

Choose new PAP set for RM A
 File: H_CRP_DHS_PAP_A.xls
 Author: S. Manganelli



Procedure Summary

Objectives

To provide a self-contained procedure to modify the PAP set and attempt counter in use FOR RM A

Summary of Constraints

The procedure must be performed under guidance of a SOE
 NOTE: by this procedure you can only select PAP set pointers and Attempt pointers that are aligned: for example PAP set 1 and Attempt pointer set 1, or PAP set 2 and Attempt pointer set 2
 This is assumed to be the normal case.

Spacecraft Configuration

Start of Procedure

Some configuration of PAP table and Attempt pointer for RM A

End of Procedure

New configuration of PAP table and attempt pointer for RM A

Reference File(s)

Input Command Sequences

Output Command Sequences

HRDPAPAX
 HRDPAP1A
 HRDPAP2A
 HRDPAP3A
 HRDPAP4A
 HRDPAPAY

Referenced Displays

ANDs	GRDs	SLDs
ZAZ7R999		(None)
ZAZ4Z999		
ZAZAA999		
ZAZAI999		

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
01/02/09	2	1	Created	S. Manganelli	
09/02/09		2	Comment updated at step 17.	cmevi-hp	
09/02/09	2.1	3	Minor update	cmevi-hp	

Status : Version 5 - Unchanged
 Last Checkin: 22/04/09

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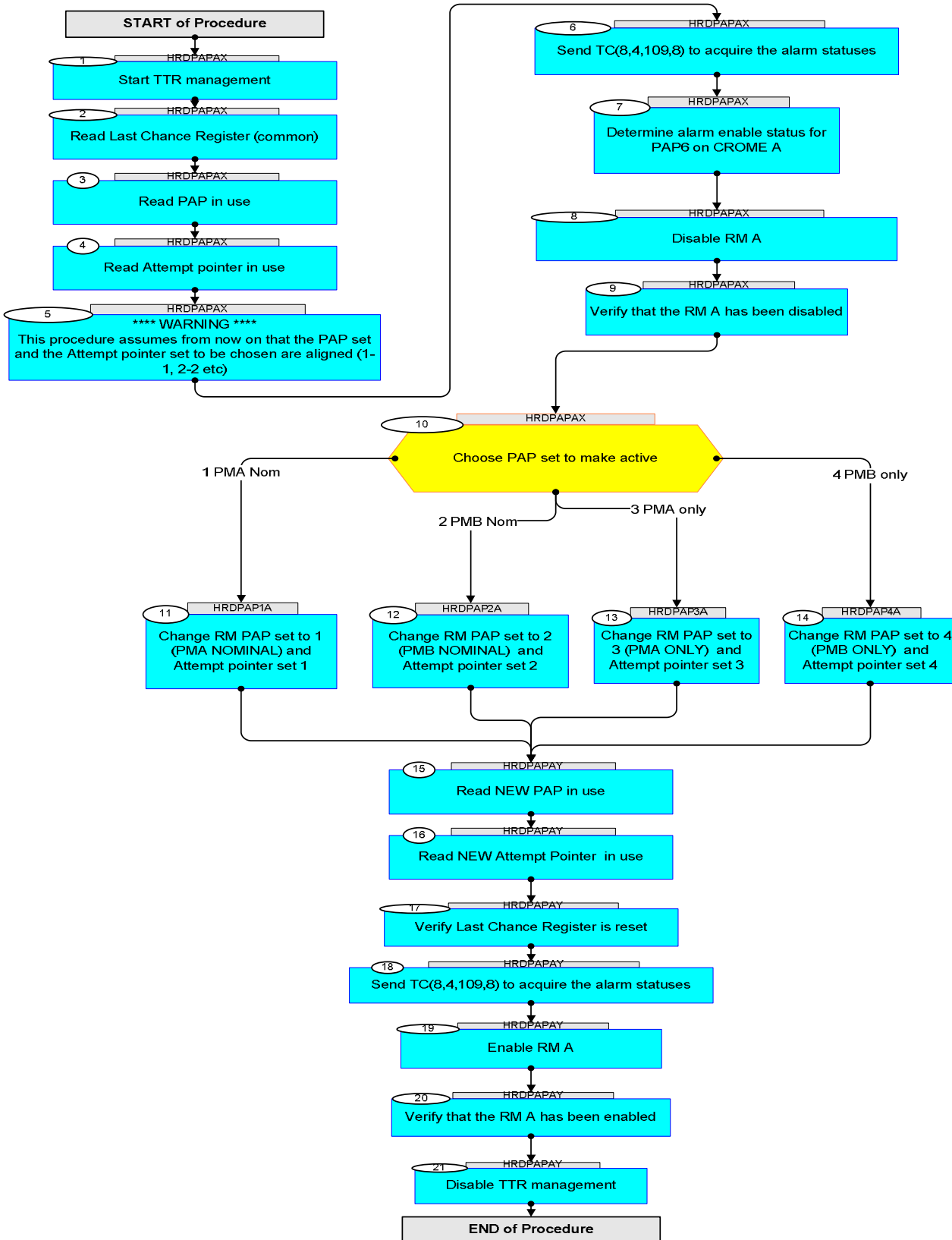


20/03/09	2.2	4	DB change due to OBSW 3_8_2	S. Manganelli	
22/04/09	2.3	5	Added step 7 to check the enable/disable status of PAP 6 alarms	S. Manganelli	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
Beginning of Procedure					
HRDPAPAX <i>TC Seq. Name : HRDPAPAX (Strt PAPset RMA)</i> <i>TimeTag Type: N</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>					
1		Start TTR management		Next Step: 2	
		Verify Telemetry TtrSts DEL17170	= Stopped	AND=ZAZ7R999	
		Execute Telecommand StartTtrManag <i>TC Control Flags :</i> GBM IL DSE --Y -- --- <i>Subsch. ID : 10</i> <i>Det. descr. : Start Ttr Management TC(8,1,109)</i>	DCN06170	TC	
		Verify Telemetry TtrSts DEL17170	= Running	AND=ZAZ7R999	
		All operations in this procedure can be followed using AND ZAZ7R999			
2		Read Last Chance Register (common)		Next Step: 3	
		Execute Telecommand ReadCromeReg <i>Command Parameter(s) :</i> CromeId DH096170 CromeAddr DH102170 <i>TC Control Flags :</i> GBM IL DSE --Y -- --- <i>Subsch. ID : 10</i> <i>Det. descr. : TEMPLATE Read CROME Register</i> <i>TC(8,4,109,17)</i>	DCT64170	TC	
		Record in the logbook the register value for future reference. The register will be automatically cleared by following steps.			
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			
		DE285170 CromeId	Crome_A	AND=ZAZ7R999 PKT=CromeRegRpt	
		DE329170 CromeAddr	07005A40 <hex>	(None) PKT=CromeRegRpt	
		DE367170 CromeData	note down	(None) PKT=CromeRegRpt	

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3		Read PAP in use		Next Step: 4	
		Execute Telecommand <p style="text-align: right;">ReadCromeReg</p> Command Parameter(s) : CromeId DH096170 CromeAddr DH102170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read CROME Register TC(8,4,109,17)	DCT64170	TC	
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			
		Verify Packet Telemetry CromeId DE285170 = Crome_A		AND=ZAZ7R999	
		Verify Packet Telemetry CromeAddr DE329170 = 07005830 <hex>		(None)	
		Verify Packet Telemetry CromeData DE367170 note down		(None)	
		Possible values in RM PAP Pointer: Set 1 PMA Nom --> 0x02000030 Set 2 PMB Nom--> 0x020000A8 Set 3 PMA only--> 0x02000104 Set 4 PMB only--> 0x0200012C			
4		Read Attempt pointer in use		Next Step: 5	
		Execute Telecommand <p style="text-align: right;">ReadCromeReg</p> Command Parameter(s) : CromeId DH096170 CromeAddr DH102170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read CROME Register TC(8,4,109,17)	DCT64170	TC	
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			

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		Verify Packet Telemetry CromeId DE285170	= Crome_A	AND=ZAZ7R999	
		Verify Packet Telemetry CromeAddr DE329170	= 07005828 <hex>	(None)	
		Verify Packet Telemetry CromeData DE367170	note down	(None)	
		Possible values in RM Attempt Pointer: Set 1 PMA Nom--> 0x02000000 Set 2 PMB Nom--> 0x02000078 Set 3 PMA only--> 0x020000F0 Set 4 PMB only--> 0x02000118			
5		**** WARNING **** This procedure assumes from now on that the PAP set and the Attempt pointer set to be chosen are aligned (1-1, 2-2 etc)		Next Step: 6	
6		Send TC(8,4,109,8) to acquire the alarm statuses		Next Step: 7	
		Execute Telecommand ReadAlarmSts Command Parameter(s) : RmId DH093170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read Alarm Status TC(8,4,109,8)	DCT62170 RM_A (Def)	TC	
		The alarm statuses in AND ZAZ7R999 should be inspected and understood before disabling the RM. If needed, refer to H_CRP_DHS_3011			
7		Determine alarm enable status for PAP6 on CROME A		Next Step: 8	
7.1		Send TC(8,4,109,17) to read the Alarm Enable Set Register on CROME A			
		Execute Telecommand CRMA_RMH_AlarmEnSetReg TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : CROME A: Read RMH Alarm Enable Set Register	DCW1A159	TC	

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7.2		Verify through TM(8,6,109,17) the CROME A alarm enable mask			
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			
		DE008170 Function_ID	TTR_Manag	(None) PKT=CromeRegRpt	
		DE368170 TtrManRptActId	CromeRegRpt	(None) PKT=CromeRegRpt	
		DE285170 CromeId	Crome_A	(None) PKT=CromeRegRpt	
		DE329170 CromeAddr	070058D4 <hex>	AND=ZAZ4Z999 PKT=CromeRegRpt	
		If PAP 6 triggering is disabled			
		DE367170 CromeData	23FE0F <hex>	AND=ZAZ4Z999 PKT=CromeRegRpt	
		If PAP 6 triggering is enabled			
		Verify Packet Telemetry CromeData DE367170	= 23FE3F <hex>	AND=ZAZ4Z999	
7.3		If PAP6 triggering alarms are enabled , disable them before proceeding. If they are disabled proceed to next step.			
		H_FCP_DHS_4009 Disable strap 2 / 3 alarms (PAP6) and check of strap 1 alarm.			
8		Disable RM A		Next Step: 9	
		Verify Telemetry RMA_fromTTR-RMA DEEXG160		AND=ZAZAA999	
		Verify Telemetry RMA_fromTTR-RMB DEEXH160		AND=ZAZAA999	
		Verify Telemetry RMB_fromTTR-RMA DEEXJ160		AND=ZAZAA999	
		Verify Telemetry RMB_fromTTR-RMB DEEXK160		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	TC	

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9		Verify that the RM A has been disabled		Next Step: 10	
		Verify Telemetry RMA_fromTTR-RMA DEEXG160 = DISABLED		AND=ZAZAA999	
		Verify Telemetry RMA_fromTTR-RMB DEEXH160 = DISABLED		AND=ZAZAA999	
10		Choose PAP set to make active type: [Switch]		Next Step: 1 PMA Nom 11 2 PMB Nom 12 3 PMA only 13 4 PMB only 14	
End of Sequence					
HRDPAP1A TC Seq. Name : HRDPAP1A (PAP SET1 RMA) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>					
11		Change RM PAP set to 1 (PMA NOMINAL) and Attempt pointer set 1		Next Step: 15	
		Execute Telecommand ChangeRmPrgSet Command Parameter(s) : RmId DH093170 RM_A (Def) PapAddr DH098170 02000030 <hex> CntTblAddr DH099170 02000000 <hex> TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Change RM Programming Set TC(8,4,109,5)	DCT59170	TC	
		This TC resets as well the whole last chance register for this PAP			
End of Sequence					
HRDPAP2A TC Seq. Name : HRDPAP2A (PAP SET2 RMA) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>					
12		Change RM PAP set to 2 (PMB NOMINAL) and Attempt pointer set 2		Next Step: 15	

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		Execute Telecommand <p style="text-align: right;">ChangeRmPrgSet</p> <i>Command Parameter(s) :</i> <p style="margin-left: 40px;">RmId DH093170 PapAddr DH098170 CntTblAddr DH099170</p> <i>TC Control Flags :</i> <p style="margin-left: 40px;"> GBM IL DSE --Y -- ---</p> <i>Subsch. ID : 10</i> Det. descr. : TEMPLATE Change RM Programming Set TC(8,4,109,5)	DCT59170	TC	
		This TC resets as well the whole last chance register for this PAP			
End of Sequence					
HRDPAP3A <i>TC Seq. Name : HRDPAP3A (PAP SET3 RMA)</i> <i>TimeTag Type: N</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>					
13		Change RM PAP set to 3 (PMA ONLY) and Attempt pointer set 3		Next Step: 15	
		Execute Telecommand <p style="text-align: right;">ChangeRmPrgSet</p> <i>Command Parameter(s) :</i> <p style="margin-left: 40px;">RmId DH093170 PapAddr DH098170 CntTblAddr DH099170</p> <i>TC Control Flags :</i> <p style="margin-left: 40px;"> GBM IL DSE --Y -- ---</p> <i>Subsch. ID : 10</i> Det. descr. : TEMPLATE Change RM Programming Set TC(8,4,109,5)	DCT59170	TC	
		This TC resets as well the whole last chance register for this PAP			
End of Sequence					
HRDPAP4A <i>TC Seq. Name : HRDPAP4A (PAP SET4 RMA)</i> <i>TimeTag Type: N</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>					
14		Change RM PAP set to 4 (PMB ONLY) and Attempt pointer set 4		Next Step: 15	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Execute Telecommand ChangeRmPrgSet	DCT59170	TC	
		Command Parameter(s) : RmId DH093170 PapAddr DH098170 CntTblAddr DH099170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Change RM Programming Set TC(8,4,109,5)	RM_A (Def) 0200012C <hex> 02000118 <hex>		
		This TC resets as well the whole last chance register for this PAP			
End of Sequence					
TC Seq. Name :HRDPAPAY (End PAPset RMA) HRDPAPAY TimeTag Type: Sub Schedule ID: <input type="checkbox"/>					
15		Read NEW PAP in use		Next Step: 16	
		Execute Telecommand ReadCromeReg	DCT64170	TC	
		Command Parameter(s) : CromeId DH096170 CromeAddr DH102170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read CROME Register TC(8,4,109,17)	Crome_A (Def) 07005830 <hex>		
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			
		Verify Packet Telemetry CromeId DE285170	= Crome_A	AND=ZAZ7R999	
		Verify Packet Telemetry CromeAddr DE329170	= 07005830 <hex>	(None)	
		Verify Packet Telemetry CromeData DE367170	note down	(None)	
		Possible values in RM PAP Pointer: Set 1 PMA Nom --> 0x02000030 Set 2 PMB Nom--> 0x020000A8 Set 3 PMA only--> 0x02000104 Set 4 PMB only--> 0x0200012C			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
16		Read NEW Attempt Pointer in use		Next Step: 17	
		Execute Telecommand <p style="text-align: right;">ReadCromeReg</p> Command Parameter(s) : CromeId DH096170 CromeAddr DH102170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read CROME Register TC(8,4,109,17)	DCT64170	TC	
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			
		Verify Packet Telemetry CromeId DE285170	= Crome_A	AND=ZAZ7R999	
		Verify Packet Telemetry CromeAddr DE329170	= 07005828 <hex>	(None)	
		Verify Packet Telemetry CromeData DE367170	note down	(None)	
		Possible values in RM Attempt Pointer: Set 1 PMA Nom--> 0x02000000 Set 2 PMB Nom--> 0x02000078 Set 3 PMA only--> 0x020000F0 Set 4 PMB only--> 0x02000118			
17		Verify Last Chance Register is reset		Next Step: 18	
		Execute Telecommand <p style="text-align: right;">ReadCromeReg</p> Command Parameter(s) : CromeId DH096170 CromeAddr DH102170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read CROME Register TC(8,4,109,17)	DCT64170	TC	
		Verify Packet Reception TM 8-6-109-17 TTR Management - Crome Register Report Packet Mnemonic : CromeRegRpt APID : 16 Type : 8 Subtype : 6 PI1 : 27921 PI2 : 0			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Verify Packet Telemetry CromeId DE285170	= Crome_A	AND=ZAZ7R999	
		Verify Packet Telemetry CromeAddr DE329170	= 07005A40 <hex>	(None)	
		Verify Packet Telemetry CromeData DE367170	note down	(None)	
18		Send TC(8,4,109,8) to acquire the alarm statuses		Next Step: 19	
		Execute Telecommand ReadAlarmSts Command Parameter(s) : RmId DH093170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Read Alarm Status TC(8,4,109,8)	DCT62170 RM_A (Def)	TC	
		The alarm statuses in AND ZAZ7R999 should be inspected and understood before enabling the RM. In particular, they should be the same received in step 6. If needed, refer to H_CRP_DHS_3011			
19		Enable RM A		Next Step: 20	
		Execute Telecommand RM_A_enable TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : RM A enable - High Priority Standard	DCA14170	TC	
20		Verify that the RM A has been enabled		Next Step: 21	
		Verify Telemetry RMA_fromTTR-RMA DEEXG160	= ENABLED	AND=ZAZAA999	
		Verify Telemetry RMA_fromTTR-RMB DEEXH160	= ENABLED	AND=ZAZAA999	
21		Disable TTR management		Next Step: END	
		The TTR Management function should be stopped by default.			
		Verify Telemetry TtrSts DEL17170	= Running	AND=ZAZAI999	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Execute Telecommand <p style="text-align: right;">StopTtrManag</p> <i>TC Control Flags :</i> <p style="text-align: right;">GBM IL DSE --Y -- ---</p> <i>Subsch. ID : 10</i> <i>Det. descr. : Stop Ttr Management TC(8,2,109)</i>	DCN07170	TC	
		Verify Telemetry <p style="text-align: right;">TtrSts DEL17170</p>	= Stopped	AND=ZAZAI999	
End of Sequence					
End of Procedure					