



**QM-C-7.1/AB/0029**  
**Inspection Plan(Check Sheet)**

**Item** : **Electro Pneumatic Brake Equipments**  
**Specn.** : **RDSO/2013/CG-03**  
**Amd.** :  
**Drg. No. & Alt.** : **As per ICF/RDSO approved Drawing**

- 
1. Firm's Name :
2. Date (period) of Inspection :
3. Contract Details :
- a. Contract no. and date. :
- b. Order placing authority. :
- c. Specification no. :  
(as mentioned in contract)
- d. Drawing no. (as mentioned in contract) :
4. Quantity on order :
5. Quantity offered for inspection :
6. Date of offering for inspection. :
7. Consignee :
8. Delivery Period :

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**(A) Item Name: EP BRAKE UNIT & EP BRAKE CONTROLLER**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 02

Specification	RDSO/2013/CG-03		Drawing No.	
Sl. No.	From		To	
Qty. Offered		Qty. Passed		
MR Pressure	7±0.1 Kg/cm <sup>2</sup>		PRV Setting	
8 nos BMBC as per RDSO spec. C-K209 (with 40mm stroke).	Corresponding volume may be added.	<b>BC Pressure (As applicable)</b>	1.6±0.1 Kg/cm <sup>2</sup> For MC ,DMC & DPC 1.2±0.1 Kg/cm <sup>2</sup> For TC (HCC) 2.0±0.1 Kg/cm <sup>2</sup> For TC(non HCC) 3.8±0.1 Kg/cm <sup>2</sup> For DMU/TC	
Test	Specified	Actual		
1. Visual	Shall be free from sharp edge, burr			
2. Marking	Manufacturers name, month & year of mfg.			
3. Material	Panel shall be of Aluminium alloy			
4. Dimensional test	As per RDSO/ICF approved drawings			
5. Insulation with meggar	500 VDC			
6. Leakage in EP mode during -				
a) Release	No Leakage			
b) Full Application	No Leakage			
c) Emergency	No Leakage			
7. Charging Time of Auxiliary reservoir of capacity 125 lts (From 0 to 4.8 Kg/cm <sup>2</sup> )	50-70 sec.			

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8. Leakage Test Leakage from mounting of sub-assemblies and components at 10±0.1 Kg/cm <sup>2</sup>	No Leakage				
9. Brake Pipe Pressure	5.0±0.1 Kg/cm <sup>2</sup>				
10. a) Full EP Application time [BC pressure to reach 1.4±.1 Kg/cm <sup>2</sup> For MC ,DMC & DPC 1.0 ±.1 Kg/cm <sup>2</sup> For TC (HCC) 1.8±.1 Kg/cm <sup>2</sup> For TC(non HCC) 3.6± .1 Kg/cm <sup>2</sup> For DMU/TC]	3 to 5 Sec.				
b) EP Release (BC Pressure to reach from 1.6/1.2/2.0/3.8 ±0.1 to 0.4 Kg/cm <sup>2</sup> )	5.5 to 6.5 Sec				
c) Check gradual application in steps.	4 Steps Min.				
d) Check gradual release in steps	4 Steps Min.				
11. EP Emergency Application time [BC pressure to reach 1.4±.1 Kg/cm <sup>2</sup> For MC ,DMC & DPC 1.0 ±.1 Kg/cm <sup>2</sup> For TC (HCC) 1.8±.1 Kg/cm <sup>2</sup> For TC(non HCC) 3.6± .1 Kg/cm <sup>2</sup> For DMU/TC]	2 Sec. (Max.)				
12. a) Auto application Time [BC pressure to reach 1.4±.1 Kg/cm <sup>2</sup> For MC ,DMC & DPC 1.0 ±.1 Kg/cm <sup>2</sup> For TC (HCC) 1.8±.1 Kg/cm <sup>2</sup> For TC(non HCC) 3.6± .1 Kg/cm <sup>2</sup> For DMU/TC]	3 to 5 Sec				
b) Auto Release Time (BC pressure to reach from 1.6/1.2/2.0/3.8 ±0.1 to 0.4 Kg/cm <sup>2</sup> )	5 to 7 Sec				
c) Check gradual application in steps	4 Steps Min.				

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13. Auto Emergency Application time [BC pressure to reach 1.4±.1 Kg/cm <sup>2</sup> For MC ,DMC & DPC 1.0 ±.1 Kg/cm <sup>2</sup> For TC (HCC) 1.8±.1 Kg/cm <sup>2</sup> For TC(non HCC) 3.6± .1 Kg/cm <sup>2</sup> For DMU/TC]	3 Sec				
14. Test of first PLV/PRV	3.6 Kg/cm <sup>2</sup>				

Note:

1. If EP Controller or EP Unit to be tested individually then either one is to be taken as standard.
2. MRVC EP Unit should be tested with EP controller for Application Release/Emergency timings, since MRVC controller does not have EP control.

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**(B) Item Name: Guard Emergency Brake Valve**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 02

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED				
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
3	THREAD	As per ICF/RDSO drg.	T.P.G.				
4	DIMENSION		VC				
6	MARKING		VISUAL				
7	Place the handle in closed position. Connect the inlet port to an air Pressure of 10 kg/cm <sup>2</sup> and observe no leakage at the outlet port.						
8	Place the handle in open position. Close the outlet port using a blank plate. Connect the inlet port to an air pressure of 10 Kg/cm <sup>2</sup> and check leakage all over the body. There shall be no leakage.						
9	Connect the cock to an air pressure of 5 kg/cm <sup>2</sup> . Place the handle in open position and check venting through outlet port.						

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**(C) Item Name: Auxiliary Reservoirs 40/50/125/6 lts (should be procured from approved source)**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Material	SS to AISI 304	Test certificate				
3	C.D.	As per RDSO/ICF approved drawing.	M.TAPE				
4	LENGTH						
5	O.D.						
6	MARKING						
7	WEIGHT						
8	HYD. TEST (at 16 Kg/cm <sup>2</sup> )	The reservoirs shall be maintained at the specified test pressure for 10 minutes to permit a thorough examination to be made of all seams and joints. Whilst under pressure, the reservoir to be well hammered on both side of and close to the welded seams. There shall be no leakage					
9	Mech. Tests of fusion welded seams	As per para 8.5 & 8.6 of section III of IS:2825					

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**(D)Item Name: Dirt Collector with sintered Bronze Filter Element of 50 microns**

Sample Size:

Dimensional: 5% or min. 02/ 3% or min. 01 for detailed dim.

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	Dimension		M. Scale				
6	Dimension		M. Scale				
7	MARKING		VISUAL				
8	Leakage	10 Kg/cm <sup>2</sup>	T. STAND				

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**(E) Item Name: Isolating Cock (with or without vent)**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	Dimension		M. Scale				
6	Dimension		M. Scale				
7	MARKING		VISUAL				
8	Leakage	10 Kg/cm <sup>2</sup>	T. STAND				

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**(F) Item Name: Check Valve**

Sample Size:

Dimensional : 5% or min. 03

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	Dimension		M. Scale				
6	Dimension		M. Scale				
7	MARKING		VISUAL				
8	Leakage	10 Kg/cm <sup>2</sup>	T. STAND				

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**(G) Item Name: Auto Drain Valve**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	MARKING		VISUAL				
6	Leakage	10 Kg/cm <sup>2</sup>	T. STAND				

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**(H) Item Name: Pressure Reducing Valve (PRV/PLV)**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test			Specified	Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	MARKING		VISUAL				
6	Leakage	10 Kg/cm <sup>2</sup>	T. STAND				
7	Output pressure	As per RDSO/ICF approved drawing.					

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**(I) Item Name: Safety Valve**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03		Drawing No.			
Sl. No.		From		To			
Qty. Offered				Qty. Passed			
Test		Specified		Actual			
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	MARKING		VISUAL				
6	Pressure test	Should blow as per design/drawing pressure	T. STAND				

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**(J) Item Name: Release Valve**

Sample Size:

Dimensional : 5% or min. 02

Performance: 10% or min. 03

Specification		RDSO/2013/CG-03	Drawing No.				
Sl. No.		From	To				
Qty. Offered				Qty. Passed			
Test		Specified	Actual				
SN	DESCRIPTION	SPECIFICATION	INST. USED	OBSERVATION			
				1	2	3	4
1	VISUAL	FREE FROM SUR. DEFECT	VISUALLY				
2	Thread	As per RDSO/ICF approved drawing.	T.P.G.				
3	Dimension		M. Scale				
4	Dimension		M. Scale				
5	MARKING		VISUAL				
6	Leakage	Connect to the supply pressure equal to BC pressure. There should be no leakage.	T. STAND				
7	Function Test	Air shall pass freely on movement of lever					

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