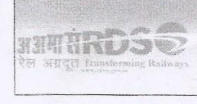




भारत सरकार - रेल मंत्रालय  
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Lucknow - 226 011  
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3300-64

**TM/HM/TLE/pt.IV**

- I- मुख्य अभियन्ता (ट्रैक मशीन)  
1. मध्य रेलवे, सीएसटी, मुंबई-400 001  
2. फेयरली प्लेस, पूर्व रेलवे, कोलकाता-700 001  
3. बडौदा हाउस, उत्तर रेलवे, नयी दिल्ली-110 001  
4. उत्तरपूर्व रेलवे, गोरखपुर 273012  
5. मालीगांव, उत्तरपूर्व सीमाना रेलवे, गुवाहाटी-781 011  
6. पार्क टाउन, दक्षिण रेलवे, चेन्नई-600 003  
7. रेल निलायम, दक्षिण मध्य रेलवे, सिकन्दराबाद-500 371  
8. गार्डन रीच, दक्षिणपूर्व रेलवे, कोलकाता-700 043  
9. चर्चगेट, पश्चिम रेलवे, मुंबई-400 020  
10. उत्तर पश्चिम रेलवे, जयपुर-302 001  
11. पूर्व मध्य रेलवे, हाजीपुर-844 101  
12. दक्षिण पश्चिम रेलवे, हुवली-580 023  
13. उत्तर मध्य रेलवे, इलाहाबाद-211 001  
14. पूर्व तट रेलवे, मुवनेश्वर-751 001  
15. पश्चिम मध्य रेलवे, जबलपुर-482 001  
16. दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495 004  
II- उप मुख्य अभियन्ता (ट्रैक मशीन)  
1. सी.पी.ओ.एच. कार्यशाला पो 0 धूमनगंज  
इलाहाबाद-221012  
2. सी.पी.ओ.एच. कार्यशाला, दक्षिण मध्य रेलवे, रायनापाडु, विजयवाड़ा,  
जिला कृष्णा, आन्ध्र प्रदेश. 521241  
III- प्रधानाचार्य भा.रे.रे.प.म.प्र.के. पीपल गांव इलाहाबाद-211001

Date: 09-01-2018

**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-211 001  
East Coast Rly, Bhubaneshwar-751 001  
WCR, Jabalpur-482 001  
South East Central Rly, Bilaspur-495 004  
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Principal, IRTMTC, Pipal Gaon, Allahabad-  
211001

विषय : सिम्पलेक्स निर्मित ट्रैक रिलेइंग इक्युपमेंट की निरीक्षण जांच सूची का संशोधन -1 ।  
Sub: Revision-1 of Inspection check list of Track Laying Equipment(Simplex)

सिम्पलेक्स निर्मित ट्रैक रिलेइंग इक्युपमेंट की निरीक्षण जांच सूची (टीएम-रिपोर्ट-160) पत्र सं. टीएम/एच/एम / 15 दि. 03.08. 2011 का संशोधन - 1 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 संशोधन 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।

Revision-1 of Inspection check list of Track Laying Equipment(Simplex) ( TM Report-160) issued vide letter no. TM/HM/15 dated 03-08-2011, has been 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 revision 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

- प्रतिलिपि : 1. कार्यकारी निदेशक रेलपथमशीन, रेलवे बोर्ड, रेल भवन, नई दिल्ली ।  
2. निदेशक, इन्डियन रेलवे इन्स्टीट्यूट आफ सिविल इन्जीनियरिंग, पुणे ।

(मुदित भटनागर)  
कार्यकारी निदेशक / रेलपथमशीन

(मुदित भटनागर)  
कार्यकारी निदेशक / रेलपथमशीन

# INSPECTION CHECK LIST FOR TRACK LAYING EQUIPMENT (SIMPLEX)



**REPORT NO.TM -160**

Revision-1

**January-2018**

## **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-2000 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.

The Revision-1 of Inspection check list report no.160, is updated on the basis of experience/suggestions received from different zonal railways and OEM manual. The suggestion and feedback from zonal Railways has been taken & incorporated in this Revision-1 of Inspection check list report no.160 for inspection purpose of Track Laying Equipment (Simplex).

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-III  
RDSO/Lucknow-226011.

January-2018

## INSPECTION CHECK LIST FOR TRACK LAYING EQUIPMENT (SIMPLEX)

Name & designation of Inspecting Official :

Date of inspection :

Machine no. :

Base station/Division :

Location of working :

Block Hours :

Progress :

### ITEMS TO BE CHECKED

<b>1. GENERAL</b>		
S. No.	Item	Remarks given by Inspecting Authority
I.	Name of supervisor	
II.	Machine make	
III.	Year of manufacturing	
IV.	First POH of Machine done on	
V.	Last IOH of M/C done on	
VI.	Next IOH of M/C due on	
VII.	Last POH of M/C done on	
VIII.	Next POH of M/C due on	
IX.	Last POH of camping coach done on	
X.	Next POH of camping coach due on	
XI.	All log books filled properly	Yes <input type="checkbox"/> No <input type="checkbox"/>
XII.	Dt. Of commissioning	
XIII.	Last visit date of Engine Service Engineer	

**History of Machine:**-----  
-----  
-----  
-----  
-----

2. ENGINE			
S.NO.	ITEM	PREVAILING CONDITIONS	
I.	Engine model & no.		
II.	Engine Hours		
III.	Over-hauling of the Engine as per Main. Schedule	Due <input type="checkbox"/>	Not due <input type="checkbox"/>
IV.	Starting problem	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
V.	Condition of smoke	White <input type="checkbox"/> Normal <input type="checkbox"/>	Black <input type="checkbox"/>
VI.	Engine temperature on load after two hour working.	Actual ----- °C	
		Within limit <input type="checkbox"/>	Abnormal <input type="checkbox"/>
VII.	Leakage in head-gasket	No <input type="checkbox"/>	Yes <input type="checkbox"/> (Head no.- )
VIII.	Self-starter	Working <input type="checkbox"/>	Not Working <input type="checkbox"/>
IX.	Belt tension	Ok <input type="checkbox"/>	To be Tighten <input type="checkbox"/>
X.	Belt condition	Ok <input type="checkbox"/>	Damaged <input type="checkbox"/> Belt no.-----
XI.	Condition of battery terminals	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
XII.	R.P.M. of the engine:	Actual-----	
XIII.	Engine oil pressure in idle run- minimum 0.8 kg/cm <sup>2</sup>	Actual-----	
XIV.	Engine oil pressure in normal working (Engine worm)	Actual-----	
XV.	Last change of air cleaner done on	Date Engine hrs.	
XVI.	Change of engine oil {Done after every 250/500 Engine hours( For oil Grade HD TYPE 4/ oil Grade HD TYPE 5)}	Done <input type="checkbox"/>	Not Done <input type="checkbox"/>
XVII.	Change of engine oil filters {Done after every 250/500 Engine hours( For oil Grade HD TYPE 4/ oil Grade HD TYPE 5) }	Done <input type="checkbox"/>	Not Done <input type="checkbox"/>
XVIII.	Change of Pre filter element (500Hrs. duration)	Done <input type="checkbox"/>	Not Done <input type="checkbox"/>
XIX.	Change of Micro filter element (750Hrs. duration)	Done <input type="checkbox"/>	Not Done <input type="checkbox"/>

S.NO.	ITEM	PREVAILING CONDITIONS	
XX.	Last change of batteries done on	Dated Engine hrs	
XXI.	Alternator/battery charging system	Ok <input type="checkbox"/>	Not Satisfactory <input type="checkbox"/>
XXII.	Last calibration of fuel injection pump done on	Dated Engine hrs	
XXIII.	Last calibration of fuel injectors done on	Dated Engine hrs	
XXIV.	Last attention given by the Service Engineer to engine	Dated Engine hrs	
XXV.	Whether Working Gauges are functional		
	a) R.P.M & Engine Hours.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	b) Lube oil pressure	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	c) Lube oil Temperature	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	d) Battery charging	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	e) Hyd. Oil temp.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
XXVI.	Any abnormal sound	Yes <input type="checkbox"/>	No <input type="checkbox"/>
XXVII.	Functioning of engine safety circuit –		
	a) Low lub. oil pressure safety device	Working <input type="checkbox"/>	Not Working <input type="checkbox"/>
<b>3. OIL LEVELS</b>			
I.	HSD OIL	Ok <input type="checkbox"/>	Need Top up <input type="checkbox"/>
II.	Engine lub oil Multi grade oil equivalent to SAE 15W40	Ok <input type="checkbox"/>	Need Top up <input type="checkbox"/>
<b>4. HYDRAULIC</b>			
I.	Level of Hydraulic oil in tank equivalent to SAE 68 /HLP68N	Ok <input type="checkbox"/>	Need Top up <input type="checkbox"/>
II.	Quality Check of hydraulic oil (After every 1000 hrs.)	Due <input type="checkbox"/>	Not due <input type="checkbox"/>
III.	Lifting pressure (100-150 bar)	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
IV.	Forward and reverse Driving pressure ( 250-270 bar)	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
V.	Brake pressure (30-50bar)	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>

S.NO.	ITEM	PREVAILING CONDITIONS	
VI.	Hoses required to be changed	(no. & sizes )	
VII.	Stock of hoses with the machine	Adequate <input type="checkbox"/>	Less <input type="checkbox"/>
VIII.	Stock of hose fittings for emergency.	Adequate <input type="checkbox"/>	Less <input type="checkbox"/>
IX.	Leakage in hydraulic system	No <input type="checkbox"/>	To be attended <input type="checkbox"/>
X.	Hydraulic oil temperature (After working of machine for 2 hrs)	----- °C	
<b>5. CHAINS</b>			
I.	Condition of simplex chain	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
II.	Condition of Duplex chain	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
III.	Condition of Drive chain	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
IV.	Tightness of simplex chain	Ok <input type="checkbox"/>	To be tighten <input type="checkbox"/>
V.	Tightness of Duplex chain	Ok <input type="checkbox"/>	To be tighten <input type="checkbox"/>
VI.	Tightness of Drive Chain	Ok <input type="checkbox"/>	To be tighten <input type="checkbox"/>
VII.	Condition of chain locks	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
<b>6. Miscellaneous</b>			
I.	Working Lights	Working <input type="checkbox"/>	To be attended <input type="checkbox"/>
II.	Flasher Lights	Working <input type="checkbox"/>	To be attended <input type="checkbox"/>
III.	Braking system	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
IV.	Condition of brake shoes	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
V.	Clearance of brake shoes	Satisfactory <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
VI.	Condition of oil coolers	Clean <input type="checkbox"/> Leaking <input type="checkbox"/>	Clogged <input type="checkbox"/>
VII.	Electrolyte level in batteries	Ok <input type="checkbox"/>	To be recouped <input type="checkbox"/>
VIII.	Specific gravity of electrolyte (min1260)	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
IX.	Condition of tools for machine maintenance	Satisfactory <input type="checkbox"/>	To be replaced <input type="checkbox"/>

S.NO.	ITEM	PREVAILING CONDITIONS			
X.	General cleanliness of the machine	Ok	<input type="checkbox"/>	To be attended	<input type="checkbox"/>
XI.	Gauge of auxiliary track (3400mm)	Ok	<input type="checkbox"/>	To be adjusted	<input type="checkbox"/>
XII.	Spacing of supporting block/sleeper under AT rails ( should be within two meter)	Ok	<input type="checkbox"/>	rectified	<input type="checkbox"/>
XIII.	Availability of spares (as per Annexure- II)	Complete	<input type="checkbox"/>	Deficient	<input type="checkbox"/>
<b>7. SAFETY ITEMS</b>					
I.	Safety equipments as per Annexure-I	Available	<input type="checkbox"/>	Deficient	<input type="checkbox"/>
II.	Competency certificate of the Operator	Valid	<input type="checkbox"/>	Deficient	<input type="checkbox"/>
<b>8. BLOCK WORKING</b>					
I.	Location of the block working	KM/TP			
II.	Duration of block	(hrs/minutes)			
III.	Output of work	Meters			
IV.	Machine protection is being done by PWI/Machine	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<b>9. STAFF</b>					
I.	Strength of staff as per correction slip no.9 to IRTMM March 2000	Full	<input type="checkbox"/>	Deficient	<input type="checkbox"/>
II.	Safety awareness	Excellent	<input type="checkbox"/>	Deficient	<input type="checkbox"/>
		Good	<input type="checkbox"/>	Average	<input type="checkbox"/>
III.	Staff due for medical	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

**Signature of Inspecting Officer**



**LIST OF SAFETY & PROTECTIVE  
EQUIPMENTS**

S. NO.	DESCRIPTION	QUANTITY
1.	Detonators in a tin case	01 box
2.	H.S. flag red	02 nos.
3.	H.S. flag green	01 no.
4.	Banner flag	02 nos.
5.	H.S. Tri colour lamps	02 nos.
6.	Chain & Pad lock	01 set
7.	Terfor ( 2 t capacity )	01 no.
8.	10 t jack with traverser	02 nos.
9.	LPG/LED lamps	01 no.
10.	Wooden blocks of different sizes	08 nos.
11.	Crow bars	04 nos.
12.	Gauge cum level	01 no.
13.	Rail thermometer (dial type)	01 no.
14.	Portable Control Phone	01 no
15.	Skids	04 nos.
16.	Walkie Talkie Set	01 no
17.	Switch clamp and pad lock	02 nos.
18.	G&SR book with up to date amendment slips	01 no.
19.	Track Machine Manual with all CS till date	01 no.
20.	Fire extinguisher	02nos.
21.	Remote controlled Hooter /Manually operated hooter	01 no.
22.	First Aid Kit	01 no
23.	Safety helmet	For each Machine staff
24.	Leather and cotton gloves	For each Machine staff
25.	Leather safety boots and shoes	For each Machine staff
26.	High visibility warning cloth	For each Machine staff
27.	Dust mask	For each Machine staff
28.	Accidental manual	01 no.
29.	Working time table of section where machine working	01 no.
30.	Stretcher (use in case of injury)	01 no.
31.	4 cell flasher light	01 no.
32.	Hydraulic Hand Pump	01 no.
33.	Emergency pneumatic/Hydraulic hose of sizes suiting to different machines(complete with end fittings)	01 no.

**Note:** Inspecting official should wear the protective equipment when doing the inspection

**ANNEXURE-II**

**LIST OF THE SPARE TO BE KEPT IN  
MACHINE'S STORE**

<b>S. NO.</b>	<b>DESCRIPTION OF PART</b>	<b>PART NO.</b>	<b>QUANTITY</b>	<b>POSITION DURING INSPECTION</b>
1.	a) V-Belt	A-45	One	
	b) V- Belt	A-51	One	
2.	HSD Oil Filter	34.032.30.0	One no.	
3.	Lube Oil Filter	06.040.10.0	one nos.	
4.	Air Cleaner Assembly	06.086.10.0	one no.	
5.	Lube Oil	Multi grade oil equivalent to SAE 15W40	60 lts.	
6.	Distilled water for battery		10 Lit.	
7.	Hyd. Oil equivalent to -SAE-68		One barrel	
8.	Grease RR-3 or equivalent		10 kgs.	
9.	Emery paper/cloth fine		Two	
10.	Suction filter element	237.01.01.010	Two	
11.	High pressure filter element	237.01.08.01	one no.	
12.	Return line filter element	237.01.09.01	One no.	
13.	Hyd. Pipe	NO. : 04	5 M with end fittings	
14.	-do-	: 06	-do-	
15.	-do-	: 08	-do-	
16.	-do-	: 10	-do-	
17.	Hyd. Pipe	: 16	-do-	
18.	-do-	: 20	-do-	
19.	-do-	SAE R5-24	5M with end fittings	
20.	Working light bulbs		Six	
21.	Self starter		One	
22.	Simplex chain/ Duplex chain / Drive chain		1 set each	
23.	Chain lock		Six	
24.	Star coupling		One	
25.	Seal set for all hydraulic cylinders		One set each	
26.	Brake shoe		04 no.	
27.	Emergency pipe for lifting bridge of second machine	No. 8	10 meters	
28.	Hydraulic pressure gauge.		01 no.	
29.	Hydraulic working pump		01 no.	

## **ACKNOWLEDGEMENT**

Following officers and staff have made their valuable contributions in finalization of the Revision-1 of Inspection Check List for Track Laying Equipment (Simplex).

### **RAILWAYS**

- |                       |            |
|-----------------------|------------|
| 1. SHRI Mukesh Gautam | SSE/TM /NR |
| 2. SHRI Ram Nath Pal  | SSE/TM/NR  |

### **RDSO**

- |                     |         |
|---------------------|---------|
| 1. SHRI Om Prakash  | DTM-III |
| 2. " " Muslim Ahmad | ARE/TM  |
| 3. " " Prem Kumar   | SSRE/TM |
| 4. " " D.G.Sharma,  | SSE/TM  |

09-01-2018