



QM-C-8.1/FIBA/0001

Inspection Plan (Check Sheet)

Item Description: *FIBA (Failure Indication cum Brake Application) Device*

Specn: RDSO's STR No. RDSO-2015 CG-05 Rev. Nil Amendment 1 of Oct-2016.

Make:

Date of inspection:

No. of Quantity:

P. O. No. :

Date: _____

Sample Quantity : _____ for dimensional check and _____ for characteristic for FIBA & _____
for dimensional check and _____ for leak test of Indicators.

Drawing No. :

VISUAL INSPECTION FIBA UNIT

S. no.	Particulars	Unit	Specified	Observed				
Sample No.								
1.	Finish	-	Smooth					
2.	Cut	-	Nil					
3.	Burs/Flash	-	Nil					
4.	Rust/Corrosion	-	Nil					
5.	Welding defect	-	Nil					
6.	Casting defect	-	Nil					
7.	Identification	-	As per drg.					
8.	Painting	-	OK/Not OK					
9.	Condition of port & thread	-	OK/Not OK					
10.	Packing	-	OK/Not OK					

Remarks-

Sign. of RDSO official

Sign. of Firms representative



DIMENSIONAL CHECK OF FIBA DEVICE & INDICATOR: (10% of the lot quantity or min 10nos)

S. no.	Particulars	Unit	Specified	Observed				
FIBA UNIT Sample No.								
1.	*Length of FIBA Device	mm						
2.	*Height of FIBA Device	mm						
3.	*Thickness of FIBA device without bkt.	mm						
4.	*Thickness of FIBA Device with bkt.	mm						
5.	Port diameter and thread:	BP		3/4" BSPP				
		B1		3/4" BSPP				
		B2		3/4" BSPP				
		IND		1/4" BSPP				
6.	#Mounting bkt hole pitch of FIBA device	mm	134±					
7.	#Dia. of mounting bkt. Holes	Hole 1	mm	18±				
		Hole 2	mm	18±				
		Hole 3	mm	18±				
8.	Weight of FIBA valve with bkt	Kg	16 Kg approx..					
Brake Indicator Sample no.								
9.	*Height of indicator	As per approved drawing	mm					
10.	*Width of indicator		mm					
11.	* Thickness of indicator		mm					
12.	Inlet port dia of indicator			1/4" BSPP				
13.	@ Weight of indicator		Kg					
14.	# Indicator Mounting holes dia		mm	11.5±				
15.	# Indicator Mounting holes pitch	mm	124±					

Remarks: - * Dimensions as per approved drawing.

Tolerance as per approved drawing.

@Weight of indicator as per approved drawing.

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Functional Test of FIBA Device:

S. No.	Test and testing procedure	Standard	Results of FIBA device sample obtained			
			S. No.....	S. No.....	Mfg dt.....	Mfg dt.....
1.	<p>Initial Charging:</p> <p>i) Ensure that all Isolating cocks and cut of angle cocks in supply line should be in open condition. Other end cut of angle cocks and drain cocks provided on test bench should be in closed position.</p> <p>ii) Charge the FP line at 6.0 Kg/Cm² and BP line at 5.0 Kg/Cm².</p>	<p>-----</p> <p>FP= 6 ± 0.1 Kg/Cm²</p> <p>BP= 5 ± 0.1 Kg/Cm²</p>				
2.	<p>Leak Test:</p> <p>Check for any leakage in FIBA device & pipe lines. No leakage is permitted in FIBA device and through its joint. Total leakage in system should not be more than 0.2 Kg/Cm² in 60 sec.</p>	<p>Leak test within limit.</p>				
3.	<p>High Pressure Test:</p> <p>Charge FP and BP upto 10.0 Kg/Cm².</p>	<p>i) No leakage in FIBA device Valve</p> <p>ii) FIBA device should not operate.</p> <p>iii) No damage in FIBA device or circuit.</p>				
4.	<p>A) Functional Test at 2.0 Kg/Cm² (Tare Pressure)</p> <p>Charge the FP at 2.0 Kg/Cm² Pressure and BP at 5.0 Kg/Cm².</p> <p>Open the ½" drain cock to drain the air pressure of one side air spring/40L auxiliary reservoir. Repeat the process for other side air spring.</p>	<p>i) Pressure in respective gauge start falling & FIBA device actuate when respective gauge pressure becomes less than 1±0.1 Kg/Cm².</p> <p>ii) BP pressure starts venting gradually and settles at 3.4 Kg/Cm² approx.</p> <p>iii) Both indicators should be red.</p> <p>iv) Hissing sound of 90±5db should blow.</p>				
	<p>BP Isolation: (Brake release and suppression of hissing sound /Hissing sound along Indicators)</p> <p>Close the Isolating cock provided before FIBA device in BP line.</p>	<p>i) BP pressure exhaust, through FIBA device exhaust port stops and BP pressure rises to 5 Kg/Cm².</p> <p>ii) Hissing sound stops.</p> <p>iii) Both indicators show red/green*.</p> <p>*If Indicators are still red go for next step i.e. suppression of Indicators)</p>				
	<p>Suppression of Indicator:</p> <p>Pull the resetting keys provided on FIBA device.</p>	<p>Both indicators of FIBA device should turn to green from red.</p>				



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<p>B) Functional Test at 5.0 Kg/Cm²: Charge the FP at 5.0 Kg/Cm² Pressure and BP at 5.0 Kg/Cm². Open the ½" drain cock to drain the air pressure of one side air spring/40L auxiliary reservoir. Repeat the process for other side air spring.</p>	<p>i) Pressure in respective gauge start falling & FIBA device actuate when respective gauge pressure becomes less than 1±0.1 Kg/Cm². ii) BP pressure starts venting gradually and settles at 3.4 Kg/Cm² approx. iii) Both indicators should be red. iv) Hissing sound of 90± 5db should blow.</p>				
<p>BP Isolation: (Brake release and suppression of hissing sound /Hissing sound along Indicators) Close the Isolating cock provided before FIBA device in BP line.</p>	<p>i) BP pressure exhaust, through FIBA device exhaust port stops and BP pressure rises to 5 Kg/Cm². ii) Hissing sound stops. iii) Both indicators show red/green*. *If Indicators are still red go for next step i.e. suppression of Indicators)</p>				
<p>Suppression of Indicator: Pull the resetting keys provided on FIBA device.</p>	<p>Both indicators of FIBA device should turn to green from red.</p>				
<p>C) Functional Test at 6.0 Kg/Cm²: Charge the FP at 6.0 Kg/Cm² Pressure and BP at 5.0 Kg/Cm². Open the ½" drain cock to drain the air pressure of one side air spring/40L auxiliary reservoir. Repeat the process for other side air spring</p>	<p>i) Pressure in respective gauge start falling & FIBA device actuate when respective gauge pressure becomes less than 1±0.1 Kg/Cm². ii) BP pressure starts venting gradually and settles at 3.4 Kg/Cm² approx. iii) Both indicators should be red. iv) Hissing sound of 90± 5db should blow.</p>				
<p>BP Isolation: (Brake release and suppression of hissing sound /Hissing sound along Indicators) Close the Isolating cock provided before FIBA device in BP line.</p>	<p>i) BP pressure exhaust, through FIBA device exhaust port stops and BP pressure rises to 5 Kg/Cm². ii) Hissing sound stops. iii) Both indicators show red/green*. *If Indicators are still red go for next step i.e. suppression of Indicators)</p>				
<p>Suppression of Indicator: Pull the resetting keys provided on FIBA device.</p>	<p>Both indicators of FIBA device should turn to green from red.</p>				
<p>5. Brake Pipe Variation Test: Drop Brake Pipe pressure from 5.0 Kg/Cm² to zero.</p>	<p>i) FIBA device should not actuate. ii) FP line pressure should not drop. iii) Both indicators should show green.</p>				



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		iv)No Hissing sound.					
6.	Charging Behaviour Test: Charge BP prior to FP and observe the actuation behaviour of FIBA Device if actuated.	FIBA device should not actuate					
7.	Resetting Behaviour Test: i) Charge the system at 5.0 Kg/Cm ² pressure . ii) Drop FP line pressure and actuate the respective FIBA Device. iii) Close the drain cock and raise FP line pressure of FIBA Device to again5.0 Kg/Cm ² .	FIBA device should not reset automatically					

Functionality & Leak Test of Brake Indicator:

Leak Test

S. No.	Test and testing procedure	Standard	S. No.	S. No.	S. No.	S. No.	S. No.	S. No.
1.	Gradually raise the air pressure to 2 Kg/Cm ² and thoroughly check the air leakage with the help of liquid soap solution.	There should be no leakage from any joint or port of Indicator						
2.	Gradually raise the air pressure to 10 Kg/Cm ² and thoroughly check the air leakage with the help of liquid soap solution.	There should be no leakage from any joint or port of Indicator						

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Sign. of Firms representative



Functionality Test

S. No.	Test and testing procedure	Standard						
1.	Apply a pressure of 0.5 to 0.6 Kg/Cm ²	Red colours should appear in window of Indicator. Movement of piston of Indicator shall be smooth and steady.						
2.	Now release the pressure to 0 Kg/Cm ²	Green colours should appear in window of Indicator.						
3.	Movement behaviour of Indicator	Piston of indicator should move smoothly and piston should not be sticky. Indicator shall be air tight and water resistant						

Remarks-

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Inspection Format of Hose connection

Date of inspection: -

Make: -

PO. No: -

Quantity on Order: -

Quantity offered for Inspection: -

No. of samples: -

SN.	Particulars	Unit	Specified	Observation
1	Overall length	mm	550 \pm 5	
2	Thread	mm	$\frac{3}{4}$ " BSP	
3	Thread	mm	$\frac{3}{4}$ " BSP	

Physical condition: -

Status/Remarks: -

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Sign. of Firms representative



Inspection Format of Isolating Cock

Date of inspection: -

Make: -

PO. No: -

Quantity on Order: -

Quantity offered for Inspection: -

No. of samples: -

SN.	Particulars	specification	Method	1	2	3	4	5
1	Dimensional check (10%)	85±0.1	VC					
		80 mm max	HG					
		CRS70±0.4	VC					
		125 mm max	HG					
		Weight (1.5 kg approx.)						
2	Leakage testing	No leakage	Test rig					
(a)	Handle in closed position connect to 10 kg/cm ² & check the leakage at out let port	No leakage	Test rig					
(b)	Plug the out let port handle in open position connect to 10 kg/cm ² & check the leakage the all over body							
3	Visual inspection	Crack, burr, extra material shall not be present, surface condition & marking to be adequate where ever required.	Visual					
		Red enamel paint						

Status/Remarks: -

Sign. of RDSO Official

Sign. of Firm Representative