



भारत सरकार
रेल मंत्रालय

GOVERNMENT OF INDIA

MINISTRY OF RAILWAYS

**CHECK LIST FOR INSPECTION
OF
DYNAMIC TRACK STABILIZER**

VKL 404 IN (BHEL)



TM Report No-209

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**RESEARCH DESIGNS & STANDARDS ORGANISATION
LUCKNOW-226011**

PREFACE

Any Machine can only be kept in good condition by regular Inspection of its various assemblies at different levels of inspections. To ensure that the components of On-Track machines are properly working & being maintained and the documentation of the same is being done properly, multi tiered Inspection of On-Track machines is also required. For the purpose IRTMM-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.

In this context, the Check list for Inspection of Dynamic Track Stabilizer VKL 404 IN (BHEL) is prepared as recommended by OEM.

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.

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Director/Track Machine-III
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INSPECTION CHECK LIST FOR

DYNAMIC TRACK STABILIZER VKL 404 IN (BHEL)

Name & Designation of Inspecting Official :
 Date of Inspection :
 Machine No :
 Base Station / Division :
 Location of Working :
 Block Hours :
 Progress :

S. No.	Item	Position	Remark by Inspecting official
1.	General		
I.	Name of supervisor		
II.	Machine make		
III.	Year of manufacturing		
IV.	Last IOH of M/c Done on		
V.	Next IOH of M/C due on		
VI.	Last POH of M/C done on		
VII.	Next POH of M/C due on		
VIII.	Last POH of camping coach done on		
IX.	Next POH of camping coach due on		
X.	All log book Filled properly		
XI.	Pending Maintenance Schedule and reasons, Schedule I,II,III,IV,V,VI,VII		

History of Machine:-

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S.No.	Item	Agent/Description	Prevailing conditions	
2.	Oil/Water Levels in Tank/Container:			
i.	Hydraulic oil	HLP 68 or equivalent	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
ii.	Radiator	Coolant	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
iii.	Diesel oil	HSD	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
iv.	Engine oil	API CF4 15W40 or equivalent	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>
v.	Change Engine lube oil on due date (after every 300 hrs)	CF-4 W 40 (35 lit.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
3.	Engine: As per maintenance schedule			
i.	Engine model & no.			
ii.	Engine Hours:			
iii.	Starting problem	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
iv.	Condition of smoke	White <input type="checkbox"/>	Normal <input type="checkbox"/>	
		Black <input type="checkbox"/>		
v.	Starting problem	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
vi.	Leakage in head-gasket	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
vii.	Electrolyte level in all batteries	Ok <input type="checkbox"/>	Need top up <input type="checkbox"/>	
viii.	Specific gravity of electrolyte	Ok <input type="checkbox"/>	Less <input type="checkbox"/>	
ix.	Belt condition & Belt tension	Ok <input type="checkbox"/>	To be Tightened <input type="checkbox"/>	
x.	Condition of engine hoses	Ok <input type="checkbox"/>	To be Replaced <input type="checkbox"/>	
xi.	R.P.M. of the engine	Actual.....		
xii.	Engine oil pressure Min.2.81 Kg/sq. cm at idle Min.3.52 Kg/sq. cm at rated speed	Actual		

Remarks-----

S.No.	Item	Agent/Description	Prevailing conditions
xiii.	Battery charging circuit	Ok <input type="checkbox"/>	Need Attention <input type="checkbox"/>
xiv.	Change of air cleaner filters (Done after every 500hrs.)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xv.	Change of engine oil , (to be done after every 300hrs but 1 st time 100hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xvi.	Change of engine oil filters (after every 300 hrs but first time 100 hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xvii.	Change of diesel filters (To be done on after every 300 hrs.)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xviii.	Condition of self starter	Ok <input type="checkbox"/>	Not satisfactory <input type="checkbox"/>
xix.	Condition of Alternator	Ok <input type="checkbox"/>	Not satisfactory <input type="checkbox"/>
xx.	Condition of batteries	Ok <input type="checkbox"/>	Not satisfactory <input type="checkbox"/>
xxi.	Condition of radiator	Ok <input type="checkbox"/>	Not satisfactory <input type="checkbox"/>
xxii.	Overhauling of the engine as per maintenance schedule of OEM	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xxiii.	Calibration of fuel PT pump. (To be done after 2000 hrs.)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xxiv.	Calibration of fuel injectors. (To be done after 2000 hrs.)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
xxv.	Last attention given by the Service Engineer to engine	Date-----	
xxvi.	Whether Working Gauges are functional		
a)	R.P.M.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
b)	Oil pressure	Yes <input type="checkbox"/>	No <input type="checkbox"/>
c)	Speedometer	Yes <input type="checkbox"/>	No <input type="checkbox"/>
d)	Temperature	Yes <input type="checkbox"/>	No <input type="checkbox"/>
e)	Battery charging	Yes <input type="checkbox"/>	No <input type="checkbox"/>
xxvii)	Any abnormal sound from engine	Yes <input type="checkbox"/>	No <input type="checkbox"/>
xxviii)	Functioning of engine safety circuit	Ok <input type="checkbox"/>	Need Attention <input type="checkbox"/>
a)	High temperature safety circuit	Ok <input type="checkbox"/>	Need Attention <input type="checkbox"/>
b)	Low lube oil pressure safety circuit	Ok <input type="checkbox"/>	Need Attention <input type="checkbox"/>

S.No	Item	Agent/Description	Prevailing conditions	
4.	General:			
I.	Heavy leakage of hydraulic oil		Yes <input type="checkbox"/>	No <input type="checkbox"/>
			(Location.....)	
II.	All locking devices		Working <input type="checkbox"/>	Not Working <input type="checkbox"/>
III.	Air oiler/drier		Working <input type="checkbox"/>	Not Working <input type="checkbox"/>
IV.	Electrical lights		Working <input type="checkbox"/>	Not Working <input type="checkbox"/>
V.	Braking system		Satisfactory <input type="checkbox"/>	Not Satisfactory <input type="checkbox"/>
VI.	Emergency Braking System		Satisfactory <input type="checkbox"/>	Not Satisfactory <input type="checkbox"/>
VII.	Parking Braking System		Satisfactory <input type="checkbox"/>	Not Satisfactory <input type="checkbox"/>
VIII.	Condition of Compressor		Ok <input type="checkbox"/>	Not Satisfactory <input type="checkbox"/>
IX.	Condition of brake shoes		Ok <input type="checkbox"/>	To be replaced <input type="checkbox"/>
X.	All log books filled properly		Yes <input type="checkbox"/>	No <input type="checkbox"/>
XI.	Condition of machine working tools (Spanner set etc.)		Ok <input type="checkbox"/>	To be replaced <input type="checkbox"/>
XII.	Hydraulic oil temperature after working of machine for 2 hrs		°C	
XIII.	Condition of oil cooler		Ok <input type="checkbox"/>	To be cleaned <input type="checkbox"/>
5.	Safety Items:			
I.	Safety equipments as per Annexure-I	Available/Deficient	Available <input type="checkbox"/>	Deficient <input type="checkbox"/>
II.	Competency certificate of the Operator	Current/Expired	Current <input type="checkbox"/>	Expired <input type="checkbox"/>
III.	Engaging/disengaging indicator of stabilizing unit	Working / Not working	Working <input type="checkbox"/>	Not Working <input type="checkbox"/>

S.No.	Item	Agent/Description	Prevailing conditions	
6.	During Block Working:			
i)	Pre & post stabilising operations being done		Yes <input type="checkbox"/>	No <input type="checkbox"/>
7.	Staff:			
i)	Strength of staff	Full/Deficient	Full <input type="checkbox"/>	Deficient <input type="checkbox"/>
ii)	First aid expiry date		Within expiry <input type="checkbox"/>	Expired <input type="checkbox"/>
iii)	Safety awareness		Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V.Good <input type="checkbox"/> Average <input type="checkbox"/>
iv)	Staff due for medical		Yes <input type="checkbox"/>	No <input type="checkbox"/>
8.	General condition of the machine		Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V.Good <input type="checkbox"/> Average <input type="checkbox"/>
9.	Hydraulic pressure in bars	Rated	Actual	
i)	Centrifugal force of vibrations		0-400 KN	
ii)	Vibration frequency		0-45 Hz	
iii)	Vertical thrust		50-240 KN	
10	Pending maintenance schedule and reasons		Ok <input type="checkbox"/>	Need Attention <input type="checkbox"/>
11.	Any other remark by the Inspecting Officer			

Remarks:-----

Signature of inspecting authority

List of Safety Equipments

Sr. No.	Description	Quantity
1.	H.S. flag red	2 nos.
2.	H.S. flag green	1 nos.
3.	H.S. Tri colour lamps/Led Torch	2 nos.
4.	Chain with Padlocks	2 nos.
5.	Fire extinguisher	1 no.
6.	Hooter (manually controlled)	2 nos.
7.	10 t jack	2 nos.
8.	Wooden blocks off sizes	4 nos.
9.	Crow bars	4 nos.
10.	Hydraulic Hand Pump	1 nos.
11.	Emergency pneumatic/Hydraulic hose off sizes suiting to different machines (complete with end fittings)	-
12.	Machine specific equipment, if any	-
13.	Fog Signals (Detonators) in a tin case	10 nos.
14.	Working timetable of section where the machine is working	1 copy
15.	G&SR book with up to date amendment slips	1 copy
16.	4 cell flasher light LED lamp cum flasher light (rechargeable)	1 no.
17.	Banner flag	2 nos.
18.	First Aid Box	1 no
19.	Skids	2 nos.
20.	Safety helmets	Each Machine staff
21.	Protective clothing, safety shoes and safety gloves	Each Machine staff
22.	Walkie Talkie with frequency of SM, Guard and Loco Pilots.	2 no
23.	Internal Communication system like walkie-talkie and/or head mounted system	1 set
24.	Track Machine Manual with up to date correction slips	1 no.
25.	Accident Manual with up to date correction slips	1 no.
26.	Tail Lamp	1 no.

ACKNOWLEDGEMENT

Following officer and staffs have made their valuable contributions in finalization of the Inspection Check List for Dynamic Track Stabilizer VKL 404 IN (BHEL)

Railways:

Sr. No.	Name	Designation
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2.	“ “ Rohit Keshewani	JE/TMC /NCR
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4.	“ “ Nizamuddin Mansori	JE/TMC /NCR
5.	“ “ Mohan Lal Bhaggu	MCM/TMC/NCR

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1.	Shri Muslim Ahmad	ARE/TM
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3.	“ “ V P Srivastava	SSE/TM
4.	“ “ D. G. Sharma	SSE/TM
5.	“ “ Ravi Kumar	SSRE/TM