



No. SV.AS.FIBA

Date: .06.2020

Principal Chief Mechanical Engineer,

1. Central Railway, CSTM, Mumbai - 400 001
2. Eastern Railway, Fairly Place, Kolkata- 700 001
3. Northern Railway, Baroda House, New Delhi-110 001
4. Southern Railway, Park Town, Chennai - 600 003
5. South Central Railway, Secunderabad-500 071
6. South Eastern Railway, Garden Reach, Kolkata-700 043
7. North Eastern Railway, Gorakhpur-273 001
8. North East Frontier Railway, Maligaon, Guwahati- 781 011
9. Western Railway, Churchgate, Mumbai-400020
10. East Central Railway, Hazipur-844 101
11. East Coast Railway, Railway Complex, Bhubaneswar- 23
12. North Central Railway, Allahabad-211 001
13. North Western Railway, Jaipur-302 006
14. South Western Railway, Hubli- 580023
15. West Central Railway, Jabalpur- 482 001
16. South East Central Railway, Bilaspur- 495 004
17. Integral Coach Factory, Chennai – 600 038
18. Rail Coach factory, Kapurthala– 144 602
19. Modern Coach Factory, Raebareli, Lalganj - 229120
20. KRC Ltd. Corporate office, Belapur Bhawan, New Mumbai-400 614

Sub:Maintenance instructions for Failure Indication cum Brake Application (FIBA) device.

Ref: This office letter no.SV.AS.FIBA dated 01.06.2018.

Maintenance instruction for FIBA device were issued earlier, vide letter under reference dated 01.06.2018. Updated maintenance instructions for Failure Indication cum Brake Application (FIBA) device to RDSO STR no. RDSO/2015/CG-05 fitted in air spring fitted coaches are as under-

1. During new fitment of FIBA device in PUs and Railways-

- i) All the pipe arrangement and fitment shall be done as per respective RCF drawing.
- ii) Functionalty test of FIBA device during new fitment in coaches shall be done as per **Annexure- 'B'** enclosed with this letter.

2. During train examination and maintenance on Railways-

Following tests and checks of FIBA devices shall be done during prescribed maintenance schedule carried out on Railways in workshops and maintenance depots.

S N o	Maintenance/checks/ tests to be carried out	During Primary/ Secondary Maintenance (D1 Schedule)	During 'A' Schedule (D2 Schedule)	During 'B' Schedule	During D3 Schedule	During 'C' Schedule/ IOH/POH (SS1/SS2/SS3 Schedule)
1	Visually inspect condition of mounting bracket, mounting bolts, fasteners & FIBA device cover and tight it properly if found loose or missing nut/bolt	Yes	Yes	Yes	Yes	Yes
2	Visually inspect condition of Isolating cocks (Open/close), release valves, release valves handles & indicators (Red/Green). It is to be ensured that FIBA device & air springs are set for its desired function & are not in isolated condition.	Yes	Yes	Yes	Yes	Yes
3	Visually inspect FIBA device, pipes and all joints for any damage/leakage and rectify.	Yes	Yes	Yes	Yes Inspect FIBA device, pipes and all joints for any leakage with soap solution.	Yes Inspect FIBA device, pipes and all joints for any leakage with soap solution.
4	*Check functioning of FIBA device as per Annexure 'A' .	*Yes (atleast 01 coach in a rake during primary maintenance and the same coach should not be repeated in next trips until all the coaches in a rake have been attended for functional test)	----	-----	Yes	----

5	Necessary schedule maintenance of FIBA device as prescribed in OEMs maintenance manual & Testing of Functional behaviour as per Annexure 'B' .	----	----	----	---	Yes
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*Air will be drained from different air spring of a coach during each functionality test so that in 4 functionality tests of FIBA devices of a coach, all the 4 air springs of the coach are covered.

3. During Rolling-in/ Rolling out Examinations-

During Rolling-in/ Rolling out Examinations of trains, following items of FIBA devices should be checked-

- i) Indicators colour i.e Red or Green to be checked. In case any indicator of FIBA device found red, FIBA device of same should be examined thoroughly and suitable action to be taken.
- ii) Hissing sound or any major leakage from FIBA device to be observed.
- iii) Any hanging or loose part, unusual sound from FIBA device or pipelines to be observed.

4. Action to be taken during actuation of FIBA device-

Following shall occur in actuated FIBA device-

- i) Both Indicators of FIBA device of same bogie will turn to red.
- ii) Hissing sound will start from exhaust port of FIBA device
- iii) Brake will apply in entire train.

Following action to be taken in case of actuated FIBA device

a) Enroute –

- i) Identify the coach in which FIBA device is actuated.
- ii) Note down the coach particulars and location of actuated FIBA device and report to C&W control for next course of action.
- iii) Close the isolating cock provided in BP line of actuated FIBA device. Brakes will release in brake release position of the train. Hissing sound will stop.
- iv) Close the both Isolating Cock with vent feature provided between FIBA device and air springs. FIBA device will be isolated from air spring. However, Indicators of FIBA device may or may not turn to green.
- v) Pull the resetting keys provided on FIBA device. Indicators of FIBA device will turn to green.
- vi) Isolate the air springs of affected coach.
- vii) Start the train and proceed upto next C&W point or destination with maximum speed of 60 kmph.

➤ At the next C&W point, C&W staff will examine the affected coach and check for the failure of air spring. In case failure of air spring is confirmed & can not be attended, detach the coach or coach may be allowed upto next suitable point available (with FIBA device & air springs in isolated condition) for repair or upto destination at restricted speed. Terminating stations & enroute divisions will be communicated in this regard.

In case failure of air spring is confirmed & attended to make it good, Air springs & FIBA device shall be set for their desired function & shall not be in isolated condition before permitting the coach in normal service with normal speed.

In case air spring is found intact, FIBA device malfunctioning & FIBA device can not be attended, the FIBA device may be isolated & air springs in working condition. Train may be allowed to run with normal speed with escorting staff, who shall keep monitoring condition of air spring condition at available opportunities up to destination. Terminating stations & enroute divisions will be communicated in this regard.

b) At train terminating stations: -

- i) Identify the coach in which FIBA device is actuated.
- ii) Note down the coach particulars and location of actuated FIBA device.
- iii) Examine the affected coach and check for the failure of air spring. In case failure of air spring is confirmed, FIBA device and air springs of affected coach are to be isolated.
- iv) If FIBA is found to be malfunctioning, necessary attention to FIBA shall be given.
- v) Detach the coach for necessary repairs of air spring or rectify the air spring.
- vi) Reset the FIBA device.
- vii) Test the functionality of FIBA device as per enclosed **ANNEXURE-A**.

The maintenance of FIBA devices of different makes shall be done as per manufacturer's manual.

This is for your kind information and necessary action please.

DA: As above

(Shobhit Pratap Singh)
Jt. Director/Carriage/VDG
For Director General/ Carriage

ANNEXURE-AON VEHICLE TEST FORMAT FOR FIBA DEVICE:Depot/Div/Rly/PU.....Date of testing.....Coach
no.....POH/mfg. Details (Coach) Return date.....Year
Built.....

S. No	Test and testing procedure	Standard	Results obtained			
			Bogie no..... S. No. of FIBA device: Make: Mfg. date :		Bogie no..... S. No. of FIBA device: Make: Mfg. date:	
			Air spring -1	Air spring -3	Air spring -2	Air spring -4
1.	Initial Charging: i) Charge the FP at 6.0 Kg/Cm ² and BP at 5.0 Kg/Cm ² . ii) Ensure the charging of air springs with the help of levelling valve lever position.	FP= 6 ± 0.1 Kg/Cm ² BP= 5 ± 0.1 Kg/Cm ² Levelling valve lever should be in horizontal position.				
2.	Leak detection: Check for any leakage in entire system. Any leakage found in FIBA device or pipe lines should be attended.	No leakage				
3.	Functional Test : Charge the air springs on tare condition of the coach and BP at 5.0 Kg/Cm ² . Open the 1/2" drain cock of 40L auxiliary reservoir of one side air spring in ICF coaches. In LHB coaches, air may be vented by detaching installation lever from levelling valve by opening nut.	i) FIBA device of relevant bogie should actuate. ii) Brakes should apply in entire coach. iii) Both indicators of same bogie should be red. Indicators of other bogie should show green. iv) Whistling/ Hissing sound should blow.				
4.	Brake Pipe Isolation Close the isolating cock of BP line of actuated FIBA device.	Brake should release in entire coach				
5.	Suppression of Indicator: Close the both isolating cocks with vent feature and pull the resetting keys if provided on FIBA device.	Both indicators of same bogie should turn to green from red. Indicators of other bogie should remain green.				
6.	After functional testing, all air springs & FIBA device of coach shall be set for their desired function & not in isolated condition.	To be ensured				

Remarks:

Signature of testing Official

ANNEXURE-B

ON VEHICLE TEST FORMAT FOR FIBA DEVICE:

Depot/Div/Rly/PU.....Date of testing.....Coach
no.....

POH/mfg. Details (Coach) Return date.....Year
Built.....

S. No.	Test and testing procedure	Standard	Results obtained			
			Bogie no..... S. No. of FIBA device: Make: Mfg. date :		Bogie no..... S. No. of FIBA device: Make: Mfg. date:	
			Air spring -1	Air spring -3	Air spring -2	Air spring -4
1	Initial Charging: i) Charge the FP at 6.0 Kg/Cm ² and BP at 5.0 Kg/Cm ² . ii) Ensure the charging of air springs with the help of levelling valve lever position.	FP= 6 ± 0.1 Kg/Cm ² BP= 5 ± 0.1 Kg/Cm ² Levelling valve lever should be in horizontal position.				
2.	Leak detection: Check for any leakage in entire system. Any leakage found in FIBA device or pipe lines should be attended.	No leakage				
3.	Functional Test : Charge the air springs on tare condition of the coach and BP at 5.0 Kg/Cm ² . Open the ½” drain cock of 40L auxiliary reservoir of one side air spring in ICF coaches. In LHB coaches, air may be vented by detaching installation lever from levelling valve by opening nut.	i) FIBA device of relevant bogie should actuate. ii) Brakes should apply in entire coach. iii) Both indicators of same bogie should be red. Indicators of other bogie should show green. iv) Whistling/ Hissing sound should blow.				
4.	Brake Pipe Isolation Close the isolating cock of BP line of actuated FIBA device.	Brake should release in entire coach				
5.	Suppression of Indicator: Close the both isolating cocks with vent feature and pull the resetting keys if provided on FIBA device.	Both indicators of same bogie should turn to green from red. Indicators of other bogie should remain green.				
6.	Brake Pipe Variation Test: Drop Brake Pipe pressure from 5.0 Kg/Cm ² to zero.	i) FIBA device should not actuate. ii) Brakes should apply. iii) No FIBA indicator should turn to red. iv) No whistling/Hissing sound.				

7.	Repetition of test for testing of FIBA devices for remaining 03 Air springs of the coach.	Repeat the above procedures for testing of remaining 03 Air springs accordingly and note down the reading in relevant column.				
8.	After functional testing, all air springs & FIBA device of coach shall be set for their desired function & not in isolated condition.	To be ensured				

Remarks:

Signature of testing Official