



भारत सरकार - रेल मंत्रालय  
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Government of India-Ministry of Railways  
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Lucknow - 226 011  
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टीएम/एच एम/यूनि,पार्ट- III

दिनांक- -11-2020

TM/HM/UNI,Pt- III

Date- -11-2020

I-मुख्य अभियन्ता (ट्रैक मशीन)सभी क्षेत्रीय रेलवे	Chief Engineer (Track Machines) All Zonal Railways
II- मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन) सी.पी.ओ.एच. कार्यशाला इलाहाबाद, रायनापाडु, कंचरापारा, अहमदाबाद,	Chief Workshop Manager (Track Machines) CPOH Workshop, Allahabad, Rayanapadu, Kachrapara, Ahmedabad
III- प्रधानाचार्या.रे.रे.प.म.प्र.के. पीपलगांव इलाहाबाद-211011	Principal,IRTMTTC,Pipal Gaon,,Allahabad-211011
Details of addresses are enclosed.	

**विषय :** पी.सी.टी.(जी.मैक) मशीन सं. सी डी सी के-16-III) की निरीक्षण जांच सूची ।

**Sub:** Inspection Check List of PCT (GEMAC) M/C No.CDCK-16-III.

ओईएम मैनुअल के आधार पर पी.सी.टी.(जी.मैक) मशीन सं. सी डी सी के-16-III की निरीक्षण जांच सूची का मसौदा तैयार कर टीएम/एच एम/यूनि,पार्ट- III दि. 23.09.2020 द्वारा जारी किया गया था और अनंतिम निरीक्षण जांच सूची पुस्तिका पत्र सं. टीएम/एच एम/यूनि,पार्ट-III दि. 06.11.2020 द्वारा 15 दिनों के लिये सभी क्षेत्रीय रेलवे को, जारी किया गया था। परन्तु क्षेत्रीय रेलवे से अभी तक कोई टिप्पणी प्राप्त नहीं हुई है। अब निरीक्षण जांच सूची को अंतिम रूप से तैयार किया गया है, जिसकी एक प्रति आपके सूचनार्थ तथा सभी मशीन के कर्मचारियों जो फील्ड में काम कर रहे हैं, के मार्गदर्शन हेतु संलग्न है। यद्यपि उपरोक्त सूची बनाते समय सभी सावधानियाँ बरती गई हैं, फिर भी यदि कोई त्रुटि हो तो कृपया अपने सुझावों/टिप्पणियों को सुधार हेतु ई-मेल/फैक्स/ पत्राचार द्वारा अद्योहस्ताक्षरी को भेजे ।

Based on OEM manual, Draft of Inspection Check List of PCT (GEMAC) M/C No. CDCK-16-III had been prepared and circulated vide letter no. TM/HM/UNI,Pt III dated 23.09.2020 for 30 days and provisional Inspection Check List circulated vide letter no.TM/HM/UNI,pt.III dated 06.11.2020 for 15 days respectively. But no suggestions/comments are received from Zonal Railways. Now the maintenance Schedule Manual has been finalized

A copy of the same is enclosed herewith for your information and guidance of the machine staff working in the field. However, every care has been taken during preparation of the above said list, the discrepancy noticed, if any, may be brought to the knowledge of the undersigned for further improvement by email/fax/post

DA: As above

Email id - [hmtmrdso@gmail.com](mailto:hmtmrdso@gmail.com)

Signed by Om Prakash

Date: 27-11-2020 16:13:55

Reason: Approved (ओमप्रकाश)  
(Om Prakash)

निदेशक रेलपथ मशीन -III

Director Track Machine-III

**I- मुख्य अभियन्ता (ट्रैक मशीन)**

- 1.0 मध्य रेलवे, सीएसटी, मुम्बई-400 001
- 2.0 फेयरली प्लेस, पूर्व रेलवे, कोलकाता-700 001
- 3.0 बड़ौदा हाउस, उत्तर रेलवे, नयी दिल्ली-110 001
- 4.0 उत्तरपूर्व रेलवे, गोरखपुर 273012
- 5.0 मालीगांव, उत्तरपूर्व सीमान्त रेलवे, गुवाहाटी-781 011
- 6.0 पार्क टाउन, दक्षिण रेलवे, चेन्नई-600 003
- 7.0 रेल निलयम, दक्षिण मध्य रेलवे, सिकन्दराबाद-500 371
- 8.0 गार्डन रीच, दक्षिणपूर्व रेलवे, कोलकाता-700 043
- 9.0 चर्चगेट, पश्चिम रेलवे, मुम्बई-400 020
- 10.0 उत्तर पश्चिम रेलवे, जयपुर-302 001
- 11.0 पूर्व मध्य रेलवे, हाजीपुर-844 101
- 12.0 दक्षिण पश्चिम रेलवे, हुवली-580 023
- 13.0 उत्तर मध्य रेलवे, इलाहाबाद-211 015
- 14.0 पूर्व तट रेलवे, भुवनेश्वर-751 001
- 15.0 पश्चिम मध्य रेलवे, जबलपुर-482 001
- 16.0 दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495 004

**Chief Engineer (Track Machines)**

- CST, C R, Mumbai - 400 001.  
 Fairlie Place, E R, Kolkata-700 001.  
 Baroda House, N R, New Delhi-110 001.  
  
 N E R, Gorakhpur-273 012.  
 Maligaon, N F R, Guwahati -781 011.  
  
 Park Town, S R, Chennai -600 003.  
 Rail Nilayam, SCR, Secunderabad-500 371.  
 Garden Reach, S E R, Kolkata-700 043.  
  
 Churchgate, W R, Mumbai-400 020  
 N W R, Jaipur-302 001.  
 E C R, Hazipur-844 101  
 SWR, Hubli-580 023  
 NCR, Allahabad-211 015  
 East Coast Rly, Bhubaneshwar-751 001  
 WCR, Jabalpur-482 001  
 South East Central Rly, Bilaspur-495 004

**II- मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन)**

- 1.0 सी.पी.ओ.एच. कार्यशाला पो0 धूमनगंज इलाहाबाद-221012
- 2.0 सी.पी.ओ.एच. कार्यशाला, दक्षिण मध्य रेलवे, रायनापाडु,, विजयवाडा, जिला कृष्णा, आन्ध्र प्रदेश. 521241
- 3.0 सी.पी.ओ.एच. कार्यशाला, पूर्व रेलवे, भूतबागान , रेलवेकॉलोनी ,कंचरापाड़ा , पी.एस- बिजपुर पो0 कंचरापाड़ा ,पश्चिम बंगाल -743145
- 4.0 मुख्य अभियन्ता ,सी.पी.ओ.एच, पश्चिम रेलवे,मंडल रेल प्रबंधक कार्यालय , चामुंडा, माता मंदिर के पास , नरोड़ा रोड , पो0 सैजपुर बोधा,अहमदाबाद-382345

**Chief Workshop Manager (Track Machines)**

- CPOH Workshop, PO. Dhoomanganj Allahabad-221012  
 CPOH Workshop, South Central Railway, Rayanapadu, Vijaywada, Dist.- Krishna, Andhra Pradesh-521241  
 CPOH Workshop, Eastern Railway, Bhutbagan Railway Colony, Kanchrapara, P.S: Bizpur, P.O.: Kanchrapara, West Bengal-743145  
  
 Chief Engineer. C.P.O.H, Western Railway, Divisional Office, Near Chamunda Mata Mandir, Naroda Road, P.O. - Saijpur Bogha, Ahmedabad-382345

**III- प्रधानाचार्य भा.रे.रे.प.म.प्र.के. पीपल गांव इलाहाबाद-211011**

**Principal, IRTMTC, Pipal Gaon, Allahabad-211011**





## **INSPECTION CHECK LIST**

**FOR**

**Points & Crossing Tamping Machine (GMAC)  
(CDCK-16 III)**

**REPORT NO. TM- 244**

**NOVEMBER-2020**

***TRACK MACHINE AND MONITORING DIRECTORATE  
RESEARCH DESIGN AND STANDARD ORGANISATION  
LUCKNOW-226011***

## PREFACE

Any Machine can only be kept in good condition by regular Inspection of its various assemblies at different levels of inspections. To ensure that the components of On-Track machines are properly working & being maintained and the documentation of the same is being done properly, multi tiered Inspection of On-Track machines is also required. For the purpose IRTMM-2019 includes the duties of different inspecting authorities from Dy. CE/TMC to SSE/TMC with the objective to monitor the health of machines and to ensure that the officials concerned are carrying out their duties satisfactorily. For the guidance of the inspecting authorities, RDSO is dealing with the preparation and issuing the list of items to be inspected for a particular type of machine.

In this context, the Check list for Inspection of Points & Crossing Tamping Machine (GMAC)(CDCK-16-III) is prepared.

While every care has been taken to make the Inspection Check List quite exhaustive, there will always be scope for further improvement. Suggestions from the railways in this regard will be welcome and may be sent to the undersigned for future improvement.

November-2020

(Om Prakash)  
Director/Track Machine-III  
RDSO/Lucknow

**Inspection Of Points & Crossing Tamping Machine(GMAC)**  
**(CDCK-16 III)**

**Name & Designation of Inspecting Official :**

**Date of Inspection :**

**Machine No. :**

**Base Station /division :**

**Location of working :**

**Block hours :**

**Progress :**

1.0 General		
S. No	Items	Remarks given by inspecting officer
1.1	Name of supervisor	
1.2	Machine make	
1.3	Year of manufacturing	
1.4	First POH of Machine done on	
1.5	Last IOH of M/C done on	
1.6	Next IOH of M/C due on	
1.7	Last POH of M/C done on	
1.8	Next POH of M/C due on	
1.9	Last POH of camping coach done on	
1.10	Next POH of camping coach due on	
1.11	All log book filled Properly	
1.12	Pending Maintenance Schedule and reasons	
1.13	Schedule I,II,III,IV,V,VI,VII	
<b>History of Machine:</b> ----- ----- ----- ----- -----		

S. No.	I t e m s	Prevailing Condition	
<b>2.0</b>	<b>Mode of Working</b>		
2.1	Pre and Post Tamping Operations being Done	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.2	Depth of Clean Cushion under Sleeper (required min. is 150 mm)	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
2.3	Condition of Ballast	Caked <input type="checkbox"/>	Clean <input type="checkbox"/>
2.4	Lifting working mode	Proportional (Smoothering) <input type="checkbox"/>	Design <input type="checkbox"/>
2.5	Working method	Manual <input type="checkbox"/>	Measuring run <input type="checkbox"/>
2.6	Parameter recorded in ALC	Yes <input type="checkbox"/>	Not recorded <input type="checkbox"/>
2.7	Hydraulic leakage from circuit	Location-----	
2.8	Pneumatic leakage from circuit	Location-----	
2.9	Overall condition of the Machine health	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	Very Good <input type="checkbox"/> Average <input type="checkbox"/>
2.10	Application of brake	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
2.11	Overall Machine working performance	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>

**Remarks.**

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S.No.	Items	Agent / Description	Prevailing Condition	
3.0. Oil/water/level in tank/container				
3.1.	Hydraulic oil	Shell Tellus S2VX46# or equivalent*	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.2.	Radiator	-----	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.3.	Hydraulic Transmission Gear Box	ATF.220 or equivalent	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.4.	Diesel Oil	HSD	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.5.	Reduction Gear Box	SAE 80W/90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.6.	Engine Lube oil	15W40 API CH-4	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.7.	Change of Engine Lube oil due on date(After every 500hrs)	15W40 API CH-4	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.8.	Driving Axle Gear Box I	SAE 80W/90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.9.	Driving Axle Gear Box II	SAE 80W/90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.10.	Driving Axle Gear Box III	SAE 80W/90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.11.	Compressor lube oil(if used)	SAE 80W/90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>

**Remarks.**

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S. No.	I t e m s	Prevailing Condition	
<b>4.0.</b>	<b>Filters</b>		
4.1.	Cleaning of Air Cleaner filters outer (Cleaned after every 200hrs or on dirt indication and change after 1000hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.2.	Change of air cleaner inner ( after every 1000hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.3.	Change of diesel filters(2nos.) (every 500hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.4.	Change of Hyd. Transmission gear box filter(1no.) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.5.	Change of High pressure filter (2nos)( after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.6.	Change of return filter (2nos.) ( after every 500hrs or on choke indication	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.7.	Change of sunction filter (3+2nos.) ( after every 500hrs or on choke indication	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.8.	Change of air dyer filter (2nos.) ( after every 1000hrs or or at least once a year)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

**Remarks.**

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5.0 Lubrication (Oiling & Greasing as per maintenance schedule)				
S.No.	Item	Agent / Description	Prevailing Condition	
<b>5.1. Tamping units</b>				
5.1.1.	Vibration shaft main bearing	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.2.	Tamping unit guide column	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.3.	Telescopic extension of tamping unit	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.4.	Connecting rod bearing of squeezing cylinder lateral shifting cylinder, adjusting cylinder, lifting cylinder, frame slewing cylinder and slewing pin	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.5.	Tamping unit guiding plate and deflection pulley	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
<b>Note-</b> If machine is equipped with auto greasing unit for some part/section working of it should be ensured time to time.				
<b>5.2. Lifting and lining units</b>				
5.2.1.	Additional lifting assembly Guide plate & deflection pulley	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.2.	Lifting cylinder pivot	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.3.	Clamp bolt & Clamp	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.4.	Locking device of lifting/ lining unit	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.5.	Swiveling frame	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.6.	Sliding plate	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.7.	Lining roller	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.8.	Vertical/longitudinal hook guide	2# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

**Remarks.**

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S.No.	Item	Agent / Description	Prevailing Condition	
<b>5.3.</b>	<b>Cordon shaft</b>			
5.3.1.	Engine to ZF gear box	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.2.	ZF to power divider gear box	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.3.	Power divider gear box to driving axle-II	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.4.	Axle I to Axle II shaft drive	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
<b>5.4.</b>	<b>Miscellaneous</b>			
5.4.1.	Sensing rod , guide bush and deflection pulley of Measuring bogie.	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.2.	Torque arm pivot	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.3.	King pin pivot	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.4.	Gear box flange cover of driving and idle bogies	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.5.	All balls and socket pivot point	ShellTellus-S100	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.6.	Sensing feeler rod, tensioning trolley, guide bush and chord displacement assembly of Front tension bogie.	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.7.	Brake linkage, brake lever bearing & Brake lever bearing & Brake rod.	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.8.	Guide rod & lateral plate of measuring trolley	ShellTellus-S100	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.9.	Lateral guide & guide rod of lining trolley.	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.10.	Suspension of machine bogie	3# lithium based grease	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

**Remarks.**

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S.No.	Item	Prevailing Condition	
6.0	Engine Model no. _____ Engine hours on date; _____		
6.1.	Over-hauling of the Engine as per Main. Schedule	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
6.2.	Starting problem	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.3.	Condition of smoke	White <input type="checkbox"/> Normal <input type="checkbox"/>	Blank <input type="checkbox"/>
6.4.	Engine temperature during working Cummins Engine: Optimum 75 to 85°C	Actual °C----- Ok <input type="checkbox"/> Required attention <input type="checkbox"/>	
6.5.	Leakage in Head gasket	No <input type="checkbox"/>	Yes <input type="checkbox"/> (Head no....)
6.6.	Compressor leakage	Yes <input type="checkbox"/>	No <input type="checkbox"/>
6.7.	Belt condition and tension	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
6.8.	Leakage of water from water pump, seal hose and radiator	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.9.	RPM of the Engine (rated 2100)	Actual °C----- Ok <input type="checkbox"/> Need attention <input type="checkbox"/>	
6.10.	Engine oil pressure Caterpillar C-15 Minimum 1-2 Kg/cm <sup>2</sup> at idle rpm Minimum 3-7 Kg/cm <sup>2</sup> on rated rpm after 2 hours working	Actual----- Actual-----	
6.11.	Overall condition of Engine	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>

Remarks -

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S.No.	Item	Prevailing Condition	
<b>7.0</b>	<b>Electrical and Electronics</b>		
7.1.	Condition of battery terminals	Ok <input type="checkbox"/>	Not satisfactory <input type="checkbox"/>
7.2.	Condition of batteries	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.3.	Electrolyte level in batteries (Plates should be embedded in electrolyte)	Ok <input type="checkbox"/>	Need Top up <input type="checkbox"/>
7.4.	Specific gravity of electrolyte (min 1.24)	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
7.5.	Condition of self starter	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.6.	Condition of alternator	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.7.	Condition of Depth transducer (4nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.8.	Condition of Lining transducer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.9.	Condition of Height transducer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.10.	Working of Lining galvanometer	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.11.	Working of X- Level galvanometer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.12.	Working of Lifting indication voltmeter LHS	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.13.	Working of Lifting indication voltmeter RHS	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.14.	Safety circuit for Engine	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.15.	Safety circuit for Driving	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>

Remarks.

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S.No.	Item	Prevailing Condition			
8.0	Gauges and meters working status				
8.1.	RPM meter in Working Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.2.	RPM meter in Front Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.3.	Speedometer/Tachometer working Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.4.	Speedometer/Tachometer front Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.5.	Engine Oil Pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.6.	Engine Temperature meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.7.	Hyd. Transmission Gear Box oil pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.8.	Hyd. Transmission Gear Box oil temperature meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.9.	Battery charging meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.10.	Battery voltage meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.11.	Hydraulic oil pressure meters	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.12.	Hydraulic driving pressure meters	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.13.	Pneumatic pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>

Remarks.

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S.No.	Item	Prevailing Condition	
<b>9.0</b>	<b>Pneumatic</b>		
9.1.	Air Oiler working properly	Yes <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.2.	Water separator working properly	Yes <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.3.	Working of drip cup	Yes <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.4.	Clearance between brake shoes and wheel	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
9.5.	Working of brake application	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.6.	Working of unloader valve	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.7.	Locking system of lifting/lining units	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.8.	Locking system of tamping units	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.9.	Locking system of lining trolley	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.10.	Locking system of middle feeler trolley	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.11.	Locking system of front feeler trolley	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.12.	Locking system of measuring feeler trolley	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
9.13.	Locking system of split head tamping unit	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>

Remarks.

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S.No.	Item	Prevailing Condition	
<b>11.0</b>	<b>Miscellaneous</b>		
11.1.	Adjustment of track lifting roller height LHS	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
11.2.	Adjustment of track lifting roller height RHS	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
11.3.	Correction of alignment	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
11.4.	Performance of Tamping unit up/down	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
11.5.	Performance of Lifting & Leveling	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
11.6.	Condition of brake shoes	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
11.7.	Visual and Physical inspection of wheel shall be done at a frequency of once in a year or after every 1000 engine running hours whichever is earlier	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
11.8.	Ultrasonic testing of axles of machine shall be done between 40,000 to 45,000 kms of running or three years whichever is earlier	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

S.No.	Item	Prevailing Condition	
<b>12.0</b>	<b>Safety Items and Staff Matter</b>		
12.1.	Safety equipment as per Annexure-I	Available <input type="checkbox"/>	Deficient <input type="checkbox"/>
12.2.	Working of safety Emergency Braking System of the machine	Ok <input type="checkbox"/>	Defective <input type="checkbox"/>
12.3.	Competency certificate of operator	Current <input type="checkbox"/>	Expired <input type="checkbox"/>
12.4.	Strength of staff	Full <input type="checkbox"/>	Deficient <input type="checkbox"/>
12.5.	Safety awareness	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V, Good <input type="checkbox"/> Average <input type="checkbox"/>
12.6.	Staff due for Medical	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**Signature of inspecting authority**



**List of Safety Equipments**

<b><u>S. No.</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>
1.	Detonators in a tin case	1 box
2.	H.S. flag red	2 nos.
3.	H.S. flag green	1 nos.
4.	H.S. Tri colour lamps	2 nos.
5.	Chain & Padlock	1 set
6.	Clamp with Padlock	2 nos.
7.	Jack 20 t capacity with traverser	1 set
8.	Jack 50 t capacity with traverser	1 set
9.	Crow bars	4 nos.
10.	Wooden blocks off sizes	8 nos.
11.	Gauge cum level	1 no.
12.	Rail thermometer (dial type)	1 no.
13.	Banner flag	2 nos.
14.	Portable Control Phone	1 no
15.	First Aid Box	1 no
16.	Skids	2 nos.
17.	Working time table of section where machine working	1 copy
18.	G&SR book with upto date amendment slips	1 copy
19.	4 cell flasher light	1 no.
20.	Petromax /LPG lamps	1 no.
21.	Safety helmets	For each Machine staff
22.	Protective clothing, safety shoes and safety gloves	For each Machine staff
23.	Track Machine Manual	1 no.
24.	Accident Manual	1 no.
25.	Fire extinguisher	1 no.
26.	Hooter (manual)	2 nos.
27.	Hydraulic Hand Pump	1 no.
28.	Emergency pneumatic/Hydraulic hose of sizes suiting to different machines(complete with end fittings)	1 no.

**Note-**

1. Inspecting official should wear the safety items 21 to 22 while doing the inspection.
2. All the working units should be properly locked and a tag should be attached to the unit showing the name of person who has locked the unit
3. Proposal is sent to Railway board vide letter no. TM/HM/1,VOL-2, dt. 22/08/2019 for approval of jack machine wise.

## Annexure-II

## List of Spares for Emergency

Sl. No.	Description	Qty
	<b>Engine:</b>	
1	Fuel filter	1 Set
2	Lube oil filter	1 Set
3	Air cleaner filter	2 Set
4	Radiator hoses	1 Set
5	Injector pipes	1 Set
6	'V' belts	1 Set
7	Fuel flexible hoses	1 Set
	<b>Tamping Unit:</b>	
1	Piston for squeezing cylinder	1 Set
2	Gland bush for squeezing cylinder	1 Set
3	Piston Locking Screw	1 No
4	<b>Tamping unit Up / Dn cylinder seals</b>	1 No
5	Tamping unit Up / Dn cylinder piston rod	1 No
6	Tamping tools	1 Set
7	Tamping tool lock bolt)	16Nos
8	Tamping depth transducer	02 Nos
9	35 mm pin with steel bush, nut & washer	1 No
10	Squeezing cylinder piston rod	1 No
11	Tool tilting cylinder	1 No
	<b>Hydraulic:</b>	
1	Seal set for all hydraulic cylinders	1 set each
2	Proportional filters	2 No
3	Servo filters	2 Nos
4	ZF in-line filter	1 No
5	Hydraulic suction filter	1 Set
6	Hydraulic return filters	1 Set
7	Hydraulic hoses R02-4	25 mtrs

Sl. No.	Description	Qty
8	Hydraulic hoses R02-6	10 mtrs
9	Hydraulic hoses- R02-8	10 mtrs
10	Hydraulic hoses R02-10	10 mtrs
11	Hydraulic hoses R02-12	10 mtrs
12	Hydraulic hoses R02-16	10 mtrs
13	Hydraulic hoses R02-20	10 mtrs
14	Hydraulic hoses R05/R06 -24	10 mtrs
15	Hydraulic hoses R05/R06 -32	10 mtrs
16	Hydraulic hose fitting of different sizes	2 each
17	HT bolts of different sizes	5 each
18	O ring of different sizes	1 each
19	Grease nipple	10 Nos
	<b>Electrical:</b>	
1	All type of Relays	2 Nos each
2	All type of Fuses	2 Nos each
3	Head light , tail light & working light bulbs	2 Each
4	Versine transducer carrier	1 No
5	Versine transducer chord	16 mtrs
6	Chord wire for lining & leveling	80mts
7	Battery lug	4 Nos
	<b>Miscellaneous:</b>	
1	Track lifting roller	1 No
2	Pneumatic hose 6.3 mm	15 mtrs
3	Pneumatic hose 12.5 mm	05 mtrs
4	Brake shoes	8 Nos
5	Brake cylinder seal	1set
6	Cordon shaft nut and bolt	10 each

## ACKNOWLEDGEMENT

Following officers and staff have made their valuable contributions in preparation of the Inspection Check List for Points & Crossing Tamping Machine (GMAC) (CDCK-16-III).

### RAILWAYS

#### RDSO

S/SRI Muslim Ahmad ARE/TM

. " " A.K.Srivastava SSE/TM