

भारत सरकार - रेल मंत्रालय लखनऊ ~ 226 011

EPBX (0522) 2451200 Fax (0522) 2458500

Government of India-Ministry of Railways अनुसंगान अभिकल्प और मानक संगठन Research Designs & Standards Organisation Lucknow - 226 011

DID (0522) 2450115 DID (0522) 2465310



SPEED CERTIFICATE FOR ONE TIME MOVEMENT

No.	TM/HM	JOUTHED	NO. 10. 10. 1 PAGE			10000	ate	73	Signed	
मह	डाप्रबन्धक	्र (इंजीनिया	रेंग).	nd Interspe						
		छत्रपति शि	,	स. मम्बई—	400 001					
	पूर्व रेलवे, फेयरली प्लेस, कोलकाता– 700 001									
		, बडौदा हा							POGEST .	
		, वि, गोरखपुर			ai grintari					
					781 011					
	र्वोत्तर फ्रन्टियर रेलवे, मालीगॉव, गुवाहाटी— 781 011 क्षिण रेलवे, एनेक्सी, पार्क टाऊन, चेन्नई— 600 003									
					— 500 071					
		रेलवे, गार्डन								
		वे, चर्चगेट,				+(
		रेलवे, प्रया	~							
		ाम रेलवे, ज						ilyong be		
		लवे, हाजीपुर	_							
		ाव, राजा वं, रेलवे कं								
٠,		वम रेलवे, हु	_		01 020					
		_		020						
15 UIS	उत्तम मध्य	उरेलवे जिल	ल पर — 482	001						
16. दरि	क्षेण पूर्व Spe (Tra	मध्य रेलवे, ed certific insportatio	ate for On	495 004 ne Time M BMVPTL8	Novement (of Rail I	Borne M	Maintena Phooltas	nce Vehic Transrai	I Ltd Pa
16. दरि	क्षण पूर्व Spe (Tra upto in tr	मध्य रेलवे, ed certificansportation o maximum ain format	बिलासपुर— ate for On n Code R n speed of ion as a d	495 004 ne Time M BMVPTL8 60kmph v ead vehicl		of Rail I tured b ng on its andera	Borne M y M/s. s own p	Maintena Phooltas ower as	nce Vehic Transrai well as wl	I Ltd Panen runn
16. दरि Sub:	क्षण पूर्व Spe (Tra upto in tr	मध्य रेलवे, ed certificansportation maximum ain format estination	बिलासपुर— ate for On n Code Ri n speed of ion as a d points of c	495 004 ne Time M BMVPTL8 60kmph w ead vehicl oncerned	3) manufac vhen runnii le from Dh	of Rail I stured b ng on its andera ways.	Borne My M/s. s own p Railwa	Maintena Phooltas ower as y Station	nce Vehic Transrai well as wl	I Ltd Panen runn
	Spe (Tra upto in tr to do	मध्य रेलवे, ed certificansportation maximum ain format estination way Board	बिलासपुर— ate for On n Code R n speed of ion as a d points of c	495 004 The Time Manual	3) manufac vhen runnii le from Dh Zonal Rail	of Rail I stured b ng on its andera ways. MC/13 (Borne My M/s. s own p Railwa	Maintena Phooltas ower as y Station 4.12.201	nce Vehic Transrai well as wl	I Ltd Panen runn
16. दर्धि Sub: Ref:	Spe (Tra upto in tr to de Rail	मध्य रेलवे, ed certificansportation maximum ain format estination way Board	बिलासपुर— ate for On n Code R n speed of ion as a d points of co l's Contrac	495 004 The Time Manual	3) manufactivhen runnii le from Dh Zonal Rail 8/Track-III/ ATED TO	of Rail I etured b ng on its andera ways. MC/13 of ROLLI lidity/	Borne My M/s. s own p Railwa	Maintena Phooltas ower as y Station 4.12.201	nce Vehic Transrai well as wl	I Ltd Pa nen runn ern Railv
16. द ि Sub: Ref: 1.0	Spe (Tra upto in tr to do Rail IMP	मध्य रेलवे, ed certificansportation o maximum ain format estination way Board	ate for On n Code Ri n speed of ion as a d points of c l's Contrac PARAMET	495 004 ne Time M BMVPTL8 60kmph w ead vehicl oncerned et No. 2018	B) manufactivhen runnii le from Dh Zonal Raillo B/Track-III/ ATED TO TO Petrone Petro	of Rail letured by andera ways. MC/13 (Borne My M/s. s own p Railwaddated 0. NG STO	Maintena Phooltas ower as y Station 4.12.201	nce Vehic Transrai well as wl of Northo	I Ltd Pa nen runn ern Railv
16. दर्धि Sub: Ref: 1.0 ype	Spe (Tra upto in trato do Rail Fina Osc COO	ed certificationsportation maximum ain format estination way Board ORTANT	ate for On n Code Ri n speed of ion as a di points of co l's Contract PARAMET ional / rial / nent	495 004 The Time Manual Manua	B) manufactivhen runnii le from Dh Zonal Raillo B/Track-III/ ATED TO TO Petrone Petro	of Rail letured being on its andera ways. MC/13 (ROLLI lidity/ riod or rmaner	Borne My M/s. s own p Railwaddated 0. NG STO	Maintena Phooltas ower as y Station 4.12.201 OCK / ctional	nce Vehics Transrai well as will of Northo	I Ltd Pa nen runn ern Railv ara
16. दर्धि Sub: Ref: 1.0 'ype Stock Name	Rail Veh	ed certificationsportation maximum ain format estination way Board ORTANT lal / Proviscillation Trock Moven Borne Maicle (RBM)	ate for On n Code Ri n speed of ion as a d points of co d's Contract PARAMET ional / rial / ment intenance V)	495 004 The Time M BMVPTL8 60kmph wead vehicle oncerned TERS REL One Time Movement	B) manufactivhen runnii le from Dh Zonal Raillo B/Track-III/ ATED TO Pe Pe Pe Max. Axle I	of Rail letured being on its andera ways. MC/13 (ROLLI lidity/ riod or rmaner	Borne My M/s. s own p Railwa dated 04 NG STO IR Sent	Maintena Phooltas ower as y Station 4.12.201 OCK / ctional Max (Loa	nce Vehice Transrai well as will of Northe 9. Refer Pa 3.6.8/IR Axle Lo aded)	I Ltd Panen runnern Railv
16. दर्धि Sub: Ref: 1.0 ype	Rail Veh	ed certificationsportation maximum ain format estination way Board ORTANT lal / Proviscillation Trock Moven Borne Maicle (RBM)	ate for On n Code Ri n speed of ion as a di points of co l's Contract PARAMET ional / rial / nent	495 004 The Time M BMVPTL8 60kmph wead vehicle oncerned TERS REL One Time Movement	B) manufactivhen runnii le from Dh Zonal Raillo B/Track-III/ ATED TO Pe Pe Pe Max. Axle I	of Rail letured being on its andera ways. MC/13 (ROLLI lidity/ riod or rmaner	Borne My M/s. s own p Railwa dated 04 NG STO IR Sent	Maintena Phooltas ower as y Station 4.12.201 OCK Ctional Max (Loa	nce Vehice Transrai well as will of Northe 9. Refer Page 3.6.8/IR	ara 18.

Commodity

Coal / Ore / Steel /Bagged / Oil /etc.

BG

Gauge

NA

Type of Bogie	во-во
Dogic	

Type of Coupler Transition type CBC Coupler

Wheel Dia	New	Worn
(mm)	952	877

Max. I emissible Speed Own Fower Outlingth Train Formation Outlingth	Max. Permissible Speed	Own Power	60kmph	Train Formation	60kmph
--	------------------------	-----------	--------	-----------------	--------

2.0	INTRODUCTION
2.1	Rail Borne Maintenance Vehicle (RBMV) manufactured by M/s. Phooltas Transrail Ltd Patna, as per their GA Drawing No. 8B0304000000 Rev. 04 is a self-propelled vehicle. The vehicle is used for accommodation and transportation of small track machines, tools & equipments, track workmen and carrying Permanent Way material at worksite for day-to-day track maintenance on Indian Railways.
2.2	The maximum axle load and wheel diameter of machine are 18.25t and 952mm respectively. Suspension details of the machine are as per M/s Phooltas Drg. No. 8B0304030001 Rev. 03. The design speed of machine is 105kmph when running on its own power as well as when running in train formation as a dead vehicle. The design details are given in Annexure-A and comparison of Rail Borne Maintenance Vehicle (RBMV) (Transportation Code 'RBMVPTL8') with existing Rail Borne Maintenance Vehicle (RBMV) (Transportation Code 'RBMVP') already running in IR is given in Annexure-B.

Based upon the design feature, details given in Annexure-A and dynamic simulation results of Rail Borne Maintenance Vehicle (RBMV) manufactured by M/s. Phooltas Transrail Ltd Patna as per their GA Drawing No. 8B0304000000 Rev. 04 may be permitted provisionally to run for one time movement up to maximum speed of 60kmph when running on its own power as well as when running in train formation as a dead vehicle and as a last vehicle from Dhandera Railway Station of Northern Railway to destination points mentioned in the following table through the most suitable route of concerned Zonal Railways as listed below:

SI No.	Destination Point	TOO ESK - NEEDEN LIES IN	No. of Machines
01	North Central Railway:-	VGL Jhansi Jn.(VGLJ)	01
02	Central Railway:-	Ajni(AJNI), Solapur(SUR)	02
03	Western Railway:-	Vadodara(BRC), Vatva(VTA)	02
04	South East Central Railway:-	Seoni(SEY), Sausar(SASR)	02
05	West Central Railway:-	Kota Jn. (KOTA), Bhopal Jn. (BPL)	02

This speed certificate for one time movement of Rail Borne Maintenance Vehicle (RBMV) manufactured by M/s. Phooltas Transrail Ltd Patna, is subject to the following conditions:

3.1	TRACK STRUCTURE DETAILS & SPEED					
3.1.1	The trac	k shall be to a	minimum standard of-	I / Frontslonal	Type: Fine	
	Rail Section	Sleeper Density	Ballast Cushion	Max. Speed (Own Power)	Max. Speed (Train Formation)	
	52kg (72 UTS)	1540Nos./km PSC sleeper	250mm (100mm clean & rest in caked up condition on compacted and stable formation)	(AMEN) est	Upto 60kmph	
3.1.2			ds shall be maintained to as June-2020, containing track ge			
3.1.3	decide the	e lower maximu	ower standard than that mention m permissible speed on the ba issued by Railway Board	sis of maintenal	nce condition. In this	

to OS	19/20.10.1966 may be seen. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending upon the local conditions.
3.1.4	The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual, June-2020. Maximum cant deficiency permitted would be 75mm.
3.1.5	The welds shall be protected by joggled fish plates as per provisions of USFD Manual and Indian Railways Permanent Way Manual, June-2020 and other policy instructions of Railway Board. The maintenance of Rails and Rail joints shall be ensured as per provisions of Indian Railways Permanent Way Manual, June-2020. In addition, wherever condition warrants on account of corrosion on rail/weld collar, wear on rail, cupping of welds etc., necessary precautions shall be taken for fish plating/joggled fish plating.
3.1.6	Zonal Railways may ensure further detailed examination of track as deemed fit based on age cum condition basis, overdue renewal and condition of formation etc. as per provisions of Indian Railways Permanent Way Manual, June-2020, regarding permanent way renewals and may suitably restrict maximum speed of operation based on such examination.

3.2	BRIDGE STIPUI	ATIONS	- A MICHE DOOR	02 00 to 10 10 10 10 10 10 10 10 10 10 10 10 10	0 I 4 - 7 I	
3.2.1	The clearance refers to "Standard RDSO Spans" bridges with standard design of girders slabs, pipe culverts, piers and abutments etc. issued by RDSO for BGML, RBG, MBG and 25t Loading-2008 standard loadings.					
3.2.2	Superstructures & Bearings of "Special Spans" (designed and constructed by Zona Railways based on site requirements), Arches and sub-structures (including foundation) of all bridges (Standard RDSO spans & Special Spans) are to be got examined by the Chie Bridge Engineer and certified safe with respect to current Indian Railway Standard Codes with up to-date correction slips.					
3.2.3			ollowing paramete ooltas Transrail Ltd	rs of Rail Borne Mair Patna:-	ntenance Vehicle	
	Rolling Stock	Maximum axle load (t)	Maximum tractive effort per axle (t)	Maximum braking force at rail level per axle (t)	Maximum CG height from rail level (mm)	
	Rail Borne Maintenance Vehicle.	18.25	8.299	1.274	1393	
3.2.4	All Standard RDSO spans of BGML, RBG, MBG and 25t Loading-2008 standard loadings are fit for proposed speed of up to a maximum speed of 60kmph when running on its own power as well as when running in train formation as a dead vehicle.					
3.2.4.1	1.5m & 3.0m (all for dispersion of where dispersion in bridges etc., t	effective) shall be longitudinal force cannot be allowed by bridge super tudinal force wi	e strengthened or se as per clause 2 ed as per clause 2 estructure including	3.0m (effective) and R modified in such a wa 2.8.3.2 of IRS Bridge 3.8.3.2 such as due to 3 bearings and sub-s and certified safe by	ay so as to allow Rules. In cases provision of SEJ tructure shall be	

3.2.5 bi	During movement of Rail Borne Maintenance Vehicle (RBMV) with single/multiple locomotives and other rolling stocks the speed certificate issued by RDSO of the single/multiple locomotives/rolling stocks in empty/loaded condition shall be strictly complied with. Therefore, speed certificate of each single/multiple locomotive and rolling stocks in train formation shall be examined carefully & speed restriction/strengthening/prohibition/any other restriction shall be imposed according to most restrictive rolling stock/locomotive/multiple locomotives in train formation.
3.2.6	Location of bridges on which speed restrictions are imposed should be notified by the Railways and incorporated in the working timetable.
3.2.7	The final speed on bridges shall also be governed by the track structure on the bridges. Therefore, the lower of the two speeds i.e. speed on particular bridges and speed for track structure over those particular bridges shall prevail as the running speed.
3.2.8	The above Para have been arrived at considering bridges are in physically sound condition. In case the bridges are not in satisfactory physical condition, necessary speed restriction to be imposed by Chief Bridge Engineer of Zonal Railway on condition basis.
3.3	SIGNALLING STIPULATIONS
3.3.1	Provisions of GR, SR, IRSOD, SEM & all extant instructions issued from time to time as applicable shall be complied with.
3.3.2	In case of locomotive/rolling stocks/ Train (having this machine in its composition) having EBD of more than 1 km and non-provision of second distant signal/ 4 Aspect automatic signaling in the section, action as per Para 7.8.9 of IRSEM (issue July 2021) shall be
3.3.3	While running through a station yard, speed of the Rolling stock shall be restricted to the maximum permissible speed as per standard of interlocking provided at the station or any other speed restriction whichever is severe.
3.4	ROLLING STOCK STIPULATIONS
3.4.1	Before initiating the movement of the Rail Borne Maintenance Vehicle (RBMV manufactured by M/s. Phooltas Transrail Ltd Patna, the Chief Engineer/Track Machine of the concerned Railway shall ensure the safety of the rolling stock and certify the track worthiness. He shall ensure the proper maintenance of the rolling stock.
3.4.2	Brake of the vehicle shall be in perfect working condition during the movement.
3.5	TRACTION INSTALLATION
3.5.1	In 25KV AC traction area, the Principal Chief Electrical Engineer of the concerned Railwashall have to ensure that the minimum height of contact wire and electrical clearances a stipulated in provisions of Chapter-V and V-A, Electric Traction 'Schedule of Dimensions 1676mm Gauge (BG) revised 2022' with latest Addendum & Corrigendum Slips is no violated and strictly followed to ensure its safe running.
3.5.2	In addition to above, the Principal Chief Electrical Engineer of the concerned Railway m impose any temporary speed restriction on the basis of personal knowledge, experience the sectional OHE and the field conditions prevailing on the particular section.
3.5.3	When the Rail Borne Maintenance Vehicle (RBMV) is being moved, it shall be ensured the all the protruding parts are withdrawn and suitably locked, so that during the run there is possibility of any infringement occurring to the standard moving dimensions.

3.6.1	The working of Maintenance Machine shall be as per provision of Indian Railways Permanent Way Manual, June-2020.
3.6.2	The profile of Rail Borne Maintenance Vehicle manufactured by M/s. Phooltas Transrail Ltd Patna, as per their GA Drg. No. 8B0304000000 Rev. 04 does not infringe with the Clauses of Chapter IV (D) of Indian Railway Schedule of Dimensions B.G. Revised-2022.
3.6.3	Necessary action is to be taken as per para 3.4 of Policy Circular No. 6 (Revised 2023) for movement of Rail Borne Maintenance Vehicle (RBMV).
3.6.4	All the permanent and temporary speed restrictions in force and those that shall be imposed from time to time due to track, bridges, curves, signaling and interlocking etc. shall also be observed. In this connection, the speed on curve shall be in accordance with Para 3.1.4 of this speed certificate.
3.6.5	For the movement of the machine, in case of failure of the machine in block sections, the instructions of the para 708(4) of Indian Railways Track Machine Manual, September - 2019 shall be followed.
3.6.6	In case of emergency, the machine shall be attached with passenger /goods trains and operation speed of passenger/goods trains shall not be more than 60kmph.
3.6,7	Competent track machine staff who can apply the machine brakes in case of train parting shall escort the machine while running in train formation as a dead vehicle.
3.6.8	This speed certificate is valid till one time movement of Rail Borne Maintenance Vehicle (RBMV) manufactured by M/s. Phooltas Transrail Ltd Patna from Dhandera Railway Station of Northern Railway to destination points of concerned Zonal Railways or three years from the date of issue, whichever is earlier.

ENCLOSURES / संलग्नकः

i)	Annexure-A
ii)	M/s Phooltas GA Drg. No. 8B0304000000 Rev. 04.
iii)	Bogie Arrangement: M/s Phooltas Drg. No. 8B0304SK0100 Rev. 0.
iv)	Suspension Arrangement: M/s Phooltas Drg. No. 8B0304030001 Rev. 03.
V)	Railway Board's letter No. 2020/M(C)/202/6(MTM)-I dated 31.10.2023.
vi)	Railway Board's letter No. 65/WDO/SR/26 dated 19/20 10.1966.
vii)	Para 708(4) of Indian Railways Track Machine Manual, September -2019.
viii)	Para 704 of Indian Railways Track Machine Manual, September -2019.
ix)	Railway Board's Letter No. 2018/Track-III/MC/13/Vol.II dated 28.03.2024.
x)	Central Railways Letter No. W.446.S.27/TM/7 dated 20.09.2024.

(नितिन मेहरोत्रा)

कार्यकारी निदेशक मानक / चालन शक्ति

प्रतिलिपिः

- 1. सचिव, {यांत्रिक / विद्युत / इंजीनियरिंग(जी)}, रेलवेबोर्ड, रेल भवन, नईदिल्ली— 110001
- 2. मुख्य रेल संरक्षा आयुक्त, अशोकमार्ग, लखनऊ-226001
- 3. महाप्रबन्धक (यांत्रिक / विद्युत / संचालन / संकेत एवंदूर संचार)
 - i) मध्य रेलवे, छत्रपति शिवाजी टर्मिनस मुम्बई— 400 001
 - ii) पूर्व रेलवे, फेयरली प्लेस, कोलकाता— 700 001 iii) उत्तर रेलवे, बडौदा हाऊस, नई दिल्ली— 110001
 - iii) उत्तर रेलवे, बडौदा हाऊस, नई दिल iv) पूर्वोत्तर रेलवे, गोरखपुर- 273001
 - v) पूर्वोत्तर फ्रन्टियर रेलवे, मालीगॉव ,गुवाहाटी- 781 011
 - vi) दक्षिण रेलवे, एनेक्सी, पार्क टाऊन, चेन्नई— 600 003
 - vii) दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद- 500 071

- viii) दक्षिण पूर्व रेलवे, गार्डन रीच, कोलकाता- 700 043
- ix) पश्चिम रेलवे, चर्चगेट, मुम्बई— 400020
- x) उत्तर मध्य रेलवे, प्रयागराज- 211 001
- xi) उत्तर पश्चिम रेलवे, जयपुर- 302 006
- xii) पूर्व मध्य रेलवे, हाजीपुर- 844 101
- xiii) पूर्व तट रेलवे, रेलवे कॉम्पलेक्स, भुवनेश्वर-- 751 023
- xiv) दक्षिण पश्चिम रेलवे, हुबली— 580 023
- xv) पश्चिम मध्य रेलवे, जबलपुर- 482 001
- xvi) दक्षिण पूर्व मध्य रेलवे, बिलासपुर- 495 004
- 4. अध्यक्ष एवं प्रबन्ध निदेशक, कोंकण रेलवे कारपोरेशन लिमिटेड, बेलापुर भवन, सेक्टर-11, सी.बी.डी. बेलापुर नवी मुम्बई-400 614.

ENCLOSURES / संलग्नकः

i)	Annexure-A Annexure-A
ii)	M/s Phooltas GA Drg. No. 8B0304000000 Rev. 04.
iii)	Bogie Arrangement: M/s Phooltas Drg. No. 8B0304SK0100 Rev. 0.
iv)	Suspension Arrangement: M/s Phooltas Drg. No. 8B0304030001 Rev. 03.
v)	Railway Board's letter No. 2020/M(C)/202/6(MTM)-I dated 31.10.2023.
vi)	Railway Board's letter No. 65/WDO/SR/26 dated 19/20.10.1966.
vii)	Para 708(4) of Indian Railways Track Machine Manual, September -2019.
viii)	Para 704 of Indian Railways Track Machine Manual, September -2019.
ix)	Railway Board's Letter No. 2018/Track-III/MC/13/Vol.II dated 28.03.2024.
X)	Central Railways Letter No. W.446.S.27/TM/7 dated 20.09.2024.

(Signed) (नितिन मेहरोत्रा)

कार्यकारी निदेशक मानक / चालन शक्ति

Page 6 of 7

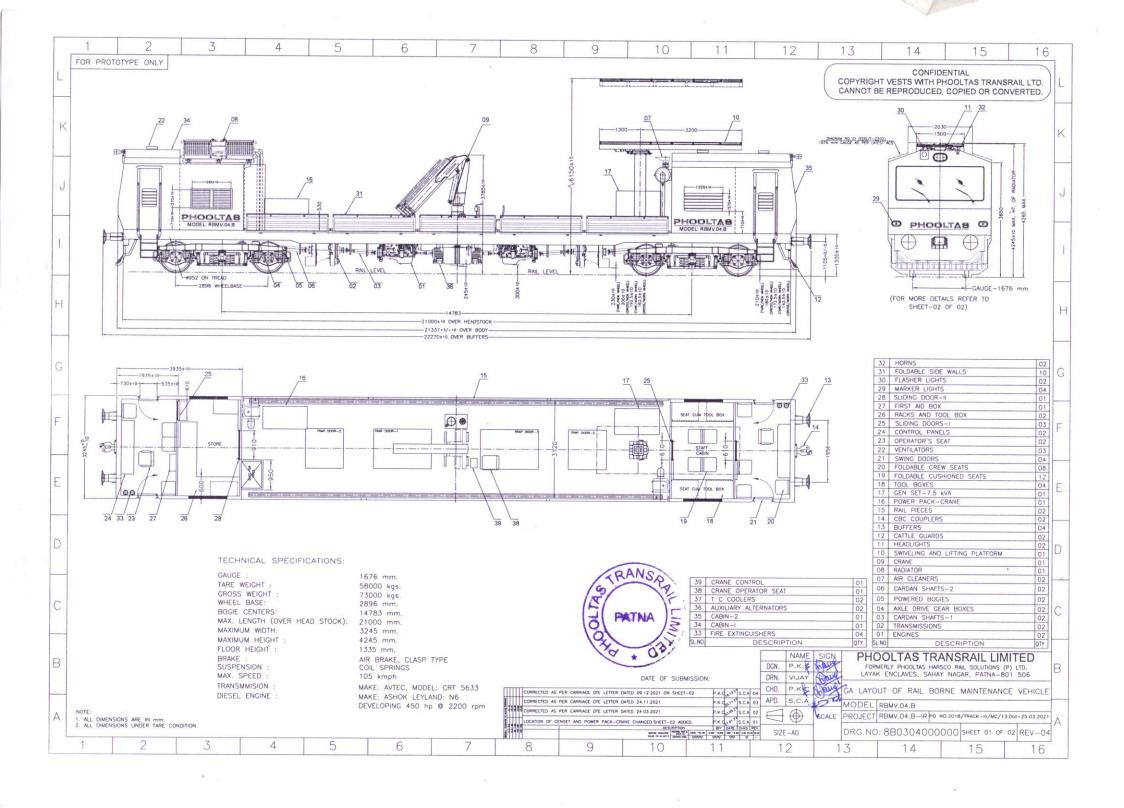
PERSONAL PROPERTY AND PROPERTY

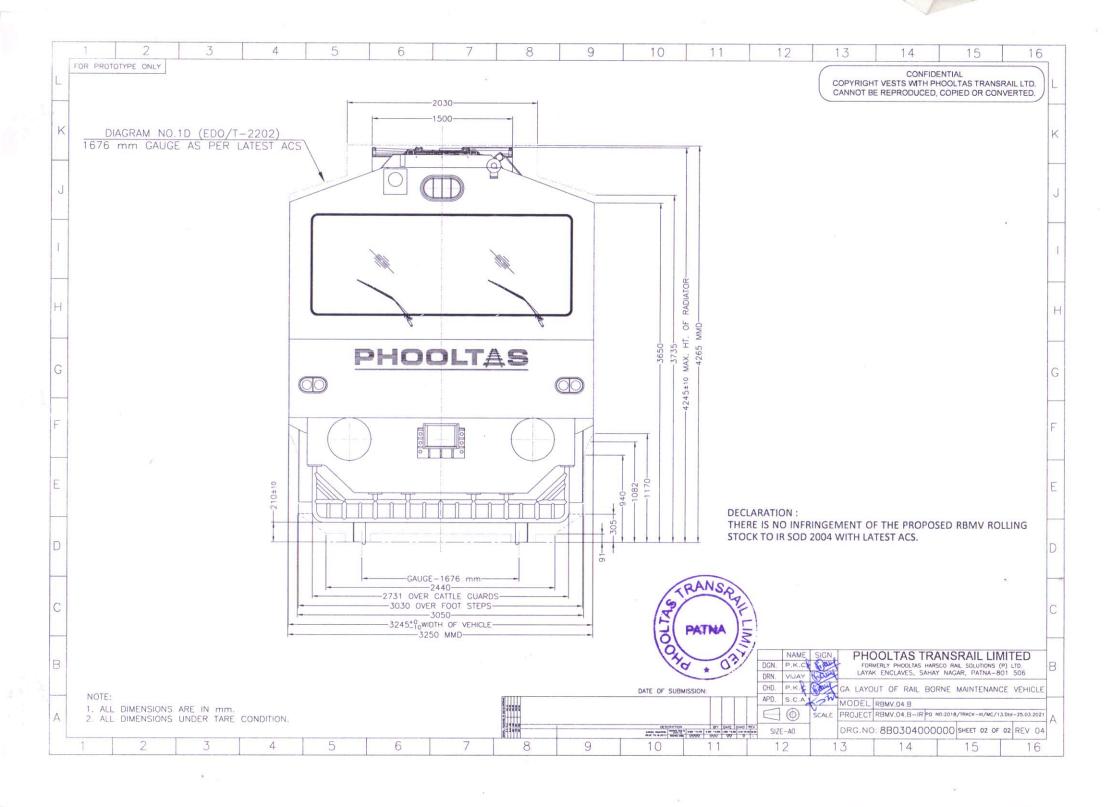
Salient features of Rail Borne Maintenance Vehicle (RBMV) (Transportation Code RBMVPTL8) manufactured by M/s. Phooltas Transrail Ltd Patna.

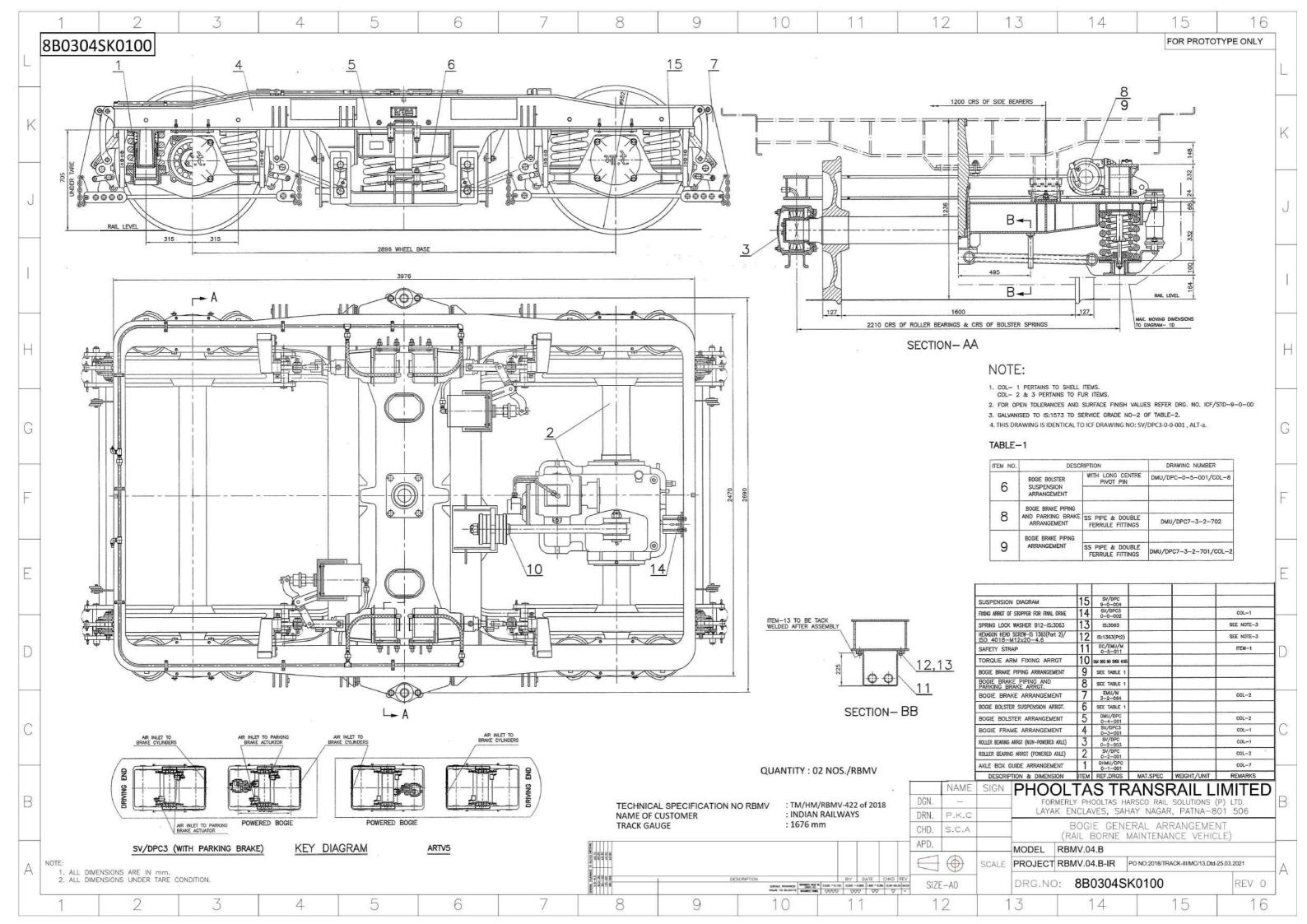
SN	Description	Details	Na						
1.	Principal dimensions of rolling stock	M/s Phooltas GA Drg. No. 8B0304000000 Rev. a) Length over buffers : 22270 mm b) Bogie centre distance : 14783 mm c) Wheel base : 2896mm d) Max. axle load : 18.25t e) Max. design speed i) Own power : 105kmph ii) Train formation : 105kmph f) Weight of Machine i) Tare : 58 t ii) Payload : 15 t iii) Gross : 73 t	04						
2.	Bogie details and wheel	M/s Phooltas Bogie arrangement Drawing N 8B0304SK0100 Rev. 0 a) Wheel dia. New : 952 mm Worn : 877mm							
3.	Suspension arrangement	M/s Phooltas Suspension arrangement Drawing No. 8B0304030001 Rev. 03							
4.	Brake system details	Air Brake System as per M/s Phooltas Drawing No. 8B0304080000 Rev. 08							
5.	Details of coupler and buffer	Coupler : Transition type CBC Coupler Buffer : RDSO SKETCH- 98145							
6.	Engine	Make: Ashok Leyland Model: N6 CRS 450 HP @ 2200 RPM							
7.	Safety Items	As per Para 704 of Indian Railways Track Machir Manual, September -2019	ie						

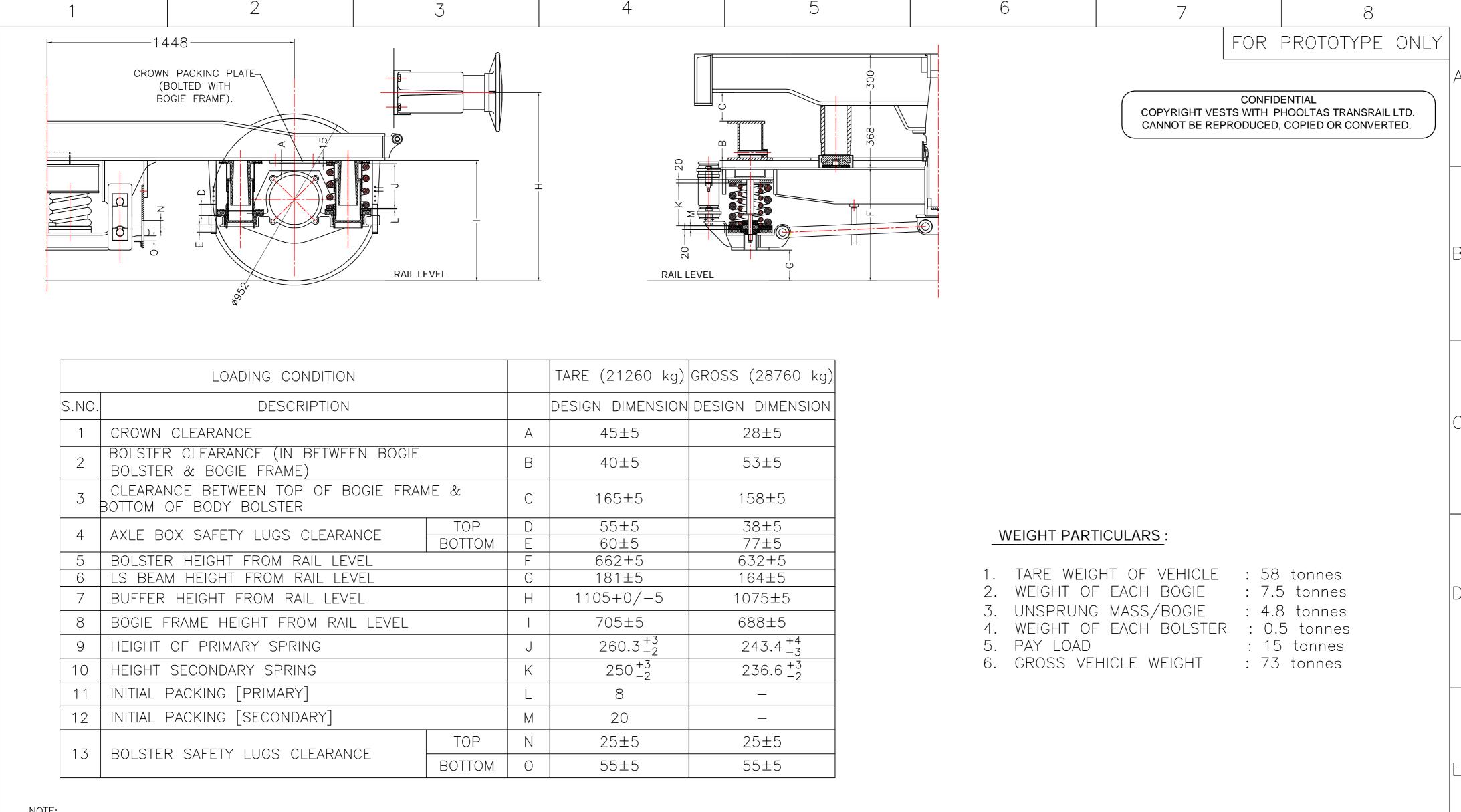
Annexure B

SI	Details	New RBMV	Old RBMV
No.	Devails	nat	Disperin
1.	Length over buffers	22270mm	22270mm
2.	Distance apart for centres of buffers	1956mm	1956mm
3.	Height of centres of buffer above rail level	1105mm	1105mm
4.	Wheel base	2896mm	2896mm
5.	Max. axle load	18.25t	18.25t
6.	Bogie centres	14783mm	14783mm
7.	Wheel diameter (new)	952mm	952mm
8.	Un-sprung weight per axle a) driving axle b) running axle	2.963t 1.841t	2.9t 1.88t
9.	Max. Braking force per axle	1.274t	6.42t
10.	Max. tractive effort per axle	8.299t	13.788t
11.	Max. Height of centre of gravity from rail level	1393mm	1263mm
12.	Gross weight	73t	73t
13.	Engine Remember of a stoom 9 as toom	Ashok Leyland N6 CRS 450HP @2200 rpm	Cummins Two engines NT855R 285HP @2100 rpm
14.	Bogie	ВОВО	High Carrying Capacity(HCC) EMU/DMU Bogie
15.	Suspension Drg. Clearance between top of bogie frame and bottom of body bolster- different	8B0304030001 Rev-03	RBMV01-03 00.02 Rev-03
16.	Floor height	1335mm	1275mm









14.09.2022

14.02.2022

DATE

P.K.C | 18.01.2021

P.K.C

BY

4

S.C.A

S.C.A

S.C.A

APPD

S.C.A

S.C.A

S.C.A

CHKD

NOTE:

- 1. ALL DIMENSIONS ARE IN mm.
- 2. AXLE BOX SPRING TO DRG. NO.8B0304030100. [IDENTICAL TO RBMV01-03 01.00, REV. 03]
- 3. BOLSTER NEST TO DRG. NO.8B0304030200. [IDENTICAL TO RBMV01-03 02.00, REV. 01]
- 4. COMPENSATING RINGS PROVIDED IN EACH BOLSTER NEST: 20 mm THK.-03 NOS.(01 NO. ON TOP, 2 NOS. BELOW THE NEST).

DRG. CORRECTED AS PER CARRIAGE LETTER NO.SV.BOGIE.GENERAL. Dtd.-17.08.2022 P.K.C

DESCRIPTION

5. INITIAL PACKING PROVIDED BELOW EACH AXLE BOX SPRING: 8 mm THICK.

LOA NUMBER ADDED.

DRG, NOs. OF SPRINGS REVISED

- 6. CROWN PLATE: 15 mm THICK EACH.
- 7. THIS DRAWING IS IDENTICAL TO OUR DRG. No. RBMV01-03 00.02 Rev.03 DULY APPROVED FOR OSCILLATION TRIAL.

DATE OF SUBMISSION:

		NAME	SIGN	PHOOLTAS TRANSRAIL LTD.
	DGN.	S.C.A		
	DRN.	P.K.C		LAYAK ENCLAVES , SAHAY NAGAR , PATNA — 801 506
	CHD.	S.C.A		SUSPENSION DIAGRAMMATIC ARRANGEMENT
	APD.	S.K.R		(RAIL BORNE MAINTENANCE VEHICLE)
03]	1		MODEL RBMV.04.B
02		1 🔷		PROJECT RBMV.04.B-IR PO NO:2018/TRACK-III/MC/13.Dtd-25.03.2021
01				DRG NO. 8B0304030001 REV 03
REV				DIVG 110. 00000400001 NEV 03
			\sim	



भारत सरकार Government of India रेल मंत्रालय Ministry of Railways रेलवे बोर्ड Railway Board



(E-File No. -3338970)

New Delhi, Date: 31.10.2023

No. 2020/M(C)/202/6(MTM)-l

ED/Carriage RDSO, Lucknow

Sub: Allotment of transportation code for 8-wheeler Rail Borne Maintenance Vehicle (RBMV) supplied by Phooltas Transrail limited Patna

Ref: RDSO letter no. MC/RBMV/Phooltas dated 19.10.2023.

Vide letter under reference above, RDSO has submitted that the proposed layout drawing No. 8B0304000000 (Rev. 04) for 8 wheeler Rail Borne Maintenance vehicle (RBMV) supplied by M/s Phooltas Transrail limited Patna has been examined in consultation with TMM Directorates and found in order.

Accordingly, a transportation code for 8-wheeler Rail Borne Maintenance Vehicle (RBMV) supplied by M/s Phooltas Transrail limited Patna is as under:

Type of Coach	Transportation Code
8-Wheeler Rail Borne Maintenance Vehicle (RBMV) supplied by M/s Phooltas Transrail limited Patna	RBMVPTL8

For further necessary action please.

DA: As above.

कार्य. निदेशक / यांत्रिक इंजी./कोचिंग रेलवे बोर्ड

C/- PED/RS/RDSO, ED/TK/M&MC/RB and GM/CMM/CRIS for kind information and necessary action.

To

The General Managers, All Indian Railways.

The G.M. & Chief Engineer, Rail av Electrification project, Calcutta,

The Chief Administrative Officer, B.B.K. Railway Projects, Waltair.

Sub: Use of new type of Rolling Sirck.

Use of new type of rolling stock on existing Railway systems is governed by the Rules laid down in Chapter W of the Rules for opening of a Railway. In terms of para 5 of this Chapter, applications for use of new type of rolling stock are required to be a companied by a certificate to be signed by the Chief Engineer and C f Mechanical Engineer of a Railway in a form specified therein.

- Engineer and the Chief Mechanical Engineer (and Chief Electrical Engineer in case of electrical stock) is a positive act of certification in regard to track and locomotive maintenance standards for the Speed indicated and a statutory obligation. The Officers signing the certificate are required to decide, on the basis of their personal knowledge and experience of the maintenance conditions of the track. Locomotives or rolling stock, with due regard to relevant information available and the maintenance requirements of the new type of rolling stock, as to whether the operation of the particular type of locomotive or rolling stock on the relevant section of the Rail ay is safe and practicable with the facilities available on the Railway system. The RDSO merely recommend the maximum speed at which locomotives and rolling stock could be permitted to run on standard track under average maintenance conditions and this recommendation is made only on the basis of design features of the particular type of locomotive, rolling stock and assessment of their suitability from oscillation and other terms conducted by the PDSO. These certificates for speed issued by RDSC are meant merely to assist the CEs and CMEs/CEEs in deciding on the speed at which these engines/rolling stock may be permitted to un on their Rail avasystam for the maintenance conditions obtaining on their alys.
- 3. A note on the subject prepared by the RG/RDSO isenclosed herewith in quadruplicate for guidance of your officers.

Receipt of this letter may please be acknowledged.

DA: As above.

No.65/MDO/SR/26

Sd/(B.S.D. Bakiga)
Director, Civil Engineering,
Railway Board
New Delhi, October 19/20, 1966,

Copy to D.G. RDSO, Alambagh, Licuknow with reference to his letter No.MRA/573 of 16.8.1966.

(E.S.D. Baliga)
Director, Civil Engineering.
Railway Board.

Enclosure to Board's letter No.65/WDD/SR/26 dated 19-10-66.

-Use of new types of Rolling Stock.

The rules for use of new types of rolling stock on existing railways are laid down in Chapter VI of the Rules for Opening of a Railway. According to para 5 of this Chapter, applications for use of new type of rolling stock are required to be accompanied by a cirtificate to be signed by the Chief Angineer and the Chief Mechanical Engineer of the Railway in the form specified in para 5(a)(ii). It should be clearly understood that this certificate by the Chief Engineer and the Chief Mechanical Engineer (Chief Electrical Engineer in the case of Electrical Stock) is a positive act of certification and a statutory obligation.

- 2. The Chief Engineers and Chief Michanical Engineers
 (Chief Michanical Anginners in the case of electric stock)
 are required to declae on the basis of their personal
 km. Ledge and experienceack, locomotives or relling
 stock with due regard to relevant information available
 of track and rolling stock and their maintenance requirements, as to whether the operation of particular locomotive
 or rolling stock is safe and practicable with the facilities
 provided on the railway system. It may be emphasized that
 respective Heads of Departments are required to cartify
 annually regarding the sound condition of the track and rolling
 stock in operation in terms of para 1222 of Indian Hailway
 Gode for Accounts departments.
- Indian Railways, the safety certificate for operation of locomotives and rolling stock was issued by the Chief Intineer and Chief Mechanical Engineers on the basis of their personal knowledge and experience and on the basis of the recommendation for speed limit by the consulting angineers, who available. With the build up of increased design and testing facilities in RDSO, due recommendation is made by RDSO on the basis of design features of particular stock and assessment of their stability from oscillation tests conducted on main line track in normal state of maintenance and not subjected to speed restriction.
- 4. R.D.S.O. advises the Bailway of the speed at which different types of lecomotive and rolling stock can be parmitted to run on different track structures. This is done in two stages
 - (a) preliminary speed; and
 - (h) final maximum speed.

The preliminary speed is based on a study of the design characteristics of the vehicle and experience of performance of similar designs in India and/or abroad. Such speed would be generally lower than the sectional maxkmum speed and it would not be difficult for CEs and CMs to arrive at a decision in issuing the Safety Certificate. Further, it is up to the CEs to decide whether any particular sections or routes require the imposition of a restriction on a generally sanctioned speed. Such a decision has to be based purely on the personal knowledge and experience of the engineers of the zonal railways.

5. It is, however, necessary to keep a watch on the performance of vertiles permitted on such preliminary speed limit to gather experience for guidance in determination of the final maximum speed both by RDSO and Railways the former taking this aspect into account along with the review of the oscillation test, and the latter while issing the certificate for the final maximum speed. The final maximum 3 sed is detarmined by the RDCC on ed review of the oscillation, tasks gamerally conducted for new designs and on confirmation of the suitability of the strength of track and bridges, although such investigation is made even at the juitial stage of design. The oscillation crials are conducted with a view to obtaining data-rolating, approve the riding characteristids of the vehicle at what vertical wheelyaxis load and lateral force ratio and vertical and lateral and lateral and lateral force ratio and vertical and lateral and 'studies are almed an assessing the possibilities of Vrapic elatortica, whost mountaing, riding conforts abc. For conducting the so tests, a section of main line track is selected over which there are no temporary restrictions and which is considered by the railway as being in a generally run down condition for main line; standards but without speed restriction. The vehicle is tested generally for new and worm clearance conditions and also where relevant. for operation in the forward or back-ward direction. The vahicle selected is one of those in average condition of normal mainteanence. The tests are conqueted on speeds usually 10% higher than that to which it is proposed to ba cartifica,

On the basis of the theoretical substudies and investigations of the tests as indicated and the analysis of the test results, the RDS) recommends the raximum speeds up to which a vehicle to be permitted in normal traffic iteration. The cortificate of the RDSO though issued by the Director Standards(Mach.) is the final result of studies conducted by the various concerned

Directorates such as Civil Engineering, Carriage and Wagon Mitive Power etc. This recommendation of the RDSO is meant to be used as guidance by the CEs and CMGs of the worst railways in formulating their own certificates to be furnished to the ACRS. It is upto Chief Engineer, Chief Mechanical Engineers and Chief Electrical Engineers to consider on the basis of their personal knowledge and experience of track locometive and rolling stock and their maintenance requirements whether the conditions prevailing are such as to require a reduction in the speed of the vehicles in normal traffic operation.

CMBs up to 105 km/hr. It is not ther feasible nor it is considered necessary that any more guidance than that at present being given by RDSO should be available to them at normal cases in arriving at their conclusions in the matter of formulation of their certificates to the ACB. In the case of operation is in gher speeds, it is proposed that in addition to the data at present being furnished, copies were conducted would also be incorporated in the test reports and made available for reference to the CBs and CMBs. It has speed track (speed above 105 km/hr) track recording would track recording for the test track with the track recording would track recording for the test track with the track recording be an additional suddance to the CBs and CMBs in the formulation of their certificates.

In conclusion, it may be pointed out that the statutory obligation of certification of speeds is that of the CEs and CMEs/ and CES of the meal railways. In discharging RDSO. The extent of wuch assistance would normally depend the speeds involved and the facilities availabe with the considered satisfactory for speeds up to 105 km/hr. For would also be made available to the zonal railways for purpose from time to time.

- involve large number of labour working with the machine. Hence, extra care is necessary as detailed below, to ensure safety of workers.
- (b) Hooters should be provided on the track machines. These hooters should be used to warn the staff working on/around the track machine about approaching train on adjoining track. Remote controlled hooters shall also be deployed as an added precaution by SSE/JE/P.Way so that lookout man standing around 150 m away from the track machine can also operate the hooter to warn the staff suitably. SSE/JE/TM shall also put on the flasher light on as an added precaution till the train on adjacent line has passed the site of work.
- (c) Caution order of 30 to 50 kmph with instructions to whistle freely should be imposed on the adjacent line, during the duration of block, for the safety of workmen, depending upon the site conditions and visibility.
- (8) Checking Infringement After Work The vertical and lateral clearance for OHE, signal post and any other structure should be checked and adjusted before clearing the block. It shall be ensured by SSE/JE (P.Way) working with track machine that there should be no infringement to signal post, OHE and any other structure as per schedule of dimensions.

708 Failure and Accidents of Track Machines

- (1) Protection in case of Breakdown In the event of breakdown, the track machines shall be protected as per GR 6.03 and SR there to by the machine staff, as directed by machine in-charge.
- (2) Failures in Block Section Failures in block sections of the track machines will be treated as accident under class 'J Equipment failure'.
- (3) Accidents involving Track Machine Accidents involving track machines shall be treated as train accidents under the appropriate class and action shall be taken as per the rules in force.
- (4) Action in case of Failure in Block In case of failure of track machine in block section, immediate information with details should be conveyed to the ADEN/DEN/Sr.DEN of the section and the AXEN/XEN/Dy.CE/Line/TM. SE/JE/TM should decide in consultation with SSE/JE (P. Way), the action to be taken to clear the section. They may decide to push the disabled unit to the nearest station provided the brake power is in good condition. Otherwise, intimation shall be sent to the nearest Station Master asking for a light engine to tow the unit.
- (5) Request for ART/Breakdown In case, SSE/JE (P. Way) and/or SSE/JE/TM feels clearance of section is going to take long time, the assistance of Road Breakdown or Accident Relief Train shall be asked for immediately. Meanwhile SSE/JE/TM in-charge on the machine shall take necessary action to rectify the defect(s). SSE/JE (P. Way) shall provide all necessary assistance.

INDIAN RAILWAYS TRACK MACHINE MANUAL Second Edition, September, 2019

certificate. Machine competency certificate is to be issued to SSE/JE/TM by Dy.CE/TM Line or an officer authorized by him. This certificate will be issued as per proforma given in **Annexure 7.3** after ascertaining the successful completion of technical training, G & SR training and his medical fitness. The validity of this certificate will be up to the earliest expiry date of the three i.e. (i) Technical training (ii) G & SR training and (iii) PME.

For automatic block section, separate competency is required to be issued as per the practice in the Zonal Railway.

704 Safety Equipment

- (1) General SSE/JE/TM in-charge shall be responsible to ensure that the following equipment in working condition are available on the track machine:
 - (a) Two red and one green hand signal flags.
 - (b) Two tri-colour hand signal lamps /LED torch.
 - (c) Two chains with padlocks.
 - (d) One fire extinguisher in each cabin.
 - (e) Two hooters (manually controlled).
 - (f) Two jacks10 t.
 - (g) Four wooden blocks.
 - (h) Four crow bars.
 - (i) One hydraulic hand pump.
 - (j) Emergency pneumatic/hydraulic hose off sizes suiting to different machines (Complete with end fitting).
 - (k) Wire rope with close loops at both ends 2 m and 9 m long for BCM: One of each length.
 - (I) Machine specific equipment, if any, listed in Chapter 2, 3, 4 and 5.
 - (m) Ten fog signals (detonators) in a tin case.
 - (n) A copy of the working timetable of the section where the machine is working.
 - (o) G & SR book with up to date amendment slips.
 - (p) One 4 cell flasher light LED lamp cum flasher light (rechargeable).
 - (q) Two banner flags.
 - (r) One first aid box.
 - (s) Two skids.
 - (t) Safety helmets for all machine staff.
 - (u) Protective clothing, safety shoes and safety gloves.
 - (v) Walkie talkie with frequency of SM, Guard and Loco Pilots.

- (w) Internal communication system like walkie-talkie and/or head mounted system.
- (x) Track Machine Manual with up to date correction slips.
- (y) Accident Manual.
- (z) Tail lamp.
- (2) Head and Tail Lights Each track machine must be equipped with prescribed head and tail lights, marker lights and flasher lights as per GR 4.14, 4.15 & 4.16 and SRs thereof. Each machine shall display LV board/tail lamp when moving alone. While moving in conveyor coupled, the LV board/tail lamp shall be fixed on the last vehicle; in the direction of movement.

705 Rules for Operation – General

- (1) Stabling of Track Machines When the track machine(s) is/are stabled at a station, SSE/JE/TM in-charge shall ensure that it is clear of fouling marks and traps and necessary precautions against rolling down such as pinning down hand brakes, chaining and provision of skids; is taken in accordance with G&SR.
- (2) Shunting of Track Machines No track machine shall be moved between a running line and the siding/stabling line without the written permission of the Station Master on duty in the form of shunting order/shunt signals.
- (3) Machine Ready Memo SSE/JE/TM shall issue a written machine ready memo (as per Annexure 7.4) after necessary maintenance/repairs/schedules and Brake Power testing and other stipulated checks, if any, to on duty SM, indicating time and date, under advice to SSE/JE/P. Way deputed to work with the machine.
- (4) Movement of Track Machines When the track machine is required to move from one station to another station, SSE/JE/TM shall run the machine only with proper authority to proceed and all necessary permits, notices and cautions as specified in G&SR. When track machine is to move on wrong road (against the direction of traffic), the speed of track machine shall not exceed more than 25 kmph and flasher light shall be kept "ON".

(5) Working in Group

- (a) When more than one machine is required to work within the same block section, these machines may be allowed to move into the block section in a group under one authority as detailed in this chapter. In such situation all the track machines must leave and enter the section simultaneously one after another keeping adequate distance among them and with proper authority as detailed further in the following paras.
- (b) Total number of the machines shall be clearly mentioned in the line clear/block authority message with exchange of private numbers. For

GOVERNMENT OF INDIA MINISTRY OF RAILWAYS (RAILWAY BOARD)

No. 2018/Track-III/MC/13/Vol.II

New Delhi, Dtd. 28.03.2024

The Principal Chief Engineers, All Indian Railways.

Sub: Allotment of 104 nos. RBMVs (16 nos. RSP-1109 of 2016-17) & 80 nos. RSP-1284 of 2018-19 and 8 nos. (out of 430 nos. RSP 1271 of 2019-20) against Railway Board's contract no. 2018/Track-III/MC/13 dated 04.12.19 for supply of 57 nos. RBMVs placed on M/s Phooltas Transrail Ltd., Patna, contract no. 2018/Track-III/MC/13(i) dated 28.08.19 for supply of 30 nos. RBMVs placed on M/s SAN Engg & contract no. 2018/Track-III/MC/13(ii) dated 28.08.19 placed on M/s OVIS

Ref: i) Railway Board's letters of even no. dated 03.06.2022.

ii) Railway Board's letter no. 2023/CE-II/TK/MMG dated 20.04.2023.

In view of the implementation of modified 3-tier system of track maintenance issued vide ref.(ii) above, partial modification to the allotment & priority issued vide ref. (i) above for supply of 104 nos. RBMVs is given in table below:

						Revise	d Allotm	ent & Pr	iority of	104	Nos. RB	MV CAF)			
	Allotment of 104 nos. RBMV					Priority			Revised Allotment of 104 nos. RBMV				Revised Priority			
Rly	16 nos. 80 nos.			8 nos.	57 nos. M/s Phooltas	17 nos. OVIS	30 nos.	16 80 1		nos. RSP-1284 of 18-19		8 nos.		17	30	
	M/s no		nos. OVIS	nos. 30 nos.			SAN	(57 r	PHOOLTAS OVIS SAN		57 nos. Phooltas		nos. OVIS	nos. SAN		
CR	2			2	2	15,16		11,12, 25,26	2			2	2	3,4		2,3, 18,19
ECoR		5				27,28,39, 40,56				5				28,29,43,44,57		
ECR	1	4		3		5,6,23, 24,55		9,10, 27	2	4		2		13,14,39, 40,53,54		14, 15
ER	1	6	4.			11,12,35,36, 48,49,57			1	6				23,24,41,42, 47,55,56		
NCR	5	3	(a			3,4,21,22,41, 42,50,51			3	3	1	1		1,2,19,20,37,38	1	1
NER	1	1				29,30			1	1				30,31		
NFR		4			2	13,14, 37,38		13,14		4			2	15,16,45,46		16,17
NR		3	3	2	2	1,2.52	9,10, 17	15,16, 29,30	1	3	2	2	2	17,18,48,49	12,13	12,13, 28,29
NWR		3				33,34, 46				3				33,34,52		
SCR			4	3	2		1,2,11, 12	5,6,19, 20,28			4	3	2		4,5, 14,15	8,9,22, 23,30
SECR		3	2			17,18, 43	15,16			3	2			7,8,25	2,3	23,30
SER		2	3			25,26	7,8,14			2	3			26,27	8,9,16	
SR			3	4			5,6,13	3,4,2 1,22			3	4			10,11, 17	10,11, 24,25
SWR			2	4			3,4	1,2,17, 18			2	4			6,7	6,7,26, 27
NCR	2	3	a to said	4		9,10,31,32, 47		7,8, 23,24	2	3		4		9,10,21, 22,32		4,5,20, 21
WR	4	4				7,8,19,20, 44,45,53,54			4	4				5,6,11,12,35,36 ,50,51	7	
IR	16	41	17	22	8	=			16	41	17	22	8			

It is advised that 5 Zonal Railways where implementation of modified 3-tier system of track maintenance is proposed should ensure proper deployment/utilization of RBMVs for implementation of modified 3-tier system of track maintenance in nominated section on first priority.

Rest of the contents mentioned in letter ref.(i) above, will remain unchanged.

Vijay Singh)

28/3/2024

Exe. Director Track(M&MC)

Railway Board Tel. +91 11 47845531

Email: dirtmcrb@gamil.coard

Copy to:

- 1. PFA & CAO/Central Railway, CSMT for information and necessary action.
- 2. M/s Phooltas Transrail Ltd., Patna, Bihar.
- 3. M/s SAN Engg., Bangalore.
- 4. M/s OVIS, Hyderabad.
- 5. SO(A/C-IV), Room No. 564, 5th floor, Rail Bhawan, New Delhi for information and necessary action.
- 6. PED/TMM/RDSO for necessary action.

CENTRAL RAILWAY



NO: W.446.S.27/TM/7

HEADQUARTERS OFFICE, ENGINEERING BRANCH, MUMBAI C.S.T.

Date: 20.09.2024

Executive Director/Track Machine RDSO, Lucknow

SUB: Speed certificates for RBMV machines allotted to Central Railway.

REF: 1) Railway Board letter no. 2018/Track-III/MC/13/Vol.II dated

28.03.2024

2) This office Ir. Dated 13.09.2024

Railway board has allotted four RBMV machines (Priority no. 2^{nd} , 3^{rd} , 18^{th} & 19^{th}) from M/s. SAN Engg & Loco. Pvt. Ltd., Banglore and two RBMV machines (Priority no. 3^{rd} & 4^{th}) from M/s. Phooltas, Haridwar to C. Rly vide letter under reference 1.

Division wise allotment of above allotted RBMV to C. Rly. is as mentioned below:

M/s. SAN Engg- 1^{st} – AJNI, NGP div.

2nd – Khadki, PUNE div.

3rd - Kalyan, CSMT div.

4th - Bhusawal, BSL div.

M/s. Phooltas-

1st- Ajni, NGP div.

2nd- Solapur, SUR div.

It is requested to issue RDSO speed certificate for one time movement of above machines from OEM works to C. Rly.

(S.K.Patel) Chief Engineer/TM
Central Railway

C/-Exe.Dir. Track(M&MC)- for kind information please.