



भारत सरकार - रेल मंत्रालय  
अनुसंधान अभियंत्रण और मानक संगठन  
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संख्या-12

TM/HM/TEX/pt.III

Date: 14-03-2019

I-	मुख्य अभियंता (ट्रैक मशीन)	Chief Engineer (Track Machines)
1.	मध्य रेलवे, वीएचटी, मुंबई-400 001	CST, C R, Mumbai - 400 001.
2.	कयरोली रेलवे, पूर्व रेलवे, कोलकाता-700 001	Fairlie Place, E R, Kolkata-700 001.
3.	बटौना हाउस, उत्तर रेलवे, एमो दिल्ली-110 001	Baroda House, N R, New Delhi-110 001.
4.	उत्तरपूर्व रेलवे, गोरखपुर-273 012	N E R, Gorakhpur-273 012.
5.	मालीगोन, उत्तरपूर्व रेलवे, गुवाहाटी-781 011	Maligaon, N F R, Guwahati -781 011.
6.	पार्क टाउन, पश्चिम रेलवे, चेन्नई-600 003	Park Town, S R, Chennai-600 003.
7.	रेल निलयम, दक्षिण मध्य रेलवे, सिकंदराबाद-500 371	Rail Nilayam, SCR, Secunderabad-500 371.
8.	गार्डन रीच, पश्चिम रेलवे, कोलकाता-700 043	Garden Reach, S E R, Kolkata-700 043.
9.	चर्चगेट, पश्चिम रेलवे, मुंबई-400 020	Churchgate, W R, Mumbai-400 020
10.	उत्तर पश्चिम रेलवे, जयपुर-302 001	N W R, Jaipur-302 001
11.	ई. सी. रेलवे, हाज़ीपुर-844 101	E C R, Hazipur-844 101
12.	पश्चिम पश्चिम रेलवे, हुबली-560 023	SWR, Hubli-560 023
13.	उत्तर मध्य रेलवे, इलाहाबाद-211 015	NCR, Allahabad-211 015
14.	पूर्व रेलवे, बृहन्मन्थल-751 001	East Coast Rly, Bhubaneswar-751 001
15.	पश्चिम मध्य रेलवे, जबलपुर-482 001	WCR, Jabalpur-482 001
16.	दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495 004	South East Central Rly, Bilaspur-495 004
II-	उप मुख्य अभियंता (ट्रैक मशीन)	Dy Chief Engineer (Track Machines)
1.	डी.पी.ओ.एच. कार्यालय, वी.डी. मूमनगर, इलाहाबाद-221012	CPOH WPRKSHOP, P.O. Dhoomanganj Allahabad-221012
2.	डी.पी.ओ.एच. कार्यालय, दक्षिण मध्य रेलवे, रायनापट्ट, विजयवाड़ा, जिला कृष्णा, आंध्र प्रदेश-521241	CPOH WPRKSHOP, South Central Railway, Rayanapadu, Vijaywada, Dist - Krishna, Andhra Pradesh-521241
III-	प्रधानाधिकाारी धातु प्रयोग प्रक. पीपल गांव इलाहाबाद-211011	Principal, IRTMTC, Pipal Gaon, Allahabad-211011

विषय : हाई आउटपुट टैम्पिंग एवं स्टेबलाइजिंग मशीन (09-3X) डायनेमिक की निरीक्षण जांच सूची ।

Sub: Inspection Check List of High Output Tamping & Stabilizing Machine (09-3X) Dynamic.

हाई आउटपुट टैम्पिंग एवं स्टेबलाइजिंग मशीन (09-3X) डायनेमिक की निरीक्षण जांच सूची की अंतिम सूची यत्र स टीएम/एच/एम / टेक्स गेट III दि. 22.02.2019 द्वारा जारी किया गया था, जिसमें सुधार के अभाव में सूची तैयार की गई है जिसकी प्रति आपके सुचनाई तथा मशीन के कार्याचारियों को फील्ड में जाग कर रहे हैं, के मार्गदर्शन हेतु संलग्न है। यद्यपि संशोधित सूची बनाने समय सभी सावधानियां कर्नी गई है, फिर भी यदि कोई त्रुटि हो तो, कृपया अपने सुझावों/ टिप्पणियों को सुधार हेतु ई-मेल/ फॉक्स/ पोस्ट द्वारा अद्यतनकर्ता को भेजें ।

Provisional Inspection Check List of High Output Tamping & Stabilizing Machine (09-3X) Dynamic has been circulated vide letter no. TM/HM/TEX pt.III dt.22.02.2019. After correction in it, the list is prepared. 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 by email/fax/post for further improvement.

DA: As above

(अनिल कुमार सिंह)

निदेशक, टेकनॉलॉजी - III



भारत सरकार  
रेल मंत्रालय

GOVERNMENT OF INDIA  
**MINISTRY OF RAILWAYS**

हाई आउटपुट टैम्पिंग एंव स्टैबलाइजिंग मशीन (09-3x) डायनेमिक  
की निरीक्षण जांच सूची

**INSPECTION CHECK LIST FOR HIGH OUTPUT TAMPING &  
STABILIZING MACHINE (09-3X) DYNAMIC**

रिपोर्ट संख्या-टी.एम.-225  
**Report No.TM -225**

मार्च-2019  
**March-2019**

अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ-226011  
**RESEARCH DESIGNS & STANDARDS ORGANISATION**  
LUCKNOW- 226 011

## Inspection of High Output Tamping & Stabilizing Machine (09-3x) Dynamic

**Name & Designation of Inspecting Official :**

**Date of Inspection :**

**Machine No. :**

**Base Station /division :**

**Location of working :**

**Block hours :**

**progress :**

**1. 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	

**History of Machine:**-----  
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S. No.	Items	Prevailing Condition	
<b>2.</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)	Actual—	
		OK <input type="checkbox"/>	Less <input type="checkbox"/>
2.3.	Condition of Ballast	Caked <input type="checkbox"/>	clean <input type="checkbox"/>
2.4.	Lining Working Method	3 point <input type="checkbox"/>	4point <input type="checkbox"/>
2.5.	Mode of working	smoothing <input type="checkbox"/>	design <input type="checkbox"/>
2.6.	Lifting working mode	Proportional (smoothing) <input type="checkbox"/>	design <input type="checkbox"/>
2.7.	Working method	Manual <input type="checkbox"/>	Measuring run <input type="checkbox"/>
2.8.	Hydraulic leakage from circuit	Location -----	
2.9.	Pneumatic leakage from circuit	Location -----	
2.10.	Overall condition of the Machine	Excellent <input type="checkbox"/>	Very good <input type="checkbox"/>
		Good <input type="checkbox"/>	Average <input type="checkbox"/>

**Remarks.**

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### 3. Oil/water/level in tank/container

S. No.	Items	Agent / Description	Prevailing Condition		
			OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.1.	Hydraulic oil	Shell Tellus S 2 V68	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	CAT DEO 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.	Satellite Gear Box	Shell Spirax S 2 G 80W90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.6.	Pump Gear Box	CAT DEO 15W40	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.7.	Reduction Gear Box	Shell Spirax S 2 G 80W90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.8.	Engine Lube oil	CAT DEO 15W40	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.9.	Engine Lube oil on due date (After every 300hrs)	CAT DEO 15W40	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
3.10.	Driving Axle Gear Box I	Shell Spirax S 2 G 80W90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.11.	Driving Axle Gear Box II	Shell Spirax S 2 G 80W90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.12.	Satellite Axle Gear Box	Shell Spirax S 2 G 80W90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.13.	Compressor lube oil (if used)	CAT DEO 15W40	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.14.	Tamping unit oil tank LHS	Shell Tellus S 2 M 100	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
3.15.	Tamping unit oil tank RHS	Shell Tellus S 2 M 100	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>

Remarks-----  
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#### 4. Filters

S. No.	Items	Prevailing Condition Remark	
4.1.	Cleaning of Air Cleaner filters outer (2no) (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 (2no) ( after every 1000 hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.3.	Change of engine oil filters (3 no.-2for C-18 & 1 for C-9) ( after every 500 hrs )	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.4.	Change of diesel filters ( 4nos.-2 for C-18 & 2 for C-9) (To be done after every 500 hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.5.	Change of ZF gear box filter (1no) ( after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.6.	Change of vibration gear box oil of Stabilizing unit (To be done after every 500 hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.7.	Change of Servo valve filter (2nos) ( after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.8.	Clean of Servo valve button filter (3nos) ( after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.9.	Change of proportional valve filter ( 5 no) ( after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.10.	Change of return filter (2nos) ( after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.11.	Change of suction filter (7nos) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.12.	Change of air dyer filter if used (2nos) (after every 1000 hrs or at least once year)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
4.13.	Change of variable pump suction filter(1no) ( after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks-----  
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### 5. Lubrication (Oiling & Greasing as per maintenance schedule)

S.No.	Item	Agent / Description	Prevailing Condition	
<b>5.1 Tamping units</b>				
5.1.1.	Tamping unit guide column (Both bank)	Shell Gedus S 3 V220 C 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.2.	Tamping arm Bolt (55mm)	Shell Tellus S 2 M 100	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.3.	Vibration shaft main bearing	Shell Gedus S 3 V220 C 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.1.4.	Connecting rod bolt (35mm pin)	Shell Tellus S3 V 220 C2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
<b>Note-</b> Machine is equipped with auto greasing unit, working of it should be ensured time to time, if it is not working properly then manual greasing should be done.				
<b>5.2 Satellite</b>				
5.2.1.	Satellite slide rollers	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.2.	Satellite support roller	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.3.	Satellite sliding plate (lateral)	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.2.4.	Satellite sliding roller (horizontal)	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
<b>5.3 Lifting and lining units</b>				
5.3.1.	Clamp Pivot	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.2.	Lifting Unit Guide Column	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.3.	Lining rollers	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.4.	Clamp Housing	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.5.	Lining cylinder pivot	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3.6.	Lifting unit locking	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks-----  
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S.No.	Item	Agent / Description	Prevailing Condition	
<b>5.4 Cardon shaft</b>				
5.4.1.	Engine to Pump Gear Box	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.2.	Pump Gear Box to ZF	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.3.	ZF to Distributor Gear Box	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	<input type="checkbox"/>
5.4.4.	Distributor Gear Box to axle II	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.5.	Distributor Gear Box to intermediate shaft	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.4.6.	Intermediate shaft to axle I	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
<b>5.5 Miscellaneous</b>				
5.5.1.	Middle feeler rod bush	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.2.	Torque arm pivot	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.3.	Driving bogie Brake linkage	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.4.	Running bogie Brake linkage	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.5.	pivot joint & bush of Front Trolley	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.6.	pivot joint & bush of Rear Trolley	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.7.	pivot joint & bush of Middle feeler Trolley	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.8.	pivot joint & bush of Lining Trolley	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5.9.	Axle gear box flange cover	Shell Gedus S 2 V100 2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks-

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**6. Engine Model** no (i) C-18  
(ii) C-9

Engine hours on date-  
Engine hours on date-

S.no	Items	Prevailing Condition	
6.1.	Over-hauling of the Engine <b>C-18</b> as per Main. Schedule	Due <input type="checkbox"/>	Not due <input type="checkbox"/>
6.2.	Over-hauling of the Engine <b>C-9</b> as per Main. Schedule	Due <input type="checkbox"/>	Not due <input type="checkbox"/>
6.3.	Starting problem for Engine <b>C-18</b>	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.4.	Starting problem for Engine <b>C-9</b>	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.5.	Condition of smoke for Engine <b>C-18</b>	White <input type="checkbox"/> Normal <input type="checkbox"/>	Black <input type="checkbox"/>
6.6.	Condition of smoke for Engine <b>C-9</b>	White <input type="checkbox"/> Normal <input type="checkbox"/>	Black <input type="checkbox"/>
6.7.	Engine C-18 temperature during working	Actual ----- °C	
		Ok <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.8.	Engine C-9 temperature during working	Actual ----- °C	
		Ok <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.9.	Leakage in Head gasket of the Engine C-18	No <input type="checkbox"/>	Yes <input type="checkbox"/> (Head no.- )
6.10.	Leakage in Head gasket of the Engine C-9	No <input type="checkbox"/>	Yes <input type="checkbox"/> (Head no.- )
6.11.	Compressor leakage of the Engine C-18	Yes <input type="checkbox"/>	No <input type="checkbox"/>
6.12.	Belt condition and tension of the Engine C-18	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
6.13.	Belt condition and tension of the Engine C-9	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
6.14.	Leakage of water from water pump, seal hose and radiator of the Engine C-18	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.15.	Leakage of water from water pump, seal hose and radiator of the Engine C-9	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
6.16.	RPM of the Engine C-18 (rated 2100)	Actual---	
		Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>

S.no	Items	Prevailing Condition	
6.17.	RPM of the Engine C-9 (rated 2100)	Actual---	
		Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
6.18.	Engine oil pressure (minimum)		
	Engine Model-C-18 Minimum 1.5 at idle rpm Minimum 2.5 On rated rpm after 2 hrs working	Actual---	Actual---
	& Engine Model-C-9 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---
6.19.	Overall condition of Engine C-18	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
6.20.	Overall condition of Engine C-9	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>

## 7. Electrical and Electronics

S.no	Items	Prevailing Condition	
7.1.	Condition of battery terminals	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.2.	Condition of batteries	Ok <input type="checkbox"/>	Not satisfactory <input type="checkbox"/>
7.3.	Ammeter	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.4.	Condition of self starter (2nos.)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.5.	Condition of alternator( 5nos.)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.6.	Condition of Depth transducer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.7.	Condition of Lining transducer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.8.	Condition of Height transducer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.9.	Working of Lining galvanometer	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.10.	Working of X- Level galvanometer (2nos)	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.11.	Working of Lifting indication voltmeter LHS	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
7.12.	Working of Lifting indication voltmeter RHS	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>

S.no	Items	Prevailing Condition			
7.13.	Safety circuit for Engine	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.14.	Safety circuit for Driving	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
7.15.	Electrolyte level in batteries (Plates should be embedded in electrolyte)	Ok	<input type="checkbox"/>	Need top up	<input type="checkbox"/>
7.16.	Specific gravity of electrolyte (min 1.24)	Ok	<input type="checkbox"/>	Less	<input type="checkbox"/>

**8.Gauges and meters working status**

S.no	Items	Prevailing Condition			
8.1.	RPM display in front Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.2.	RPM display in rear Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.3.	Speedometer/Tachometer front Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.4.	Speedometer/Tachometer rear Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.5.	Engine Oil Pressure display (front Cabin)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.6.	Engine Oil Pressure display (rear Cabin)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.7.	Engine Temperature display	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.8.	ZF oil pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.9.	ZF oil temperature meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.10.	Battery charging display (front Cabin)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.11.	Battery charging display (rear Cabin)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.12.	Battery voltage display	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.13.	Hydraulic oil pressure gauge.	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
8.14.	Pneumatic pressure gauge	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>

Remarks-----  
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**9.Pneumatic**

S.no	Items	Prevailing Condition	
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	Condition of brake shoes	Ok <input type="checkbox"/>	To be Changed <input type="checkbox"/>
9.4	Clearance between brake shoes and wheel	Ok <input type="checkbox"/>	To be Changed <input type="checkbox"/>
9.5	Working of direct brake application	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.6	Working of indirect brake application	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.7	Working of unloader valve	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.8	Locking system of lifting/lining units	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.9	Locking system of tamping units	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.10	Locking system of lining trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.11	Locking system of middle feeler trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.12	Locking system of front feeler trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.13	Locking system of measuring feeler trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.14	Locking system of satellite	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.15	Locking system of Shadow board trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.16	Locking system of Stabilizing unit	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>

Remarks

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### 10. Hydraulic pressure and operation

Sl no.	Items	Prevailing Condition	
		Recommended value	Actual value
10.1.	System Pressure	150 bar	
10.2.	High Pressure System	150 bar	
10.3.	Counter Pressure for small squeezing cylinder	55 bar	
10.4.	Squeezing Pressure for concrete sleepers	110 -120 bar	
10.5.	ZF Oil Pressure	10 - 15 bar	
10.6.	Charging Pressure	30 bar	
10.7.	Accumulator pressure for		
	a) High pressure	100 (Max)	
	b) Working pressure	100 (Max.)	
10.8.	Satellite roller pressure	120bar	
10.9.	Squeezing pressure	35 bar	
10.10.	Vibration pressure LHS	150 bar	
10.11.	Vibration pressure RHS	150 bar	
10.12.	Satellite Booster pressure	40-60 bar	
10.13.	Squeezing time	0.8-1.2 second	
10.14.	Air Pressure (in kg / cm <sup>2</sup> )	9.3 -10 bar	
10.15.	Satellite brake pressure	40 bar & 100 bar	
10.16.	Preload pneumatic pressure	2-5 bar	
10.17.	Pending Maintenance Schedule and reasons.	Schedule I,II,III,IV,V,VI,VII	
10.18.	Condition of Oil Coolers	Clean <input type="checkbox"/>	Clogged <input type="checkbox"/>
10.19.	Function of satellite axle support cylinder (4 nos)	Satisfactory <input type="checkbox"/>	Leaking <input type="checkbox"/>
10.20.	Hydraulic Oil Temperature after working of machine for 2 hrs. (Max limit 76 <sup>o</sup> c)	----- °C	

Remarks

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**11. Miscellaneous:**

Sl no.	Items	Prevailing Condition	
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	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
11.6.	Performance of satellite	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
11.7.	Performance of stabilizing unit	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
11.8.	Overall performance of Machine working	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>

**12. Safety Items:**

Sl no.	Items	Prevailing Condition	
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"/>
12.7.	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"/>

Remarks

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### 13. Under Frame Inspection

Sl no.	Items	Prevailing Condition			
13..1.	<b>Under Frame</b>				
13.1.1.	Visual Inspection of centre pivot mounting Bolts and Mounting of Suspension system ,Bogie Frame etc.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.1.2.	Examine the shock absorber for damages.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.1.3.	Check condition of head stock/sole bar of centre buffer Coupler	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13..2.	<b>Bogie frame &amp; Wheels</b>				
13.2.1.	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"/>
13.2.2.	Visual Inspection of wheels and under gear for any infringement	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.2.3.	Visually inspect all the welding locations.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.2.4.	Visually check the suspension brackets.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13..3.	<b>Brake Rigging</b>				
13.3.1.	Visually check the rubbing plates.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.3.2.	Examine brake beams breakages/ damages.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.3.3.	Inspection of Brake hanger bracket , torque support , cardan shaft hanger brackets for damages	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13..4.	<b>Draw Gear</b>				
13.4.1.	Check condition of the screw coupling and replace if required.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.4.2.	Examine draw hook ,draw bars, rubber pads for damages	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.4.3.	Ensure that wear at any section on draw hook should not exceed 10 mm.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.4.4.	Ensure that wear on screw coupling shackle pins, trunion pins, shackle/link holes and draw hook holes should not exceed 3mm.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
13.4.5.	Check condition of draw beam and locking pins on it.	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>

Sl no.	Items	Prevailing Condition	
13.4.6.	Examine visually draft key locking pins.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
13.5. 13..6.	<b>Buffing Gear</b>		
13.5.1.	Visually examine the wheel tyre profile and crack with tyre profile gauge as mention in procedure for inspection of wheels (On Track Machines) issued by RDSO report no. TM-170	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
13.5.2.	Examine for corrosion of sole bar and other under frame member with track tight or inspection lamp.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
13.5.3.	Visually examine the buffers casing for cracks/damages.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
13.6	<b>Running Gear and Wheels</b>		
13.6.1.	Visually inspect axle box covers.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
13.6.2.	Inspect wheel tread for shattered rim, spread rim, shelled tread, thermal cracks, heat checks	Ok <input type="checkbox"/>	To be attended <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.	10 t jack with terfor	2 nos.
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.	Walky Talky	2 nos.
16.	First Aid Box	1 no
17.	Skids	2 nos.
18.	Working time table of section where machine working	1 copy
19.	G&SR book with upto date amendment slips	1 copy
20.	4 cell flasher light/ LED Torch 6watt	1 no.
21.	LED Petromax	1 no.
22.	Safety helmets	For each Machine staff
23.	Protective clothing, safety shoes and safety gloves	For each Machine staff
24.	Track Machine Manual	1 no.
25.	Accident Manual	1 no.
26.	Fire extinguisher	3 nos.
27.	Hooter (manual)	2 nos.
28.	Hydraulic Hand Pump	1 no.
29.	Emergency pneumatic/Hydraulic hose of sizes suiting to different machines(complete with end fittings)	1 no.

**Track Parameters measured**

Km post/ Sleeper no.	Curve/ Straight	Before tamping			After tamping & Stabilising		
		XL	Twist	Alignment at _____	XL	Twist	Alignment at _____

**ANY OTHER OBSERVATIONS:**

**Signature of Inspecting Officer**

Name	Designation	Signature

## **ACKNOWLEDGEMENT**

Following officers and staff have made their valuable contributions in finalization of the Inspection Check List for T.Exp. Dynamic (09-3x, Dy.)

### **Railways**

1. Shri Ashwini Kumar Singh           SSE/TMC/NER
2. Shri Anand Suman Srivastava       SSE/TMC/NER

### **RDSO**

1. S/Shri Muslim Ahmad                ARE/TM
2. S/Shri Ashish Kumar Srivastava     SSE/TM
3. S/Shri D.G.Sharma                 SSE/Engg./TM

12-03-2019