



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011
EPBX (0522) 2451200
Fax (0522) 2458500

Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011
DID (0522) 2450115
DID (0522) 2465310



TM/HM/RBMV/Pt-III

Date: 19.03.2020

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|------------------------------------------------------------------|-------------------------------------------------------------|
| I- मुख्य अभियन्ता (ट्रैक मशीन) सभी क्षेत्रिय रेलवे | Chief Engineer (Track Machines) All Zonal Railways |
| II- मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन) | Chief Workshop Manager (Track Machines) |
| सी.पी.ओ.एच. कार्यशाला इलाहाबाद, रायनापाड़ा, कचरापारा, अहमदाबाद, | CPOH WPRKSHOP, Allahabad, Rayanapadu, Kachrapara, Ahmedabad |
| III- प्रधानाचार्य भा.रे.रे.प.म.प्र.के. पीपल गांव इलाहाबाद-211011 | Principal, IRTMTC, Pipal Gaon, Allahabad-211011 |
- Detailed addresses are overleaf.

विषय: रेल बॉर्न मेन्टेनेंस वेहिकल (आर.बी.एम.वी.) (फूलटास) की क्रिटिकल स्पेयर्स पार्ट्स सूची एवं निरीक्षण जाँच सूची


Sub: Critical Spares Part list and Inspection Check list for Rail Borne Maintenance Vehicle (RBMV) (Phooltas)

रेल बॉर्न मेन्टेनेंस वेहिकल (आर.बी.एम.वी.) (फूलटास) की क्रिटिकल स्पेयर्स पार्ट्स सूची एवं निरीक्षण जाँच सूची तैयार की गई है। जिसकी प्रति, आपके सूचनार्थ तथा मशीन के कर्मचारियों जो फील्ड में कार्य कर रहे हैं, के मार्गदर्शन हेतु संलग्न है। यद्यपि उपरोक्त सूची बनाते समय सभी सावधानियां बरती गई है, फिर भी यदि कोई त्रुटि हो तो, कृपया अपने सुझावों/टिप्पणियों को सुधार हेतु ई-मेल/फैक्स/पत्राचार द्वारा अद्योहस्ताक्षरी को भेजें।

Critical spare parts list and Inspection Check List for Rail Borne Maintenance Vehicle (RBMV) (Phooltas), have 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 have been taken during the preparation of the above said list, the discrepancy noticed, if any, may be brought to the knowledge of the undersigned for further improvement, by e-mail/fax/post.

Email address: hmtmmrdso@gmail.com

DA: As above


19.3.2020

(ओम प्रकाश)

निदेशक रेलपथ मशीन-III

I- मुख्य अभियन्ता (ट्रैक मशीन)

- 1.0 मध्य रेलवे, सीएसटी, मुम्बई-400 001
- 2.0 फेयरली प्लेस, पूर्व रेलवे, कोलकाता-700 001
- 3.0 बड़ौदा हाउस, उत्तर रेलवे, नयी दिल्ली-110 001
- 4.0 उत्तरपूर्व रेलवे, गोरखपुर 273012
- 5.0 मालीगांव, उत्तरपूर्व सीमान्त रेलवे, गुवाहाटी-781 011
- 6.0 पार्क टाउन, दक्षिण रेलवे, चेन्नई-600 003
- 7.0 रेल निलयम, दक्षिण मध्य रेलवे, सिकन्दराबाद-500 371
- 8.0 गार्डन रीच, दक्षिणपूर्व रेलवे, कोलकाता-700 043
- 9.0 चर्चगेट, पश्चिम रेलवे, मुम्बई-400 020
- 10.0 उत्तर पश्चिम रेलवे, जयपुर-302 001
- 11.0 पूर्व मध्य रेलवे, हाजीपुर-844 101
- 12.0 दक्षिण पश्चिम रेलवे, हुबली-580 023
- 13.0 उत्तर मध्य रेलवे, इलाहाबाद-211 015
- 14.0 पूर्व तट रेलवे, भुवनेश्वर-751 001
- 15.0 पश्चिम मध्य रेलवे, जबलपुर-482 001
- 16.0 दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495 004

II- मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन)

- 1.0 सी.पी.ओ.एच. कार्यशाला पो0 धूमनगंज इलाहाबाद-221012
 - 2.0 सी.पी.ओ.एच. कार्यशाला, दक्षिण मध्य रेलवे, रायनापाडु,, विजयवाडा, जिला कृष्णा, आन्ध्र प्रदेश. 521241
 - 3.0 सी.पी.ओ.एच., कार्यशाला, पूर्व रेलवे, भूतबागान रेलवे कॉलोनी, कांचरापारा, पी. एस.- बिजपुर, पी. ओ.- कांचरापारा, पश्चिम बंगाल-743145
 - 4.0 मुख्य अभियन्ता, सी.पी.ओ.एच., पश्चिम रेलवे, मंडल रेल प्रबंधक कार्यालय, चामुंडा माता मंदिर के पास, नरोड़ा रोड, पोस्ट-सैजपुर बोधा, अहमदाबाद-382345
- III- प्रधानाचार्य भारे.रे.प.म.प्र.के. पीपल गांव इलाहाबाद-211011**

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-211 015
East Coast Rly, Bhubaneshwar-751 001
WCR, Jabalpur-482 001
South East Central Rly, Bilaspur-495 004
Chief Workshop Manager (Track Machines)

- CPOH Workshop, PO. Dhoomanganj Allahabad-221012
CPOH Workshop, South Central Railway, Rayanapadu, Vijaywada, Dist.-Krishna, Andhra Pradesh-521241
CPOH Workshop, Eastern Railway, Bhutbagan Railway Colony, Kanchrapara, P.S: Bizpur, P.O.: Kanchrapara, West Bengal-743145
Chief Engineer. C.P.O.H, Western Railway, Divisional Office, Near Chamunda Mata Mandir, Naroda Road, Post- Saijpur Bogha, Ahmedabad-382345
Principal, IRTMTC, PipalGaon, Allahabad-211011

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**CRITICAL SPARES PARTS LIST
FOR
RAIL BORNE MAINTENANCE VEHICLE
(Phooltas)**

CSP

March- 2020

**TRACK MACHINE & MONITORING DIRECTORATE
RESEARCH DESIGNS & STANDARD ORGANISATION
LUCKNOW-226011**

PREFACE

For maintenance of any Track Machine, timely availability of spare parts/units and consumables play an important role. Thus, to keep the machine in sound condition, first and foremost prerequisite is availability of spares and consumables. As there are thousands of items/spares which are required for maintenance of machine, it is very much required to identify critical spares which are vital and in turn, to ensure availability of such spares well within the scheduled time.

Critical spares for RBMV (Phooltas) are prepared. It may be noted that this is the list of spares required for the normal maintenance of RBMV (Phooltas) for one year only and does not include the spares required for IOH, POH and other special maintenance work. Railways are advised to check the part list of own machine before any execution of work as parts list may vary from machine to machine. Maintenance requirement for such scheduled maintenance (IOH/POH) and emergency maintenance/attention may be assessed separately on need basis by zonal railways itself.

March-2020

(OM PRAKASH)
Director Track Machine-III

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Rail Borne Maintenance Vehicle

S. No	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
1.0 ENGINE NT 855 R (02 Nos.)							
1.1	Self-starter (Make Delco Remy)	20/3021036/MT42	1	6	0.2*	0	0
1.2	Lube oil filter	3166554	1	0.3	1	0	2
1.3	Lube oil bypass filter	3873576	1	0.3	1	0	2
1.4	Fuel filter	3166555/4084133	1	0.3	1	0	2
1.5	Air Filter Inner	3237742	1	1	1	0	0
1.6	Air Filter Outer	3872336	1	1	1	0	0
1.7	Lub Oil	Multi Grade 20W40	87 Ltr	0.3	210 ltr	100 ltr	100 ltr
1.8	V-belt	3226018 & 32260189	2	0.5	2	0	2
1.9	V-Belt	217638	1	0.5	2	0	2
1.10	V-belt	504867	1	0.5	2	0	2
1.11	Lube Oil Pressure gauge	-----	1	6	0	0	0.2*
1.12	Lube Oil pressure switch	-----	1	6	0	0	0.2*
1.13	Water Temperature Switch	-----	1	6	0	0	0.2*
1.14	Lub. Oil Temperature gauge and sensor	-----	1	6	0	0	0.2*
1.15	Water Temperature gauge	-----	1	6	0	0	0.2*
1.16	Ammeter	11P4	2	6	0	0	0.3*
1.17	Hose pipe (BY PASS NT 855)	AS060720055	1	2	0.5*	0	0
2.0 MECHANICAL & POWER TRANSMISSION							
2.1	Helical Pinion	3P8	1	6	0	0	0.2*
2.2	Helical Gear	3P9	1	6	0	0	0.2*
2.3	Bevel Pinion-23T	3P12	1	6	0	0	0.2*
2.4	Bevel Gear 37T	3P13	1	6	0	0	0.2*
2.5	Hydex Gear Coupling	6P16	1	6	0	0	0.2*
* Minimum quantity 1, ** lub oil 87x4= 348 + 52 ltr for recoupment = 400 ltr							

Rail Borne Maintenance Vehicle

No s.	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
2.6	Torque Arm Assemblies	2P5	2	6	0	0	0.2*
2.7	Torque Arm	4P1	1	6	0	0	0.2*
2.8	Spring Disc	4P2	4	6	0	0	0.7*
2.9	Hex. Head Screw M45x180	4P8	1	6	0.2*	0	0
2.10	Lower Bush	1P6	1	6	0	0	0.2*
2.11	Hub Bush	1P7	1	6	0	0	0.2*
2.12	Bush Dipper	1P29	2	6	0	0	0.3*
2.13	Lock Pin	1P33	1	6	0	0	0.2*
2.14	Mounting Pad	1P36	4	6	0	0	0.7*
2.15	Pin	2P9	3	6	0	0	0.3*
2.16	Pin	2P10	1	6	0	0	0.2*
2.17	Crane Hook	2P21	1	6	0	0	0.2*
2.18	Split Pin	2P23	1	6	0	0	0.2*
2.19	Spring Disc	-----	4	6	0	0	0.7*
2.20	Hex Head Screw	M45x180	1	6	0	0	0.2*
2.21	Transmission Oil	C4-SAE-30	160 ltr	0.5	160	80	80
2.22	Gear Oil	EP-90	90 ltr	0.5	90	45	45
2.23	Grease	AP-3	12 Kg	-----	40	40	40
3.0 PNEUMATIC							
3.1	½" Drain Cock	30 09 54 21	2	6	0	0	0.2*
3.2	1" Check Valve (pneumatic)	30 50 13 24	2	6	0	0	0.3*
3.3	Unloader Valve(pneumatic)	99 30 09 01	1	6	0	0	0.2*
3.4	Auto Drain valve with timing reservoir type D-1	30 10 13 62	2	6	0	0	0.3*
3.5	J- Air Filter with drain cock	30 60 14 41	1	1	1	0	0
3.6	Hose with Dummy Coupling (Type-F)	08094861	2	6	0	0	0.3*
3.7	1-1/4" Angle Cock	-----	2	6	0	0	0.3*
* Minimum quantity 1							

Rail Borne Maintenance Vehicle

No s.	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
3.8	Feed Valve – C2N/FT1	-----	1	6	0	0	0.2*
3.9	½" Check Valve	7020050 00	1	6	0	0	0.2*
3.10	Pressure Switch (VCD Signal)(1.5 KSC to 2 KSC)	RT-200	3	6	0	0	0.5*
3.11	Pressure Switch, Type 2SPDT CUT IN 5 KSC, PUT OUT 4 kSC	RT-116	1	6	0	0	0.2*
3.12	Pressure Switch, Throttle Cut Off (1.0 KSC to 1.5 KSC)	RT-200	1	6	0	0	0.2*
3.13	Pressure Switch, Throttle Cut Off (Close at 8 KSC Open At 7 KSC)	RT-116	1	6	0	0	0.2*
3.14	Magnet Valve 24 V DC Throttle Cut Off	-----	1	6	0	0	0.2*
3.15	C-2W Relay Valve (B.P.)	30 30 17 22	1	6	0	0	0.2*
3.16	T-C 2 Way Throttle Control Valve	799800060	2	6	0	0	0.3*
3.17	Clutch Cut Off Cylinder	80001301	1	6	0	0	0.2*
3.18	8" Brake Cylinder, JSL Type Without Trunion	7 06 0031 00	6	6	0	0	1
3.19	8" Brake Cylinder, JSL Type With Trunion	7 06 0030 00	2	6	0	0	0.2*
3.20	EAB/D-1 Emergency Brake Valve	30 50 12 21	2	6	0	0	0.3*
3.21	SA-9 Brake Valve Set At 2 KSC	30 20 14 07	2	6	0	0	0.3*
3.22	A-9 Auto Brake Valve	30 20 13 07	2	6	0	0	0.3*
3.23	V.C.D. Control Assy, 24 V DC	LAX-VCD-D	1	6	0	0	0.2*
3.24	24 A Double Check Valve	30 40 17 23	5	6	0	0	0.8*
3.25	N1 Reducing Valve Set At 2.6 KSC	30 10 15 01	1	6	0	0	0.2*
3.26	N1 Reducing Valve Set At 5 KSC	30 10 15 01	3	6	0	0	0.5*
3.27	4" Duplex Pressure Gauge (MR-FP)	30 09 57 02	2	6	0	0	0.3*
3.28	4" Single Pressure Gauge (BC, BP)	30 09 57 02	4	6	0	0	0.7*
3.29	½" ISO Cock	29 09 20 29	3	6	0	0	0.5*
* Minimum quantity 1							

Rail Borne Maintenance Vehicle

S. No	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
3.30	J-1 safety ValveSet At 8.5 KSC	30 10 17 04	1	6	0	0	0.2*
3.31	Shut-off Cock $\frac{3}{4}$ "	7030063 00	1	6	0	0	0.2*
3.32	Pneumatic Hose	6.3 mm	-----	2	10 m	10 m	10 m
3.33	Pneumatic Hose	12.5 mm	-----	2	10 m	10 m	10 m
4.0 ELECTRICAL & ELECTRONICS							
4.1	Head Light	1P11	2	6	0	0	0.3*
4.2	Marker Light	1P29	4	6	0	0	0.7*
4.3	Flasher Light	1P30	2	6	0	0	0.3*
4.4	Horn	1P36	2	6	0	0	0.3*
4.5	Hyd. Low level safety switch	6P9	1	6	0	0	0.2*
4.6	Magnet valve type J-1 set at 8.5 kg/cm ²	7P10	1	6	0	0	0.2*
4.7	C2W Relay valve	30 30 17 22	1	6	0	0	0.2*
4.8	Solenoid valve, Two position 1/8"	MFH-5-1/8	8	6	0	1	0.3*
4.9	24 Volt alternator	8P2	2	6	0	0	0.3*
4.10	Fuse box 63 Amp	8P3	2	6	0	0	0.3*
4.11	24 Volt 290 AH battery	8P5	2	6	0	0	0.3*
4.12	By pass Switch	9P3	2	6	0	0	0.3*
4.13	Relay 8 point (2d1, 2d2, 2d3) (4d1, 4d2, 4d3)	9P5	6	6	1	0	0
4.14	Magnetic Switch	9P6	2	6	0	0	0.3*
4.15	Fuel Solenoid Valve	9P7	2	6	0	0	0.3*
4.16	Ignition Switch	9P9	2	6	0	0	0.3*
4.17	Engine Mounted Safety Switch	10P1	14	6	1	1	0.3*
4.18	Red Indicator	10P2	14	6	1	1	0.3*
4.19	Green Indicator	10P3	14	6	1	1	0.3*
* Minimum quantity 1							

Rail Borne Maintenance Vehicle

S. No	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
4.20	Yellow Indicator	10P6	4	6	0	0	0.7*
4.21	Engine Stop Switch	10P5	2	6	0	0	0.3*
4.22	Gauge For Safety Sensor	11P1	12	6	0	1	1
4.23	Engine Mounted Sensor	11P2	14	6	1	1	0.3*
4.24	Relay 8 Point I Transmission	12P3	4	6	0.7*	0	0
4.25	Relay 8 Point II Transmission	12P4	3	6	0	0	0.5*
4.26	Rotary Switch 3 Way for Engine I	12P5	2	6	0	0	0.3*
4.27	Solenoid Valve for Gear (both frame)	13p1	2	6	0	0	0.3*
4.28	Selector Switch 3 Position	13P4	2	6	0	0	0.3*
4.29	Green Indicator Cabin II	13P6	3	6	0	0	0.5*
4.30	Relay 8 Point	14P3	1	6	0	0	0.2*
4.31	Relay 11 Point	14P5	1	6	0	0	0.2*
4.32	Alternator 110Volt	15P2	1	6	0	0	0.2*
4.33	Contact 24 Volt	15P3	2	6	0.3*	0	0
4.34	Head Light Rear	16P1	2	6	0	0	0.3*
4.35	Search Light Rear	16P4	2	6	0	0	0.3*
4.36	Flasher Light Rear	16P6	2	6	0	0	0.3*
4.37	Marker Light Rear	16P8	2	6	0	0	0.3*
4.38	One Way Toggle Switch	16P10	14	6	1	1	0.3*
4.39	16 Amp MCB For Head Light	16P11	2	6	0	0	0.3*
4.40	6 Amp MCB For Search Light	16P12	2	6	0	0	0.3*
4.41	MCB 25 Amp- 2 Pole	9P1	2	6	0	0	0.3*
4.42	MCB 15 Amp- 2 Pole	9P2	2	6	0	0	0.3*
4.43	Rotary Switch	16P19	2	6	0	0	0.3*
4.44	Solenoid For Unloader Valve	17P2	1	6	0	0	0.2*
4.45	Pressure Switch For Throttle Cut Off	17P3	1	6	0	0	0.2*
4.46	Parking Brake Pressure Switch	17P6	1	6	0	0	0.2*
* Minimum quantity 1							

Rail Borne Maintenance Vehicle

S. No	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
4.47	Auxiliary Alternator (Power Pack)	2P6	2	6	0	0	0.3*
4.48	Pressure switch For Unloader Valve	17P1	1	6	0	0	0.2*
4.49	Pressure Switch For Throttle Cut Off	17P4	1	6	0	0	0.2*
4.50	Two Way Toggle Switch	16P1	6	6	1	0	0
4.51	MCB 100 Amp (110 V power supply)	15P1	2	6	0	0	0.3*
4.52	Diode In 5408	14P2	17	6	2	0	1
5.0 HYDRAULIC							
5.1	Fan Drive Hyd Motor	5P1	2	6	0	0	0.3*
5.2	Hyd Pump (15 H.P. @ approx 2100 rpm)	5P2	2	6	0	0	0.3*
5.3	Return Filter Assy	6P4	1	0.5	1	0	1
5.4	Hyd Motor For Radiator Fan	6P1	2	6	0	0	0.3*
5.5	Hyd Double Pump Power 15 H.P. Approx To Cooling Ckt and Approx 18 H.P. To Optional Supply To Crane	6P2	2	6	0	0	0.3*
5.6	Suction Strainer	6P7A	3	2	0	1	0.5*
5.7	Suction Strainer	6P7B	2	2	0	0	0
5.8	Emergency Gear Pump	6P15	1	6	0	0	0.2*
5.9	Emergency Pump Drive Motor	6P17	1	6	0	0	0.2*
5.10	Auxiliary Pump For Transmission Lubrication	2P22	2	6	0	0	0.3*
5.11	Pressure Relief Valve	----	1	6	0	0	0.2*
5.12	Gear Pump	-----	1	6	0	0	0.2*
5.13	Piston Seal	1P12	2	2	0	0	1
5.14	O- Ring (50x5)	1P13	4	2	1	0	1
5.15	Gasket	1P24	1	2	0.5*	0	0
* Minimum quantity 1							

Rail Borne Maintenance Vehicle

S. No	Brief description	Part no.	Nos per M/C	Estt. life cycle in Yrs.	Requirement per m/c		
					SITE	STMD	ZTMD
5.16	Gasket	1P26	1	2	0.5*	0	0
5.17	3 rd Extension Cyl. Assy.	2P6	1	6	0	0	0.2*
5.18	2 nd Extension Cyl. Assy	2P7	1	6	0	0	0.2*
5.19	1 st Extension Cyl. Assy	2P8	1	6	0	0	0.2*
5.20	Oil Cooler With Fan Assy	1P5	2	6	0	0	0.3*
5.21	Emergency Pump Drive Motor	1P17	1	6	0	0	0.2*
5.22	Oil Filter	1P6	1	0.5	1	1	0
5.23	Suction Strainer	1P7	3	2	0	1	0.5*
5.24	Hyd Pressure Gauge	1P20	1	6	0	0	0.2*
5.25	Main Hyd Pump For Crane	1P22	1	6	0	0	0.2*
5.26	Transmission Filter	80000561	1	0.5	1	0	1
5.27	Hose Pipe with end fittings	R2x4	-----	2	10 m	10 m	10 m
5.28	Hose Pipe with end fittings	R2x6	-----	2	10 m	10 m	10 m
5.29	Hose Pipe with end fittings	R2x8	-----	2	10 m	10 m	10 m
5.30	Hose Pipe with end fittings	R2x12	-----	2	10 m	10 m	10 m
5.31	Hose Pipe with end fittings	R2x16	-----	2	10 m	10 m	10 m
5.32	Hose Pipe with end fittings	R2x20	-----	2	10 m	10 m	10 m
5.33	Hose Pipe with end fittings	R2x24	-----	2	10 m	10 m	10 m
5.34	Hyd. Oil	SS-68	160Ltr	2	80 ltr	80 ltr	80 ltr
* Minimum quantity 1							

Annexure-I**List of Safety Equipments**

S.No.	Description	Quantity
1.0	Detonators in a tin case box	1 box
2.0	H.S. flag red	2 nos
3.0	H.S. flag green	1 nos
4.0	H.S. Tri Colour lamps/LED lamps	2 nos
5.0	Chain & Padlock	1 set
6.0	Point Clamp with Padlock	2 nos
7.0	10 t jack with terfor*	2nos.
8.0	Crow bars	2nos.
9.0	Wooden blocks off sizes	8 nos.
10.0	Rail thermometer (dial type)	1 no.
11.0	Banner flag	2 nos
12.0	Walki talki	1 nos.
13.0	First Aid Box	1 no
14.0	Skids	4 nos.
15.0	Working time table of section where machine working	1 copy
16.0	G&SR book with up to date amendment slips	1 copy
17.0	4 cell flasher light/ LED torch,6watt	1 no.
18.0	LED Petromax	1 no.
19.0	Safety helmets	Each Machine staff
20.0	Protective clothing, safety shoes and safety gloves	Each Machine staff
21.0	Track Machine Manual	1 no.
22.0	Accident Manual	1 no.
23.0	Fire extinguisher	1 no.(in each cabin)
24.0	Hooter (Manual/ Remote)	2 nos.
25.0	Hydraulic Hand Pump	1 no.
26.0	Emergency pneumatic/Hydraulic hose off sizes	1 no.
* list of jacks send to Railway Board for approval		

ACKNOWLEDGEMENT

Following officers and staff have made their valuable contributions in finalization of the Critical Spares Parts List for Rail Borne Maintenance Vehicle (RBMV)

RAILWAYS:-

Shri	Yogesh Patel	SSE/TMC/SECR
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Shri	Raja Varma	SSE/TMC/SWR
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Shri	Umesh Kumar Gupta	JE/TMC/NCR
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RDSO:-

Shri	Muslim Ahmad	ARE/TM
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Shri	A.K.Srivastava	SSE/TM
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Shri	Ravi Kumar	SSRE/TM
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