

Date:		Red on Time	HH:MM	led Off Time	HH:MM	Day:	Primary Maintenance		
		Trip / Depot Examination		(Every 06 Dyas or 10,000 KMS which ever is earlier)					
SCHEDULE ACTIVITIES FOR MECHANICAL EQUIPMENT									
1	Bogie								
1.1	Bogie Frame(DTC,NDTC,MC,TC)								
Sl No	Activities								
		1	Visually inspect the bogie frame and their components for crack, loose, missing and leakage etc. and check whether all equipment is secure.						
		2	Perform visual check on longitudinal beams, cross beams for cracks,damages and corrosion.						
		3	Perform visual check on brake supports, damper supports, traction center supports and stabilizer assembly supports for cracks, damages and corrosion						
		4	Check bogie brackets visually for cracks, damages and corrosion.						
		5	Check safety cables visually for damages, cracks and corrosion.						
1.2	Axle Box CTRB(DTC,NDTC,MC,TC)								
		1	Visual Inspection						
		2	Check the bearing for any sign of overheating or detection of hot bearing.						
		3	Check bearings for grease leakage or any abnormal sound						
1.3	Primary Suspension (DTC,NDTC,MC,TC)								
		1	Visual Inspection						
		2	Visually check springs for cracks, damages, corrosion or foreign objects presence.						
		3	The split pin installed in primary suspension may be checked for any visible damage and may be replaced if required.						
1.4	Air Spring Systems (DTC,NDTC,MC,TC)								
		1	Visual Inspection for general condition						
		2	Visually check the air spring rubber bellow in inflated condition for any external damage, cracks, air leakage ,bulging and infringement of any fittings						
1.5	Wheels and Axles (DTC,NDTC,MC,TC)								
		1	Visual Inspection for general condition						
		2	Perform a visual check on wheels for cracks, damages and defects.						
		3	Check by wheel profile gauge, the wheel flange thickness and profile.						
		4	Visually inspect the axle for cracks and signs of corrosion, if any.						
1.6	Primary vertical /Secondary vertical and Lateral /Yaw dampers(DTC,NDTC,MC,TC)								
		1	Visual Inspection for general condition						
		2	Perform a visual check on dampers for damage, cracks and oil leakage.						
		3	Perform a visual check on all fixings for loosening and/or missing components						
		4	Perform a visual check on rubber elements for cracks and ageing.						
1.7	Stabilizer assembly(DTC,NDTC,MC,TC)								
		1	Visual Inspection for general condition						
		2	Perform a visual check on torsion bar, stabilizer links and brackets for cracks, damages and corrosion						
		3	Perform a visual check on rubber joints for cracks, damage and ageing						
		4	Visually inspect for grease oozing out of stabilizer assembly bearings, which may result in bearing failure.						
		5	Perform visual check on all fixings for loose/missing fittings						
1.8	Traction rod and traction Centre (DTC,NDTC,MC,TC)								
		1	Visual Inspection for general condition						
		2	Perform a visual check on the traction center housing and bars for cracks, damages and corrosion.						

		3	The assembly should be free to move, and not blocked by any foreign objects
		4	Perform a visual check on all fixings for loosening and the ball joints.
		5	Perform a visual check on rubber joints for cracks/damages.
		6	Visually inspect the lateral damper as per specification
		7	Visually inspect the lateral bump stop for loosening, missing and damages etc.
1.9	Control Arm and other components on primary suspension(DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition
		2	Visually check control arm parts for damages, cracks or corrosion marks.
		3	Perform a visual check on all fixings for loosening and / or missing components
		4	Inspect the rubber joint for cracks, damages and ageing
1,10	All Rubber metal bonded parts on bogie. (DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition
		2	Perform a visual check for cracks, damages, peeling, bulging, looseness etc.
2	Brakes and Air Supply		
	Main Air Compressor(DTC/NDTC)		
2.1		1	Visual check for loose/damage/missing parts or abnormal sound
		2	Check Main air Compressor running on TCMS.
		3	Vacuum indicator inspection – Check the functionality of indicator plunger (red). The indicator plunger appears entirely and latches once the maximum acceptable negative pressure (OEM recommendation) is reached. The plunger remains fully in view even when the compressors shut down. Replace the filter element of dry type air filter if the indicator plunger appears entirely and latches
		4	Check the functioning of compressor for loading/ unloading.
2.2	MR & BP pressurized system(DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition & sound of leakage
2.3	Auxiliary Compressor(TC)		
		1	Visual check for loose/damage/missing parts or abnormal sound
		2	Check the oil level
		3	Check for any damage
		4	Clean air inlet filter and electric motor
		5	Check oil inlet filter for any damage
		6	Check for any abnormal sound
		7	Check earthing cable tightness.
2.4	Brake System(DTC,NDTC,MC,TC)		
		1	Inspect MR Pressure (8 to 10 bar), BP pressure (5 bar) and BC/AR pressure (8 to 10 bar) from dual pressure gauges in the Cab.
		2	Check the Brake page on TCMS monitor by visual for Brake cylinder pressure on applying and releasing brake: 1. Service brake through Master controller 2. Emergency brake through master controller. 3. Emergency brake through Driver's brake valve.
		3	Parking brake to be tested by pressing apply and release command from CRW panel.
		4	Brake pipe continuity test applying brake through DBV for BP drop in last coach.
		5	Self-test of BECU from TCMS (brake + WSP).
		6	Emergency brake by Assistant. Emergency brake handle.

2.5	Brake Control System(DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition, any sound of leakage
		2	1. Parking brake application or suitable protection against rolling down to be ensured before any testing. 2. Status update of isolating cocks and wire connectors may be checked in case of no status update.
2.6	Air Horn-Tyfon (DTC,NDTC)		
		1	Visual Inspection for general condition
		2	Check functioning of horn
2.7	Under Frame Brake components(DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition, any sound of leakage.
		2	Check operation of automatic drain (correct drainage) of main reservoir.
		3	Check for noticeable air leakages in compressed air system.
		4	Inter-unit air hose couplings visual check for open/damage.
		5	Hose pipe of caliper visual check open/ damage/ missing.
		6	Brake Caliper, disc & pad visual check for loose/damage/missing .
		7	Brake equipment box cover in position.
		8	Renew the worn-out brake pad (thickness < 8 mm) if necessary. Particular attention be paid to differential rate to wear between motor coaches & other type Coaches.
		9	Speed sensor visual checks for any loose/ damage.
2.8	Brake Disc and Caliper assembly(DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition, any damage/loose or missing part.
2.9	Air Dryer Unit (DTC,NDTC)		
		1	Visual Inspection for general condition, any damage/loose or missing part.
2.10	Micromesh Filter(DTC)		
		1	Visual Inspection for general conditionVisual Inspection for general condition
2.11	Air Reservoirs(DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition, any sound of leakage
2.12	Ballcock with or without switch module or exhaust (DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition, any sound of leakage
2.13	Magnet Valve(DTC,NDTC)		
		1	Observe for noticeable air leakages (sound).
2.14	Axle Speed Sensor(DTC,NDTC,MC,TC)		
		1	Visual check for looseness or any damage.
2.15	Check and Drain valve-All(DTC,NDTC,MC,TC)		
		1	Observe for noticeable air leakages (sound).
2.16	Brake Control Unit (DTC,MC,TC)		
		1	Self-test of BECU from TCMS (brake + WSP).
2.17	Safety Valves(DTC,TC)		
		1	Observe for noticeable air leakages(sound).
2.18	Drain Valves, Hose Couplings, Duplex Check Valve, MeanPress. Valve, Hose Pipes, Hose Connections (DTC,NDTC,MC,TC)		
		1	Observe for noticeable air leakages(sound).
2.19	Driver Desk Control, Driver Brake Valve(DTC)		
		1	Observe for noticeable air leakages(sound).
2.20	Dual Gauges (MR/BP), Dual gauge (BC/BR), BP Gauge(DTC)		
		1	Observe for noticeable air leakages(sound).
3	Shell and Under-Frame		

3.1	Underframe/Car-body(DTC,NDTC,MC,TC)		
		1	Visual inspection of coach underframe and its components.
		2	Check visually the following for any damages/defects/deficiencies: Condition of head stock, sole bar and other under frame members.
		3	Interior cleaning of lavatories, cleaning of coach floor, cleaning of passenger amenities, windows etc.
		4	Exterior coach cleaning with recommended cleaning solution as per latest RDSO specification no. M&C/PCN/101/2007 for Liquid Cleaning Composition for Exterior of Railway Coaches.
		5	Checking of hand rails, sliding doors, body side, lavatories and vestibule doors for proper functioning.
		6	Amenities fittings should be checked for proper functioning.
		7	All missing passenger amenity fittings must be replaced and the rake must be turned out as 'Zero-Missing-Fitting' rake. Check visually the following for any damages/defects/deficiencies: 1. Destination board and brackets. 2. Body side walls 3. End walls 4. Windows, Body side doors, Lavatory doors, inter communication doors (vestibule doors) etc. for their functioning. 5. Fire Extinguishers.
		8	Exterior panels & End panels" should be replaced with Exterior Body side walls and End walls.
		9	External Cleaning Exterior coach cleaning with recommended cleaning solution as per latest RDSO specification no. M&C/PCN/101/2007 For the coaches with vinyl wrap instructions of ICF/ RDSO should be follow. Coach cleaning/washing should be done by Automatic Coach Washing Plant (ACWP).
		10	However, where these plants are not available, external cleaning/washing of coaches can be done in following manner: 1. Place the rake/coaches on the washing pit provided with equipment required for washing and cleaning. It should be ensured that the rake/coach is protected with proper board/signal for safety of the staff working on washing/ cleaning job to prevent movement/ disturbance in the activity. Scotch blocks with locking arrangement should protect lines and keys should be kept with Engineer(C&W) till the time rake is under maintenance. In electrified section, C&W supervisor shall in addition, obtain power block from OHE before commencing work. 2.All VCBs may be grounded before commencing washing and isolation keys may be kept securely. 3. The cleaning solution should be spread/ rubbed with nylon brush or sponge brushes and then rubbed thoroughly to clean the panels. Extra attention should be given to oily and badly stained surfaces. 4. Clean the external surface by high pressure jet where facilities are available
		11	All exterior panels including end panels should be hosed with water and brushed with diluted soft soap (detergent solution) the strength of the solution may be increased or decreased according to RDSO specification.
		12	Internal Cleaning 1. Collect the newspaper from magazine bag and waste from dust bin.Sweep the whole coach with broom in sleeper coaches. Clean the floor of AC coaches with vacuum cleaner. 2. Remove dust from floor, berths/seat, magazine nylon wire mesh bag fitted on panels and fan guards with duster. Use of vacuum cleaner is excellent in such areas. 3. Also remove dust/dirt from under the berths, window sill, sliding door, railing corner and all corner & crevices of coach interior with vacuum cleaner if provided. 4. Aluminum frames, strips, and other metal fittings, etc. should be cleaned with recommended cleaning agent. 5. The coach flooring should be rubbed with hard coir brush and PVC flooring should be rubbed with nylon bristles/sponge brush and cleaned withrecommended cleaning agent
		13	6. The amenity fittings and toilet fittings such as coat hanger, stools, arm rest, foot rest, towel hanger, etc. should be cleaned with duster. Stains on these items should be removed with recommended detergent solution. 7. Spray recommended air freshener in the coach. No employee should be allowed to enter the coach for any purpose/work after complete cleaning. 8. Precaution should be taken to prevent nuisance of cockroaches and rodents in AC coaches and pantry car. 9. No repair works should generally be left to be carried out after washing and cleaning of the coach.
		14	Pest and rodent control should be done as per extant instructions issued by the Railway Board from time to time.
3.2	Roof(DTC,NDTC,MC,TC)		
		1	Warning : Necessary precaution to be taken for OHE lines while working on roof
4	Interior and Furnishing		

4.1A	Gangway – Hubner (DTC,NDTC,MC,TC)		
		1	Visual inspection for Tears or Holes in bellows fabric. Loosening of connection between Bellows and folding Wall.
		2	Intactness of all inter- coach gangways to be ensured
4.1B	Gangway – Lince (DTC,NDTC,MC,TC)		
		1	Visual Inspection for any loose, missing parts or abnormalities
		2	Intactness of all inter- coach gangways to be ensured
		3	Check the integrity of the bellow fabric & clean
4.1C	Gangway – Ultimate (DTC,NDTC,MC,TC)		
		1	Visual Inspection for any loose, missing parts or abnormalities
		2	Intactness of all inter- coach gangways to be ensured
		3	<input type="checkbox"/> Inspection of bellow completeness <input type="checkbox"/> Inspection of top protection panels <input type="checkbox"/> Inspection of side cladding panel assy. <input type="checkbox"/> Inspection of bridge plate <input type="checkbox"/> Inspection of step plate assy. <input type="checkbox"/> Cleaning
		4	<input type="checkbox"/> Inspection of flexibility of bridge plate hinge
4.2	Passenger Seat – STER (DTC,NDTC,MC,TC)		
		1	Visual inspection for Tears/Holes in Upholstery & Foam sets. For upholstered area, operator identifies unacceptable visible degradation of the fabric such as: <input type="checkbox"/> Fabric wear is not acceptable on a visual point of view <input type="checkbox"/> Act of vandalism cut through the fabric <input type="checkbox"/> Foam is visible under the fabric
		2	Cleaning of Seats, Grab Rail & Armrest. Note : <input type="checkbox"/> For cleaning details refer to Chapter -2 of Volume 2 <input type="checkbox"/> Intensive cleaning to be done on monthly basis.
		3	Inspect Seats and check for completeness. For painted area, identify structural damages or deep scratches that: <input type="checkbox"/> Scratches is not acceptable on a visual point of view <input type="checkbox"/> Metal structure damaged
4.3	Table (Executive Class) (DTC,NDTC,MC,TC)		
		1	Cleaning of Tables.
		2	Checking for loosened hinges and tightening (if any).
4.4	Floor Mat/ Cover(DTC,NDTC,MC,TC)		
		1	Cleaning of Floor Mat.
		2	Checking for peel off and repair, if any (using suitable adhesives/fasteners).
4.5	Window(DTC,NDTC,MC,TC)		
		1	Cleaning to be done.
		2	Intactness of windows to be ensured.
		3	Checking for cracks and breakage (replace immediately, if any found).
4.6	Roller Blind(DTC,NDTC,MC,TC)		
		1	Cleaning of Roller Blind
		2	Checking for any tear of Blind Roll and Pull String. Repairing or replacing the same.
4.7	Luggage Rack(DTC,NDTC,MC,TC)		
		1	Cleaning of Luggage Rack.

		2	Checking of Fasteners for looseness and tightening (if any looseness found)
4.8	Side & Roof Panels(DTC,NDTC,MC,TC)		
		1	Visual inspection for general condition
4.9	Fire Extinguisher(DTC,NDTC,MC,TC)		
		1	Confirm Fire Extinguisher is visible, unobstructed and available at designated location.
		2	Verify Safety Pin is intact and pressure gauge indicator is within green range.
		3	Check for expiry date in label (Should not be overdue)
5	Couplers		
5.1	Semi-Permanent Coupler - DELLNER (DTC,NDTC,MC,TC)		
		1	Visual Inspection for general condition
		2	Check visually for any missing/loose parts.
		3	Check visually for any damage/ crack/ wear etc.
		4	Visual check of torque marks on sleeve and wedges bolts. Torqueing to be done if necessary
6	Doors		
6.1A	Internal Sliding Door - PRAG (DTC,NDTC,MC,TC)		
		1	Check the log sheet and attend the defect recorded by the escorting staff.
		2	Clean the dust by compressed air of I/C—door and tighten the cable terminals, if found loose.
		3	Checking the fluent opening & Closing of the door, noise, jerking motion and knocking & rectify the observed defect.
		4	Check the mechanical movement of door after pressing emergency pushbutton switch, i.e Manual operation and rectify the issue if noticed any.
		5	Check the function of Radar for proper working and replace if defective.
		6	Check the door leaf and Glass for any damage or crack and replace the glass if crack or broken.
		7	Checking completeness of the mechanism, screwing up, binding cables, loose connections etc. Visually, Adjust the mechanism for smooth operation
		8	Check the Cable Drag Chain for any damage, Replaced if required.
		9	Check the function of Relay , Replaced if required
6.1B	Internal Sliding Door -NORGREN (DTC,NDTC,MC,TC)		
		1	Check the log sheet maintained in driver cabin and attend the defect recorded by the escorting staff
		2	Checking the fluent opening & Closing of the door, noise, jerking motion and knocking & rectify the observed defect.
		3	Check the mechanical movement of door after pressing emergency pushbutton switch, i.e Manual operation and rectify the issue if noticed any.
		4	Check the function of Radar for proper working and replace if defective.
		5	Check the door leaf and Glass for any damage or crack and replace the glass if crack or broken.
		6	Checking completeness of the mechanism, screwing up, binding cables, loose connections etc. Visually, Adjust the mechanism for smooth operation.
6.2	Plug Doors - iFE (DTC,NDTC,MC,TC)		
		1	Check the Entrance door glass for cracked, fixing with frame
		2	Check door leaf for any damage, crack.
		3	Check step for any damage crack.
		4	Check the functioning of indication lamps.
		5	Check the functioning of emergency button
7	Vacuum Bio-Toilet - EVAC GmbH (DTC,NDTC,MC,TC)		
		1	Check the Operation of flush push button.
		2	Check for foul smell and clogging of toilet.
		3	Check the LCD screen for any fault code.
		4	Perform a visual check on WC seat and cover, toilet Bowl for damages and corrosion
		5	Check the bolts of fixation, toilet seat hinge for their looseness and condition.