



QM-C-8.1/AB/0001/H (Rev.-0)

**Inspection Plan(Check Sheet)**

**Item:** Hose Coupling Assembly for Brake Pipe & Feed Pipe  
**Specn.:** 02-ARB-02, Appendix-F, AAR Manual M-601 & 602  
with latest revision & amendment  
**Drg. No.:** SK-73547 & WD-81027-S-01 with latest alteration

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1. Firm's Name
2. Date ( Period) of inspection
3. Contracts details:
  - a) Contract No.
  - b) Order placing authority
  - c) Specification no.  
(as mentioned in the contract )
  - d) Drawing No.  
(as mentioned in the contract )
4. Quantity on order
5. Quantity offered for inspection
6. Consignee

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7. Acceptance criteria Item ready Yes / No  
 7.1 Visual Check OK/Not OK  
 7.1.1 : Marking Yes / No  
 7.1.2 Opening plugged with PVC plugs / End caps Yes / No  
 7.1.3 Visual Defects Yes / No

**7.2 Periodic tests:**

Sl. No.	Test Description	Mode	Sample Size	Specified Parameters	Observed Value										Remarks			
					1	2	3	4	5	6	7	8	9	10				
7.2.1	Coupling Pull of Test	Coupling Pull of test Fixture	1 out of Every 10000 pieces	On 2800 l/b														
7.2.2	Cold chamber leakage test at 10 kg/cm <sup>2</sup> & -40 °F for 48 hrs	Cold chamber & test fixture	1 out of Every 10000 pieces	No leakage for 2 hrs after completion of 48 hrs														
7.2.3	Cold test Aging	Cold chamber	1 out of 10000	No crack after 24 hrs ageing at -40 F														
a.	Tube																	
b.	Cover																	

**8. Performance Tests & Dimensional**

**8.1 Check of Hose:**

Sl. No.	Test Description	Mode	Sample Size	Specified Parameters	Observed Value										Remarks		
					1	2	3	4	5	6	7	8	9	10			
8.1.1	Dimensional Checks																
a	Length (mm)	Scale	2%	660±6 790±6													
b	Outer Dia.	Vernier	2%	53+1-0.6													
c	Inner Dia.	Vernier	2%	35+1.5-0.1													
8.1.2	Tensile Strength																
a.	Lining	Tensile testing	1 out of 1000	84.4kg/cm <sup>2</sup>													
b.	Cover			84.4kg/cm <sup>2</sup>													
8.1.3	Elongation																
a.	Lining	Tensile testing	1 out of 1000	250%													
b.	Cover			300%													
8.1.4	Adhesion test																
a)	Between lining & Braids (with a load of 7.3 kg )	Unbinding device & weight	1 out of 1000	101.6mm Max. in 4-minutes Unbinding													
b)	Between Braids ( 9.1kg )		1 out of 1000														
c)	Between cover & braids (7.3 kg)		1 out of 1000														

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Sl. No.	Test Description	Mode	Sample Size	Specified Parameters	Observed Value										Remarks	
					1	2	3	4	5	6	7	8	9	10		
					11	12	13	14	15	16	17	18	19	20		
8.1.5	Oil immersion Test as per ASTM-3 for 70 hrs. at 100 °C															
a)	Lining	Oven & weighing balance	1 out of 1000	% age of volume increase 100% max												
b)	Cover															
8.1.6	In reference Fuel B at Room Temp for 70 hrs. 70 hrs.	Weighing balance	1 out of 1000	% age of volume increase												
a)	Lining			80% max												
b)	Cover			80% max												
8.1.7	Twist test at 140 Psi hydrostatic pressure	Device	1 out of 1000	As per para 4.7 AAR-M-601												
8.1.8	Hydrostatic pressure	Testing device	1 out of 1000	As per para 4.8 AAR-M-601												
a)	Increase in circumference at 14.08 kg/cm			12.7 (max)												
b)	Leakage at 35.2 kg/cm			No leakage or other defects												
c)	Bursting test (pressure)			70.4 kg/cm (1000 psi min.)												
8.1.9	Flexibility test as per para 4.10 AAR-M-601	Testing device	1 out of 1000	At room temp.9-lb weight apply not produce kinking of the hose within 30 seconds.												
				Hose with nipples are stored for 7-days at room temperature. After that at -55°F for 48 hours. After that 40-lb steady weights apply produce kinking of the hose within 30 seconds.												
8.1.10	Leakage test of complete hose assy.	Testing Rig	10%	No leakage at 10 kg/cm												
8.1.11	Ozone test	Ozone chamber	1 out of 1000	No crack after 50 hrs at 100 pphm & 20% stretch												

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**8.2. Gasket:**

Sl. No.	Test Description	Mode	Sample Size	Specified Parameters	Gauge No.	Observed Value										Remarks								
						1	2	3	4	5	6	7	8	9	10									
						11	12	13	14	15	16	17	18	19	20									
8.2.1	Dimension	Gauges as per AAR-S-447	2 out of 1000	As per para 4.0 of AAR-M-602	A																			
					B																			
					C																			
					D																			
					E																			
					F																			
					G																			
					H																			
8.2.2	Deflection test As. per Clause 3.3 of AAR-M-602	Deflection testing M/c	1 out of 1000	25.4 mm max																				
8.2.3	Compression test as per clause 3.4.1 of AAR-M-602	Comp. test testing m/c	1 out of 1000	% age of the original deflection 65% max																				

**8.3. Coupling Head**

Sl. No.	Test Description	Mode	Sample Size	Specified Parameters	Gauge No.	Observed Value										Remarks								
						1	2	3	4	5	6	7	8	9	10									
						11	12	13	14	15	16	17	18	19	20									
8.3.1	Dimension	Gauges as per AAR-S-455 & 456	2 out of 1000	As per AAR-S-491	26313																			
					26314																			
					26315																			
					26316																			
					26317																			
					26318																			
					26319																			
					26320																			
					26772																			
					26773																			
129841																								

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#### 8.4. Hose Nipple

Sl. No.	Test Description	Mode	Sample Size	Specified Parameters	Observed Value										Remarks
					1	2	3	4	5	6	7	8	9	10	
8.4.1	Dimension	Gauges/Measuring Instruments as per AAR-S-455	2 out of 1000	As per AAR-S-491	11	12	13	14	15	16	17	18	19	20	
8.4.2	Thread	Go/No Go Gauge	2 out of 1000	IS:554											

#### 8.5 Visual Check of Nipple and Coupling head.

- (i) For material verification WTC of the supplier can be checked for Tensile Strength, Hardness and Plating of the Coupling surface & Gasket groove.
- (ii) Check WTC of Hose nipple and Coupling head: OK / NOT OK
- (iii) Visual inspection: There should be no burr: OK /NOT OK
- (iv) Marking detail:
- a) On Coupling Head-Manufacturer's symbol, Month, Year, B.P/F. P and "TOP" :- OK / NOT OK
- b) On Hose Nipple- Manufacturer's symbol, "TOP" and Month, Year: OK/NOT OK

#### 8.6 Hose Clamp:

**Material: Stainless Steel 10A IS: 304**

Test certificate issued by NTH Laboratory or NABL accredited Lab to be enclosed. Details are to be verified and as per the test report, results are conforming to the Specifications.

**Note: -All RDSO specification, AAR specification, IS, and Drawings will be followed with latest revision, amendment and alteration.**

Signature of firms Representative

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