

Recovery
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Procedure Summary

Objectives

This procedure describes the steps needed to recover an LCL following a LCL trip-off protection activation.

Summary of Constraints

This procedure shall be used in case of LCL trip-off, since it acts directly on the LCL (discrete) latch; to turn ON again the LCL through 1553, one 1553 OFF command has to be sent before the ON.

The LCLs are switched OFF through ASW TCs(8,4,112,3); thus the status of the ASW function "PCDU Management" has to be "running".

Spacecraft Configuration

Start of Procedure

CDMU in default configuration;
 LCL in OFF status via trip-off signal

End of Procedure

CDMU in default configuration;
 LCL re-inforced in OFF status via 1553

Reference File(s)

Input Command Sequences

Output Command Sequences

HRWLCLR1
 HRWLCLR2

Referenced Displays

ANDs **GRDs** **SLDs**
 WALC1584
 WALC2584
 WALC3584

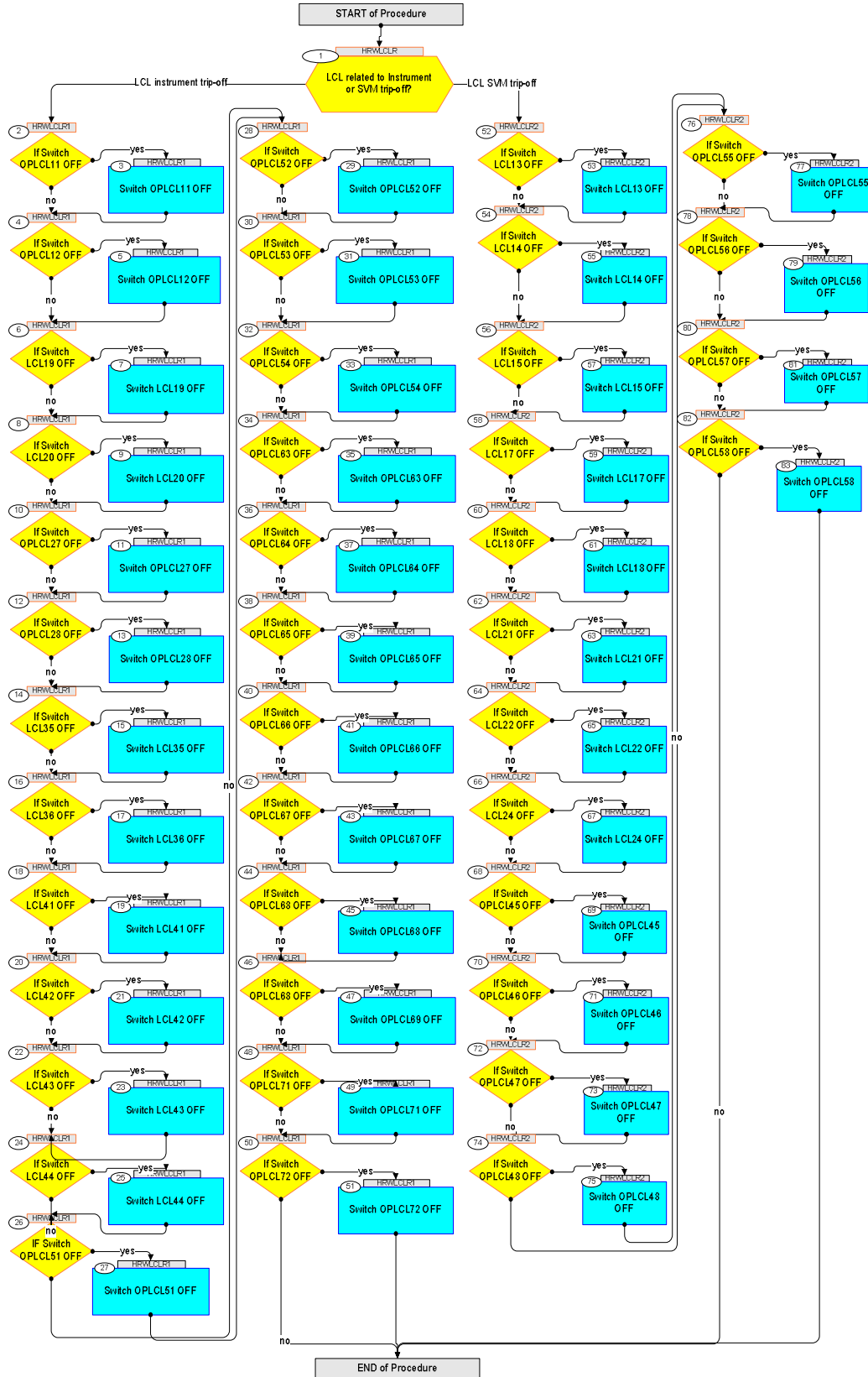
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
23/07/08	1	1	Created	E. Picallo	
15/12/08		2	Display mode update	E. Picallo	
02/02/09	2	3	Procedure updated to recover LCL from trip-off activation SVM LCLs added	E. Picallo	
05/05/09	2.4	4	TM WM309565 (PacsB_R_L28_I) description corrected	E. Picallo	

Recovery
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Procedure Flowchart Overview



LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name : HRWLCLR (LCL Recovery) LCL Recovery after trip-off protection activation TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
1		LCL related to Instrument or SVM trip-off?		Next Step: LCL SVM trip-off 52 LCL instrument trip-off 2
TC Seq. Name : HRWLCLR1 (LCL Instru Recovery) LCL Instrument Recovery after trip-off protection activation TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
2		If Switch OPLCL11 OFF		Next Step: no 4 yes 3
3		Switch OPLCL11 OFF		Next Step: 4
		Execute Telecommand <div style="text-align: right;">SwOff_SpireHSPDU_N_L11</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) SPIRE HSDPU Nom - switch LCL_11 off	DC11B170	
		Verify Telemetry SpirHsdN_L11_1S WM32C565	= OFF	AND=WALC1584
		Verify Telemetry SpirHsdN_L11_2S WM32J565	= OFF	AND=WALC1584
		Verify Telemetry SpireHsN_L11_I WM308565	>= 0.0 A <= 0.1 A	AND=WALC1584
4		If Switch OPLCL12 OFF		Next Step: no 6 yes 5
5		Switch OPLCL12 OFF		Next Step: 6

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SwOff_SpireHSPDU_R_L12 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) SPIRE HSDPU Red - switch LCL_12 off GBM IL DSE --Y -- ---	DC12B170	
		Verify Telemetry SpirHsdR_L12_1S WM82C565	= OFF	AND=WALC1584
		Verify Telemetry SpirHsdR_L12_2S WM82J565	= OFF	AND=WALC1584
		Verify Telemetry SpireHsdR_L12_I WM808565	>= 0.0 A <= 0.1 A	AND=WALC1584
6		If Switch LCL19 OFF		Next Step: no 8 yes 7
7		Switch LCL19 OFF		Next Step: 8
		Execute Telecommand SwOff_SREM_L19 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) SREM - switch LCL_19 off GBM IL DSE --Y -- ---	DC19B170	
		Verify Telemetry SREM_L19_S WM32B565	= OFF	AND=WALC1584
		Verify Telemetry Srem_L19_I WM307565	>= 0.0 A <= 0.1 A	AND=WALC1584
8		If Switch LCL20 OFF		Next Step: no 10 yes 9
9		Switch LCL20 OFF		Next Step: 10

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <p style="text-align: right;">SwOff_VMC_L20</p> TC Control Flags : <p style="text-align: right;">GBM IL DSE ---Y ---</p> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) VMC - switch LCL_20 off	DC20B170	
		Verify Telemetry <p style="text-align: center;">VMC_L20_S WM82B565</p>	= OFF	AND=WALC1584
		Verify Telemetry <p style="text-align: center;">VMC_L20_I WM807565</p>	>= 0.0 A <= 0.1 A	AND=WALC1584
10		If Switch OPLCL27 OFF		Next Step: no 12 yes 11
11		Switch OPLCL27 OFF		Next Step: 12
		Execute Telecommand <p style="text-align: right;">SwOff_PacsB_N_L27</p> TC Control Flags : <p style="text-align: right;">GBM IL DSE ---Y ---</p> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS BOLC Nom-switch LCL_27 off	DC27B170	
		Verify Telemetry <p style="text-align: center;">PacsB_N_L27_1S WM82D565</p>	= OFF	AND=WALC1584
		Verify Telemetry <p style="text-align: center;">PacsB_N_L27_2S WM82K565</p>	= OFF	AND=WALC1584
		Verify Telemetry <p style="text-align: center;">PacsB_N_L27_I WM809565</p>	>= 0.0 A <= 0.1 A	AND=WALC1584
12		If Switch OPLCL28 OFF		Next Step: no 14 yes 13
13		Switch OPLCL28 OFF		Next Step: 14

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SwOff_PacsB_R_L28 TC Control Flags : Subschr. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS BOLC Red-switch LCL_28 off GBM IL DSE --Y -- --	DC28B170	
		Verify Telemetry PacsB_R_L28_1S WM32D565	= OFF	AND=WALC1584
		Verify Telemetry PacsB_R_L28_2S WM32K565	= OFF	AND=WALC1584
		Verify Telemetry PacsB_R_L28_I WM309565	>= 0.0 A <= 0.1 A	AND=WALC1584
14		If Switch LCL35 OFF		Next Step: no 16 yes 15
15		Switch LCL35 OFF		Next Step: 16
		Execute Telecommand SwOff_PacsS_N_L35 TC Control Flags : Subschr. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS SPU Nom - switch LCL_35 off GBM IL DSE --Y -- --	DC35B170	
		Verify Telemetry PacsS_N_L35_S WM52A565	= OFF	AND=WALC2584
		Verify Telemetry PacsS_N_L35_I WM506565	>= 0.0 A <= 0.1 A	AND=WALC2584
16		If Switch LCL36 OFF		Next Step: no 18 yes 17
17		Switch LCL36 OFF		Next Step: 18

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SwOff_PacsS_R_L36 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS SPU Red - switch LCL_36 off GBM IL DSE --Y -- ---	DC36B170	
		Verify Telemetry PacsS_R_L36_S WM62A565	= OFF	AND=WALC2584
		Verify Telemetry PacsS_R_L36_I WM606565	>= 0.0 A <= 0.1 A	AND=WALC2584
18		If Switch LCL41 OFF		Next Step: no 20 yes 19
19		Switch LCL41 OFF		Next Step: 20
		Execute Telecommand SwOff_PacsD_N_L41 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS DPU Nom - switch LCL_41 off GBM IL DSE --Y -- ---	DC41B170	
		Verify Telemetry PacsD_N_L41_S WM72B565	= OFF	AND=WALC2584
		Verify Telemetry PacsD_N_L41_I WM707565	>= 0.0 A <= 0.1 A	AND=WALC2584
20		If Switch LCL42 OFF		Next Step: no 22 yes 21
21		Switch LCL42 OFF		Next Step: 22
		Execute Telecommand SwOff_PacsD_R_L42 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS DPU Red - switch LCL_42 off GBM IL DSE --Y -- ---	DC42B170	

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry PacsD_R_L42_S WM42B565	= OFF	AND=WALC2584
		Verify Telemetry PacsD_R_L42_I WM407565	>= 0.0 A <= 0.1 A	AND=WALC2584
22		If Switch LCL43 OFF		Next Step: yes 23 no 24
23		Switch LCL43 OFF		Next Step: 24
		Execute Telecommand SwOff_HiFiWEH_L43 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI WEH - switch LCL_43 off	DC43B170	
		Verify Telemetry HiFiWEV_L43_S WM82A565	= OFF	AND=WALC2584
		Verify Telemetry HiFiWEH_L43_I WM806565	>= 0.0 A <= 0.1 A	AND=WALC2584
24		If Switch LCL44 OFF		Next Step: no 26 yes 25
25		Switch LCL44 OFF		Next Step: 26
		Execute Telecommand SwOff_HiFiWEV_L44 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI WEV - switch LCL_44 off	DC44B170	
		Verify Telemetry HiFiWEV_L44_S WM32A565	= OFF	AND=WALC2584
		Verify Telemetry HiFiWEV_L44_I WM306565	>= 0.0 A <= 0.1 A	AND=WALC2584

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
26		IF Switch OPLCL51 OFF		Next Step: no 28 yes 27
27		Switch OPLCL51 OFF		Next Step: 28
		Execute Telecommand SwOff_SpireHSFCU_N_L51 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) SPIRE HSFCU Nom - switch LCL_51 off	DC51B170	
		Verify Telemetry SpirHsfN_L51_1S WM42C565	= OFF	AND=WALC2584
		Verify Telemetry SpirHsfN_L51_2S WM42J565	= OFF	AND=WALC2584
		Verify Telemetry SpireHsfN_L51_I WM408565	>= 0.0 A <= 0.1 A	AND=WALC2584
28		If Switch OPLCL52 OFF		Next Step: yes 29 no 30
29		Switch OPLCL52 OFF		Next Step: 30
		Execute Telecommand SwOff_SpireHSFCU_R_L52 TC Control Flags : GBM IL DSE ---Y --- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) SPIRE HSFCU Red - switch LCL_52 off	DC52B170	
		Verify Telemetry SpirHsfr_L52_1S WM72C565	= OFF	AND=WALC2584
		Verify Telemetry SpirHsfr_L52_2S WM72J565	= OFF	AND=WALC2584
		Verify Telemetry SpireHsfr_L52_I WM708565	>= 0.0 A <= 0.1 A	AND=WALC2584
30		If Switch OPLCL53 OFF		Next Step: no 32 yes 31

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
31		Switch OPLCL53 OFF		Next Step: 32
		Execute Telecommand SwOff_HiFiLCU_N_L53 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI LCU Nom - switch LCL_53 off	DC53B170	
		Verify Telemetry HiFiLcuN_L53_1S WM72D565	= OFF	AND=WALC2584
		Verify Telemetry HiFiLcuN_L53_2S WM72K565	= OFF	AND=WALC2584
		Verify Telemetry HiFiLCU_N_L53_I WM709565	>= 0.0 A <= 0.1 A	AND=WALC2584
32		If Switch OPLCL54 OFF		Next Step: no 34 yes 33
33		Switch OPLCL54 OFF		Next Step: 34
		Execute Telecommand SwOff_HiFiLCU_R_L54 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI LCU Red - switch LCL_54 off	DC54B170	
		Verify Telemetry HiFiLcuR_L54_1S WM42D565	= OFF	AND=WALC3584
		Verify Telemetry HiFiLcuR_L54_2S WM42K565	= OFF	AND=WALC3584
		Verify Telemetry HiFiLCU_R_L54_I WM409565	>= 0.0 A <= 0.1 A	AND=WALC3584
34		If Switch OPLCL63 OFF		Next Step: no 36 yes 35
35		Switch OPLCL63 OFF		Next Step: 36

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <div style="text-align: right;">SwOff_HiFiHRH_L63</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI HRH - switch LCL_63 off	DC63B170	
		Verify Telemetry <div style="text-align: center;">HiFiHRH_L63_1S WM52C565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: center;">HiFiHRH_L63_2S WM52J565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: center;">HiFiHRH_L63_I WM508565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
36		If Switch OPLCL64 OFF		Next Step: no 38 yes 37
37		Switch OPLCL64 OFF		Next Step: 38
		Execute Telecommand <div style="text-align: right;">SwOff_HiFiICU_N_L64</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI ICU Nom - switch LCL_64 off	DC64B170	
		Verify Telemetry <div style="text-align: center;">HiFiIcuN_L64_1S WM52D565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: center;">HiFiIcuN_L64_2S WM52K565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: center;">HiFiICU_N_L64_I WM509565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
38		If Switch OPLCL65 OFF		Next Step: no 40 yes 39
39		Switch OPLCL65 OFF		Next Step: 40

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <div style="text-align: right;">SwOff_PacsDecMec1_L65</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PACS DEC/MEC1 - switch LCL_65 off	DC65B170	
		Verify Telemetry <div style="text-align: right;">PacsMec1_L65_1S WM52E565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">PacsMec1_L65_2S WM52L565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">PacsMec1_L65_I WM510565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
40		If Switch OPLCL66 OFF		Next Step: no 42 yes 41
41		Switch OPLCL66 OFF		Next Step: 42
		Execute Telecommand <div style="text-align: right;">SwOff_LouDecH3_L66</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) LOU Dec Heater 3 - switch LCL_66 off	DC66B170	
		Verify Telemetry <div style="text-align: right;">LouDecH3_L66_1S WM52F565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">LouDecH3_L66_2S WM52M565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">LouDecH3_L66_I WM511565</div>	>= 0.0 A <= 0.1 A	
42		If Switch OPLCL67 OFF		Next Step: no 44 yes 43
43		Switch OPLCL67 OFF		Next Step: 44

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <div style="text-align: right;">SwOff_HiFiHRV_L67</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI HRV - switch LCL_67 off	DC67B170	
		Verify Telemetry <div style="text-align: right;">HiFiHRV_L67_1S WM62C565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">HiFiHRV_L67_2S WM62J565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">HiFiHRV_L67_I WM608565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
44		If Switch OPLCL68 OFF		Next Step: no 46 yes 45
45		Switch OPLCL68 OFF		Next Step: 46
		Execute Telecommand <div style="text-align: right;">SwOff_HiFiICU_R_L68</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) HIFI ICU Red - switch LCL_68 off	DC68B170	
		Verify Telemetry <div style="text-align: right;">HiFiIcuR_L68_1S WM62D565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">HiFiIcuR_L68_2S WM62K565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">HiFiICU_R_L68_I WM609565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
46		If Switch OPLCL68 OFF		Next Step: no 48 yes 47
47		Switch OPLCL69 OFF		Next Step: 48

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <p style="text-align: right;">SwOff_PacsDecMec2_L69</p> <i>TC Control Flags :</i> <p style="text-align: right;">GBM IL DSE --Y -- --</p> <i>Subsch. ID : 10</i> Det. descr. : PCDU: TC(8,4,112,3) PACS DEC/MEC2 - switch LCL_69 off	DC69B170	
		Verify Telemetry <p style="text-align: center;">PacsMec2_L69_1S WM62E565</p>	= OFF	AND=WALC3584
		Verify Telemetry <p style="text-align: center;">PacsMec2_L69_2S WM62L565</p>	= OFF	AND=WALC3584
		Verify Telemetry <p style="text-align: center;">PacsMec2_L69_I WM610565</p>	>= 0.0 A <= 0.1 A	AND=WALC3584
48		<i>If Switch OPLCL71 OFF</i>		Next Step: no 50 yes 49
49		<i>Switch OPLCL71 OFF</i>		Next Step: 50
		Execute Telecommand <p style="text-align: right;">SwOff_NCA_N_L71</p> <i>TC Control Flags :</i> <p style="text-align: right;">GBM IL DSE --Y -- --</p> <i>Subsch. ID : 10</i> Det. descr. : PCDU: TC(8,4,112,3) PLM NCA Actuators Nom - switch LCL_71 off	DC71B170	
		Verify Telemetry <p style="text-align: center;">NCA_N_L71_1_S WM32F565</p>	= OFF	AND=WALC3584
		Verify Telemetry <p style="text-align: center;">NCA_N_L71_2_S WM32M565</p>	= OFF	AND=WALC3584
		Verify Telemetry <p style="text-align: center;">NCA_N_L71_I WM311565</p>	>= 0.0 A <= 0.1 A	AND=WALC3584
50		<i>If Switch OPLCL72 OFF</i>		Next Step: no END yes 51
51		<i>Switch OPLCL72 OFF</i>		Next Step: END

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SwOff_NCA_R_L72 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) PLM NCA Actuators Red - switch LCL_72 off	DC72B170	
		Verify Telemetry NCA_R_L72_1_S WM82F565	= OFF	AND=WALC3584
		Verify Telemetry NCA_R_L72_2_S WM82M565	= OFF	AND=WALC3584
		Verify Telemetry NCA_R_L72_I WM811565	>= 0.0 A <= 0.1 A	AND=WALC3584
<p>TC Seq. Name :HRWLCLR2 (LCL SVM Recovery) LCL SVM Recovery after trip-off protection activation</p> <p>TimeTag Type: N Sub Schedule ID: <input type="checkbox"/></p>				
52		If Switch LCL13 OFF		Next Step: yes 53 no 54
53		Switch LCL13 OFF		Next Step: 54
		Execute Telecommand SwOff_GyroA_L13 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) GYRO A - switch LCL_13 off	DC13B170	
		Verify Telemetry GyroA_L13_S WM92A565	= OFF	AND=WALC1584
		Verify Telemetry GyroA_L13_I WM906565	>= 0.0 A <= 0.1 A	AND=WALC1584
54		If Switch LCL14 OFF		Next Step: yes 55 no 56

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
55		Switch LCL14 OFF		Next Step: 56
		Execute Telecommand SwOff_GyroB_L14 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) GYRO B - switch LCL_14 off	DC14B170	
		Verify Telemetry GyroB_L14_S WM22A565	= OFF	AND=WALC1584
		Verify Telemetry Gyro_B_L14_I WM206565	>= 0.0 A <= 0.1 A	AND=WALC1584
56		If Switch LCL15 OFF		Next Step: yes 57 no 58
57		Switch LCL15 OFF		Next Step: 58
		Execute Telecommand SwOff_Crs1_L15 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) CRS1 - switch LCL_15 off	DC15B170	
		Verify Telemetry CRS1_L15_S WM22C565	= OFF	AND=WALC1584
		Verify Telemetry CRS1_L15_I WM208565	>= 0.0 A < 0.1 A	AND=WALC1584
58		If Switch LCL17 OFF		Next Step: yes 59 no 60
59		Switch LCL17 OFF		Next Step: 60

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SwOff_CBH_N_L17 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) Cat Bed Heaters Nom switch LCL_17 off	DC17B170	
		Verify Telemetry CBH_N_L17_S WMA2H565	= OFF	AND=WALC1584
		Verify Telemetry CBH_N_L17_I WMA13565	>= 0.0 A <= 0.1 A	AND=WALC1584
60		If Switch LCL18 OFF		Next Step: yes 61 no 62
61		Switch LCL18 OFF		Next Step: 62
		Execute Telecommand SwOff_CBH_R_L18 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) Cat Bed Heaters Red switch LCL_18 off	DC18B170	
		Verify Telemetry CBH_R_L18_S WM12H565	= OFF	AND=WALC1584
		Verify Telemetry CBH_R_L18_I WM113565	>= 0.0 A <= 0.1 A	AND=WALC1584
62		If Switch LCL21 OFF		Next Step: yes 63 no 64
63		Switch LCL21 OFF		Next Step: 64
		Execute Telecommand SwOff_Str_1_L21 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) STR 1 - switch LCL_21 off	DC21B170	

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry STR_1_L21_S WMA2C565	= OFF	AND=WALC1584
		Verify Telemetry STR_1_L21_I WMA08565	>= 0.0 A <= 0.1 A	AND=WALC1584
64		If Switch LCL22 OFF		Next Step: yes 65 no 66
65		Switch LCL22 OFF		Next Step: 66
		Execute Telecommand SwOff_Str_2_L22 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) STR 2 - switch LCL_22 off	DC22B170	
		Verify Telemetry STR_2_L22_S WM12C565	= OFF	AND=WALC1584
		Verify Telemetry STR_2_L22_I WM108565	>= 0.0 A <= 0.1 A	AND=WALC1584
66		If Switch LCL24 OFF		Next Step: yes 67 no 68
67		Switch LCL24 OFF		Next Step: 68
		Execute Telecommand SwOff_Crs2_L24 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) CRS2 - switch LCL_24 off	DC24B170	
		Verify Telemetry CRS2_L24_S WMA2D565	= OFF	AND=WALC1584
		Verify Telemetry CRS2_L24_I WMA09565	>= 0.0 A <= 0.1 A	AND=WALC1584

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
68		If Switch OPLCL45 OFF		Next Step: yes 69 no 70
69		Switch OPLCL45 OFF		Next Step: 70
		Execute Telecommand SwOff_AccRCSthrA_L45 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) ACC RCS Thrusters A switch LCL_45 off	DC45B170	
		Verify Telemetry RcsThrsA_L45_1S WM22D565	= OFF	AND=WALC2584
		Verify Telemetry RcsThrsA_L45_2S WM22J565	= OFF	AND=WALC2584
		Verify Telemetry RcsThrsA_L45_I WM209565	>= 0.0 A <= 0.1 A	AND=WALC2584
70		If Switch OPLCL46 OFF		Next Step: yes 71 no 72
71		Switch OPLCL46 OFF		Next Step: 72
		Execute Telecommand SwOff_AccRCSthrB_L46 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) ACC RCS Thrusters B switch LCL_46 off	DC46B170	
		Verify Telemetry RcsThrsB_L46_1S WM92D565	= OFF	AND=WALC2584
		Verify Telemetry RcsThrsB_L46_2S WM92J565	= OFF	AND=WALC2584
		Verify Telemetry RcsThrsB_L46_I WM909565	>= 0.0 A <= 0.1 A	AND=WALC2584
72		If Switch OPLCL47 OFF		Next Step: yes 73 no 74

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
73		Switch OPLCL47 OFF		Next Step: 74
		Execute Telecommand SwOff_AccLvA_L47 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) ACC RCS LV A - switch LCL_47 off	DC47B170	
		Verify Telemetry RcsLvA_L47_1S WM12E565	= OFF	AND=WALC2584
		Verify Telemetry AccLvA_L47_2S WM12J565	= OFF	AND=WALC2584
		Verify Telemetry AccLvA_L47_I WM110565	>= 0.0 A <= 0.1 A	AND=WALC2584
74		If Switch OPLCL48 OFF		Next Step: yes 75 no 76
75		Switch OPLCL48 OFF		Next Step: 76
		Execute Telecommand SwOff_AccLvB_L48 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) ACC RCS LV B - switch LCL_48 off	DC48B170	
		Verify Telemetry AccLvB_L48_1S WMA2E565	= OFF	AND=WALC2584
		Verify Telemetry AccLvB_L48_2S WMA2J565	= OFF	AND=WALC2584
		Verify Telemetry AccLvB_L48_I WMA10565	>= 0.0 A <= 0.1 A	AND=WALC2584
76		If Switch OPLCL55 OFF		Next Step: yes 77 no 78
77		Switch OPLCL55 OFF		Next Step: 78

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <div style="text-align: right;">SwOff_Rwl_1_L55</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) Reaction Wheel 1 - switch LCL_55 off	DC55B170	
		Verify Telemetry <div style="text-align: right;">Rwl_1_L55_1S WM22F565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">Rwl_1_L55_2S WM22L565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">Rwl_1_L55_I WM211565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
78		If Switch OPLCL56 OFF		Next Step: yes 79 no 80
79		Switch OPLCL56 OFF		Next Step: 80
		Execute Telecommand <div style="text-align: right;">SwOff_Rwl_2_L56</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) Reaction Wheel 2 - switch LCL_56 off	DC56B170	
		Verify Telemetry <div style="text-align: right;">Rwl_2_L56_1S WM92F565</div>		AND=WALC3584
		Verify Telemetry <div style="text-align: right;">Rwl_2_L56_2S WM92L565</div>	= OFF	AND=WALC3584
		Verify Telemetry <div style="text-align: right;">Rwl_2_L56_I WM911565</div>	>= 0.0 A <= 0.1 A	AND=WALC3584
80		If Switch OPLCL57 OFF		Next Step: yes 81 no 82
81		Switch OPLCL57 OFF		Next Step: 82

LCL Recovery after trip-off
 File: H_CRP_EPS_LCLR.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SwOff_Rwl_3_L57 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) Reaction Wheel 3 - switch LCL_57 off GBM IL DSE --Y -- --	DC57B170	
		Verify Telemetry Rwl_3_L57_1S WM12F565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_3_L57_2S WM12K565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_3_L57_I WM111565	>= 0.0 A <= 0.1 A	AND=WALC3584
82		If Switch OPLCL58 OFF		Next Step: yes 83 no END
83		Switch OPLCL58 OFF		Next Step: END
		Execute Telecommand SwOff_Rwl_4_L58 TC Control Flags : Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,3) Reaction Wheel 4 - switch LCL_58 off GBM IL DSE --Y -- --	DC58B170	
		Verify Telemetry Rwl_4_L58_1S WMA2F565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_4_L58_2S WMA2K565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_4_L58_I WMA11565	>= 0.0 A <= 0.1 A	AND=WALC3584
End of Procedure				