



No. EL/3.2.19/3-Phase

Date 28.12.2018

Principal Chief Electrical Engineer,

1. Central Railway, Mumbai CST-400 001.
2. Northern Railway, Baroda House, New Delhi-110001.
3. North Central Railway, Subedarganj, Allahabad- 211001
4. North Eastern Railway, Gorakhpur-273 001
5. Eastern Railway, Fairlie Place, Kolkata -700 001.
6. East Central Railway, Hazipur-844101.
7. East Coast Railway, Chandrashekharapur, Bhubaneswar-751016.
8. Southern Railway, Park Town, Chennai-600 003.
9. South Central Railway, Secunderabad-500 371.
10. South Eastern Railway, Garden Reach, Kolkata -700 043.
11. South East Central Railway, Bilaspur-495004
12. Western Railway, Churchgate, Mumbai-400 020.
13. West Central Railway, Jabalpur-482001.
14. Chittaranjan Locomotive Works, Chittaranjan-713331 (WB)
15. Diesel Locomotive Works, Varanasi-221004

Sub: Training cum workshop for maintenance/operating officials on Brake System of three phase electric locomotives held at ELS/GZB on 12th & 13th Dec'2018.

Ref: This office letter no. EL/3.2.19/3-Phase dated 03.12.2018

A Training cum workshop for maintenance/operating officials on Brake System of three phase electric locomotives chaired by PEDSE/RDSO was held at ELS/GZB/NR on 12th & 13th Dec'2018. The Officials from RDSO, various electric loco sheds/driver lobbies were present. Training was imparted by representatives of OEMs of brake system. The details of training cum workshop are issued and uploaded on RDSO's website under following link:

http://www.rdsco.indianrailways.gov.in/view_section.jsp?lang=0&id=0,2,344,5544,5552

Ut
28/12/2018
(Aseem Kumar)

For Director General electrical

Encl: Nil

Copy To:

- Secretary (Electrical), Railway Board, Rail Bhawan, New Delhi-110001
(Kind attn.: Shri A. K. Goswami, DEE/RS/RB) for kind information please.
- M/s. Faiveley Transport Rail Technologies India Limited, P.B. No. 69, Harita, HOSUR, Tamil Nadu- 635 109
- M/s. Knorr-Bremse India Pvt. Ltd. 51/4 KM Stone, Village & P.O. Bhagola, Delhi Mathura Road (NH-2), Palwal-121102 (HARYANA)

Ut
28/12/2018
(Aseem Kumar)

For Director General electrical

Encl: Nil

Points covered during Training cum workshop held at ELS/GZB/NR on 12&13.12.2018 on Brake System For 3-Phase Electric Locomotives

A Training cum workshop for maintenance/operating officials on Brake System of three phase electric locomotives chaired by PEDSE/RDSO was held at ELS/GZB/NR on 12th & 13th Dec'2018. The Officials from RDSO, various electric loco sheds and driver lobbies were present. Training was imparted by representatives of OEMS of brake system. The soft copies of training material and presentation was shared to all the participants. These were also sent on e-mail addresses of all the sheds. The topics covered in presentation/training and demonstration on shed floor are summarized as under:

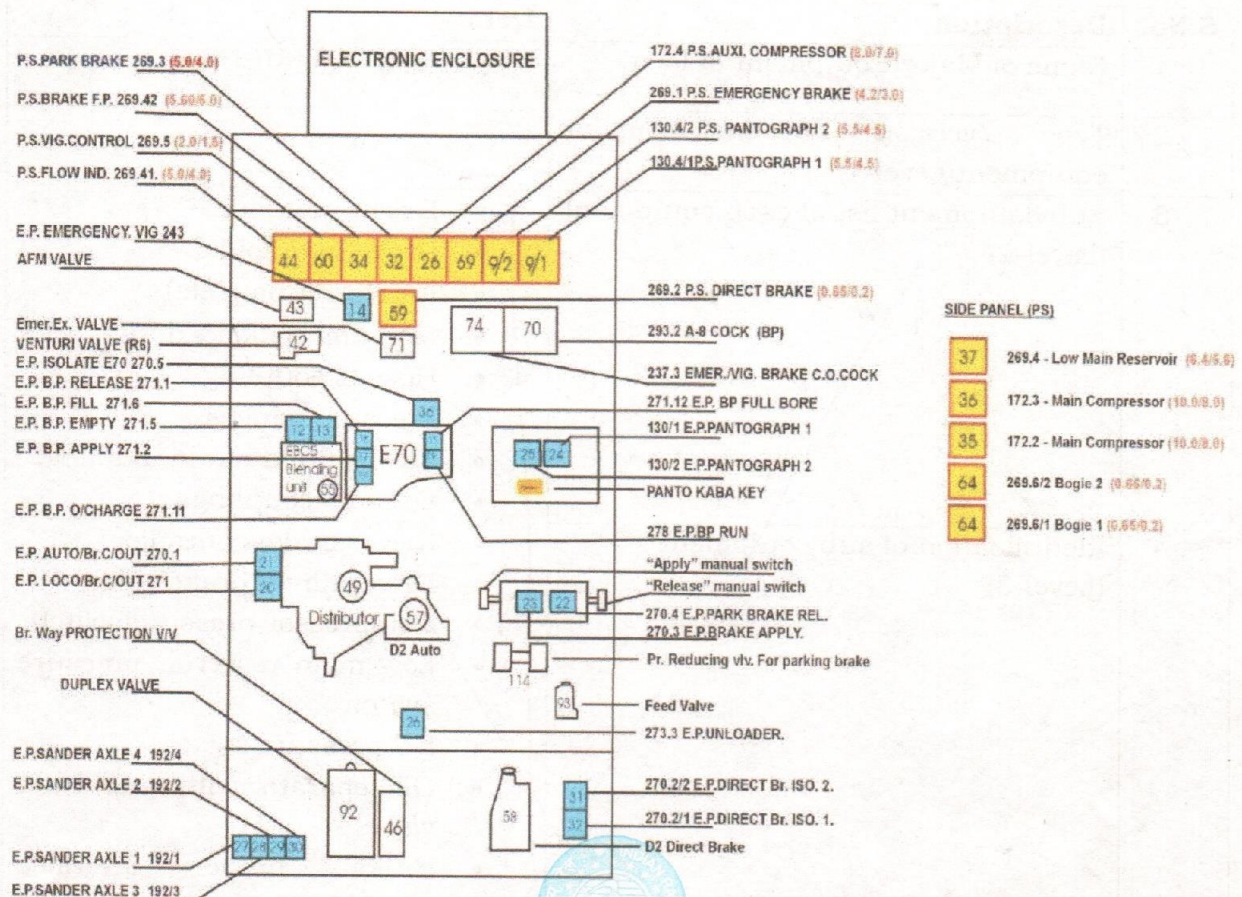
A. E-70 Brake System: System feature, System Operation & equipments description.

1. Drivers Brake Controller Valve(DBC).
2. FD1 Direct Brake Valve (SA9).
3. Emergency exhaust valve.
4. C3W distributor valve.
5. EP Relay valve.
6. Direct brake pilot valve.
7. Double check valve.
8. D2 Relay valve.
9. Brake pipe control block diagram.
10. Parking brake
11. Brake blending
12. Regenerative braking.
13. Brake electronic cards
14. Various pressure switches.

B. E-70 Brake System: Presentation on shop floor.

1. Testing of various valves on pneumatic test jigs available at ELS/GZB.
2. Testing of Electronic cards on test jig in electronic lab.

✓



C. CCB Brake System: System feature, System Operation & equipments description.

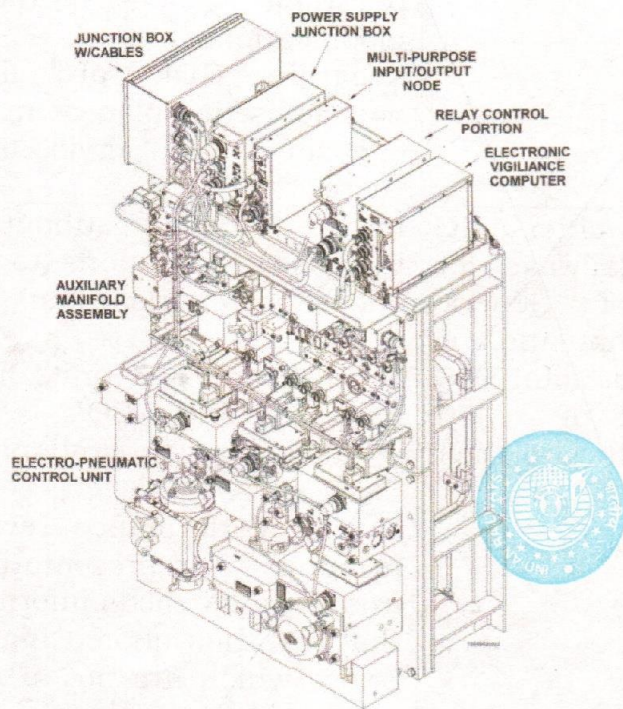
1. Electronic Brake Valve (EBV)
2. Line Replacements Units (LRUs).
3. KE Valve (C3W)
4. PERCOS
5. Brake Blending.
6. Parking brake.
7. Regenerative braking failure.
8. Check valves.
9. Aux circuit drainage arrangement
10. Electronic cards
11. PANS COCK (KABA Key)

D. CCB Brake System: Presentation in loco.

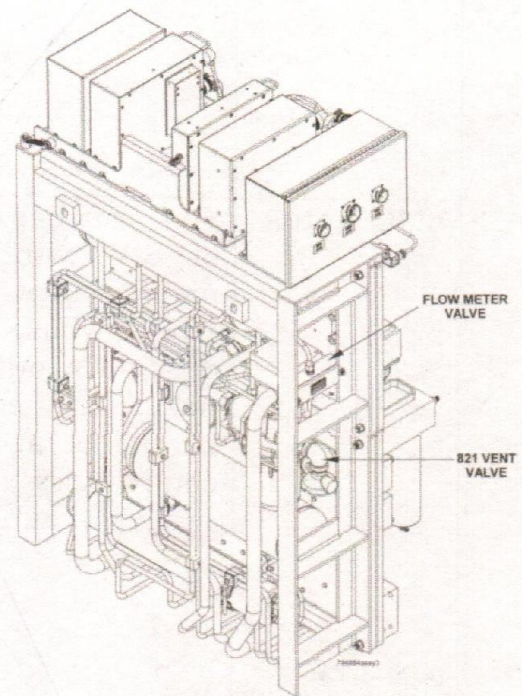
1. Set up for PTDC operation.
2. Operation of dead loco.

JK

3. Proposed aux drain arrangement.
4. Slot positions of EBV with handle positions.
5. Coupler plug/unplug during multi operation.
6. Cock operation during banking operation.
7. Location & operation of PANS COCK (KABA Key)
8. Location of various pressure switches.
9. BP leakage test setup.
10. Cab changing procedure.



Front view of CCB Panel



Rear View of CCB Panel

E. Members Present: List enclosed

W

**Attendance sheet for training regarding Brake System held at Electric Loco Shed,
Ghaziabad on date 12.12.2018**

Sr.No.	Name	Designation	Rly.	Signature	Mobile No.
1	M. ADHOOP KUMAR	Tech W-2	S.R.	<i>Adhoo</i>	9497510491
2	S. SRINIVAS	SSE/ELS/VSNA	E.L.Rly	<i>S. Srinivas</i>	8978081338
3	DINDEHRA RAJARATI	SSE/RSINDS	NR	<i>Dinendra</i>	9717632759
4	Ashish Kumar	Tech-2/HKT	W.C.R.	<i>Ashish Kumar</i>	9981072039
5	Jamil A. Shaikh	Tech III/BRC	W.Rly	<i>Jamil A. Shaikh</i>	9601999932
6	RAHUL KUMAR	JE/ELS/HWH	ER	<i>Rahul Kumar</i>	8709961593
7	Ajindran Chakraborty	Tech-1/ELS/HWH	ER	<i>Ajindran Chakraborty</i>	9801768223
8	Yogender Pal	CLI/GRS	NR	<i>Yogender Pal</i>	9717632875
9	AJAY VEER SAXENA	CLI/GRS	NR	<i>Ajay Veer Saxena</i>	9717632267
10	JAI RAJ	CLI/LKO	NR	<i>Jai Raj</i>	9794834665
11	Rakam Singh Meena	Tech-III	NR(SRE)	<i>Rakam Singh Meena</i>	9043593612
12	Ganesh R. Sonawane	Tech-III	CR(SRE)	<i>Ganesh R. Sonawane</i>	7030203202
13	MANIK GUPTA	JE/ELS/LDH	NR(LDH)	<i>Manik Gupta</i>	7889364220
14	Sunil Kumar	SSE/ELS/GRS	NR/GRS	<i>Sunil Kumar</i>	9711023034
15	Ramkesh Meena	JE/ELS/BRC	WR	<i>R. Meena</i>	7698630678
16	Syifa Khadwaj	JE/HQ	NR	<i>Syifa Khadwaj</i>	9818660864
17	Mahendra Pal	SE/RD SO	RDSO	<i>Mahendra Pal</i>	7459850025
18	PARUL SINGH	CLI/Delhi	NR	<i>Parul Singh</i>	9729531338
19	AJIT SINGH	CLI/LMB	NR	<i>Ajit Singh</i>	9729532476
20	Anil Kumar	Instructor BRC/GRS	NR	<i>Anil Kumar</i>	9717432876
21	Vivek Bhandhale	Tech III/ELS/HQ	CR	<i>Vivek Bhandhale</i>	9527937420
22	A.T. Joshi	MCM	CR	<i>A.T. Joshi</i>	9552283965
23	Santosh Upadhyay	Inst	NR/LY	<i>Santosh Upadhyay</i>	9717632857
24	Rakesh Singh	FTIL/DEL		<i>Rakesh Singh</i>	9911228206
25	Mukesh Kumar	Inst	NR/LY	<i>Mukesh Kumar</i>	9717632162
26	Lokesh Kumar	SSE/ELS/GRS	NR/LY	<i>Lokesh Kumar</i>	7503538847
27	ANIL SHARMA	SSE/ELS/GRS	NR/LY	<i>Anil Sharma</i>	9717632925
28	Rajesh Kumar	SSE/WR/HQ	NR/LY	<i>Rajesh Kumar</i>	9717637303
29	Ashwath Kumar Yadav	SSE/ELS/GRS	NR/LY	<i>Ashwath Kumar Yadav</i>	9717631359
30	Ajay Mishra	SSE/TEL/GRS	NR/LY	<i>Ajay Mishra</i>	9717632926
31	M. K. Singh	SSE/ELS/GRS	NR/LY	<i>M. K. Singh</i>	

②

Sr.No.	Name	Designation	Relg	Signature	Mobile No.
32	Dinesh Sharma	ADFE/PS/GZB	NR		9717631358
33	Kamal Kant Rastogi	DEE/PS/GZB	NR		9717631319
34	Bhishn Singh	ADFE/PS/RD80	RDSO		9794863133
35	Chandrakant Naorgay	DEE/TRS I/GZB	NR.		9717631357
36	Gyan Singh	Tech II/TRS LDM	PAGE E-5		9914269274
37	N. SANTOSH KUMAR	JE/ELS/KJS	SCR		9704723406
38	Md. Akbar Hossain	GTech/ELN/KJS	SR		8985354970
39	M. Jagadeesh	SSE/ELN/GZB	SCR		9701371596
40	P.R. MAURYA	SSE/ELS/MA/BLILAI	SECR		9752440971
41	M. KANAKA RAJU	SGTch	ELS/LCD M. Kanaka		9290734865
42	Anil S. Nimbalkar	SSE/ELS/BSL	CR		9975210565
43	B.R. Rajur	SSE/ELS/BNOM	SE		997649511
44	P.R. Singh	Tech I/ELN/BNOM	SER		917836391
45	P.R. Sen	JE	SER		9905432769
46	P.C. Jha	SSE/ELS/MA	SER		8797318001
47	Shibasish Swain	SSE/ELS/BRL	WR.		9724091591
48	BIMAL KUMAR	CLI/RSO/SVDR	NR		9779234125
49	Mohi Lal	CLI/MB	NR		9760537425
50	SANJAY KUSHWAHA	JE/NKJ	WCR		7024141862
51	D. S. Tyagi	MCF/Tech	WCR		9968832162

(3)

Sr.No.	Name	Designation	RM	Signature	Mobile No.
52	A. LOGANATHA	SSE/BS/ED	SR	A. Loganatha	9965911692
53	E. VANARAJ	SGE/BS/BSM	SR.	E. Vanaraj	9754443051
54	R. PRABHAKARAN	Engineer/Customs Semi	HS/THRU	R. Prabakaran	9503117979
55	Karan Singh	Tech-I/42B	N.R.	Karan Singh	9717686234
56	Sohan Singh	Tech III	WCR/THD	Sohan Singh	9868348782
57	Manish Jav	SSE/RS/42B	NR	Manish Jav	9123158195
58	P. K. Gupta	CL/BR	WCR	P. K. Gupta	9752416371
59	R. K. Goswami	Tech I	WCR	R. K. Goswami	9165698949
60	A P Gupta	CL - IBP	WCR	A. P. Gupta	9752418441
61	Somvir	Tech I	42B NR	Somvir	9953230575
62	Deepak Kumar	Tech - III	42B NR	Deepak Kumar	9990166783
63	Shavita Singh	Tech. I	NR G413	Shavita Singh	9588233471
64	Rajmal	Service Engineer	FTATIL Delhi	Rajmal	9464974072
65	MANOJ KUMAR	Dy. Manager	FTATIL Delhi	Manoj Kumar	9311272868
66	S. D. BARTHWAL	AGTM-Jah	FTATIL DELHI	S. D. Barthwal	9810056839
67	ARUNACHALA KANI	MANAGER - DESIGN	FTATIL HOSUR	M. Arunachala Kani	9486736710
68	Sandeep Tripathi	SSE	WCR Bhopal	Sandeep Tripathi	8236860266
69	Vipin Sene	MEM	WCR Bhopal	Vipin Sene	9039750312
70	Vinit Prakash	SSE	WR.	Vinit Prakash	9004499333
71	Ashok M. Huggs	CLC - GDA	WR	Ashok M. Huggs	9724098083
72	Vagish Dikshit	CL/BRGY	WR	Vagish Dikshit	9724098057
73	PANKAJ K. PRASAD	CL/ACC	WCR	P. K. Prasad	9760568369
74					
75					

④

**Attendance sheet for training regarding Brake System held at Electric Loco Shed,
Ghaziabad on date 13.12.2018**

Sr.No.	Name	Designation	Rly.	Signature	Mobile No.
1	V.C. SETHI	MC	ET/WCR		9039700312
2	Sandeep Tripathi	SSE	ET/WCR		8236860466
3	DINESH KR. PRADAPATI	SSE	NR/NDLS		9717632759
4	Rakesh Singh	Tech-I	SR		9178306391
5	B.R. KUMAR	SSE	SR		9457699511
6	Ashish Kumar	Tech-I	W.C.R./HKS		9981072033
7	D.K. Tyagi	MC	WCR		9968832112
8	Sehan Singh	Tech	TAP/WCR		9868349782
9	Ashok M. Huggi	CLC/GDA	WR		9724098083
10	Vagish Dikshit	CLC/BRCY	WR		9724098053
11	Jai Raj	CLC/LKO	NR		9794834665
12	Rajendra Singh	Tech III	NR(SRE)		9043593612
13	Ganesh R. Sonawane	Tech III	CR(CTRS)		7030208202
14	RK GOSWAMI	Tech I	TRS/BSL		8165698949
15	Anil S. Nimbalkar	SSE/BSL	TRS/BSL		9975210565
16	Mahesh Lal	CLC/MB	NR		9760537425
17	BIMAL KUMAR	CLC/RSO/SNDH	NR		9779234125
18	PARUL SINGH	CLC/DU	NR		9729531778
19	Ajay Singh	CLC/UMB	NR		9729532476
20	Manish Gupta	JE/TRS/LDH	LDH		7889364220
21	Gyan Singh	Tech/TR/LPH	N.ROD		97142-69274
22	P.K. Gupta	CLC/BSL	LOCK		9752416371
23	PANICAS KR. PRINATAVA	CLC/AGC	NR		9760568309
24	A P Gupta	CLC-NRJ/JAP	WCR		9752418441
25	S.SAINI	SSE/TRS/BSL/NDLS	ELCR		8978081338
26	SANJAY KUSHWAHA	JE/RSINKJ	WCR		7024141862
27	Karan Singh	Tech-I/428	N.R		9717686234
28	M Anoop Kumar	Tech-II/ED	SR		9497510492
29	E. VANARAJ	SSE/ELS/RDM	SR		806754414935
30	A. Logorath	SSE/ELS/ED	SR		9965911692
31	SHIBASISHA SWAIN	SSE/ELS/BRCY	WR		9724091591
32	Vinay Prakash	SSE/HS/BDS	WR		9004497333

(5)

(5)

Sr.No.	Name	Designation		Signature	Mobile No.
33	Jamil A. Shaikh	Tech II/ELS/BRC	W. Rly		9801999932
34	Ram Kesh Meena	JE/ELS/BRC	WR	R. Meena	7698630678
35	Siyaram Meena	CH/TKD	NR		9717633890
36	Yogender Lal	CL/GAS	NR	Yogender Lal	9717632875
37	Ram Kumar	SSE/GSR	NR		9717599572
38	M. JAGADEESH	SSE/ELS/GSD	SCR	M. Jagadeesh	9701371596
39	M. KANAKARAJU	SSE/ELS/GSD	SCR	M. Kanakaraju	9230734364
40	Mustakeem	SSE/SWM	WCR	Mustakeem	8920141178
41	Mukesh Kumar	Tech-T	WCR		9784117901
42	A. T. Joshi	Norm	CR	A. T. Joshi	9552288862
43	Virek Bankhede	Technician	CR		9527937420
44	P. R. Sen	J.E/Tata	SER	P. R. Sen	9905432769
45	Anindam Chakraborty	Tech-I	E. R/HWH	A. Chakraborty	9831768223
46	RAHUL KUMAR	JE	ER/HWH	Rahul Kumar	8709961593
47	Md. Akbar Hussain	Ss-Tech	ELS/KZS		8585735570
48	N. SANTOSH KUMAR	JE	ELS/KZS/SER	N. Santosh Kumar	9706923406
49	Mahendra Lal	SSE	} PDSO		7459850025
50	Azeem Iquman	Director			9794863133
51	M. K. Gupta	ASDE/RS/GZB	N. R		9777621328
52	Dinesh Sharma	ASDE/RS/GZB	NR		9717631352
53	Jyoti Khadwal	JE	NR		9818610864
54	Ajay Kichar	SSE/GZB	NR		9717632929
55	Amir Sharma	SSE/GZB	NR		9717632925
56	Shantanu Sori	Tech T	NR GZB		9888283491
57	Sunil Kumar	SSE/ELS/GZB	NR GZB		9711023036
58	Rahul Kumar	Engineer/KBIL			7828430042
59	Anant Chavara	Engineer/BDT			939181182
60	Zeekush Nigam	SSE/ELS/RM	WR		9752492375
61	Rajendra Prasad	CLIE/RM	WR		9752495414

6

Sr.No.	Name	Designation	Rty.	Signature	Mobile No.
62	P.R. ATKURJA	SSE	SECA	[Signature]	9752440971
63	P.C. Jha	SSE	SEK	[Signature]	8797318001
64	Shubham Mathur	Seminar Exp	KBIL	[Signature]	8318742657
65	G.K. Gupta	C.M. Manager & Service	ICBL	[Signature]	9971011095
66	Arinash Kumar	Jt. AGM (MKTG)	KBIL	[Signature]	9873663694
67	C.M. SAWAKAR	Chief Manager KBI (MKTG)	KBIL	[Signature]	9036596526
68	Lucky	Engineer/KBI	KBIL	[Signature]	8800741399
69	Saurash Verma	S. Engineer / KBI	KBI	[Signature]	8748481273
70	Gurpreet	Sr. Engineer / KBI	KBI	[Signature]	802473199
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					