



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/BCM/Pt-III

Date: 08.07.2020

- | | |
|--|---|
| 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, रायनापाडु, 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 enclosed herewith.

विषय: बैलास्ट क्लिनिंग मशीन (आर.एम.-900), बैलास्ट क्लिनिंग मशीन (आर.एम.-80 92U) और शोल्डर बैलास्ट क्लिनिंग मशीन (एफ.आर.एम.-80) संशोधन-1 की क्रिटिकल स्पेयर्स पार्ट सूची।

Sub: Critical Spares Parts list for Ballast Cleaning Machine BCM (RM- 900), BCM (RM80-92U) Rev-1 and Shoulder Ballast Cleaning Machine (FRM-80) Rev.1
Ref: CE/TMC/Seminar held on 4th and 5th April 2019

बैलास्ट क्लिनिंग मशीन (आर.एम.-900), बैलास्ट क्लिनिंग मशीन (आर.एम.-80 92U) संशोधन-1 और शोल्डर बैलास्ट क्लिनिंग मशीन (एफ.आर.एम.-80) संशोधन-1 की क्रिटिकल स्पेयर्स पार्ट सूची तैयार की गई जिसकी प्रति आपके सूचनार्थ तथा मशीन के कर्मचारियों, जो फील्ड में कार्य कर रहे हैं के मार्ग दर्शन हेतु संलग्न है। यद्यपि उपरोक्त सूची/पुनरीक्षण बनाते समय सभी सावधानियों बरती गई है, फिर भी यदि कोई त्रुटि हो तो, कृपया अपने सुझावों/टिप्पणियों को ईमेल/फैक्स/पत्राचार द्वारा अधोहस्ताक्षरी को अवगत करायें।

Critical Spares Parts list for Ballast Cleaning Machine (RM-900), BCM (RM 80-92U) Rev.1 and Shoulder Ballast Cleaning Machine (FRM-80) Rev.1 have been prepared. A copy of the same is enclosed herewith for your information and guidance of the machine staff working on the field however, every care has been taken during preparation on the above list, the discrepancy noticed, if any, may be brought to the knowledge of the undersigned for further improvement, by email/fax/post

E-mail Id- hmtmmrdso@gmail.com

DA: As above

(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 बडौदा 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.ए 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 भा.रे.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

INDIAN RAILWAYS

CRITICAL SPARES OF TRACK MACHINES

SHOULDER BALLAST CLEANING MACHINE

FRM-80 (Rev.1)

June-2020

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

PREFACE

For maintenance of any machine, timely availability of spare parts 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.

On the basis of experience of Track machine working on Indian Railways, a need for revision of list was felt. Accordingly, revision-1 of critical spares parts list for Shoulder Ballast Cleaning Machine (FRM 80) has been prepared. It may be noted that this is the list of spares required for the normal maintenance of machine for one year only and does not include the spares required for IOH , POH and other spl. maintenance. Requirement of spare parts for such schedule maintenance (IOH/POH), other spl. maintenance and emergency maintenance/attention may be assessed separately on need basis by zonal railways itself.

(OM PRAKASH)
Director Track Machine-III

June-2020

INDEX

SI No	Category	Page No.
1	ENGINE	1
2	HYDRAULICS	2 – 6
3	MECHANICAL	7- 12
4	ELECTRICAL & ELECTRONICS	13
5	PNEUMATIC	14
6	ACKNOWLEDGEMENT	15

SITE - At machine

STMD - Satellite depot

ZTMD - Zonal depot

ENGINE

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STM D	ZTMD
1.0	ENGINE Cuminis VTA1710L 695 BHP						
1.1	Engine oil CF 4 Volvoline//Equivalent	15W/40	75 L	0.25	100	0	200
1.2	Lub. oil filter	3166554	3	0.2	6	0	9
1.3	Lub. oil by pass filter	3873576	1	0.2	2	0	3
1.4	Fuel filter	3166555	2	0.3	4	0	3
1.5	Air cleaner element outer	3237962	1	0.5	2	0	0
1.6	Air cleaner element inner	-	1	1	1	0	0
1.7	V –Belt	B-42	2	1	2	0	0
1.8	RPM meter(gauge)	EL-T2313.00	2	2	0	0	1
1.9	Accelerator motor (transducer)	EL-T 7059.00	1	3	0	0	0.3*
1.10	Pressure gauge	500109	1	5	0	0	0.2*
1.11	Temperature gauge	500410-A	1	5	0	0	0.2*
1.12	Pressure switch	VDO3T/30(0-10 bar)	1	3	0	0	0.3*
1.13	Temperature switch	-	1	3	0	0	0.3*
1.14	Fuel pump	KE127/145481	1	6	0	0	0.2*
1.15	Self starter	09D090	1	3	1	0	0
1.16	Alternator	0120689545	1	6	0	0	0.2*
1.17	Turbo charger	3521598	2	5	0	0	0.4 *
(*) Minimum Quantity 1							

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
2.0	HYDRAULIC						
2.1	HYDRAULICS PUMP						
2.1.1	Cutter Chain Drive Pump	HYS704X90R/EP/A350bar	2	6	0	0	0.3 *
2.1.2	Clutch Pump	HY830X06x06RE	1	6	0	0	0.2 *
2.1.3	Driving Pump	HY704X180L/ELA380bar	2	6	0	0	0.3 *
2.1.4	Brush Box +General System Pump	HY830X17.06RE	1	6	0	0	0.2 *
2.1.5	Screen Drive Pump	HY712X60L/HD10/10LNTC1 2N00	1	6	0	0	0.2 *
2.1.6	Excavating Conveyor Left Drive Pumps	HY709X28R/DFR/5097	2	6	0	0	0.3 *
2.1.7	Distributor Conveyor Left Drive Pumps	HY709X28L/DFR/5097	2	6	0	0	0.3 *
2.1.8	Radiator +Two Oil Coolers +Screen Lubrication	HY830X08.05LI	1	6	0	0	0.2 *
2.1.9	Main + Waste Conveyor Drive Pump	HY709X71(65)R/FED+45R/F ED	1	6	0	0	0.2 *
2.2	HYDRAULIC CYLINDER						
2.2.1	Chain Adjustment Cylinder	HZMBV.080.050.0400.2.001	2	6	0	0	0.3 *
2.2.2	Unit I/O Cylinder	HZGB.125.090.1000.1	2	6	0	0	0.3 *
2.2.3	Cylinder	HZMBV.100.063.1170.2	2	6	0	0	0.3 *
2.2.4	Cylinder	HZMB.100.045.0120.2	2	6	0	0	0.3 *
2.2.5	Outer flapper U/D Cylinder	HZGB.063.036.0190.1.001	2	6	0	0	0.3 *
2.2.6	Inner flapper I/O + Outer flapper from I/O Cylinder	HZMB.080.045.0120.2	4	6	0	0	0.6 *
2.2.7	Chain U/D Cylinder	HZMB.080.045.0160.2	2	6	0	0	0.3 *
2.2.8	Chain tension Cylinder	HZGB.063.036.0200.1	2	6	0	0	0.3 *
2.2.9	Scraper I/O Cylinder	HZGB.063.036.0775.1	2	6	0	0	0.3 *
2.2.10	Scraper U/D Cylinder	HZGB.063.036.0400.1	2	6	0	0	0.3 *
2.2.11	waste conv. U/D Cylinder	62.05.3000.63PL	2	6	0	0	0.3 *
2.2.12	Side plough I/O Cylinder	HZGB.063.040.0880.1	2	6	0	0	0.3 *
2.2.13	Side plough flapper adjusts. Cylinder	HZGB.063.040.0190.1	2	6	0	0	0.3 *
2.2.14	Side plough flapper I/O Cylinder	HZGB.080.045.0130.1	2	6	0	0	0.3 *

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
2.2.15	Cylinder	62.05.3000.300	4	6	0	0	0.6 *
2.2.16	Centre plough U/D Cylinder	HZGB.063.036.0380.1	2	6	0	0	0.3 *
2.2.17	Distribution conv. I/O Cylinder	HZMB.063.040.0600.1009	2	6	0	0	0.3 *
2.2.18	Ballast guide equipment Cylinder	62.05.3000.69PL	2	6	0	0	0.3 *
2.2.19	Ballast regulation Cylinder	HZGB.040.025.0160.1	2	6	0	0	0.3 *
2.2.20	Broom U/D Cylinder	HZGB.063.036.0425.1	2	6	0	0	0.3 *
2.2.21	Vertical cylinder	HZMBV.125.090.2250.1	2	6	0	0	0.3 *
2.2.22	Swivel cylinder	HZGB.125.063.0250.1	2	6	0	0	0.3 *
2.2.23	Control cylinder	HZPB.040.025.0220.2.001	2	6	0	0	0.3 *
2.2.24	Adjusting cylinder	HZPA.050.036.0800.1.001	2	6	0	0	0.3 *
2.2.25	Adjusting cylinder	NZGB.080.045.0200.2	4	6	0	0	0.6 *
2.2.26	Lifting cylinder	NZGB.080.045.0100.1	4	6	0	0	0.6 *
2.2.27	Slide cylinder	HZPK.063.036.0560.1.005	2	6	0	0	0.3 *
2.3 HYDRAULIC MOTOR							
2.3.1	Screen Drive Motor	HY910X63/61	1	6	0	0	0.2 *
2.3.2	Hydraulic Oil Cooler Motor	SU1702.14.186.POS1	2	6	0	0	0.3 *
2.3.3	Excavating Con. Driving Motor	HY940X390	2	6	0	0	0.3 *
2.3.4	Main Con. Driving Motor	HY910X28/61-PAB01	2	6	0	0	0.3 *
2.3.5	Hydraulic Motor	HY92N-30	1	6	0	0	0.2 *
2.3.6	Pump Motor Combination(For screen circuit)	62.05.1000.338	1	6	0	0	0.2 *
2.3.7	Pump Motor Combination(One for each axle)	62.05.1000.309	4	6	0	0	0.6 *
2.3.8	Waste Conveyor Drive Motor	XM.200.CN00	1	6	0	0	0.2 *
2.3.9	Distribution Belt Drive Motor	XM.558.CN00	2	6	0	0	0.3 *
2.3.10	Driving Motor	HY909X160HA1T/50/280 BAR	4	6	0	0	0.6 *
2.3.11	Radiator Fan Motor	HY701EN22/RE	2	6	0	0	0.3 *
2.3.12	Hydraulic Motor	HY910X56/61W-V2B027	2	6	0	0	0.3 *

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
2.3.13	Hydraulic Motor	A2FM56/61WV2B0027	2	6	0	0	0.3 *
2.3.14	Cutter chain drive motor	HY910X56/61W-V2B027	2	6	0	0	0.3 *
2.3.15	Broom drive Motor	HY90N42	2	6	0	0	0.3 *
2.3.16	Broom Belt driving Motor	HY90N315	2	6	0	0	0.3 *
2.4 HYDRAULIC VALVE							
2.4.1	Relief valve	HY511.06	2	6	0	0	0.3 *
2.4.2	Safety valve	HY56R	2	6	0	0	0.3 *
2.4.3	Unloaded valve	HY511.12	1	6	0	0	0.2 *
2.4.4	Non return valve	HY151.19	1	6	0	0	0.2 *
2.4.5	Double check valve	HY155.12	5	6	0	0	0.8*
2.4.6	System Valve	HY6RSJ	5	6	0	0	0.8*
2.4.7	Went common control	HY157.44	2	6	0	0	0.3 *
2.4.8	Reducing valve	62.05.3000.568	2	6	0	0	0.3 *
2.4.9	Scraper control valve	HY6RSJ	4	6	0	0	0.6*
2.4.10	Reducing valve	HY511.19/150	2	6	0	0	0.3 *
2.4.11	Valve	HY10RMJJJJ	1	6	0	0	0.2 *
2.4.12	Valve	HY10RMJE	1	6	0	0	0.2 *
2.4.13	Valve	HY10RMJ	1	6	0	0	0.2 *
2.4.14	Valve	HY157.50	2	6	0	0	0.3 *
2.4.15	Non return valve	HY151.06	2	6	0	0	0.3 *
2.4.16	Non return valve	HY151.28	2	6	0	0	0.3 *
2.4.17	Main conveyor control valve	HY16RSH-T	1	6	0	0	0.2 *
2.4.18	Excavator conveyor control valve	HYV10RSH-T, HY151.155	4	6	0	0	0.6 *
2.4.19	Driving control	HY6RSB	4	6	0	0	0.6 *
2.4.20	Went control U/D	HY6RSJ	2	6	0	0	0.3 *
2.4.21	Screen valve	HY6RSE	6	6	0	0	1

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
2.4.22	Oil cooler control	HY10RSD-8	2	6	0	0	0.3 *
2.4.23	Broom drive control	HY157.44	1	6	0	0	0.2 *
2.4.24	Relief & by pass	62.05.3000.71	2	6	0	0	0.3 *
2.4.25	Control valve	2103.01-44.00	2	6	0	0	0.4 *
2.5 FILTER AND FILTER ELEMENT							
2.5.1	Return Filter	HYR.501.330.10ES	2	0.5	2	0	2
2.5.2	Suction Filter	HYS.501.360.150ES	1	1	1	0	0
2.5.3	Suction Filter	HYS.501.460.150ES	4	1	4	0	0
2.5.4	Driving axle clutch filter	62.05.1000.113ES	4	0.5	4	0	4
2.6 SEAL,SEAL KIT, SEAL RING							
2.6.1	Seal Kit	HZ01.050	3	2	1	0	1
2.6.2	Seal Kit	HZ01.063	11	2	3	0	3
2.6.3	Seal Kit	HZ01.080	4	2	1	0	1
2.6.4	Seal Kit	HZ01.100	2	2	1	0	0
2.6.5	Seal Kit	HZ01.125	3	2	1	0	0
2.6.6	Seal Kit	HZ02.040.025	2	2	1	0	0
2.6.7	Seal Kit	HZ02.050.036	3	2	1	0	0
2.6.8	Seal Kit	HZ02.063.036	7	2	2	0	0
2.6.9	Seal Kit	HZ02.080.045	5	2	2	0	0
2.6.10	Seal Kit	HZ02.080.050	1	2	1	0	0
2.6.11	Seal Kit	HZ02.100.045	1	2	1	0	0
2.6.12	Seal Kit	HZ02.100.063	1	2	1	0	0
2.6.13	Seal Kit	HZ02.125.063	1	2	1	0	0
2.6.14	Seal Kit	HZ02.125.090	2	2	1	0	0
2.6.15	Seal Kit	HZ01.040	2	2	1	0	0
2.6.16	Seal Kit	HZ02.063.040	4	2	1	0	0

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD

2.7 HYDRAULIC HOSE							
2.7.1	Hydraulic Hose	R02-4 X 500	2	5	1	0	0
2.7.2	Hydraulic Hose	R02-4 X 1550	2	5	1	0	0
2.7.3	Hydraulic Hose	R02-4 X 3500	4	5	1	0	0
2.7.4	Hydraulic Hose	R02-4 X 6100	1	5	1	0	0
2.7.5	Hydraulic Hose	R02-4 X 8200	2	5	1	0	0
2.7.6	Hydraulic Hose	R02-6 X 600	1	5	1	0	0
2.7.7	Hydraulic Hose	R02-6 X 2300	2	5	1	0	0
2.7.8	Hydraulic Hose	R02-6 X 4400	1	5	1	0	0
2.7.9	Hydraulic Hose	R02-6 X 8200	1	5	1	0	0
2.7.10	Hydraulic Hose	R02-8 X 8200	1	5	1	0	0

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
3.0 Mechanical							
3.1 Guide Plates & Bushes							
3.1.1	Guide Plate	RE20.511	2	3	0	0	0.6*
3.1.2	Side Member	RE20.509	2	3	0	0	0.6*
3.1.3	Side Member	RE20.510	2	3	0	0	0.6*
3.1.4	Guide Plate	RE20.512	2	3	0	0	0.6*
3.1.5	Guide Plate	RE20.513	2	3	0	0	0.6*
3.1.6	Guide Plate	RE20.514	2	3	0	0	0.6*
3.1.7	Guide plate	64.11.3225	2	3	0	0	0.6*
3.1.8	Guide plate	64.11.3226	2	3	0	0	0.6*
3.1.9	Side plate	RE30.151	2	2	0	0	1
3.1.10	Side rubber	100x10 mm	60 m	0.1	150m	150 m	300 m
3.1.11	Side Rubber (talc tape with hydraulic cylinder)	(Edge angle 45 degree) 10x100	40 m	0.1	100 m	100 m	200 m
3.1.12	Guide Bush	HZ06.063.036	6	0.5	4	4	4
3.1.13	Guide Bush	HZ06.080.050	1	0.5	1	0	1
3.1.14	Guide Bush	HZ06.080.045	5	0.5	3	3	4
3.1.15	Guide Bush	HZ06.100.045	1	0.5	1	0	1
3.1.16	Guide Bush	HZ06.125.090	2	0.5	2	0	2
3.1.17	Guide Bush	HZ06.125.063	1	0.5	1	0	1
3.1.18	Guide Bush	HZ06.100.063	1	0.5	1	0	1
3.1.19	Guide Bush	HZ06.040.025	2	0.5	2	0	2
3.1.20	Guide Bush	HZ06.063.040	3	0.5	2	2	2
3.1.21	Guide Bush	HZ06.050.36	3	0.5	2	2	2
3.1.22	Guide Bush	HZ06.063.036.002	1	0.5	1	0	1
3.1.23	Guide Bush	62.05.3216	1	0.5	1	0	1
3.2 WEAR PLATE AND STRIP							
3.2.1	Wear Plate	SU1702.21.1.27	4	2	1	0	1
3.2.2	Wear Plate	SU1702.21.1.28	8	2	2	0	2

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
3.2.3	Wear Plate	SU1702.521.1.29	2	2	1	0	1
3.2.4	Wear Plate	SU1702.521.1.30	2	2	1	0	0
3.2.5	Strip	SU1702.521.1.58	4	1	2	0	1
3.2.6	Strip	SU1702.521.1.77	52	1	10	10	32
3.2.7	Strip	SU1702.521.1.78	26	1	5	5	16
3.2.8	Strip	SU1702.21.1.11	4	1	2	2	0
3.2.9	Strip	RE30.188	1	1	1	0	0
3.2.10	Strip	RE30.189	1	1	1	0	0
3.2.11	Plastic strip	RE.30.118	2	1	2	0	0
3.2.12	Wear strip (4100 x 60 x 6 mm)	SU.1702.21.1.15.37	4 nos	2	2	0	0
3.2.13	Strip acrylic teflon	1000 x 50 x 8 mm	40	2	10	0	10
3.3 CONVEYOR BELT AND BEARING							
3.3.1	Excavating conveyor belt (open ended)	RE20.725 (19000x500x10mm with clits)	2	2	1	0	0
3.3.2	Distribution conveyor belt (end less)	RE20.580 (10400x650x10 mm)	2	3	0	0	0.6*
3.3.3	Main conveyor belt (open ended)	RE30.125 (31500x850x10 mm)	1	3	0	0	0.3*
3.3.4	Disposal conveyor belt (end less)	64.11.2507(11800x760x10 mm)	1	3	0	0	0.3*
3.3.5	Conveyor belt chain	SU3"-P239GLIDER	105 m	2	26	0	27
3.3.6	Excavation conveyor cover	RE20.217	6	2	0	0	3
3.3.7	Excavation conveyor cover	RE20.218	2	2	0	0	1
3.3.8	Excavation conveyor cover	RE20.308	2	2	0	0	1
3.3.9	Excavation conveyor cover	RE20.309	2	2	0	0	1
3.3.10	Excavation conveyor cover	RE20.112	16	2	0	0	8
3.3.11	Conveyor tray side wall	RE350.101	2	3	0	0	0.6*
3.3.12	Conveyor tray side wall	RE350.102	1	3	0	0	0.3*
3.3.13	Conveyor tray side wall	RE350.103	1	3	0	0	0.3*
3.3.14	Conveyor tray side wall	RE350.104	1	3	0	0	0.3*
3.3.15	Conveyor tray side wall	RE350.105	1	2	0	0	0.5*

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
3.3.16	Conveyor tray front section wall	RE350.106	1	2	0	0	0.5*
3.3.17	Conveyor tray side wall	RE350.107	1	2	0	0	0.5*
3.3.18	Conveyor tray side wall	RE350.108	1	2	0	0	0.5*
3.3.19	Conveyor tray front wall	RE350.109	1	2	0	0	0.5*
3.3.20	Excavation conveyor cover	SU1502.208.6.13.8	4	2	0	0	2
3.3.21	Cone bearing	571801917-70SH	4	1	2	0	2
3.3.22	Cone bearing	571801917.70SH	4	1	2	0	2
3.3.23	Bearing (roller bearing)	22212 HL	6	1	3	0	3
3.3.24	Ball Bearing	6014 RS	4	1	2	0	2
3.3.25	Bearing with Block	UCT314	2	1	1	0	1
3.3.26	Ball Bearing	6214/2RS	4	1	2	0	2
3.3.27	Ball Bearing	1308 E	6	1	3	0	3
3.4 NUT AND BOLT							
3..4.1	Self locking Hex. nut	M10DIN985-8	325	0.5	162	162	325
3..4.2	Hex nut	M12DIN934	12	0.5	6	6	12
3..4.3	Self locking hex. Nut	M16DIN985-8	344	0.5	172	172	344
3..4.4	Hex nut	M20DIN934-8/VERZ	8	0.5	4	4	8
3..4.5	Hex bolt	8 x 16	-	6	10	10	50
3..4.6	Hex bolt	8 x 25	-	6	10	10	50
3..4.7	Hex bolt	8 x 35	-	6	10	10	50
3..4.8	Hex bolt	8 x 65	-	6	10	10	50
3..4.9	Hex bolt	10 x 20	-	6	10	10	50
3..4.10	Hex bolt	10 x 30	-	6	10	10	50
3..4.11	Hex bolt	10 x 55	-	6	10	10	50
3..4.12	Hex bolt	10 x 70	-	6	10	10	50
3..4.13	Hex bolt	12 x 20	-	6	10	10	50
3..4.14	Hex bolt	12 x 30	-	6	10	10	50
3..4.15	Hex bolt	12 x 40	-	6	10	10	50

3..4.16	Hex bolt	12 x 60	-	6	10	10	50
3..4.17	Hex bolt with nylock nut	M12X65 DIN 931-8.8/VEZ	2000	1	100	100	760
3..4.18	Hex bolt	16 x 40	-	6	10	10	50
3..4.19	Hex bolt	16 x 80	-	6	10	10	50
3..4.20	Hex bolt	16 x 110	-	6	10	10	50
3..4.21	Hex bolt	20 x 45	-	6	10	10	50
3..4.22	Hex bolt	20 x 65	-	6	10	10	50
3..4.23	Hex bolt	20 x 80	-	6	10	10	50
3..4.24	Hex bolt	20 x 100	-	6	10	10	50
3..4.25	Hex bolt	20 x 120	-	6	10	10	50
3..4.26	Hex bolt	20 x 220	-	6	10	10	50

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
3..4.27	Hex bolt	24 x 40	-	6	10	10	50
3..4.28	Hex bolt	24 x 65	-	6	10	10	50
3..4.29	Allen bolt	6 x 25	-	6	10	10	50
3..4.30	Allen bolt	8 x 16	-	6	10	10	50
3..4.31	Allen bolt	8 x 40	-	6	10	10	50
3..4.32	Allen bolt	12 x 20	-	6	10	10	50
3..4.33	Allen bolt	12 x 30	-	6	10	10	50
3..4.34	Allen bolt	14 x 25	-	6	10	10	50
3..4.35	Allen bolt	14 x 45	-	6	10	10	50
3..4.36	Counter sunk bolt with Allen head	6 x 12	-	6	10	10	50
3..4.37	Counter sunk bolt with Allen head	12 x 40	-	6	10	10	50
3..4.38	Counter sunk bolt with Allen head	16 x 80	-	6	10	10	50
3..4.39	Hex nut	M16 DIN934-8	8	6	1	1	2
3..4.40	Hex nut	M20DIN934-8/VERZ	8	6	1	1	2

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
3.5 SCREENING UNIT							
3.5.1	Screen floor –MW80/H-15 (650X1215 mm)	64.09.5545	2	0.5	2	0	2
3.5.2	Screen floor –MW80/H-15 (650X1215 mm)	64.09.5546	1	0.5	1	0	1
3.5.3	Screen floor –MW80/H-15 (650X1050 mm)	64.09.5547	4	0.5	4	0	4
3.5.4	Screen floor –MW80/H-15 (650X1050 mm)	64.09.5548	2	0.5	1	0	1
3.5.5	Screen floor –MW50/H-10 (650X1050 mm)	64.09.5562	1	0.5	1	0	1
3.5.6	Screen floor –MW50/H-10 (650X1050 mm)	64.09.5563	1	0.5	1	0	1
3.5.7	Screen floor –MW50/H-10 (650X1050 mm)	64.09.5554	4	0.5	4	0	4
3.5.8	Screen floor –MW50/H-10 (650X1215 mm)	64.09.5555	2	0.5	1	0	2
3.5.9	Screen floor –MW50/H-10 (650X1215 mm)	64.09.5565	1	0.5	1	0	1
3.5.10	Screen floor –MW32/H-8 (650X1050 mm)	64.09.5556	2	0.5	2	0	2
3.5.11	Screen floor –MW32/H-8 (650X1050 mm)	64.09.5558	4	0.5	2	2	4
3.5.12	Screen floor –MW32/H-8 (650X1215 mm)	64.09.5567	3	0.5	2	1	3
3.6 GENERAL							
3.6.1	Angle	RE20.515	2	3	0	0	0.6*
3.6.2	Angle	RE20.516	2	3	0	0	0.6*
3.6.3	Angle	62.11.4093	4	3	0	0	1
3.6.4	Angle	RE20.515	2	3	0	0	0.6*
3.6.5	Angle	RE20.516	2	3	0	0	0.6*
3.6.6	Cap for cutting chain	91064538	172	0.5	86	86	172
3.6.7	Locking link	E 12B-2DIN8187	2	1	1	0	1
3.6.8	Hook screw	64.09.1066	18	0.5	9	9	18
3.6.9	Tensioning Screw	WN111.M20.320-1	2	0.5	1	1	2
3.6.10	Hex socket head cap screw	M16X50DIN912.12.9VERZ	12	0.5	6	6	12
3.6.11	Toothed disc	SU1702.21.1.5	4	6	0	0	0.6*
3.6.12	Toothed disc	SU1702.21.4.5	4	4	0	0	1
3.6.13	Tensioner spindle	62.11.1079	2	4	0	0	0.5*
3.6.14	Pin	SU1702.521.3.78	2	6	0	0	0.3*

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
3.6.15	Pin	SU1702.21.3.17	4	6	0	0	0.6*
3.6.16	Drive Shaft(Powered)	RE20.275-2	2	6	0	0	0.3*
3.6.17	Driven Shaft	(Idle) RE20.250-2	2	6	0	0	0.3*
3.6.18	Spacer	64.09.5208	18	0.5	9	9	18
3.6.19	Scraper rubber	150x7 mm	30 m	0.5	15 m	15 m	30 m
3.6.20	Bush 127x2	SU127.21.4.1.5	344	2	10	10	172
3.6.21	Fixing pin	14X50DIN1481	200	2	50	25	25
3.6.22	Adapter plate	3-20210	2	1	1	0	1
3.6.23	Rivet with washer	6,4X18STAHLKOPFDURCHM	1000	1	250	250	500
3.6.24	Brake shoe	WN146.900.K2	12	0.5	6	6	12
3.6.25	Cardan shaft	KGV150.0745.110.00	1	6	0	0	0.2*
3.6.26	Cardan shaft	LZ760LA110/0120111001	1	6	0	0	0.2*
3.6.27	Pinion shaft	64.02.2105.00	4	2	1	0	1
3.6.28	Support pipe for excavating conveyor	RE.20.304	240	2	60	30	30
3.6.29	Support pipe for excavating conveyor	RE20.305	40	1	10	10	20
3.6.30	Cover	RE.20.218	8	0.5	4	4	8

S.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
4.0	ELECTRICAL/ELECTRONIC						
4.1	Transducer	226.801/015/001	1	2	0	0	0.5*
4.2	Driving transducer	EL-T1199.00-BR/L/L	1	2	0	0	0.5*
4.3	Pr. Circuit board (cutter chain control)	EK727A.00	4	2	1	0	1
4.4	Pr. Circuit board	EL-T5096.00	1	6	0	0	0.2*
4.5	Pr. Circuit board	EK-F3.00(02)	1	6	0	0	0.2*
4.6	Pr. Circuit board	EL-T631.00B	1	6	0	0	0.2*
4.7	Pr. Circuit board	EK813SV-00	2	2	0	0	1
4.8	Pr. Circuit board	EK-554P-00A	2	6	1	0	0.3*
4.9	Relay	EL-T7010	1	2	0	1	0.5*
4.10	Filling/checking device	FPU-1-250F2,5A3	1	1	0	0	1
4.11	Rack	EL-T1807.00	1	6	0	0	0.2*
4.12	Amplifier	VT5036	1	6	0	0	0.2*
4.13	Battery	12V/240AH/27 plate	3	2	0	0	1
4.14	Encoder	EL-T7055/700	1	3	0	0	0.3*
4.15	Microphone	EL-T631.04	1	3	0	0	0.3*
4.16	Speaker	EL-T631.04	1	2	0	0	0.5*
4.17	Pendulum	EL-T130.00M	1	6	0	0	0.2*
4.18	Potentiometer	EL-T500A,P450/A502	2	1	1	0	1
4.19	Fuse	91062380	1032	0.5	516	516	1032
4.20	Fuse	91062380	172	0.5	86	86	172
4.21	Pressure switch electrical	64.07.1000.54	12	1	3	3	6
4.22	Telescopic beam guide black	RE22.209	12	1	3	3	6
4.23	Head light	24V	2	5	0	0	0.4*
4.24	Hooter	24V	1	5	0	0	0.2*
4.25	Flasher light	24V	2	5	0	0	0.4*
4.26	Working light	24V	25	3	4	0	4
4.27	Electric horn	24V	2	3	0	0	0.6*

.No	Brief description	Part no.	Nos per M/C	Estt. life cycle in year	Requirement per m/c		
					SITE	STMD	ZTMD
5.0	PNEUMATIC						
5.1	Unloader valve	90201	1	2	0	0	0.5*
5.2	Relief valve	90202	1	2	0	0	0.5*
5.3	Reducing valve	90188	6	2	0	0	1
5.4	Brake valve	90364	3	2	0	0	1
5.5	Solenoid valve	90345	1	2	0	0	0.5*
5.6	Valve	90344(90338/H)	2	2	0	0	1
5.7	Suttle Valve	90362	4	2	0	0	1
5.8	Drivers brake Valve	90366	1	2	0	0	0.5*
5.9	Valve	90338/90344	2	2	0	0	1
5.10	Brake cylinder seal	90226DS-BGS12"	3	3	0	0	1
5.11	PN cylinder	PN1Z-G.35/12/50	2	2	0	0	1
5.12	PN cylinder	PN2Z-G.50/16/100	2	2	0	0	1
5.13	Water separator	90356	1	2	0	0	0.5*
5.14	Pressure gauge	90283	1	2	0	0	0.5*
5.15	Pressure gauge	90284	1	2	0	0	0.5*
5.16	Brake cylinder	90226	3	6	0	0	0.5*
5.17	Non return valve	90248	5	2	0	0	1

Note: - Any other items which the Zonal Railways decide as per condition and safe operation of machine shall be kept on the machine.

ACKNOWLEDGEMENT

Following officers and staff have made their valuable contributions in finalization of the Critical Spare Parts Manual for Shoulder Ballast Cleaning machine FRM-80 (Rev.1).

RAILWAYS NORTHERN RAILWAYS

RDSO

1. S/SHRI Muslim Ahmad ARE/TM
2. “ “ V.P. Srivastava SSE/TM

