

RM log clearing
File: H_CRP_DHS_3069.xls
Author: S. Manganelli



Procedure Summary

Objectives

This procedure describe the steps needed to sequentially clear the RM logs (on TTR A and TTR B).

Summary of Constraints

The BSW INIT uses the RM Log Timestamps in order to determine which RM that executed the latest reconfiguration.

The format of the RM Log Timestamp is according to the CCSDS Unsegmented Time Format (CUC) with 3 octets of coarse time and 3 octets of fine time.

This time format wraps around every 2^{24} s = 194 days.

To be able to determine the most recent of two reconfigurations the time stamps must be within $194/2=97$ days. To guarantee this, it is not allowed to let RM Log entries reside in the RM Log longer than 97 days.

An RM Log clearing is needed when re-establishing the system after a completed reconfiguration. RM Log clearing is performed using the TC(6,2) Memory Load.

If the RM log is NOT cleared after a reconfiguration, and more than 97 days elapse before the next reconfiguration, and some other conditions are met, at next sw init the ASW may misinterpret the RM Log content, see it as an empty log, enter the WARM PATCH branch and restore all ASW configuration from EEPROM rather than SGM.

Spacecraft Configuration

Start of Procedure

Any

End of Procedure

Unchanged but RM logs are cleared

Reference File(s)

Input Command Sequences

Output Command Sequences

HRD3069X
HRD3069B
HRD3069A
HRD3069Y

Referenced Displays

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ZAZAI999 (None)
 ZAZ4Z999
 ZAZAA999

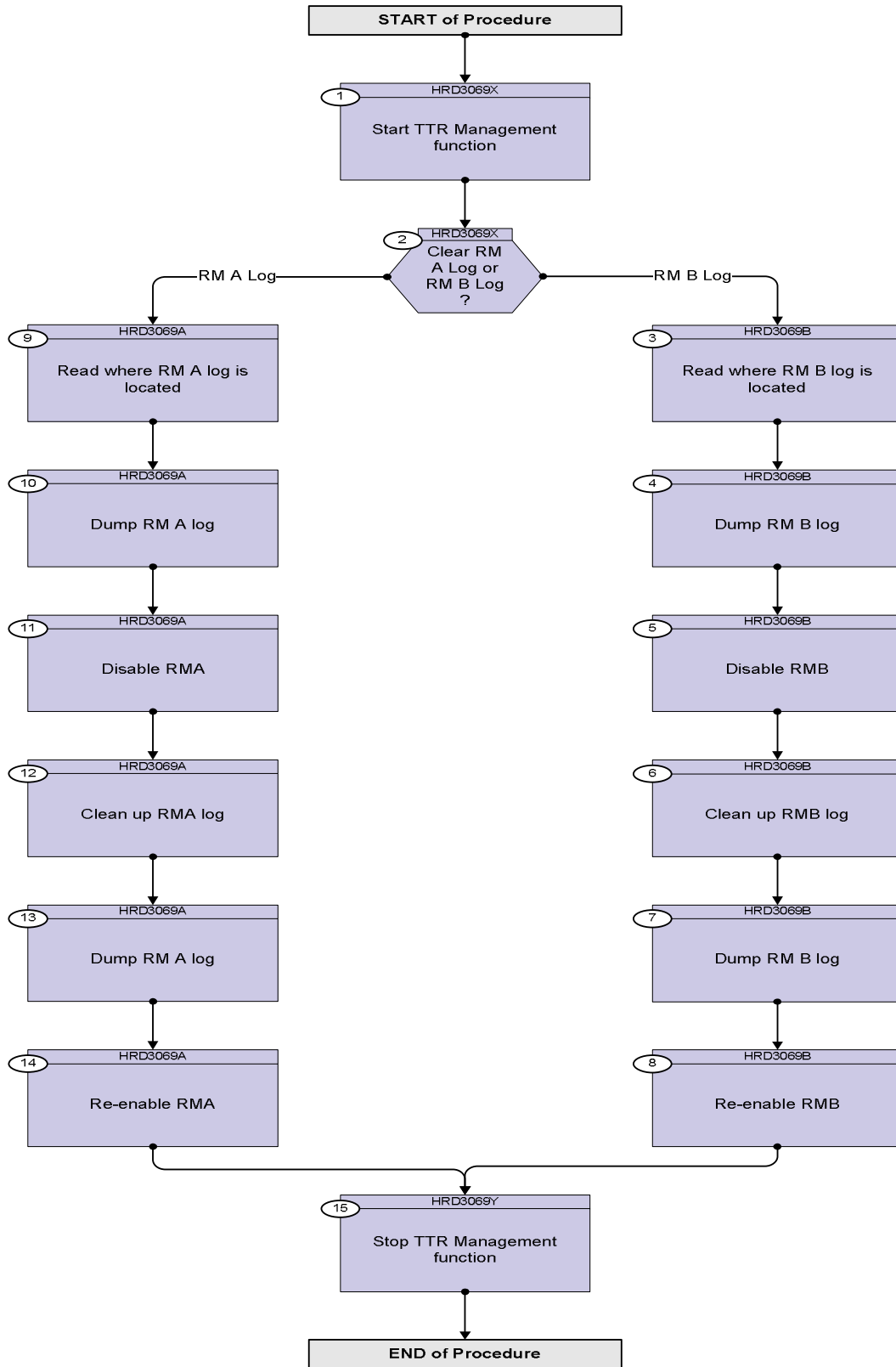
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
29/11/08		1	Created	S. Manganelli	
02/01/09	2	2	Completely modified using instantiated ESOC TCs and removing most procedure calls	S. Manganelli	
04/02/09	2.1	3	Patch commands replaced and procedure re-structured.	cmevi-hp	
13/04/09	2.3	4	Use of instantiated TCs to clear RM logs and to read the CROME registers	S. Manganelli	
18/03/10	3	5	Added comment on front page, deleted two obsolete sequence headers.	S. Manganelli	

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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 :HRD3069X (Start TTR function) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
1		Start TTR Management function		Next Step: 2
		Verify Telemetry <div style="text-align: right;">TtrSts DEL17170</div>	= Stopped	AND=ZAZAI999
		If the TTR Management function is already running go to next step.		
		Execute Telecommand <div style="text-align: right;">StartTtrManag</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : Start Ttr Management TC(8,1,109)	DCN06170	
		Verify Telemetry <div style="text-align: right;">TtrSts DEL17170</div>	= Running	AND=ZAZAI999
2		Clear RM A Log or RM B Log ?		Next Step: RM B Log 3 RM A Log 9
TC Seq. Name :HRD3069B (Clear RM Log B) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
3		Read where RM B log is located		Next Step: 4
		The RM Log is located at addresses given by the RM Log Pointer Register and the value read should be the same for both Crome_A and Crome_B.		
		Execute Telecommand <div style="text-align: right;">CRMB_RMh_LOGPointerReg</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : CROME B: Read RMH LOG Pointer Register	DCW2V159	
		the value read should be:		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry CromeAddr DE329170	= 0700582C <hex>	AND=ZAZ4Z999
		Verify Telemetry CromeData DE367170	= 03007E00 <hex>	AND=ZAZ4Z999
4		Dump RM B log		Next Step: 5
		Execute Telecommand DumpMem_AbsAddr DC602180 Command Parameter(s) : Memory_ID DH003180 DF <hex> Start_Address DH004180 FE00 <hex> N DH105180 256 <dec> TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : Dump Memory Using Absolute Addresses		
		The check has to be done directly in the raw packet using the TMPH.		
		Verify Packet Reception Memory Dump - Absolute Addresses - SAU 8 MemDmpAbsAdd Packet Details: APID: 16 Type: 6 Subtype: 6 PI1: PI2:		
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Memory_ID DE060180 = 00DF <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Start_Address DE061180 = FE00 <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) N DE062180 = 100 <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Dumped_Byte DE063180	256 bytes containing some RM Log entries	(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Checksum DE064180		
5		Disable RMB		Next Step: 6
		Verify Telemetry RMB_fromTTR-RMA DEEXJ160	= ENABLED	AND=ZAZAA999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMB_fromTTR-RMB DEEXK160	= ENABLED	AND=ZAZAA999
		Execute Telecommand RM_B_Disable TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : RM B Disable - High Priority Standard	DCA12170	
		Verify Telemetry RMB_fromTTR-RMA DEEXJ160	= DISABLED	AND=ZAZAA999
		Verify Telemetry RMB_fromTTR-RMB DEEXK160	= DISABLED	AND=ZAZAA999
6		Clean up RMB log		Next Step: 7
		WARNING: to clear the RM log, two consecutive TC(6,2) are necessary to write 256 bytes with zeroes.		
		WARNING: The "Start address" to be used in TC(6,2) is based on the value of the TTRA or TTRB RM Log Pointer Register read earlier in Step 2. In order for the value to be used however, it must first be converted from an internal to a logical address. To convert to a logical address: • When accessing TTRA, add 0x00AF8000 to the 16 LSBs of the internal address; • When accessing TTRB, add 0x00DF8000 to the 16 LSBs of the internal address. For example: A TTRA RM Log Pointer Register value of 0x03005000 results in a logical address of 0x00AFD000 to be used in TC(6,2), whereas for the same RM Log Pointer Register value the logical address to be used for the TTRB would be 0x00DFD000. TTR A RAM 0 (not protected): - Logical address 0xAFC000 - 0xAFFFFFFF - TTR internal address 0x3004000 - 0x3007FFFF TTR B RAM 0 (not protected): - Logical address 0xDFC000 - 0xDFFFFFFF - TTR internal address 0x3004000 - 0x3007FFFF		
		The values for the Memory_ID and Start_Address fields in commands below are valid if TM check at step 4 is successful.		

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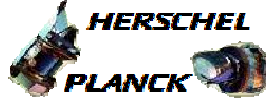
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Patch APID 16	XC340991	
		Command Parameter(s) : Memory Id (-----) XH340991 Start Address (-----) XH341991 Length of Block (N) XH343991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991	00DF <hex> FE00 <hex> 128 <dec> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def)	
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
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		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Checksum (-----) XH345991	F00A <hex> (Def)	
		<i>TC Control Flags :</i> <p style="text-align: right;">GBM IL DSE --Y -- --</p> <i>Subsch. ID : 30</i> <i>Det. descr. : Patch APID 16 (Clear RM Log)</i>		
		Execute Telecommand		
		Patch APID 16	XC340991	
		<i>Command Parameter(s) :</i> <i>Memory Id (-----)</i> XH340991 00DF <hex> <i>Start Address (-----)</i> XH341991 FE80 <hex> <i>Length of Block (N)</i> XH343991 128 <dec> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def) Data field (8bit) XH344991 0 <hex> (Def)		
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		Data field (8bit)	XH344991	0 <hex> (Def)
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Data field (8bit) XH344991	0 <hex> (Def)	
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		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Checksum (-----) XH345991	F00A <hex> (Def)	
		TC Control Flags :		
			GBM IL DSE	
			--Y --	
		Subsch. ID : 30		
		Det. descr. : Patch APID 16 (Clear RM Log)		
7		Dump RM B log		Next Step: 8

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DumpMem_AbsAddr Command Parameter(s) : Memory_ID DH003180 Start_Address DH004180 N DH105180 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Dump Memory Using Absolute Addresses	DC602180 DF <hex> FE00 <hex> 256 <dec>	
		The check has to be done directly in the raw packet using the TMPH.		
		Verify Packet Reception Memory Dump - Absolute Addresses - SAU 8 Packet Details: APID: 16 Type: 6 Subtype: 6 PI1: PI2:	MemDmpAbsAdd	
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Memory_ID DE060180 = 00DF <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Start_Address DE061180 = FE00 <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) N DE062180 = 100 <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Dumped_Byte DE063180 256 bytes all zeros		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Checksum DE064180		
8		Re-enable RMB		Next Step: 15
		Verify Telemetry RMB_fromTTR-RMA DEEXJ160	= DISABLED	AND=ZAZAA999
		Verify Telemetry RMB_fromTTR-RMB DEEXK160	= DISABLED	AND=ZAZAA999
		Execute Telecommand RM_B_enable TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : RM B enable - High Priority Standard	DCA15170	

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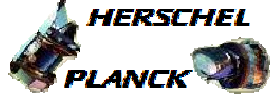

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMB_fromTTR-RMA DEEXJ160	= ENABLED	AND=ZAZAA999
		Verify Telemetry RMB_fromTTR-RMB DEEXK160	= ENABLED	AND=ZAZAA999
<p>TC Seq. Name :HRD3069A (Clear RM LOG A)</p> <p>TimeTag Type: Sub Schedule ID: <input type="checkbox"/></p>				
9		Read where RM A log is located		Next Step: 10
		The RM Log is located at addresses given by the RM Log Pointer Register and the value read should be the same for both Crome_A and Crome_B.		
		Execute Telecommand CRMA_RMH_LOGPointerReg TC Control Flags : Subsch. ID : 10 Det. descr. : CROME A: Read RMH LOG Pointer Register	DCW0X159 GBM IL DSE --Y -- --	
		the value read should be:		
		Verify Telemetry CromeAddr DE329170	= 0700582C <hex>	AND=ZAZ4Z999
		Verify Telemetry CromeData DE367170	= 03007E00 <hex>	AND=ZAZ4Z999
10		Dump RM A log		Next Step: 11
		Execute Telecommand DumpMem_AbsAddr Command Parameter(s) : Memory_ID DH003180 Start_Address DH004180 N DH105180 TC Control Flags : Subsch. ID : 10 Det. descr. : Dump Memory Using Absolute Addresses	DC602180 AF <hex> FE00 <hex> 256 <dec> GBM IL DSE --Y -- --	
		The check has to be done directly in the raw packet using the TMPH.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception Memory Dump - Absolute Addresses - SAU 8 Packet Details: APID: 16 Type: 6 Subtype: 6 PI1: PI2:	MemDmpAbsAdd	
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Memory_ID DE060180 = 00AF <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Start_Address DE061180 = FE00 <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) N DE062180 = 100 <hex>		(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Dumped_Byte DE063180	256 bytes containg some RM Log entries	(None)
		Verify Packet Telemetry (Pkt = MemDmpAbsAdd) Checksum DE064180		
11		<i>Disable RMA</i>		Next Step: 12
		Verify Telemetry RMA_fromTTR-RMA DEEXG160	= ENABLED	AND=ZAZAA999
		Verify Telemetry RMA_fromTTR-RMB DEEXH160	= ENABLED	AND=ZAZAA999
		Execute Telecommand RM_A_Disable TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : RM A Disable - High Priority Standard	DCA11170	
		Verify Telemetry RMA_fromTTR-RMA DEEXG160	= DISABLED	AND=ZAZAA999
		Verify Telemetry RMA_fromTTR-RMB DEEXH160	= DISABLED	AND=ZAZAA999
12		<i>Clean up RMA log</i>		Next Step: 13
		WARNING: to clear the RM log, two consecutive TC(6,2) are necessary to write 256 bytes with zeroes.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>WARNING: The "Start address" to be used in TC(6,2) is based on the value of the TTRA or TTRB RM Log Pointer Register read earlier in Step 2. In order for the value to be used however, it must first be converted from an internal to a logical address.</p> <p>To convert to a logical address:</p> <ul style="list-style-type: none"> • When accessing TTRA, add 0x00AF8000 to the 16 LSBs of the internal address; • When accessing TTRB, add 0x00DF8000 to the 16 LSBs of the internal address. <p>For example: A TTRA RM Log Pointer Register value of 0x03005000 results in a logical address of 0x00AFD000 to be used in TC(6,2), whereas for the same RM Log Pointer Register value the logical address to be used for the TTRB would be 0x00DFD000.</p> <p>TTR A RAM 0 (not protected): - Logical address 0xAFC000 - 0xAFFFFF - TTR internal address 0x3004000 - 0x3007FFF</p> <p>TTR B RAM 0 (not protected): - Logical address 0xDFC000 - 0xDFFFFF - TTR internal address 0x3004000 - 0x3007FFF</p>		
		<p>The values for the Start_Address field in commands below are valid if TM check at step 4 is successful.</p>		
		<p>Execute Telecommand Patch APID 16</p> <p>Command Parameter(s) :</p> <pre> Memory Id (-----) XH340991 Start Address (-----) XH341991 Length of Block (N) XH343991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 </pre>	<p>XC340991</p> <pre> 00AF <hex> FE00 <hex> 128 <dec> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) </pre>	
		<pre> Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 </pre>	<pre> 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) </pre>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Patch APID 16	XC340991	
		Command Parameter(s) : Memory Id (-----) XH340991 Start Address (-----) XH341991 Length of Block (N) XH343991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991	00AF <hex> FE80 <hex> 128 <dec> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def)	
		Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991	0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def)	
		Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991	0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def)	
		Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991 Data field (8bit) XH344991	0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def) 0 <hex> (Def)	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Data field (8bit) XH344991	0 <hex> (Def)	
		Checksum (-----) XH345991	F00A <hex> (Def)	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 30 Det. descr. : Patch APID 16 (Clear RM Log)		
13		Dump RM A log		Next Step: 14
		Execute Telecommand DumpMem_AbsAddr DC602180 Command Parameter(s) : Memory_ID DH003180 AF <hex> Start_Address DH004180 FE00 <hex> N DH105180 256 <dec>		
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 10 Det. descr. : Dump Memory Using Absolute Addresses		
		The check has to be done directly in the raw packet using the TMPH.		
		Verify Packet Reception Memory Dump - Absolute Addresses - SAU 8 Packet Details: APID: 16 Type: 6 Subtype: 6 PI1: PI2:	MemDmpAbsAdd	
		Verify Packet Telemetry Memory_ID DE060180	= 00DF <hex>	(None)
		Verify Packet Telemetry Start_Address DE061180	= FE00 <hex>	(None)
		Verify Packet Telemetry N DE062180	= 100 <hex>	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry Dumped_Byte DE063180	256 bytes all zeros	(None)
		Verify Packet Telemetry Checksum DE064180		
14		Re-enable RMA		Next Step: 15
		Verify Telemetry RMA_fromTTR-RMA DEEXG160	= DISABLED	AND=ZAZAA999
		Verify Telemetry RMA_fromTTR-RMB DEEXH160	= DISABLED	AND=ZAZAA999
		Execute Telecommand RM_A_enable DCA14170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : RM A enable - High Priority Standard		
		Verify Telemetry RMA_fromTTR-RMA DEEXG160	= ENABLED	AND=ZAZAA999
		Verify Telemetry RMA_fromTTR-RMB DEEXH160	= ENABLED	AND=ZAZAA999
TC Seq. Name :HRD3069Y (Stop TTR function)				
TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
15		Stop TTR Management function		Next Step: END
		Verify Telemetry TtrSts DEL17170	= Running	AND=ZAZAI999
		Execute Telecommand StopTtrManag DCN07170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Stop Ttr Management TC(8,2,109)		
		Verify Telemetry TtrSts DEL17170	= Stopped	AND=ZAZAI999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		End of Procedure		