



भारत सरकार - रेल मंत्रालय
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TM/HM/MPT/Pt.III

Date: 21-10-2020

I-मुख्य अभियन्ता (ट्रैक मशीन)सभीक्षेत्रियरेलवे	Chief Engineer (Track Machines) All Zonal Railways
II- मुख्य कार्यशालाप्रबन्धक (ट्रैक मशीन) सी.पी.ओ.एच. कार्यशालाइलाहाबाद, रायनापादु, कंचरापारा, अहमदाबाद,	Chief Workshop Manager (Track Machines) CPOH Workshop, Allahabad, Rayanapadu, Kachrapara, Ahmedabad
III- प्रधानाचार्यभारे.रे.प.म.प्र.के. पीपलगांव इलाहाबाद-211011	Principal, IRTMTC, Pipal Gaon,, Allahabad-211011
Details of addresses are overleaf.	

विषय : यूनिमेट एस एच एम एफ आई मशीन सं.(56564-590,56650-657) की निरीक्षण जांच सूची ।

Sub: Inspection Check List of UNIMAT SH MFI M/C NO.56564-590, 56650-657.

ओईएम मैनुअल के आधार पर यूनिमेट एस एच एम एफ आई मशीन सं.(56564.590,56650.657) की निरीक्षण जांच सूची का मसौदा तैयार कर टीएम/एच एम/एम ०पी.टी०,पार्ट- I। दि. 06.07.2020 द्वारा जारी किया गया था और अनंतिम निरीक्षण जांच सूची पत्र सं टीएम/एचएम/ /एम ०पी.टी०, /पार्ट. III दि 31.08.2020 द्वारा 15 दिनों के लिये सभी क्षेत्रिय रेलवे को जारी किया गया था। सभी क्षेत्रिय रेलवे में से केवल उत्तर पूर्व रेलवे से सुझाव/ टिप्पणी प्राप्त हुआ, जिसके आधार पर निरीक्षण जांच सूची को अंतिम रूप से तैयार किया गया है । जिसकी प्रति, आपके सूचनार्थ तथा 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 अग्रोहस्ताक्षरी को भेजे ।

Based on OEM manual, Draft Inspection Check List for UNIMAT SH MFI M/C NO.56564-590, 56650-657, has been prepared and circulated vide letter no. TM/HM/MPT,pt.III dated 06/07/2020 for 30 days and provisional Inspection Check List circulated vide letter no. TM/HM/MPT,pt.III dated 31/08/2020 for 15 days respectively. After circulating to all zonal railways, suggestions/ Comments received from only one zonal railway (N.E. Railway).Hence the Inspection Check List has been finalized on the basis of suggestions/ Comments received from N.E. Railway.

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

Signed by Om Prakash

Date: 27-10-2020 12:35:23

Reason: Approved (ओम प्रकाश)

(Om Prakash)

निदेशक रेलपथ मशीन-III

Director Track Machine-III

I-	मुख्य अभियन्ता (ट्रैक मशीन)	Chief Engineer (Track Machines)
1.0	मध्य रेलवे, सीएसटी, मुम्बई-400 001	CST, C R, Mumbai - 400 001.
2.0	फेयरली प्लेस, पूर्व रेलवे, कोलकाता-700 001	Fairlie Place, E R, Kolkata-700 001.
3.0	बडौदा हाउस, उत्तर रेलवे, नयी दिल्ली-110 001	Baroda House, N R, New Delhi-110 001.
4.0	उत्तरपूर्व रेलवे, गोरखपुर 273012	N E R, Gorakhpur-273 012.
5.0	मालीगांव, उत्तरपूर्व सीमान्त रेलवे, गुवाहाटी-781 011	Maligaon, N F R, Guwahati -781 011.
6.0	पार्क टाउन, दक्षिण रेलवे, चेन्नई-600 003	Park Town, S R, Chennai -600 003.
7.0	रेल निलयम्, दक्षिण मध्य रेलवे, सिकन्दराबाद-500 371	Rail Nilayam, SCR, Secunderabad-500 371.
8.0	गार्डन रीच, दक्षिणपूर्व रेलवे, कोलकाता-700 043	Garden Reach, S E R, Kolkata-700 043.
9.0	चर्चगेट, पश्चिम रेलवे, मुम्बई-400 020	Churchgate, W R, Mumbai-400 020
10.0	उत्तर पश्चिम रेलवे, जयपुर-302 001	N W R, Jaipur-302 001.
11.0	पूर्व मध्य रेलवे, हाजीपुर-844 101	E C R, Hazipur-844 101
12.0	दक्षिण पश्चिम रेलवे, हुबली-580 023	SWR, Hubli-580 023
13.0	उत्तर मध्य रेलवे, इलाहाबाद-211 015	NCR, Allahabad-211 015
14.0	पूर्व तट रेलवे, भुवनेश्वर-751 001	East Coast Rly, Bhubaneshwar-751 001
15.0	पश्चिम मध्य रेलवे, जबलपुर-482 001	WCR, Jabalpur-482 001
16.0	दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495 004	South East Central Rly, Bilaspur-495 004
II-	मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन)	Chief Workshop Manager (Track Machines)
1.0	सी.पी.ओ.एच. कार्यशाला पो0 धूमनगंज इलाहाबाद-221012	CPOH Workshop, PO. Dhoomanganj Allahabad-221012
2.0	सी.पी.ओ.एच. कार्यशाला, दक्षिण मध्य रेलवे, रायनापाडु,, विजयवाडा, जिला कृष्णा, आन्ध्र प्रदेश. 521241	CPOH Workshop, South Central Railway, Rayanapadu, Vijaywada, Dist.- Krishna, Andhra Pradesh-521241
3.0	सी.पी.ओ.एच. कार्यशाला, पूर्व रेलवे, भूतबागान , रेलवेकॉलोनी , कंचरापाड़ा , पी.एस- बिजपुर पो0 कंचरापाड़ा , पश्चिम बंगाल -743145	CPOH Workshop, Eastern Railway, Bhutbagan Railway Colony, Kanchrapara, P.S: Bizpur, P.O.: Kanchrapara, West Bengal-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 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, PipalGaon, Allahabad-211011

**INSPECTION CHECK LIST
FOR
UNIMAT SH MFI M/C
NO.56564-590, 56650- 657**



REPORT NO. TM-249

OCTOBER-2020

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 UNIMAT SH MFI M/C NO.56564-590, 56650- 657 is prepared. The suggestions and feedback from Zonal Railways has been taken and incorporated in Inspection Check list.

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.

(Om Prakash)
Director/Track Machine
RDSO/Lucknow-226011.

INSPECTION OF UNIMAT SH MFI M/C NO.56564-590, 56650- 657

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	
History of Machine: _____ _____ _____ _____ _____		

S. No.	I t e m s	Prevailing Condition	
2.0 Mode of Working			
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)	-----mm	
		Or <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 (Smoothing) <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.

S.No.	Items	Agent / Description	Prevailing Condition	
3.0. Oil/water/level in tank/container				
3.1.	Hydraulic oil	Servo System HLP68N or equivalent*	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.2.	Radiator	Water with coolant	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.3.	ZF Gear Box	CF-4 15W40	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.	Intermediate Gear Box	SAE-90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.6.	Reduction Gear Box	SAE-90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.7.	Engine Lube oil	CF-4 15W40	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.8.	Change of Engine Lube oil due on date(After every 300hrs)	CF-4 15W40	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.9.	Funk Gear Box	SAE-90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.10.	Driving Axle Gear Box I	SAE-90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.11.	Driving Axle Gear Box II	SAE-90	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
3.12.	Compressor lube oil(if used)	CF-4 15W40	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>

*equivalent of servo system HLP68N list issued by RDSO vide I.n.TM/HM/Oils dated dt.26/07/2012

Remarks

4. Filters

S. No.	I t e m s	Prevailing Condition	
4.0. Filters			
4.1.	Cleaning of Air Cleaner filters outer(1no.) (Cleaned after every 250hrs or on dirt indication and change after 1000hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.2.	Change of air cleaner inner(1no) (after every 1000hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.3.	Change of diesel filters(2nos.) (to be done after every 300hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.4.	Change of ZF gear box filter(1no.) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.5.	Change of Servo valve filter (2nos)(after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.6.	Change of Servo valve button filter (6nos)(after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.7.	Change of proportional valve filter (2nos)(after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.8.	Change of return filter (2nos.) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.9.	Change of suction filter (3nos.) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.10.	Change of air dryer filter (2nos.) (after every 1000hrs or at least once a year)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks _____

5.Lubrication (Oiling & Greasing as per maintenance schedule)				
S.No.	Item	Agent / Description	Prevailing Condition	
5.1.	Tamping units			
5.1.1.	Vibration shaft main bearing	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.2.	Tamping unit guide column	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.3.	Connecting rod bearing of squeezing cylinder lateral shifting cylinder, adjusting cylinder, lifting cylinder, frame slewing cylinder and slewing pin	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.4.	Tamping unit guiding plate and deflection pulley	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
Note- if machine is equipped with auto greasing unit for some part/section working of it should beensured time to time.				
5.2.	Lifting and lining units			
5.2.1.	Lifting cylinder pivot	ShellTellus-100	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.2.	Clamp bolt & Clamp	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.3.	Locking device of lifting/ lining unit	ShellTellus-100	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.4.	Swiveling frame	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.5.	Sliding plate	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.6.	Lining roller	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.7.	Vertical/longitudinal hook guide	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
*equivalent of servo system HLP68N list issued by RDSO vide l.n.TM/HM/Oils dated, 26/07/2012				

Remarks _____

S.No.	Item	Agent / Description	Prevailing Condition	
5.3.	Cardon shaft			
5.3.1.	Engine to ZF gear box	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.2.	ZF to power divider gear box	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.3.	Power divider gear box to driving axle-I	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.4.	Power divider gear box to Intermediate shaft drive	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.5.	Intermediate shaft to Driving axle-II	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.	Miscellaneous			
5.4.1.	Sensing rod , guide bush and deflection pulley of Measuring bogie.	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.2.	Torque arm pivot	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.3.	King pin pivot	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.4.	Gear box flange cover of driving and idle bogies	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.5.	All balls and socket pivot point	Oil Servo system- 100	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.	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.7.	Brake linkage, brake lever bearing && Brake rod.	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.8.	Guide rod & lateral plate of measuring trolley	Oil Servo system- 100	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.9.	Lateral guide & guide rod of lining trolley.	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.10.	Suspension of machine bogie	Grease Shell Alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks-

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 (minimum) Cummins (KTA 1150L) Minimum 1-2 Kg/cm ² at idle rpm Minimum 3-7 Kg/cm ² 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-

S.No.	Item	Prevailing Condition			
7.0 Electrical and Electronics					
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.	Condition of self starter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.4.	Condition of alternator	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.5.	Condition of Depth transducer (4nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.6.	Condition of Lining transducer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.7.	Condition of Height transducer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.8.	Working of Lining galvanometer	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.9.	Working of X- Level galvanometer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.10.	Working of Lifting indication voltmeter LHS	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.11.	Working of Lifting indication voltmeter RHS	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.12.	Safety circuit for Engine	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.13.	Safety circuit for Driving	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.14.	Electrolyte level in batteries (Plates should be embedded in electrolyte)	Ok	<input type="checkbox"/>	Need Top up	<input type="checkbox"/>
7.15.	Specific gravity of electrolyte (min 1.24)	Ok	<input type="checkbox"/>	Less	<input type="checkbox"/>

Remarks.

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.	ZF oil pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.8.	ZF 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.

S.No.	Item	Prevailing Condition	
9.0 Pneumatic			
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.

S.No.	Item	Prevailing Condition	
		Recommended value	Actual value
10. 0 Hydraulic Pressure and Operation			
10.1.	System Pressure	130-140	
10.2.	High Pressure System	150	
10.3.	Squeezing pressure for concrete sleepers	135 -140	
10.4.	Accumulator pressure	85 bar (max)	
10.5.	Vibration pressures	185 bar	
10.6.	Tamping unit interlocking pressure	80 bar	
10.7.	Emergency pump pressure	130 bar	
10.8.	Air condition pressure	210 bar	
10.9.	Hydraulic. brake pressure	30 to 70 bar	
10.10.	Air pressure	6-7 Kg/cm2	
10.11.	ZF oil pressure	12-14 bar	
10.12.	Hydraulic Oil Temperature after working of machinefor 2 hrs. (Max limit 76 ⁰ c)	-----°C	

Remarks.

S.No.	Item	Prevailing Condition	
11.0	Miscellaneous		
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 & Levelling unit	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	
12.Safety Items and Staff Matter			
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"/>	V,Good <input type="checkbox"/>
		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

S. No.	Description	Quantity
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.	20 t jack*	1 no.
8.	50 t jack*	1 no.
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 is 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 systems of machine(complete with end fittings)	1 set

Note-

1. Inspecting official should wear the safety items 21 & 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
	Engine:	
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
	Tamping Unit:	
1.	Piston for squeezing cylinder	1 Set
2.	Gland bush for squeezing cylinder	1 Set
3.	Piston Locking Screw	1 No
4.	Tamping unit Up / Dn cylinder seals	1 No
5.	Tamping unit Up / Dn cylinder piston rod	1 No
6.	Tamping tool cu30.6220-BE	8 Nos
7.	Tamping tool cu30.6820-BE	8 Nos
8.	Tamping tool bolts cu30.406	8 Nos
9.	Tamping tool lock bolt (WN119-M20.100-1)	16Nos
10.	Tamping depth transducer (EL-T750.00/ZS)	02 Nos
11.	35 mm pin with steel bush, nut & washer	1 No
12.	Squeezing cylinder piston rod	1 No
13.	Tool tilting cylinder	1 No
14.	Bolt (W.31.133A)	2 Nos
15.	Bolt (CU.37.632)	2 Nos
	Hydraulic:	
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

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Sl. No.	Description	Qty
9.	Hydraulic hoses R02-6	10 mtrs
10.	Hydraulic hoses- R02-8	10 mtrs
11.	Hydraulic hoses R02-10	10 mtrs
12.	Hydraulic hoses R02-12	10 mtrs
13.	Hydraulic hoses R02-16	10 mtrs
14.	Hydraulic hoses R02-20	10 mtrs
15.	Hydraulic hoses R05/R06 -24	10 mtrs
16.	Hydraulic hoses R05/R06 -32	10 mtrs
17.	Hydraulic hose fitting of different sizes	2 each
18.	HT bolts of different sizes	5 each
19.	O ring of different sizes	1 each
20.	Grease nipple	10 Nos
	Electrical:	
1.	PCB EK819	1 No
2.	PCB EK816	1 no
3.	EK IAP13.02a	01 no.
4.	Relay ELT- 7002/S4	2 Nos
5.	All type of Fuses	2 Nos each
6.	Head light , tail light & working light bulbs	2 Each
7.	Versine transducer carrier	1 No
8.	Versine transducer chord 1mm	16 mtrs
9.	Chord wire 2mmx80mts	80mts
10.	Battery lug	4 Nos
	Miscellaneous:	
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.	Cardan shaft nut and bolt	10 each

ACKNOWLEDGEMENT

Following officers and staff have made their valuable contributions in finalization of the Inspection Check List for Unimat SH MFI M/C NO.56564-590, 56650- 657.

RAILWAYS

Shri	Ashutosh Tripathi	SSE/TM/NER
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RDSO

1. S/SRI	Muslim Ahmad	ARE/TM
2. " "	A.K.Srivastava	SSE/TM
3. " "	D.G.Sharma	SSE/CIVIL

12/10/2020