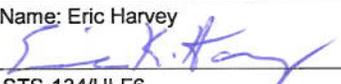


1. Tracking Number:	INTERNATIONAL SPACE STATION SAFETY NONCOMPLIANCE REPORT (NCR)		Page: 1 of 10
2. Date: 08/12/10	3. NCR Number: AMS02-GNCR-001		
4. Title of Safety NCR: Waiver of NDE Inspection of AMS-02 Swivel Hoists for the Primary Lifting Fixture (PLF)			
5. Hazard Report: GHR-AMS02-009			
6. Originator Name: Phil Mott 	Organization/Company: NASA ESCG	Phone: 281-461-5712	
7. Safety Engineer Name: Eric Harvey 	Organization: Barrios/ESCG	Phone: 281-461-5509	
8. Flight Effectivity: STS-134/ULF6			
9. Expiration Date: December 2011			
10. End Item Identification: <i>(Include reference to applicable end item, subsystem, and/or component)</i> PLF Upper Sling Assy (SEG38117113-701), Drop Sling Inner B Assy (SEG38117115-701)			
11. Requested Processing:			
<input type="checkbox"/> Routine		<input checked="" type="checkbox"/> Urgent (Justification required below)	
12. Applicable Requirement: KHB 1700.7 Rev C, paragraph 4.5.1.1.d			
13. Description of Noncompliance: <i>(Specify how the design or operation does not meet the safety requirements)</i> The AMS-02 PLF has eight swivel hoists that cannot be NDE tested because they are permanently attached to their sling assemblies.			
14. Reason requirement cannot be fulfilled: There are eight swivel hoists that cannot be separated from their sling assemblies without destroying the slings. In order to perform NDE testing, the swivel hoists must be tested unattached from their slings.			
15. Rationale for acceptance <i>(Define the design feature or procedure used to conclude that the noncompliant condition is safe. Attach applicable support data, i.e., drawings, test reports, analysis, etc.):</i> See attached memo, ESCG-4420-10-CED-MEMO-0009, Waiver for NDE Inspection of Swivel Hoists.			
16. Equivalent Safety? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
17. Safety Review Panel Signature:			
Print Name: PAUL D. KIRKPATRICK	Phone: 321-867-6568		
Signature: 	Date: 8/24/10		

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Block 12: Section A, Applicable Requirement:

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Block 13: Section B, Description of Noncompliance: *(Specify how the design or operation does not meet the safety requirements)*

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Block 14: Section C, Reason requirement cannot be fulfilled:

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Block 15: Section D, Rationale for acceptance (Define the design feature or procedure used to conclude that the noncompliant condition is safe. Attach applicable support data, i.e., drawings, test reports, analysis, etc.):

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18. Submitting Signatures:			
18a. Originator			
Print Name	Phil Mott	Phone: 281-461-5712	
Signature:		Date: 08/16/10	
18b. Safety Manager – Submitting Organization			
Print Name	Eric Harvey	Phone: 281-461-5509	
Signature:		Date: 08/16/10	
18c. Project/Program Manager – Submitting Organization			
Print Name	Trent Martin	Phone: 281-483-3296	
Signature:		Date: 8/16/10	

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19. Shuttle Signatures:

19a. Safety & Mission Assurance Panel - Shuttle		
Print Name:		Phone:
Signature:		Date:
19b. Engineering Technical Authority - Shuttle		
Print Name:		Phone:
Signature:		Date:
19c. Health and Medical Technical Authority - Shuttle		
Print Name:		Phone:
Signature:		Date:
19d. Safety & Mission Assurance Technical Authority - Shuttle		
Print Name:		Phone:
Signature:		Date:
19e. Program Manager - Shuttle		
Print Name:		Phone:
Signature:		Date:

20. Concurrence Signatures:

20a. Affected AIT/SPRT/FIT		
Print Name:		Phone:
Signature:		Date:
20b. Affected AIT/SPRT/FIT		
Print Name:		Phone:
Signature:		Date:
20c. Flight Equipment Safety and Reliability Review Panel (FESRRP)		
Print Name:		Phone:
Signature:		Date:
20d. ISS Safety Review Panel (SRP/PSRP/GSRP)		
Print Name:	PAUL D. KIRKPATRICK	Phone: 221-867-6568
Signature:		Date: 8/24/10
20e. ISS Safety & Mission Assurance Panel:		
Print Name:		Phone:
Signature:		Date:
20f. Other Concurrence (as required)		
Print Name:	JOE TORSANI / KSC LDEM	Phone:
Signature:	PER TELECON	Date:
20g. Other Concurrence (as required)		
Print Name:		Phone:
Signature:		Date:

1. Tracking Number:	INTERNATIONAL SPACE STATION SAFETY NONCOMPLIANCE REPORT (NCR)	Page: 8 of 10
2. Date: 08/12/10	3. NCR Number: AMS02-GNCR-001	

21. Approval Signatures:

21a. Engineering Technical Authority - ISS		
Print Name:	Phone:	
Signature:	Date:	
21b. Health and Medical Technical Authority - ISS		
Print Name:	Phone:	
Signature:	Date:	
21c. Safety & Mission Assurance Technical Authority - ISS		
Print Name: <i>Maryneth E. Smith</i>	Phone: <i>321-867-6543</i>	
Signature: <i>Maryneth E. Smith</i>	Date: <i>8/24/10</i>	
21d. ISS Program Office		
Print Name: <i>Paul D. Kirkpatrick</i>	Phone: <i>321-867-6568</i>	
Signature: <i>Paul Kirkpatrick</i>	Date: <i>8/24/10</i>	

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22. International Partner Signatures		
22a. ASI		
Print Name:		Phone:
Signature:		Date:
22b. CSA		
Print Name:		Phone:
Signature:		Date:
22c. ESA		
Print Name:		Phone:
Signature:		Date:
22d. JAXA		
Print Name:		Phone:
Signature:		Date:
22e. Roscosmos/RSC-E		
Print Name:		Phone:
Signature:		Date:

1. Tracking Number:	INTERNATIONAL SPACE STATION SAFETY NONCOMPLIANCE REPORT (NCR)	Page: 10 of 10
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Attachment:

Engineering and Science Contract Group

2224 Bay Area Boulevard
Houston, Texas 77058



ESCG-4420-10-CED-MEMO-0009

August 5, 2010

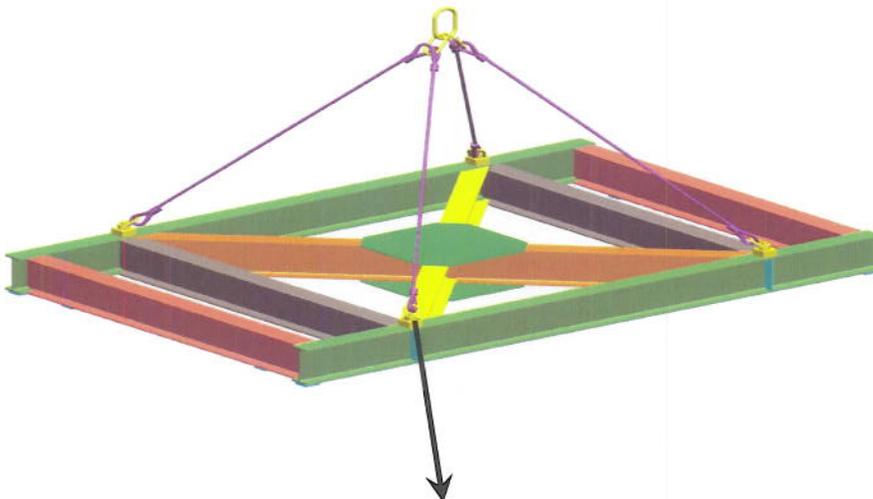
TO: GSRP
FROM: Phil Mott
SUBJECT: Waiver for NDE Inspection of Swivel Hoists

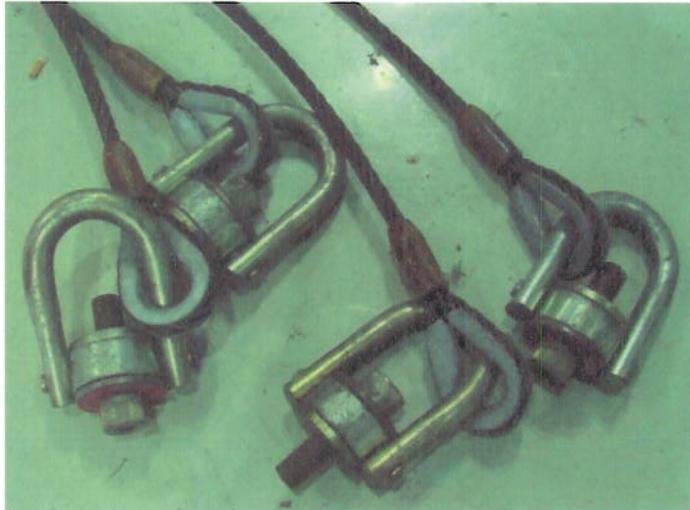
Request for KHB 1700.7 Deviation on AMS-02 Lifting Fixture Swivel Hoists

KHB1700.7 requirements state that all swivel hoists, eyebolts, and shackles be NDE inspected prior to use at KSC. In the case of AMS, 33 of the 41 items were removed, inspected (all passed), and reinstalled. The eight that were not inspected are a part of sling assemblies that cannot be taken apart without destroying the sling (installed on wire ropes that are swaged together). This memo outlines the rationale for using this hardware without the NDE inspection.

PLF Upper Sling Assy (SEG38117113-701)

The PLF Upper Sling is used to connect the PLF (Primary Lifting Fixture) to a crane and is attached to the PLF by the means of four swivel hoist as shown below. Both the PLF drawing (SEG38117100) and Upper Sling Assembly drawing (SEG38117113) are in the JSC Engineering Drawing Control Center system and are available upon request.





The swivel hoists are rated at 15,000 lbs each and the PLF is rated to 26,800 lbs. In addition to the original proof load test to 2X the rated load, the PLF has been load tested on a yearly basis and more recently, load tested to 1.25X the rated load for KSC use. No issues have been identified with this sling. The upper sling has been kept in controlled storage (not outside) and visually inspected before every hoist.

The actual load that the PLF will be lifting is 25,800 lbs and the safety factors for the rated load are a minimum of 3 on yield and 5 on ultimate.

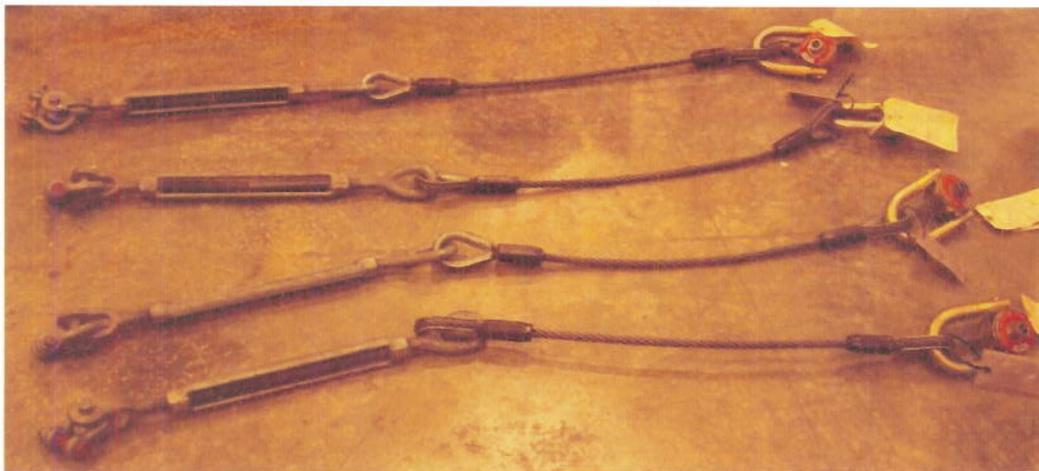
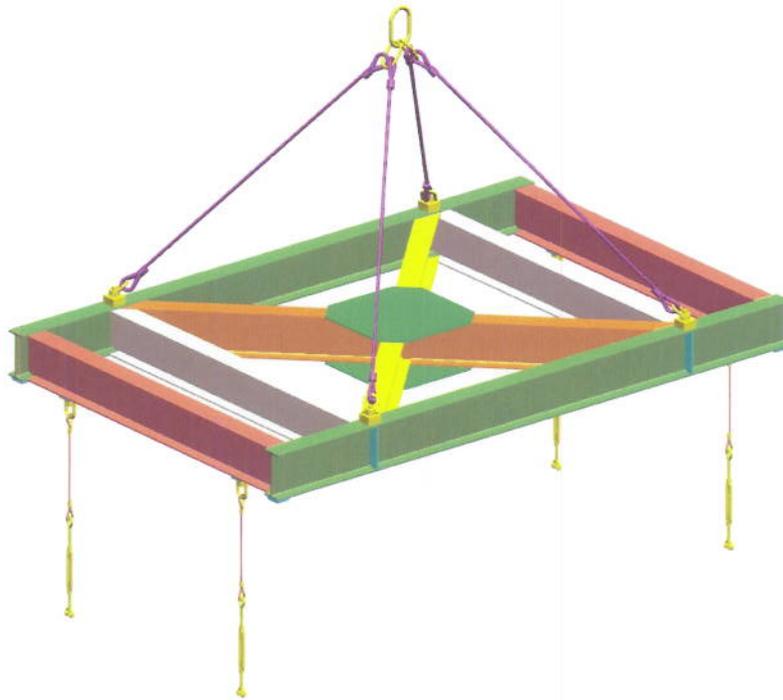
The PLF and upper sling will be used at KSC for the following identified lifts:

- PSS lift from C5 to truck
- PSS lift from truck to SSPF airlock
- PSS lift from airlock to SSPF Footprint 7
- PSS reconfiguration from mid to high
- AMS-02 payload moves (3-4) – This is contingency if the CELA fixture is not available

Drop Sling Inner B Assy (SEG38117115-701)

The Drop Sling Inner B Assy is used to raise the PSS from the mid configuration to the high configuration and is attached to the PLF by the means of four swivel hoist as shown below.

Drop Sling Inner B Assy drawing (SEG38117115) is in the JSC Engineering Drawing Control Center system and available upon request.



The swivel hoists are rated at 15,000 lbs each and the PLF with these drop slings is rated to 26,800 lbs. In addition to the original proof load test to 2X the rated load, the PLF has been loaded tested on a yearly basis and more recently, load tested to 1.25X the rated load for KSC use. No issues have been identified with this sling. The drop slings have been kept in controlled storage (not outside) and visually inspected before every hoist.

The actual load that the PLF will be lifting is 22,000 lbs and the safety factors for the rated load are a minimum of 3 on yield and 5 on ultimate.

These drop slings will be used at KSC for the following identified lifts:

- PSS reconfiguration from mid to high

Based on the above, AMS believes that using these swivel hoists without and NDE inspection poses no additional risk to the flight hardware or personnel.