

संजीव स्वरूप
प्रधान कार्यकारी निदेशक मानक विद्युत

Sanjiv Swarup
Principal Executive Director Stds. Electrical



भारत सरकार – रेल मंत्रालय
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D.O.No.EL.8.5.10.1

Dt: 04.05.2020

Dear Sri Tiwariji,

Sub: PCDO for the month of April, 2020.

1.0 HIGHLIGHTS

- 1.1 Development of 12000 HP, WAG12B Electric Locomotives for Indian Railways:**
Based upon statutory inspection report of WAG12B (12000 HP) locomotive by CCRS, Railway Board has sanctioned the introduction of WAG12B loco by Zonal Railways up to maximum speed of 100 kmph vide letter No.2020/CEDO/SR/08 Dated 28th April 2020. This will facilitate operation of the WAG12B Electric locomotives on Dedicated Freight Corridor as well as other sections on Indian Railways for hauling heavier goods trains on graded sections with improved throughput and average speeds of operations.
- 1.2 Development of 9000HP, WAG9HH Electric Locomotives with M/s Siemens make Propulsion System:**
Based upon successful completion of various trials by RDSO which consisted of Oscillation, Emergency Braking Distance (EBD) and Rating & Performance Trials of the locomotive, final Speed Certificate for WAG9HH class of Locomotive (9000HP with Siemens propulsion system) for operations at 100kmph has been issued vide Speed Certificate No.SD.WAG9HH.11 dated 25.04.2020. Application for Railway Board's sanction has also been sent to CCRS/Lucknow on 29.04.2020.

2.0 RELIABILITY IMPROVEMENT

- 2.1** Comparative sheet of maintenance practices of bogie frames of HHP Vs Three Phase and ALCO Vs Conventional submitted by MP Dte of RDSO has been examined and some corrections have made. The same has been sent vide this office note no. EL/3.1.35/2 (Bogie) dated 27.04.2020.

3.0 DEVELOPMENTAL ACTIVITIES

- 3.1** Vide RDSO letter no. EL/3.2.19/3-Phase (Escorts) dated 22.04.2020, after witnessing the Prototype test of M/s Escorts Ltd., shortcomings were communicated to the firm regarding computer/ microprocessor controlled air brake system for Three Phase Electric Locomotive. The reply and clarifications of the firmware also received. As requested by the firm, it was advised to go ahead with manufacturing of second unit of EMCBS taking into view of short comings observed. The second unit shall go through necessary testing and validation before according the dispatch clearance.

- 3.2 Vide RDSO letter no. EL/1.2.9.1/Medha dated 22.04.2020, M/s Medha wanted a major deviation from the 2x130 KVA SIV but RDSO advised to adhere to the RDSO specification.
- 3.3 Major/Minor deficiencies were found during scrutiny of online application no. dated 19.02.2020 submitted by M/s Sujan Industries, Vasai, Palghar, Maharashtra regarding fresh vendor registration for manufacturing and supply of Spheriblocs for three phase Electric Locomotives and have been communicated to firm vide this office letter No. EL/3.1.35/12 (SB)/Sujan dated 27.04.2020.
- 4.0 PROTOTYPE TESTING/QUALITY AUDIT**
Nil
- 5.0 OTHER ITEMS**
- 5.1 Submitted document of traction Motor type TME-48-45-6 for On- Board MEMUs doc. no. TSA 021879_B of Motorette Test plan of TSADUR through PS&EMU Directorate note No. EL/1.3.16.6/On-Board MEMU/Medha dated 03.03.2020 had been examined as per RDSO specification No. RDSO/PE/SPEC/EMU/0096-2008 (Rev 4) of Dec-2009 along with ICF Annexure ICF/EMU/0096-02, Rev.00. Comments have been communicated to PS & EMU Directorate vide Electrical Directorate note no. No. EL/3.2.182/On-Board MEMU/Medha dated 22.04.2020.
- 5.2 Failure investigation of TM bearings for traction motor type 6FRA6068 of loco no. 41036/WAG9 was carried out at ELS/GMO on 06.02.2020 & 07.02.2020 jointly by RDSO, DLW, ELS/GMO, M/s Saini Electricals & M/s SKF. Preventive measures to be taken along with detailed failure investigation report of Traction Motor bearing seizure in loco No. 41036/WAG-9 fitted with M/s Saini make traction motor has been circulated to Zonal Railways and PUs Vide letter no. EL/2.2.13 dated 22.04.2020.
- 5.3 Comments on draft Speed Certificate for conducting detailed oscillation & EBD trial of WDAP5 (Dual Mode) locomotive up to a maximum test speed of 150kmph on track maintained as per standard specified under Para 607 of IRPWM, 3rd Reprint 2019 over NAD-KOTA-SWM section of West Central Railway was sent to MP Dte vide note no. EL/3.1.28 dated 08.4.2020.
- 5.4 Comments on draft Speed Certificate for conducting detailed oscillation & EBD trial of WDAP5 (Dual Mode) locomotive up to a maximum test speed of 115kmph on track maintained as per standard specified under Para 607 of IRPWM, 3rd Reprint 2019 over New Morinda-Sanahwal(NMDA-SNL) section of Northern Railway was sent to MP Dte vide note no. EL/3.1.28 dated 08.4.2020.
- 5.5 Comments on draft Provisional Speed Certificate of WDAP5 (Dual Mode) locomotive for operation up to a maximum speed of 65 kmph over Indian Railways on track maintained as per standard specified under Para 607 of IRPWM, 3rd Reprint 2019 was sent to MP Dte vide note no. EL/3.1.28 dated 08.4.2020.
- 5.6 Comments on draft Speed certificate received from Carriage Dte vide note no. MC/LHB/COACH dated 13.03.2020 was sent vide note no. EL/3.1.28 dated 27.04.2020.

- 5.7 Comments on draft Speed certificate received from Carriage Dte vide note no. SV.FIAT (SC) dated 13.03.2020 was sent vide note no. EL/3.1.28 dated 27.04.2020.
- 5.8 Comments on draft Speed certificate received from Carriage Dte vide note no. MC/UIC/EN14363 dated 13.03.2020 was sent vide note no. EL/3.1.28 dated 27.04.2020.
- 5.9 The design documents of IV coupler for Train -18, received from PS & EMU Dte vide note no. EL/1.3.16.6/Train-18 was examined & comments were sent vide note no. EL/8.1.25.1/Medha/Train-18 dated 29.04.2020.
- 5.10 Railway board has communicated the 19 Items identified for Improved Operational Efficiency over IR & formed various committee to submit the action plan vide CRB message dated 10.4.2020. RDSO has to submit the preliminary as well as final report for items (i) Correction of ACTM(TI and Loco portions) in view of technological up gradation (ii)Review of periodicity of Electric loco in view of technological improvement & (iii) Review of prescribed codal life of Electric loco, TRD and general services assets in view of technological advancements. Accordingly, preliminary reports on aforesaid items have been submitted to Railway Board on 13.04.2020. RDSO is in the process of preparing the final reports duly consulting all the other Committee Members and stake holders & likely to be submitted by 31.5.2020.
- 5.11 On line training session on "Basic feature of WAG12B locomotive" was organized for all Zonal Railways through Webinar on 25/03/2020 by RDSO with the help of M/s Alstom, in order to familiarize everyone with the layout, design and operational features of the locomotive.
- 5.12 For knowledge enhancement in three-phase propulsion system, Webinar was organized by M/S ABB on "Composite Converter, Aux Converter and VCU" as requested by RDSO/CLW.

With Warm Regards'

Encl: Annexure I, II & III

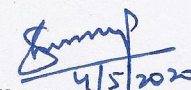
Yours sincerely,


4/5/2020

(Sanjiv Swarup)

**Shri Rajesh Tiwari,
Member Traction,
Railway Board, Rail Bhavan,
New Delhi - 110 001**

Copy for kind information to-
Additional Member (Electrical), Railway Board, Rail Bhawan, New Delhi.


4/5/2020

(Sanjiv Swarup)

Pr.Exe.Dir.Stds. Electrical

Status of un-modified motor support in WAP7 & WAG9/9H three phase locomotives

Position on: 25.04.2020

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Balance to be modified	PDC
CR	AQ	1,2	28	204	232	32	Jun'20
		3	30	257	287	226	
	BSL	1,2	0	0	0	0	Completed in all locos
		3	0	0	0	0	
	KYN	1,2	0	0	0	Nil	June'20
		3	0	96	96	96	
		3	0	49	49	0	
NR	GZB	1,2	143	0	143	64	Dec'20
		3	159	0	159	73	
SCR	LGD	1,2	68	164	232	0	NA June.' 20
		3	84	206	290	154	
	KZJ	1,2	0	0	0	Nil	
		3	0	99	198	26	
SER	TATA	1,2	0	0	0	Nil	June.'20
		3	0	49	44	05	

Note: Following sheds have already modified motor support in all locations of bogies.

HWH, WAT, LDH, CNB, BRC, ED, BNDM, SRC, ET, NKJ, BIA, RPM, TKD, GMO.

Status of modified/unmodified brake lever of WAG-9/9H locomotive as per MS 455 issued on Dec'16.

SN	Shed	No. of WAG-9/9H locos	Modified with TBU/PBU	Un-Modified with TBU/PBU	Converted to conventional rigging
1	BSL	29	13	0	13
2	AQ	156	71 ^(22TBU/PBU+41BL)	85	11
3	KYN	69	16	53	0
4	GMO	177	0	177	0
5	WAT	142	14.5	122.5	5
6	LDH	129	22	0	107
7	CNB	79	12	0	67
8	LGD	130 ⁽⁸⁹⁺⁴¹⁾	28	61	41 ^(37-WAG9H; 4-WAG9)
9	KZJ	99	38	14	45
10	TATA	133	0	133	20
11	BIA	118	31	68	19
12	TKD	103	82	0	21
13	NKJ	63	26	14	23
14	BNDM	19	0	19	19
Total		1446	353.5	746.5	391

Population of high Reach Pantograph as on April'20

RLY	Shed	Rev.1							Rev.2							Rev 2 Total	Total Shed wise (Rev1+2)					
		WAG-5	WAG-7	WAG-9	WAP-5	WAP-7	WAP-1	WAP-4	Shop Floor	Rev 1 Total	WAG-5	WAG-7	WAG-9	WAP-5	WAP-7			WAP-1	WAP-4	WCA M-3	WCA G-1	Shop Floor
CR	AQ	0	1	6	0	0	0	0	9	16	0	0	38	0	3	0	0	0	0	6	47	63
CR	KYN	0	0	0	0	0	0	0	0	0	0	1	24	0	0	0	0	1	1	0	27	27
CR	BSL	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	1	14	14
NR	LDH	0	6	0	0	0	0	0	3	9	0	1	36	0	0	0	0	0	0	2	39	48
NR	GZB	0	0	0	0	0	0	0	0	0	0	0	0	36	3	0	0	0	0	1	40	40
NR	KIGY	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
NCR	JHS	1	15	0	0	0	0	0	0	16	0	4	0	0	0	0	0	0	0	0	4	20
NCR	CNB	0	5	0	0	0	0	0	2	7	0	5	38	0	0	0	0	0	0	11	54	61
ER	ASN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ER	HWH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ECR	GMO	0	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0	0	0	0	42	42
ECR	MGS	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	5
ECOR	ANGL	0	0	0	0	0	0	0	13	13	0	2	0	0	0	0	0	0	0	0	2	15
ECOR	VSKP	0	0	0	0	0	0	0	4	4	0	0	12	0	0	0	0	0	0	2	14	18
SCR	KZJ	0	0	3	0	0	0	0	1	4	0	2	35	0	0	0	0	0	0	2	39	43
SCR	LGD	0	0	7	0	0	0	0	3	10	0	0	37	0	1	0	0	0	0	0	38	48
SCR	BZA	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	8	8
SER	BKSC	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	16	16
SER	BNDM	0	0	9	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	9	9
SER	SRC	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	5	12	12
SER	TATA	0	3	7	0	1	0	0	4	15	0	1	12	0	0	0	0	0	0	0	13	28
SER	ROU	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	27	27
SECR	BIA	0	0	15	0	1	0	0	14	30	0	0	2	0	5	0	0	0	0	0	7	37
SR	AJJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SR	ED	0	3	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	0	4	7
SR	RPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WCR	ET	2	0	0	0	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0	0	7
WCR	NKJ	0	0	0	0	0	0	0	0	0	0	10	6	0	0	0	0	0	0	1	17	17
WCR	TKD	0	0	0	0	0	0	0	2	2	0	0	41	0	7	0	0	0	0	7	55	57
WR	BL	0	0	0	0	0	0	0	0	0	1	52	0	0	0	0	4	0	0	0	57	57
WR	BRC	0	0	0	0	0	0	0	0	0	0	0	0	51	82	0	9	0	0	5	147	147
IR	TOTAL	3	34	47	0	2	0	0	60	146	1	91	379	87	108	0	13	1	1	47	728	874