Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
Author: E. Picallo

Procedure Summary

Objectives

The aim of this procedure is to restore the Ground limits in the
FCCT after the launch in case of DoD (CDMU in Survial Mode)
occurs during LEOP.

The FCCT thresholds to be modified on launch pad are indicated
(in green) in the table annexed to the procedure.

Summary of Constraints

Some lines will reach the expected temperature quickly while
other lines will need more time. This procedure shall be repeated
as many times as required ONLY for the thermal control looops
that have not reached the expected in-flight temperatures values
in case of DoD (CDMU in Survial Mode) occurs during LEOP.

WARNING: before restoring the FCCT limits of any TCS line, make
sure that the temperature is already stable within the required
range.

Spacecraft Configuration

Start of Procedure

CDMU in Survial Mode (DoD scenario) during LEOP
FDIR management function running
FCCT limits restored to the default (Flight) values

End of Procedure

FDIR management function running
FCCT limits restored to the Ground values (if required)

Reference File(s)

Input Command Sequences

Output Command Sequences

HLTFCCG
HLTFCCG1
HLTFCCG2
HLTFCCG3
HLTFCCG4
HLTFCCG5
HLTFCCG6
HLTFCCG7
HLTFCCG8
HLTFCCG9
HLTFCCGA
HLTFCCGB
HLTFCCGC
HLTFCCGD
HLTFCCGE
HLTFCCGF
HLTFCCGG
HLTFCCGH
HLTFCCGI

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Last Checkin: 29/04/09

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Referenced Displays

ANDs	GRDs	SLDs
	ZGZ2B999	
	ZGZ2L999	
	ZGZ3B999	
	ZGZ2W999	
	ZGZ35999	
	ZGZ2F999	
	ZGZ2G999	
	ZGZ32999	
	ZGZ2Y999	
	ZGZ2M999	
	ZGZ2D999	
	ZGZ23999	
	ZGZ34999	
	ZGZ36999	
	ZGZ2H999	
	ZGZ2K999	
	ZGZ2P999	
	ZGZ2Q999	
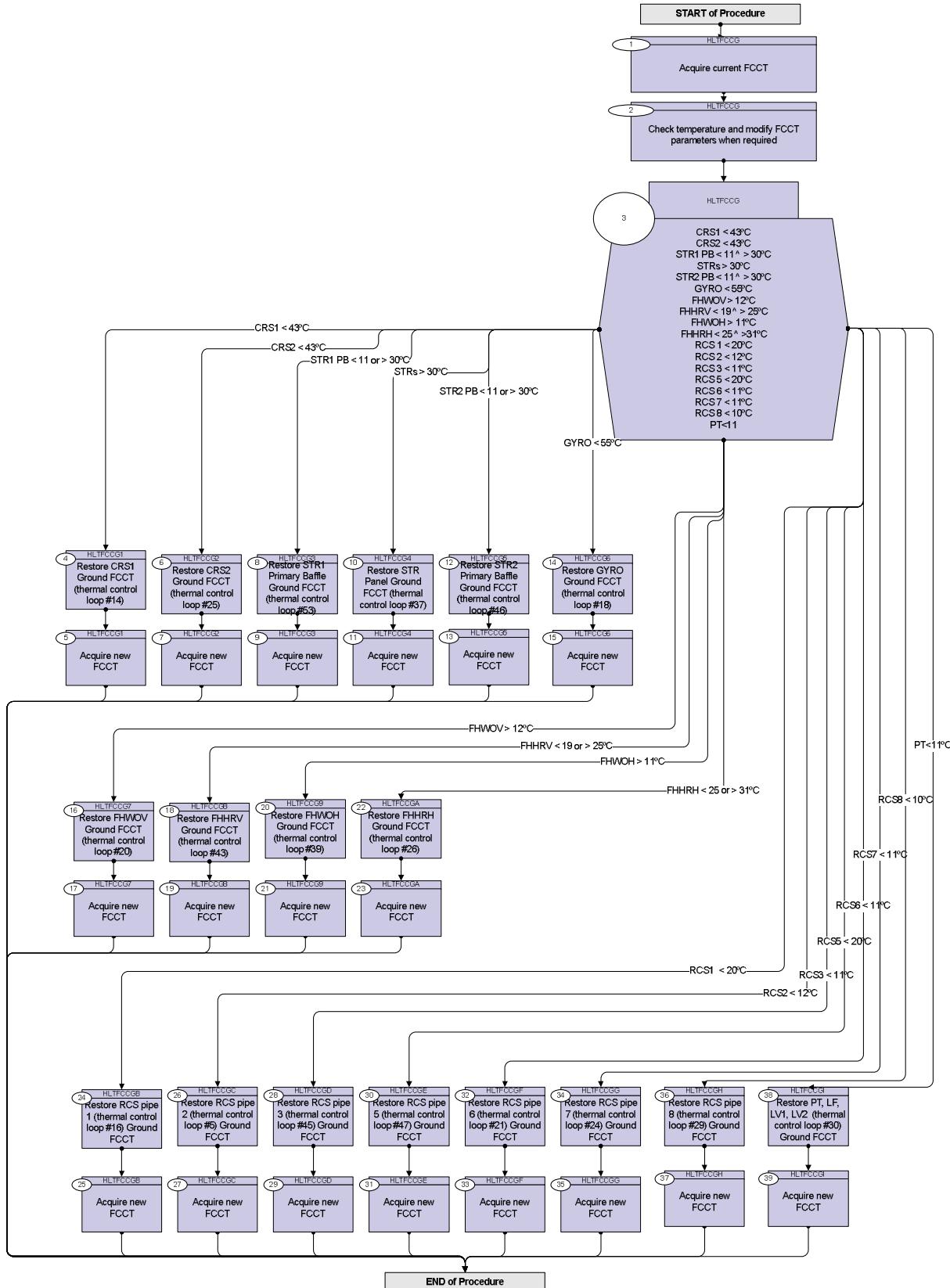
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
29/04/09	2.4	1 Created		E. Picallo	

Status : Version 1 - Unchanged
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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 :HLTFCCG (Restore Ground FCCT) Restore Ground FCCT parameters Init *TimeTag Type: N* *Sub Schedule ID:*		
1		*Acquire current FCCT*		Next Step: 2
1.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		
		Execute Telecommand **ReportFdirManagSts** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Report Fdir Management Status, TC(8,5,116)	**DCN02170**	
1.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	**16**	
		Type:	**8**	
		Subtype:	**6**	
		PI1:	**29951**	
		PI2:	**0**	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	**FcctRpt1**	
		APID:	**16**	
		Type:	**8**	
		Subtype:	**6**	
		PI1:	**29697**	
		PI2:	**0**	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	**FcctRpt2**	
		APID:	**16**	
		Type:	**8**	
		Subtype:	**6**	
		PI1:	**29698**	
		PI2:	**0**	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2		*Check temperature and modify FCCT parameters when required*		Next Step: 3
2.1		*CRS 1 (thermal control loop #14)*		
		If the parameters in the FCCT are set to the flight values: **FDIR LOW_NOP = 43ºC** **FDIR LOW_OP = 43ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp14_CRS_1 DEA85170		GRD=ZGZ2B999
		If Taverage < 43ºC, then restore the Ground limits in the FCCT		
2.2		*CRS 2 (thermal control loop #25)*		
		If the parameters in the FCCT are set to the flight values: **FDIR LOW_NOP = 43ºC** **FDIR LOW_OP = 43ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp25_CRS_2 DEA90170		GRD=ZGZ2L999
		If Taverage < 43ºC, then restore the Ground limits in the FCCT		
2.3		*STR1 Primary Baffle (thermal control loop #53)*		
		If the parameters in the FCCT set to the flight values: **FDIR LOW_OP = 11ºC** **FDIR HIGH_NOP = 30ºC** **FDIR HIGH_OP = 30 ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp53_STR1_Baf DEAAC170		GRD=ZGZ3B999
		If Taverage < 11ºC or > 30ºC, then restore the Ground limits in the FCCT		
2.4		*STR Panel (thermal control loop #37)*		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		If the parameters in the FCCT are set to the Flight values: **FDIR HIGH_NOP = 30ºC** **FDIR HIGH_OP = 30 ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp37_STRs DEA9C170		GRD=ZGZ2W999
		If Taverage > 30ºC, then restore the Ground limits in the FCCT		
2.5		*STR2 Primary Baffle (thermal control loop #46)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_OP = 11ºC** **FDIR HIGH_NOP = 30ºC** **FDIR HIGH_OP = 30 ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp46_STR2_Baf DEAA5170		GRD=ZGZ35999
		If Taverage < 11ºC or > 30ºC, then restore the Ground limits in the FCCT		
2.6		*GYRO (thermal control loop #18)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 55ºC** **FDIR LOW_OP = 55ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp18_GYRO DEA89170		GRD=ZGZ2F999
		If Taverage < 55ºC, then restore the in-flight default limits in the FCCT		
2.7		*FHWOV (thermal control loop #20)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR HIGH_NOP = 12ºC** **FDIR HIGH_OP = 12ºC** **Then, check if the temperature has not reached the expected value on flight yet**		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry ATemp20_FHWOV DEA8B170		GRD=ZGZ2G999
		If Taverage > 12ºC, then restore the Ground limits in the FCCT		
2.8		*FHHRV (thermal control loop #43)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_OP = 19ºC** **FDIR HIGH_NOP = 25ºC** **FDIR HIGH_OP = 25ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp43_FHHRV DEAA2170		GRD=ZGZ32999
		If Taverage < 19ºC or > 25ºC, then restore the Ground limits in the FCCT		
2.9		*FHWOH (thermal control loop #39)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR HIGH_NOP = 11ºC** **FDIR HIGH_OP = 11ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp39_FHWOH DEA9E170		GRD=ZGZ2Y999
		If Taverage > 11ºC, then restore the Ground limits in the FCCT		
2.10		*FHHRH (thermal control loop #26)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_OP = 25ºC** **FDIR HIGH_NOP = 31ºC** **FDIR HIGH_OP = 31 ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp26_FHHRH DEA91170		GRD=ZGZ2M999
		If Taverage < 25ºC or > 31ºC, then restore the Ground limits in the FCCT		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2.11		*RCS pipe 1 (thermal control loop #16)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 20ºC** **FDIR LOW_OP = 20ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp16_RCSPipe1 DEA87170		GRD=ZGZ2D999
		If Taverage < 20ºC, then restore the Ground limits in the FCCT		
2.12		*RCS pipe 2 (thermal control loop #5)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 12ºC** **FDIR LOW_OP = 12ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp05_RCSPipe2 DEA7C170		GRD=ZGZ23999
		If Taverage < 12ºC, then restore the Ground limits in the FCCT		
2.13		*RCS pipe 3 (thermal control loop #45)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 11ºC** **FDIR LOW_OP = 11ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry ATemp45_RCSPipe3 DEAA4170		GRD=ZGZ34999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT		
2.14		*RCS pipe 5 (thermal control loop #47)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 20ºC** **FDIR LOW_OP = 20ºC** **Then, check if the temperature has not reached the expected value on flight yet**		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **ATemp47_RCSPipe5** **DEAA6170**		GRD=ZGZ36999
		If Taverage < 20ºC, then restore the Ground limits in the FCCT		
2.15		*RCS pipe 6 (thermal control loop #21)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 11ºC** **FDIR LOW_OP = 11ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry **ATemp21_RCSPipe6** **DEA8C170**		GRD=ZGZ2H999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT		
2.16		*RCS pipe 7 (thermal control loop #24)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 11ºC** **FDIR LOW_OP = 11ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry **ATemp24_RCSPipe7** **DEA8F170**		GRD=ZGZ2K999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT		
2.17		*RCS pipe 8 (thermal control loop #29)*		
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 10ºC** **FDIR LOW_OP = 10ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry **ATemp29_RCSPipe8** **DEA94170**		GRD=ZGZ2P999
		If Taverage < 10ºC, then restore the Ground limits in the FCCT		
2.18		*PT, LF, LV1, LV2 (thermal control loop #30)*		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		If the parameters in the FCCT are set to the Flight values: **FDIR LOW_NOP = 11ºC** **FDIR LOW_OP = 11ºC** **Then, check if the temperature has not reached the expected value on flight yet**		
		Verify Telemetry **ATemp30_LV_1_2** **DEA95170**		GRD=ZGZ2Q999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT		
3		*CRS1 < 43ºC* *CRS2 < 43ºC* *STR1 PB < 11 ^ > 30ºC* *STRs > 30ºC* *STR2 PB < 11 ^ > 30ºC* *GYRO < 55ºC* *FHWOV > 12ºC* *FHHRV < 19 ^ > 25ºC* *FHWOH > 11ºC* *FHHRH < 25 ^ >31ºC* *RCS 1 < 20ºC* *RCS 2 < 12ºC* *RCS 3 < 11ºC* *RCS 5 < 20ºC*		Next Step: CRS1 < 43°C 4 CRS2 < 43°C 6 STR1 PB < 11 or > 30°C 8 STRs > 30°C 10 STR2 PB < 11 or > 30°C 12 GYRO < 55°C 14 FHWOV > 12°C 16 FHHRV < 19 or > 25°C 18 FHWOH > 11°C 20 FHHRH < 25 or > 31°C 22 RCS1 < 20°C 24 RCS2 < 12°C 26 RCS3 < 11°C 28 RCS5 < 20°C 30
		R$_{CS}$ 6 < 11°C *RCS 7 < 11°C* *RCS 8 < 10°C* *PT<11*		RCS6 < 11°C 32 RCS7 < 11°C 34 RCS8 < 10°C 36 PT<11°C 38
		TC Seq. Name :HLTFCCG1 (Restore CRS1 FCCG) Restore CRS1 Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
4		*Restore CRS1 Ground FCCT (thermal control loop #14)*		Next Step: 5
		Verify Telemetry **ATemp14_CRS_1** **DEA85170**	**< 43.0 <dec>**	GRD=ZGZ2B999
		If Taverage < 43ºC, then restore the Ground limits in the FCCT by sending the following TC		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		                FCCT_CRS_1_HPS3_HCS2
		
		Command Parameter(s) :
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		        CCorrParValUInt DH133170
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		
		TC Control Flags :
		                  GBM IL DSE
		                  --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_CRS_1_HPS3_HCS2 CrCorrChkPar
		TC(8,4,116,17) Id=ChkId_32
			ZCC3A999
			
			8.0 \<dec\> (Def)
			52.0 \<dec\> (Def)
			64800 \<dec\> (Def)
			8.0 \<dec\> (Def)
			8.0 \<dec\> (Def)
			52.0 \<dec\> (Def)	

5		*Acquire new FCCT*		Next Step: END
5.1		*Send TC(8,5,116) to acquire the status of the function* **Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".**		

		Execute Telecommand
		
		                ReportFdirManagSts
		
		TC Control Flags :
		                  GBM IL DSE
		                  --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status,
		TC(8,5,116)
			DCN02170	

5.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		                 APID:
		                 Type:
		           Subtype:
		                  PI1:
		                  PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	FcctRpt1	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	FcctRpt2	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCG2 (Restore CRS2 FCCG) Restore CRS2 Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
6		*Restore CRS2 Ground FCCT (thermal control loop #25)*		Next Step: 7
		Verify Telemetry **ATemp25_CRS_2**　　　　DEA90170	**< 43.0 <dec>**	GRD=ZGZ2L999
		If Taverage < 43°C, then restore the Ground limits in the FCCT by sending the following TC		
		Execute Telecommand **FCCT_CRS_2_HPS5_HCS1** *Command Parameter(s) :*	ZCC3L999	
		CCorrParValFlt　　　　DH134170	8.0 **<dec>** (Def)	
		CCorrParValFlt　　　　DH134170	52.0 **<dec>** (Def)	
		CCorrParValUInt　　　　DH133170	64800 **<dec>** (Def)	
		CCorrParValFlt　　　　DH134170	8.0 **<dec>** (Def)	
		CCorrParValFlt　　　　DH134170	8.0 **<dec>** (Def)	
		CCorrParValFlt　　　　DH134170	52.0 **<dec>** (Def)	
		TC Control Flags : **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : FCCT_CRS_2_HPS5_HCS1 CrCorrChkPar TC(8,4,116,17) Id=ChkId_43		
7		*Acquire new FCCT*		Next Step: END
7.1		*Send TC(8,5,116) to acquire the status of the function*		
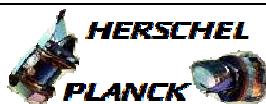
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		
		        ReportFdirManagSts
		
		TC Control Flags :
		       GBM IL DSE
		       --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

7.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29951	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	**FcctRpt1**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	**FcctRpt2**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCG3 (Restore STR1 PB FCCG) Restore STR1 PB Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
8		*Restore STR1 Primary Baffle Ground FCCT (thermal control loop #53)*		Next Step: 9
		Verify Telemetry **ATemp53_STR1_Baf** DEAAC170	< 11.0 <dec> > 30.0 <dec>	GRD=ZGZ3B999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		If Taverage < 11ºC or > 30ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		
		                    FCCT_STR1_PRBF_HPS9_HCS5
		
		Command Parameter(s) :
		            CCorrParValFlt DH134170
		            CCorrParValFlt DH134170
		            CCorrParValUInt DH133170
		            CCorrParValFlt DH134170
		            CCorrParValFlt DH134170
		            CCorrParValFlt DH134170
		
		TC Control Flags :
		                          GBM IL DSE
		                          --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_STR1_PRBF_HPS9_HCS5 CrCorrChkPar TC(8,4,116,17) Id=ChkId_71
			ZCC4D999
			
			-23.5 <dec> (Def)
			40.0 <dec> (Def)
			64800 <dec> (Def)
			-23.5 <dec> (Def)
			8.0 <dec> (Def)
			40.0 <dec> (Def)	

9		*Acquire new FCCT*		Next Step: END
9.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		
		                    ReportFdirManagSts
		
		TC Control Flags :
		                          GBM IL DSE
		                          --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

9.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	FcctRpt1	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	FcctRpt2	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCG4 (Restore STRs FCCG) Restore STRs Panel Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
10		*Restore STR Panel Ground FCCT (thermal control loop #37)*		Next Step: 11
		Verify Telemetry **ATemp37_STRs** DEA9C170	> 30.0 **<dec>**	GRD=ZGZ2W999
		If Taverage > 30ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		FCCT_STRs_HPS7_HCS1
		
		Command Parameter(s) :
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		        CCorrParValUInt DH133170
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		
		TC Control Flags :
		                         GBM IL DSE
		                         --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_STRs_HPS7_HCS1 CrCorrChkPar
		TC(8,4,116,17) Id=ChkId_55
			ZCC3Y999
			
			-10.0 **<dec>** (Def)
			40.0 **<dec>** (Def)
			64800 **<dec>** (Def)
			-10.0 **<dec>** (Def)
			-3.0 **<dec>** (Def)
			40.0 **<dec>** (Def)	

11		*Acquire new FCCT*		Next Step: END

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
11.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		
		                         ReportFdirManagSts
		
		TC Control Flags :
		                         GBM IL DSE
		                         --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

11.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29951	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	FcctRpt1	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	FcctRpt2	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCG5 (Restore STR2 PB FCCG) Restore STR2 PB Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
12		*Restore STR2 Primary Baffle Ground FCCT (thermal control loop #46)*		Next Step: 13

Status   : Version 1 – Unchanged
Last Checkin: 29/04/09

Restore Ground FCCT parameters
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Author: E. Picallo

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **ATemp46_STR2_Baf** **DEAA5170**	**< 11.0 <dec>** **> 30.0 <dec>**	GRD=ZGZ35999
		If Taverage < 11ºC or > 30ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		                    FCCT_STR2_PRBF_HPS8_HCS4
		
		Command Parameter(s) :
		          CCorrParValFlt **DH134170**
		          CCorrParValFlt **DH134170**
		          CCorrParValUInt **DH133170**
		          CCorrParValFlt **DH134170**
		          CCorrParValFlt **DH134170**
		          CCorrParValFlt **DH134170**
		
		TC Control Flags :
		                    GBM IL DSE
		                    --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_STR2_PRBF_HPS8_HCS4 CrCorrChkPar TC(8,4,116,17) Id=ChkId_64
			ZCC47999
			
			-23.5 <dec> (Def)
			40.0 <dec> (Def)
			64800 <dec> (Def)
			-23.5 <dec> (Def)
			8.0 <dec> (Def)
			40.0 <dec> (Def)	

13		*Acquire new FCCT*		Next Step: END
13.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		                    ReportFdirManagSts
		
		TC Control Flags :
		                    GBM IL DSE
		                    --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

13.2		*Verify that three TM(8,6,116) have been received*		

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29951	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	FcctRpt1	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	FcctRpt2	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCG6 (Restore Gyro FCCG) Restore Gyro Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
14		*Restore GYRO Ground FCCT (thermal control loop #18)*		Next Step: 15
		Verify Telemetry **ATemp18_GYRO** **DEA89170**	**< 55.0 <dec>**	GRD=ZGZ2F999
		If Taverage < 55ºC, then restore the Ground limits in the FCCT by sending the following TC		
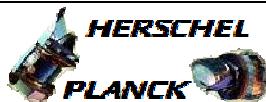
		Execute Telecommand
		          FCCT_GYRO_HPS3_HCS6
		
		Command Parameter(s) :
		          CCorrParValFlt DH134170
		          CCorrParValFlt DH134170
		          CCorrParValUInt DH133170
		          CCorrParValFlt DH134170
		          CCorrParValFlt DH134170
		          CCorrParValFlt DH134170
		
		TC Control Flags :
		                    GBM IL DSE
		                    --Y -- ---
		
		Subsch. ID : 10
			ZCC3E999
			
			8.0 <dec> (Def)
			65.0 <dec> (Def)
			64800 <dec> (Def)
			8.0 <dec> (Def)
			8.0 <dec> (Def)
			65.0 <dec> (Def)	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
Author: E. Picallo

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Det. descr. : FCCT_GYRO_HPS3_HCS6 CrCorrChkPar TC(8,4,116,17) Id=ChkId_36		
15		*Acquire new FCCT*		Next Step: END
15.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		
		Execute Telecommand ReportFdirManagSts *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Report Fdir Management Status, TC(8,5,116)	DCN02170	
15.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	FdirMngRun 16 8 6 29951 0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	FcctRpt1 16 8 6 29697 0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	FcctRpt2 16 8 6 29698 0	

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		TC Seq. Name :HLTFCCG7 (Restore FHWOV FCCG) Restore FHWOV Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
16		*Restore FHWOV Ground FCCT (thermal control loop #20)*		Next Step: 17
		Verify Telemetry **ATemp20_FHWOV** **DEA8B170**	**> 12.0 <dec>**	GRD=ZGZ2G999
		If Taverage > 12ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		                            FCCT_FHWOV_HPS4_HCS2
		
		Command Parameter(s) :
		           CCorrParValFlt **DH134170**
		           CCorrParValFlt **DH134170**
		           CCorrParValUInt **DH133170**
		           CCorrParValFlt **DH134170**
		           CCorrParValFlt **DH134170**
		           CCorrParValFlt **DH134170**
		
		TC Control Flags :
		                            GBM IL DSE
		                            --Y -- ---
		Subsch. ID : 10
		
		Det. descr. : FCCT_FHWOV_HPS4_HCS2 CrCorrChkPar
		TC(8,4,116,17) Id=ChkId_38
			ZCC3F999
			
			-20.0 <dec> (Def)
			30.0 <dec> (Def)
			64800 <dec> (Def)
			-20.0 <dec> (Def)
			2.0 <dec> (Def)
			30.0 <dec> (Def)	

17		*Acquire new FCCT*		Next Step: END
17.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		                            ReportFdirManagSts
		
		TC Control Flags :
		                            GBM IL DSE
		                            --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status,
		TC(8,5,116)
			DCN02170	

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
17.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	**16**	
		Type:	**8**	
		Subtype:	**6**	
		PI1:	**29951**	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	**FcctRpt1**	
		APID:	**16**	
		Type:	**8**	
		Subtype:	**6**	
		PI1:	**29697**	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	**FcctRpt2**	
		APID:	**16**	
		Type:	**8**	
		Subtype:	**6**	
		PI1:	**29698**	
		PI2:	0	
		TC Seq. Name :HLTFCCG8 (Restore FHHRV FCCG) Restore FHHRV Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
18		*Restore FHHRV Ground FCCT (thermal control loop #43)*		Next Step: 19
		Verify Telemetry **ATemp43_FHHRV DEAA2170**	**< 19.0 <dec>** **> 25.0 <dec>**	GRD=ZGZ32999
		If Taverage < 19ºC or > 25ºC, then restore the Ground limits in the FCCT by sending the following TC		

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		          FCCT_FHHRV_HPS8_HCS1
		
		Command Parameter(s) :
		    CCorrParValFlt DH134170
		    CCorrParValFlt DH134170
		    CCorrParValUInt DH133170
		    CCorrParValFlt DH134170
		    CCorrParValFlt DH134170
		    CCorrParValFlt DH134170
		
		TC Control Flags :
		                GBM IL DSE
		                --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_FHHRV_HPS8_HCS1 CrCorrChkPar
		TC(8,4,116,17) Id=ChkId_61
			ZCC44999
			
			-25.0 <dec> (Def)
			40.0 <dec> (Def)
			64800 <dec> (Def)
			-25.0 <dec> (Def)
			8.0 <dec> (Def)
			40.0 <dec> (Def)	

19		*Acquire new FCCT*		Next Step: END
19.1		*Send TC(8,5,116) to acquire the status of the function* **Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".**		

		Execute Telecommand
		
		          ReportFdirManagSts
		
		TC Control Flags :
		                GBM IL DSE
		                --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status,
		TC(8,5,116)
			DCN02170	

19.2		*Verify that three TM(8,6,116) have been received*
		
		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		                    APID:
		                    Type:
		              Subtype:
		                      PI1:
		                      PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:* APID: Type: Subtype: PI1: PI2:	FcctRpt1 16 8 6 29697 0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:* APID: Type: Subtype: PI1: PI2:	FcctRpt2 16 8 6 29698 0	
		TC Seq. Name :HLTFCCG9 (Restore FHWOH FCCG) Restore FHWOH Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
20		*Restore FHWOH Ground FCCT (thermal control loop #39)*		Next Step: 21
		Verify Telemetry **ATemp39_FHWOH** **DEA9E170**	**> 11.0 \<dec\>**	GRD=ZGZ2Y999
		If Taverage > 11ºC, then restore the Ground limits in the FCCT by sending the following TC		
		Execute Telecommand **FCCT_FHWOH_HPS7_HCS3** *Command Parameter(s) :* **CCorrParValFlt** **DH134170** **CCorrParValFlt** **DH134170** **CCorrParValUInt** **DH133170** **CCorrParValFlt** **DH134170** **CCorrParValFlt** **DH134170** **CCorrParValFlt** **DH134170** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : FCCT_FHWOH_HPS7_HCS3 CrCorrChkPar TC(8,4,116,17) Id=ChkId_57	ZCC40999 -15.0 **\<dec\>** (Def) 30.0 **\<dec\>** (Def) 64800 **\<dec\>** (Def) -15.0 **\<dec\>** (Def) 1.0 **\<dec\>** (Def) 30.0 **\<dec\>** (Def)	
21		*Acquire new FCCT*		Next Step: END

Restore Ground FCCT parameters
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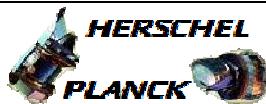
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
21.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		
		                          ReportFdirManagSts
		
		TC Control Flags :
		                          GBM IL DSE
		                          --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

21.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

		Verify Packet Reception
		      TM 8-6-116-1 FCCT contents report part 1
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FcctRpt1
			
			16
			8
			6
			29697
			0	

		Verify Packet Reception
		      TM 8-6-116-2 FCCT contents report part 2
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FcctRpt2
			
			16
			8
			6
			29698
			0	

		TC Seq. Name :HLTFCCGA (Restore FHHRH FCCG) Restore FHHRH Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
22		*Restore FHHRH Ground FCCT (thermal control loop #26)*		Next Step: 23

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **ATemp26_FHHRH** **DEA91170**	**< 25.0 <dec>** **> 31.0 <dec>**	GRD=ZGZ2M999
		If Taverage < 25ºC or > 31ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		      FCCT_FHHRH_HPS5_HCS2
		
		Command Parameter(s) :
		      CCorrParValFlt **DH134170**
		      CCorrParValFlt **DH134170**
		      CCorrParValUInt **DH133170**
		      CCorrParValFlt **DH134170**
		      CCorrParValFlt **DH134170**
		      CCorrParValFlt **DH134170**
		
		TC Control Flags :
		      GBM IL DSE
		      --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_FHHRH_HPS5_HCS2 CrCorrChkPar
		TC(8,4,116,17) Id=ChkId_44
			ZCC3M999
			
			-22.0 <dec> (Def)
			40.0 <dec> (Def)
			64800 <dec> (Def)
			-22.0 <dec> (Def)
			8.0 <dec> (Def)
			40.0 <dec> (Def)	

23		*Acquire new FCCT*		Next Step: END
23.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		      ReportFdirManagSts
		
		TC Control Flags :
		      GBM IL DSE
		      --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

23.2		*Verify that three TM(8,6,116) have been received*		

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29951	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	FcctRpt1	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	FcctRpt2	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCGB (RestoreRCSpipe1 FCCG) Restore RCS pipes (control loop 16) Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
24		*Restore RCS pipe 1 (thermal control loop #16) Ground FCCT*		Next Step: 25
		Verify Telemetry **ATemp16_RCSpipe1** DEA87170	**< 20.0 <dec>**	GRD=ZGZ2D999
		If Taverage < 20ºC, then restore the Ground limits in the FCCT by sending the following TC		
		Execute Telecommand **FCCT_RCS pipe1_HPS3_HCS4** *Command Parameter(s) :*	**ZCC3C999**	
		CCorrParValFlt DH134170	**8.0 <dec>** (Def)	
		CCorrParValFlt DH134170	**52.0 <dec>** (Def)	
		CCorrParValUInt DH133170	**64800 <dec>** (Def)	
		CCorrParValFlt DH134170	**8.0 <dec>** (Def)	
		CCorrParValFlt DH134170	**8.0 <dec>** (Def)	
		CCorrParValFlt DH134170	**52.0 <dec>** (Def)	
		TC Control Flags : GBM IL DSE --Y -- --- *Subsch. ID : 10*		
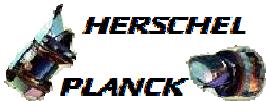
Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
Author: E. Picallo

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Det. descr. : FCCT_RCS pipe1_HPS3_HCS4 CrCorrChkPar TC(8,4,116,17) Id=ChkId_34		
25		*Acquire new FCCT*		Next Step: END
25.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		
		Execute Telecommand **ReportFdirManagSts** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Report Fdir Management Status, TC(8,5,116)	DCN02170	
25.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	FdirMngRun 16 8 6 29951 0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	FcctRpt1 16 8 6 29697 0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	FcctRpt2 16 8 6 29698 0	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		TC Seq. Name :HLTFCCGC (RestoreRCSpipe2 FCCG) Restore RCS pipes (control loop 5) Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
26		*Restore RCS pipe 2 (thermal control loop #5) Ground FCCT*		Next Step: 27
		Verify Telemetry **ATemp05_RCSPipe2 DEA7C170**	**< 12.0 <dec>**	GRD=ZGZ23999
		If Taverage < 12ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		                    FCCT_RCS pipe2_HPS1_HCS5
		
		Command Parameter(s) :
		          CCorrParValFlt DH134170
		          CCorrParValFlt DH134170
		          CCorrParValUInt DH133170
		          CCorrParValFlt DH134170
		          CCorrParValFlt DH134170
		          CCorrParValFlt DH134170
		
		TC Control Flags :
		                    GBM IL DSE
		                    --Y -- ---
		Subsch. ID : 10
		
		Det. descr. : FCCT_RCS pipe2_HPS1_HCS5 CrCorrChkPar TC(8,4,116,17) Id=ChkId_23
			ZCC33999
			
			8.0 <dec> (Def)
			52.0 <dec> (Def)
			64800 <dec> (Def)
			8.0 <dec> (Def)
			8.0 <dec> (Def)
			52.0 <dec> (Def)	

27		*Acquire new FCCT*		Next Step: END
27.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		                    ReportFdirManagSts
		
		TC Control Flags :
		                    GBM IL DSE
		                    --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
27.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:* APID: Type: Subtype: PI1: PI2:	**FdirMngRun** 16 8 6 29951 0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:* APID: Type: Subtype: PI1: PI2:	**FcctRpt1** 16 8 6 29697 0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:* APID: Type: Subtype: PI1: PI2:	**FcctRpt2** 16 8 6 29698 0	
		TC Seq. Name :HLTFCCGD (RestoreRCSpipe3 FCCG) Restore RCS pipes (control loop 45) Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
28		*Restore RCS pipe 3 (thermal control loop #45) Ground FCCT*		Next Step: 29
		Verify Telemetry **ATemp45_RCSPipe3 DEAA4170**	**< 11.0 <dec>**	GRD=ZGZ34999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT by sending the following TC		

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		           FCCT_RCS pipe3_HPS8_HCS3
		
		Command Parameter(s) :
		      CCorrParValFlt DH134170
		      CCorrParValFlt DH134170
		      CCorrParValUInt DH133170
		      CCorrParValFlt DH134170
		      CCorrParValFlt DH134170
		      CCorrParValFlt DH134170
		
		TC Control Flags :
		            GBM IL DSE
		            --Y -- ---
		
		Subsch. ID : 10
		
		Det. descr. : FCCT_RCS pipe3_HPS8_HCS3 CrCorrChkPar TC(8,4,116,17) Id=ChkId_63
			ZCC46999
			
			8.0 <dec> (Def)
			52.0 <dec> (Def)
			64800 <dec> (Def)
			8.0 <dec> (Def)
			8.0 <dec> (Def)
			52.0 <dec> (Def)	

29		*Acquire new FCCT*		Next Step: END
29.1		*Send TC(8,5,116) to acquire the status of the function* **Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".**		

		Execute Telecommand
		
		           ReportFdirManagSts
		
		TC Control Flags :
		            GBM IL DSE
		            --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

29.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		            APID:
		            Type:
		        Subtype:
		            PI1:
		            PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	FcctRpt1	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	FcctRpt2	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCGE (RestoreRCSpipe5 FCCG) Restore RCS pipes (control loop 47) Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
30		*Restore RCS pipe 5 (thermal control loop #47) Ground FCCT*		Next Step: 31
		Verify Telemetry **ATemp47_RCSPipe5** **DEAA6170**	**< 20.0 <dec>**	GRD=ZGZ36999
		If Taverage < 20ºC, then restore the Ground limits in the FCCT by sending the following TC		
		Execute Telecommand **FCCT_RCS pipe5_HPS8_HCS5** *Command Parameter(s) :* **CCorrParValFlt** **DH134170** **CCorrParValFlt** **DH134170** **CCorrParValUInt** **DH133170** **CCorrParValFlt** **DH134170** **CCorrParValFlt** **DH134170** **CCorrParValFlt** **DH134170** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : FCCT_RCS pipe5_HPS8_HCS5 CrCorrChkPar TC(8,4,116,17) Id=ChkId_65	ZCC48999 **8.0 <dec>** (Def) **52.0 <dec>** (Def) **64800 <dec>** (Def) **8.0 <dec>** (Def) **8.0 <dec>** (Def) **52.0 <dec>** (Def)	
31		*Acquire new FCCT*		Next Step: END

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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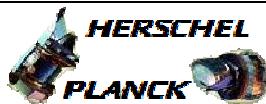
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
31.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		
		                          ReportFdirManagSts
		
		TC Control Flags :
		                          GBM IL DSE
		                          --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status,
		TC(8,5,116)
			DCN02170	

31.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

		Verify Packet Reception
		        TM 8-6-116-1 FCCT contents report part 1
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FcctRpt1
			
			16
			8
			6
			29697
			0	

		Verify Packet Reception
		        TM 8-6-116-2 FCCT contents report part 2
		Packet Details:
		                          APID:
		                          Type:
		                          Subtype:
		                          PI1:
		                          PI2:
			FcctRpt2
			
			16
			8
			6
			29698
			0	

		TC Seq. Name :HLTFCCGF (RestoreRCSpipe6 FCCG) Restore RCS pipes (control loop 21) Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
32		*Restore RCS pipe 6 (thermal control loop #21) Ground FCCT*		Next Step: 33
		Verify Telemetry **ATemp21_RCSPipe6** **DEA8C170**	**< 11.0 <dec>**	GRD=ZGZ2H999
		If Taverage < 11°C, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		          FCCT_RCS pipe6_HPS4_HCS3
		
		Command Parameter(s) :
		       CCorrParValFlt **DH134170**
		       CCorrParValFlt **DH134170**
		      CCorrParValUInt **DH133170**
		       CCorrParValFlt **DH134170**
		       CCorrParValFlt **DH134170**
		       CCorrParValFlt **DH134170**
		
		TC Control Flags :
		               GBM IL DSE
		               --Y -- ---
		Subsch. ID : 10
		
		Det. descr. : FCCT_RCS pipe6_HPS4_HCS3 CrCorrChkPar TC(8,4,116,17) Id=ChkId_39
			ZCC3G999
			
			8.0 <dec> (Def)
			52.0 <dec> (Def)
			64800 <dec> (Def)
			8.0 <dec> (Def)
			8.0 <dec> (Def)
			52.0 <dec> (Def)	

33		*Acquire new FCCT*		Next Step: END
33.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		           ReportFdirManagSts
		
		TC Control Flags :
		               GBM IL DSE
		               --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

33.2		*Verify that three TM(8,6,116) have been received*		

Restore Ground FCCT parameters
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**FdirMngRun** 16 8 6 29951 0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**FcctRpt1** 16 8 6 29697 0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**FcctRpt2** 16 8 6 29698 0	
		TC Seq. Name :HLTFCCGG (RestoreRCSpipe7 FCCG) Restore RCS pipes (control loop 24) Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
34		*Restore RCS pipe 7 (thermal control loop #24) Ground FCCT*		Next Step: 35
		Verify Telemetry **ATemp24_RCSPipe7 DEA8F170**	**< 11.0 <dec>**	GRD=ZGZ2K999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT by sending the following TC		
		Execute Telecommand **FCCT_RCS pipe7_HPS4_HCS6** *Command Parameter(s) :* **CCorrParValFlt DH134170** **CCorrParValFlt DH134170** **CCorrParValUInt DH133170** **CCorrParValFlt DH134170** **CCorrParValFlt DH134170** **CCorrParValFlt DH134170** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10*	**ZCC3K999** **8.0 <dec>** (Def) **52.0 <dec>** (Def) **64800 <dec>** (Def) **8.0 <dec>** (Def) **8.0 <dec>** (Def) **52.0 <dec>** (Def)	

Status   : Version 1 - Unchanged
Last Checkin: 29/04/09

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
Author: E. Picallo

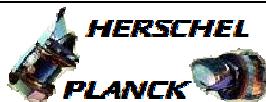| Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Det. descr. : FCCT_RCS pipe7_HPS4_HCS6 CrCorrChkPar TC(8,4,116,17) Id=ChkId_42		
35		*Acquire new FCCT*		Next Step: END
35.1		*Send TC(8,5,116) to acquire the status of the function*		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		
		                    ReportFdirManagSts
		
		TC Control Flags :
		                    GBM IL DSE
		                    --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

35.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		                    APID:
		                    Type:
		                    Subtype:
		                    PI1:
		                    PI2:
			FdirMngRun
			
			16
			8
			6
			29951
			0	

		Verify Packet Reception
		        TM 8-6-116-1 FCCT contents report part 1
		Packet Details:
		                    APID:
		                    Type:
		                    Subtype:
		                    PI1:
		                    PI2:
			FcctRpt1
			
			16
			8
			6
			29697
			0	

		Verify Packet Reception
		        TM 8-6-116-2 FCCT contents report part 2
		Packet Details:
		                    APID:
		                    Type:
		                    Subtype:
		                    PI1:
		                    PI2:
			FcctRpt2
			
			16
			8
			6
			29698
			0	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
Author: E. Picallo

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		TC Seq. Name :HLTFCCGH (RestoreRCSpipe8 FCCG) Restore RCS pipes (control loop 29) Ground FCCT parameters TimeTag Type: N Sub Schedule ID:		
36		Restore RCS pipe 8 (thermal control loop #29) Ground FCCT		Next Step: 37
		Verify Telemetry ATemp29_RCSPipe8 DEA94170	< 10.0 <dec>	GRD=ZGZ2P999
		If Taverage < 10ºC, then restore the Ground limits in the FCCT by sending the following TC		

		Execute Telecommand
		                    FCCT_RCS pipe8_HPS5_HCS5
		
		Command Parameter(s) :
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		        CCorrParValUInt DH133170
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		        CCorrParValFlt DH134170
		
		TC Control Flags :
		                              GBM IL DSE
		                              --Y -- ---
		Subsch. ID : 10
		
		Det. descr. : FCCT_RCS pipe8_HPS5_HCS5 CrCorrChkPar TC(8,4,116,17) Id=ChkId_47
			ZCC3R999
			
			8.0 <dec> (Def)
			52.0 <dec> (Def)
			64800 <dec> (Def)
			8.0 <dec> (Def)
			8.0 <dec> (Def)
			52.0 <dec> (Def)	

37		Acquire new FCCT		Next Step: END
37.1		Send TC(8,5,116) to acquire the status of the function		
		Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".		

		Execute Telecommand
		                    ReportFdirManagSts
		
		TC Control Flags :
		                              GBM IL DSE
		                              --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
37.2		*Verify that three TM(8,6,116) have been received*		
		Verify Packet Reception (assumed FDIR function is started) **TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF** *Packet Details:*	**FdirMngRun**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29951	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:*	**FcctRpt1**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29697	
		PI2:	0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:*	**FcctRpt2**	
		APID:	16	
		Type:	8	
		Subtype:	6	
		PI1:	29698	
		PI2:	0	
		TC Seq. Name :HLTFCCGI (RestorePT_LF_LV FCCG) Restore PT, LF, LV1, LV2 Ground FCCT parameters *TimeTag Type: N* *Sub Schedule ID:*		
38		*Restore PT, LF, LV1, LV2 (thermal control loop #30)* *Ground FCCT*		Next Step: 39
		Verify Telemetry **ATemp30_LV_1_2** **DEA95170**	**< 11.0 <dec>**	GRD=ZGZ2Q999
		If Taverage < 11ºC, then restore the Ground limits in the FCCT by sending the following TC		

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		     FCCT_PTLFLV12_HPS5_HCS6
		
		Command Parameter(s) :
		   CCorrParValFlt DH134170
		   CCorrParValFlt DH134170
		  CCorrParValUInt DH133170
		   CCorrParValFlt DH134170
		   CCorrParValFlt DH134170
		   CCorrParValFlt DH134170
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		Subsch. ID : 10
		
		Det. descr. : FCCT_PTLFLV12_HPS5_HCS6 CrCorrChkPar TC(8,4,116,17) Id=ChkId_48
			ZCC3S999
			
			8.0 <dec> (Def)
			52.0 <dec> (Def)
			64800 <dec> (Def)
			8.0 <dec> (Def)
			8.0 <dec> (Def)
			52.0 <dec> (Def)	

39		*Acquire new FCCT*		Next Step: END
39.1		*Send TC(8,5,116) to acquire the status of the function* **Report FDIR Management Status telecommand is used for requiring the status of the function as a telemetry packet. Default status of the function: "started".**		

		Execute Telecommand
		
		     ReportFdirManagSts
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		Subsch. ID : 10
		Det. descr. : Report Fdir Management Status, TC(8,5,116)
			DCN02170	

39.2		*Verify that three TM(8,6,116) have been received*		

		Verify Packet Reception (assumed FDIR function is started)
		TM 8-6-116 Fdir Management Status Report Running-Idle 0xFF
		Packet Details:
		        APID:
		        Type:
		     Subtype:
		         PI1:
		         PI2:
			
			FdirMngRun
			
			16
			8
			6
			29951
			0	

Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **TM 8-6-116-1 FCCT contents report part 1** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**FcctRpt1** 16 8 6 29697 0	
		Verify Packet Reception **TM 8-6-116-2 FCCT contents report part 2** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**FcctRpt2** 16 8 6 29698 0	

End of Procedure

```
Restore Ground FCCT parameters
File: H_CRP_TCS_FCCG.xls
Author: E. Picallo
```

HERSCHEL								
TCS Htr Line	**HEATER location**	**Reference Unit**	**LOW FDIR Unit ON**	**LOW FDIR Unit OFF**	**HIGH FDIR Unit ON**	**HIGH FDIR Unit OFF**	**Control Loop index**	**FCCT CHK index**
Line 01	Close to XPND1	XPND1	-12	-12	52	52		
Line 02	Close to XPND2	XPND2	-12	-12	52	52		
Line 03	Inside BATTERY	BATTERY	-2	-2	37	37		
Line 04	Tanks	TANKS	N/A	N/A	N/A	N/A		
Line 05	Close to FPSPU, FPDPU	FPSPU	-17	-25	47	47		
Line 06	Close to FPBOLC	FPBOLC	-17	-21	47	47		
Line 07	CRS 1	CRS 1	43 -> 8	43 -> 8	52	52	14	32
Line 08	Close to FPDECMEC	FPDECMEC	-17	-22	47	47		
Line 09	On RCS pipes	RCS PIPES	20 -> 8	20 -> 8	52	52	16	34
Line 10	Close to CCU,HSDCU,HSFCU	CCU	3	3	42	42		
Line 11	On RCS pipes	RCS PIPES	12 -> 8	12 -> 8	52	52	5	23
Line 12	Close to FHWOV	FHWOV	2	**-20**	12 -> 30	12 -> 30	20	38
Line 13	Close to FHHRV	FHHRV	**19 -> 8**	-25	**25 -> 40**	**25 -> 40**	43	61
Line 14	STR1 Primary Baffle	STR 1	11 -> 8	**-23**	30 -> 40	30 -> 40	53	71
Line 15	Close to FHWEV, FHICU	FHWEV	-2	**-22**	32	32		
Line 16	Close to FHWOH	FHWOH	1	**-15**	11 -> 30	11 -> 30	39	57
Line 17	Close to FHWEH	FHWEH	-2	**-7**	32	32		
Line 18	Close to FHHRH	FHHRH	**25 -> 8**	-22	**31 -> 40**	**31 -> 40**	26	44
Line 19	Close to FHLCU, FHIFH	FHLCU	**8**	**-20**	42	42		
Line 20	Close to FHLSU	FHLSU	8	**-13**	**37**	**37**		
Line 21	RWL2	RWL2	-2	-6	57	57		
Line 22	RWL4	RWL4	-2	-6	57	57		
Line 23	RWL1	RWL1	-2	-6	57	57		
Line 24	RWL3	RWL3	-2	-6	57	57		
Line 25	TANK +Y	TANK +Y	8	8	**40**	**40**		
Line 26	TANK -Y	TANK -Y	8	8	**40**	**40**		
Line 27	Close to STR's	STR panel	-3	-10	30 -> 40	30 -> 40	37	55
Line 28	Close to FHIFV	FHIFV	-12	-12	42	42		
Line 29	FCV A1A **(*)**	FCV A1A	8	8	**90**	**90**		
Line 30	FCV C2A **(*)**	FCV C2A	8	8	**90**	**90**		
Line 31	FCV C1A **(*)**	FCV C1A	8	8	**90**	**90**		
Line 32	FCV A2A **(*)**	FCV A2A	8	8	**90**	**90**		
Line 33	FCV C4A **(*)**	FCV C4A	8	8	**90**	**90**		
Line 34	FCV C3A **(*)**	FCV C3A	8	8	**90**	**90**		
Line 35	on RCS pipes	RCS PIPES	11 -> 8	11 -> 8	52	52	45	63
Line 36	STR2 Primary Baffle	STR 2	11 -> 8	**-23**	30 -> 40	30 -> 40	46	64
Line 37	on RCS PIPES	RCS PIPES	20 -> 8	20 -> 8	52	52	47	65
Line 38	Close to GYRO	GYRO	55 -> 8	55 -> 8	65	65	18	36
Line 39	FCV A1B **(*)**	FCV A1B	8	8	**90**	**90**		
Line 40	FCV C2B **(*)**	FCV C2B	8	8	**90**	**90**		
Line 41	FCV C1B **(*)**	FCV C1B	8	8	**90**	**90**		
Line 42	FCV A2B **(*)**	FCV A2B	8	8	**90**	**90**		
Line 43	FCV C4B **(*)**	FCV C4B	8	8	**90**	**90**		
Line 44	FCV C3B **(*)**	FCV C3B	8	8	**90**	**90**		
Line 45	on RCS Pipes	RCS PIPES	11 -> 8	11 -> 8	52	52	21	39
Line 46	on RCS Pipes	RCS PIPES	11 -> 8	11 -> 8	52	52	24	42
Line 47	on RCS pipes	RCS PIPES	10 -> 8	10 -> 8	52	52	29	47
Line 48	on PT, LF, LV1, LV2	LV1	11 -> 8	11 -> 8	52	52	30	48
Line 49	CRS 2	CRS 2	43 -> 8	43 -> 8	52	52	25	43