

1. PROJECT CODE AMS		2. JPIC CODE AMS		<b>AMS-02 TASK SHEET (ATS)</b>			
T Y P E	A	CONFIGURATION CHANGE		<input checked="" type="checkbox"/>	4. ATS NO. <u>AMS-STA-PROC-1</u>	5. PAGE 1 OF 5	
	PERMANENT		<input checked="" type="checkbox"/>	TEMPORARY	6. MOD SHEET(S) NUMBER(S)		
	B	NONCONFIGURATION CHANGE		<input type="checkbox"/>			
10. PART NAME USS/VC installation to RAS				11. Sub Detector Name		12. SERIAL/LOT NO.	
14. APPLICABLE DOCUMENTS NA							
18. ATS TITLE AMS Integration Procedure 1							
20. OPER SEQ. NO.		21. OPERATIONS (Print, Type, or Write Legibly)				VERIFICATION	
						22. TECH	23. QA/DV
		<b><u>WARNING</u></b> <b>THIS PROCEDURE AUTHORIZES LIFTING OPERATIONS. ALL SAFETY REGULATIONS AND PROCEDURES SHALL BE FOLLOWED</b>					
		<p>Note 1: The steps of this procedure may be worked out of order with the cognizant project engineer's approval.</p> <p>Note 2: All hardware removed during the performance of this procedure shall be bagged and tagged to identify their P/N and S/N, or Lot# if applicable.</p> <p>Note 3: This procedure assumes that the AMS-02 USS assembly has been lifted to and is within close proximity of the Rotation Assembly Stand (RAS).</p>					
1.		<p>Verify the positions of the USS assembly (SEG38116929-302) as it is lifted on the Primary Lifting Fixture (SEG38117112-307) is in the intended position.</p> <p>Note: NASA/JSC TPS # <u>2A0720040</u></p>					
24. ORIGINATOR <i>Robert Becker</i> Robert BECKER				DATE 02-07-07	25. FINAL ACCEPTANCE STAMP AND DATE		
APPROVALS (Printed or Typed and Signed)							
26. PROJECT ENGINEER <i>Robert Becker</i>				DATE 02-07-07	27. QUALITY ENGINEER		DATE
28.				29.			
30.				31.			

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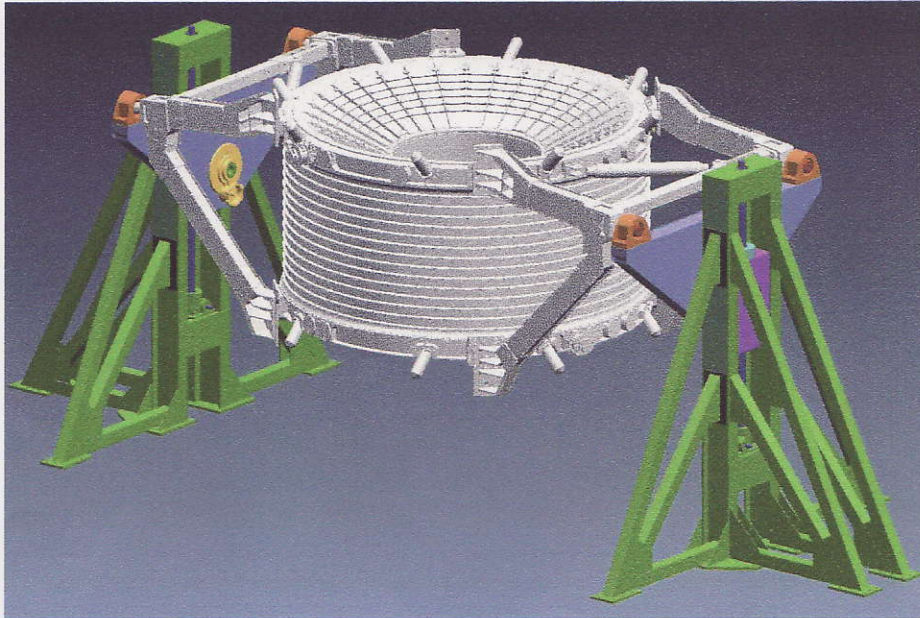
20. OPER  
SEQ. NO.

21. OPERATIONS  
(Print, Type, or Write Legibly)

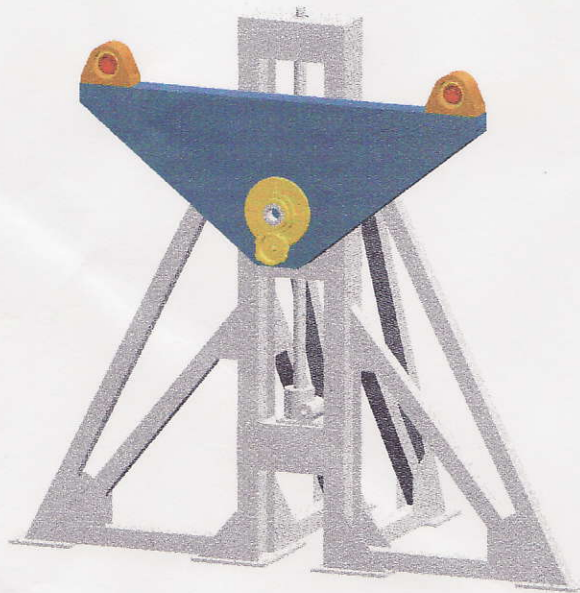
VERIFICATION

22. TECH

23. QA/DV



**Figure 1: Rotation Assembly Stand (RAS)**  
**(Green & Blue) with AMS USS & VC**



**Figure 2: Rotation Assembly Stand (Single Side)**

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(Print, Type, or Write Legibly)

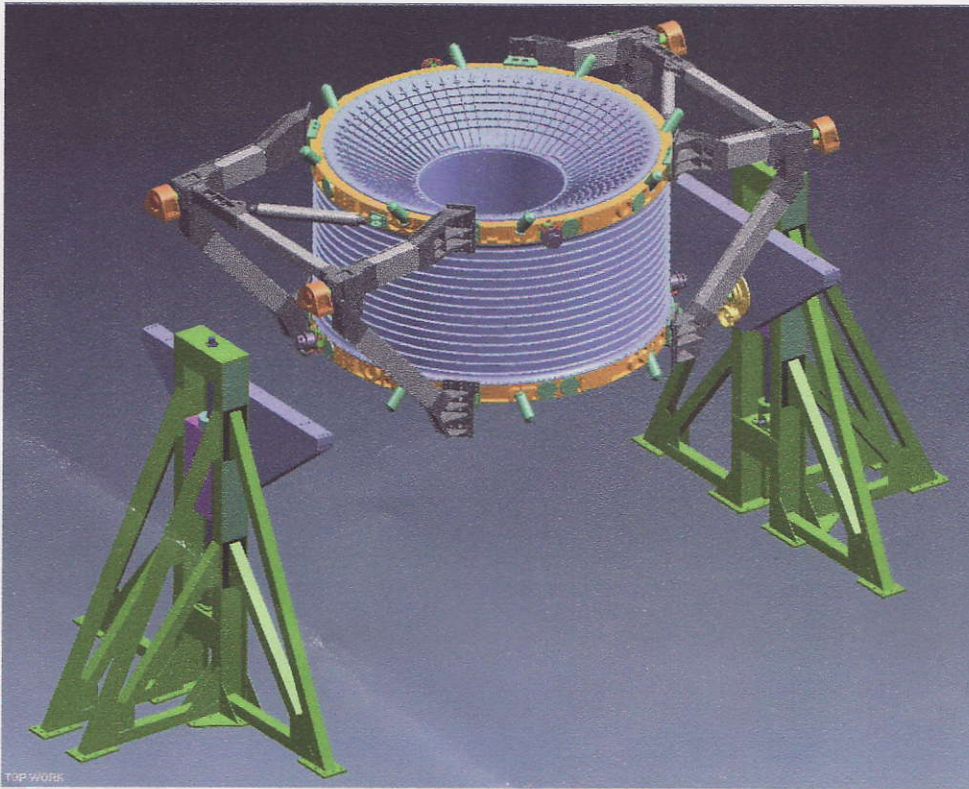
VERIFICATION

22. TECH

23. QA/DV

**Warning: Extreme caution should be used when handling or interfacing the AMS-02 Trunnions Pins. These parts are highly sensitive to surface damage.**

2. With the USS and Assembly Fixture lifted, slide the brass trunnion protection cups together with the RAS trunnion brackets onto the ends of the AMS-02 trunnions pins. Orient the brackets such that the flat interface surface is horizontal and allow them to rest on the RAS triangle upper flat side (the RAS interface).



**Figure 3: Installation of AMS-02 into RAS**

Note: AMS-02 Vacuum Case Shown representing the Assembly Fixture.

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VERIFICATION

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23. QA/DV

3. Gently lower the assembly onto the RAS interface surfaces. (See above figure)
4. Bolt two brackets: both clean room door facing (South) Alps and Jura side, using four (4) M20 shear bolts per bracket.
5. Tighten the M20 shear bolts on the brackets to 340Nm (327-353). Record data on torque wrenches below. Record Torques below.

BOLT	Running Torque	Final Torque
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

Running Torque Wrench Data:

P/N: \_\_\_\_\_ Range: \_\_\_\_\_

S/N: \_\_\_\_\_

Calibration due: \_\_\_\_\_

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Final Torque Wrench Data:

P/N: \_\_\_\_\_ Range: \_\_\_\_\_

S/N: \_\_\_\_\_

Calibration due: \_\_\_\_\_

6. Bolt the remaining two brackets using normal M20 SS bolts (BN623) with a torque of 340Nm (327-353). Record in table above.

**Hex cap screws**

- partially threaded

Material: Stainless steel

Quality: A2

Technical information

Please select d1 or L:

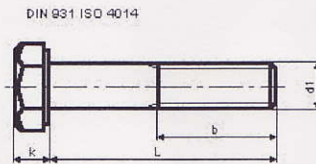
d1:

M20

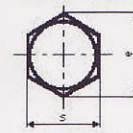
L:

110

Go



**BN 623**



zoom / print

7. Match drill the 4 pin holes on the remaining brackets and install Bossard BN585 20mm dia x 80mm pins.

**Precision dowel pins**

- hardened and ground  
- plain  
- hardened, ground

Material: Steel hardened

Hardness: 60 HRC

Tolerance: h6

Please select d1 or L:

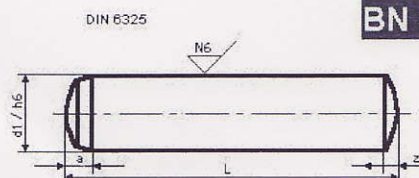
d1:

20

L:

80


Go



**BN 858**

zoom / print

NOTE: This completes the installation of the USS/Assembly Fixture installation into the RAS. Refer back to NASA/JSC TPS # \_\_\_\_\_ for completion of the lifting procedure.

1. PROJECT CODE <b>AMS</b>		2. JPIC CODE <b>AMS</b>		<b>AMS-02 TASK SHEET (ATS)</b>			
T Y P E	<b>A</b>	CONFIGURATION CHANGE		<input checked="" type="checkbox"/>	4. ATS NO. <b>AMS_STA_PROC_1</b>		5. PAGE <b>1</b> OF <b>2</b>
		PERMANENT	<input checked="" type="checkbox"/>	TEMPORARY	<input type="checkbox"/>	6. MOD SHEET(S) NUMBER(S)	
	<b>B</b>	NONCONFIGURATION CHANGE		<input type="checkbox"/>			
10. PART NAME <b>USS/VC installation to RAS</b>				11. Sub Detector Name		12. SERIAL/LOT NO.	
14. APPLICABLE DOCUMENTS <b>NA</b>							
18. ATS TITLE <b>AMS Integration Procedure 1 - Modification</b>							
20. OPER SEQ. NO.		21. OPERATIONS (Print, Type, or Write Legibly)				VERIFICATION	
						22. TECH	23. QA/DV
1.		Open this MOD.				<b>8/02/07</b> <b>MV</b>  <b>2/8/07</b>	
2.		Replace Step 5 with this step: Tighten the M20 shear bolts on the brackets to 185 lb/251 Nm (238-264 Nm). Record data on torque wrenches below. Record Torques below.					
		BOLT	Running Torque	Final Torque			
		1		<i>185 ft. lbs</i>			
		2		<i>185 ft. lbs</i>			
		3		<i>185 ft. lbs</i>			
		4		<i>185 ft. lbs</i>			
		5		<i>185 ft. lbs</i>			
		6		<i>185 ft. lbs</i>			
		7		<i>185 ft. lbs</i>			
		8		<i>185 ft. lbs</i>			
		9		<i>185 ft. lbs</i>			
		10		<i>185 ft. lbs</i>			
		11		<i>185 ft. lbs</i>			
24. ORIGINATOR <i>Robert Becker</i> <i>Robert Becker</i>			DATE <i>02-07-07</i>	25. FINAL ACCEPTANCE STAMP AND DATE			
APPROVALS (Printed or Typed and Signed)							
26. PROJECT ENGINEER <i>Robert Becker</i>			DATE <i>02-07-07</i>	27. QUALITY ENGINEER			DATE
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21. OPERATIONS  
(Print, Type, or Write Legibly)

VERIFICATION

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23. QA/DV

12		185 ft-lbs
13		185 ft-lbs
14		185 ft-lbs
15		185 ft-lbs
16		185 ft-lbs

Running Torque Wrench Data:

P/N: M214647 Range: 50 - 250 ft-lbs

S/N: 0406510402

Calibration due: 04/11/07

Final Torque Wrench Data:

P/N: M214647 Range: 50 - 250 ft-lbs

S/N: 0406510402

Calibration due: 04/11/07

3. Remove Step 6 and Step 7.
4. Close this MOD