

ACC Health Check  
File: H\_FCP\_AOC\_5012.xls  
Author: dsalt-hp



## Procedure Summary

### Objectives

The objective of this Herschel ACMS procedure is to verify the health and status of the ACC and the BSW.

The procedure involves the following activities:

- check configuration of ACC modules
- check LCL & FCL status and currents
- check ACC housekeeping TM
- check RM status
- check ACC internal configuration and status
- check ACC internal housekeeping parameters
- check ACC subsystem health and status
- check BSW functional parameters

The verification covers the configuration and status data as well as analogue housekeeping telemetries. The procedure uses both external ACC telemetries acquired by the CDMU and data available internally through the ACC and included in the essential TM for the ACMS.

### Summary of Constraints

The procedure assumes the nominal configuration of the ACC:

1. Both RM's powered on and enabled.
2. PMA powered and running as main processor; PMB switched off.
3. PMA executing the OBSW in nominal ACMS modes.
4. PMB configured for execution in Survival Mode.

### Spacecraft Configuration

#### Start of Procedure

n/a

#### End of Procedure

n/a

### Reference File(s)

#### Input Command Sequences

#### Output Command Sequences

HFA5012A

### Referenced Displays

ANDs	GRDs	SLDs
ZAZ52999		
ZAZ55999		
ZAZ56999		

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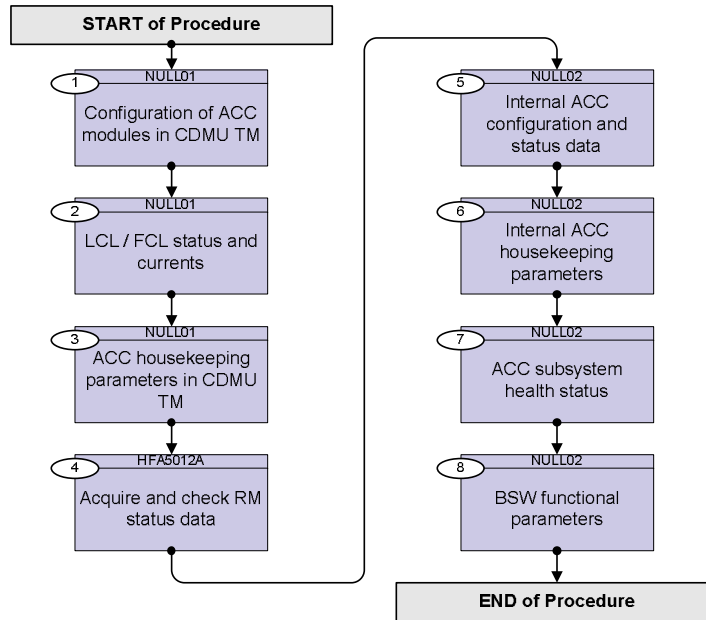
**Configuration Control Information**

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
03/08/08	1	1	Created	dsalt-hp	
10/12/08		2	New ANDs created to enable more efficient checking.	dsalt-hp	
10/12/08		3	Removal of redundant sequence name at start of procedure.	dsalt-hp	
13/12/08	2	4	Expected TM values corrected in Step 4 (RMH_TDLY0_MSB/LSB) for the WD toggle (i.e. Temporisation Delay #1)	dsalt-hp	
05/03/09	2.1	5	Checked in for FOP update	dsalt-hp	

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### Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
TC Seq. Name : NULL01 (Null Sequence 01)				
TimeTag Type: Sub Schedule ID:  □				
1		Configuration of ACC modules in CDMU TM		Next Step: 2
		All telemetries used in this section of the procedure are derived from bi-level status signals provided by the ACC on its external interface and acquired by the CDMU.		
		Verify Telemetry ColdSts_A_J011                      AEE45050	= ON	AND=ZAZ52999
		Verify Telemetry ColdSts_A_J121                      AEE46050	= OFF	AND=ZAZ52999
		In spite of the misleading short description of the parameter, the signal it corresponds to represents the power status of cold converter B in the ACC		
		Verify Telemetry RMA_Ext_J132                      AEE95050	= ENABLED	AND=ZAZ52999
		Verify Telemetry RMA_Ext_J135                      AEE96050	= ENABLED	AND=ZAZ52999
		In spite of the misleading short description of the parameter, the signal it corresponds to represents the status of the RM-B Enable/Disable relay, as read through external connector J135		
		Verify Telemetry ActPmBoard_N                      AEDPG050	= A	AND=ZAZ52999
		Verify Telemetry ActPmBoard_R                      AEDPH050	= A	AND=ZAZ52999
		The two ActPm parameters represent the status of the main and redundant contacts of the PM selection relay which is physically located on the RMB board in the ACC. The relay status is converted to digital bi-level signals by auxiliary circuitry on the PAAH, the main function of which is to acquire data from ARAD sensors and generate level 4 alarms.		
		Verify Telemetry ACC_A_MODE                      AEE8G050	= Nominal	AND=ZAZ52999
		Verify Telemetry ACC_A_IMAGE                      AEE8H050	= Image 1	AND=ZAZ52999
		Verify Telemetry ACC_B_MODE                      AEE8Z050	= Survival	AND=ZAZ52999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry ACC_B_IMAGE AEE8J050	= Image 1	AND=ZAZ52999
		<i>The four parameters above represent the status of configuration relays (bit 0, bit 1) of PMA and PMB.</i>		
2		LCL / FCL status and currents		Next Step: 3
		Verify Telemetry AccHotA_FCL5_I WM602565	<= 0.7 A	AND=ZAZ52999
		Verify Telemetry AccHotB_FCL6_I WM502565	<= 0.7 A	AND=ZAZ52999
		Verify Telemetry AccColdA_L33_S WM62B565	= ON	AND=ZAZ52999
		Verify Telemetry AccColdA_L33_I WM607565	<= 1.27 A	AND=ZAZ52999
		Verify Telemetry AccColdB_L34_S WM52B565	= ON	AND=ZAZ52999
		Verify Telemetry AccColdB_L34_I WM507565	= 0.0 A	AND=ZAZ52999
3		ACC housekeeping parameters in CDMU TM		Next Step: 4
		Verify Telemetry V15HotIrg2 AEK05050	>= 14.5 V <= 16.1 V	AND=ZAZ52999
		Verify Telemetry V15HotRIrg2 AEK0M050	>= 14.5 V <= 16.1 V	AND=ZAZ52999
		Verify Telemetry PCDH_HOT_A_Data AEK15050	>= -15.0 degC <= 65.0 degC	AND=ZAZ52999
		Verify Telemetry PCDH_COLD_A_Data AEK17050	>= -15.0 degC <= 67.0 degC	AND=ZAZ52999
		Verify Telemetry TEMP_REF_Data AEK19050	>= -15.0 degC <= 50.0 degC	AND=ZAZ52999
		Verify Telemetry PCDH_HOT_B_Data AEK1F050	>= -15.0 degC <= 65.0 degC	AND=ZAZ52999
		Verify Telemetry PCDH_COLD_B_Data AEK1H050	>= -15.0 degC <= 67.0 degC	AND=ZAZ52999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<p>TC Seq. Name :HFA5012A (Get RM status)</p> <p>TimeTag Type:            Sub Schedule ID:  <input type="checkbox"/></p>				
4		Acquire and check RM status data		Next Step: 5
		Execute Telecommand <p style="text-align: right;"><b>Get RM-A status</b></p> Command Parameter(s) : RMStat DF86Cmd           AH841001 RMStat DD86Cmd           AH842001  TC Control Flags : GBM IL DSE YY- ---- ---  Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status	<b>ACZZ4109</b>  <b>Enable 86</b> <b>Enable 86</b>	
		Verify Packet Reception <p style="text-align: center;"><b>TM 8-6 for RM Status parametrized</b></p> Packet Details: <b>APID:</b> 512 <b>Type:</b> 8 <b>Subtype:</b> 6 <b>PI1:</b> 41600 <b>PI2:</b> 1	<b>A86_RMStatus</b>	
		Verify Packet Telemetry (Pkt = A86_RMStatus) <p style="text-align: center;"><b>RMH_STAT            AEW00109</b></p>		AND=ZAZ52999
		<i>The parameter above has ben included in the verification list in order to indicate clearly the register from which the data originates. Specific checks are carried out on the daughter parameters below.</i>  <i>The same approach is used for other RM registers, including ASTAT, FSTAT, MSTAT, APOL and AEN.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus) <p style="text-align: center;"><b>SW Enable            AEW03109</b></p>	= <b>ENABLED</b>	AND=ZAZ52999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <p style="text-align: center;"><b>LCT Enable            AEW02109</b></p>	= <b>DISABLED</b>	AND=ZAZ52999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <p style="text-align: center;"><b>RMH Enable            AEW01109</b></p>	= <b>ENABLED</b>	AND=ZAZ52999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <p style="text-align: center;"><b>RMH_ASTAT            AEW0J109</b></p>		AND=ZAZ53999
		<i>The bits in the ASTAT register represent the raw (unfiltered) alarm status.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus) <p style="text-align: center;"><b>ASTAT WD Enable      AEW17109</b></p>	= <b>High</b>	AND=ZAZ53999

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		<i>The verification criterion is valid for the configuration of RM relays in flight. The WD enable relay will be reset (low) on ground is set externally by the CDMU 20 seconds after separation (the relay provides an indication to the ACC SM logic that the post-separation coasting period is over).</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PM Select                    AEW13109</b>	= Low	AND=ZAZ53999
		<i>The low setting of the PM selection relay indicates PMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMB SW                    AEW12109</b>	= Low	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMB UVD                    AEW11109</b>	= Low	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMB COCOS                    AEW10109</b>	= Low	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMB CPU                    AEW0Z109</b>	= Low	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMA SW                    AEW0Y109</b>	= Low	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMA UVD                    AEW0X109</b>	= High	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMA COCOS                    AEW0W109</b>	= Low	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT PMA CPU                    AEW0V109</b>	= High	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT Ext8                    AEW0U109</b>	= High	AND=ZAZ53999
		<b>NOTE:</b> <b>The next 2 parameter values are for <u>post separation</u></b> <b>(pre-separation = LOW)</b>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT Strap2                    AEW0T109</b>	= High	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT Strap1                    AEW0S109</b>	= High	AND=ZAZ53999
		<i>The expected value for the raw status of the separation strap signals depends on the mission phase. The status is expected to be "low" on ground and up to the moment of separation. Following the separation event the status should remain "high" for the remainder of the mission.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT AAD2                    AEW0R109</b>	= Low	AND=ZAZ53999

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		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT AAD1</b> <b>AEWOP109</b>	= <b>Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT CRS3</b> <b>AEWON109</b>	= <b>High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT CRS2</b> <b>AEWOM109</b>	= <b>High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ASTAT CRS1</b> <b>AEWOL109</b>	= <b>High</b>	AND=ZAZ53999
		<i>The settings specified above for the ARAD alarm inputs correspond to the situation in which none of the alarms is active.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_MSTAT</b> <b>AEW04109</b>		AND=ZAZ53999
		<i>Verification of bits coming from the RM monitor status register (PIO). The contents of this register are different for RMA and RMB.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>Cont save inter</b> <b>AEW05109</b>	= <b>Inactive</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>PMA Bit 0 sts</b> <b>AEW07109</b>	= <b>RESET</b>	AND=ZAZ53999
		<i>This setting of the PMA bit 0 indicates software execution in nominal modes</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ColdConvBpwrSts</b> <b>AEW08109</b>	= <b>OFF</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ColdConvApwrSts</b> <b>AEW09109</b>	= <b>ON</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>MM2 Pwr Status</b> <b>AEW0A109</b>	= <b>OFF</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>MM1 Pwr Status</b> <b>AEW0B109</b>	= <b>OFF</b>	AND=ZAZ53999
		<i>The two bits representing the power status of mass memories are unused in the ACC. Their value should always be 0.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>PMA Bit 1 sts</b> <b>AEW0C109</b>	= <b>SET</b>	AND=ZAZ53999
		<i>This setting of the bit 1 relay indicates the use of the lower EEPROM image (image 1).</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMB Undervoltag</b> <b>AEW0D109</b>	= <b>NoUVD</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMB Enable</b> <b>AEW0E109</b>	= <b>ENABLED</b>	AND=ZAZ53999



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		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMA Enable</b> <b>AEWOF109</b>	= <b>ENABLED</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>WD A Enable</b> <b>AEWOG109</b>	= <b>ENABLED</b>	AND=ZAZ53999
		<i>The expected value is valid in flight (at least 20 seconds after separation). See comment above about the use of the WD enable relays in the ACC.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>Select PM</b> <b>AEWOH109</b>	= <b>A</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_FSTAT</b> <b>AEW18109</b>		AND=ZAZ53999
		<i>Bits in the FSTAT register represent the status of the filtered alarm inputs.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT WDEnable</b> <b>AEWLX109</b>	= <b>ACTIVE</b>	AND=ZAZ53999
		<i>See previous comments on the expected setting of the WD enable relay.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMSelect</b> <b>AEW1T109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999
		<i>The expected setting corresponds to PMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMB SW</b> <b>AEW1S109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMB UVD</b> <b>AEW1R109</b>	= <b>ACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMBCOCOS</b> <b>AEW1P109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMB CPU</b> <b>AEW1N109</b>	= <b>ACTIVE</b>	AND=ZAZ53999
		<i>The CPU and UVD alarms are active for the processor that remains unpowered. This does not trigger the RM, because level 3 alarms patterns are conditional on the the setting of the PM selection relay.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMA SW</b> <b>AEW1M109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMA UVD</b> <b>AEW1L109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMACOCOS</b> <b>AEW1K109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMA CPU</b> <b>AEW1J109</b>	= <b>NOTACTIVE</b>	AND=ZAZ53999

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		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT Ext8                    AEW1H109</b>	<b>= ACTIVE</b>	AND=ZAZ53999
		<i>The alarm input line indicated as Ext8 is not connected to any external signal. Any unconnected alarm input is permanently held high by the input circuits of the RM. Ext8 alarm is not included in any alarm pattern so that its "active" setting does not trigger an alarm response in the RM.</i>		
		<b>NOTE:</b> <b>The next 2 parameter values are for <u>post separation</u></b> (pre-separation = NOT ACTIVE)		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT Strap2                    AEW1G109</b>	<b>= ACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT Strap1                    AEW1F109</b>	<b>= ACTIVE</b>	AND=ZAZ53999
		<i>The expected setting of filtered separation strap inputs depends on the mission phase.</i>  <i>These alarms are expected to become active after the expiry of their respective filtering delays following separation from the launcher.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT AAD2                    AEW1E109</b>	<b>= NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT AAD1                    AEW1D109</b>	<b>= NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT CRS3                    AEW1C109</b>	<b>= NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT CRS2                    AEW1B109</b>	<b>= NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT CRS1                    AEW1A109</b>	<b>= NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT WD                    AEW19109</b>	<b>= NOTACTIVE</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ATPTR                    AEW1Y109</b>	<b>= PMA=N _PMB=R</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_PAPPTR                    AEW1Z109</b>	<b>= PMA=N _PMB=R</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY0_MSB                    AEXU0109</b>	<b>= 250 &lt;dec&gt;</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY0_LSB                    AEXU1109</b>	<b>= 1 &lt;dec&gt;</b>	AND=ZAZ53999
		<i>The hexadecimal values indicated above correspond to the default setting of toggle delay 0, which approximately equals 50 msec.</i>		

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		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY1_MSB</b> <b>AEXU2109</b>	= 150 <dec>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY1_LSB</b> <b>AEXU3109</b>	= 2 <dec>	AND=ZAZ53999
		<i>The indicated values are the default settings of toggle delay 1 and correspond to approximately 60 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ADLY_MSB</b> <b>AEXU4109</b>	= 156 <dec>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ADLY_LSB</b> <b>AEXU5109</b>	= 7 <dec>	AND=ZAZ53999
		<i>The parameter above represents the activation delay of the RM. The default value corresponds approximately to 2 seconds.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_APOL</b> <b>AEW2C109</b>		AND=ZAZ54999
		<i>Bits in the APOL register represent the polarity of the alarm signal at which the alarm is considered active.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL WD Enable</b> <b>AEW51109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PM Select</b> <b>AEW50109</b>	= High	AND=ZAZ54999
		<i>The low (0) setting of the relay indicates PMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB SW</b> <b>AEW4Z109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB UVD</b> <b>AEW4Y109</b>	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB COCOS</b> <b>AEW4X109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB CPU</b> <b>AEW4W109</b>	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMA SW</b> <b>AEW4V109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMA UVD</b> <b>AEW4U109</b>	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMA COCOS</b> <b>AEW4T109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMA CPU</b> <b>AEW4S109</b>	= Low	AND=ZAZ54999

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		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL Ext8 AEW4R109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL Strap2 AEW4P109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL Strap1 AEW4N109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL AAD2 AEW4M109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL AAD1 AEW4L109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL CRS3 AEW4K109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL CRS2 AEW4J109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL CRS1 AEW4H109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL WD AEW4G109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TMOD AEW2D109	= 1 <hex>	AND=ZAZ54999
		<i>Bits in the TMOD register indicate the temporisation mode of each alarm. For most alarms, the temporisation mode is used, which implies triggering when the signal has remained at the constant setting corresponding to the polarity indicated in the APOL register for a time that exceeds the filtering delay specified for the alarm.</i>  <i>The only exception is the "WD toggle" input which used the WD temporisation with triggers occurring when the setting of the input signal remains fixed for more than the specified delay.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_VEN AEW2E109	= 0 <hex>	AND=ZAZ54999
		<i>The VEN register can be used to define voting groups consisting of subsets of alarm inputs. This not used on Herschel-Planck.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_AENSET AEW2F109		AND=ZAZ54999
		<i>The AENSET register defines the enable status of each alarm.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  AENSET WDEnable AEW5V109	= ENABLED	AND=ZAZ54999

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		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMSelect</b> <b>AEW5U109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMB SW</b> <b>AEW5T109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMB UVD</b> <b>AEW5S109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMBCOCOS</b> <b>AEW5R109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMB CPU</b> <b>AEW5P109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMA SW</b> <b>AEW5N109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMA UVD</b> <b>AEW5M109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMACOCOS</b> <b>AEW5L109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMA CPU</b> <b>AEW5K109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET Ext8</b> <b>AEW5J109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET Strap2</b> <b>AEW5H109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET Strap1</b> <b>AEW5G109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET AAD2</b> <b>AEW5F109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET AAD1</b> <b>AEW5E109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET CRS3</b> <b>AEW5D109</b>	= <b>DISABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET CRS2</b> <b>AEW5C109</b>	= <b>DISABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET CRS1</b> <b>AEW5B109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		<i>The enable/disable pattern for the CRS alarm input corresponds to the default configuration, in which CRS1 is used to trigger the rate alarm pattern in the RM.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET WD</b> <b>AEW5A109</b>	= <b>ENABLED</b>	AND=ZAZ54999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY0_MSB AEXU8109	= 156 <dec>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY0_LSB AEXU9109	= 6 <dec>	AND=ZAZ54999
		<i>The TDLY0 register specifies the temporisation (filtering) delay for the WD alarm. The value corresponds approximately to 1 second.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY1_MSB AEXUA109	= 156 <dec>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY1_LSB AEXUB109	= 4 <dec>	AND=ZAZ54999
		<i>TDLY1 specifies the temporisation delay for the CRS1 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY2_MSB AEXUC109	= 156 <dec>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY2_LSB AEXUD109	= 4 <dec>	AND=ZAZ54999
		<i>TDLY2 specifies the temporisation delay for the CRS2 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY4_MSB AEXUG109	= 156 <dec>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY4_LSB AEXUH109	= 4 <dec>	AND=ZAZ54999
		<i>TDLY4 specifies the temporisation delay for the AAD1 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY5_MSB AEXUJ109	= 156 <dec>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY5_LSB AEXUK109	= 4 <dec>	AND=ZAZ54999
		<i>TDLY5 specifies the temporisation delay for the AAD2 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY6_MSB AEXUL109	= 244 <dec>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TDLY6_LSB AEXUM109	= 10 <dec>	AND=ZAZ54999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p><i>TDLY6 specifies the filtering delay for separation strap 1. This signal is used in the definition of the rate alarm pattern. This prevents the rate alarm from triggering during the time specified in the TDLY6 register after the separation strap input is switched to "active" at the moment of separation.</i></p> <p><i>The delay must be set to a value which includes 20 seconds of passive coasting and allows the attitude control logic sufficient time to suppress the potentially high initial body rate acquired at separation from the launcher. The default value corresponds approximately to 30 seconds. This value may be subject to further tuning before launch.</i></p>		
		<p>Verify Packet Telemetry (Pkt = A86_RMStatus)</p> <p><b>RMH_TDLY7_MSB                    AEXUN109</b></p>	= 183 <dec>	AND=ZAZ54999
		<p>Verify Packet Telemetry (Pkt = A86_RMStatus)</p> <p><b>RMH_TDLY7_LSB                    AEXUP109</b></p>	= 13 <dec>	AND=ZAZ54999
		<p><i>TDLY7 controls the temporisation of separation strap 2. Its function is similar to that of TDLY6, but the alarm pattern affected is the Sun presence (AAD) alarm. The value of the delay, corresponding to about 300 seconds, is preliminary and will be modified before launch.</i></p>		
		<p>Verify Packet Telemetry (Pkt = A86_RMStatus)</p> <p><b>RMH_ATCNT0                    AEW2G109</b></p>	= 0 <dec>	AND=ZAZ54999
		<p>Verify Packet Telemetry (Pkt = A86_RMStatus)</p> <p><b>RMH_ATCNT1                    AEW2H109</b></p>	= 0 <dec>	AND=ZAZ54999
		<p>Verify Packet Telemetry (Pkt = A86_RMStatus)</p> <p><b>RMH_ATCNT2                    AEW2J109</b></p>	= 0 <dec>	AND=ZAZ54999
		<p>Verify Packet Telemetry (Pkt = A86_RMStatus)</p> <p><b>RMH_ATCNT3                    AEW2K109</b></p>	= 0 <dec>	AND=ZAZ54999
		<p><i>The ATCNT registers contain the attempt counters for the four alarm pattern defined for the Herschel RM's. Multiple attempts are foreseen only for the lowest alarm pattern, which implies that the other three attempt counter must always remain at 0.</i></p> <p><i>ATCNT0 could be incremented to 1 by the RM firmware during the execution of a reconfiguration sequence triggered by a level 3 alarm. however, as part of the recovery procedure after such a trigger, the ground should reset the value of the counter to 0 and this value should always be found when the nominal RM configuration has been restored.</i></p>		

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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 : GBM IL DSE YY- ---- ---  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	
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_STAT           AEW00109		AND=ZAZ53999
		<i>The parameter above has ben included in the verification list in order to indicate clearly the register from which the data originates. Specific checks are carried out on the daughter parameters below.</i>  <i>The same approach is used for other RM registers, including ASTAT, FSTAT, MSTAT, APOL and AEN.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  SW Enable           AEW03109	= ENABLED	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  LCT Enable           AEW02109	= DISABLED	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH Enable           AEW01109	= ENABLED	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_ASTAT           AEW0J109		AND=ZAZ53999
		<i>The bits in the ASTAT register represent the raw (unfiltered) alarm status.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  ASTAT WD Enable     AEW17109	= High	AND=ZAZ53999
		<i>The verification criterion is valid for the configuration of RM relays in flight. The WD enable relay will be reset (low) on ground is set externally by the CDMU 20 seconds after separation (the relay provides an indication to the ACC SM logic that the post-separation coasting period is over).</i>		



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PM Select                      AEW13109</b>	<b>= Low</b>	AND=ZAZ53999
		<i>The low setting of the PM selection relay indicates PMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMB SW                            AEW12109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMB UVD                         AEW11109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMB COCOS                     AEW10109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMB CPU                        AEW0Z109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMA SW                         AEW0Y109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMA UVD                        AEW0X109</b>	<b>= High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMA COCOS                     AEW0W109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT PMA CPU                        AEW0V109</b>	<b>= High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT Ext8                             AEW0U109</b>	<b>= High</b>	AND=ZAZ53999
		<b>NOTE:</b> The next 2 parameter values are for <u>post separation</u> (pre-separation = LOW)		
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT Strap2                         AEW0T109</b>	<b>= High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT Strap1                         AEW0S109</b>	<b>= High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT AAD2                            AEW0R109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT AAD1                            AEW0P109</b>	<b>= Low</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT CRS3                            AEW0N109</b>	<b>= High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT CRS2                            AEW0M109</b>	<b>= High</b>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)		
		<b>ASTAT CRS1                            AEW0L109</b>	<b>= High</b>	AND=ZAZ53999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<i>The settings specified above for the ARAD alarm inputs correspond to the situation in which none of the alarms is active.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_MSTAT</b> <b>AEW04109</b>		AND=ZAZ53999
		<i>Verification of bits coming from the RM monitor status register (PIO). The contents of this register are different for RMA and RMB.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>Cont save inter</b> <b>AEW05109</b>	= Inactive	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>PMA Bit 0 sts</b> <b>AEW07109</b>	= SET	AND=ZAZ53999
		<i>Differences in the contents of the PIO register between RMA and RMB causes confusion in the descriptions of TM parameters (RM dump generates the same TM packet independently of which RM is indicated in the TC). For an RMB dump, the parameter above refers the bit 0 relay on PMB and its default setting should be 0 indicating Survival Mode.</i>  <i>To avoid confusion, the verification of PM bit relays can in the RM dump can be skipped altogether, since their settings are verified independently further on in the procedure using data stored by the BSW in the datapool.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ColdConvBpwrSts</b> <b>AEW08109</b>	= OFF	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>ColdConvApwrSts</b> <b>AEW09109</b>	= ON	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>MM2 Pwr Status</b> <b>AEW0A109</b>	= OFF	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>MM1 Pwr Status</b> <b>AEW0B109</b>	= OFF	AND=ZAZ53999
		<i>The two bits representing the power status of mass memories are unused in the ACC. Their value should always be 0.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>PMA Bit 1 sts</b> <b>AEW0C109</b>	= SET	AND=ZAZ53999
		<i>This setting of the bit 1 relay indicates the use of the lower EEPROM image (image 1).</i>  <i>The same comments as for bit 0 above apply here, and the parameter refers to the relay on PMB in spite of the description in the database.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMB Undervoltag</b> <b>AEW0D109</b>	= NoUVD	AND=ZAZ53999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<i>The RM undervoltage bit is affected by the same problem is the PM configuration relay. In the register dump of RMB, the bit above corresponds to the undervoltage status for RMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMB Enable                    AEW0E109</b>	= ENABLED	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMA Enable                    AEW0F109</b>	= ENABLED	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>WD A Enable                    AEW0G109</b>	= ENABLED	AND=ZAZ53999
		<i>The expected value is valid in flight (at least 20 seconds after separation). See comment above about the use of the WD enable relays in the ACC.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>Select PM                    AEW0H109</b>	= A	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_FSTAT                    AEW18109</b>		AND=ZAZ53999
		<i>Bits in the FSTAT register represent the status of the filtered alarm inputs.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT WDEnable                AEW1X109</b>	= ACTIVE	AND=ZAZ53999
		<i>See previous comments on the expected setting of the WD enable relay.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMSelect                AEW1T109</b>	= NOTACTIVE	AND=ZAZ53999
		<i>The expected setting corresponds to PMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMB SW                    AEW1S109</b>	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMB UVD                    AEW1R109</b>	= ACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMBCOCOS                AEW1P109</b>	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMB CPU                    AEW1N109</b>	= ACTIVE	AND=ZAZ53999
		<i>The CPU and UVD alarms are active for the processor that remains unpowered. This does not trigger the RM, because level 3 alarms patterns are conditional on the the setting of the PM selection relay.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMA SW                    AEW1M109</b>	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>FSTAT PMA UVD                    AEW1L109</b>	= NOTACTIVE	AND=ZAZ53999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT PMACOCOS                    AEWIK109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT PMA CPU                    AEWLJ109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT Ext8                    AEWLH109	= ACTIVE	AND=ZAZ53999
		<i>The alarm input line indicated as Ext8 is not connected to any external signal. Any unconnected alarm input is permanently held high by the input circuits of the RM. Ext8 alarm is not included in any alarm pattern so that its "active" setting does not trigger an alarm response in the RM.</i>		
		<b>NOTE:</b> The next 2 parameter values are for <u>post separation</u> (pre-separation = NOT ACTIVE)		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT Strap2                    AEWIG109	= ACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT Strap1                    AEWLF109	= ACTIVE	AND=ZAZ53999
		<i>The expected setting of filtered separation strap inputs is valid in flight.</i>  <i>These alarms are expected to become active after the expiry of their respective filtering delays following separation from the launcher.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT AAD2                    AEWIE109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT AAD1                    AEWID109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT CRS3                    AEWIC109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT CRS2                    AEWIB109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT CRS1                    AEWIA109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  FSTAT WD                    AEWI9109	= NOTACTIVE	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_ATPTR                    AEWLY109	= PMA=N_PMB=R	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_PAPPTR                    AEWLZ109	= PMA=N_PMB=R	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TGDLYO_MSB                    AEXU0109	= 137 <dec>	AND=ZAZ53999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY0_LSB                    AEXU1109</b>	= 2 <dec>	AND=ZAZ53999
		<i>The hexadecimal values indicated above correspond to the default setting of toggle delay 0, which approximately equals 50 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY1_MSB                    AEXU2109</b>	= 137 <dec>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TGDLY1_LSB                    AEXU3109</b>	= 2 <dec>	AND=ZAZ53999
		<i>The indicated values are the default settings of toggle delay 1 and correspond to approximately 60 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ADLY_MSB                    AEXU4109</b>	= 156 <dec>	AND=ZAZ53999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ADLY_LSB                    AEXU5109</b>	= 7 <dec>	AND=ZAZ53999
		<i>The parameter above represents the activation delay of the RM. The default value corresponds approximately to 2 seconds.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_APOL                    AEW2C109</b>		AND=ZAZ54999
		<i>Bits in the APOL register represent the polarity of the alarm signal at which the alarm is considered active.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL WD Enable                    AEW51109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PM Select                    AEW50109</b>	= High	AND=ZAZ54999
		<i>The low (0) setting of the relay indicates PMA.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB SW                    AEW4Z109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB UVD                    AEW4Y109</b>	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB COCOS                    AEW4X109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMB CPU                    AEW4W109</b>	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMA SW                    AEW4V109</b>	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>APOL PMA UVD                    AEW4U109</b>	= Low	AND=ZAZ54999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL PMA COCOS AEW4T109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL PMA CPU AEW4S109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL Ext8 AEW4R109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL Strap2 AEW4P109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL Strap1 AEW4N109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL AAD2 AEW4M109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL AAD1 AEW4L109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL CRS3 AEW4K109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL CRS2 AEW4J109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL CRS1 AEW4H109	= Low	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  APOL WD AEW4G109	= High	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_TMOD AEW2D109	= 1 <hex>	AND=ZAZ54999
		<i>Bits in the TMOD register indicate the temporisation mode of each alarm. For most alarms, the temporisation mode is used, which implies triggering when the signal has remained at the constant setting corresponding to the polarity indicated in the APOL register for a time that exceeds the filtering delay specified for the alarm. The only exception is the "WD toggle" input which used the WD temporisation with triggers occurring when the setting of the input signal remains fixed for more than the specified delay.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_VEN AEW2E109	= 0 <hex>	AND=ZAZ54999
		<i>The VEN register can be used to define vetoing groups consisting of subsets of alarm inputs. This not used on Herschel-Planck.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  RMH_AENSET AEW2F109		AND=ZAZ54999
		<i>The AENSET register defines the enable status of each alarm.</i>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET WDEnable</b> <b>AEW5V109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMSelect</b> <b>AEW5U109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMB SW</b> <b>AEW5T109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMB UVD</b> <b>AEW5S109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMBCOCOS</b> <b>AEW5R109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMB CPU</b> <b>AEW5P109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMA SW</b> <b>AEW5N109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMA UVD</b> <b>AEW5M109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMACOCOS</b> <b>AEW5L109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET PMA CPU</b> <b>AEW5K109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET Ext8</b> <b>AEW5J109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET Strap2</b> <b>AEW5H109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET Strap1</b> <b>AEW5G109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET AAD2</b> <b>AEW5F109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET AAD1</b> <b>AEW5E109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET CRS3</b> <b>AEW5D109</b>	= <b>DISABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET CRS2</b> <b>AEW5C109</b>	= <b>DISABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus) <b>AENSET CRS1</b> <b>AEW5B109</b>	= <b>ENABLED</b>	AND=ZAZ54999
		<i>The enable/disable pattern for the CRS alarm input corresponds to the default configuration, in which CRS1 is used to trigger the rate alarm pattern in the RM.</i>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>AENSET WD</b> <b>AEW5A109</b>	<b>= ENABLED</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY0_MSB</b> <b>AEXU8109</b>	<b>= 156 &lt;dec&gt;</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY0_LSB</b> <b>AEXU9109</b>	<b>= 6 &lt;dec&gt;</b>	AND=ZAZ54999
		<i>The TDLY0 register specifies the temporisation (filtering) delay for the WD alarm. The value corresponds corresponds approximately to 1 second.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY1_MSB</b> <b>AEXUA109</b>	<b>= 156 &lt;dec&gt;</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY1_LSB</b> <b>AEXUB109</b>	<b>= 4 &lt;dec&gt;</b>	AND=ZAZ54999
		<i>TDLY1 specifies the temporisation delay for the CRS1 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY2_MSB</b> <b>AEXUC109</b>	<b>= 156 &lt;dec&gt;</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY2_LSB</b> <b>AEXUD109</b>	<b>= 4 &lt;dec&gt;</b>	AND=ZAZ54999
		<i>TDLY2 specifies the temporisation delay for the CRS2 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY4_MSB</b> <b>AEXUG109</b>	<b>= 156 &lt;dec&gt;</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY4_LSB</b> <b>AEXUH109</b>	<b>= 4 &lt;dec&gt;</b>	AND=ZAZ54999
		<i>TDLY4 specifies the temporisation delay for the AAD1 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY5_MSB</b> <b>AEXUJ109</b>	<b>= 156 &lt;dec&gt;</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY5_LSB</b> <b>AEXUK109</b>	<b>= 4 &lt;dec&gt;</b>	AND=ZAZ54999
		<i>TDLY5 specifies the temporisation delay for the AAD2 line. The value is approximately 250 msec.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY6_MSB</b> <b>AEXUL109</b>	<b>= 244 &lt;dec&gt;</b>	AND=ZAZ54999
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY6_LSB</b> <b>AEXUM109</b>	<b>= 10 &lt;dec&gt;</b>	AND=ZAZ54999



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<i>TDLY6 specifies the filtering delay for separation strap 1. This signal is used in the definition of the rate alarm pattern. This prevents the rate alarm from triggering during the time specified in the TDLY6 register after the separation strap input is switched to "active" at the moment of separation. The delay must be set to a value which includes 20 seconds of passive coasting and allows the attitude control logic sufficient time to suppress the potentially high initial body rate acquired at separation from the launcher. The default value corresponds approximately to 30 seconds. This value may be subject to further tuning before launch.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY7_MSB                      AEXUN109</b>	<b>= 183 &lt;dec&gt;</b>	<b>AND=ZAZ54999</b>
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_TDLY7_LSB                      AEXUP109</b>	<b>= 13 &lt;dec&gt;</b>	<b>AND=ZAZ54999</b>
		<i>TDLY7 controls the temporisation of separation strap 2. Its function is similar to that of TDLY6, but the alarm pattern affected is the Sun presence (AAD) alarm. The value of the delay, corresponding to about 300 seconds, is preliminary and will be modified before launch.</i>		
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ATCNT0                      AEW2G109</b>	<b>= 0 &lt;dec&gt;</b>	<b>AND=ZAZ54999</b>
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ATCNT1                      AEW2H109</b>	<b>= 0 &lt;dec&gt;</b>	<b>AND=ZAZ54999</b>
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ATCNT2                      AEW2J109</b>	<b>= 0 &lt;dec&gt;</b>	<b>AND=ZAZ54999</b>
		Verify Packet Telemetry (Pkt = A86_RMStatus)  <b>RMH_ATCNT3                      AEW2K109</b>	<b>= 0 &lt;dec&gt;</b>	<b>AND=ZAZ54999</b>
		<i>The ATCNT registers contain the attempt counters for the four alarm pattern defined for the Herschel RM's. Multiple attempts are foreseen only for the lowest alarm pattern, which implies that the other three attempt counter must always remain at 0. ATCNT0 could be incremented to 1 by the RM firmware during the execution of a reconfiguration sequence triggered by a level 3 alarm. however, as part of the recovery procedure after such a trigger, the ground should reset the value of the counter to 0 and this value should always be found when the nominal RM configuration has been restored.</i>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<p><i>TC Seq. Name :NULL02 (Null Sequence 02)</i></p> <p><i>TimeTag Type:</i></p> <p><i>Sub Schedule ID:</i></p> <p>□</p>				
5		Internal ACC configuration and status data		Next Step: 6
		Verify Telemetry <b>PwrOnResetRegA</b> <b>AEG41050</b>	= Power On = Warm Start	AND=ZAZ52999
		Verify Telemetry <b>PwrOnResetRegB</b> <b>AEG42050</b>	= Power On = Warm Start	AND=ZAZ52999
		Verify Telemetry <b>PM_relay_0</b> <b>AEG43050</b>	= RESET	AND=ZAZ52999
		Verify Telemetry <b>StartupSurvNom</b> <b>AEG44050</b>	= Nominal	AND=ZAZ52999
		<p><i>The four parameters above are acquired by the BSW during initialisation and stored in the DID_STARTUP_CFG entry in the datapool.</i></p> <p><i>The value of PM_relay_0 is acquired from the GPIB register of the processor. It should be kept in mind that the raw value of this bit is inverted with respect to the corresponding bit found in the RM PIO register.</i></p> <p><i>The values found in the power_on status register depend on whether is executing after a cold or warm start of the ACC. Both of these situations are considered nominal.</i></p>		
		Verify Telemetry <b>ColdSts_A_fromA</b> <b>AEE41050</b>	= ON	AND=ZAZ52999
		Verify Telemetry <b>ColdSts_A_fromB</b> <b>AEE42050</b>	= ON	AND=ZAZ52999
		Verify Telemetry <b>ColdSts_B_fromA</b> <b>AEE43050</b>	= OFF	AND=ZAZ52999
		Verify Telemetry <b>ColdSts_B_fromB</b> <b>AEE44050</b>	= OFF	AND=ZAZ52999
		<p><i>The four parameters above represent the status A and B cold converters obtained by BSW from the PIO ports of both RM's. The data are updated in each cycle.</i></p>		
		Verify Telemetry <b>ACC_A_MODE</b> <b>AEE8G050</b>	= Nominal	AND=ZAZ52999
		Verify Telemetry <b>ACC_A_IMAGE</b> <b>AEE8H050</b>	= Image 1	AND=ZAZ52999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry ACC_B_MODE AEE8Z050	= Survival	AND=ZAZ52999
		Verify Telemetry ACC_B_IMAGE AEE8J050	= Image 1	AND=ZAZ52999
		<i>The four bits represent the status of PM configuration relays (bit 0 and bit 1) read by the BSW through the PIO ports of the RM's. All bits in the PIO registers are also checked before in the procedure as part of the RM dump (the MSTAT register contains the PIOI data).</i>		
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAZ52999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAZ52999
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= ENABLED	AND=ZAZ52999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= ENABLED	AND=ZAZ52999
		<i>The final block in this section verifies the RM enable bits acquired by the BSW through the PIO ports of both RM's.</i>		
6		Internal ACC housekeeping parameters		Next Step: 7
		Verify Telemetry V3HotIrg AED01050	>= 3.27 V <= 3.44 V	AND=ZAZ52999
		Verify Telemetry V5HotIrg1 AED03050	>= 5.15 V <= 5.35 V	AND=ZAZ52999
		Verify Telemetry V15HotIrg1 AED05050	>= 14.58 V <= 16.08 V	AND=ZAZ52999
		Verify Telemetry V15HotIrg1 AED07050	<= -14.8 V >= -16.43 V	AND=ZAZ52999
		Verify Telemetry V28HotIrg1 AED09050	= 27.65 V <= 31.55 V	AND=ZAZ52999
		Verify Telemetry V3ColdIrg1 AED0B050	>= 3.27 V <= 3.44 V	AND=ZAZ52999
		Verify Telemetry V5ContIrg1 AED0D050	>= 5.1 V <= 5.35 V	AND=ZAZ52999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry V15ContIrg1 AED0F050	>= 14.1 V <= 16.08 V	AND=ZAZ52999
		Verify Telemetry V3HotRIrg1 AED0H050	>= 3.27 V <= 3.44 V	AND=ZAZ52999
		Verify Telemetry V5HotRIrg1 AED0K050	>= 5.15 V <= 5.35 V	AND=ZAZ52999
		Verify Telemetry V15HotRIrg1 AED0M050	>= 14.58 V <= 16.08 V	AND=ZAZ52999
		Verify Telemetry VN15HotRIrg1 AED0P050	<= -14.8 V >= -16.43 V	AND=ZAZ52999
		Verify Telemetry V28HotRIrg1 AED0S050	>= 27.65 V <= 31.55 V	AND=ZAZ52999
		Verify Telemetry V3ColdRIrg1 AED0U050	= 0.0 V	AND=ZAZ52999
		<i>The analogue parameters in the verification block above are voltage values for various secondary output of both hot and cold power converters. The verification criteria are set up for the nominal ACC configuration in which the redundant cold converter is switched off.</i>		
		Verify Telemetry VA_AN25FS_Data AED11050	>= 1.192 V <= 1.218 V	AND=ZAZ52999
		Verify Telemetry VA_AN75FS_Data AED13050	>= 3.763 V <= 3.827 V	AND=ZAZ52999
		Verify Telemetry VB_AN25FS_Data AED1B050	= 0.0 V	AND=ZAZ52999
		Verify Telemetry VB_AN75FS_Data AED1D050	= 0.0 V	AND=ZAZ52999
7		ACC subsystem health status		Next Step: 8
		Verify Telemetry TtrRmA_UpdateEn AEFSG050	= ENABLED	AND=ZAZ55999
		Verify Telemetry TtrRmA_Enabled AEFSH050	= ENABLED	AND=ZAZ55999
		Verify Telemetry TtrRmA_Healthy AEF SZ050	= Healthy	AND=ZAZ55999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The FDIR status for each ACC component subsystem managed autonomously by the BSW should be as follows: - component enabled - health table updating enabled - component healthy		
		Verify Telemetry <b>TtrRmB_UpdateEn</b> <b>AEFSJ050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmB_Enabled</b> <b>AEFSK050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmB_Healthy</b> <b>AEFSL050</b>	= <b>Healthy</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIntA_UpdEn</b> <b>AEFT1050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIntA_Enabl</b> <b>AEFT2050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIntA_Healt</b> <b>AEFT3050</b>	= <b>Healthy</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIntB_UpdEn</b> <b>AEFT4050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIntB_Enabl</b> <b>AEFT5050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIntB_Healt</b> <b>AEFT6050</b>	= <b>Healthy</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmSgmA_UpdEn</b> <b>AEFTG050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmSgmA_Enabl</b> <b>AEFTH050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmSgmA_Healt</b> <b>AEFTZ050</b>	= <b>Healthy</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmSgmB_UpdEn</b> <b>AEFTJ050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmSgmB_Enabl</b> <b>AEFTK050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmSgmB_Healt</b> <b>AEFTL050</b>	= <b>Healthy</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIcbA_UpdEn</b> <b>AEFU1050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIcbA_Enabl</b> <b>AEFU2050</b>	= <b>ENABLED</b>	AND=ZAZ55999
		Verify Telemetry <b>TtrRmIcbA_Healt</b> <b>AEFU3050</b>	= <b>Healthy</b>	AND=ZAZ55999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry TtrRmIcbB_UpdEn AEFU4050	= ENABLED	AND=ZAZ55999
		Verify Telemetry TtrRmIcbB_Enabl AEFU5050	= ENABLED	AND=ZAZ55999
		Verify Telemetry TtrRmIcbB_Healt AEFU6050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmIcbA_UpdateEn AEFUG050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmIcbA_Enabled AEFUH050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmIcbA_Healthy AEFUZ050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmIcbB_UpdateEn AEFUJ050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmIcbB_Enabled AEFUK050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmIcbB_Healthy AEFUL050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmCocosA_UpdEn AEFV1050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmCocosA_Enable AEFV2050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmCocosA_Health AEFV3050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmCocosB_UpdEn AEFV4050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmCocosB_Enable AEFV5050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmCocosB_Health AEFV6050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmObdhA_UpdEn AEFVG050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmObdhA_Enabled AEFVH050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmObdhA_Healthy AEFVZ050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmObdhB_UpdEn AEFVJ050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmObdhB_Enabled AEFVK050	= ENABLED	AND=ZAZ55999

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		Verify Telemetry PmObdHB_Healthy AEFVL050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmSpwTtrAA_UpdE AEFX1050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrAA_Enab AEFX2050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrAA_Hlth AEFX3050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmSpwTtrAB_UpdE AEFX4050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrAB_Enab AEFX5050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrAB_Hlth AEFX6050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmSpwTtrBA_UpdE AEFXG050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrBA_Enab AEFXH050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrBA_Hlth AEFXZ050	= Healthy	AND=ZAZ55999
		Verify Telemetry PmSpwTtrBB_UpdE AEFXJ050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrBB_Enab AEFXK050	= ENABLED	AND=ZAZ55999
		Verify Telemetry PmSpwTtrBB_Hlth AEFXL050	= Healthy	AND=ZAZ55999
		Verify Telemetry MarsGrp01A_UpdE AEFY1050	= ENABLED	AND=ZAZ55999
		Verify Telemetry MarsGrp01A_Enab AEFY2050	= ENABLED	AND=ZAZ55999
		Verify Telemetry MarsGrp01A_Hlth AEFY3050	= Healthy	AND=ZAZ55999
		Verify Telemetry MarsGrp01B_UpdE AEFY4050	= ENABLED	AND=ZAZ55999
		Verify Telemetry MarsGrp01B_Enab AEFY5050	= ENABLED	AND=ZAZ55999
		Verify Telemetry MarsGrp01B_Hlth AEFY6050	= Healthy	AND=ZAZ55999
		Verify Telemetry MarsGrp02A_UpdE AEFYG050	= ENABLED	AND=ZAZ55999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry MarsGrp02A_Enab AEFYH050	= ENABLED	AND=ZAZ55999
		Verify Telemetry MarsGrp02A_Hlth AEFYZ050	= Healthy	AND=ZAZ55999
		Verify Telemetry MarsGrp02B_UpdE AEFYJ050	= ENABLED	AND=ZAZ55999
		Verify Telemetry MarsGrp02B_Enab AEFYK050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp02B_Hlth AEFYL050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp03A_UpdE AEFZ1050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp03A_Enab AEFZ2050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp03A_Hlth AEFZ3050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp03B_UpdE AEFZ4050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp03B_Enab AEFZ5050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp03B_Hlth AEFZ6050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp04A_UpdE AEFZG050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp04A_Enab AEFZH050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp04A_Hlth AEFZZ050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp04B_UpdE AEFZJ050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp04B_Enab AEFZK050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp04B_Hlth AEFZL050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp05A_UpdE AEG01050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp05A_Enab AEG02050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp05A_Hlth AEG03050	= Healthy	AND=ZAZ56999



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry MarsGrp05B_UpdE AEG04050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp05B_Enab AEG05050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp05B_Hlth AEG06050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp06A_UpdE AEG0G050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp06A_Enab AEG0H050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp06A_Hlth AEG0Z050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp06B_UpdE AEG0J050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp06B_Enab AEG0K050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp06B_Hlth AEG0L050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp07A_UpdE AEG11050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp07A_Enab AEG12050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp07A_Hlth AEG13050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp07B_UpdE AEG14050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp07B_Enab AEG15050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp07B_Hlth AEG16050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp08A_UpdE AEG1G050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp08A_Enab AEG1H050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp08A_Hlth AEG1Z050	= Healthy	AND=ZAZ56999
		Verify Telemetry MarsGrp08B_UpdE AEG1J050	= ENABLED	AND=ZAZ56999
		Verify Telemetry MarsGrp08B_Enab AEG1K050	= ENABLED	AND=ZAZ56999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry <b>MarsGrp08B_Hlth</b> <b>AEGIL050</b>	<b>= Healthy</b>	AND=ZAZ56999
8		<i>BSW functional parameters</i>		Next Step: END
		Verify Telemetry <b>BSW_OBT_STATE</b> <b>AEGZF050</b>	<b>= Nominal</b>	AND=ZAZ56999
		<i>The parameter used in the check above represents the main state variable of the OBT management function in the BSW. The nominal setting of the variable indicates that the ACC remains synchronised with the CRT without failures or time-outs.</i>		
		Verify Telemetry <b>BSW_ObtSmoothEr</b> <b>AEGZ0050</b>	<b>&lt;= 1500 &lt;hex&gt;</b>	AND=ZAZ56999
		<i>The parameter above represents the difference detected by the OBT algorithm between the Central Reference Time distributed by the CDMU and the OBT counter of the active PM of the ACC.</i>  <i>The data are encoded as a signed integer with the LSB corresponding to 2<sup>(-24)</sup> seconds (this approximately equals 60 nanoseconds). The value specified for the verification criterion corresponds to about 90 microseconds and is set just below the threshold used by the BSW to declare loss of synchronisation with the CDMU.</i>		
		Verify Telemetry <b>BSW_CPULoad_Min</b> <b>AEEDF050</b>		AND=ZAZ56999
		Verify Telemetry <b>BSW_CPULoad_Avg</b> <b>AEEEF050</b>	<b>&lt;= 75.0 %</b>	AND=ZAZ56999
		Verify Telemetry <b>BSW_CPULoad_Max</b> <b>AEEEE050</b>	<b>&lt;= 80.0 %</b>	AND=ZAZ56999
		<i>The CPU load monitored by the BSW background task is expressed as percentage of the execution cycle in which the CPU is occupied.</i>  <i>The values used in verification criteria are based on the measurements of the timing of the ASW tasks during subsystem tests and include a generous margin to account for CPU time which may be by the BSW without affecting the execution of ASW tasks.</i>		
<b>End of Procedure</b>				