

**Check list for Air Spring 160 KN capacity supplied by M/s Avadh Rail Infra Ltd. (OEM-TMT, China)**

**1. Dimensional and visual check:  
Drawing No.- TX200012100E Rev. K**

**1.1 Visual Inspection**

S N	Particulars	Specified	Observation					Remarks
			Air spring no.					
i)	Finish	Smooth						
ii)	Cut	Nil						
iii)	Burrs / Flash	Nil						
iv)	Rust / Corrosion	Not Allowed						
v)	Weld / Paint Marks	Not Allowed						
vi)	Flatness / Parallelism	OK/ Not OK						
vii)	"O" Ring	OK/ Not OK						
viii)	<b>Marking</b>	<b>As per Para 11 of 'Section-A' of RDSO STR no. RDSO/2020/CG-01</b>						
	1. Top Plate	OK/ Not OK						
	2. Bottom Plate	OK/ Not OK						
	3. Emergency Spring	OK/ Not OK						
	4. Identification plate	OK/ Not OK						
ix)	Colour & shade	Sky Blue (RAL no. 5012)						
<b>Status : Accepted / Not Accepted</b>								

**1.2 Dimensional Inspection (Dimensions in mm)**

S N	Particular		Specified	Observation				
				Air spring no.				
1	Base Plate	Length	As per Firm's RDSO Approved Drg. / RDSO STR					
		Width						
		Thickness						
		Mounting hole dia.						

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Signature of RDSO  
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		Centre distance of mounting holes (single / both side)						
2	Top Plate	Spigot Dia.						
		Spigot Height						
		Top plate dia.						
		Cross section diameter of "O" ring						
3	Air Bellow diameter	Diameter of air bellow at 6 Kg/cm <sup>2</sup> under design height.						
4	Deflated height	Min. height of air spring under full load (160 kN) with no air and without spigot	233 mm					
<b>Status : Accepted / Not Accepted</b>								

**2. Leak Test of Air Spring:** As per Clause 10.2.2 of section A.

**Parameter:** Inflate and stabilize the Air Spring:  
 (i) at 9 kg/cm<sup>2</sup>, hold for 60 minutes.  
 (ii) at 6kg/cm<sup>2</sup>, hold for 15 minutes.  
 Pressure drop is required to be within 1 % of test pressure.

SN	Air Springs Number	Pressure after 60 minutes when inflated at 9 Kg/cm <sup>2</sup>	Pressure after 15 minutes when inflated at 6 Kg/cm <sup>2</sup>	Pressure drop with in specified limit (Yes / No.)
1.				
2.				
3.				
4.				
5.				
<b>Status: Accepted / Not Accepted</b>				

**3. Pressure v/s Load Test**

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S.N	Pressure in kg/cm <sup>2</sup> or bar	Specified Vertical Load (kN)		Measured Vertical Load (kN)				
				Air Spring No.				
		Min	Max					
1.	1.0	24.42	26.99					
2.	2.0	52.35	57.86					
3.	3.0	80.28	88.73					
4.	4.0	108.21	119.60					
5.	5.0	136.23	150.57					
6.	6.0	163.21	180.39					
<b>Status : Accepted / Not Accepted</b>								

**4. Test for Emergency Spring: Vertical load v/s deflection Test:**

S.N	Specified Load (vertical) in KN	Specified Deflection (vertical) in mm		Measured Deflection in mm				
				Emergency Spring No.				
		Min.	Max.					
1.	50	4.93	6.03					
2.	60	5.76	7.04					
3.	90	8.23	10.05					
4.	120	10.50	12.84					
5.	160	13.13	16.05					
<b>Status : Accepted / Not Accepted</b>								

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