

AIR BRAKE TESTING

(Single Car)

Presented by-
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AIR BRAKE TESTING (Single Car)

Coach no.		Type		Date of testing	
POH date		IOH		R/Date	
DV No.		DV Make		Bk. Equipment	
WSP make					
Pressure	BP	Specified	5 ± 0.1 kg/cm ²	Actual	
	FP		6 ± 0.1 kg/cm ²		

Pre-Inspection: Please ensure that all the pipe fittings, brake equipment's are properly fitted and in place before starting of testing.

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
1.0	Reservoir Charging			
1.1	Charging time of AR (0 – 4.8 kg/cm ²)	175± 30 sec.(SAB) 60 to 120 sec.(KB)	.....
1.2	Charging time of CR(6.0 Ltr) (0 – 4.8 kg/cm ²)	165±20 sec.(SAB) 160 to 210 sec.(KB)	.....
1.3	BP Pressure	5.0±0.10 kg/cm ²	.....
1.4	CR Pressure	5.0±0.10 kg/cm ²	.....
1.5	FP Pressure	6.0±0.10 kg/cm ²	.....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
2.0	<p>Sealing test/ leakage test (Allow the system to settle for 2 min. after charging BP & FP. Observe the rate of leakage.)</p>			
2.1	BP (Less than 0.1 kg/cm ² in 5 minutes)	BP<0.2 kg/cm ² /minute	..... ...
2.2	FP (Less than 0.1 kg/cm ² in 5 minutes)	FP<0.2 kg/cm ² /minute	..... ....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
3.0	Full Brake Application			
3.1	Reduce BP from 5.0 to 3.4 kg/cm ²	3 – 5 Sec.	..... ...
3.2	Brake Accelerator should not respond	Should not respond	..... ....
3.3	Maximum BC pressure	3.0 ±0.1 kg/cm ²	..... .....
3.4	Leakage in BC Pressure within 5 minutes	<0.1 kg/cm	..... .....
3.5	All brake cylinder are applied	Applied	..... .....
3.6	Both side Brake indicators should show Red	Red		

ITEM	TEST	SPECIFIED VALUE	CTUAL VALUE	REMARKS
4.0	Release full Brake Application			
4.1	Charge BP (up to 5.0 kg/cm ²)	5.0±0.1 kg/cm ²	..... ...
4.2	All brake cylinders are released	Released	..... ....
4.3	Both side Brake indicators should show Green	Green	..... .....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
5.0	Over Charge Protection Check the overcharging of CR it should not be overcharged more than 0.1 kg/cm ² in 10 second.	Less than 0.1 kg/cm ² in 10 sec.	.....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
6.0	Emergency Application			
6.1	Reduce BP to 0 kg/cm ²	0 kg/cm ²	..... ...
6.2	Brake accelerator should respond	blast of air	..... .....
6.3	Charging time of brake cylinder (0 – 3.6 kg/cm ²)	3 – 5 Sec.	..... .....
6.4	Max. brake cylinder pressure	3.0 ±0.1 kg/cm ²	..... .....
6.5	All Brake Cylinders applied	Applied	..... .....
6.6	Both side Brake indicator window should show red	Red		

ITEM	TEST1.35	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
7.0	Release emergency Brake application			
7.1	BC release time (Maximum to 0.4 kg/cm ²)	15 -20 Sec.	.....
7.2	All Brake Cylinder released	Released	.....
7.3	Both side Brake indicator window should show Green	Green	.....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
8.0	<p>Graduated brake application and Release</p> <p>Graduated brake application and Release (Minimum 7 steps)</p>	<p>Brake should apply and release corresponding to decrease and increase of BP Pressure</p>		

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
9.0	Test for Pressure switch for Anti skid device			
9.1	Charge the Feed pipe pressure	OK	..... ...
9.2	Anti skid device get power supply at 1.8 ± 0.2 kg/cm ²	OK	..... ....
9.3	Anti skid device get power supply off at 1.3 ± 0.2 kg/cm ²	OK	..... .....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
10.0	Isolation Test			
10.1	Close the isolating cocks for Bogie –1 & 2	Brake should not applied	.....
10.2	Reduce BP pressure to full brake application(Brake should not apply)		.....
10.3	Both side Brake indicators shows Green	Green.	.....
10.4	Open both isolating cock (Brake should apply)	Brake Apply	.....
10.5	corresponding to opening of isolating cock for bogies)	Applied	.....
10.6	Both side Brake indicators shows Red	Red	.....
10.7	Again close the Isolating cock of bogie 1&2 one by one.Both side Brake indicators of bogie 1&2 shows Green one by one.	Green.	.....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
11.0	Sensitivity Test			
11.1	Reduce the BP pressure at the rate of 0.6kg/cm ² in 6 second.	Brake should applied within 6 second	..... ...
12.0	Insensitivity Test		..... ....
12.1	Exhaust BP pressure at the rate of 0.3 kg/cm ² Per minute	Brake should not applied	..... .....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
13.0	Passenger Emergency Pull Box testing			
13.1	Pull the emergency pull box handle & check	BP pressure should remain 2.0±0.2 kg/cm ²	.....
13.2	Brake accelerator does respond.	should respond	.....
13.3	BP Pressure exhaust from emergency Brake valve	YES.	..... ...
13.4	Indicator Lamp on out side coach glowing	YES	..... ...
13.5	Both side Brake indicators shows Red	Red	.....
13.6	After resetting, exhaust from emergency Brake valve is stopped	Should stop	.....
13.7	Both side Brake indicators shows Green	Green.	.....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
14.0	Hand Brake test (Power car only)			
14.1	Apply hand brake by means of wheel	OK	.....
14.2	Both side Hand Brake indicators shows Red	Red	.....
14.3	Brake Cylinders provided with hand brake lever are applied	Applied	..... ...
14.4	Movement of flex ball cable is proper	YES	..... ...
14.5	Release hand brake by means of wheel	OK	.....
14.6	Brake should release	Release		
14.7	Both side Hand Brake indicators shows Green	Green.		

	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
15.0	Emergency brake by guard van valve (Power car only)			
15.1	Drop BP Pressure by means of guard valve (Brake Should apply)	Brake Apply	.....
15.2	Brake accelerator should respond	Blast of air	.....
15.3	Both side Brake indicators shows Red & Hand Brake indicators shows Green	OK	..... ...
15.4	Reset guard van valve (Brake should release)	Releases	..... ...

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
16.0	<p>Manual release test</p> <p>Apply full brake application and pull manual release wire of DV, it should be released in one brief pull of Manual release valve.</p>	<p>CR Drops to zero, Brake releases</p>	<p>.....</p>	

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
17.0	WSP test			
17.1	Check all Speed sensor air gap between sensor and Phonic wheel by means of filler gauge.	0.9 to 1.4 mm	.....
17.2	Charge the FP Pressure at full specified value.	1.8±0.2 kg/cm ²	.....
17.3	Check the WSP Micro Processor activated	Activated	.....
17.4	Check the WSP Micro Processor showing code 99.	OK	.....
17.5	Check the Dump Valve venting by test mode	Venting one by one in proper sequence	.....

ITEM	TEST	SPECIFIED VALUE	ACTUAL VALUE	REMARKS
18.0	Clearance between brake disc & brake pad	1.5 mm	.....

Any Question?

THANKYOU