 10mm for curves less than 350 m radius).	
<b>5</b>	Whether adequate ballast provided for outer rail of the curve, any deficiency of ballast noticed.	
<b>6</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT – LWR / SEJ</b>		
<b>1</b>	Whether SEJ/LWR particular board provided or not?	
<b>2</b>	Whether reference pillars are correctly positioned or not (mean position should coincidence with reference mark & centre of the chair plate).	
<b>3</b>	Whether the total gaps are tallying as per temperature range or not.	
<b>4</b>	Check the squaring of tongue rails, tightness of bolts/nuts.	
<b>5</b>	Whether any discontinuation of track	

	noticed (fish plated joint) in LWR track which is not permitted.	
<b>6</b>	Whether angle tie provided or not?	
<b>7</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT – BRIDGES</b>		
<b>1</b>	<ul style="list-style-type: none"> <li>• Whether danger level is marked;</li> <li>• Whether HFL marked or not &amp;</li> <li>• Whether availability of flood gauge or not.</li> </ul>	
<b>2</b>	Whether Guard rails are provided in major bridges or not. Check the lateral clearance between Guard rail & running rail (250 ± 50mm).	
<b>3</b>	Top table of the Guard rail should not be lower than that of the running rail, by more than 25mm or not.	
<b>4</b>	Check the gauge & cross-levels on the bridge (straight including curves of 350m radius or more - 5mm to + 3mm, for curves less than 350m radius upto + 10mm i.e., 1686 mm).	
<b>5</b>	Whether pathway provided in the centre of track over sleepers properly/intact or not for the purpose of inspection of Engineering Officials. Ensure overlapping pathway plates are fixed properly.	

<b>6</b>	Whether the entire hook bolts are intact and position of arrows on top of the bolts should be at right angle to the rails pointing towards the rail.	
<b>7</b>	Whether all the nuts, hook bolts etc., are oiled periodically or not.(to avoid rusting)	
<b>8</b>	Whether vent-way is clear of obstruction or not.	
<b>9</b>	Whether joggled fish plates of the Thermit weld on the bridge along with its approaches up to 100m is done using proper clamps or not.	
<b>10</b>	Whether prescribed trolley refuges/man refuges are provided or not (on bridge with main spans of <100m - 100m, on bridge with main spans of 100m or more - a refuge over each pier, on ballasted deck bridges- 50m).	
<b>11</b>	Whether anti-sabotage device with nut and special keys in all the identified sabotage prone locations on important/major bridges and their approaches provided or not as per engineering standing order no. 66.	
<b>12</b>	Any other observation	

<b>ACTIVITY CENTRE / EQUIPMENT - SOD</b>		
<b>1</b>	Check the horizontal distance from centre of track to passenger platform coping which should be 1670 - 1680mm.	
<b>2</b>	Check the horizontal distance from centre of track to face of any platform wall which shall be 1675 - 1905mm.	
<b>3</b>	Check the height above rail level for passenger platform which shall be 760 - 840mm.	
<b>4</b>	Check the height of cover over platform above rail level which shall be 4470 - 6250mm.	
<b>5</b>	Check the minimum distance centre to centre of tracks (for existing works - 4265mm, for new works or alterations to existing works - 5300mm).	
<b>6</b>	Any other observation	
<b>TRACK MACHINES LIKE TTM, BCM, UTV, PQRS CRANE, UNIMAT, DUOMAT, Etc.,</b>		
<b>1</b>	Whether the Operator is trained and in possession of competency certificate?	
<b>2</b>	Does the Operator possess sectional knowledge?	



<b>3</b>	<b>Whether the Operator underwent PME on par with train LP and having the certificate?</b>	
<b>4</b>	<b>Knowledge of the Operator in observation of G&amp;SR rules (normal and abnormal).</b>	
<b>5</b>	<b>Whether the prescribed equipment is available in working condition or not?</b>	

## S&T Installations

ACTIVITY CENTRE / EQUIPMENT – CONTROL PANEL		
S. No.	Items to be checked	Observations made
1	Whether yard diagram on the panel, the actual yard layout and the location of the signals as well as the SWR is matching with the Signal Interlocking Plan.	
2	whether SM's key is 'IN', set the relevant points for the required route, check the track clear indications in the route as well as the overlap, LC Gates are closed if any, in the route as well as the overlap, and then take 'OFF' the concerned signal. Whether the signal had correctly responded as per the laid down conditions or not.	
3	Initiate route cancellation when required and observe whether the time taken for the same is 120 seconds or less.	
4	Calling-on signal – ensure the calling 'on' track is occupied, Home Signal knob is 'normal', points in the route are correctly set before taking 'off' Calling-on Signal. After 60 (as per amendment to IRSEM) seconds, Calling-on Signal shall clear. Initiate Calling-'on' signal Cancellation; wait for 240 seconds for releasing the route. Notice whether route is released after 240 seconds or not.	

	Also notice whether points in the trailing direction is proved or not (not necessary to prove)	
<b>5</b>	Whether entry is made in the calling 'on' cancellation register along with reasons and remarks or not.	
<b>6</b>	Whether Veeder counters are separately provided for UP and DN directions or not?	
<b>7</b>	Similarly, whether separate counters (for up and down) are provided for Calling-'on' Cancellation or not.	
<b>8</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT – ELECTRIC POINT MACHINES</b>		
<b>1</b>	Whether crank handle is kept in a glass box with EKT provision and provided with Veeder counter or not?  Whether the removal of crank handle is linked with data-logger or not.	
<b>2</b>	Whether free indication near point knob is disappearing when concerned track relay is dropped or not.	
<b>3</b>	Point should not stop in-between even if that point zone track relay is dropped after the point operation had already started. Check this.	

<b>4</b>	Whether point TJLB is causing any inconvenience for crank handling.	
<b>5</b>	Place an obstruction test piece of 5 mm between stock and tongue rail at 150 mm from the toe of the switch and observe that the point does not get locked and its 'N' or 'R' indication flashes on the panel or not.	
<b>6</b>	Whether opening of the point is around 115 mm or not and housing is satisfactory or not.	
<b>7</b>	Whether the readings of the point machine are recorded and kept in the respective point machine or not.	
<b>8</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT – TRACK CIRCUIT</b>		
<b>1</b>	<p>Whether POH of track relay is carried out once in 10-12 years.</p> <p>a) Whether track relay voltage is not more than 300% of the pickup value for QT relays.</p> <p>b) Whether 'J' clips are provided on the glued joints.</p> <p>c) Whether cross protection and double cutting is available or not.</p>	
<b>ACTIVITY CENTRE / EQUIPMENT – CRANK HANDLE</b>		
<b>1</b>	Whether the crank handle is able to be extracted only when the relevant	

	signal is in 'on' position?	
<b>2</b>	Extract crank handle when the concerned signal knob in the normal position and observe crank handle out indication appeared or not.	
<b>3</b>	Attempt to take off that signal and observe that it should not respond.	
<b>4</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT – SGE DOUBLE LINE BLOCK</b>		
<b>1</b>	Keep the commutator in 'TOL' position and try to take 'off' LSS which should not assume 'off' position.	
<b>2</b>	Whether block instrument is provided with double lock arrangement and sealed or not.	
<b>3</b>	Whether line voltage and line current incoming and outgoing recorded or not.	
<b>4</b>	Any other observation	
<b>ACTIVITY CENTRE – RELAY ROOM</b>		
<b>1</b>	Whether double lock arrangement is available ND effective or not?	
<b>2</b>	Whether the relays are clean and in sealed condition or not?	

<b>3</b>	Whether the relay room opening and closing is linked with data logger or not?	
<b>4</b>	Any other observation	
<b>ACTIVITY CENTRE – BATTERY ROOM</b>		
<b>1</b>	Specific gravity should be 1180-1220 when the battery cells are fully charged. SPG < 1180 implies that those cells are discharged and normally charged cell voltages would be 2 – 2.2 v and discharged cell voltage would be < 1.8 V.	
<b>2</b>	Any other observation	
<b>ACTIVITY CENTRE – INTERLOCKED LC GATE</b>		
<b>1</b>	Whether interlocked LC Gate indications (i.e. open, close & free) is available on the panel or not?	
<b>2</b>	If the interlocked LC is open in the route, the corresponding signal should not assume 'off' aspect, even if its knob is turned to reverse position.	
<b>3</b>	The signal is taken 'off' duly closing the concerned LC Gate, the free indication of that gate should disappear.	
<b>4</b>	Any other observation.	

<b>ACTIVITY CENTRE / EQUIPMENT – SIGNAL POST</b>		
<b>1</b>	Implantation distance should be painted on all signal posts and it should be more than 2.36 m.	
<b>2</b>	Whether arrow marks are provided for Starter signals, if they are placed on the right hand side of the track.	
<b>3</b>	Any other observation	
<b>ACTIVITY CENTRE /EQUIPMENT – LED SIGNALS</b>		
<b>1</b>	Whether minimum 90V/118 MA at the regulator is available or not.	
<b>2</b>	Whether AC/DC, conventional CR/LED, blanking/non-blanking selection in current regulator correct setting is done or not.	
<b>3</b>	Where IPS is provided or not, whether inverters are provided for signals to avoid their blanking or not.	
<b>4</b>	ANY OTHER OBSERVATION	
<b>ACTIVITY CENTRE / EQUIPMENT – LOCATION BOXES</b>		
<b>1</b>	Whether opening of the door from the centre of track is more than 2.5m or not?	

<b>2</b>	Whether the value of the earth is painted on the location earth enclosure or not; and it should be less than 10 ohms or not?	
<b>3</b>	Whether the value of maintenance free earth (ring earth) is below 1 OHM or not?	
<b>4</b>	Any other observation	
<b>ACTIVITY CENTRE / EQUIPMENT– ELECTRONIC INTERLOCKING</b>		
<b>1</b>	<b>WHEN VDU IS AVAILABLE:</b>  a) WHETHER SM'S KEY EQUIVALENT IS EFFECTIVE, b) WHETHER ALL OPERATIONS ARE POSSIBLE WITH THAT c) WHETHER PANEL / VDU OPERATION SELECTION IS AVAILABLE. d) WHETHER AUTOMATIC CHANGE OVER TO PANEL OPERATION IS POSSIBLE WHEN VDU FAILS, e) WHETHER CHECKSUMS / CRC OF APPLICATION SOFTWARE AND STATION SPECIFIC SOFTWARE IS AVAILABLE. f) WHETHER PROPER MAINTENANCE FREE EARTHING AND SURGE PROTECTION DEVICE IS AVAILABLE. g) WHETHER MAIN TERMINAL AS WELL AS THE STAND BY SYSTEM IS IN WORKING CONDITION.	



<b>ACTIVITY CENTRE / EQUIPMENT - MULTI SECTION DIGITAL AXLE COUNTER</b>		
<b>1</b>	<b>WHETHER SURGE PROTECTION DEVICE AND MAINTENANCE FREE EARTHING ARE AVAILABLE AND WORKING</b>	
<b>2</b>	<b>WHETHER CHECKSUM / CRC OF WORKING SYSTEM VERIFIED.</b>	
<b>3</b>	<b>WHETHER DATA DOWNLOADING / ANALYZING PORT – MAIN TERMINAL IS AVAILABLE AND WORKING.</b>	
<b>4</b>	<b>ANY OTHER OBSERVATION</b>	
<b>ACTIVITY CENTRE / EQUIPMENT - BPAC</b>		
<b>1</b>	<b>WHETHER MAINTENANCE REGISTER, AND MAINTENANCE AS PER MANUFACTURERS/RDSO FORMAT AVAILABLE OR NOT?</b>	
<b>2</b>	<b>WHETHER PROPER EARTHING EQUIPMENTS AND RESET COUNTERS ARE WORKING OR NOT?</b>	
<b>3</b>	<b>WHETHER RESETTING DATA ENTRY IN RESETTING REGISTER / SIGNAL FAILURE REGISTER IS RECORDED OR NOT?</b>	
<b>4</b>	<b>ANY OTHER OBSERVATION</b>	

<b>ACTIVITY CENTRE / EQUIPMENT – EMERGENCY SOCKETS</b>		
<b>1</b>	WHETHER TESTING OF EMERGENCY SOCKETS ONCE IN EVERY 10 DAYS AND NOTIFYING THE CONTROL REGARDING THE DEFECTIVE SOCKETS IS FOLLOWED OR NOT?	
<b>2</b>	ARRANGE FOR THEIR RECTIFICATION AT THE EARLIEST AND ALSO NOTIFY THE CONTROL REGARDING THE SAME.	
<b>3</b>	WHETHER EMERGENCY CIRCUIT IS CONNECTED TO THE SECTION CONTROLLER DIRECTLY AND NOT THROUGH THE TEST ROOM?	
<b>4</b>	WHETHER THE TESTING OF PORTABLE EMERGENCY TELEPHONE LOADED IN SLRs OF TRAINS DULY CONNECTING THEM TO THE EMERGENCY SOCKETS AS PER THE SCHEDULE IS BEING DONE OR NOT?	
<b>5</b>	ANY OTHER OBSERVATION	
<b>ACTIVITY CENTRE / EQUIPMENT - CHANGE OVER PANEL ROOM AND GENERATORS</b>		
<b>1</b>	Whether self-starting arrangement is available and working or not?	
<b>2</b>	Procedure for change over is painted near the power board or not?	
<b>3</b>	Whether description about changeover of power supply and	

	status monitoring panel of DCDP is included in SWR?	
4	Any other observation	



**SOUTH CENTRAL RAILWAY**

**SAFETY  
INSPECTION  
CHECKLIST**

**2011**

**HEADQUARTERS SAFETY ORGANISATION  
SECUNDERABAD**

## FOREWORD

My dear Inspecting Officials,


I am glad to issue the updated "*Safety Inspection Checklist-2011*" which is a compilation of vital areas / safety features of various Departments to be checked during inspections.

The check list has been prepared by keeping in mind all safety features which are required to be checked by Officers and Staff while carrying out inspections.

In addition, approved schedule of inspections of Officers and Supervisors, has also been incorporated in this booklet.

This booklet is a guide to the inspecting officials and in no way replacement of the existing instructions contained in codes, manuals, departmental circulars, etc.,. **In case of any discrepancy, the instructions contained in codes/manuals/circulars will prevail.**

*I hope that this checklist will be handy in conducting various safety inspections and will also improve the quality of inspections.*

  
(ADESH SHARMA)  
CHIEF SAFETY OFFICER

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## SECTION “A”

### TRAFFIC DEPARTMENT

#### **1. STATION INSPECTION:**

- i. Name of the station :
- ii. Staff on duty:
- iii. Availability of valid BCC & PCC in their personal custody:
- iv. Placement of line blocked lever collars/slide-pins/panel caps, if running lines are occupied/obstructed:
- v. Whether the SM/Dy.SM is in the habit of altering the points as per GR 3.38 (i.e., setting of points against the occupied line) immediately after the arrival of the stopping train. Cross check the same with the data-logger output(Note: On double line section, when a stopping train is received on a common loop, points in rear and in front shall be set against the blocked line treating that as single line).
- vi. Exchange of ‘all-right’ signals and action taken when any unusual noticed like, efforts to stop the train, intimating the Gateman, SM of next station and SCOR, making remark in TSR & Station Diary, etc., :
- vii. Deputing Pointsman to exhibit ‘all-right’ signals from ‘off’ side.
- viii. Whether the SM is personally ensuring complete arrival of the stopping train by exchanging Private Number with the Guard as per the amended SR 14.10 at stations where BPAC is not provided/when BPAC is not working.
- ix. Whether the Shunting Order (T.806) is prepared and issued in triplicate and acknowledgement of train crew is obtained (unless the same is exempted by Sr.DOM of the Division):
- x. In the course of shunting operations, whether the related points are locked during unsignalled movements:

- xi. Whether the SM/Dy.SM is aware about the station section and demarcation limits of station section & block section – related train passing documents and provisions as per SWR to be followed while performing shunting operations.
- xii. Whether station essential safety equipment is available in working condition as per SWR and also whether the prescribed number is adequate to the station or not?
- xiii. Whether Gateman of Interlocked LC Gate is intimated about train details before despatch/reception of trains?
- xiv. Whether PNs are exchanged with Gateman of Interlocked LC Gate during failures of interlocking?
- xv. Whether TI of the section is adhering to his schedule of inspections?
- xvi. Whether the PNs are exchanged before granting / obtaining line clear for a train with Gateman of Non-Interlocked LC Gates whose normal position is 'closed' for road traffic.
- xvii. Whether reception and departure of trains are dealt as per SWR stipulations or not?
- xviii. Whether shunting operations are carried out as per the conditions stipulated in SWR or not?
- xix. Whether testing of signals and emergency cross-over is done regularly?
- xx. Whether monthly safety meetings are regularly conducted?
- xxi. Whether surprise night inspections are carried out as per schedule by the SM-in-charge?

**2. TRAIN SIGNAL REGISTER:**

- i. Whether the entries are complete and legible?
- ii. Whether sign 'on' and sign 'off' is properly done as per BWM guidelines?
- iii. Whether counter numbers, last PN issued is written while HOC/TOC?

- iv. Cross-check the PNs with adjacent stations at least for the last 3 trains.
- v. Check for red-ink entries during PLCT working, TSL working, when relief engine/train is sent into the section, name and time of departure/arrival of Night Patrolman, etc.,
- vi. Whether the SM-in-charge is checking the TSR and signing in it daily?

### **3. ROUTE CANCELLATION REGISTERS**

- i. Cross check and tally the counter numbers.
- ii. Whether the reason for cancellation is recorded or not?
- iii. In case route cancellation is done for departure stop signal, whether memo was served to Loco-Pilot or not before putting back signals to 'ON'? Also check for the record of the memo given to Loco-Pilot.
- iv. In case of route cancellation for reception stop signal, check for the record of details accident averted?
- v. In case of route cancellations initiated in the course of shunting operations, check whether short shunt movements are adopted?
- vi. Whether the time taken for route cancellation is recorded in the register or not to analyse the functioning of timer relay?

### **4. SWR AND SWR DECLARATION REGISTER**

- i. Check for the currency of SWR.
- ii. Check whether it is in new format as circulated.
- iii. Check whether the staff are acknowledging whenever amendments are issued to SWR.

- iv. Similarly check, whether the staff acknowledgement is taken after 15 consecutive days leave/sick/absent/refresher course training. Cross check these with attendance register and satisfy.
- v. Whether the station layout is tallying with SWR diagram or not?
- vi. Whether the actual working is as per the instructions in the SWR?

**5. S&T FAILURE REGISTER**

- i. Whether all Signal and Telecom failures are recorded or not, i.e., block failures, signal failures, point failures, track circuit failures, axle counter failures, control telephone failures, station to station auto-phone failures, station to cabin/LC Gate phone failures.
- ii. In case of block instrument failures, cross check whether entries are made at both the stations (since block instrument is an asset between two stations).
- iii. Cross check the entries with train passing documents like T.369(3b), PLCT (T.A1425, T/B 1425, T/C 1425 and T/D 1425) and vice-versa.
- iv. Whenever trains are received on Calling-ON signal due to signal failure – check whether related failure entry is made in S&T Failure Register or not.
- v. Check whether failure memos are issued to S&T officials for attending to failures.
- vi. Check whether monthly and yearly summary of failures are drawn in the register.
- vii. Check if any particular signal or point is failing frequently and whether the S&T officials have analysed the failure properly?

**6. DETONATOR REGISTER**

- i. Whether the VTO, as prescribed in SWR is visible to SM/Dy.SM or not?
- ii. Check whether assurance is obtained from nominated Fog signalmen or not?
- iii. Whether the available stock of detonators are within the prescribed time limit or not?
- iv. Whether the stock is adequate?

**7. ACCIDENT REGISTER, DETAILS OF DISASTER MANAGEMENT**

- i. Check whether all the columns are filled in the accident register like, staff held responsible, D&AR action, awarded punishments are as prescribed by Railway Board guidelines or not, etc.,
- ii. Identify whether similar type of accidents/unusual are happening on a particular line/point.
- iii. Check whether the details and contact numbers of railway and non-railway doctors list is exhibited within/outside SM office.
- iv. Check up for the contents as prescribed in the first-aid box – replenishment details, competency certificate, etc.,
- v. Contact numbers of civil authorities like, Collector, MRO, SP, Magistrate, Transport (both private and Govt.), NGO Organisations, Crane Operators, list of Divers in cases of floods, etc., is available and updated every year or not.
- vi. Make a random effort to contact the doctor / clinic / hospital and ensure that the available contact telephone numbers are updated ones, keep a record of the same.
- vii. Availability of fire fighting equipment and the usage knowledge of staff.
- viii. Availability of a gist of DM Plan.

**8. STABLED LOAD REGISTER**

- i. Whether the record maintained is as per the prescribed pro-forma and the entries are properly made.

- ii. Whether the securing of formation is properly done as per rules, i.e., pinning down of handbrakes of 6 wagons from loco and 6 wagons from BV including BV or in the absence of BV, a total of 18 wagons handbrakes are to be pinned down.
- iii. While clearing the load, GDR check is conducted or not and cross check be asking for the record/file of GDR check pro-formas.

**9. STATION DIARY**

- i. Check whether the entries are properly made.
- ii. Check whether the columns meant to be filled by SM/SMR of the station are filled-in by them or not.

**10. PN SHEET AND PN ISSUING REGISTER**

- i. Cross-check the PNs with TSR and with adjacent stations/cabins/LC Gates.
- ii. Whether the sequence of issuing PNs is properly done.
- iii. Whether record of issuing PN sheets to Cabins & LC Gates are properly maintained or not.
- iv. The staff is in possession of only two PN sheets at any given time.

**11. CAUTION ORDER RECORD AND REGISTER**

- i. Whether caution order imposition/cancellation messages are properly numbered and pasted.
- ii. Whether the imposition of caution order is correctly relayed to 'all concerned'.
- iii. Whether existing caution orders are correctly brought forward on every Monday.
- iv. Cross check the same with caution orders issued to crew.

- v. Whether the caution orders are geographically printed.
- vi. Whether any new caution is imposed/existing one is cancelled – suitable remarks are passed and signed by SM/Dy.SM.
- vii. Whether acknowledgement of crew is taken.

**12. BIO-DATA REGISTER**

- i. Check for the PME and Refresher Course details.
- ii. Specially, check for the date of next PME after staff attaining 45 years and 55 years of age.
- iii. Ensure that the staff overdue for PME or Refresher Course are not entrusted with train passing duties.

**13. WEATHER WARNING REGISTER**

- i. Whether name, designation and time of officials to whom message was repeated are written or not?
- ii. Actual weather prevailing at the time of receipt of weather warning is remarked in the register or not?

**14. AT GOODS LOADING STATION WEIGHMENT & SUMO RAKE**

**PARTICULARS:**

- i. Whether the unweighed train was issued with Caution Order with SR 40 KMPH up to next weighing point.
- ii. If it is noticed as 'SUMO' rake (CC+8+2/CC+6+2/CC+4+2), whether Caution order with relevant SRs
- iii. in case of granite block loading, ensure that the JPO is followed.

.....

**SCHEDULE OF INSPECTIONS FOR  
SECTION TRAFFIC INSPECTOR**

<b>S. No</b>	<b>Activity centre</b>	<b>Periodicity</b>	<b>No. of inspections</b>
1	Regular Station Inspection		Each station once in 3 months
2	Station Safety Inspection	Monthly	3
3	Inspection of LC Gates a. Traffic b. Engineering	Monthly Monthly	3 1
4	Surprise night inspection	Monthly	3
5	*Foot plate inspection a. Passenger carrying train b. Goods train (*one by night and one by day)	Monthly Monthly	2 2
6	BV Inspection	Monthly	2
7	Crew-lobby	Bi-monthly	1
8	Joint foot-plate inspection (signal sighting committee)	Quarterly	1
9	Checking the knowledge of rules a. SM/ASM b. Guard c. LP & ALPs d. Gatemen e. Pointsmen	Monthly Monthly Monthly Monthly Monthly	10 5 5&5 5 5
10	Inspection of ART & MRT	Quarterly	1
11	Safety equipment at stations, LC Gates and locos	Monthly	1



**Note:** TI should take care that same station/LC is not inspected again and again. The TI should cover all the stations/LCs in their jurisdiction on rotation.

**Section TIs** –Ensure to complete your schedule inspection.

**SMR/SS** - Complete your schedule inspections at the activity centres in the station.

**NOTE: THE GRADATION OF THE STATION STAFF TO BE DONE AS FOLLOWS :**

1. SS in grade pay 4600 shall be graded by AOM/G.
2. The section TI & the supervisory SS (in grade pay of 4600) should conduct the gradation of train passing staff of operating, Group 'C' staff including ASMs, switchman.
3. The SS/SM in-charge the station shall grade all group 'D' staff working under his control.

**SCHEDULE OF INSPECTIONS – DIVISIONAL TRAFFIC OFFICERS**

(GM/SC letter No. G.157/Optg./2005 dated 17.02.2005)

S.No	Inspection	JAG	SS	JS
1	Station inspection	1	1	2
2	Night inspection of stations, LCs, cabins	1	1	1
3	Inspections of cabins other than mentioned under S.No.1	1	1	2
4	Foot-plate inspection	1	1	2
5	Inspection of crew-lobby	*1	*1	1
6	Inspection of running-room	*1	*1	*1
7	Monitoring of Guard and inspection of BV Equipment	1	1	1
8	Manned LC Gate	1	1	2

\* Once in a quarter

## SECTION “B”

### TESTING OF EQUIPMENT

#### **I. Control Panel:**

1. Ensure Yard diagram on the Panel, the actual yard layout & the location of signals as well as the SWR is matching with the SIP.
2. Ensure no undesired indications are available on the Panel.

#### **II. To Clear Signal:**

- i. Ensure SM's key is 'IN', set the relevant points for the required route, check the track clear indications in the route as well as the overlap, ensure LCs are closed if any, in the route as well as the overlap, and then take 'off' the concerned signal.
- ii. After satisfying that the signal had correctly responded.
- iii. Initiate route cancellation when required and also ensure the time taken for the same is 120 seconds.
- iv. Make entry in the route cancellation register along with reasons, and also the remarks for the same, if any.
- v. In case of end-panels, clear the signal with slot and put back the slot and satisfy whether the signal is responding correctly or not.
- vi. For testing of calling-ON signal, ensure the Calling-'ON' track is occupied (either by the occupation of train or by simulation), home signal knob is 'normal', points in the route are correctly set before taking 'off' calling-ON.

- vii. After 120 seconds, the calling-ON signal shall clear.
- viii. Initiate calling-ON signal cancellation, wait for 240 seconds for the releasing of the route.
- ix. Make entry in the calling-on cancellation register along with reasons and remarks, if any.
- x. Ensure Sand Humps or Buffer Stops are available physically as per SIP. If not, restrict the concerned reception signal when overlap is set onto it.

### **III. Point Machines:**

- a. Track Locking:
  - a. Ensure the crank handle is 'IN'.
  - b. Free indication near point knob should disappear when concerned point Track relay is dropped.
  - c. Point should not get operated when its point zone track relay is dropped.
  - d. Point should not stop in between even if that point zone track relay is dropped after the point operation had already started.
- 2. Ensure Point TLJB does not cause inconvenience for crank handling.
- 3. Place an obstruction test piece of 3.25 mm between stock and tongue rail at 150mm from the toe of the switch and observe that, the point does not get locked and its 'N' or 'R' indication flashes on the panel, as the case may be.

4. Conduct the correspondence test and ensure steady Normal or steady Reverse indications appear only when both the cross over points are set and locked in those respective positions only. Otherwise, flashing indication should appear.
5. Ensure cross protection is provided.
6. Ensure the opening of the point is around 115 mm.
7. Ensure housing is satisfactory.
8. Ensure the readings of the point machine are recorded and kept in the respective point machines.
9. Ensure Normal point operation voltage and current readings are as under:

Operation	Volts (V)	Current (Amp)	Obstruction	
			(V)	(Amp)
'N' to 'R'	100-105 + or – 5	1.6 + or – 0.2	95-100 + or – 5	4 + or – 0.4
'R' to 'N'	100-105 + or – 5	1.6 + or – 0.2	95-100 + or – 5	4 + or – 0.4

**IV. Track Circuits:**

- i. Ensure POH of track relay is carried out once in 10 – 12 years.
- ii. Ensure track relay voltage is not more than 300% of the pickup value for QT relays.
- iii. Ensure J clips are provided on the Glued Joints.
- iv. Ensure cross protection is available.
- v. Ensure double cutting is available.

**V. Crank Handle:**

1. Ensure the crank handle is able to be extracted only when the relevant signal is in 'ON' position.

2. Extract Crank Handle when the concerned signal knob in the normal position and observe Crank Handle out indication.
3. Attempt to take 'off' that signal and ensure it would not respond.

**VI. SGE Double Line Block Instrument:**

- i. Even if commutator is turned to TOL position and the concerned LSS knob is reversed, it should not assume 'off' aspect.
- ii. Ensure the block instrument is provided with double lock arrangement (one key with Operating staff and one key with S&T staff) and also sealed.
- iii. Line voltage – outgoing 18V – 26 V; current 18mA – 30mA (depending on the length of the block section).
- iv. Line voltage – incoming 8V – 9V; current 18mA – 20mA (depending on the length of the block section).

**VII. Podanur Make Push-Button Type Single Line Block Instrument:**

- i. Normal line voltage: 60V – 80V (depending on the length of the block section).
- ii. Line current – outgoing 60mA – 70mA (depending on the length of the block section).
- iii. Line current – incoming 60mA – 70mA (depending on the length of the block section).

**VIII. Relay Room:**

- i. Ensure double lock arrangement is effective.
- ii. Ensure the relays are clean and in sealed condition.
- iii. Ensure relay room opening and closing is included in the data logger (for new installations).

**IX. Equipment Room/Maintainer Room :**

- i. Ensure the meters (Voltmeters & Ammeters) in power board are in working condition.
- ii. Records to be maintained in the Equipment Room:
  - a) Battery History Register.
  - b) Track circuit history register.
  - c) Track circuit maintenance register.
  - d) Axle-counter maintenance registers, if any.
  - e) Cable-meggering register.
  - f) IPS maintenance register.
  - g) Motor point reading register.
  - h) Earth resistance register.
  - i) Signal/LED lamp register.
  - j) Data-logger Register containing the installation date, date of failure, date intimated to the agency, date of rectification, etc.,
  - k) Disconnection/ Reconnection Notice Memo Register.
  - l) Availability of 'as made' diagrams.

**X. Battery Room:**

- a. Ensure proper maintenance of batteries.
  - a. Specific gravity should be 1180 – 1220 when the Battery cells when fully charged.  $SPG < 1180$  implies that those cells are discharged.
  - b. Normally charged cell voltage would be 2 – 2.2 V. Discharged cell voltage would be  $< 1.8V$ .
- b. Topping up of the batteries with distilled water is to be as and when required.

**XI. Registers to be maintained at the station:**

- a) Route cancellation registers (UP & DN).
- b) Calling-ON cancellation register.
- c) Failure and history register.
- d) Joint inspection of points and crossings register.
- e) Crank handle register.
- f) Axle-counter re-setting register if any available.
- g) Line clear cancellation register.
- h) Relay-room key register.
- i) Block instrument key register.
- j) Cable Meggering register.

**XII. Interlocked LC Gates:**

- 1. Interlocked LC Gate Indications (i.e., Open, Close & Free) should be made available on the Panel.
- 2. In the interlocked LC is open in the route, the corresponding signal should not assume 'OFF' aspect, even if its knob is turned to reverse position.
- 3. When the signal is taken off duly closing the concerned LC gate, the free indication of that Gate would disappear.

**XIII. Signals:**

**a. Posts:**

Implantation distance should be painted on all the signal posts and it should be more than 2.36 m.

## **2. LED signals:**

- a. Ensure minimum 90 V/ 118 mA at the regulator.
- b. AC/DC, Conventional ECR/LED ECR, Blanking/ Non-blanking Selection in current regulator correct setting to be checked.
- c. Where IPS is not provided inverters are to be provided for Signals to avoid their blanking.

## **XIV. Location Boxes:**

1. On opening of the door the distance from the centre of track should be more than 2.5 m.
2. Value of the earth should be painted on the location earth enclosure and it should be less than 10 Ohms.
3. Value of Maintenance Free earth (Ring earth) should be below 1 Ohm.

## **XV. Electronic Interlocking:**

When VDU is available ensure:

1. SMs key equivalent is effective.
2. All operations are possible with that.
3. Panel/VDU operation selection is available.
4. Automatic change over to panel operation is possible when VDU fails.
5. Checksums/CRC (Cyclic Redundant Check) of application software and station specific software is available.
6. Proper maintenance free earthing and surge protection device is available.
7. Main terminal as well as the stand by system is in working condition.



**XVI. Multi Section Digital Axle Counter:**

1. Ensure Surge Protection Device and Maintenance Free Earthing are available and working.
2. Checksum/ CRC of working system to be verified.
3. Ensure Data down loading/ Analysing port – Main terminal is available and working.

**XVII. BPAC:**

1. Maintenance Register.
2. Ensure maintenance as per Manufacturers/ RDSO format.
3. Ensure proper earthing of equipments.
4. Ensure Reset Counters are working.
5. Ensure resetting data entry in resetting register/ Signal failure register.

**XVIII. Emergency Sockets/ Portable Telephones:**

- a. Ensure testing of emergency sockets once in every ten days and notify the control regarding the defective sockets if any.
- b. Arrange for their rectification at the earliest and also notify the control regarding the same.
- c. Ensure emergency circuit is connected to the section controller directly and not through the Test room.
- d. Ensure testing of portable emergency telephones to be loaded in the trains duly connecting them to the emergency sockets as per the schedule.

**XIX. Change over Panel room and Generators:**

- i. Ensure self starting arrangement is available and working.
- ii. Ensure procedure for changeover is painted near the power board.
- iii. Ensure description about changeover of power supply and status monitoring panel of DCDP is included in SWR.

\* \* \*

**SIGNAL GEARS MAINTENANCE SCHEDULE**

S. No	Maintenance work	Periodicity		
		ES M	JE	SE/ SSE
Point Machines:				
1	Check all fittings for tightness, cleanliness, clean contacts and commutator	F	M	Q
2	Ensure correct working in 'N' & 'R'	F	M	Q
3	Check the tripping at the overload of friction clutch	F	M	Q
4	Conduct obstruction test. Take voltage/current readings	F	M	Q
5	Check ground connections alignment and intactness of fittings (slack pins to be replaced)	F	M	Q
6	Check intactness of wiring on terminals	F	M	Q
7	Check detection contacts. Measure I/C and O/G voltages	F	M	Q
8	Check track locking	...	M	Q

9	Check out correspondence	...	...	Q
10	Check 'D' clamp/gauge plate insulation	Q	Q	H
11	Check crank handle contact	F	M	Q
12	Check for proper ballasting and packing of sleepers	F	M	Q
13	Check the setting of switches for having required amount of spring	F	M	Q
<b>Track Circuit:</b>				
1	Check relay for over-energisation	F	M	Q
2	Measure earth resistance	F	M	Q
<b>Block Instrument:</b>				
1	Check functioning of double locking arrangement and sealing	F	M	Q
2	Clean and lubricate all points	F	M	Q
3	Check contact pressure	F	M	Q
4	Check functioning of PR Relay tongue	M	M	Q
5	Measure line voltage/current	F	M	Q
6	Check SM's key working	F	M	Q
7	Check whether LSS can be taken 'off' without line clear	F	M	Q
8	Check working of all counters	F	M	Q
9	Check that shunting key is released in closed or TGT position only	F	M	Q
<b>Battery Room:</b>				
1	Check all batteries SPG	F	M	Q
2	Clean, tighten and apply petroleum jelly to terminals	F	M	Q
3	Top the levels of cells, if required	F	M	Q

<b>Battery Chargers:</b>				
1	Check working of battery charger	W	M	Q
2	Check terminals connections, rotary switches, fuses and working of meters	F	M	Q
<b>Control Panel:</b>				
1	Observe the panel and replace fused indication lamps	W	M	Q
2	Check working of knob/push buttons, effectiveness of keys on panel and veeder counters	F	M	Q
<b>Track circuits:</b>				
1	Check bonding/jumper/lead/connection TLJ boxes	M	M	Q
2	Replace block joint, ML3 months, LL 6 months	...	...	...
3	Clean glued joints			
4	Test glued joint	H	H	Y
5	Test block joint	M	M	Q
6	Ensure fail-safe adjustment of TC	...	Q	Q
7	Measure track voltage at FE/RE/RT	F	M	Q
8	Maintain history/reading book	F	M	Q
9	Check RE bond/ Z bond, pandrol clips, bolts at block joints and GFN liners	F	M	Q
<b>Rotary key transmitter:</b>				
1	Check all fittings, clean contact and lubricate the parts	F	M	Q
2	Test the working	F	M	Q

<b>SM's slide control frame:</b>				
1	Check all working parts and contact pressure	...	M	Q
2	Contact pressure	...	M	Q
<b>Location box:</b>				
1	Check location box for locking	F	M	Q
2	Clean the location box	F	M	Q
3	Check the wiring on terminals and earth connections	F	M	Q
<b>Colour light signals:</b>				
1	Check signal unit, locking and opening and holes to be covered	M	M	Q
2	Check fixing of lamp holder contacts springs and terminals	M	M	Q
3	Ensure and clean lenses, measure voltage and adjust focusing, if required	M	M	M
<b>Axle-counters:</b>				
1	<b>EJ Box:</b>			
	Check all nuts, bolts fitting of RX,TX	F	M	Q
	Check connections of EJBs, measure reading and adjust, if required	F	M	Q
	Check DIP, staggering and record the readings	M	M	Q
2	<b>Evaluator:</b>			
	Check coupler connections and soldering connections	M	M	Q
	Measure reading, adjust, if required and record	F	M	Q

3	<b>IB hut/RE cutting:</b>			
	Check batteries, battery chargers and wiring on terminals	F	M	Q
	Check voltage on relays	F	M	Q
<b>Communication:</b>				
S. No	Maintenance work	Periodicity		
		TCM	JE	SE/SSE
1	Check block telephones	F	M	Q
2	Check control telephone and VHF sets	F	M	Q
3	Check of emergency portable telephones			
4	Check of emergency sockets	Once in 10 days	M	Once in 2 Months

**SCHEDULE OF INSPECTIONS – DIVISIONAL S&T OFFICERS**

S. No.	Type of inspection	Sr. DSTE/DSTE	ADSTE
1	Every station of the Division	10% of total stations	Every station of the Division in a year

**ENSURE SIGNAL SIGHTING COMMITTEE INSPECTION BY SECTIONAL TI, CLI AND SSE/SIGNAL ONCE IN THREE MONTHS IN THEIR JURISDICTION ONCE DURING DAY TIME AND ONCE DURING NIGHT TIME AND COMPLIANCE OF THE DEFECTS NOTED IS SUBMITTED WITH IN ONE MONTH**

**SECTION “C”**

**MECHANICAL DEPARTMENT (LOCO and C&W)**

**(C&W)**

**MINIMUM QUOTA OF INSPECTIONS PER MONTH**

**I. Coaching Maintenance**

<b>S. No</b>	<b>Type inspection</b>	<b>JAG</b>	<b>SS</b>	<b>JS</b>	<b>Supervisor</b>
Rake inspection/month (under-gear & passenger amenities)					
1.	Pit line	2	3	4	10
2.	Platform	2	3	4	10
3.	Running	1	1	2	2
4.	Sick line inspection	1	2	2	2

<b>Coaching Depot Inspection S.No</b>	<b>Type inspection</b>	<b>JAG</b>	<b>SS</b>	<b>JS</b>	<b>Supervisor</b>
1.	Major	1	1	1	Once every month in the nominated beat

2.	Medium	1 (bi-monthly)	1 (bi-monthly)	1	”
3.	Minor	1 (four monthly)	1	1	”
4.	Brake power check	1	2	4	4
5.	Quarterly joint inspection of infrastructural facility of coaching Maintenance Depot, examination yard and sick lines with Engineering & Electrical officer	1	1	1	1
6.	Surprise night inspection	1	2	2	2

## II. Freight Operation

S.No	Type inspection	JAG	SS	JS	Supervisor
1.	Sick line	1	2	2	2
2.	Yard	2	2	3	3
3.	ROH Depot	1	1	1	1
4.	Surprise night inspection	1	1	1	2



5.	Super check of Goods train	1	2	4	4
6.	Jt. Inspection	1	1	1	....
7.	Office inspection	1	1	1	1
8.	Brake power check (Goods train)	2	2	4	4

#### **ASPECTS TO BE CHECKED ON ART AND ARMES**

1. Condition of rolling stock and any schedule is due.
2. Whether freight stock is converted to run at 100 KMPH.
3. Whether complete ART formation is stabled in one hook and whether double entry facility available or not?
4. Hydraulic re-railing equipment, running of power pack under load and no load condition and test the jacks for its efficient working.
5. Condition of wire ropes and rope test certificate.
6. Check LPG lamps whether they are properly burning, spare mantles available or not.
7. Availability of acetylene and oxygen cylinders as per ARTs requirement.
8. Availability and adequacy of other tools like jacks, hard wood packing, first-aid box.
9. Check working of hydraulic and electrical operated cold-cutting equipment, availability of spares and maintenance tools, ask for demonstration and see whether staff are conversant with its usage.

10. Fire extinguishers general condition and next refilling date.
11. Check whether staff knows as to how to use the fire extinguisher.
12. Detonators availability and its due date.
13. Check whether wooden/iron wedges are available in all the coaches
14. Check the safety equipment for staff such as gum boots, safety shoes, safety helmets, rain coats, hand gloves, etc., are available in adequate numbers.
15. Check for the digital still/video camera and its working. Check availability of spare memory stick.
16. Check all the measuring instruments and gauges are kept as per the requirement. Check the calibration dates are due.
17. Check whether standard items list display board is provided with location plan by the Mechanical, S&T, Engineering, Electrical and Medical Departments.
18. Check the drinking water is replaced periodically and water purifier is available.
19. Check the maintenance schedules are carried out properly for all the equipment.
20. Check the compliance of last inspections.
21. Check AMC is available for critical items like HRE, HRD, Inflatable lights etc.
22. Check for adequacy of manpower.
23. Check whether joint inspections are carried out as per schedule.

24. Check whether mock drills are conducted or not and number of staff present during mockdrill
25. Average turnout time during accidents
- 140 T Crane**
26. Check for cranes working, propping beam and its hydraulic piston jacks and its seals for leakage.
27. Whether all maintenance schedules have been carried out.
28. Check whether 'special safety precautions for operation of 140 T crane' are prominently displayed in the driver's cab both in English and vernacular language. Refer Board's letter No. 99/M(M&P)/7/8 dated 11.8.1999.
29. Availability of consumables for the crane.
30. Availability of at least two sets of well trained staff who can operate the crane with valid competency certificate.
31. Check proper working of Safe Load Indicator.
32. Check all the systems lift/lower, derrick in/out, slew, haul and travel are working.
33. Check whether AMC is available for Main Engine.
34. Check for adequacy of manpower.
35. Check whether joint inspections are carried out as per schedule
36. Check whether mock drills are conducted or not and number of staff present during mockdrill
37. Average turnout time during accidents.

### **Electrical Equipment**

- 38. Check for the running of generators both fixed and portable and its related spares availability.
- 39. Check all lighting equipments, stands, reflectors, condition of cables, switches, etc.,
- 40. Check for the functioning of inflatable lighting towers.

### **S&T Equipment**

- 41. Whether PA System is in working condition.
- 42. VHF sets are in working condition or not.
- 43. Walkie-talkie sets for its working, condition of dry cells and expiry date.
- 44. Field telephones for its proper working and condition of cables.

### **P.Way Equipment**

- 45. Check the P.Way materials like Rails, ST sleepers as per standard list.
- 46. Check the tools & Plants i.e Gas cutting equipments, cylinders, rail cutting/drilling machines etc., & fittings and their functioning.
- 47. Check the records of staff accompany along with ART/BD spl to the accident spot.

Note: The BD spl shall be inspected by the ADEN once in a month along with the sectional SSE/SE and safety counselor of Engineering Department of concerned Division.

## **COACHING DEPOT**

### **ASPECTS TO BE CHECKED ON COACHING RAKE ON PITLINE**

1. Adequacy of pit-examination time for various rakes- 6 Hours
2. Availability of berthing slots.
3. Infrastructure availability and adequacies of the following;
  - Approach road
  - Pathways for material movement
  - General Lighting
  - Pit light for night examination
  - Welding connections
  - Availability and functioning of air-compressor and rake test rig.
4. Quality of repairs
  - (i) Is the level of dashpot oil religiously checked and topped up in 'A' schedule.
  - (ii) Whether the ARs for every trip, dirt collectors for 'A' schedule are periodically drained and cleaned?
  - (iii) Whether wheel profile/diameter/gauge are measured and recorded in the schedule cards?
  - (iv) Whether proper attention paid to maintenance of air hoses, DVs, BP & FP lines, isolation cocks, COCs and other under-gear/brake gear and suspension items.

(v) Condition of under slung water tank, AR, battery box, brake beam, safety bracket and all brake gear pins.

5. Average repair time, placement/withdrawal time.
6. Stock detained for longer periods.
7. Ineffective coaching stock.
8. Cases of punctuality loss.
9. Coach failure analysis, reporting system and follow-up, detachment in primary rakes.
10. Schedules done/arising/overdue including POH & IOH.

**Sick line related items**

11. Quality of repairs during sick attentions.
12. Adequacy of lifting facilities.
13. Attention to welding practices particularly earthing.
14. Brake power check by connecting single car test rig after repairs in sick line.
15. Road access and availability of material handling equipment.

**Platform TXR duty**

16. System of rolling 'in' examination of passing through trains – availability of powerful lights for conducting this examination on either side of all platforms.
17. Does JE/SE/SSE-C&W record correct levels of vacuum/air-pressure on loco and SLR? Does he conduct checks for

passenger alarm device? Do the fitters have proper tools, lights, etc.

18. Whether padlocking of terminating trains was done?

19. Check the availability of non-contact thermometer, whether it is being used during rolling 'in' examination?

#### **ITEMS TO BE CHECKED DURING IOH OF COACH**

1. Infrastructure availability and adequacies of IOH/Sick line-covered shed, line capacity for IOH/Sick attention, availability of materials, tools and plants, pathway and lighting facility.
2. During IOH, the following bogie components to be stripped off, examined and, if required replaced/repared.
  - a) Brake beam and brake-gear pins.
  - b) Brake gear levers and rods.
  - c) Brake-gear pin bushes.
  - d) Brake shoe and hanger.
  - e) Brake beam safety straps/wire ropes.
  - f) Axle guide assembly.
  - g) Anchor links
  - h) Equalising stay and safety bracket.
  - i) Side-bearer wearing piece and wearing plate.
  - j) Springs and spring suspension arrangement.
3. Check whether the centre-pivot bolt loose or worn out or silent blocks damaged were examined?

4. Whether springs free height measured and grouping made before replacement?
5. Check whether the AR is drained out.
6. Check whether the dirt collector filters cleaned.
7. Check whether the bogie frame alignment was checked with trammeling gauge.
8. Whether the brake power of the coach was tested by connecting single car test rig with air compressor.
9. Check whether the IOH format given in coaching manual was being used for each coach for recording the readings before and after the IOH schedule attention.
10. Check availability of BV Equipments in Guard compartment and OTL with seal.

**ASPECTS TO BE CHECKED ON AIR-BRAKE RAKE (BOX'N' & BCN)**

1. Whether the air brake test rig is being used for testing of brake power and brake system by using the air compressor?
2. Whether the brake power maintained 100% in case of CC rakes, 95% in case of Premium Rakes, 90% in case of End-to-End rakes.
3. Whether the air pressure gauge available in BV?
4. Whether the condition of DV Isolating cock, COACs, load/empty device and hand brake wheel were checked and ensured for proper functioning?
5. Whether the condition of CBC components, brake gear components, wheel profile, springs, elastomeric pads, brake



beam, brake block, hangers, brake pins and split pins were checked and ensured for proper fitment and functioning?

6. Whether all the brake cylinders are released manually and ensured the brakes released completely before handing over the rake for traffic use?
7. Any wagon is due for ROH/POH and allowed in the formation without detachment.
8. Whether the train was tested for brake continuity before signing the BPC by the Guard?
9. Whether the BPC issued is in proper format (CC rakes or Premium rake or End to end) and necessary log sheets enclosed?
10. Whether the doors of empty wagons are in closed and secured condition?

**ASPECTS TO BE CHECKED DURING ROH OF WAGON**

1. Infrastructure availability and adequacies of ROH/Sick line-covered shed, line capacity for ROH/sick attention, availability of materials, tools & plants, pathway and lighting.
2. During ROH, the following bogie components to be stripped 'off', examined and if required to be replaced/repaired.
  - a) Brake beam and brake-gear pins.
  - b) Brake-gear levers and rods.
  - c) Brake-gear pin bushes.
  - d) Brake shoe and hanger.
  - e) Brake beam safety straps.

- f) Springs and spring suspension arrangement.
3. Check whether the centre-pivot was checked with gauge for worn out.
  4. Check whether springs free height measured and grouping made before replacement.
  5. Check whether the AR is drained out.
  6. Check whether the dirt collector filters cleaned.
  7. Check whether the bogie frame alignment was checked with trammeling gauge.
  8. Check whether the CBC components dismantled and examined.
  9. Check whether all the knuckles were subjected for dypenatrent test.
  10. Check whether all the wheels are subjected for UST and axle box cap bolts are tightened with torque wrench with proper torque and in no case old locking plates are to be reused.
  11. Whether the brake power of wagon was tested by connecting single car test rig with air compressor.
  12. Check whether all the wagons after ROH were offered to NTXR and defects noticed on first offering.

**DOCUMENTS TO BE CHECKED IN C&W DEPOTS**

1. RS – 1: sick rolling stock register – details of repairs attended to sick wagons/coaches.
2. RS – 5: GDR remarks of incoming train – maintained by platform/yard TXR.

3. RS – 6: BPC – correct filling up of the details duly signed by the GDR jointly.
4. RS – 7: TXR diary – to check whether activity-wise train examination and details of staff deputed for various jobs are recorded.
5. RS – 9: Wheel transaction register.
6. RS – 15: TXR hand book – to record the defects/deficiencies noticed and replacement done on rolling stock during train examination.
7. RS – 16: Sick memo, advice SM/YM on sick vehicle to check whether the nature of sickness is relevant.
8. RS – 17: FIT memo – to ensure whether the defects for which the vehicle was sick marked has been rectified.
9. RS – 69: Register for coaching rake maintenance.
10. History card for coaching maintenance.
11. Schedule card for coaching maintenance.
12. Register for using air-compressor.
13. Register for IOH and 'C' schedule coaching maintenance
14. ROH register for goods stock maintenance.

### **Check list for pantry cars**

Train No. \_\_\_\_\_ Pantry Car No. \_\_\_\_\_

Division/Depot: \_\_\_\_\_

1. Check for presence of any inflammable material like Gas cylinders (kept outside the nominated room), Petrol, Kerosene etc.
2. Check whether there are any gas leakages and condition of gas pipe line.
3. Check whether LPG connections are periodically checked and certified (daily and 15 day check)
4. Check whether gas regulators, fire back arresters and pressure gauge are in working order.
5. Check whether the specified number of outlets only being used.
6. Check whether the Gas cylinders are kept on proper rack duly clamping.
7. Check whether fire extinguishers (4 Nos.) in Pantry car are kept in proper location and not over due for refilling.
8. Check whether the pantry car staff is having adequate knowledge in usage of fire extinguishers.
9. Check whether pantry car staff are aware of the action to be taken in case of fire in pantry car.
10. Check whether ACP is working in pantry car.
11. Check the exhaust fans are available and are in working order.
12. Check whether all main doors are free to open and the passage kept free for movement.
13. Check whether any empty cartons, gunny bags, plastic crates/bags or any other material kept in Gas Room.

14. Ensure vestibule area, passage of Pantry car and Gas Cylinders' Room are kept clean.
15. Check proper rating and types of fuses are used for Battery, Fan circuit, light circuit in junction boxes. Rewirable fuses are not to be used in place of HRC fuses.
16. Check tightness of terminal connections at junction boxes, EFT terminals and Battery terminals.
17. Check for earth in wiring. If any earth is noticed, investigate and remove earth.
18. Check if any excessive sparking is noticed in fans.
19. Check whether electrical equipment provided are as per prescribed standard. Additional equipment, non-standard equipment is not to be connected.
20. Check the plug & sockets for loose connection, burnt marks.
21. Check the register for maintenance of electrical equipment. The equipments are to be periodically maintained and tested.
22. Ensure surface surrounding the equipment is clean.
23. Check the condition of inverters for any overheating. Check sufficient natural ventilation for the inverters.
24. Check over voltage protection is working in Rectifier-cum-regulator unit (RRU).
25. Check proper cleaning of battery terminals.
26. Check proper sealing of fuse disconnection board to avoid entry of foreign material.
27. Check provision of gas proof electrical fitting in gas cylinder room.
28. Ensure no perished / damaged cables and no open wiring in the pantry car.
29. Ensure the unauthorized tapping of electrical connection is not resorted to.

**LIST OF DOs & DO NOTs FOR PANTRY CARS**

<b>S.NO</b>	<b>DOs</b>	<b>S.NO</b>	<b>DO NOTs</b>
1	Ensure that there are no gas leakages	1	Utilise extra gas outlets.
2.	Ensure specified number of gas out lets only to be used	2	Keep gas cylinders on the floor
3.	Ensure gas cylinders are kept on proper rack including upper shelf duly clamped.	3.	Keep gas cylinders in kitchen area.
4.	Ensure gas regulators , flame arrester and pressure gauge are in working condition.	4.	Directly connect gas cylinder to gas stove.
5.	Ensure that gas manifold is available.	5.	Put any gas cylinder in hot water tub.
6.	Ensure exhaust fans are working.	6.	Block main door, vestibule area and passage.
7	Ensure all main doors are free to be opened.	7	Keep inflammable material in kitchen area.
8.	Ensure passage free movement.	8	Keep cooking oil tins adjacent to gas burner.
9.	Ensure vestibule area passage of Pantry car and gas cylinder room kept clean.	9	Tamper with gas flexible pipes, gas regulators, flame arrester and click on adaptors.
10	Ensure 4 Nos Fire extinguishers are	10	Keep empty cartons, gunny bags, plastic

	clamped at nominated place and not over due for refilling.		crates bags or other material in gas room.
11.	Ensure pantry car staffs are conversant with fire extinguisher operation.	11.	Use hot cases for storage of material.
12.	Ensure prompt disposal of garbage to prevent fire accidents.	12.	Keep electrical junction boxes in open condition.
13.	Ensure that gas stoves/burners are secured firmly to prevent their dislocation while the train is on run	13.	Use electrical fittings as hanger
14.	Proper insulation of all electrical connections.	14.	Allow temporary electrical wiring and/or loose open electrical connections.
15.		15.	Permit extra persons to travel in Pantry car on run.
16.		16.	Permit more than 2 persons in the Pantry car in washing lines.
*****			
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**(LOCO)**

**MINIMUM QUOTA OF INSPECTIONS PER MONTH  
DIESEL LOCO SHEDS**

Type of inspection	JA	SS	JS	Supervisors MF / EF
Super Check of Diesel Locomotives	4	4	6	8

**OPERATIONAL ASPECTS**

Sl. No.	Type of inspection	JA	SS	JS	Supervisors	
					CCC/CC	SLI/ LI
1	Footplate	3	5	8	--	12
2	Crew Booking (Day/Night)	1/1	2/1	2/1	4/4	2/2
3	Running Room	1	1	1	1	1
4	Ambush Check	1	1	1	--	2
5	Safety Seminar	Q	Q	Q	1	--
6	Dsl. Installation	1	1	1	2	1
7	ART	Q	Q	Q	1	--
8	Monitoring of Loco Pilot's and ALP's	Monitoring of LPs & ALPs (All LPS and ALPs assigned to CLI shall be covered as per their Gradation i.e., 'C' Grade once in a month(Twice in a month for six months), 'B' Grade once in 2 months & 'A' Grade once in 3 months				
9	140 T Crane	Q	M	M	...	--



### Safety checklist in Crew Booking Lobbies

Date :

Location:

S. No.	Observations
1.	Sign 'ON' and Sign 'OFF' Registers & its entries are made correctly.
2.	Breathalyzer functioning, availability of spare breath analyzer.
3.	Whether BA test is conducted at the time of sign 'ON' and sign 'OFF' time : Whether the CCC/CC is having the knowledge on, action to be taken if the crew is found to be positive in the test:
4.	<b>Registers/Records:</b> <ol style="list-style-type: none"> <li>a. Bio-data register of Crew. (including due date of PME/G&amp;SR/Tech. refresher)</li> <li>b. Periodical Rest (30 hrs four or 22 hrs five per month)</li> <li>c. Progressive hours(104 hrs per fortnight)</li> <li>d. 10 hrs implementation (&gt;14 hrs cases from Sign ON to OFF)</li> <li>e. LR and Gradation(A,B,C,D) register along with nominated LI</li> <li>f. Track defects Register } whether defects are conveyed to PCOR/TLC and feedback</li> <li>g. Signal defects Register } Received in time or not</li> <li>h. Unusual occurrence register</li> <li>i. Leave Register</li> </ol>

	j. PAD & PDD Register k. Availability of CMS and weather crew are signing ON&OFF in CMS. l. 100% implementation of CMS for generating reports like Kilometre and O.T etc. m. List of alcoholic staff and action taken for the staff found positive. n. Weather nominated Welfare Inspector is visiting lobby as per schedule.
5.	Booking procedure of crew (FIFO in first week and as per progressive hours in 2 <sup>nd</sup> week).
6.	SOB Register and acknowledgement by staff.
7.	Rest availed by Crew before signing 'ON'
8.	Whether any crew is booked before completion of stipulated rest hours (out-station and home-station)?
9.	Availability of safety literature such as, Safety Circulars /Fly Leaves/ Quarterly bulletin (Vigil), etc., - acknowledgement of staff?
10.	Availability of G&SR, Accident manual with latest amendment slips posted up to date with CC/Lobby in-charge
11.	Illuminated caution order boards and updating the same with permanent speed restriction and temporary speed restriction.
12.	Availability of First-aid box and its recoupment
13.	List of senior goods loco pilots who have been screened and found fit to work on passenger-carrying trains whether available with lobby in-charge
14.	Whether list of accident prone staff is available in Lobby?
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15.	Whether list of staff addicted to alcohol drinks is available?
16.	Records of outstation crew working to ensure sufficient rest is given based on working hours.
17.	Gradient charts of Crew working stations and guidelines to LPs over typical stations of their sections (including falling down gradients & stalling points)
18.	Availability of BSNL/CUG & Railway phones.
19.	Mechanised CTR numbering and issue register.
20.	List of staff wearing spectacles.
21.	The entries in the feedback register of the track and signal defects are relayed to the concerned department immediately and remarks on rectification obtained are brought to the notice of concerned LP and acknowledgement is obtained.
22.	Any other requirements.

**Checklist for safety items in Running Room and Rest Rooms**

**Date:**

**Location:**

<b>S. No</b>	<b>Observations</b>
<b>1</b>	Availability of Proper path way
<b>2.</b>	Whether running is protected by compound wall to avoid entry by out siders and cattle.
<b>3.</b>	Staff vacancy position & PME details
<b>4</b>	Registers availability: - a. Complaint Book and remarks on complaints b. Officers/supervisors inspection register c. Staff attendance register d. Bed occupancy register and entries of staff e. Peak occupation and time.
<b>5</b>	Weather running room is out sourced

6	Implementation of subsidized meal
7	Whether contract staff attended medical examination. Whether cooks ,bearers and waiters are medically examined for TB, Skin diseases other infectious diseases etc.,
8.	Whether basic amenities, hygiene, ventilation and lighting available.
9	Drinking water facility with water purification system. Whether water filtering arrangement through RO plant/Aqua Guard provided.
10	Whether adequate toilet facilities available and the toilets and urinals are hygienically maintained with flush type fittings with proper drainage and septic tank.
11	Whether adequate facilities like buckets, cloth hangers, soap box stand, jugs etc., are provided in the bath rooms.
12	Whether washing machine/drier/electric iron are provided for the occupants.
13	Cooking facilities to meet the needs of Running staff.
14	Cooking facility, departmental or out sourced. If out sourced check for the quality & quantity of food id supplied to running staff and availability of Menu card.
15	Whether cooking facilities with separate kitchen for vegetarian & non-vegetarian is provided.
16	Whether stainless steel utensils provided.
17	Whether computer with facility to check the booking status of the crew is available.
18	Availability of Beds, Linen, Mosquito nets/ Repellents-condition of the same.
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19	Whether Linen is changed for each occupant.
20	Whether the beds are numbered.
21	Whether two beds per room/cubicle is provided.
22	Whether room occupancy display is provided.
23	Whether lights for individual cot provided.
24	Whether charger socket provided for charging VHF sets.
25	Whether electrical wiring and fittings are of proper quality and workmanship.
26	Provision of beds/room& ventilation.
27	Whether doormats/foot mats are provided.
28	Whether window and door curtains of good quality are provided to avoid excess sunlight into the room.
29	Case of staff waiting for bed & for meals.
30	Whether centralised air cooling system provided. If not adequate number of desert coolers provided.
31	Whether white washing and colour washing done.
32	Whether adequate Safaiwalas and bearers are available.
33	Whether housekeeping is out sourced and performance is satisfactory.
34	Whether running room staff are provided with uniform, laminated badges with their photographs.
35	Whether DOs and DO NOTs boards for the occupants are provided at conspicuous place.
36	Provision of BSNL & Railway Phones.
37	Provision of lockers for keeping personal belongings.
38	Availability of First-Aid box & Fire extinguishers.
39	Meditation /Yoga room and its maintenance.
40	Safety posters/slogans.
41	Whether staff taking proper rest or not.

42	Maintenance of gas consumption registers. Whether adequate no. of LPG cylinders backup is available.
43	Whether fly catchers machine is provided in the dining hall.
44	Reading room with availability of News Papers and Magazines.
45	Whether power back up through standby DG set is provided.
46	Train timings board.
47	Greenery in surrounding areas.
48	Any other additional feature, if available.
49	Any other irregularities related to Safety.

<div> <div>Check list for Footplate Inspection</div> <div> Date:                      Section:                      Division: </div> </div>	
Sl. No	Observations
1	Date: Train No:                      Load: Loco No:                      Type :                      Base: Schedule attended:                      Next due: BPC Particulars:  Departure Time:    From:    Arrival Time:    To:
2	Crew Details: Name/Depot/Division:Tech./G&SR/PME/Automatic Competency  LP:  ALP:
3	<u>Personal Stores of Loco Pilot:-</u> a. Walkie-talkie and CUG phone b. Competency (G&SR, Tech, Automatic)/G&SR hand book with updated correction slips c. Detonators /standard tool kit/Spare Spectacles, if any <u>Personal stores of ALP:-</u> Two red flags , One green flag , One LED-based torch-cum-HS lamp and One WTT

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4	<p>Availability of safety equipment in the Loco motive</p> <ul style="list-style-type: none"> <li>a. PT phone and pole</li> <li>b. Fire extinguishers-whether there is any overdue.</li> <li>c. Skids</li> <li>d. Safety 'U' Clamp and spare transition screw coupling</li> <li>e. Spare hoses.</li> </ul>
5	<p>Performance of safety Items</p> <ul style="list-style-type: none"> <li>a. Availability of VCD and its functioning</li> <li>b. Speedo Meters</li> <li>c. Head Lights</li> <li>d. Flasher Lights</li> <li>e. Classification Lights</li> <li>f. Horns</li> <li>g. Wipers</li> <li>h. Sanders</li> <li>i. Air-flow indicator with alarm.</li> </ul>
6	<p>Condition of</p> <ul style="list-style-type: none"> <li>a. Cattle Guard/Rail Guard</li> <li>b. CBC Locking Pin and Operating Handle</li> </ul>
7	<p>Provision of</p> <ul style="list-style-type: none"> <li>a. Additional BP Cut Out Cock</li> <li>b. BP/FP Angle Cock Protector</li> </ul>
8	<p>Performance of the Loco Pilot/Asst Loco Pilot</p> <ul style="list-style-type: none"> <li>a. Ensuring of the correct authorities/documents and referring the loco log book for previous Remarks</li> <li>b. Brake power test at the 1<sup>st</sup> opportunity</li> <li>c. Conducting Continuity test and endorsing pressures in</li> </ul>
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	<p>BPC where ever required.</p> <p>d. Logging of Kilometres for CC rake BPC</p> <p>e. Exchanging of Alright signals</p> <p>f. Repeating and Acknowledging of Signal aspects and CD spots</p> <p>g. Whistling at 'W',' W/L' and while Running through Stations.</p> <p>h. Observation of PSR/TSR (section/Loop Line/Yard)</p> <p>i. Driving skill of Loco Pilot</p> <p>j. Knowledge of LP/ALP about G&amp;SR and Technical Aspects:</p> <ul style="list-style-type: none"> <li>➤ Train passing documents/whistle codes</li> <li>➤ Train Protection</li> <li>➤ En route Shunting related precautions</li> <li>➤ Sumo rake- Related remarks(Yellow Label/Stamp)</li> <li>➤ Working timetable instructions during monsoon</li> <li>➤ Trouble shooting knowledge of Loco</li> <li>➤ Flat tyre/wheel skidding/locked axle</li> <li>➤ Precautions to avoid partings/Stallings(scabbing, divided train working)</li> <li>➤ Use of fire extinguishers</li> <li>➤ Brake binding and precautions</li> </ul>
9	Footplate Inspecting officials should check the Diary of the Loco Inspector if he is accompanying, about coverage of the Loco Pilots as per their schedule.
10	Any other items noticed related to Safety.
<p><b>Note: Nominated CLIs to conduct their scheduled foot plate inspection and counsel their LPs/ALPs from time to time.</b></p> <p>49</p>	

Checklist for safety items in Loco Sheds	
Date:	Division:
Sl. No.	Observations
1.	Whether staff is using suitable gadgets while working at the electrical & rotary machines.
2	whether supply is made dead & earthed before working on power/equipment.
3	Whether safety belts are used when attending equipment at heights?
4	Availability of fire extinguishers & whether staff is familiar with fire fighting & fire prevention measures?
5	Availability of First aid box & whether all the staff is familiar with rendering first-aid to the electrocuted.
6	Whether the staff observing safety precautions during their work & protecting the work spot.
7	Ensure whether proper ear thing is done to the equipments through earth pits/earth resistance.
8	Whether proper crimping of the connecting terminals of heavy electrical equipment is done.
9	While attending electrical repair works, ensure proper power blockage. Also the boards like 'MEN AT WORK', 'SUPPLY OFF', 'SUPPLY ON' to be ensured at switching panels and distribution boards.
10	Check whether calibrated recommended standardized tools like torque wrenches, pressure gauges & testing equipment (electrical & mechanical) are used.
11	General upkeep of shed premises & proper environment.
12	While dispatching the Locos from shed whether all safety items are safety fittings are intact and in function or not?
13	Shunters working in shed are being undergoing sober test or not?
14	Securing of locomotives as per the procedure or not?
15	Any other items noticed related to safety
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## SECTION “D”

### CIVIL ENGINEERING DEPARTMENT SCHEDULE OF INSPECTIONS – SSE/SE/JE(P.WAY)

S. No	Description	SSE/P.Way (in-charge)	SE/JE-P.Way Sub-section
1.	Push trolley	Once in a month should cover entire section	Once in a fortnight
2.	Foot-plate	Once in a month should cover entire section	Once in a month should cover entire sub-section
3.	On-foot inspection	Once in a year may be introduced to start with	Once in 6 months may be introduced to start with
4.	Curve	Once in 6 months by rotation	Once in 6 months by rotation including route ‘A’ and ‘B’ except route ‘A’ and ‘B’ where the check should be conducted every four months
5.	Points and crossings	Passenger running lines once in 3 months by rotation other lines once in 6 months by rotation	Passenger running lines once in 3 months by rotation other lines once in 6 months by rotation.

6.	Creep measurement	Once in quarter	Once in quarter
7.	LWR (SEJ/buffer rail gaps)	Every fortnight during the 2 coldest and 2 hottest months and once in 2 months during other months of the year max/min temperatures alternately by SSE/SE/JE	Every fortnight during the 2 coldest and 2 hottest months and once in 2 months during other months of the year max/min temperatures alternately by SSE/SE/JE
8.	Bridge inspection	Once in a year during prescribed months prior to monsoon, every bridge including ROB's/RUBs	....
9.	OMS/TRC	Accompanying each TRC and OMS runs.	Accompanying alternate with SSE
10.	LC Gates	As per his schedule (ref: ACS of 106 of IRPWM, Para 124(2)).	All the LCs in his jurisdiction once in a month and check the equipment
11.	Sand hump	Once in 3 months alternately by SSE in-charge and SE/JE sectional. As per Eng.Standing Order No.43/2004 ADEN & DEN once in a year.	Once in 3 months alternately by SSE in-charge and SE/JE sectional
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12.	Gangs	Once in fortnight or more often as necessary	Should cover all the gangs within a week.
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**NOTE: SSE/SE/JE ensure to complete your schedule inspections  
Covering Manned & UMLCs in your jurisdictions & educate  
and counsel the gatemen.**

**SCHEDULE OF INSPECTIONS – OFFICERS (ADENs)**  
**As per PCE letter No. W.246/Genl.(pilot) dated 11.9.2001**

S. No.	Para no of IRPWM	Type of inspection	Minimum schedule	
			As per inspection manual	Modified as
1.	G 1.1	Push trolley on branch lines	Once in two months	Once in a month
2.	D 1.1	Push/motor trolley	Once in a month	....
3.	D 1.2	Foot- plate/BV	Once in a month	....
4.	D 1.2.1	Night foot- plate	Once in a month	....

**SCHEDULE OF INSPECTIONS – OFFICERS (Sr.DEN/DEN)**

S.No.	Para no. of manual	Type of inspection	Minimum schedule	
			As per manual	Modified as
1.	G 1.1	Push-trolley on branch lines	Once in two months	Once in a month
2.	D 1.1	Push/motor-trolley	Once in three months	Once in three months (PT once in a year covering the entire jurisdiction)
3.	D 1.2	Foot-plate / BV	Once in three months	Once in a month
4.	D 1.2.1	Night foot-plate	Once in a month	Once in three months

**CHECK LIST - PERMANENT WAY.****INSPECTION OF CURVES:**

1. Details of curve particulars should be displayed in board i.e. LWR number, laid on, date of distressing, temperature, length of transition, length of circular portion, length of curve, super elevation.
2. Maintain correct SE in transition and circular portion of the curve.  
Limits of station to station versine variations should be maintained  
Properly as per following limits.

- a) For speed 120 kmph and above-10 mm or 25% of the average versine on circular whichever is more
- b) For speed <120 & up to 80 KMPH - 15 mm or 25% of the Average versine on circular whichever is more.
- b) For speed <80 & up to 50 KMPH -- 40 mm or 25% of the average

Versine circular curve whichever is more

**Note:** If more than 20% of stations are having versine variations above Limits prescribed complete Realignment of curve should be Planned within a week.

- 3. Curve register of group A & B routes should be provided with cumulative frequency diagrams for each curve to get a graphic idea about the condition of geometry of curve.
- 4. Rail joints on curves must be laid square at beginning and at the end of the curve especially.
- 5. Wear on outer rail of curves can be reduced efficiently by periodical lubricating the gauge face of outer rails on the curve once in fortnight by key man.

#### **INSPECTION OF STATION YARD/POINTS & CROSSINGS.**

- 1. Whether joint inspection by section JE (Engg.) and JE (Signal) is carried out as per the schedule laid down and compliance carried out promptly.
- 2. Inspection of points and crossings; following items should be checked from safety aspect :-
  - (i) Condition of tongue rail, whether damaged or worn out.
  - (ii) Whether tongue rails are out of square.
  - (iii) Whether tongue rail housing properly against stock rail.
  - (iv) Whether tongue rail fittings i.e., stretcher bar, switch stops, stud bolts etc., are intact and effective.

- (v) Whether proper heel block with heel distance blocks are provided maintaining specified heel diversion.
- (vi) Whether proper bent fish plate is at loose heel joint (in loose heel switch).
- (vii) Whether throw of switch is maintained in the range of 95 mm to 115 mm.
- (viii) Whether clearance of first stretcher bar under the rail is 1.5 mm to 3mm.
- (ix) Whether gauge and cross level is maintained at toe of switch within permissible limits.
- (x) Whether crossing assembly is worn out on vee rail and wing rails.
- (xi) Whether correct gauge and cross level is maintained at the nose of the crossing.
- (xii) Whether all the fittings and bolts are provided in built up crossing assembly correct
- (xiii) Clearance of check rails opposite the crossing is maintained. (44-48 mm) 41-44mm for PSC.
- (xiv) Condition of Sleepers.
- (xv) Whether proper packing is given in switch and crossing portion.
- (xvi) Whether proper clearance between vee and wing rail at nose of the crossing is maintained.
- (xvii) Whether full complement of spike, rail screws in PSC layout (i.e. 4 Nos. at each rail seat) is provided in turn out.
- (xviii) Whether greasing of plate screws is done on points and crossings once in 15 for corrosive prone area once in two year in other area.
- (xix) Whether Greasing of Points & Crossings Once in 15 days. (Gauge face corners of switch & crossing portions)



## INSPECTION OF LWR TRACK

Training the staff in LWR track and ensure competency certificate to maintain LWR track.

1. Maintain temperature record.
2. Destressing of LWR in proper manner and in appropriate temperature.
3. Provision of adequate ballast on outer side of curve.
4. Special attention to :
  - i. SEJ
  - ii. Lubrication of SEJ once in a month.
  - iii. Watching the behaviour of SEJ, LWR/CWR and timely action for gap adjustment and destressing to prevent buckling.
  - iv. Gaps at SEJ shall be adjusted @ the time of laying/subsequent destressing of LWR/CWR, 60kg/52kg-40mm (at Td), other rail section 60 mm.
5. Special equipment with the gang staff for maintenance of LWR/CWR shall be available
  - (i) A pair of joggled fish plates with bolted clamps.
  - (ii) Rail thermometer with marking for temperature ranges for maintenance.
  - (iii) Special 1 metre long fish plates with screw clamps.
  - (iv) Rail closure pieces of different lengths.

### **INSPECTION OF MANNED LEVEL CROSSING GATE:**

1. Level crossing gate no:  
Location:  
Interlocked/Non-interlocked.  
Gate leaf/lifting barrier.
2. Name of the gateman  
PME done on-----PME due-----  
Refresher course attended on-----due on -----
3. Gateman's competency certificate.
4. Traffic census available- date and TVU's.
5. Safety equipments available.  
Availability of modified banner flags.
6. Gate connections in working order.
7. Gate working instructions available in Hindi/regional language.
8. Records available at gate.
  - i. Gate working instructions/copy of Appendix A of SWR.
  - ii. Gateman's rule book
  - iii. Gate inspection book
  - iv. Duty roaster
  - v. Public complaint book
9. Gate protection diagram painted in gate lodge.
10. PNs exchanged with adjacent SM; cross check 5 PNs.
11. Whether SM/TI/ PWI/SI are inspecting the gate regularly.
12. Whether chains provided are of correct length and has proper hooks at either end for immediate use with locking arrangement.
13. Compliance of deficiencies noticed in inspections.

14. Provision of whistle boards for trains at 600/350 metres distance on either side for manned double crossing where the view is not clear on either side in a distance of 600/350 metres and those which have normal position opened to road traffic, without interlocking and protection by signals.
15. Conditions of road surface.
16. Availability of road sign.
17. Availability of modified banner flags are available (for non-interlocked LC gates).
18. Rumble strips at appropriate location.
19. Approach road surface.
20. Effective wicket gate available.
21. Whether height gauge available at proper location on either side.  
(for gates located in electrified section).
22. Functioning of gate bell from lifting barriers.
23. Whether adequate fencing to restrict unauthorized movement is provided.
24. Whether the gate lamps are clean and properly focused on the road.
25. Flange way clearance of check rail is clear of ballast.
26. General upkeep of the gate and condition of gate lodge.

27. Whether effective interlocking is available at gate.
28. Is there necessity to upgrade the gate  
(Justification should also be given)
29. Is there necessity to interlock the gate?  
(Justification should also be given)
30. Whether gateman conversant with following rules:-
  - (i) Symptoms of seizure of roller bearing and brake binding and distinguishing factor between the two.
  - (ii) Symptoms of hot axle/flat tyre.
  - (iii) Train parting- precautions to be taken.
  - (iv) Use of whistle.
  - (v) Knowledge of gate working instructions.
  - (vi) Precautions to be taken while opening the gate.
  - (vii) Action to be taken when unsafe condition is noticed and gate phone has gone defective.

### **INSPECTION OF UNMANNED LEVEL CROSSINGS**

1. Level crossing number and location, KM/TP and block section.
2. Whether W/L board provided on both sides at proper locations.
3. Whether check rails have been provided with correct flange way clearances (51-57 mm)
4. Whether speed breakers are provided at appropriate location.
5. Whether height gauge is provided at proper location (for electrified section).
6. Whether road surface is found good/bad/satisfactory.
7. Whether channel for wheel flange is kept clean.
8. Whether visibility of 600 metres on either side is available for road users at 5 metres from centre line of the track.
9. Whether stop board of size (675 mm x 525 mm) provided 5 metres from centre line of track.
10. Whether train crew whistling continuously from whistle board to the level crossing.
11. Ambush checks:- whether road users are observing the following instructions :-
  - (i) Stop short of sign board (in case of bus)
  - (ii) Driver / conductor get down (in case of bus)
  - (iii) Watch in either direction for approaching train
  - (iv) Pass cautiously
  - (v) Not taking risk of crossing in the face of an approaching train.

12. Check the traffic census figures with year of census taken
13. Suggestions for :- Closing the level crossing

- (i) Manning
- (ii) Improving visibility for rail/road users.

#### **INSPECTION OF SAND HUMP**

1. Depth of sand above rail level (65 mm).
2. Condition of sand. ( kept in loose condition)
3. Condition of sleepers and fastenings.(M+3 density)
4. Gauge and cross level of track leading to sand hump.
5. Condition of brick walling.
6. Any deficiency in the dimension of sand hump.
7. There should be no bridges or structures within 61 metres beyond the sand hump, this clause will also for snags taking off loop lines.

#### **OBSERVING CORRECT METHOD AS REGARDS TO:**

1. Issue of caution order
2. Method of track protection
3. Works to be done under caution order or under block protection.
4. Fixing of indication boards at appropriate location.
5. Do not specify time limit in works of short duration. Caution order should not be cancelled until cancellation memo served by PWI.

#### **INSPECTION OF MISCELLANEOUS ITEMS LIKE WEATHER WARNING**

1. Record of weather warning and action taken immediately after its receipt.
2. Never keep any P.Way materials in midsection, yards which may infringe safety of moving train.
3. Remove rail closure from running track before relaxing SR.
4. Maintaining ZMF (Zero missing fittings) at any time.
5. Adequate precautions during special track works involving safety aspect.
6. Ensure adequate P.Way material on 'Break-down train'.
7. Do gap survey in time and adjust gaps accordingly
8. Provision of adequate ballast on outer side of curve especially in LWR track with extra width on shoulder ballast.
9. Keep close watch/special attention at approaches of Girder Bridge, level crossings, points and crossings, junction of two type of track structure having different strength potential.
10. Ensure periodical Greasing of outer side of rails on sharp curves where lateral wear is found.
11. Booking of staff for PME, Refresher course may be done well in time.
12. Keep a close watch/special attention at fracture prone areas.
13. Engineering standing order no 34/3/1 issued by Railway board dt. 10.11.04 for providing fish plate at weld joints.
14. Frequency of lubrication of ERCs and sealing of liner contact area shall be as under ;
  - i. On corrosion prone areas – ERC greasing (all 4 ERCs) and sealing of liner Contact area (only inside) - **once in a year**
  - ii On other areas -- ERC greasing (all 4 ERCs) – **once in 2 years.**
15. Frequency of lubrication of plate screws on points & crossings.

- i) Corrosion prone area – Once in a year.
- ii) Other area - Once in 2 years.

16. Weld collar painting

- i. Corrosion prone area - once in a year painting with 2 coats of anti-corrosive bituminous black conforming to IS-9862-1981 to a thickness of 200 microns.
- ii. Other than area - once in 2 years.

17. Painting of new rails & service rails:

- a. New rails shall be painted before laying with one prime coat of red lead and 2 coats of red oxide.
- b. Painting of service rails shall be carried out depending upon condition but not earlier than once in 2 years on inner gauge face using 2 coats of anti-corrosive bituminous black paints sealing of liner contact area should be done after scrapping and painting.
- c. Use of galvanized metal liners in all identified corrosive prone areas. Galvanised plate screws and stretcher bars in all areas irrespective of corrosive proneness.

**PRE- MONSOON PRECAUTIONS**

- 1. Cleaning/making side/catch water/cross drains.
- 2. Preparation of Monsoon patrol charts.
- 3. Arrangements of tools/equipment for patrolling.
- 4. Selection and training of patrolman for action to be taken in emergency.
- 5. Cleaning water ways at bridges.
- 6. Monsoon reserve Stock of boulders/coal ashes at nominated location.
- 7. Monsoon rake ready loaded with boulders/coal ashes.



8. Attention to major/minor repairs to bridges.
9. Removal of loose boulders from sliding location.(Deep cutting in ghat section)
10. Painting of HFL, Danger level on bridges before monsoon starts to have clear visibility for patrolmen keyman.
11. Joint inspection with PWD authorities and getting timely repair of RATs.
12. Maintaining the list of vulnerable bridges these should be made aware right from keyman in their jurisdiction.

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## SECTION “E”

### ELECTRICAL DEPARTMENT

#### **SCHEDULE OF INSPECTIONS – DIVISIONAL OFFICERS OF ELECTRICAL DEPARTMENT**

**(Railway Board letter No. 99/Re/220/3/Part III (inspection schedules) dated 28.4.2000)**

#### **(TRO Officers)**

S.No.	Type of inspection (per month)	Sr.DEE	DEE/ADEE
1	Foot-plate inspection (at least 2 by Goods trains and half of the inspections during night)	3	4
2	Trip-sheds	2	2
3	Crew booking points	1	2
4	Running rooms	1	2
5	Training centres	1	...

#### **(ELS Officers)**

		Sr.DEE	DEE	AEE
1	Foot-plate inspection	1	1	1
2	Trip-sheds	1	1	1

#### **(CCC/CC & SLI/JLI)**

		CCC/CC	SLI/JLI
1	Foot-plate inspection	....	12
2	Crew-booking (day/night)	4/4	2/2
3	Ambush check	....	2
4	Safety Seminar	1	....
5	Electrical installation	....	1
6	ART	1	....
7	Monitoring of LPs & ALPs (All LPS and ALPs assigned to SLIs & JLI shall be covered as per their gradation i.e., 'C' grade twice in a month, 'B' grade once in a month & 'A' Grade once in 2 months)		

**Safety checklist in Crew Booking Lobbies****Date :****Location:**

<b>Sl. No.</b>	<b>Observations</b>
1.	Sign 'ON' and Sign 'OFF' Registers & its maintenance. Availability of CMS and whether crew are signing 'ON' & 'OFF' in CMS.
2.	Breathalyzer functioning, availability of spare breath analyzer.
3.	Whether BA test is conducted at the time of sign 'on' and sign 'off' time : Whether the CCC/CC is having the knowledge about what shall be done, if the crew is tested positive in the test:
4.	Registers/Records: a. Bio-data register of Crew. (including due date of PME/G&SR/Tech. refresher) b. Periodical Rest (30 hrs four or 22 hrs five per month) c. Progressive hours(104 hrs per fortnight) d. 10 hrs implementation(from Sign ON to Sign OFF) e. LR and Gradation(A,B,C,D)register along with nominated LI f. Track defects Register with feedback from TLC g. Signal defects Register with feedback from TLC h. Unusual occurrence register

	i. Cattle Run over Register j. PAD & PDD Register k. BPC Register for CC rakes l. Loco defect register.
5.	Booking procedure (FIFO systems and 2 <sup>nd</sup> week less hours system).
6.	Rest availed by Crew before signing 'ON'
7.	Whether any crew is booked before completion of stipulated rest hours (out-station and home-station) i.e., under rest?
8.	Availability of safety literature such as, Safety Circulars /Fly Leaves/ Quarterly bulletin (Vigil), etc., - acknowledgement of staff?
9.	Availability of G&SR, Accident manual with latest amendment slips posted up to date with CC/Lobby in-charge
10.	If 'Sign safe' system is available, functioning of the same including IRIS
11.	Illuminated caution order boards with colour-coding.
12.	Availability of First-aid box and its recoupment
13.	List of senior goods loco pilots who have been screened and found fit to work on passenger-carrying trains whether available with lobby in-charge
14.	Whether list of accident prone staff is available in Lobby?
15.	Whether list of staff addicted to alcohol drinks is available?
16.	Gradient charts of Crew working stations and guidelines to LPs over typical stations of their sections (including

	falling down gradients & stalling points)
17.	Availability of BSNL & Railway phones
18.	List of staff wearing spectacles.
19.	Availability of 'Gyankasauti'/self learning programmes.
20.	Any other essential requirements.

**Checklist for safety items in Running Room and Rest Rooms**

**Date :**

**Location:**

<b>Sl. No</b>	<b>Observations</b>
1.	Staff vacancy position & PME details
2.	Registers availability: - a. Complaint Book and remarks on complaints Officers/supervisors inspection register b. Details of joint inspection by Running Room Committee. c. Staff attendance register d. Bed occupancy register and entries of staff.
3.	General cleanliness & amenities its upkeep
4.	Drinking water facility.
5.	Cooking facility, departmental or outsourced. If outsourced check for the quality & quantity of food supplied to running staff and availability of menu card.
6.	Availability of beds, Lenin, mosquito nets/repellants
7.	Provision of beds/room & ventilation
8.	Provision of BSNL & Railway phones
9.	Provision of lockers for keeping personal belongings
10.	Availability of First-aid box & fire extinguishers
11.	Complaint book & remedial measures on complaints

12.	Safety posters/slogans
13.	Whether staff taking proper rest or not?
14.	Any other irregularities related to safety.
15.	Whether two beds per room/cubicle provided.
16.	Whether centralized air cooling system provided. If not, adequate number of desert coolers provided.
17.	Whether reading room with magazines and newspapers provided.
18.	Whether linen is changed for each occupant.
19.	Whether adequate stock of linen as per yardstick is maintained.
20.	Whether lights for individual cot provided.
21.	Whether window and door curtains of good quality are provided to avoid excess sunlight into the room.
22.	Whether the beds and rooms are numbered
23.	Whether charger socket provided for charging VHF sets.
24.	Whether basic amenities, hygiene, ventilation and lighting available.
25.	Whether adequate toilet facilities and clean drinking water available.
26.	Whether water filtering arrangement through RO plant / aqua guard provided.
27.	Whether the electric wiring and fittings are of proper quality and workmanship.
28.	Whether white washing and color washing done.
29.	Whether the toilets and urinals are hygienically maintained with flush type fittings, with proper drainage and septic tank.
30.	Whether the running room is provided with

	meditation/yoga room.
31.	Whether adequate Safaiwalas and bearers are available.
32.	Whether running room staff are provided with uniform, laminated badges with their photographs.
33.	Whether DOs and DON'Ts boards for the occupants are provided at conspicuous place.
34.	Whether washing machine / drier / electric iron are provided for the occupants.
35.	Whether computer with facility to check the booking status of the crew is available.
36.	Whether room occupancy display is provided.
37.	Whether power back up through stand-by DG set is provided
38.	Whether running room is protected by compound wall to avoid entry by outsiders and cattle.
39.	Whether cooking is outsourced and subsidized meals is served and whether quality of food is fresh and good. Any complaints regarding quality of food , round the clock supply of food.
40.	Whether housekeeping is outsourced and performance is satisfactory.
41.	Whether cooks, bearers and waiters are medically examined for TB, skin diseases, other infectious diseases etc.
42.	Whether cooking facilities with separate kitchen for veg. and non-veg. provided.
43.	Whether stainless steel utensils provided.
44.	Whether adequate LPG cylinders back up is available.
45.	Whether fly catcher machine is provided in the dining hall.

Check list for Footplate Inspection	
Date :	Section: Division:
Sl. No	Observations
1	Date: Train No: Loco No:                      Base:                      Rly.: Load:                      BPC NO: Departure Time:                      Arrival Time:
2	Crew Details:                      Name/Depot/ Division: Technical/G&SR/PME /Automatic competency availability LP:                      ALP:
3	<u>Personal Stores of Loco Pilot:-</u> a. Walkie-talkie and CUG phone, tri-color torch b. Competency (G&SR, Tech, Automatic)/G&SR hand book with updated correction slips c. Detonators /Tools/Spare Spectacles if any. <u>Personal stores of ALP:-</u> Two red flags , One green flag , One LED-based torch-cum-HS lamp and One WTT
4	Availability of safety equipment in the Loco motive a. PT phone b. Fire extinguishers c. Skids d. Safety 'U' Clamp and spare transition screw coupling.
5	Performance of safety Items a. Availability of VCD and its functioning b. Speedo Meters c. Head Lights d. Flasher Lights e. Classification Lights f. Horns g. Wipers h. Sanders



6	<p>Condition of</p> <ol style="list-style-type: none"> <li>Cattle Guard/Rail Guard</li> <li>CBC Locking Pin, Operating Handle and proper coupling of CBC formation with TE.</li> </ol>
7	<p>Provision of</p> <ol style="list-style-type: none"> <li>Additional BP Cut Out Cock/its seal.</li> <li>BP/FP Shell Protector</li> </ol>
8	<p>Performance of the Loco Pilot/Asst Loco Pilot</p> <ol style="list-style-type: none"> <li>Ensuring of the correct authorities/documents and referring the loco log book for previous Remarks</li> <li>Brake power test at the 1<sup>st</sup> opportunity</li> <li>Conducting Continuity test and endorsing pressures in BPC where ever required</li> <li>Logging of Kilo Meters for CC rake BPC</li> <li>Exchanging of Alright signals</li> <li>Repeating and Acknowledging of Signal aspects and CD spots.</li> <li>Whistling at 'W', 'W/L' and Run-through Stations.</li> <li>Observation of PSR/TSR (section/Loop Line/Yard)</li> <li>Driving skill of Loco Pilot</li> <li>Knowledge of LP/ALP about G&amp;SR and Technical Aspects <ul style="list-style-type: none"> <li>➤ Train passing documents/whistle codes</li> <li>➤ Train Protection at station/mid-section/on gradients</li> <li>➤ En-route Shunting related precautions</li> <li>➤ Sumo rake- Related remarks(Yellow Label/Stamp)</li> <li>➤ Working timetable instructions during monsoon</li> <li>➤ Trouble shooting knowledge of Loco</li> <li>➤ Flat tyre/wheel skidding/locked axle</li> <li>➤ Precautions to avoid partings/Stallings(scabbing, divided train working)</li> <li>➤ Use of fire extinguishers</li> <li>➤ Brake binding and precautions</li> <li>➤ Working with dead loco attached and precautions to be taken.</li> <li>➤ Alertness of ALP when LP fails to stop the train.</li> </ul> </li> </ol>

9	Footplate Inspecting officials should check the Diary of the Loco Inspector if he is accompanying, about coverage of the Loco Pilots as per their schedule
10	Any other items noticed related to Safety

### Checklist for safety items in Loco Sheds

**Date:**

**Division:**

Sl. No.	Observations
1.	Whether staff are using suitable gadgets while working at the electrical & rotary machines.
2	Whether supply is made dead & earthed before working on power/equipment.
3	Whether safety belts are used when attending equipment at heights?
4	Availability of fire extinguishers & whether staff is familiar with fire fighting & fire prevention measures?
5	Availability of First aid box & whether all the staff is familiar with rendering first-aid to the electrocuted.
6	Whether the staff observing safety precautions during their work & protecting the work spot.
7	Ensure whether proper ear thing is done to the equipments through earth pits/earth resistance.
8	Whether proper crimping of the connecting terminals of heavy electrical equipment is done.
9	While attending electrical repair works, ensure proper power blockage. Also the boards like 'MEN AT WORK', 'SUPPLY OFF', 'SUPPLY ON' to be ensured at switching panels and distribution boards.
10	Check whether calibrated recommended standardized tools like torque wrenches, pressure gauges & testing equipment (electrical & mechanical) are used.
11	General upkeep of shed premises & proper environment.

12	While dispatching the Locos from shed whether all safety items and safety fittings are intact and in function or not?
13	Securing of locomotives as per the procedure or not?
14	Any other items noticed related to safety
15	Display of loco-schedule board inside the locos.
16	Availability of sand and water at welding locations
17	Condition of distribution panels
18	Display of stop boards.
19	Proper locking of 'isolator' handles of OHE
20	Proper condition of earth discharge rods.

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