## File No.RDSO-CARR0VDG(AS)/1/2021-O/o ED/CARRIAGE/RDSO

# Check sheet for Air Spring 160 KN capacity supplied by M/s Tayal ((OEM-SRI, China) RDSO Spec RDSO/CG/S/23002, Rev. nil

As per inspection and testing Clause no. 10.0

1. Dimensional and visual check (10% of the Lot Qty or minimum 10 whichever is maximum)

#### 1.1 Visual Inspection:

SN	Particulars	Specified	Observation Air spring No.				
1.	Finish	Smooth					
2.	Cut	Nil					
3.	Burrs /Flash	Nil					
4.	Rust / Corrosion	Not Allowed					
5.	Weld / Paint Marks	Not Allowed					
6.	Flatness / Parallelism	OK/Not OK					
7.	Identification	As per Specification					
8.	"O" Ring	OK/ Not OK					
9.	Marking	As per Para 11 of 'Section-A' of specification					
9.1	Top Plate	OK/ Not OK					
9.2	Bottom Plate	OK/ Not OK					
9.3	Emergency Spring	OK/ Not OK					
9.4	Identification plate	OK/ Not OK					
10	Colour & shade	Sky Blue (RAL no. 5012)					
Stat	us: Accepted/Not Acce	epted					

### 1.2 Dimensional test:

SN	Particular		Specified	Observation		
				Air spring No.		
1.	Base Plate	Length	As per Firm's			
		Width	RDSO			
		Thickness	Approved Drg. /			
		Mounting hole dia.	RDSÖ STR			
		Centre distance of mounting holes (single /both side)				
2.	Top Plate	Spigot Dia.				
		Spigot Height	1			
		Top plate dia.				
		Cross section diameter of" O" ring				

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3.	Air Bellow diameter	Diameter of air bellow at 6Kg/cm² under design height.							
4.	Min. height of air spring	Min. height of air spring under full load with no air and without spigot (mm)							
Statu	Status: Accepted/Not Accepted								

2.

- 2.1 Leak Test of Air Spring: Inflate and stabilize the Air Spring: As per Clause 10.2.2 of section A.
  - (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 Pressure Test of Spring inflated spring for 60 minutes @ 9 Kg/cm²			Pressure inflated sp minutes @	Pressure drop within specified limit (Yes /	
	Number	Pressure before test	Pressure after test	Pressure before test	Pressure after test	No.)

## 2.2 Centrality check of metal wires in the belt: (Sample size 4% or Minimum 4 Nos. whichever is higher. For lot of less than 4 nos., all springs)

SN	Particular	Particular Specified		Observation				
			Air spring No.					
1.	,	Difference of wire bead distance from side belt edges should be < 4.5 mm.						

3. Pressure v/s Load test of Air Spring assembly: As per Clause 10.2.3.1 of Section - A.

<u>Pressure v/s Load Test</u>: Test should be carried out as per the formats as below:

S.N.	Pressure in kg/cm <sup>2</sup> or bar	Specified Vertical Load (kN) (As per Type Test Report)		Measured Vertical Load(kN)		
				Air spring No.		
		Min	Max			
1.	1.0	27.46	30.35			
2.	2.0	54.44	60.17			
3.	3.0	81.32	89.88			
4.	4.0	108.21	119.60			

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5.	5.0	135.19	149.42			
6.	6.0	162.07	179.13			
Status:	Accepted/Not Accepted			1	1	

#### 4. Test for Emergency Spring:

**4.1** Vertical load v/s deflection Test: As per Clause 10.2.3.2 of Section - A. Test should be carried out as per the formats as below:

S.N.	Specified Load (vertical)in KN	Specified Deflection(vertical) in mm (As per Type Test Report)		Measured Deflection in mm		
	(As per Type Test			Emergency S	Spring no.	
	Report)	Min	Max			
1.	50	6.72	8.22			
2.	60	7.97	9.75			
3.	90	11.50	14.06			
4.	120	14.72	17.99			
5.	160	18.64	22.78			

#### 4.2 Bonding strength test (for metal bonded emergency spring design)

Bonding strength test of 02 samples from each batch to be done as per para 5.0 of "SECTION – B" of RDSO Specification no. RDSO/CG/S/23002, Rev. nil during the purchase inspection. The test piece shall be taken from the same batch used for the manufacturing of the emergency spring.

Sample size for the tests at S. No. 2.1, 3 & 4 above are given as under:

Lot Size upto (nos.)	10	25	50	75	100	Above 100
Number of Samples Check	2	3	4	5	6	6% of Lot

Note: "For firms, outsourcing emergency springs, Bond Strength Test report given by supplying source should be verified."