



**QM-C-8.1/AB/0010**

**Inspection Plan(Check Sheet)**

(For Knorr Bremse/ Medha/Prag make BMBS)

**Item** : Bogie Mounted Brake System (BMBS) for Freight Stock  
fitted with CASNUB Type Bogie  
**Specn.** : WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-2016.  
**Amd.** :  
**Drg. No. & Alt.:**

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1. Firm's Name
2. Date (Period) of inspection
3. Contracts details:
  - a) Contract No.
  - b) Order placing authority
  - c) Specification no.  
(as mentioned in the contract)
  - d) Drawing No.  
(as mentioned in the contract)
4. Quantity on order
5. Quantity offered for inspection
6. Consignee





**INSPECTION PLAN**  
**(For Knorr Bremse/ Medha/Prag make BMBS)**  
**SPECIFICATION NO. WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-16 For**  
**EL 60 VALVE**  
**I.3.5114 Rev-03**

**1. Acceptance Criteria:**

Equipment Ready Yes/No  
D.P. within due date Yes/No

**2. Visual Check:**

Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No

**3. Performance Tests & Dimensional Check:**

Air / Hydraulic Pressure adequate Yes/No

**CHECK SHEET**

No. Of Sets .

Qty \_\_\_\_\_

Sr.No	TEST DESCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	RECEIVING GAUGE	2% MIN. 2	78						
2		RECEIVING GAUGE		78						
3		RECEIVING GAUGE		44.5						
4		RECEIVING GAUGE		60						
5		VERNIER/GAUGE		70±0.4						
6		VERNIER/GAUGE		49±0.2						
7		VERNIER		10						

**4. Painting** : Adequate Yes / No  
Anti-Corrosive treatment to exteriors given Yes / No

**5. Packing** : Packed adequately Yes / No

**6. Calibration Status checked** OK / Not OK

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



(For Knorr Bremse/ Medha/Prag make BMBS)

**SAMPLE SIZE: 01 No. for 100 BMBS sets or 01 No. Minimum**

**Test No.1**

**LOAD TESTING LEAKAGE**

Place 1" high block between the adjusting screw. Open the cock 16, 8 and 3. Move Handle 'A' to position no 1 and charge brake pipe volume and brake cylinder reservoir gauge to 90 psi (6.2±0.2 Bar).

S.NO.	Description	Specification	Observation			
1	Check leakage all over the body and cock 8 vent.	No leakage				

Move handle 'B' in position no 3 and close cock 16 & 3

1	Check pressure drop in Auxiliary Reservoir and brake cylinder reservoir gauges	Pressure drop should not be there.				
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**Test No. 2**

**EMPTY POSITION LEAKAGE**

Commence test with 3 16 & 8 open and valve handle in position no 8

Move handle 'B' into position no 3. Move the red cock and charge brake pipe volume and brake cylinder reservoir gauges to 5 to 8 psi (0.3-0.6 Bar). Then close the red cock.

1	Check the leakage in cock 8 vent	No Leakage				
2	Close the cock 8 and check leakage in Ratio Piston Vent	No Leakage				

**Test No. 3**

**VALVE FUNCTION**

Commence test with 3 & 16 open and valve handle 'B' in position no 3

1	Open cock 19 & 20. Check the leakage in test plate vent	No Leakage				
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Close cock 19, open red cock and slowly increase pressure on brake pipe volume gauges.

1	Check the pressure in brake cylinder reservoir	13 to 17 psi(0.9 ~1.1 Bar)				
2	Check the pressure in brake pipe volume gauge.	24 to 28 PSI(1.60~2.0 Bar)				
3	Check the initial pressure in Quick action pressure gauge	>0				
4	Check the pressure when valve piston indicator commences to extend in QA.	Before pressure reaches to 20 PSI(1.40Bar)				

**Test No. 4**

**LEAKAGE EMPTY POSITION AND BRAKE CYLINDER PRESSURE GAUGE**

Commence the test with cock 3, 20 & 16 open and valve handle in position no 1. and handle 3 to initial position

1	Check the leakage in test plate vent and ratio piston vent	No Leakage				
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**Test No. 5**

**CAPACITY**

Commence test with 3,16 & 20 cocks open and handle in position no 1

1	Move handle to position 8 and Check the time to reduce the pressure of Q.A. chamber gauge from 90 to 30	7-9 sec.				
2	Close cock 3 and move handle to position no 1. and check the time to increase the pressure of Q.A. chamber gauge from 20 to 80 psi(1.38 to 5.5 Bar)	5-8 sec.				
3	Move Valve handle to position no 8. Check the Q.A. chamber gauge pressure when indicator piston begins to retract.	Before 5 psi(0.35 Bar)				

**Test No. 6 Empty Load Changeover by APM Device**

1.	Set main line PRV at 55 PSI (3.8 Bar). Open the cock 16, 20 and 3. Move cock 'A' handle to position no 1 and charge brake pipe.	Brake cylinder pr. 32 PSI (2.2 ± 0.25 Kg/cm <sup>2</sup> )				
2.	Open the cock 16, 20 and 3 & move cock 'A' handle to position no 8. Place 25 mm. +1/-0 high block between the adjusting screw.	Brake cylinder pr. 55 PSI (3.8± 0.1 Kg/cm <sup>2</sup> )				

• **Calibration Status checked**

OK / Not OK

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**  
(For Knorr Bremse/ Medha/Prag make BMBS)  
SPECIFICATION NO. WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-16 for  
RESERVOIR 6.6 Ltr (EL 60)  
I.3.5115 Rev-Nil

**1. Acceptance Criteria:**

Equipment Ready Yes/No  
D.P. within due date Yes/No

**2. Visual Check :**

Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No

**3. Performance Tests & Dimensional Check:**

Air / Hydraulic Pressure adequate Yes/No

**CHECK SHEET**

No. Of Sets.

Qty \_\_\_\_\_

Sr.No	TEST DESCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	VERNIER/GAUGE	2% or Min 2	178±1.5						
2		VERNIER/GAUGE		∅ 13.5						
3		VERNIER / PLUG GAUGE		∅ 11						
4		VERNIER / RECEIVING GAUGE		49±0.2						
5		VERNIER / RECEIVING GAUGE		257±2.5						
6	Leakage Test	TEST RIG	01 No.	10 kg/cm <sup>2</sup>						

**4. Painting** : Adequate Yes / No  
Anti Corrosive treatment to exteriors given Yes / No

**5. Packing** : Packed adequately Yes / No

**6. Calibration Status checked** OK / Not OK

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**  
**(For Knorr Bremse/ Medha/Prag make BMBS)**  
SPECIFICATION NO. WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-16 for  
SECONDARY BEAM  
I.3.5112 Rev-01

**1. Acceptance Criteria:**

Equipment Ready Yes/No  
D.P. within due date Yes/No

**2. Visual Check:**

Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No

**3. Performance Tests & Dimensional Check:**

Air / Hydraulic Pressure adequate Yes/No

CHECK SHEET

No. of Sets.

Qty \_\_\_\_\_

Sr.No	TEST DISCRPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	Measuring tape/Receiving gauge	2% or Min 2	1762 +2/-0						
2		Bevel Protector/Receiving gauge		13.5°±0.5 °						
3		Measuring tape/Receiving gauge		2026 +2/-0						
4		Measuring tape/Receiving gauge		1540						
5		Vernier/Receiving gauge		36±0.5						
6		Vernier/ Plug Gauge		∅ 16						
7		Vernier/ Plug Gauge		∅ 25.5						
8		Vernier/Receiving gauge		70						

**FUNCTIONAL**

1	Deflection measurement test	Load Measurement Equipment	1% or Min 2	Not more than 1.8mm at 10.8 ton						
2	Set test	Load Measurement Equipment		Not more than 0.25 mm at 16.2 ton.						

**4. Painting:** Adequate Yes / No  
Anti-Corrosive treatment to exteriors given Yes / No

**5. Packing** : Packed adequately Yes / No

**6. Calibration Status checked** OK / Not OK

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**  
**(For Knorr Bremse/ Medha/Prag make BMBS)**  
SPECIFICATION NO. WD-23-BMBS-2008 Rev1, Amendment No. 1 of Sep-16 for  
PRIMARY BEAM  
I.3.5111 Rev-01

1. **Acceptance Criteria:**  
Equipment Ready Yes/No  
D.P. within due date Yes/No
2. **Visual Check:**  
Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No
3. **Performance Tests & Dimensional Check:**  
Air / Hydraulic Pressure Adequate Yes/No

CHECK SHEET

No. of Sets.

Qty \_\_\_\_\_

Sr.No	TEST DISCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	Measuring tape/Receiving gauge	2% or  Min 2	1762 +2/-0						
2		Measuring tape/Receiving gauge		1060						
3		Measuring tape/Receiving gauge		2026+2/-0						
4		Bevel Protector/Receiving gauge		13.5°±0.5 °						
5		Vernier/Receiving gauge		36±0.5						
6		Vernier/ Plug Gauge		∅ 16						
7		Vernier/ Plug Gauge		∅ 32						
8		Vernier/Receiving gauge		70						
<b>FUNCTIONAL</b>										
1	Deflection measurement test	Load Measurement Equipment	1% or Min 2	Not more then 1.8 mm at 10.8 ton						
2	Set test	Load Measurement Equipment		Not more then 0.25mm at 16.2 ton						

4. **Painting** : Adequate Yes / No  
Anti-Corrosive treatment to exteriors given Yes / No
5. **Packing** : Packed adequately Yes / No
6. **Calibration Status checked** OK/Not ok

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**  
**(For Knorr Bremse/ Medha/Prag make BMBS)**  
SPECIFICATION NO.WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-16 for  
LEVER, WELDMENT, LH  
I.3.5109\_Rev-Nil

1. **Acceptance Criteria :**  
Equipment Ready Yes/No  
D.P. within due date Yes/No
  
2. **Visual Checks :**  
Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No
  
3. **Performance Tests & Dimensional Check :**  
Air / Hydraulic Pressure adequate Yes/No

CHECK SHEET

No. of Sets.

Qty \_\_\_\_\_

Sr.No	TEST DISCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	CMM/RECEIVING GAUGE	2% or Min 2	327±0.5						
2		CMM/RECEIVING GAUGE		230±0.5						
3		Vernier/Receiving gauge		117.5						
4		CMM /PLUG GAUGE		∅ 32						
5		CMM/ PLUG GAUGE		∅ 25.38 - 25.46						
6		CMM/ PLUG GAUGE		∅ 25.40 to 25.50						
7		VERNIER		19						
8		CMM/RECEIVING GAUGE		A						

4. **Painting** : Adequate Yes / No  
Anti-Corrosive treatment to exteriors given Yes / No
5. **Packing** : Packed adequately Yes / No
6. **Calibration Status checked** OK / Not ok

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp





**INSPECTION PLAN**  
(For Knorr Bremse/ Medha/Prag make BMBS)  
SPECIFICATION NO. WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-16 for  
LEVER, WELDMENT, RH  
I.3.5108\_Rev-Nil

**1. Acceptance Criteria:**

Equipment Ready Yes/No  
D.P. within due date Yes/No

**2. Visual Checks:**

Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No

**3. Performance Tests & Dimensional Check:**

Air / Hydraulic Pressure adequate Yes/No

CHECK SHEET

No.of Sets .

Qty \_\_\_\_\_

Sr.No	TEST DISCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	CMM/RECEIVING GAUGE	2% or Min 2	327±0.5						
2		CMM/RECEIVING GAUGE		230±0.5						
4		VERNIER/RECEIVING GAUGE		117.5						
5		CMM /PLUG GAUGE		∅ 32						
6		CMM/ PLUG GAUGE		∅ 25.38 - 25.46						
7		CMM/ PLUG GAUGE		∅ 25.40 - 25.50						
8		VERNIER		19						
9		CMM/RECEIVING GAUGE		A						

**4. Painting** : Adequate Yes / No  
Anti Corrosive treatment to exteriors given Yes / No

**5. Packing** : Packed adequately Yes / No

**6. Calibration Status checked** OK / Not ok

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**  
(For Knorr Bremse/ Medha/Prag make BMBS)  
SPECIFICATION NO.WD-23-BMBS-2008 Rev1, Amendment No. 01 of Sep-16 for PUSH ROD ASSEMBLY  
I.3.5110\_Rev-01

- |   |  |           |
|---|--|-----------|
| <b>1. <u>Acceptance Criteria :</u></b>                      | Equipment Ready                            | Yes/No    |
|   | D.P. within due date                       | Yes/No    |
| <b>2. <u>Visual Check:</u></b>                              | Name plate/S.N. punching/Any Loose Fitting | OK/Not OK |
|   | Visual Defects                             | Yes/No    |
| <b>3. <u>Performance Tests &amp; Dimensional Check:</u></b> | Air / Hydraulic Pressure adequate          | Yes/No    |

**CHECK SHEET**

No. of Sets. \_\_\_\_\_

Qty \_\_\_\_\_

Sr.No	TEST DISCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	VERNER/WIDTH GAUGE	2% or Min 2	25.75 - 26.00						
2		VERNIER/ PLUG GAUGE		∅ 25.40 - 25.60						
3		VERNIER		∅ 32						
4		VERNIER / PLUG GAUGE		∅ 25.38 - 25.46						
5		MEASURING TAPE/ RECEIVING GAUGE		864±1.5						

- |   |   |          |
|---|---|----------|
| <b>3. <u>Painting</u></b>                   | : Adequate                                  | Yes / No |
|   | Anti-Corrosive treatment to exteriors given | Yes/No   |
|   |   | Yes / No |
| <b>4. <u>Packing</u></b>                    | : Packed adequately                         | OK/Not   |
| <b>5. <u>Calibration Status checked</u></b> |   | Ok/NotOk |

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**  
**(For Knorr Bremse/ Medha/Prag make BMBS)**  
SPECIFICATION NO.WD-23-BMBS-2008 Rev 1, Amendment No.-1 of Sep-16 FOR HOSE PIPE FOR BRAKE CYLINDER  
DRG NO. I.4.2036 Rev- 04

**1. Acceptance Criteria:**

Equipment Ready Yes/No  
D.P. within due date Yes/No

**2. Visual Checks :**

Name plate/S.N. punching/Any Loose Fitting OK/Not OK  
Visual Defects Yes/No

**3. Performance Tests & Dimensional Check:**

Air / Hydraulic Pressure adequate Yes/No

CHECK SHEET

No.of Sets .Qty\_\_\_\_\_

Sr.No	TEST DISCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	Vernier / Gauge	2% or Min 2	60.30±0.4						
2		Vernier / Gauge		70±0.4						
3		Measuring Tape		840±6						
4	LEAKAGE TEST Apply at 10 Bar.	Test Rig	01 No.	No. Leakage						

**4. Painting** : Adequate Yes / No  
Anti-Corrosive treatment to exteriors given Yes / No

**5. Packing** : Packed adequately Yes / No

**6. Calibration Status checked** OK / Not

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**INSPECTION PLAN**

**(For Knorr Bremse/Medha/Prag make BMBS)**

SPECIFICATION NO. WD-23-BMBS-2008 Rev 1, amendment No-1 of Sep-16 FOR  
HOSE PIPE FOR EL-60  
DRG NO. I.4.2037 Rev-03

**1. Acceptance Criteria:**

Equipment Ready  
D.P. within due date

Yes/No  
Yes/No

**2. Visual Checks:**

Name plate/S.N. punching/Any Loose Fitting  
Visual Defects

OK/Not OK  
Yes/No

**3. Performance Tests & Dimensional Check:**

Air / Hydraulic Pressure adequate

Yes/No

**CHECK SHEET**

No.of Sets .

Qty\_\_\_\_\_

Sr.No	TEST DISCRIPTION	MODE	SAMPLE SIZE	SPECIFIED PARAMETERS	OBSERVED VALUES					REMARKS
					1	2	3	4	5	
1	Dimensional checks	Vernier / Gauge	2% or Min 2	49.20±0.3						
2		Vernier / Gauge		49.20±0.3						
3		Measuring Tape		835±6						
4	LEAKAGE TEST Apply at 10 Bar.	Test Rig	01 No.	No. Leakage						

**4. Painting**

: Adequate  
Anti-Corrosive treatment to exteriors given

Yes / No  
Yes / No  
Yes / No

**5. Packing**

: Packed adequately

**6. Calibration Status checked**

OK/Notok

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp



**CHECK SHEET FOR VISUAL INSPECTION HARDWARE/ STANDARED ITEMS (VISUAL INSPECTION 1%)**

**(For Knorr Bremse/Medha/Prag make BMBS)**

**1.0 Acceptance Criteria:**

- Equipment Ready Yes/No
- D.P. within due date Yes/No

**1.1. Visual Check :**

- Name plate/S.N. punching/Any Loose Fitting (Wherever applicable) Opening plugged with PVC Plugs/Caps OK/Not OK  
Yes/No
- Visual Defects Yes/No

S. No	Name of Item	Drawing No with latest alteration	Lot Size	Sample Size	Observation	Remarks
1	PIN COTTER	476858				
2.	PIN CLEVIS	778111				
3.	PIN CLEVIS	C162086				
4.	PIN CLEVIS	C162088				
5.	PIN CLEVIS	C162087				
6	PIN CLEVIS	778112				
7	PIN COTTER	C162098				
8	PIN COTTER	C162098				
9	WASHER	778084				
10	BRAKE HEAD	778113				
11	BUSH	C140445				
12	SPRING DOWEL SLEEVE	C140446				
13	O-RING	A27763/17/KI				
14	SCREW HEX HEAD	748645				
15.	WASHER LOCK	735734				
16	LOCKNUT	755896				
17	O-RING	I.4.1050				
18	SCREW HEAD	734734				
19	HEXA HEAD BOLT	I.H.0337				
20	HEX HEAD BOLT	I.H.0153				
21	HEXA NUT	I.H.509				
22	HEXHEAD BOLT	C152126				
23	PIN CABLE	776621				
24	SPLIT PINS	I.4.2063				
25	SPLIT PINS	I.4.2062				
26	SPRING WASHER	I.H.0062				
27	SPRING WASHER	I.H.0510				
28	SPRING WASHER	477111				
29	PIN TIE ROAD	I.3.2044				
30	EQUALIZER FOR CABLE	776622				
31	WASHER	C162060				
32	WASHER	C162641				

**1.2 Painting :**

- Adequate- Yes/No
- Anti-Corrosive treatment to exteriors given
- Anti-Corrosive treatment to exteriors given- Yes/No

**1.3 Packing :** Packed adequately - Yes/No

**1.4 Calibration Status checked.** OK/Not OK

RDSO Rep.  
Name, Designation & Stamp

FIRM's Q.C  
Name, Designation & Stamp