

Manual LPU switch OFF
 File: H_LEO_SYS_LL0.xls
 Author: E. Picallo



Procedure Summary

Objectives

This procedure describes the steps to perform the manual LPU switch OFF .

During the launcher sequence, one launch lock is installed on Spire to avoid instrument vibration. After the separation, the ground have to disable this Spire Launch Lock.

Summary of Constraints

The LCL 25 and 26 are switched OFF through ASW TCs(8,4,112,3); thus the status of the ASW function "PCDU Management" has to be "running".

For temperatures reasons, the Spire launch lock shall be done at the beginning of the LEOP sequence.

Spacecraft Configuration

Start of Procedure

CDMU in default configuration;
 LPU nominal Activated
 LPU redundant Activated

End of Procedure

CDMU in default configuration;
 LPU nominal De-activated
 LPU redundant De-activated

Reference File(s)

Input Command Sequences

Output Command Sequences

HLYLL0

Referenced Displays

ANDs **GRDs** **SLDs**
 ZAZ9M999

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
04/08/08	1	1	Created	E. Picallo	
21/10/08		2	Display mode update	E. Picallo	
03/11/08	2	3	Disable P DTM SPIRE Launch Lock PKT deleted	E. Picallo	
18/02/09	2.1	4	Check Spire L1 Temperature added	E. Picallo	
25/03/09		5	Nominal LCL 25 and 26 current values (130-180mA) updated	E. Picallo	
25/03/09	2.2	5.01	Validation : comment on automatic Spire LL switch off (TBC) deleted	E. Picallo	

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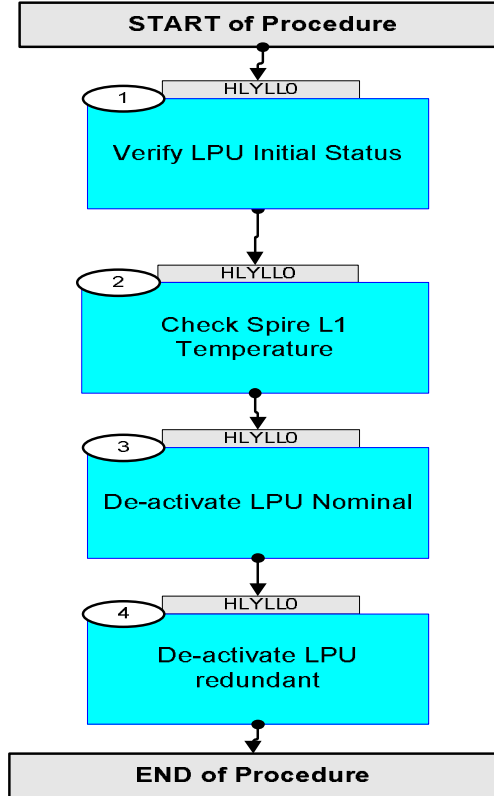


30/03/09	2.3	6	First send HLC #5/#21 and then switch LCL 25/26 OFF	E. Picallo	
05/05/09	2.4	7	AND reference updated	E. Picallo	

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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 : HLYLLO (Manual LPU switchOFF)				
TimeTag Type: N				
Sub Schedule ID:				
□				
1		Verify LPU Initial Status		Next Step: 2
1.1		Verify LPU Nominal Status		□
		Verify Telemetry SpireLL_N_L25_S WM12B565	= ON	AND=ZAZ9M999
		Verify Telemetry SpireLL_N_L25_I WM107565	>= 0.13 A <= 0.18 A	AND=ZAZ9M999
1.2		Verify LPU Redundant Status		□
		Verify Telemetry SpireLL_R_L26_S WMA2B565	= ON	AND=ZAZ9M999
		Verify Telemetry SpireLL_R_L26_I WMA07565	>= 0.13 A <= 0.18 A	AND=ZAZ9M999
2		Check Spire L1 Temperature		Next Step: 3
		Verify L1; ON Ventline upstream cooling strap to "Spire Optical Bench" T3-3 (B)		
		Verify Telemetry C100_3_T236 KD211302	<= 11.0 K >= 7.0 K	AND=ZAZ9M999
3		De-activate LPU Nominal		Next Step: 4
3.1		Send HLC to Disable Spire Launch Lock Nominal		□

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SpireLaunchLockDis_Nom <i>TC Control Flags :</i> GBM IL DSE --Y -- -- <i>Subsch. ID : 10</i> Det. descr. : SPIRE Launch Lock Disable Nominal - High Level	DCH06170	
3.2		Verify LCL 25 status		<input type="checkbox"/>
		Verify Telemetry SpireLL_N_L25_S WM12B565	= ON	AND=ZAZ9M999
		Verify Telemetry SpireLL_N_L25_I WM107565	>= 0.000 A <= 0.100 A	AND=ZAZ9M999
3.3		Switch LCL 25 OFF		<input type="checkbox"/>
		Execute Telecommand SwOff_SpireLLock_N_L25 <i>TC Control Flags :</i> GBM IL DSE --Y -- -- <i>Subsch. ID : 10</i> Det. descr. : PCDU: TC(8,4,112,3) SPIRE Launch Lock Nominal-switch LCL_25 off	DC25B170	
3.4		Verify LCL 25 status		<input type="checkbox"/>
		Verify Telemetry SpireLL_N_L25_S WM12B565	= OFF	AND=ZAZ9M999
		Verify Telemetry SpireLL_N_L25_I WM107565	>= 0.000 A <= 0.100 A	AND=ZAZ9M999
4		De-activate LPU redundant		Next Step: END
4.1		Send HLC to disable Spire Launch Lock Red		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand SpireLaunchLockDis_Red <i>TC Control Flags :</i> GBM IL DSE --Y -- -- <i>Subsch. ID : 10</i> Det. descr. : SPIRE Launch Lock Disable Redundant - High Level	DCH22170	
4.2		Verify LCL 26 status		<input type="checkbox"/>
		Verify Telemetry SpireLL_R_L26_S WMA2B565	= ON	AND=ZAZ9M999
		Verify Telemetry SpireLL_R_L26_I WMA07565	>= 0.000 A <= 0.100 A	AND=ZAZ9M999
4.3		Switch LCL 26 OFF		<input type="checkbox"/>
		Execute Telecommand SwOff_SpireLLock_R_L26 <i>TC Control Flags :</i> GBM IL DSE --Y -- -- <i>Subsch. ID : 10</i> Det. descr. : PCDU: TC(8,4,112,3) SPIRE Launch Lock Red. -switch LCL_26 off	DC26B170	
4.4		Verify LCL 26 status		<input type="checkbox"/>
		Verify Telemetry SpireLL_R_L26_S WMA2B565	= OFF	AND=ZAZ9M999
		Verify Telemetry SpireLL_R_L26_I WMA07565	>= 0.000 A <= 0.100 A	AND=ZAZ9M999
End of Procedure				