

1.1.1. Single car test procedure

pressure	BP	Specified	$5 \pm 0.1 \text{ kg/cm}^2$
	FP		$6 \pm 0.1 \text{ kg/cm}^2$

Please ensure that all the pipe fittings, brake equipment are properly fitted and in place before starting the testing.

Item	Test Parameters	Specified value
1.0	Reservoir Charging	
1.1	Charging time of AR ($0 - 4.8 \text{ kg/cm}^2$)	$175 \pm 30 \text{ sec. (FTIL)}$ $60 \text{ to } 120 \text{ sec. (KB)}$
1.2	Charging time of CR (6.0 litre) ($0 - 4.8 \text{ kg/cm}^2$)	$165 \pm 20 \text{ sec. (FTIL)}$ $160 \text{ to } 210 \text{ sec. (KB)}$
1.3	BP Pressure	$5.0 \pm 0.10 \text{ kg/cm}^2$
1.4	CR Pressure	$5.0 \pm 0.10 \text{ kg/cm}^2$
1.5	FP Pressure	$6.0 \pm 0.10 \text{ kg/cm}^2$
2.0	Sealing test (Allow the system to settle for 2 min. after charging BP & FP. Observe the rate of leakage).	
2.1	BP (Less than 0.1 kg/cm^2 in 5 minutes)	$< 0.1 \text{ kg/cm}^2$
2.2	FP (Less than 0.1 kg/cm^2 in 5 minutes)	$< 0.1 \text{ kg/cm}^2$
3.0	Full Brake Application	Brake should apply
3.1	Reduce BP from 5.0 to 3.4 kg/cm^2	with in 3 – 5 Sec.
3.2	Brake Accelerator	Should not respond
3.3	Maximum BC pressure	$3.0 \pm 0.1 \text{ kg/cm}^2$
3.4	Leakage in BC Pressure within 5 minutes	$< 0.1 \text{ kg/cm}^2$
3.5	All brake cylinders	Should be Applied
3.6	Both side Brake indicators	Should show Red
4.0	Release after Brake Application	
4.1	Charge BP (up to 5.0 kg/cm^2)	$5.0 \pm 0.1 \text{ kg/cm}^2$
4.2	All brake cylinders	Should be Released
4.3	Both side Brake indicators	Should show Green
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.
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 ($0 - 3.0 \text{ kg/cm}^2$)	3 – 5 Sec.
6.4	Max. brake cylinder pressure	$3.0 \pm 0.1 \text{ kg/cm}^2$
6.5	All Brake Cylinders	Should be Applied

STC/SBC

6.6	Both side Brake indicator window	Should show red
7.0	Release after emergency Brake application	15 - 20 Sec. Should be Released Should show Green
7.1	BC release time (from 3.0 kg/cm ² to 0.4 kg/cm ²)	
7.2	All Brake Cylinder	
7.3	Both side Brake indicator window	
8.0	Graduated brake application and Release Graduated brake application and Release (Minimum 7 steps)	Brake should apply & release corresponding to decrease & increase of BP Pressure.
9.0	Test for Pressure switch for Anti skid device	Ok Should get power supply at 1.8 ± 0.2 kg/cm ² Power supply should cut off at 1.3 ± 0.2 kg/cm ²
9.1	Charge the Feed pipe/Brake pipe* pressure	
9.2	Anti skid device	
9.3	Anti skid device * For FTIL - FP & For KBI - BP.	
10.0	Isolation Test	Brake should not be applied Should show Green Brake should apply corresponding to opening of isolating cock for bogies Should show Red Brake should Release Should show Green one by one
10.1	Close the isolating cocks for Bogie -1 & 2	
10.2	Reduce BP pressure to full brake application	
10.3	Both side Brake indicators	
10.4	Open both isolating cock	
10.5	Both side Brake indicators	
10.6	Again close the Isolating cock of bogie 1 & 2 one by one.	
10.7	Both side Brake indicators of bogie 1&2	
11.0	Sensitivity Test	Brake should apply within 6 sec
11.1	Reduce the BP pressure at the rate of 0.6kg/cm ² in 6 seconds.	
12.0	Insensitivity Test	Brake should not be applied.
12.1	Exhaust BP pressure at the rate of 0.3 kg/cm ² Per minute	
13.0	Passenger Emergency Pull Box testing	BP pressure should remain at 2.0 ± 0.2 kg/cm ² Should respond Should exhaust
13.1	Pull the emergency pull box handle & check	
13.2	Brake accelerator	
13.3	Check BP Pressure exhaust from emergency brake valve	

STC/SBC

13.4	Indicator Lamp on out side the coach	Should glow
13.5	Both side Brake indicators	Should show Red
13.6	After resetting, check exhaust from emergency brake valve	Should stop
13.7	Both side Brake indicators shows Green	Green
14.0	Hand Brake test (Power car only)	
14.1	Apply hand brake by means of wheel	Should work smoothly
14.2	Both side Hand Brake indicators	Should show Red
14.3	Check Brake Cylinders provided with hand brake lever	Should be Applied Yes
14.4	Movement of flex ball cable	Should be proper
14.5	Release hand brake by means of wheel	Should work smoothly
14.6	Check the Brakes	Should release
14.7	Both side Hand Brake indicators	Should show green
15.0	Emergency brake by guard van valve (Power car only)	
15.1	Drop BP Pressure by means of guard valve	Brake should Apply
15.2	Brake accelerator should respond	Blast of air
15.3	Both side Brake indicators	Should show red
	Hand Brake indicators	Should show green
15.4	Reset guard van valve	Brake should releases
16.0	Manual release test	
16.1	Apply full brake application and pull manual release wire of DV; it should be released in one brief pull of Manual release valve.	CR Drops to zero, Brake releases.
17.0	WSP test	
17.1	Check the Speed sensor air gap between sensor and Phonic wheel by means of feeler gauge. (At least at four different locations)	KB - 0.7 to 1.5 mm FTIL -1.5 to 2.5 mm
17.2	Charge the BP/FP Pressure at full specified value.	
17.3	Check the WSP Micro Processor	Should activate at $1.8 \pm 0.2 \text{ kg/cm}^2$
17.4	Check the WSP Micro Processor code.	Should show code 99
17.5	Check the Dump Valve venting by test mode	Should vent one by one in proper sequence
18.0	Check clearance between brake disc & brake pad	1.5 mm