

Recovery from Separation Straps 7 or 8 Failure
File: H_CRP_AOC_OS78.xls
Author: dsalt-hp



Procedure Summary

Objectives

Out of the 4 separation straps assigned to the ACMS two are routed to the input connector of the RM's as alarm signals. Separation straps 7 and 8, which are connected respectively to RMA and RMB, are additionally duplicated in the SVM harness to provide two separate inputs for each RM. The filtered alarms derived from the strap signals are used in the RM as conditioning inputs in level 4 alarm patterns. The conditioning allows level 4 ARAD alarms to trigger only if one (CRS) or both (AAD) filtered separation strap signals are active. The splitting of the separation strap inputs in the harness makes it possible to apply different temporisation delays for the strap signals in the RM. This in turn allows the AAD alarm to be enabled later than the CRS trigger after separation from the launcher.

If the status of one of the RM separation strap inputs remains "low" after separation, one or both of level 4 alarm patterns on that RM will be blocked. Because of the hot redundancy of the RM's, this condition is not immediately mission-threatening after separation. However, it should be corrected so that both RM's are able to respond to level 4 alarms during the remainder of the mission. The correction is achieved by inverting the polarity assigned in the RM filtering stage to the failing separation strap input, which causes the filtered status to be permanently "high" and enables the corresponding level 4 alarm pattern.

USAGE:

The procedure can be applied at any time after the larger of the post-separation delays applied for ARAD alarms expires (the larger delay is applied for the AAD; the values are 150 seconds for Herschel and 340 seconds for Planck).

It is assumed that the procedure is used only after a separation strap failure has been diagnosed on the basis of RM data obtained through TC_GET_RM_STATUS. The diagnosis should be based on both raw and filtered alarm status with the following logic:

1. If both raw separation strap inputs (parameters AEW0S109 and AEW0T109) are low, the failure is due to the separation strap itself or the harness and both polarities must be inverted.
2. If only one of the raw inputs shows incorrect status, the failure is most likely due to the receiving circuit in the RM, and the polarity should be inverted only for the failed signal.
3. If the status of raw separation strap inputs is correct but the value for the corresponding filtered alarms (parameters AEW1F109 and AEW1G109) for at least one of the separation strap lines, the problem may be due to incorrect temporisation of the alarm or a failure of the RM filtering stage and polarity change should not be attempted.

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Summary of Constraints

N/A

Spacecraft Configuration

Start of Procedure

N/A

End of Procedure

N/A

Reference File(s)

Input Command Sequences

Output Command Sequences

HRA0S781
 HRA0S782
 HRA0S783
 HRA0S784
 HRA0S785
 HRA0S786

Referenced Displays

ANDs	GRDs	SLDs
ZAAM1999		
ZAAM2999		
ZAAM3999		
ZAA07999		

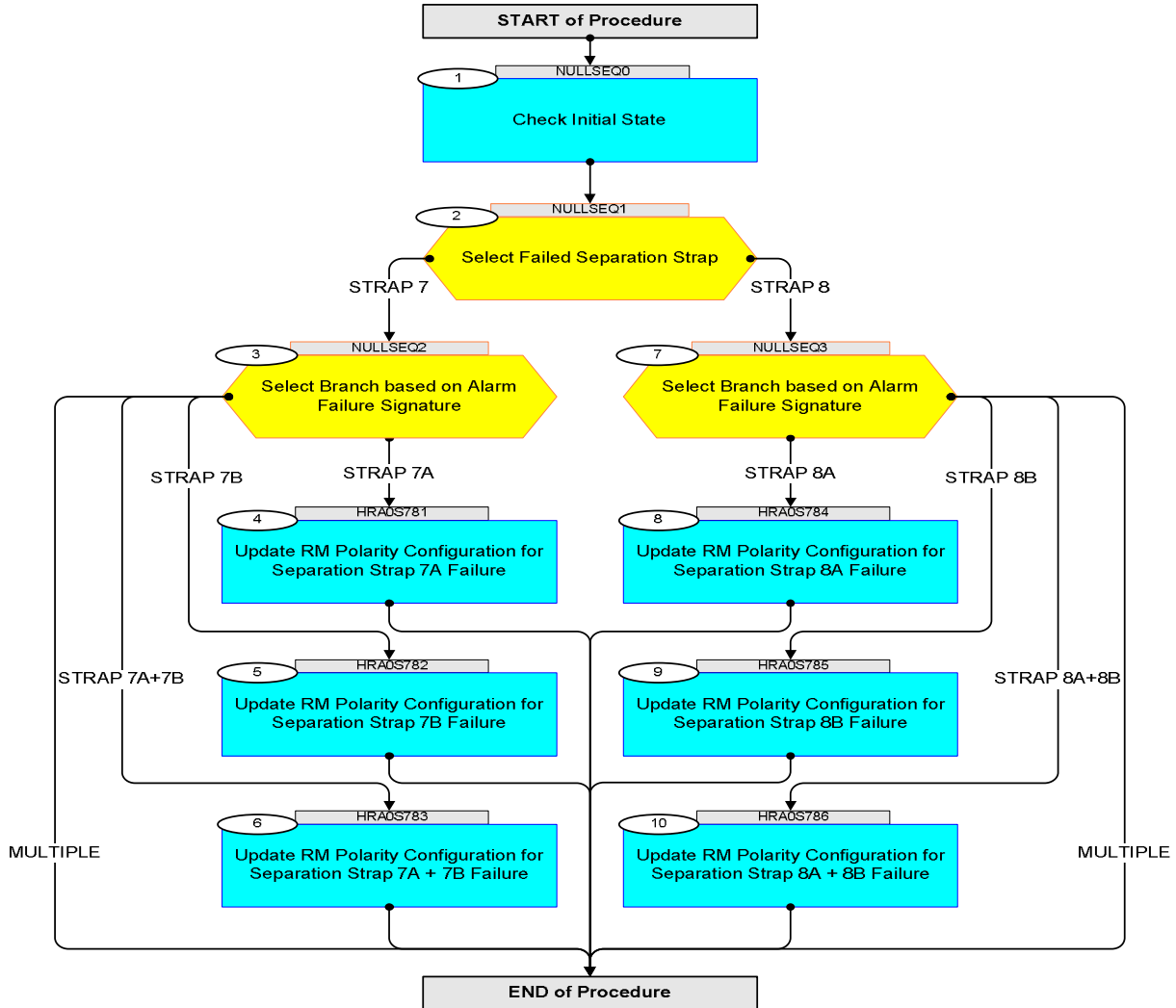
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
10/01/09		1	Created	dsalt-hp	
02/02/09	2	2	Checked-in for FOP release (02/02/09)	dsalt-hp	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name : NULLSEQ0 () TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
1		Check Initial State		Next Step: 2
		This step diagnoses the separation strap failure on the basis of RM data obtained through TC_GET_RM_STATUS. The diagnosis should be based on both raw and filtered alarm status with the following logic:		
		<ol style="list-style-type: none"> 1. If both raw separation strap inputs (parameters AEWOS109 and AEWOT109) are low, the failure is due to the separation strap itself or the harness and both polarities must be inverted. 2. If only one of the raw inputs shows incorrect status, the failure is most likely due to the receiving circuit in the RM, and the polarity should be inverted only for the failed signal. 3. If the status of raw separation strap inputs is correct but the value for the corresponding filtered alarms (parameters AEW1F109 and AEW1G109) for at least one of the separation strap lines, the problem may be due to incorrect temporisation of the alarm or a failure of the RM filtering stage and polarity change should not be attempted. 		
1.1		Check RM A for Separation Strap 7A/7B Failure		<input type="checkbox"/>
		Separation strap 7 is connected to RM A only, but duplicated in the SVM harness to provide two separate inputs. In the RM A status report the strap inputs are referred to as strap 1 and 2. Their correspondence with the hardware is as follows: TLM: strap 1 -> H/W: strap 7A TLM: strap 2 -> H/W: strap 7B		
1.1.1		Uplink Sequence HFADRMR1		<input type="checkbox"/>
		Execute Sequence HFADRMR1 GetRmAstatusReport		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
1.1.2		<i>Separation Strap 7A Failure Signature</i>		□
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= High	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
1.1.3		<i>Separation Strap 7B Failure Signature</i>		□
		Verify Telemetry ASTAT Strap1 AEW0S109	= High	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
1.1.4		Separation Strap 7A + 7B Failure Signature		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
1.1.5		Check Alarm Polarity Table for Changes to Default Flight Configuration		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
1.2		Check RM B for Separation Strap 8A/8B Failure		□
		<p>Separation strap 8 is connected to RM B only, but duplicated in the SVM harness to provide two separate inputs. In the RM B status report the strap inputs are referred to as strap 1 and 2. Their correspondence with the hardware is as follows:</p> <p>TLM: strap 1 -> H/W: strap 8A TLM: strap 2 -> H/W: strap 8B</p>		
1.2.1		Uplink Sequence HFADRRM2		□

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Sequence HFADRM2 GetRmBstatusReport		
1.2.2		Separation Strap 8A Failure Signature		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= High	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
1.2.3		Separation Strap 8B Failure Signature		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= High	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
1.2.4		<i>Separation Strap 8A + 8B Failure Signature</i>		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= NOTACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
1.2.5		<i>Check Alarm Polarity Table for Changes to Default Flight Configuration</i>		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
TC Seq. Name : NULLSEQ1 () TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
2		Select Failed Separation Strap		Next Step: STRAP 7 3 STRAP 8 7

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>Based on the diagnosis of step 1, select the branch of the failed separation strap here:</p> <p>Strap 7 failure -> GO TO STEP 3</p> <p>Strap 8 failure -> GO TO STEP 7</p>		
<p>TC Seq. Name : NULLSEQ2 ()</p> <p>TimeTag Type: Sub Schedule ID:</p> <p><input type="checkbox"/></p>				
3		Select Branch based on Alarm Failure Signature		<p>Next Step: STRAP 7A 4 STRAP 7B 5 STRAP 7A+7B 6 MULTIPLE END</p>
		<p>WARNING: If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.1.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</p>		
		<p>Based on the diagnosis of step 1, select the branch of the failed separation strap input here.</p> <p>Strap 7A failure -> GO TO STEP 4</p> <p>Strap 7B failure -> GO TO STEP 5</p> <p>Strap 7A + 7B failure -> GO TO STEP 6</p> <p>Multiple alarm failures -> EXIT PROCEDURE</p>		
<p>TC Seq. Name : HRA0S781 (RecovSepStrap7Afail)</p> <p>TimeTag Type: Sub Schedule ID:</p> <p><input type="checkbox"/></p>				
4		Update RM Polarity Configuration for Separation Strap 7A Failure		<p>Next Step: END</p>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<i>This step updates the default RM alarm polarity configuration for a separation strap 7A failure. Default configuration is as highlighted in table 1 attached at the back of this procedure. Keep in mind the inversion of the interpretation of raw values between command and telemetry.</i>		
		WARNING: <i>If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.1.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</i>		
4.1		Uplink Sequence HRA0S781		<input type="checkbox"/>
4.1.1		Disable RM A		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM A Disable - Mission Specific GBM IL DSE --Y -- ---	DCM22170	
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= DISABLED	AND=ZAA07999
4.1.2		Set RM Alarm Polarity Configuration		<input type="checkbox"/>
		WARNING: <i>Polarity of alarms in TC_SET_RM_ALARM_POLARITY. The interpretation of raw bit values is different in the command and in the alarm polarity register(!). The bits in the polarity register are set according to the convention: 1 = high , 0 = low. The interpretation of the bits is inverted in the command: 1 = low, 0 = high.</i>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <p style="text-align: center;">SetAlarmPolarity RMA</p> Command Parameter(s) : AlarmPolF86Cmd AH8H3001 Enable 86 AlarmPolDD86Cmd AH8H4001 Enable 86 AlmPol WD Togg AHF81001 0 <dec> AlarmPol CRS1 AHF82001 1 <dec> AlarmPol CRS2 AHF83001 1 <dec> AlarmPol CRS3 AHF84001 1 <dec> AlarmPol AAD1 AHF85001 0 <dec> AlarmPol AAD2 AHF86001 0 <dec> AlmPol SepStr1 AHF87001 1 <dec> AlmPol SepStr2 AHF88001 0 <dec> AlmPol Extrnl7 AHG8A001 0 <dec> AlmPol PMASyEr AHG8B001 1 <dec> AlmPol PMAAL1 AHG8C001 0 <dec> AlarmPol PMAUnV AHG8D001 1 <dec> AlmPol PMASwAl AHG8E001 0 <dec> AlmPol PMBSyEr AHG8F001 1 <dec> AlmPol PMBAL1 AHG8G001 0 <dec> AlarmPol PMBUnV AHG8H001 1 <dec> AlmPol PMBSwAl AHH81001 0 <dec> AlarmPol Sel PM AHH82001 0 <dec> AlmPol NotUse1 AHH83001 0 <dec> AlmPol NotUse2 AHH84001 0 <dec> AlmPol NotUse3 AHH85001 0 <dec> AlarmPol WD Ena AHH86001 0 <dec> TC Control Flags : <p style="text-align: center;">GBM IL DSE --Y -- ---</p> Subsch. ID : 20 Det. descr. : TC(8,1) SET ALRM - SetAlarmPolarity RMA	ACZWA109	
		Execute Telecommand <p style="text-align: center;">Fire SetRMAlarmPolarity</p> Command Parameter(s) : FireFun DF86Cmd AH8F1001 Enable 86 FireFun DD86Cmd AH8F2001 Enable 86 TC Control Flags : <p style="text-align: center;">GBM IL DSE --Y -- ---</p> Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire SetRMAlarmPolarity	ACZ3N109	
4.1.3		Verify Update via RM A Status Report		□

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Get RM-A status Command Parameter(s) : RMStat DF86Cmd AH841001 RMStat DD86Cmd AH842001 TC Control Flags : Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status GBM IL DSE --Y -- ---	ACZZ4109 Enable 86 Enable 86	
		Verify Packet Reception TM 8-6 for RM Status parametrized Packet Details: APID: 512 Type: 8 Subtype: 6 PI1: 41600 PI2: 1	A86_RMStatus	
4.1.4		Check Separation Alarm Status		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= High	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= Low	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
4.1.5		Check Alarm Polarity Settings		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
4.1.6		Enable RM A		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Enable TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : External ACC RM A Enable - Mission Specific	DCM21170	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
<p>TC Seq. Name :HRA0S782 (RecovSepStrap7Bfail)</p> <p>TimeTag Type: Sub Schedule ID: <input type="checkbox"/></p>				
5		Update RM Polarity Configuration for Separation Strap 7B Failure		Next Step: END
		<i>This step updates the default RM alarm polarity configuration for a separation strap 7B failure. Default configuration is as highlighted in table 1 attached at the back of this procedure. Keep in mind the inversion of the interpretation of raw values between command and telemetry.</i>		
		WARNING: <i>If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.1.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</i>		
5.1		Uplink Sequence HRA0S782		<input type="checkbox"/>
5.1.1		Disable RM A		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Disable TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : External ACC RM A Disable - Mission Specific	DCM22170	
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= DISABLED	AND=ZAA07999

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																																																																											
5.1.2		Set RM Alarm Polarity Configuration		□																																																																											
		<p><i>WARNING:</i> Polarity of alarms in TC_SET_RM_ALARM_POLARITY. The interpretation of raw bit values is different in the command and in the alarm polarity register(!). The bits in the polarity register are set according to the convention: 1 = high , 0 = low. The interpretation of the bits is inverted in the command: 1 = low, 0 = high.</p>																																																																													
		<p>Execute Telecommand</p> <p style="text-align: center;">SetAlarmPolarity RMA</p> <p>Command Parameter(s) :</p> <table border="0"> <tr><td>AlarmPolF86Cmd</td><td>AH8H3001</td><td>Enable 86</td></tr> <tr><td>AlarmPolDD86Cmd</td><td>AH8H4001</td><td>Enable 86</td></tr> <tr><td>AlmPol WD Togg</td><td>AHF81001</td><td>0 <dec></td></tr> <tr><td>AlarmPol CRS1</td><td>AHF82001</td><td>1 <dec></td></tr> <tr><td>AlarmPol CRS2</td><td>AHF83001</td><td>1 <dec></td></tr> <tr><td>AlarmPol CRS3</td><td>AHF84001</td><td>1 <dec></td></tr> <tr><td>AlarmPol AAD1</td><td>AHF85001</td><td>0 <dec></td></tr> <tr><td>AlarmPol AAD2</td><td>AHF86001</td><td>0 <dec></td></tr> <tr><td>AlmPol SepStr1</td><td>AHF87001</td><td>0 <dec></td></tr> <tr><td>AlmPol SepStr2</td><td>AHF88001</td><td>1 <dec></td></tr> <tr><td>AlmPol Extrnl7</td><td>AHG8A001</td><td>0 <dec></td></tr> <tr><td colspan="3"> </td></tr> <tr><td>AlmPol PMASyEr</td><td>AHG8B001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMAA1A1</td><td>AHG8C001</td><td>0 <dec></td></tr> <tr><td>AlarmPol PMAUnV</td><td>AHG8D001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMASwA1</td><td>AHG8E001</td><td>0 <dec></td></tr> <tr><td>AlmPol PMBSyEr</td><td>AHG8F001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMBA1A1</td><td>AHG8G001</td><td>0 <dec></td></tr> <tr><td>AlarmPol PMBUnV</td><td>AHG8H001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMBSwA1</td><td>AHH81001</td><td>0 <dec></td></tr> <tr><td>AlarmPol Sel PM</td><td>AHH82001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse1</td><td>AHH83001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse2</td><td>AHH84001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse3</td><td>AHH85001</td><td>0 <dec></td></tr> <tr><td>AlarmPol WD Ena</td><td>AHH86001</td><td>0 <dec></td></tr> </table> <p>TC Control Flags :</p> <p style="text-align: center;">GBM IL DSE --Y -- ---</p> <p>Subsch. ID : 20 Det. descr. : TC(8,1) SET ALRM - SetAlarmPolarity RMA</p>	AlarmPolF86Cmd	AH8H3001	Enable 86	AlarmPolDD86Cmd	AH8H4001	Enable 86	AlmPol WD Togg	AHF81001	0 <dec>	AlarmPol CRS1	AHF82001	1 <dec>	AlarmPol CRS2	AHF83001	1 <dec>	AlarmPol CRS3	AHF84001	1 <dec>	AlarmPol AAD1	AHF85001	0 <dec>	AlarmPol AAD2	AHF86001	0 <dec>	AlmPol SepStr1	AHF87001	0 <dec>	AlmPol SepStr2	AHF88001	1 <dec>	AlmPol Extrnl7	AHG8A001	0 <dec>				AlmPol PMASyEr	AHG8B001	1 <dec>	AlmPol PMAA1A1	AHG8C001	0 <dec>	AlarmPol PMAUnV	AHG8D001	1 <dec>	AlmPol PMASwA1	AHG8E001	0 <dec>	AlmPol PMBSyEr	AHG8F001	1 <dec>	AlmPol PMBA1A1	AHG8G001	0 <dec>	AlarmPol PMBUnV	AHG8H001	1 <dec>	AlmPol PMBSwA1	AHH81001	0 <dec>	AlarmPol Sel PM	AHH82001	0 <dec>	AlmPol NotUse1	AHH83001	0 <dec>	AlmPol NotUse2	AHH84001	0 <dec>	AlmPol NotUse3	AHH85001	0 <dec>	AlarmPol WD Ena	AHH86001	0 <dec>	ACZWA109	
AlarmPolF86Cmd	AH8H3001	Enable 86																																																																													
AlarmPolDD86Cmd	AH8H4001	Enable 86																																																																													
AlmPol WD Togg	AHF81001	0 <dec>																																																																													
AlarmPol CRS1	AHF82001	1 <dec>																																																																													
AlarmPol CRS2	AHF83001	1 <dec>																																																																													
AlarmPol CRS3	AHF84001	1 <dec>																																																																													
AlarmPol AAD1	AHF85001	0 <dec>																																																																													
AlarmPol AAD2	AHF86001	0 <dec>																																																																													
AlmPol SepStr1	AHF87001	0 <dec>																																																																													
AlmPol SepStr2	AHF88001	1 <dec>																																																																													
AlmPol Extrnl7	AHG8A001	0 <dec>																																																																													
AlmPol PMASyEr	AHG8B001	1 <dec>																																																																													
AlmPol PMAA1A1	AHG8C001	0 <dec>																																																																													
AlarmPol PMAUnV	AHG8D001	1 <dec>																																																																													
AlmPol PMASwA1	AHG8E001	0 <dec>																																																																													
AlmPol PMBSyEr	AHG8F001	1 <dec>																																																																													
AlmPol PMBA1A1	AHG8G001	0 <dec>																																																																													
AlarmPol PMBUnV	AHG8H001	1 <dec>																																																																													
AlmPol PMBSwA1	AHH81001	0 <dec>																																																																													
AlarmPol Sel PM	AHH82001	0 <dec>																																																																													
AlmPol NotUse1	AHH83001	0 <dec>																																																																													
AlmPol NotUse2	AHH84001	0 <dec>																																																																													
AlmPol NotUse3	AHH85001	0 <dec>																																																																													
AlarmPol WD Ena	AHH86001	0 <dec>																																																																													

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Fire SetRMAlarmPolarity Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire SetRMAlarmPolarity	ACZ3N109 Enable 86 Enable 86	
5.1.3		Verify Update via RM A Status Report		<input type="checkbox"/>
		Execute Telecommand Get RM-A status Command Parameter(s) : RMStat DF86Cmd AH841001 RMStat DD86Cmd AH842001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status	ACZZ4109 Enable 86 Enable 86	
		Verify Packet Reception TM 8-6 for RM Status parametrized Packet Details: APID: 512 Type: 8 Subtype: 6 PI1: 41600 PI2: 1	A86_RMStatus	
5.1.4		Check Separation Alarm Status		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= High	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= Low	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
5.1.5		Check Alarm Polarity Settings		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
5.1.6		Enable RM A		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Enable TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : External ACC RM A Enable - Mission Specific	DCM21170	
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
TC Seq. Name :HRA0S783 (RecovSepStrap7A7Bfail)				
TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
6		Update RM Polarity Configuration for Separation Strap 7A + 7B Failure		Next Step: END
		<i>This step updates the default RM alarm polarity configuration for a separation straps 7A + 7B failure. Default configuration is as highlighted in table 1 attached at the back of this procedure. Keep in mind the inversion of the interpretation of raw values between command and telemetry.</i>		
		WARNING: <i>If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.1.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</i>		
6.1		Uplink Sequence HRA0S783		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
6.1.1		Disable RM A		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM A Disable - Mission Specific	DCM22170	
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= DISABLED	AND=ZAA07999
6.1.2		Set RM Alarm Polarity Configuration		<input type="checkbox"/>
		WARNING: Polarity of alarms in TC_SET_RM_ALARM_POLARITY. The interpretation of raw bit values is different in the command and in the alarm polarity register(!). The bits in the polarity register are set according to the convention: 1 = high , 0 = low. The interpretation of the bits is inverted in the command: 1 = low, 0 = high.		
		Execute Telecommand SetAlarmPolarity RMA Command Parameter(s) : AlarmPolF86Cmd AH8H3001 Enable 86 AlarmPolDD86Cmd AH8H4001 Enable 86 AlmPol WD Togg AHF81001 0 <dec> AlarmPol CRS1 AHF82001 1 <dec> AlarmPol CRS2 AHF83001 1 <dec> AlarmPol CRS3 AHF84001 1 <dec> AlarmPol AAD1 AHF85001 0 <dec> AlarmPol AAD2 AHF86001 0 <dec> AlmPol SepStr1 AHF87001 1 <dec> AlmPol SepStr2 AHF88001 1 <dec> AlmPol Extrnl7 AHG8A001 0 <dec>	ACZWA109	

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		AlmPol PMASyEr AHG8B001 AlmPol PMAA1A1 AHG8C001 AlarmPol PMAUnV AHG8D001 AlmPol PMASwA1 AHG8E001 AlmPol PMBSyEr AHG8F001 AlmPol PMBA1A1 AHG8G001 AlarmPol PMBUnV AHG8H001 AlmPol PMBSwA1 AHH81001 AlarmPol Sel PM AHH82001 AlmPol NotUse1 AHH83001 AlmPol NotUse2 AHH84001 AlmPol NotUse3 AHH85001 AlarmPol WD Ena AHH86001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) SET ALRM - SetAlarmPolarity RMA	1 <dec> 0 <dec> 1 <dec> 0 <dec> 1 <dec> 0 <dec> 1 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec>	
		Execute Telecommand Fire SetRMAlarmPolarity Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire SetRMAlarmPolarity	ACZ3N109 Enable 86 Enable 86	
6.1.3		Verify Update via RM A Status Report		□
		Execute Telecommand Get RM-A status Command Parameter(s) : RMStat DF86Cmd AH841001 RMStat DD86Cmd AH842001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status	ACZZ4109 Enable 86 Enable 86	
		Verify Packet Reception TM 8-6 for RM Status parametrized Packet Details: APID: 512 Type: 8 Subtype: 6 PI1: 41600 PI2: 1	A86_RMStatus 512 8 6 41600 1	

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
6.1.4		Check Separation Alarm Status		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= Low	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= Low	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
6.1.5		Check Alarm Polarity Settings		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
6.1.6		Enable RM A		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Enable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM A Enable - Mission Specific	DCM21170	
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
TC Seq. Name : NULLSEQ3 ()				
TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
7		Select Branch based on Alarm Failure Signature		Next Step: STRAP 8A 8 STRAP 8B 9 STRAP 8A+8B 10 MULTIPLE END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>WARNING: If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.2.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</p>		
		<p>Based on the diagnosis of step 1, select the branch of the failed separation strap input here.</p> <p>Strap 8A failure -> GO TO STEP 8</p> <p>Strap 8B failure -> GO TO STEP 9</p> <p>Strap 8A + 8B failure -> GO TO STEP 10</p> <p>Multiple alarm failures -> EXIT PROCEDURE</p>		
<p>TC Seq. Name :HRA0S784 (RecovSepStrap8Afail)</p> <p>TimeTag Type: Sub Schedule ID:</p> <p><input type="checkbox"/></p>				
8		Update RM Polarity Configuration for Separation Strap 8A Failure		Next Step: END
		<p>This step updates the default RM alarm polarity configuration for a separation strap 8A failure. Default configuration is as highlighted in table 1 attached at the back of this procedure. Keep in mind the inversion of the interpretation of raw values between command and telemetry.</p>		
		<p>WARNING: If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.2.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</p>		
8.1		Uplink Sequence HRA0S784		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
8.1.1		Disable RM B		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Disable TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : External ACC RM B Disable - Mission Specific	DCM25170	
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= DISABLED	AND=ZAA07999
8.1.2		Set RM Alarm Polarity Configuration		<input type="checkbox"/>
		WARNING: Polarity of alarms in TC_SET_RM_ALARM_POLARITY. The interpretation of raw bit values is different in the command and in the alarm polarity register(!). The bits in the polarity register are set according to the convention: 1 = high , 0 = low. The interpretation of the bits is inverted in the command: 1 = low, 0 = high.		
		Execute Telecommand SetAlarmPolarity RMB Command Parameter(s) : AlarmPolF86Cmd AH8H3001 Enable 86 AlarmPolDD86Cmd AH8H4001 Enable 86 AlmPol WD Togg AHF81001 0 <dec> AlarmPol CRS1 AHF82001 1 <dec> AlarmPol CRS2 AHF83001 1 <dec> AlarmPol CRS3 AHF84001 1 <dec> AlarmPol AAD1 AHF85001 0 <dec> AlarmPol AAD2 AHF86001 0 <dec> AlmPol SepStr1 AHF87001 1 <dec> AlmPol SepStr2 AHF88001 0 <dec> AlmPol Extrnl7 AHG8A001 0 <dec>	ACZWB109	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		AlmPol PMASyEr AHG8B001 AlmPol PMAA1A1 AHG8C001 AlarmPol PMAUnV AHG8D001 AlmPol PMASwA1 AHG8E001 AlmPol PMBSyEr AHG8F001 AlmPol PMBA1A1 AHG8G001 AlarmPol PMBUnV AHG8H001 AlmPol PMBSwA1 AHH81001 AlarmPol Sel PM AHH82001 AlmPol NotUse1 AHH83001 AlmPol NotUse2 AHH84001 AlmPol NotUse3 AHH85001 AlarmPol WD Ena AHH86001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) SET ALRM - SetAlarmPolarity RMB	1 <dec> 0 <dec> 1 <dec> 0 <dec> 1 <dec> 0 <dec> 1 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec> 0 <dec>	
		Execute Telecommand Fire SetRMAlarmPolarity Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire SetRMAlarmPolarity	ACZ3N109 Enable 86 Enable 86	
8.1.3		Verify Update via RM B Status Report		□
		Execute Telecommand Get RM-B status Command Parameter(s) : RMStat DF86Cmd AH841001 RMStat DD86Cmd AH842001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-B status	ACZZ5109 Enable 86 Enable 86	
		Verify Packet Reception TM 8-6 for RM Status parametrized Packet Details: APID: 512 Type: 8 Subtype: 6 PI1: 41600 PI2: 1	A86_RMStatus	

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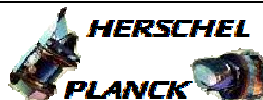


Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
8.1.4		Check Separation Alarm Status		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= High	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= Low	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= High	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
8.1.5		Check Alarm Polarity Settings		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999

Recovery from Separation Straps 7 or 8 Failure

File: H_CRP_AOC_0S78.xls

Author: dsalt-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL PMA COCOS	AEW4T109	= High AND=ZAAM2999
		Verify Telemetry APOL PMA UVD	AEW4U109	= Low AND=ZAAM2999
		Verify Telemetry APOL PMA SW	AEW4V109	= High AND=ZAAM2999
		Verify Telemetry APOL PMB CPU	AEW4W109	= Low AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS	AEW4X109	= High AND=ZAAM2999
		Verify Telemetry APOL PMB UVD	AEW4Y109	= Low AND=ZAAM2999
		Verify Telemetry APOL PMB SW	AEW4Z109	= High AND=ZAAM2999
		Verify Telemetry APOL PM Select	AEW50109	= High AND=ZAAM2999
		Verify Telemetry APOL WD Enable	AEW51109	= High AND=ZAAM2999
8.1.6		Enable RM B		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Enable	DCM24170	
		TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Enable - Mission Specific	GBM IL DSE --Y -- --	
		Verify Telemetry RMB_fromTTR-RMA	AEE93050	= ENABLED AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB	AEE94050	= ENABLED AND=ZAA07999
TC Seq. Name :HRA0S785 (RecovSepStrap8Bfail)				
TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
9		Update RM Polarity Configuration for Separation Strap 8B Failure		Next Step: END

Recovery from Separation Straps 7 or 8 Failure
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 Author: dsalt-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<i>This step updates the default RM alarm polarity configuration for a separation strap 8B failure. Default configuration is as highlighted in table 1 attached at the back of this procedure. Keep in mind the inversion of the interpretation of raw values between command and telemetry.</i>		
		WARNING: <i>If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.2.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</i>		
9.1		Uplink Sequence HRA0S785		<input type="checkbox"/>
9.1.1		Disable RM B		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Disable - Mission Specific GBM IL DSE --Y -- ---	DCM25170	
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= DISABLED	AND=ZAA07999
9.1.2		Set RM Alarm Polarity Configuration		<input type="checkbox"/>
		WARNING: <i>Polarity of alarms in TC_SET_RM_ALARM_POLARITY. The interpretation of raw bit values is different in the command and in the alarm polarity register(!). The bits in the polarity register are set according to the convention: 1 = high , 0 = low. The interpretation of the bits is inverted in the command: 1 = low, 0 = high.</i>		

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																																																																											
		Execute Telecommand <div style="text-align: right;">SetAlarmPolarity RMB</div> Command Parameter(s) : <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 30%;">AlarmPolF86Cmd</td><td style="width: 30%;">AH8H3001</td><td style="width: 40%;">Enable 86</td></tr> <tr><td>AlarmPolDD86Cmd</td><td>AH8H4001</td><td>Enable 86</td></tr> <tr><td>AlmPol WD Togg</td><td>AHF81001</td><td>0 <dec></td></tr> <tr><td>AlarmPol CRS1</td><td>AHF82001</td><td>1 <dec></td></tr> <tr><td>AlarmPol CRS2</td><td>AHF83001</td><td>1 <dec></td></tr> <tr><td>AlarmPol CRS3</td><td>AHF84001</td><td>1 <dec></td></tr> <tr><td>AlarmPol AAD1</td><td>AHF85001</td><td>0 <dec></td></tr> <tr><td>AlarmPol AAD2</td><td>AHF86001</td><td>0 <dec></td></tr> <tr><td>AlmPol SepStr1</td><td>AHF87001</td><td>0 <dec></td></tr> <tr><td>AlmPol SepStr2</td><td>AHF88001</td><td>1 <dec></td></tr> <tr><td>AlmPol Extrnl7</td><td>AHG8A001</td><td>0 <dec></td></tr> <tr><td colspan="3"> </td></tr> <tr><td>AlmPol PMASyEr</td><td>AHG8B001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMAALAl</td><td>AHG8C001</td><td>0 <dec></td></tr> <tr><td>AlarmPol PMAUnV</td><td>AHG8D001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMASwAl</td><td>AHG8E001</td><td>0 <dec></td></tr> <tr><td>AlmPol PMBSyEr</td><td>AHG8F001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMBALAl</td><td>AHG8G001</td><td>0 <dec></td></tr> <tr><td>AlarmPol PMBUnV</td><td>AHG8H001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMBSwAl</td><td>AHH81001</td><td>0 <dec></td></tr> <tr><td>AlarmPol Sel PM</td><td>AHH82001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse1</td><td>AHH83001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse2</td><td>AHH84001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse3</td><td>AHH85001</td><td>0 <dec></td></tr> <tr><td>AlarmPol WD Ena</td><td>AHH86001</td><td>0 <dec></td></tr> </table> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 20 Det. descr. : TC(8,1) SET ALRM - SetAlarmPolarity RMB	AlarmPolF86Cmd	AH8H3001	Enable 86	AlarmPolDD86Cmd	AH8H4001	Enable 86	AlmPol WD Togg	AHF81001	0 <dec>	AlarmPol CRS1	AHF82001	1 <dec>	AlarmPol CRS2	AHF83001	1 <dec>	AlarmPol CRS3	AHF84001	1 <dec>	AlarmPol AAD1	AHF85001	0 <dec>	AlarmPol AAD2	AHF86001	0 <dec>	AlmPol SepStr1	AHF87001	0 <dec>	AlmPol SepStr2	AHF88001	1 <dec>	AlmPol Extrnl7	AHG8A001	0 <dec>				AlmPol PMASyEr	AHG8B001	1 <dec>	AlmPol PMAALAl	AHG8C001	0 <dec>	AlarmPol PMAUnV	AHG8D001	1 <dec>	AlmPol PMASwAl	AHG8E001	0 <dec>	AlmPol PMBSyEr	AHG8F001	1 <dec>	AlmPol PMBALAl	AHG8G001	0 <dec>	AlarmPol PMBUnV	AHG8H001	1 <dec>	AlmPol PMBSwAl	AHH81001	0 <dec>	AlarmPol Sel PM	AHH82001	0 <dec>	AlmPol NotUse1	AHH83001	0 <dec>	AlmPol NotUse2	AHH84001	0 <dec>	AlmPol NotUse3	AHH85001	0 <dec>	AlarmPol WD Ena	AHH86001	0 <dec>	ACZWB109	
AlarmPolF86Cmd	AH8H3001	Enable 86																																																																													
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AlmPol NotUse3	AHH85001	0 <dec>																																																																													
AlarmPol WD Ena	AHH86001	0 <dec>																																																																													
		Execute Telecommand <div style="text-align: right;">Fire SetRMAlarmPolarity</div> Command Parameter(s) : <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 30%;">FireFun DF86Cmd</td><td style="width: 30%;">AH8F1001</td><td style="width: 40%;">Enable 86</td></tr> <tr><td>FireFun DD86Cmd</td><td>AH8F2001</td><td>Enable 86</td></tr> </table> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire SetRMAlarmPolarity	FireFun DF86Cmd	AH8F1001	Enable 86	FireFun DD86Cmd	AH8F2001	Enable 86	ACZ3N109																																																																						
FireFun DF86Cmd	AH8F1001	Enable 86																																																																													
FireFun DD86Cmd	AH8F2001	Enable 86																																																																													
9.1.3		Verify Update via RM B Status Report		□																																																																											

Recovery from Separation Straps 7 or 8 Failure
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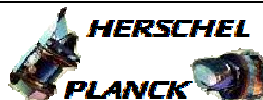
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Get RM-B status Command Parameter(s) : RMStat DF86Cmd AH841001 RMStat DD86Cmd AH842001 TC Control Flags : Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-B status GBM IL DSE --Y -- ---	ACZZ5109 Enable 86 Enable 86	
		Verify Packet Reception TM 8-6 for RM Status parametrized Packet Details: APID: 512 Type: 8 Subtype: 6 PI1: 41600 PI2: 1	A86_RMStatus	
9.1.4		Check Separation Alarm Status		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= High	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= High	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= Low	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
9.1.5		Check Alarm Polarity Settings		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999

Recovery from Separation Straps 7 or 8 Failure
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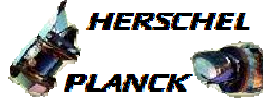
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
9.1.6		Enable RM B		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Enable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Enable - Mission Specific	DCM24170 GBM IL DSE --Y -- --	

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= ENABLED	AND=ZAA07999
<p>TC Seq. Name :HRA0S786 (RecovSepStrap8A8Bfail)</p> <p>TimeTag Type: Sub Schedule ID: <input type="checkbox"/></p>				
10		Update RM Polarity Configuration for Separation Strap 8A + 8B Failure		Next Step: END
		<i>This step updates the default RM alarm polarity configuration for a separation straps 8A + 8B failure. Default configuration is as highlighted in table 1 attached at the back of this procedure. Keep in mind the inversion of the interpretation of raw values between command and telemetry.</i>		
		WARNING: <i>If the separation strap failure is not the only change to the default alarm polarity table (as you would have noticed through the checks in step 1.2.5), you have to exit this procedure and use H_CRP_AOC_D2AP (Set RM Alarm Polarity) to set a user-defined alarm polarity configuration.</i>		
10.1		Uplink Sequence HRA0S786		<input type="checkbox"/>
10.1.1		Disable RM B		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Disable - Mission Specific	DCM25170 GBM IL DSE --Y -- --	
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= DISABLED	AND=ZAA07999

Recovery from Separation Straps 7 or 8 Failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																																																																											
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= DISABLED	AND=ZAA07999																																																																											
10.1.2		Set RM Alarm Polarity Configuration		□																																																																											
		<i>WARNING:</i> Polarity of alarms in TC_SET_RM_ALARM_POLARITY. The interpretation of raw bit values is different in the command and in the alarm polarity register(!). The bits in the polarity register are set according to the convention: 1 = high , 0 = low. The interpretation of the bits is inverted in the command: 1 = low, 0 = high.																																																																													
		Execute Telecommand SetAlarmPolarity RMB	ACZWB109																																																																												
		<p>Command Parameter(s) :</p> <table border="0"> <tr><td>AlarmPolF86Cmd</td><td>AH8H3001</td><td>Enable 86</td></tr> <tr><td>AlarmPolDD86Cmd</td><td>AH8H4001</td><td>Enable 86</td></tr> <tr><td>AlmPol WD Togg</td><td>AHF81001</td><td>0 <dec></td></tr> <tr><td>AlarmPol CRS1</td><td>AHF82001</td><td>1 <dec></td></tr> <tr><td>AlarmPol CRS2</td><td>AHF83001</td><td>1 <dec></td></tr> <tr><td>AlarmPol CRS3</td><td>AHF84001</td><td>1 <dec></td></tr> <tr><td>AlarmPol AAD1</td><td>AHF85001</td><td>0 <dec></td></tr> <tr><td>AlarmPol AAD2</td><td>AHF86001</td><td>0 <dec></td></tr> <tr><td>AlmPol SepStr1</td><td>AHF87001</td><td>1 <dec></td></tr> <tr><td>AlmPol SepStr2</td><td>AHF88001</td><td>1 <dec></td></tr> <tr><td>AlmPol Extrnl7</td><td>AHG8A001</td><td>0 <dec></td></tr> <tr><td colspan="3"> </td></tr> <tr><td>AlmPol PMASyEr</td><td>AHG8B001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMAA1A1</td><td>AHG8C001</td><td>0 <dec></td></tr> <tr><td>AlarmPol PMAUnV</td><td>AHG8D001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMASwAl</td><td>AHG8E001</td><td>0 <dec></td></tr> <tr><td>AlmPol PMBSyEr</td><td>AHG8F001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMBA1A1</td><td>AHG8G001</td><td>0 <dec></td></tr> <tr><td>AlarmPol PMBUnV</td><td>AHG8H001</td><td>1 <dec></td></tr> <tr><td>AlmPol PMBSwAl</td><td>AHH81001</td><td>0 <dec></td></tr> <tr><td>AlarmPol Sel PM</td><td>AHH82001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse1</td><td>AHH83001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse2</td><td>AHH84001</td><td>0 <dec></td></tr> <tr><td>AlmPol NotUse3</td><td>AHH85001</td><td>0 <dec></td></tr> <tr><td>AlarmPol WD Ena</td><td>AHH86001</td><td>0 <dec></td></tr> </table> <p>TC Control Flags :</p> <p style="text-align: right;">GBM IL DSE --Y -- --</p> <p>Subsch. ID : 20 Det. descr. : TC(8,1) SET ALRM - SetAlarmPolarity RMB</p>	AlarmPolF86Cmd	AH8H3001	Enable 86	AlarmPolDD86Cmd	AH8H4001	Enable 86	AlmPol WD Togg	AHF81001	0 <dec>	AlarmPol CRS1	AHF82001	1 <dec>	AlarmPol CRS2	AHF83001	1 <dec>	AlarmPol CRS3	AHF84001	1 <dec>	AlarmPol AAD1	AHF85001	0 <dec>	AlarmPol AAD2	AHF86001	0 <dec>	AlmPol SepStr1	AHF87001	1 <dec>	AlmPol SepStr2	AHF88001	1 <dec>	AlmPol Extrnl7	AHG8A001	0 <dec>				AlmPol PMASyEr	AHG8B001	1 <dec>	AlmPol PMAA1A1	AHG8C001	0 <dec>	AlarmPol PMAUnV	AHG8D001	1 <dec>	AlmPol PMASwAl	AHG8E001	0 <dec>	AlmPol PMBSyEr	AHG8F001	1 <dec>	AlmPol PMBA1A1	AHG8G001	0 <dec>	AlarmPol PMBUnV	AHG8H001	1 <dec>	AlmPol PMBSwAl	AHH81001	0 <dec>	AlarmPol Sel PM	AHH82001	0 <dec>	AlmPol NotUse1	AHH83001	0 <dec>	AlmPol NotUse2	AHH84001	0 <dec>	AlmPol NotUse3	AHH85001	0 <dec>	AlarmPol WD Ena	AHH86001	0 <dec>		
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AlmPol Extrnl7	AHG8A001	0 <dec>																																																																													
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Recovery from Separation Straps 7 or 8 Failure
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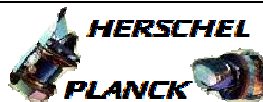
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Fire SetRMAlarmPolarity Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire SetRMAlarmPolarity	ACZ3N109 Enable 86 Enable 86	
10.1.3		Verify Update via RM B Status Report		<input type="checkbox"/>
		Execute Telecommand Get RM-B status Command Parameter(s) : RMStat DF86Cmd AH841001 RMStat DD86Cmd AH842001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-B status	ACZZ5109 Enable 86 Enable 86	
		Verify Packet Reception TM 8-6 for RM Status parametrized Packet Details: APID: 512 Type: 8 Subtype: 6 PI1: 41600 PI2: 1	A86_RMstatus	
10.1.4		Check Separation Alarm Status		<input type="checkbox"/>
		Verify Telemetry ASTAT Strap1 AEW0S109	= Low	AND=ZAAM1999
		Verify Telemetry ASTAT Strap2 AEW0T109	= Low	AND=ZAAM1999
		Verify Telemetry APOL Strap1 AEW4N109	= Low	AND=ZAAM2999
		Verify Telemetry APOL Strap2 AEW4P109	= Low	AND=ZAAM2999
		Verify Telemetry FSTAT Strap1 AEW1F109	= ACTIVE	AND=ZAAM1999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry FSTAT Strap2 AEW1G109	= ACTIVE	AND=ZAAM1999
		Verify Telemetry RMH_TDLY6 AD010109	29900.9 ms	AND=ZAAM3999
		Verify Telemetry RMH_TDLY7 AD011109	299827.3 ms	AND=ZAAM3999
		Verify Telemetry AENSET Strap1 AEW5G109	= ENABLED	AND=ZAAM2999
		Verify Telemetry AENSET Strap2 AEW5H109	= ENABLED	AND=ZAAM2999
10.1.5		Check Alarm Polarity Settings		<input type="checkbox"/>
		Verify Telemetry APOL WD AEW4G109	= High	AND=ZAAM2999
		Verify Telemetry APOL CRS1 AEW4H109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS2 AEW4J109	= Low	AND=ZAAM2999
		Verify Telemetry APOL CRS3 AEW4K109	= Low	AND=ZAAM2999
		Verify Telemetry APOL AAD1 AEW4L109	= High	AND=ZAAM2999
		Verify Telemetry APOL AAD2 AEW4M109	= High	AND=ZAAM2999
		Verify Telemetry APOL Ext8 AEW4R109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA CPU AEW4S109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA COCOS AEW4T109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMA UVD AEW4U109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMA SW AEW4V109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB CPU AEW4W109	= Low	AND=ZAAM2999
		Verify Telemetry APOL PMB COCOS AEW4X109	= High	AND=ZAAM2999
		Verify Telemetry APOL PMB UVD AEW4Y109	= Low	AND=ZAAM2999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry APOL PMB SW AEW4Z109	= High	AND=ZAAM2999
		Verify Telemetry APOL PM Select AEW50109	= High	AND=ZAAM2999
		Verify Telemetry APOL WD Enable AEW51109	= High	AND=ZAAM2999
10.1.6		<i>Enable RM B</i>		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B Enable <i>TC Control Flags :</i> GBM IL DSE --Y -- --- <i>Subsch. ID : 10</i> <i>Det. descr. : External ACC RM B Enable - Mission Specific</i>	DCM24170	
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= ENABLED	AND=ZAA07999
End of Procedure				

Recovery from Separation Straps 7 or 8 Failure
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Tables & Figures

No.	Alarm	Default RM Alarm Polarity Configuration for Flight	
		TM Convention (1 = high, 0 = low)	TC Convention (0 = high, 1 = low)
(00)	Watchdog Toggle	1	0
(01)	CRS 1	0	1
(02)	CRS 2	0	1
(03)	CRS 3	0	1
(04)	AAD 1	1	0
(05)	AAD 2	1	0
(06)	Separation Strap 1	1	0
(07)	Separation Strap 2	1	0
(08)	External 8	1	0
(09)	PM A CPU	0	1
(10)	PM A COCOS	1	0
(11)	PM A Under-Voltage Detection	0	1
(12)	PM A Software Alarm	1	0
(13)	PM B CPU	0	1
(14)	PM B COCOS	1	0
(15)	PM B Under-Voltage Detection	0	1
(16)	PM B Software Alarm	1	0
(17)	PM Select	1	0
(18)	Unused	1	0
(19)	Unused	1	0
(20)	Unused	1	0
(21)	Watchdog Enable	1	0
(22)	Unused	0	1
(23)	Unused	0	1
(24)	Unused	0	1
(25)	Unused	0	1
(26)	Unused	0	1
(27)	Unused	0	1
(28)	Unused	0	1
(29)	Unused	0	1
(30)	Unused	0	1
(31)	Unused	0	1

Table 1 : Default Polarities of the Alarms in the Flight Configuration