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1. PROJECT CODE		2. JPIC CODE		TASK PERFORMANCE SHEET				
SA-AMS		AMS		NASA - LYNDON B. JOHNSON SPACE CENTER				
T Y P E	A	CONFIGURATION CHANGE		<input checked="" type="checkbox"/>	4. TPS NO. <i>2A0720057</i>		5. PAGE 1 OF 5	
		PERMANENT	<input checked="" type="checkbox"/>	TEMPORARY	<input type="checkbox"/>	6. MOD SHEET(S) NUMBER(S)	7. ORG. EA1	
	B	NONCONFIGURATION CHANGE		<input type="checkbox"/>		8. SYSTEM AMS	9. NEED DATE 3/12/07	
10. PART NAME Upper USS -02 STA Assembly				11. PART NO./DRAWING NO. SEG39135726-303		12. SERIAL/LOT NO. 1001	13. TIME/CYCLE/SHELF LIFE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
14. APPLICABLE DOCUMENTS N/A				15. CONTRACT NO./JOB NO. NNJ05H105C		16. HAZ. TEST <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	17. ENG. EVAL. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
18. SHORT TITLE OF TPS Removal of the Upper USS from the RAS						19. ADP UPDATE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
20. OPER. SEQ. NO.		21. OPERATIONS (Print, Type, or Write Legibly)				VERIFICATION		
		<p>WARNING</p> <p>THIS TPS AUTHORIZES LIFTING OPERATIONS. ALL CERN SAFETY REGULATIONS AND PROCEDURES SHALL BE FOLLOWED.</p> <p>This TPS is to remove the Unique Support Structure (USS) with Assembly Fixture from the Rotation Assembly Stand (RAS) for installation into the Primary Support Stand (PSS).</p> <p>The steps of this TPS may be worked out of order with the cognizant project engineer's approval</p> <ol style="list-style-type: none"> Open this TPS. All hardware removed during the performance of this TPS shall be bag and tagged to identify their P/N and S/N or Lot# if applicable. 				22. TECH # 3-13-07 # 3-13-07		23. QA/DV
24. ORIGINATOR John Heilig <i>JH</i>			DATE 3-8-07	25. FINAL ACCEPTANCE STAMP AND DATE				
APPROVALS (Printed or Typed and Signed)								
26. PROJECT ENGINEER John Heilig <i>JH</i>		DATE 3-8-07	27. QUALITY ENGINEER <i>Steve Caldwell</i> STEVE CALDWELL			DATE 3-8-07		
28. Corrado Gargiulo		Return to Bldg. 10						
30. Robert Becker		Rm. 114 QARC						

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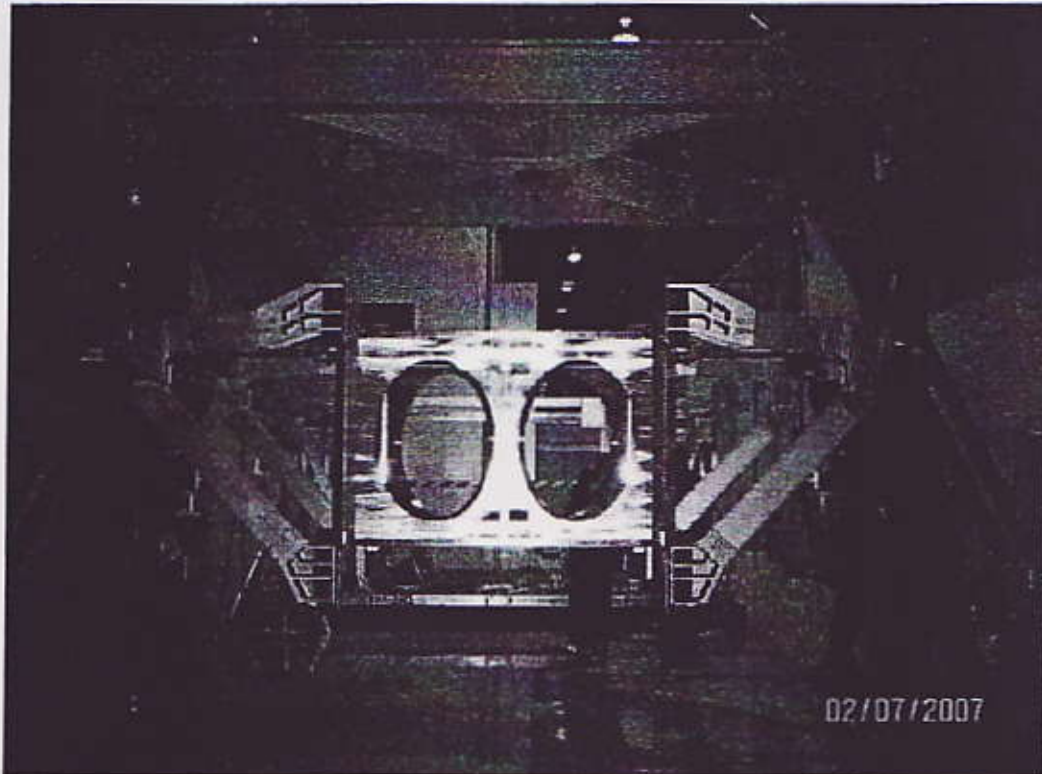


Figure 1. Rotating Assembly Stand (RAS) with AMS USS & Assembly Fixture and PLF and downslings above.

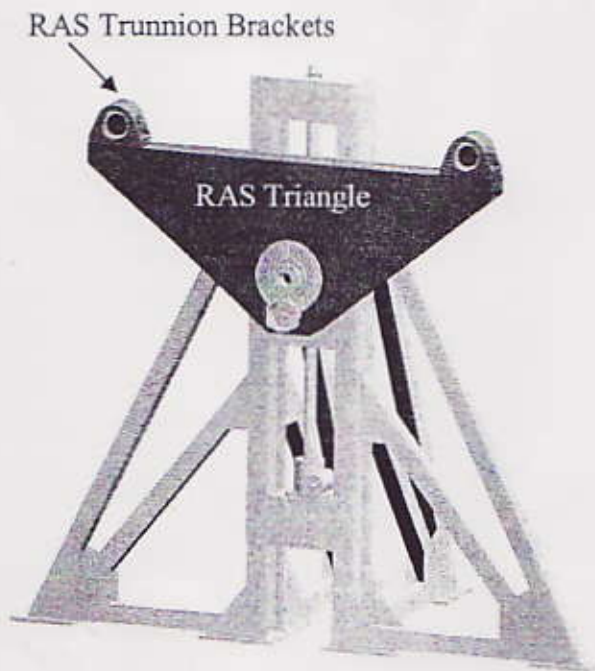


Figure 2. RAS (side 1 of 2 identical)

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3. Rotate AMS into the upright position, as shown in Figure 1. Close the software and power off the RAS control system. This will engage the motion brakes (motor clutches).

CAUTION. The RAS power must remain off while lifting operation are in progress. Damage to flight hardware may result if enabled.

4. Loosen / break the initial torque on all (n.16) the M20 shear bolts fixing the RAS trunnion brackets to the RAS triangle. (Brackets in orange in Figure 2)

5. Attach the crane to the upper sling, item 3, of the Primary Lifting Fixture (PLF), SEG38117112-305, as seen in Figure 3.

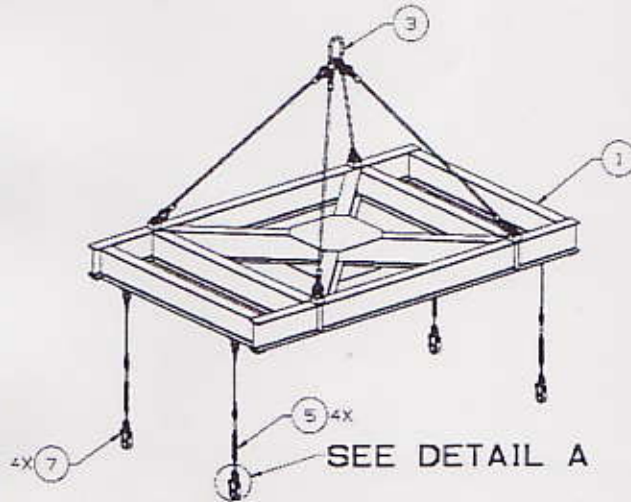


Figure 3. PLF and downslings with U-hooks.

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6. Lift the PLF over the RAS with the 30T crane and align such that the slings will reach the 4 lifting U-Hooks.

7. Attach the U-Hook assembly, item 7 in Figure 3, to the Sill Trunnion on the USS, for all four Sill Trunnions. See Figure 4 for locations. Removal of U-Hook cotter pins and bolt preload may be required to attach to the Trunnions. (See SEG38117120). If required, indicate actual torque: (Ref: Torque fasteners to 258 - 304 in-lbs.)

U-Hook 1	Bolt 1	<u>272</u>	Bolt 2	<u>289</u>
U-Hook 2	Bolt 1	<u>285</u>	Bolt 2	<u>288</u>
U-Hook 3	Bolt 1	<u>303</u>	Bolt 2	<u>286</u>
U-Hook 4	Bolt 1	<u>254</u>	Bolt 2	<u>240</u>

* Low cannot line up w/cotter pin

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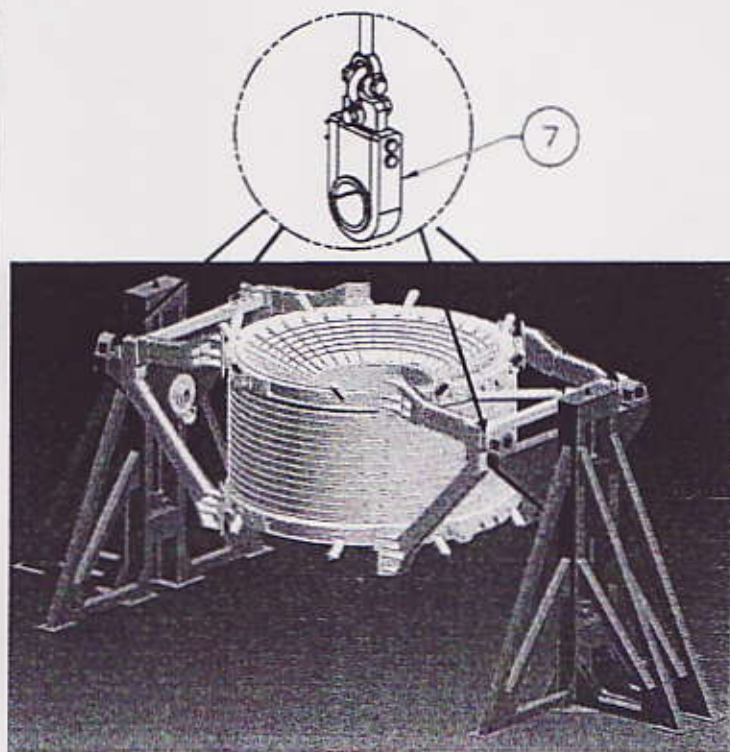


Figure 4. U-Hooks at USS Sill Trunnions at the side of RAS Trunnion brackets

8. Lift PLF with crane such that slings have little or no slack, but no load is taken up.
 9. Unscrew all (n.16) the M20 shear bolts securing the RAS trunnion brackets to the triangle, leaving AMS and trunnion brackets free to be lifted.
- CAUTION: Care should be used when handling or interfacing the AMS-02 Sill Trunnions. These parts are highly sensitive to surface damage.**
10. Lift the payload ~5mm and remove the RAS trunnion brackets by sliding them off together with the brass cups protecting the trunnions (Figure 5). Store RAS trunnion brackets for reuse at a later date.

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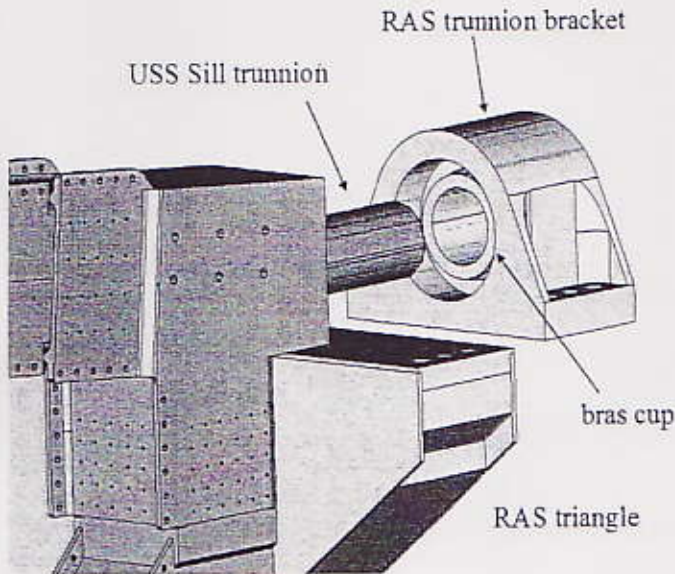


Figure 5. RAS trunnion brackets sliding out from Sill Trunnion

11. USS is now ready to be lifted free of the RAS. Slowly lift the USS to clear the RAS Triangles, approximately 2-3 ft (>0.5m). Move the USS clear of the RAS framework.

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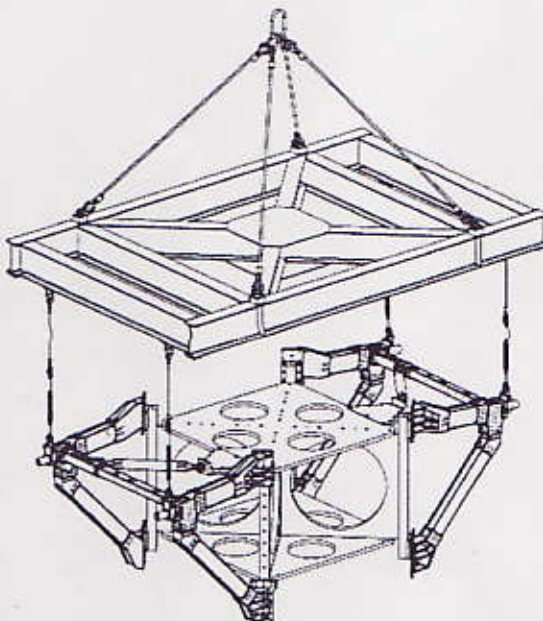


Figure 6. USS with PLF above

12. Store all hardware removed from the RAS for reuse.
NOTE: The USS is now in position to be installed immediately into the PSS.
13. Close this TPS

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