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TM/HM/CSM/Pt.III

Date: 22-04-2020

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विषय: सी एस एम (09-32) की क्तिक्ल स्पेयर्स पार्ट सूची का संशोधन -2.

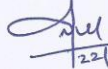
Sub: Revision-2 of Critical Spares parts list of CSM (09-32).

सी एस एम (09-32) की क्तिक्ल स्पेयर्स पार्ट सूची का संशोधन - 2 तैयार किया गया है। जिसकी प्रति, आपके सूचनार्थ तथा मशीन के कर्मचारियों जो फील्ड में काम कर रहे हैं, के मार्गदर्शन हेतु संलग्न है। यद्यपि उपरोक्त संशोधन बनाते समय सभी सावधानियों बरती गई हैं, फिर भी यदि कोई त्रुटि हो तो कृपया अपने सुझावों/ टिप्पणियों को सुधार हेतु ई-मेल/ फैक्स /पत्राचार द्वारा अद्योहस्ताक्षरी को भेजें।

Revision-2 of Critical Spares Part lists of CSM (09-32) has been prepared. A copy of the same is enclosed herewith for your information and guidance of the machine staff working in the field. However, every care has been taken during revision of the above said list, the discrepancy noticed, if any, may be brought to the knowledge of the undersigned for further improvement, by email/fax/post.

Email id - hmtmmrdso@gmail.com

DA: As above


22/4/2020

(ओम प्रकाश)

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CRITICAL SPARES OF TRACK MACHINES

CSM-09-32

REVISION-2

2020-2021

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 list was felt. Accordingly, revision-2 of critical spares for CSM (09-32) has been prepared. It may be noted that this is the list of spares required for the normal maintenance of the machine for one year only and does not include the spares required for IOH, POH and other spl. Maintenance. Requirement for such schedule maintenance (IOH/POH) and emergency maintenance/attention, may be assessed separately on need basis by zonal railways itself.

(Om Prakash)
Director Track Machine-III

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SITE- At machine

STMD- Satellite depot

ZTMD-Zonal depot

CSM					ENGINE		
S.No	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
A. Engine (Cummins KTA1150L)							
1	Lube oil	15W 40 CF4	45 liters	0.3	50 lts	50 lts	100lts
2	Lube oil filter element	3166554	2	0.3	2	2	2
3	Lube oil bypass filter	3873576	1	0.3	1	1	1
4	Fuel filter element	3166555	2	0.3	2	2	2
5	Air cleaner outer	4055280	1	1	0	0	1
6	Air cleaner inner	4055279	1	1	0	0	1
7	V-Belt	A-48 & A-65	4	0.6	2	2	2
8	V-Belt for New CSM alternator	AV X 13-1040L & AV X 13-925 LA	2	0.6	2 (one each)	0	1(one each)
9	Alternator	Bosch make 28V/55A	2	6	0	0	0.3*
10	Self- starter	20/3021038/MT 50	1	6	1	0	0
11	Battery	12 volts/180AH	2	2	0	0	1
12	Battery Lug	-	4	2	2	0	0
13	Lube oil pressure switch	194504	1	6	0	0	0.2*
14	Temperature switch	194505	1	6	0	0	0.2*
15	Engine Mounting Pad	5018053-11MN55	4	2	0	0	2
*minimum quantity 1							

CSM				HYDRAULIC			
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
A.Valve							
16	4-way valve(satellite axle support)	HY 06RSD	1	6	0	0	0.2*
17	4-way valve (holding lining + Cabin support)	HY06RSX	3	6	0	0	0.5*
18	4-way valve (T/U lateral sate. support)	HY 06RSJ	1	6	0	0	0.2*
19	4-way valve (satellite booster)	HY- V 10. RSD ET	1	6	0	0	0.2*
20	4-way valve (Lining bypass + big squeezing holding)	HY 10 RSX-A	3	6	0	0	0.5*
21	4-way valve (rail clamp)	H.10 RSJA	2	6	0	0	0.3*
22	4-way valve (Lifting cyl. holding)	HY 10 RSG-A	2	6	0	0	0.3*
23	4-way valve (Big Squeezing)	HY 16 RSD - ET	2	6	0	0	0.3*
24	4-way valve (Small Squeezing)	HY- 10 RSD-A	2	6	0	0	0.3*
25	4-way valve (hand operated for bogie/ axle support)	HY- 153.02	1	6	0	0	0.2*
26	proportional valves (T/U and satellite drive)	HYN-25RPE 325TD	3	6	0	0	0.5*
27	Relief valve (high Pressure)	HY- 511.12	1	6	0	0	0.2**
28	Safety valve (High Pressure)	HY- 511.08	1	6	0	0	0.2*
29	Unloader valve (System Pressure)	HY- 511.11	1	6	0	0	0.2*
30	Relief valve (vibration)	HY-511.06	2	6	0	0	0.3*
31	Safety valve (System pressure)	HY- 511.15	1	6	0	0	0.2*
32	Relief valve (Small counter Squeezing pressure)	HY-511-07	1	6	0	0	0.2*
33	Safety valve (Radiator+ZF cooler)	HY- 56 R	3	6	0	0	0.5*
34	Reducing valve (Sq. cyl. +Booster cyl.)	HY- 55 R	3	6	0	0	0.5*
35	Safety valve (35 bar)	HY -511.10	1	6	0	0	0.2*
36	Servo valve (Lining and lifting)	ELT- 76.00 MO	3	6	0	0	0.5*
37	Check valve (system pressure)	HY-151.18	1	6	0	0	0.2*
38	Check valve (system Pump)	HY-151.03/0.5 bar	1	6	0	0	0.2*
*minimum quantity 1							

CSM					HYDRAULIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
39	Check valve (oil cooler+ZF cooler)	HY-151.03/5 bar	2	6	0	0	0.3*
40	Check valve (high pressure)	Hy-151.19	1	6	0	0	0.2*
41	Check valve (vibration motor)	Hy-40.53	2	6	0	0	0.3*
B.Motor							
1	Hyd. Motor work drive	HY- 916.N.500	1	6	0	0	0.2*
2	Radiator Cooler motor	HY- 701.N.17L	1	6	0	0	0.2*
3	Hyd. Cooler motor	HY-701N10	1	6	0	0	0.2*
4	Hyd. Cooler motor (By Directional)	HY-701N14	1	6	0	0	0.2*
5	ZF oil cooler motor	HY- 90.N 42L	1	6	0	0	0.2*
6	Satellite Drive Motor	HY- 915.N.160	1	6	0	0	0.2*
7	Motor for vibration	HY-72Sx35 L&R	2	6	0	0	0.3*
C.Pump							
1	Double pump	HY- 806x38.17 R	2	6	0	0	0.3*
2	Double pump	HY- 806x38.22.R	1	6	0	0	0.2*
3	Variable pump	HY- 704.90L/EL/210 bar.	1	6	0	0	0.2*
4	Double pump	HY- 806x20.17 L or 20.14 L	1	6	0	0	0.2*
D. Filter Element							
1	Servo filter element	DL.40.60.3E	2	0.25	2	4	2
2	Proportional filter element	HY.D.501.32.10 ES.	1	0.25	1	2	1
3	Suction filter element variable Pump	HY.S.501.90.10 ES.	2	0.25	2	4	2
4	Button filter (servo valve)	Moog part no A-25446-002	6	1	2	2	2
5	Return filter element	HYR.501.330.10 ES	2	0.5	2	1	1
6	Suction filter element	HYS.501.360.150 ES.	4	0.5	4	2	2
7	ZF filter element	HYD501.225.25 ES.	1	0.5	1	0	1
E. Cylinder							
1	T/U Lifting/lowering cylinder	HZDPA.080.040.0760.1.00 1	2	3	0	0	0.6*
2	Lining Cylinder with Yoke	HZGB.100.045.03001.003.	2	6	0	0	0.3*
3	Track Lifting Cylinder with yoke	HZGB.125.050.0330.1.	2	6	0	0	0.3*
4	Booster Cylinder	HZQB.050.036.0600.1.002	1	6	0	0	0.2*
5	Satellite axle support cylinder	UD.50.2800	2	6	0	0	0.3*
6	Axle support cylinder	UD.50.2200	4	6	0	0	0.6*
7	Axle support cylinder (front)	UD.50.550	2	6	0	0	0.3*
*minimum quantity 1							

CSM					HYDRAULIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
8	Satellite roller support cylinder	UD.50.1950 a	2	6	0	0	0.3*
9	Satellite lateral displacement	HZGB 100.050.04001	1	6	0	0	0.2*
10	Satellite Buffer Cylinder	HY-600.05a	2	6	0	0	0.3*
11	Bogie support cylinder	HZ MB.080.036.0210.2.024	8	6	0	1	0.2*
12	rail clamp Open/ close cylinder	E 150.180	4	6	0	0	0.6*
13	Big squeezing cylinder male	HZSA-A-150-245 KPL	4	1	0	2	2
14	Big squeezing cylinder female	HZSA-G-150-246 KPL	4	1	0	2	2
15	Small squeezing cylinder male	HZSI-A-57.5. 404 KPL	4	1	0	2	2
16	Small squeezing cylinder female	HZSI-G-57.5. 403 KPL	4	1	0	2	2
F. Seal Kit:							
1	Seal Kit rail clamp Cylinder	E-150-180DS	4	1	1	2	1
2	Seal Kit Cabin Support Cylinder	HZ-01-080 & HZ-02-080.036	8 set	1	1	2	5
3	Seal Kit Wheel Support Cylinder	UD-50-100 DS	4	1	1	1	2
4	Seal Kit Axle Support Cylinder	UD-50-550 DS	2	1	1	1	0
5	Seal Kit Satellite axle Support Cylinder	UD-50-2800 DS	2	1	1	1	0
6	Seal Kit Satellite axle roller Cylinder	UD-50-1950 ADS	2	1	1	1	0
7	Seal Kit T/U UP/Down cylinder	HZ-01-080 & HZD-02.080.040	2 set	1	1	1	0
8	Seal Kit Lining cylinder	HZ-01-100 & HZ-02.100.045	2 set	2	0	1	0
9	Seal Kit Lifting cylinder	HZ-01-125 & HZ-02.125.50	2 set	2	0	1	0
10	Seal Kit Booster cylinder	HZ-01-50 & HZ-02.050.036	1 set	2	0	0.5*	0
11	Seal Kit Satellite lateral sliding cylinder	HZ-01-100 & HZ-02-100-50	1 set	2	0	0.5*	0
12	Seal Kit Shock absorber	HZ-05-600 ADS	2	2	0	1	0
13	Seal set big Squeezing cyl.	HZS.DS.243	8	1	2	2	4
14	Seal set for small Squeezing cyl.	HZS.DS.401	8	1	2	2	4
15	Radial seal	DL- 12.22	16	1	2	6	8
16	Kit for unloader valve R4U10	-	1	6	1	0	0
*minimum quantity 1							

CSM					HYDRAULIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
17	Kit for unloader valve R4U06	-	1	6	1	0	0
G. Hoses							
1	Hyd. hose with fitting 1020 mm	R02x4	4	6	1	0	0
2	Hyd. hose with fitting 770 mm	R02x4	2	6	1	0	0
3	Hyd. hose with fitting 580 mm	R02x4	4	6	1	0	0
4	Hyd. hose with fitting 360 mm	R02x4	4	6	1	0	0
5	Hyd. hose with fitting 490 mm	R02x4	4	6	1	0	0
6	Hyd. hose without fitting	R02X4	-	6	25 m	15 m	10 m
7	Hyd. hose without fitting	R02X6	-	6	20 m	15 m	10 m
8	Hyd. hose without fitting	R02X8	-	6	20 m	15 m	10 m
9	Hyd. hose without fitting	R02X10	-	6	15 m	15 m	10 m
10	Hyd. hose without fitting	R02X12	-	6	10 m	15 m	10 m
11	Hyd. hose without fitting	R02X16	-	6	10 m	10 m	10 m
12	Hyd. hose without fitting	R02X20	-	6	10 m	10 m	10 m
13	Hyd. return hose without fitting	R05x6	-	4	15m	10m	10 m
14	Hyd. return hose without fitting	R05x12	-	4	10m	10m	10 m
15	Hyd. hose with fitting 2450 mm	R02x4	-	6	1	0	1
16	Hyd. hose with fitting 3950 mm	R02x8	-	6	1	0	1
17	Hyd. hose with fitting 1950 mm	R02x10	-	6	1	0	1
18	Hyd. hose with fitting 3200 mm	R02x12	-	6	1	0	1
19	Hyd. hose with fitting 1750 mm	R02x16	-	6	2	0	2
20	Hyd. hose with fitting 3000 mm	2755-16	-	6	1	0	1
21	Hyd. hose with fitting 2900 mm	2721-20	-	6	1	0	1
22	Return hose with fitting 2500mm	R05X6	-	6	1	0	1
23	Return hose with fitting 3650mm	R05X20	-	6	1	0	1
24	Return hose with fitting 4000mm	R05X24	-	6	1	0	1
25	Hyd. return hose without fitting	R05x16	-	4	10m	10m	10 m
26	Hyd. return hose without fitting	R05x24	-	4	15m	10m	10 m
27	Hyd. return hose without fitting	R05x32	-	4	10m	15m	10
H. Hydraulic Fittings & Adaptor							
1	Hyd. Hose fitting	4721-6-4	-	6	4	10	10
2	Hyd. Hose fitting	4721-8-6	-	6	4	4	4
*minimum quantity 1							

CSM					HYDRAULIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
3	Hyd. Hose fitting	4721-10-8	-	6	4	4	4
4	Hyd. Hose fitting	4721-10-10	-	6	4	4	4
5	Hyd. Hose fitting	4721-12-12	-	6	4	4	4
6	Hyd. Hose fitting	4721-16-16	-	6	2	4	4
7	Hyd. Hose fitting	4721-20-20	-	6	2	2	4
8	Hyd. Return hose fitting	411- 6-6	-	6	2	6	4
9	Hyd. Return hose fitting	411-12-12	-	6	2	2	2
10	Hyd. Return hose fitting	411-24-24	-	6	2	2	2
11	Hyd. Return hose fitting	411-32-32	-	6	2	2	2
12	Adaptor (straight)	2021.4.6	-	6	5	10	10
13	Adaptor (straight)	2021.6.6	-	6	5	10	10
14	Adaptor (straight)	2021.6.8	-	6	5	4	4
15	Adaptor (straight)	2021.8.8	-	6	5	4	4
16	Adaptor (straight)	2021.8.10	-	6	4	4	4
17	Adaptor (straight)	2021.12.12	-	6	4	4	4
18	Adaptor (straight)	2021.16.16	-	6	3	4	4
19	Adaptor (straight)	2021.20.20	-	6	3	4	4
20	Adaptor (straight)	2021.24.24	-	6	2	4	2
21	Adaptor (straight)	2021.32.32	-	6	2	2	2
22	Adaptor (120 deg /135deg)	2023.4.6	-	6	5	6	6
23	Adaptor (120 deg /135deg)	2023.6.6	-	6	5	4	4
24	Adaptor (120 deg /135deg)	2023.6.8	-	6	5	2	4
25	Adaptor (120 deg /135deg)	2023.8.10	-	6	5	2	4
26	Adaptor (120 deg /135deg)	2023.12.12	-	6	5	2	4
27	Adaptor (120 deg /135deg)	2023.16.16	-	6	4	2	2
28	Adaptor (120 deg /135deg)	2023.20.20	-	6	4	2	2
29	Adaptor (120 deg /135deg)	2023.24.24	-	6	2	2	2
30	Adaptor (120 deg /135deg)	2023.32.32	-	6	2	2	2
31	Adaptor (900)	2024.4.6	-	6	4	2	2
32	Adaptor (90 ⁰)	2024.20.20	-	6	2	2	2
33	Adaptor (90 ⁰)	2024.6.8	-	6	4	4	2
34	Adaptor (90 ⁰)	2024.8.6	-	6	4	4	2
*minimum quantity 1							

CSM					HYDRAULIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
35	Adaptor (90 ⁰)	2024.8.10	-	6	4	2	4
36	Adaptor (90 ⁰)	2024.12.12	-	6	2	4	4
37	Adaptor (90 ⁰)	2024.16.16	-	6	2	4	2
38	Adaptor (90 ⁰)	2024.24.24	-	6	2	2	2
39	Adaptor (90 ⁰)	2024.32.32	-	6	2	2	2
40	Adaptor	2027.6.6	-	6	6	4	4
41	Adaptor	2027.6.8	-	6	5	5	0
42	Adaptor	2027.8.8	-	6	2	4	4
43	Adaptor	2027.10.10	-	6	4	2	4
44	Adaptor	2027.12.12	-	6	2	2	2
45	Adaptor	2027.16.16	-	6	2	2	2
46	Adaptor	2027.20.20	-	6	2	2	2
47	Adaptor	2027.24.24	-	6	2	2	2
48	Adaptor	2027.32.32	-	6	2	2	2
49	Adaptor dummy cap**	210292.4	-	-	2	4	6
50	Adaptor dummy cap**	210292.6	-	-	2	4	6
51	Adaptor dummy cap**	210292.8	-	-	2	4	6
52	Adaptor dummy cap**	210292.10	-	-	2	4	6
53	Adaptor dummy cap**	210292.12	-	-	2	4	6
54	Adaptor dummy cap**	210292.20	-	-	2	4	6
55	Adaptor dummy cap**	210292.32	-	-	2	4	6
56	Hydraulic pipe plug.**	900599.6	-	-	2	4	6
57	Hydraulic pipe plug.**	900599.8	-	-	2	4	6
58	Hydraulic pipe plug.**	900599.12	-	-	2	4	6
59	Hydraulic pipe plug.**	900599.16	-	-	2	4	6
60	Hydraulic pipe plug.**	900599.20	-	-	2	4	6
61	Hydraulic pipe plug.**	900599.24	-	-	2	4	6
62	Hydraulic pipe plug.**	900599.32	-	-	2	4	6
63	Adaptor	202411.6.8	35	6	2	2	2
64	Adaptor	202411.8.10	25	6	1	1	2
65	Adaptor	202411.12.12	25	6	1	1	2
66	Adaptor	202411.16.16	25	6	1	1	2
*minimum quantity 1							

CSM					HYDRAULIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
67	Adaptor	2091.4.4	4	6	1	0	0.6*
68	Adaptor	2092.4.4	4	6	1	0	0.6*
69	Adaptor	2092.6.6	4	6	1	0	0.6*
70	Grease nipple	DINR1/4"ZDIN3404-MF	100	6	4	4	8
71	Grease gun adopter	DIN R1/4"ZDIN 340-MI	-	6	4	10	15
72	Hydraulic straight reducer	2081.6.4	10	6	1	1	0
73	Hydraulic straight reducer.	2081.8.4	10	6	1	1	0
74	Hydraulic straight reducer.	2081.8.6	10	6	1	1	0
75	Hydraulic straight reducer.	2081.12.6	10	6	1	1	0
76	Hydraulic straight reducer.	2081.12.8	10	6	1	1	0
77	Hydraulic straight reducer.	2081.16.12	10	6	1	1	0
I.OTHERS							
1	Accumulator for counter pressure	HY-156-06	2	6	0	0	0.3*
2	Hydraulic Oil	HLP 68N or Equivalent	1600 lts	2	210 lit	295 lit	295 lit
3	Hydraulic Oil	SS-100 or equivalent	50 lts	2	25 lit	0	0
4	Gear Oil	HP-90 or Equivalent	50 lts	0.5*	50 lit	25lit	25lit
5	ZF Gear Oil	15W40 CF-4	60 lts	0.5*	60 lit	30 lit	30 lit
6	Grease	RL-2 or Equivalent	20 Kg	-	20 kg	0	20 Kg
*minimum quantity 1							

CSM					MECHANICAL		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
A. Bearing							
1	Bearing	32009X	16	2	4	2	2
2	Ball bearing	16010	2	2	0	0	1
3	Ball bearing	6208	16	6	0	0	3
4	Ball bearing	6002Z	8	6	0	0	2
5	Needle bearing	NKI 70/35	6	2	1	1	1
6	Needle bearing	NA 6913	6	2	1	1	1
B. Shaft (vibration+ cardon)							
1	Vibration shaft bearings	U.20.218P(6220)	2	1	0	0	2
2	Vibration shaft bearings	(NU 2220 MC3)	4	1	0	0	4
3	Vibration shaft bearings	(NJ 219 MC3)	8	1	0	0	8
4	Vibration shaft bearings	(NJP 2216 MC3)	4	1	0	0	4
5	Cardon shaft (small)	LZ 325, LA-35-0112131	1	6	1	0	0
6	Cardon shaft	KGW180.1250.110.00	1	6	0	0	0.2*
7	Cardon shaft	KGW.150.1000.110.00	1	6	0	0	0.2*
8	Cardon shaft	KGW.180.950.110.00	1	6	0	0	0.2*
9	Cardon shaft	KGW.150.950.110.00	2	6	0	0	0.3*
10	Cardon shaft	LZ420-LA-50/UD72-2719	1	6	0	0	0.2*
C. Bolt and Nut							
1	Hex bolts	M 8x30mm	-	6	10	10	10
2	Hex bolts	M 8x40mm	-	6	10	10	10
3	Hex bolts	M 8x50mm	-	6	10	10	10
4	Hex bolts	M 10x35mm	-	6	10	10	10
5	Hex bolts	M 10x45mm	-	6	10	10	10
6	Hex bolts	M 10x55mm	-	6	10	10	10
7	Hex bolts	M 10X65mm	-	6	10	10	10
8	Hex bolts	M10x75mm,	-	6	10	10	10
9	Hex bolts	M10x90mm,	-	6	10	10	10
10	Hex bolts	M 12x35mm	-	6	10	10	10
*minimum quantity 1							

CSM					MECHANICAL		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
11	Hex bolts	M 12x50mm	-	6	10	10	10
12	Hex bolts	M 12x65mm	-	6	5	5	10
13	Hex bolts	M 12x75mm	-	6	5	5	5
14	Hex bolts	M 12x100mm	-	6	4	5	5
15	Hex bolts	M 14x35mm	-	6	10	10	10
16	Hex bolts	M 16x45mm	-	6	10	10	10
17	Hex bolts	M 16x65mm	-	6	10	10	10
18	Hex bolts	M 16x75mm	-	6	5	5	10
19	Hex bolts	M 16x100mm	-	6	4	4	10
20	Hex bolts	M 20x50mm	-	6	5	5	10
21	Hex bolts	20x70 mm	-	6	10	10	10
22	Hex bolts	M 20x90mm	-	6	10	10	10
23	Hex nut	M 8x1.25mm	-	6	10	10	10
24	Hex nut	M10x1.5mm	-	6	10	10	10
25	Hex nut	M 12x1.75mm	-	6	10	10	10
26	Hex nut	M16x2.00mm	-	6	5	5	5
27	Ny lock nut	M12	-	6	10	10	15
28	Ny lock nut	M14	-	6	6	6	10
29	Socket head cap bolt	M 8x20mm	-	6	5	10	10
30	Socket head cap bolt	M 8x35 mm	-	6	10	10	10
31	Socket head cap bolt	M 8x45 mm	-	6	10	10	10
32	Socket head cap bolt	M 8x55 mm	-	6	5	10	10
33	Socket head cap bolt	M 10x20 mm	-	6	5	10	10
34	Socket head cap bolt	M 10x30 mm	-	6	10	10	10
35	Socket head cap bolt	M 10x40 mm	-	6	10	10	10
36	Socket head cap bolt	M 10x50 mm	-	6	5	10	10
37	Socket head cap bolt	M 10x60mm	-	6	5	10	10
38	Socket head cap bolt	M 10x70 mm	-	6	4	10	10
39	Socket head cap bolt	M 10x80 mm	-	6	4	10	10
40	Socket head cap bolt	M 10x90 mm	-	6	4	10	10
41	Socket head cap bolt	M 12x35mm	-	6	10	10	10
42	Socket head cap bolt	M 12x45 mm	-	6	10	10	10
*minimum quantity 1							

CSM				MECHANICAL			
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
43	Socket head cap bolt	M 12x55 mm	-	6	5	10	10
44	Socket head cap bolt	M 12x65 mm	-	6	5	10	10
45	Socket head cap bolt	M 12x75 mm	-	6	4	10	10
46	Socket head cap bolt	M 14x25 mm	-	6	5	10	10
47	Socket head cap bolt	M 14x35 mm	-	6	10	10	10
48	Socket head cap bolt	M 14x45 mm	-	6	10	10	10
49	Socket head cap bolt	M 14x 65 mm	-	6	5	10	10
50	Socket head cap bolt	M 14x75 mm	-	6	4	10	10
51	Socket head cap bolt	M 16x35 mm	-	6	10	10	10
52	Socket head cap bolt	M 16x45 mm	-	6	10	10	10
53	Socket head cap bolt	M 16x55 mm	-	6	5	10	10
54	Socket head cap bolt	M 16x65 mm	-	6	5	10	10
55	Socket head cap bolt	M 20x45 mm	-	6	10	10	10
56	Socket head cap bolt	M 20x55 mm	-	6	10	10	10
57	Socket head cap bolt	M 20x65 mm	-	6	5	10	10
D. O' Ring							
1	O' ring	126-67x131-9(126x3)	4	3	1	0	0.3*
2	O' ring	38x48	4	3	1	0	0.3*
3	O' ring	36x42/44	4	3	1	0	0.3*
4	O' ring	162x169	1	3	1	0	0
5	O' ring	88-57x2-67(PU)	3	3	1	0	0
6	O' ring	126.37x5.33	4	3	1	0	0.3*
E. Oil Seal							
1	Seal ring	BA 20x40x10 mm	1	2	2	0	0
2	Seal ring	BA 85x110x13mm	2	2	2	0	0
3	Seal ring	BA 130x165x13 DIN 3760	2	2	0	0	1
4	Grooved seal ring	U.400.325	8	2	1	1	2
5	Flat ring	DL 12.09	8	2	1	1	2
6	Gasket	DL 12.08	8	2	1	1	2
F. Tamping Unit							
1	Tamping arm bush	2E.34.210	8	1	2	2	4
2	Tamping arm big pin assembly.	2E.31.04	8	1	2	2	4
*minimum quantity 1							

CSM					MECHANICAL		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
3	Tamping arm small pin assembly(35mm).	G.20.13	24	1	4	2	4
4	Flange	DL.23.104	8	1	2	2	4
5	Flange	DL.23.103A	8	1	2	2	4
6	Flange	2E.22.09	8	1	2	2	4
7	Flange	2E.22.11	8	1	2	2	4
8	Teflon washers	2E.34.228. 7.00	8	1	4	2	2
9	Tamping tools caps	2E.31.19 ART	32	1	10	10	12
10	Tamping tools	-	32	0.5	20	22	22
11	Tamping arm big	CU.30.412	8	1	0	4	4
12	Tamping arm small	CU.30.413	8	1	0	4	4
13	Guide rod for T/U	UD-70-752	4	1	0	2	2
G. General							
1	Rubber mounting (damping block)	M-12	12	2	2	2	2
2	Rubber mounting (damping block)	M-10	16	2	2	3	3
3	Coupling for funk gear box	WN220-27	1	6	0	0	0.2*
4	Rail tongue roller	DL150-011	8	2	2	0	2
5	Lining roller	-	4	2	0	0	2
6	Roller disc for lifting units	E-150	8	2	2	0	2
7	roller for shadow board trolly	-	4	4	0	0	1
8	Engage & disengage rod for satellite g/box	WN 70.1107	1	2	1	0	0
*minimum quantity 1							

CSM			ELECTRICAL & ELECTRONICS				
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STM D	ZMTD
A. Meters and gauges							
1	Engine RPM meter	EL-T 1264	2	6	0	0	0.3*
2	Galvanometer	EL-T 80.00	4	6	0	0	0.6*
3	Water temp. gauge	EL-T 1259	2	6	0	0	0.3*
4	ZF pressure gauge	EL-T 1001	1	6	0	0	0.2*
5	ZF temp gauge	EL-T 1200	1	6	0	0	0.2*
6	Speedometer (Front)	EL-T1263	1	6	0	0	0.2*
7	Speedometer (Rear)	-	1	6	0	0	0.2*
8	Ammeter	EL-T 1262	1	6	0	0	0.2*
B. PCB							
1	Power supply	EK813 SV00b	5	2	1	0	1
2	Leveling control	EK 347 LV02	2	6	0	0	1
3	Lining control	EK349 LV01	1	6	0	1	0.2*
4	Multiplex	EK28 V00	1	6	0	0	0.2*
5	T/U Up/Dn19control	EK16 V00b	2	6	0	0	0.3*
6	Front input	EK345LV00	1	6	0	0	0.2*
7	Pendulum Control	EK346LV0a	1	6	0	0	0.2*
8	Satellite compensation	EK348LV00	1	6	0	0	0.2*
9	Over slew	EK290LV00b	1	6	0	0	0.2*
10	Power supply	EK812SV00	1	6	0	0	0.2*
11	Power supply	EK851SV0b	1	6	0	0	0.2*
12	Distance simulator	EK99V00	1	6	0	0	0.2*
13	Pendulum compensation	EK110LV00	1	6	0	0	0.2*
14	Satellite drive control	EK24V00b	1	6	1	0	0
15	Machine drive control	EK319LV00	1	6	0	0	0.2*
16	Variable pump control	942600	1	6	0	0	0.2*
17	QL PCB	-	1	6	0	0	0.2*
18	Input/ output of programmer	EK553P00	9	6	1	0	0.5*
19	Time delay of programmer	EK552P00	1	6	0	0	0.2*
20	Relay PCB	EL-T 1163	6	6	0	0	1
21	Relay PCB	E-LT 1157	2	6	0	0	0.3*
*minimum quantity 1							

CSM			ELECTRICAL & ELECTRONICS				
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
22	Relay PCB	EL-T 1442	1	6	0	0	0.2*
23	Pulse counter of encoder PCB	E-LT 5034	1	6	0	0	0.2*
24	Power pack	E-LT7050/400	5	2	1	0	1
C. Relay							
1	Relay	ELT 7045/24	5	2	1	1	0.5*
2	Relay	ELT 7018	4	2	1	0	1
3	Relay	LR 24VDC	5	2	1	1	0.5*
4	Relay	EL-T 7002/ S4/ EL-T 7002/ S2	41	2	4 +4 (each)	2 +2 (each)	4 +4 (each)
5	Relay	ELT 663	31	2	2	4	10
6	Relay	ELT 277	10	2	2	1	2
7	Relay	ELT.1218s	30	2	5	5	5
8	Relay	ELT. 7010	4	2	1	0	1
D. General							
1	Limit Switch	LJW	5	2	1	1	0.5*
2	Proximity switch	EL-T1151a	2	2	1	0	0
3	Proximity switch	EL-T1422k	3	2	1	0	0.5*
4	Transducer tamping depth	EL-T 750.00ZS	3	6	0	0	0.5*
5	Potentiometer	ELT 500 HQ	4	6	1	0	0
6	Potentiometer	ELT 595 HQ	5	6	1	0	0
7	Satellite transducer spring	EL-T 1041-12	1	1	1	0	0
8	Transducer chord wire	0.80mm	10m	1	5m	2m	3m
9	Transducer chord wire	1.35mm	15m	1	5m	5m	5m
10	Lining & leveling chord	2 MM 80 MLG	80m	2	20m	0	20m
11	Head light bulb (pin type)	24V/36W	6	1	2	2	2
12	Working light assy.	24V/36W	30	2	4	0	11
13	Micro fuse	272-4A	16	2	2	2	4
14	Distance encoder	ELT 7023/700	1	6	0	0	0.2*
15	Contact element	N O (26020)	60	6	2	0	8
16	Contact element	N C (23068)	10	6	1	0	0.6*
17	IC	OP O4	25	6	2	0	2
*minimum quantity 1							

CSM				ELECTRICAL & ELECTRONICS			
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
18	IC	OP 11	20	6	1	0	2
19	Hooter	-	1	6	0	0	0.2*
20	Flasher Light	-	1	6	0	0	0.2*
21	Satellite transducer	EL-T1041	1	6	0	0	0.2*
22	Oil pressure sensor	0-25bar (360/081/037/018)	2	6	0	0	0.3*
23	Lining transducer fork	EL-T67.00C	2	2	1	0	0
24	T/U transducer fork	EL-T920.04A	2	2	1	0	0
*minimum quantity 1							

CSM					PNEUMATIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
A. SEAL							
1	Seal kit for 1 1/2" dia. cylinder	-	12	2	2	2	2
2	Seal kit for 2 1/4" dia. cylinder	-	8	2	2	1	1
3	Seal kit for 3" dia. cylinder	-	6	2	1	1	1
4	Seal kit for 4" dia. cylinder	-	6	2	1	1	1
5	Seal set for satellite brake cylinder	8"	2	2	1	0	0
6	Seal set for m/c brake cylinder	12"	2	2	1	0	0
B. OTHERS							
1	2-way valve for satellite brake	90362	1	6	0	0	0.2*
2	Air oiler	90180	1	6	0	0	0.2*
3	Brake valve for satellite (4-way)	90254	2	6	0	0	0.3*
4	Brake valve for machine	90364	4	6	0	0	0.6*
5	Over flow valve	M 301890	1	6	0	0	0.2*
6	Pressure regulator	90186	5	6	0	0	1
7	Safety valve	90204	2	6	0	0	0.3*
8	Stop cock for working system	90259	1	6	0	0	0.2*
9	Water separator (in working cabin)	90181A	1	6	0	0	0.2*
10	Water separator near engine	90356	1	6	0	0	0.2*
11	2-way valve	90151	1	6	0	0	0.2*
12	3-way valve	90336	15	6	1	1	0.5*
13	4-way valve for datum	90341	1	6	0	0	0.2*
14	4-way valve	90344	7	6	1	0	0.2*
15	4-way valve	90343	2	6	0	0	0.3*
16	pressure Reducing valve	90183 (90188)	6	6	0	0	1
17	Throttle valve	WM67	2	6	0	0	0.3*
18	Actuating cylinder for engine	WM 607-B1	2	6	0	0	0.3*
19	cylinder for ZF Engage / Disengage	90233	1	6	0	0	0.2*
*minimum quantity 1							

CSM					PNEUMATIC		
S.No.	Brief description	Part no.	Nos Per M/C	Estt. life cycle in years	Requirement per m/c		
					SITE	STMD	ZMTD
20	Satellite engage cylinder	PN 2Z-KF-50/18/70	1	6	0	0	0.2*
21	Air unloader	90200 /TVS make 6.5 to 10 bar	1	2	0	0	0.5*
22	Air drier filter	4324102227	2	0.5	2	1	1
23	Pne. horn	-	2	6	0	0	0.3*
24	Brake shoes	-	10	2	2	0	3
25	Tank drain	90215	2	6	0	0	0.3*
26	Pneumatic hose	6.33 mm	-	2	25 m	20 m	20 m
27	Pneumatic hose	12.5 mm	-	2	10 m	10 m	20 m
28	Clip for pneumatic hose	6.33 mm	-	2	20	10	40
29	Clip for pneumatic hose	12.5 mm	-	2	10	5	20
30	Hose assy compressor and cooling coil	90267 /90291	1	2	0	0	0.5*
31	Pne. Nipple with nut 6.3mm	6.3mm	-	2	4	4	6
32	Pne. Nipple with nut 12.5mm	12.5mm	-	2	4	4	6
33	Ball and socket M-16	M16	-	6	2	2	2
34	Pne. Elbow (90 ⁰) for 12.5mm	12.5mm	-	6	2	2	4
35	Pne. Elbow (90 ⁰) for 6.3mm	6.3mm	-	6	4	4	6
36	Pne. Elbow with both side nipple	6.3mm	-	6	4	6	12
37	Pne. Elbow T type	6.3mm	-	6	4	6	12
*minimum quantity 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 revision-2 of Critical Spares Parts List for **CSM (09-32)**

RAILWAYS

1. S/SRI Navin Patil Dy. Chief Engineer//TM/line/BSL/CR

RDSO

1. S/SRI Muslim Ahmad ARE/TM
2. " " A.K. Srivastava SSE/TM
3. " " D.G. Sharma SSE/TM

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