

File No.RDSO-TMM0RGM(RG21)/1/2022-O/o PED/TMM/RDSO



भारत सरकार - रेल मंत्रालय  
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TM/RGM/RGM-96 Stone  
टीएम/आरजीएम/आरजीएम-96 स्टोन

Date: 03.02.2025  
दिनांक: 03.02.2025

- I- मुख्य अभियन्ता (ट्रैक मशीन) सभी क्षेत्रीय रेलवे  
II- मुख्य अभियन्ता (सी.पी.ओ.एच. कार्यशाला), अहमदाबाद  
III- मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन)  
सी.पी.ओ.एच. कार्यशाला प्रयागराज, रायनापाडु, कंचरापारा  
IV- प्रधानाचार्य भा.रे.रे.प.म.प्र.के. पीपलगांव प्रयागराज-211011
- Chief Engineer (Track Machines) All Zonal Railways  
Chief Engineer (CPOH Workshop), Ahmedabad  
Chief Workshop Manager (Track Machines)  
CPOH Workshop, Prayagraj, Rayanapadu, Kachrapara  
Principal IRTMTC, PipalGaon, Prayagraj - 211011

Detailed addresses are enclosed herewith.

विषय : रेल ग्राइंडिंग मशीन (RGM-96 स्टोन) की निरीक्षण जाँच सूची।

Sub : Inspection Check list for Rail Grinding Machine (RGM -96 Stone)

रेल ग्राइंडिंग मशीन (आरजीएम-96 स्टोन) के लिए अनंतिम निरीक्षण चेकलिस्ट तैयार की गई थी और इस कार्यालय के दिनांक 17.12.2024 के समसंख्यक पत्र के माध्यम से टिप्पणी/सुझाव लेने के लिए क्षेत्रीय रेलवे और सीपीओएच को जारी की गई थी। कोई टिप्पणी/सुझाव प्राप्त नहीं हुआ।

अब रेल ग्राइंडिंग मशीन (आरजीएम-96 स्टोन) के लिए अंतिम निरीक्षण चेकलिस्ट तैयार की गई है। इसकी एक प्रति आपकी जानकारी और क्षेत्र में काम करने वाले मशीन कर्मचारियों के मार्गदर्शन के लिए संलग्न है। हालाँकि, उपरोक्त सूची तैयार करने के दौरान हर सावधानी बरती गई है, यदि कोई विसंगति पाई जाती है, तो उसे आगे सुधार के लिए ईमेल/पोस्ट द्वारा नीचे हस्ताक्षरकर्ता के संज्ञान में लाया जा सकता है।

The provisional inspection checklist for Rail Grinding Machine (RGM-96 Stone) was prepared and issued to Zonal Railways & CPOHs for taking comments/suggestions vide this office letter of even no. dated 17.12.2024. No comments/suggestions received.

Now final inspection checklist for Rail Grinding Machine (RGM-96 Stone) 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 preparation of the above said list, discrepancy noticed, if any, may be brought to the knowledge of the undersigned for further improvement, by email/post.

Email address: [rgmtmmrdso@gmail.com](mailto:rgmtmmrdso@gmail.com)

संलग्नक: ऊपरोक्त अनुसार

(जनेन्द्र कुमार सिंह)  
(Jainendra Kumar Singh)  
निदेशक/टीएम-VI  
(Director/TM-VI)



सत्यमेव जयते

भारत सरकार

रेल मंत्रालय

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS



Inspection Check List of  
**Rail Grinding Machine (RGM-96 Stone)**

**REPORT NO. TM- 306**

**January-2025**

अनुसंधान अभिकल्प और मानक संगठन

मानक नगर, लखनऊ — 226011

**Research Designs & Standards Organisation  
Manak Nagar, Lucknow- 226 011**

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 Inspection check list for Rail Grinding Machine (RGM-96 Stone) is prepared as recommended by OEM and suggestions obtained from machine staff.

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.

January - 2025

(Jainendra Kumar Singh)  
Director/Track Machine-VI  
RDSO/Lucknow-226011

### Inspection Check List for Rail Grinding Machine (RGM-96 Stone)

Name & Designation of Inspecting Official :  
 Date of Inspection :  
 Machine No. :  
 Base Station/Division/Zone :  
 Location of working :  
 Block hours :  
 Progress :

Sr. No.	Items	Remarks given by inspecting officer
<b>1.0</b>	<b>General :</b>	
1.1	Name of supervisor	
1.2	Machine make	
1.3	Year of manufacturing	
1.4	Last attention given to engine by Service Engineer	
1.5	Last attention given to machine by Service Engineer	
1.6	First POH of Machine done on	
1.7	Last IOH of M/C done on	
1.8	Next IOH of M/C due on	
1.9	Last POH of M/C done on	
1.10	Next POH of M/C due on	
1.11	Last POH of Camp Car done on	
1.12	Next POH of Camp Car due on	
1.13	All log book filled properly	
1.14	Pending Maintenance Schedule and its reason in Schedule I,II,III,IV,V,VI,VII	
1.15	Failure register updated	
1.16	Reserve stock of consumables and spare parts	

**History of Machine:**-----  
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Sr. No.	Items	Prevailing Condition	
1.17	General cleanliness of the machine	Ok <input type="checkbox"/>	To be cleaned <input type="checkbox"/>
1.18	Function of all locking devices	Working <input type="checkbox"/>	Not working <input type="checkbox"/>
1.19	Condition of Camp Car	Satisfactory <input type="checkbox"/>	Poor <input type="checkbox"/>
1.20	Condition of machine base stabling siding	Satisfactory <input type="checkbox"/>	Poor <input type="checkbox"/>
1.21	Condition of rest house at stabling station if available	Satisfactory <input type="checkbox"/>	Poor <input type="checkbox"/>
1.22	Provision of water & electric supply at stabling station	Available <input type="checkbox"/>	Not available <input type="checkbox"/>
1.23	Pre and Post work for machine operation being done.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
1.24	Back-up system of machine	Working <input type="checkbox"/>	Not working <input type="checkbox"/>
1.25	Condition of tools & plants (spanner, wrench etc.)	Ok <input type="checkbox"/>	Deficient <input type="checkbox"/>
1.26	Material available at site {as per Critical Spares Parts list of Rail Grinding Machine (RGM-96) issued by RDSO/LKO}	Yes <input type="checkbox"/>	No <input type="checkbox"/>
1.27	Condition of Gen-set of Camping Car if available.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>

**History of Machine:**-----  
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## 3498063/2025/O/o PED/INFRA-1/RDSO

Sr. No.	Items	Prevailing Condition	
<b>2.0</b>	<b>Engine</b> (Cummins QST30 G5 NR2, 900KW, 480VAC/60 Hz )		
2.1	Engine hours on date	Date.....	_____ ERH
2.2	Starting problem	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.3	Condition of Emergency Stop/ Reset Button	OK <input type="checkbox"/>	Not ok <input type="checkbox"/>
2.4	Condition of Self starter	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
2.5	Condition of Genset	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
2.6	Condition of Compressor	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
2.7	Condition of smoke	White <input type="checkbox"/> Normal <input type="checkbox"/>	Black <input type="checkbox"/>
2.8	Leakage in Head gasket	Yes <input type="checkbox"/> Head number.....	No <input type="checkbox"/>
2.9	Electrolyte level in batteries	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
2.10	Specific gravity of electrolyte (min. 240)	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
2.11	Measure Each Battery Voltage & Record	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
2.12	Check v- belts condition and tension	Ok <input type="checkbox"/>	To be tightened <input type="checkbox"/>
2.13	Condition of Engine/coolant hoses	Ok <input type="checkbox"/>	To be replaced <input type="checkbox"/>
2.14	Any leakage in water hoses	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.15	Leakage in fuel pump and injectors and fuel supply system	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.16	Battery Charging System	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
2.17	Condition of battery terminal	Ok <input type="checkbox"/>	To be repaired <input type="checkbox"/>
2.18	Air brake pressure (Max. 5.9 bar)	Ok <input type="checkbox"/>	Less <input type="checkbox"/>
2.19	Last overhauling of engine done on	Dated .....	.....ERH
2.20	Last overhauling of air compressor	Dated .....	.....ERH
2.21	Last change/repair of self starter done on	Dated .....	.....ERH
2.22	Last change/repair of alternators done on	Dated .....	.....ERH
2.23	Last overhauling of water pump done on	Dated .....	.....ERH
2.24	Last change of batteries done on	Dated .....	.....ERH
2.25	Calibration of fuel injection pump (to be done after every 2000 hrs)	done <input type="checkbox"/>	due <input type="checkbox"/>

Sr. No.	Items	Prevailing Condition	
2.26	RPM of the Engine (Rated 1800)	Actual.....	
2.27	Replace Primary (6 Months) /Secondary (3 Months) air filter	Dated <input type="checkbox"/>	ERH <input type="checkbox"/>
2.28	Change of engine Lub. oil (250 Hrs duration)	done <input type="checkbox"/>	Not done <input type="checkbox"/>
2.29	Change of lub oil filter (250 Hrs duration)	done <input type="checkbox"/>	Not done <input type="checkbox"/>
2.30	Engine oil pressure a) Low Presser = 34.47 Bar (500 Psi) b) High Presser =138 Bar (2000 Psi)	Ok <input type="checkbox"/> Ok <input type="checkbox"/>	Need attention <input type="checkbox"/> Need attention <input type="checkbox"/>
2.31	Engine temperature after two hours working (Optimum range 75 <sup>0</sup> C to 92 <sup>0</sup> C )	..... <sup>0</sup> C	
2.32	Buggy Temperature Sensor 1. Warning 170 <sup>0</sup> C 2. Alarm 200 <sup>0</sup> C	Ok <input type="checkbox"/> Ok <input type="checkbox"/>	Need attention <input type="checkbox"/> Need attention <input type="checkbox"/>
2.33	Any abnormal sound	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.34	Overall condition of engine	Ok <input type="checkbox"/>	Not Satisfactory <input type="checkbox"/>
3.0	<b>Mechanical</b>		
3.1	Torque arm pivot	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.2	Brake linkages	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.3	All pivot joints of Trolleys.	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.4	Brake lever Pivot	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.5	Bogie king pin Pivots	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.6	All locking device	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.7	Driving Axle gear box flange covers	Greasing/Lubrication	Done <input type="checkbox"/> Not done <input type="checkbox"/>
3.8	Condition of Water Spray Assembly	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
3.9	Condition of camp car water pump & storage system	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
3.10	Working of rail profile system	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
3.11	Condition of rail inspection equipments of camp car	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
3.12	Condition of cameras	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
3.13	Availability of Grind stone	Adequate <input type="checkbox"/>	Less <input type="checkbox"/>
3.14	Condition of buggy manifold	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>

Remarks: -.....  
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Sr. No.	Items	Prevailing Condition	
<b>4.</b>	<b>Hydraulic</b>		
4.1	General condition	Ok <input type="checkbox"/>	Leaking (location): .....
4.2	Hose Clamping	Proper <input type="checkbox"/>	Improper <input type="checkbox"/>
4.3	Stock of hoses with the machine	Adequate <input type="checkbox"/>	Less <input type="checkbox"/>
4.4	Working of hyd. Pumps and Motors	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
4.5	Working of hyd. cylinders.	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
4.6	Replacement of hyd. Return filters. (Annually)	Replaced timely <input type="checkbox"/>	Due <input type="checkbox"/>
4.7	Condition of hydraulic coolers.	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
4.8	Condition of Low Pressure Gauges	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
4.9	Condition of High Pressure Gauges	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
4.10	Condition of Low Pressure Filters	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
4.11	Condition of High Pressure Filters	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
4.12	Condition of accumulator	Satisfactory <input type="checkbox"/>	to be attended <input type="checkbox"/>
<b>5.</b>	<b>Electrical and Electronics</b>		
5.1	Safety circuit for Engine	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.2	Safety circuit for driving	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.3	Condition of head & marker lights	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.4	Condition of flasher lights, horns	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.5	Condition of Transducers, solenoids	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.6	Condition of switches (joysticks), electrical cables & limit switches.	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.7	Requirement of PCB and other Electrical items if any.	Part no. ....	
5.8	Locking indication of machines	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
5.9	Battery terminals condition.	Petroleum jelly <input type="checkbox"/>	Done <input type="checkbox"/>

Remarks: -.....  
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Sr. No.	Items	Prevailing Condition	
<b>6.</b>	<b>Pneumatic</b>		
6.1	FCC Main Reservoir Air Pressure (5.9 bar & Above)	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
6.2	Condition of Air Compressor	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.3	Condition of water separator and air Dryer	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.4	Working of Pneumatic Horns	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.5	Working of Pneumatic Hoses	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.6	Condition of Pneumatic cylinders	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.7	Condition and clearance of all brake shoes	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.8	Working of air Compressor Oil Cooler	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
6.9	Condition of Hand brake	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
6.10	Condition of dust collector & dust blower	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
<b>7.</b>	<b>Block Working:</b>		
7.1	Location of the block	Km/TP .....	
7.2	Block section & up & down Rd.		
7.3	Condition of ballast	Caked <input type="checkbox"/>	Clean <input type="checkbox"/>
7.4	Duration of block	(From ..... to.....)=.....ERH	
7.5	Progress	.....KM	

Remarks: -.....  
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Sr. No.	Items	Prevailing Condition	
<b>8.0</b>	<b>UNDER FRAME INSPECTION</b>		
<b>8.1</b>	<b>UNDER FRAME</b>		
8.1.1	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"/>
8.1.2	Examine the shock absorber for damages.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.1.3	Visual Inspect centre pivot cover.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.1.4	Check condition of head stock/sole bar of centre buffer coupler.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
<b>8.2</b>	<b>BOGIE FRAME &amp; WHEELS</b>		
8.2.1	Visual and Physical inspection of wheel shall be done every month.	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
8.2.2	Visual Inspection of wheels and under gear for any infringement.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.2.3	Visually inspect all the welding locations.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.2.4	Visually check the suspension brackets.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
<b>8.3</b>	<b>Brake Rigging</b>		
8.3.1	Examine brake beams breakages/damages.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.3.2	Inspection of Brake hanger bracket , torque support, cardan shaft hanger brackets for damages	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
<b>8.4</b>	<b>Draw Gear</b>		
8.4.1	Check condition of the screw coupling/CBC coupling and replace if required.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.4.2	Examine draw hook, draw bars, rubber pads for damages	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.4.3	Ensure that wear at any section on draw hook should not exceed 10 mm.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.4.4	Ensure that wear on screw coupling shackle pins, trunion pins, shackle/link holes and draw hook holes should not exceed 3 mm.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.4.5	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"/>

Sr. No.	Items	Prevailing Condition	
8.5	<b>Buffing Gear</b>		
8.5.1	Visually examine the buffers casing for cracks/damages.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
8.5.2	Examine for corrosion of sole bar and other under frame member with track light or inspection lamp.	Ok <input type="checkbox"/>	To be attended <input type="checkbox"/>
9.0	<b>Safety Items and Staff Matter:</b>		
9.1	Safety equipment as per Annexure-I	Complete <input type="checkbox"/>	Deficient <input type="checkbox"/>
9.2	Working of locking indicator of different units	Ok <input type="checkbox"/>	Not ok <input type="checkbox"/>
9.3	Competency certificate of the Operator	Current <input type="checkbox"/>	Expired <input type="checkbox"/>
9.4	Working of safety Emergency Braking System of the machine	Ok <input type="checkbox"/>	Defective <input type="checkbox"/>
9.5	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"/> Date.....	Not Done <input type="checkbox"/>
9.6	Strength of staff	Full <input type="checkbox"/>	deficient <input type="checkbox"/>
9.7	General condition of the machine	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V. Good <input type="checkbox"/> Average <input type="checkbox"/>
9.8	Group performance	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V. Good <input type="checkbox"/> Average <input type="checkbox"/>
9.9	Cost awareness	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V. Good <input type="checkbox"/> Average <input type="checkbox"/>
9.10	Safety awareness	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V. Good <input type="checkbox"/> Average <input type="checkbox"/>
9.11	Staff due for Medical	Yes <input type="checkbox"/>	No <input type="checkbox"/>
9.12	Last break down	Dated .....	.....ERH

Remaks:.....  
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**Signature of inspecting authority**

### ACKNOWLEDGEMENT

Following officer and staff have made their valuable contributions in finalization of inspection check list for Rail Grinder Machine (RGM-96 Stone).

#### **RDSO:-**

- |    |      |                |         |
|----|------|----------------|---------|
| 1. | Shri | Kamal Chand    | ARE/TM  |
| 2. | Shri | Prince Kumar   | SSE/TM  |
| 3. | Shri | Surendra Kumar | SSRE/TM |
| 4. | Shri | Neeraj Singh   | JRE/TM  |