

Reaction Weels LCLs Close
 File: H_LEO_EPS_RWL.xls
 Author: E. Picallo



Procedure Summary

Objectives

This procedure describes the steps needed to close the four OP-LCLs dedicated to the Reaction Weels (Not performed at Launch Pad)

The Reaction Weels OP-LCLs shall be closed by Ground during the first visibility period.

Summary of Constraints

The Reaction Weels OP-LCLs are switched ON through ASW TCs(8,4,112,5); thus the status of the ASW function "PCDU Management" has to be "running".

Spacecraft Configuration

Start of Procedure

CDMU in default configuration;
 OP-LCL 55/56/57/58 Open
 RWL 1/2/3/4 power OFF

End of Procedure

CDMU in default configuration;
 OP-LCL 55/56/57/58 Close

Reference File(s)

Input Command Sequences

Output Command Sequences

HLWRW1

Referenced Displays

ANDs **GRDs** **SLDs**
 WALC3584
 ZAZ9J999

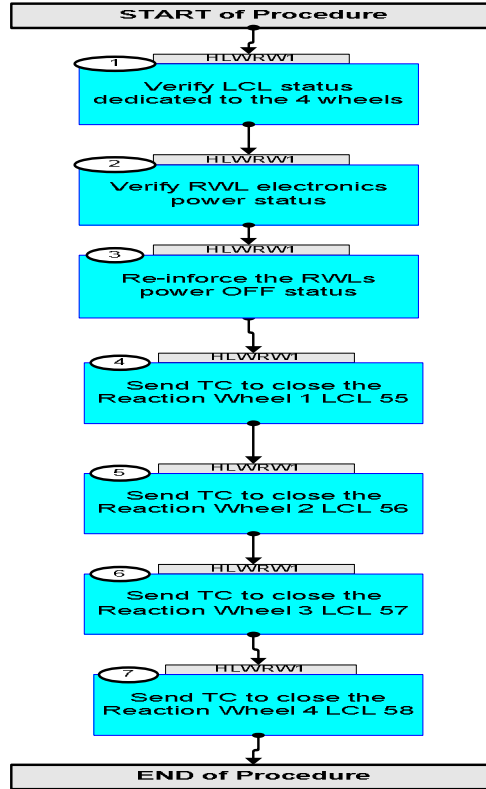
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
24/07/08	1	1	Created	E. Picallo	
21/10/08	2	2	Display mode update	E. Picallo	
24/02/09	2.1	3	RWL LCLs status precondition added	E. Picallo	
31/03/09		4	Verification of RWLs power TM parameters added Constrain on RWL switch LCLS added	E. Picallo	
07/04/09	2.3	5	Re-infoce of RWL power OFF status by TCs(8,1/4) added	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 :HLWRW1 (Rws LCLs Close) Reaction Wheels 1, 2, 3 and 4 (LCL 55, 56, 57 and 58) Close TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
1		Verify LCL status dedicated to the 4 wheels		Next Step: 2
		Verify Telemetry Rwl_1_L55_1S WM22F565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_1_L55_I WM211565	>= 0.0 A <= 0.1 A	AND=WALC3584
		Verify Telemetry Rwl_2_L56_1S WM92F565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_2_L56_I WM911565	>= 0.0 A <= 0.1 A	AND=WALC3584
		Verify Telemetry Rwl_3_L57_1S WM12F565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_3_L57_I WM111565	>= 0.0 A <= 0.1 A	AND=WALC3584
		Verify Telemetry Rwl_4_L58_1S WMA2F565	= OFF	AND=WALC3584
		Verify Telemetry Rwl_4_L58_I WMA11565	>= 0.0 A <= 0.1 A	AND=WALC3584
2		Verify RWL electronics power status		Next Step: 3
		Verify Telemetry RWL1 power AE4P3002	= OFF	AND=ZAZ9J999
		Verify Telemetry RWL2 power AE4P4002	= OFF	AND=ZAZ9J999
		Verify Telemetry RWL3 power AE4P5002	= OFF	AND=ZAZ9J999
		Verify Telemetry RWL4 power AE4P6002	= OFF	AND=ZAZ9J999
3		Re-inforce the RWLs power OFF status		Next Step: 4

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
3.1		RWL1 switch OFF		<input type="checkbox"/>
		Execute Telecommand <p style="text-align: right;">RWL-1 OFF</p> ACZ49109 Command Parameter(s) : UnitSw DF86 Cmd AH8F1001 Enable 86 UnitSw DD86 Cmd AH8F2001 Enable 86 TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- ---</p> Subsch. ID : 20 Det. descr. : TC(8,1) Switch ACMS unit on/off - RWL-1 OFF		
		Execute Telecommand <p style="text-align: right;">FireSwitchACMSunitONOFF</p> ACZ1M109 Command Parameter(s) : FireFun DF86Cmd AH8F1001 Enable 86 FireFun DD86Cmd AH8F2001 Enable 86 TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- ---</p> Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - FireSwitchACMSunitONOFF		
3.2		Verify RWL1 power status		<input type="checkbox"/>
		Verify Telemetry <p style="text-align: right;">Rwl_1_L55_1S WM22F565</p> = OFF AND=WALC3584		
		Verify Telemetry <p style="text-align: right;">RWL1 power AE4P3002</p> = OFF AND=ZAZ9J999		
		Verify Telemetry <p style="text-align: right;">Rwl_1_L55_I WM211565</p> >= 0.0 A <= 0.1 A AND=WALC3584		
3.3		RWL2 switch OFF		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand RWL-2 OFF <i>Command Parameter(s) :</i> UnitSw DF86 Cmd AH8P1001 UnitSw DD86 Cmd AH8P2001 <i>TC Control Flags :</i> GBM IL DSE --Y -- --- <i>Subsch. ID : 20</i> Det. descr. : TC(8,1) Switch ACMS unit on/off - RWL-2 OFF	ACZ51109 Enable 86 Enable 86	
		Execute Telecommand FireSwitchACMSunitONOFF <i>Command Parameter(s) :</i> FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 <i>TC Control Flags :</i> GBM IL DSE --Y -- --- <i>Subsch. ID : 20</i> Det. descr. : TC(8,4) Fire Command - FireSwitchACMSunitONOFF	ACZ1M109 Enable 86 Enable 86	
3.4		Verify RWL2 power status		<input type="checkbox"/>
		Verify Telemetry Rwl_2_L56_1S WM92F565	= OFF	AND=WALC3584
		Verify Telemetry RWL2 power AE4P4002	= OFF	AND=ZAZ9J999
		Verify Telemetry Rwl_2_L56_I WM911565	>= 0.0 A <= 0.1 A	AND=WALC3584
3.5		RWL3 switch OFF		<input type="checkbox"/>
		Execute Telecommand RWL-3 OFF <i>Command Parameter(s) :</i> UnitSw DF86 Cmd AH8P1001 UnitSw DD86 Cmd AH8P2001 <i>TC Control Flags :</i> GBM IL DSE --Y -- --- <i>Subsch. ID : 20</i> Det. descr. : TC(8,1) Switch ACMS unit on/off - RWL-3 OFF	ACZ53109 Enable 86 Enable 86	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <p style="text-align: right;">FireSwitchACMSunitONOFF</p> Command Parameter(s) : FireFun DF86Cmd AH8F1001 Enable 86 FireFun DD86Cmd AH8F2001 Enable 86 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - FireSwitchACMSunitONOFF	ACZ1M109	
3.6		Verify RWL3 power status		<input type="checkbox"/>
		Verify Telemetry <p style="text-align: right;">Rwl_3_L57_1S WM12F565</p>	= OFF	AND=WALC3584
		Verify Telemetry <p style="text-align: right;">RWL3 power AE4P5002</p>	= OFF	AND=ZAZ9J999
		Verify Telemetry <p style="text-align: right;">Rwl_3_L57_I WM111565</p>	>= 0.0 A <= 0.1 A	AND=WALC3584
3.7		RWL4 switch OFF		<input type="checkbox"/>
		Execute Telecommand <p style="text-align: right;">RWL-4 OFF</p> Command Parameter(s) : UnitSw DF86 Cmd AH8P1001 Enable 86 UnitSw DD86 Cmd AH8P2001 Enable 86 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) Switch ACMS unit on/off - RWL-4 OFF	ACZ55109	
		Execute Telecommand <p style="text-align: right;">FireSwitchACMSunitONOFF</p> Command Parameter(s) : FireFun DF86Cmd AH8F1001 Enable 86 FireFun DD86Cmd AH8F2001 Enable 86 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - FireSwitchACMSunitONOFF	ACZ1M109	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
3.8		Verify RWL4 power status		<input type="checkbox"/>
		Verify Telemetry Rwl_4_L58_1S WMA2F565	= OFF	AND=WALC3584
		Verify Telemetry RWL4 power AE4P6002	= OFF	AND=ZAZ9J999
		Verify Telemetry Rwl_4_L58_I WMA11565	>= 0.0 A <= 0.1 A	AND=WALC3584
4		Send TC to close the Reaction Wheel 1 LCL 55		Next Step: 5
		Execute Telecommand SwOn_Rwl_1_L55 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) Reaction Wheel 1 - switch LCL_55 on	DC55D170	
		Verify Telemetry Rwl_1_L55_1S WM22F565	= ON	AND=WALC3584
		Verify Telemetry Rwl_1_L55_2S WM22L565	= ON	AND=WALC3584
		Verify Telemetry RWL1 power AE4P3002	= OFF	AND=ZAZ9J999
		Verify Telemetry Rwl_1_L55_I WM211565	>= 0.0 A <= 0.1 A	AND=WALC3584
5		Send TC to close the Reaction Wheel 2 LCL 56		Next Step: 6
		Execute Telecommand SwOn_Rwl_2_L56 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) Reaction Wheel 2 - switch LCL_56 on	DC56D170	
		Verify Telemetry Rwl_2_L56_1S WM92F565	= ON	AND=WALC3584
		Verify Telemetry Rwl_2_L56_2S WM92L565	= ON	AND=WALC3584

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RWL2 power AE4P4002	= OFF	AND=ZAZ9J999
		Verify Telemetry Rwl_2_L56_I WM911565	>= 0.0 A <= 0.1 A	AND=WALC3584
6		Send TC to close the Reaction Wheel 3 LCL 57		Next Step: 7
		Execute Telecommand SwOn_Rwl_3_L57 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) Reaction Wheel 3 - switch LCL_57 on	DC57D170	
		Verify Telemetry Rwl_3_L57_1S WM12F565	= ON	AND=WALC3584
		Verify Telemetry Rwl_3_L57_2S WM12K565	= ON	AND=WALC3584
		Verify Telemetry RWL3 power AE4P5002	= OFF	AND=ZAZ9J999
		Verify Telemetry Rwl_3_L57_I WM111565	>= 0.0 A <= 0.1 A	AND=WALC3584
7		Send TC to close the Reaction Wheel 4 LCL 58		Next Step: END
		Execute Telecommand SwOn_Rwl_4_L58 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) Reaction Wheel 4 - switch LCL_58 on	DC58D170	
		Verify Telemetry Rwl_4_L58_1S WMA2F565	= ON	AND=WALC3584
		Verify Telemetry Rwl_4_L58_2S WMA2K565	= ON	AND=WALC3584
		Verify Telemetry RWL4 power AE4P6002	= OFF	AND=ZAZ9J999
		Verify Telemetry Rwl_4_L58_I WMA11565	>= 0.0 A <= 0.1 A	AND=WALC3584

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