

Check Survival mode configuration
 File: H_CRP_DHS_3044.xls
 Author: S. Manganelli



Procedure Summary

Objectives

This procedure describes the steps needed to check the S/C status in Survival mode.

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

n/a

End of Procedure

n/a

Reference File(s)

Input Command Sequences

Output Command Sequences

HRD3044

Referenced Displays

ANDs	GRDs	SLDs
ZAZAI999		(None)
ZAZAF999		
ZAZAP999		
ZAD11999		
ZAZAA999		
ZAD07999		
ZAZA0999		
ZAZAH999		
ZAD01999		

Configuration Control Information

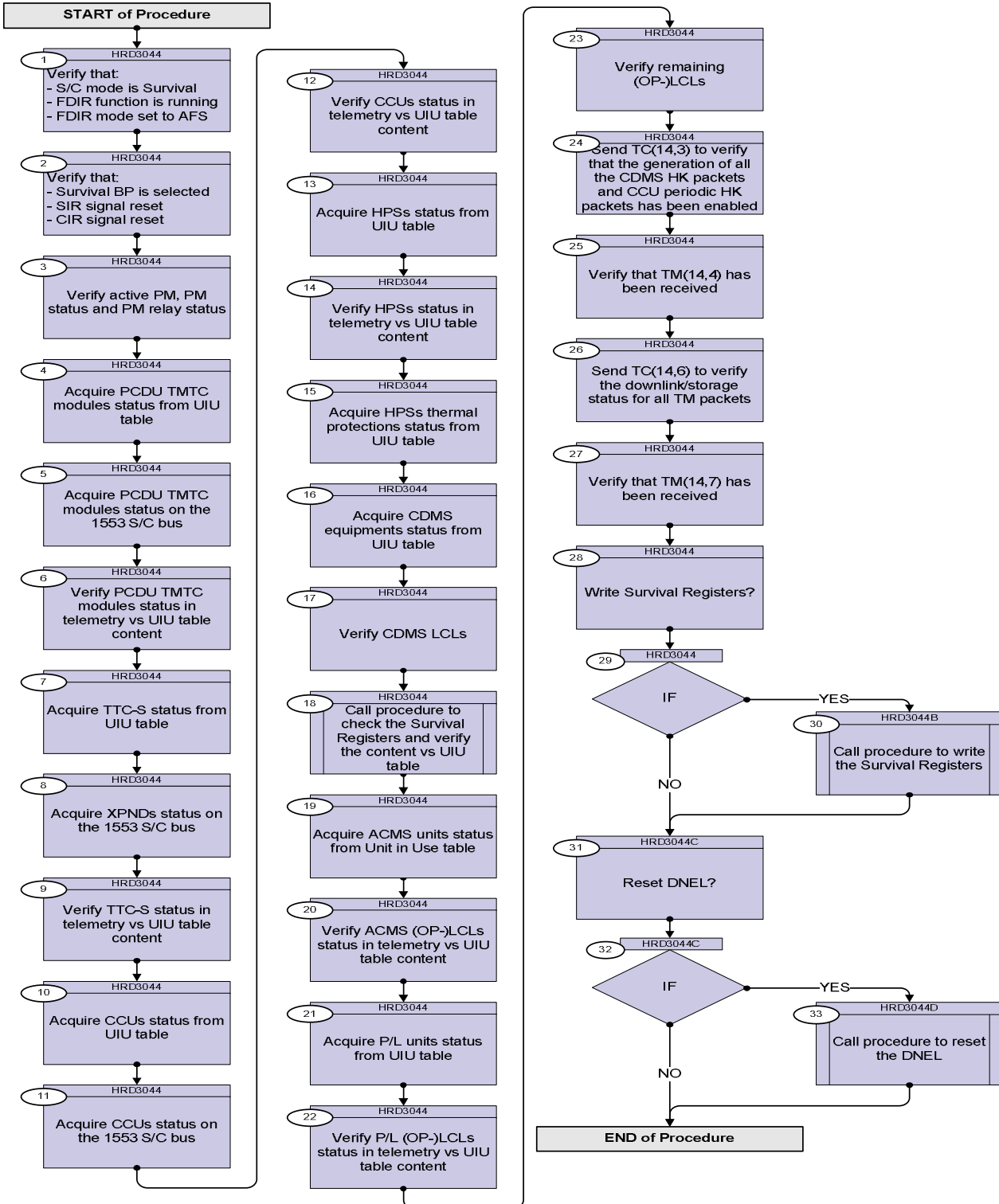
DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
28/01/08	1	1	Created	cmevi-hp	
02/01/09		2	Updated for OBSW 3_6 and corrected DNEL procedure call	S. Manganelli	
12/01/09	2	3	Updated for OBSW 3_8	S. Manganelli	
03/07/09	2.5	4	Following TAS inputs due to ASW update (XPONDER LCL always ON)	S. Manganelli	

Status : Version 4 - Unchanged
 Last Checkin: 03/07/09

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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 :HRD3044 (Check Survival conf)				
TimeTag Type: N Sub Schedule ID: □				
1		Verify that: - S/C mode is Survival - FDIR function is running - FDIR mode set to AFS		Next Step: 2
		Verify Telemetry CurrentMode DEL34170	= Survival	AND=ZAZAI999
		Verify Telemetry FdirSts DEG23170	= Running	AND=ZAZAI999
		Verify Telemetry FdirMode DE81D170	= AFS	AND=ZAZAI999
2		Verify that: - Survival BP is selected - SIR signal reset - CIR signal reset		Next Step: 3
		Verify Telemetry BSW_SDB_ActProf DEF5F160		AND=ZAZAF999
		Verify Telemetry SIR_N DEK28160	= No	AND=ZAZAP999
		Verify Telemetry CIR_N DEK18160	= No	AND=ZAZAP999
3		Verify active PM, PM status and PM relay status		Next Step: 4
		Expected configuration: Active PM= "B"		
		Verify Telemetry Active_PM_Board DEDM1160		AND=ZAD11999
		Expected configuration: - ColdSts_A_fromA/B="OFF" - ColdSts_B_fromA/B="ON"		
		Verify Telemetry ColdSts_A_fromA DEE81160		AND=ZAZAA999
		Verify Telemetry ColdSts_A_fromB DEE82160		AND=ZAZAA999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry ColdSts_B_fromA DEE83160		AND=ZAZAA999
		Verify Telemetry ColdSts_B_fromB DEE84160		AND=ZAZAA999
		Expected configuration: - PM B bit 0=PM B in Survival Mode (Set) - PM A bit 0=don't care (PM A OFF)		
		Verify Telemetry PMA_R0_TTR-RM_A DEEX1160		AND=ZAD07999
		Verify Telemetry PMB_R0_TTR-RM_B DEEX3160		AND=ZAD07999
4		Acquire PCDU TMTC modules status from UIU table		Next Step: 5
		Expected configuration: <u>PCDU 1:</u> - Fail="Not failed" - Functional="OFF" - Logical="Redundant" - Use="Not in use" <u>PCDU 2:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"		
		Verify Telemetry PcdulFailSts DEN02170		AND=ZAZA0999
		Verify Telemetry PcdulFuncSts DEG03170		AND=ZAZA0999
		Verify Telemetry PcdulLogSts DEN01170		AND=ZAZA0999
		Verify Telemetry PcdulUse DEN00170		AND=ZAZA0999
		Verify Telemetry Pcd2FuncSts DEG02170		AND=ZAZA0999
		Verify Telemetry Pcd2FailSts DEN05170		AND=ZAZA0999
		Verify Telemetry Pcd2LogSts DEN04170		AND=ZAZA0999
		Verify Telemetry Pcd2Use DEN03170		AND=ZAZA0999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
5		Acquire PCDU TMTC modules status on the 1553 S/C bus		Next Step: 6
		Expected configuration: <u>PCDU A: "OFF" and "Invalid"</u> <u>PCDU B: "ON" and "Valid"</u> <u>PCDU No Re RTA: "Redundant"</u>		
		Verify Telemetry PCDUA_On_Off DEFAG160		AND=ZAZAH999
		Verify Telemetry PCDUA_Val_Inval DEFAK160		AND=ZAZAH999
		Verify Telemetry PCDUB_On_Off DEFB1160		AND=ZAZAH999
		Verify Telemetry PCDUB_Val_Inval DEFB5160		AND=ZAZAH999
		Verify Telemetry PCDU_No_Re_RTA DEFDM160		AND=ZAZAH999
6		Verify PCDU TMTC modules status in telemetry vs UIU table content		Next Step: 7
		Expected configuration: <u>M1 N/R: "OFF"</u> <u>M2 N/R: "ON"</u>		
		Verify Telemetry PCDU_1553_M1_N WMB02565		AND=ZAD01999
		Verify Telemetry PCDU_1553_M1_R WMB04565		(None)
		Verify Telemetry PCDU_1553_M2_N WMB03565		(None)
		Verify Telemetry PCDU_1553_M2_R WMB05565		(None)
7		Acquire TTC-S status from UIU table		Next Step: 8
		<u>RFDN switches</u>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Expected configuration: SW 1: - Fail="Not failed" - Functional="OFF" - Logical="Nominal" - Use="In use" SW 2: - Fail="Not failed" - Functional="ON" - Logical="Redundant" - Use="Not in use"		
		SW 3: Fail="Not failed" Functional="ON" Logical="Nominal" Use="In use" SW 4: Fail="Not failed" Functional="ON" Logical="Redundant" Use="Not in use"		
		Verify Telemetry <div style="text-align: right;">Rfdn1FailSts DEH48170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn1FuncSts DEH49170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn1LogSts DEH50170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn1Use DEH51170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn2FailSts DEH52170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn2FuncSts DEH53170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn2LogSts DEH54170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn2Use DEH55170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn3FailSts DEH56170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn3FuncSts DEH57170</div>		(None)
		Verify Telemetry <div style="text-align: right;">Rfdn3LogSts DEH58170</div>		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Rfdn3Use DEH59170		(None)
		Verify Telemetry Rfdn4FailSts DEH60170		(None)
		Verify Telemetry Rfdn4FuncSts DEH61170		(None)
		Verify Telemetry Rfdn4LogSts DEH62170		(None)
		Verify Telemetry Rfdn4Use DEH63170		(None)
		<u>XPND 1/2 Transmitter and TWT Assembly 1/2</u>		
		<p>Expected configuration:</p> <p><u>XPND1:</u> - Fail="Not failed" - Functional="OFF" - Logical="Redundant" - Use="Not in use"</p> <p><u>XPND2:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"</p>		
		<p><u>TWTA1:</u> - Fail="Not failed" - Functional="OFF" - Logical="Redundant" - Use="Not in use"</p> <p><u>TWTA2:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"</p>		
		Verify Telemetry XpndTx1FailSts DEL26170		(None)
		Verify Telemetry XpndTx1FuncSts DEL27170		(None)
		Verify Telemetry XpndTx1LogSts DEL28170		(None)
		Verify Telemetry XpndTx1Use DEL29170		(None)
		Verify Telemetry XpndTx2FailSts DEL30170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry XpndTx2FuncSts DEL31170		(None)
		Verify Telemetry XpndTx2LogSts DEL32170		(None)
		Verify Telemetry XpndTx2Use DEL33170		(None)
		Verify Telemetry TwtalFailSts DEL18170		(None)
		Verify Telemetry TwtalFuncSts DEL19170		(None)
		Verify Telemetry TwtalLogSts DEL20170		(None)
		Verify Telemetry TwtalUse DEL21170		(None)
		Verify Telemetry Twtal2FailSts DEL22170		(None)
		Verify Telemetry Twtal2FuncSts DEL23170		(None)
		Verify Telemetry Twtal2LogSts DEL24170		(None)
		Verify Telemetry Twtal2Use DEL25170		(None)
		<u>EPC 1/2 and TWT Amplifier 1/2</u>		
		Expected configuration: <u>EPC1:</u> - Fail="Not failed" - Functional="OFF" - Logical="Redundant" - Use="Not in use" <u>EPC2:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		TWT1: - Fail="Not failed" - Functional="OFF" - Logical="Redundant" - Use="Not in use" TWT2: - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"		
		Verify Telemetry Epc1FailSts DEG24170		(None)
		Verify Telemetry Epc1FuncSts DEG25170		(None)
		Verify Telemetry Epc1LogSts DEG26170		(None)
		Verify Telemetry Epc1Use DEG27170		(None)
		Verify Telemetry Epc2FailSts DEG28170		(None)
		Verify Telemetry Epc2FuncSts DEG29170		(None)
		Verify Telemetry Epc2LogSts DEG30170		(None)
		Verify Telemetry Epc2Use DEG31170		(None)
		Verify Telemetry TwtAmp1FailSts DEH12170		(None)
		Verify Telemetry TwtAmp1FuncSts DEH13170		(None)
		Verify Telemetry TwtAmp1LogSts DEH14170		(None)
		Verify Telemetry TwtAmp1Use DEH15170		(None)
		Verify Telemetry TwtAmp2FailSts DEH16170		(None)
		Verify Telemetry TwtAmp2FuncSts DEH17170		(None)
		Verify Telemetry TwtAmp2LogSts DEH18170		(None)
		Verify Telemetry TwtAmp2Use DEH19170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<u>XPND 1/2 RX</u>		
		Expected configuration: <u>RX1:</u> - Fail="Not failed" - Functional="ON" - Logical="Redundant" - Use="Not in use" <u>RX2:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"		
		Verify Telemetry XpndRx1FailSts DEL59170		(None)
		Verify Telemetry XpndRx1FuncSts DEL58170		(None)
		Verify Telemetry XpndRx1LogSts DEL57170		(None)
		Verify Telemetry XpndRx1Use DEL56170		(None)
		Verify Telemetry XpndRx2FailSts DEL63170		(None)
		Verify Telemetry XpndRx2FuncSts DEL62170		(None)
		Verify Telemetry XpndRx2LogSts DEL61170		(None)
		Verify Telemetry XpndRx2Use DEL60170		(None)
8		Acquire XPNDs status on the 1553 S/C bus		Next Step: 9
		Expected configuration: - <u>XPND1:</u> "OFF" and "Invalid" - <u>XPND2:</u> "ON" and "Valid"		
		Verify Telemetry XPND1On_Off DEF6G160		(None)
		Verify Telemetry XPND1Val_Inval DEF6K160		(None)
		Verify Telemetry XPND2On_Off DEFD1160		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry XPND2Val_Inval DEF5160		(None)
9		Verify TTC-S status in telemetry vs UIU table content		Next Step: 10
		<u>RFDN TMs</u>		
		Expected configuration: - <u>SW1</u> : "Pos A"=1 and "Pos B"=0 - <u>SW2</u> : "Pos A"=0 and "Pos B"=1 - <u>SW3</u> : "Pos A"=0 and "Pos B"=1 - <u>SW4</u> : "Pos A"=0 and "Pos B"=1		
		Verify Telemetry RFDN SW1 Pos A RMB05436		(None)
		Verify Telemetry RFDN SW1 Pos B RMB09436		(None)
		Verify Telemetry RFDN SW2 Pos A RMB06436		(None)
		Verify Telemetry RFDN SW2 Pos B RMB10436		(None)
		Verify Telemetry RFDN SW3 Pos A RMB07436		(None)
		Verify Telemetry RFDN SW3 Pos B RMB11436		(None)
		Verify Telemetry RFDN SW4 Pos A RMB08436		(None)
		Verify Telemetry RFDN SW4 Pos B RMB12436		(None)
		<u>TM Encoder (in use) and PCDU TMs</u>		
		Expected configuration: - <u>XPND1</u> LCL: "ON" - <u>TWTA1</u> OP-LCL: "OFF" - <u>XPND2</u> LCL: "ON" - <u>TWTA2</u> OP-LCL: "ON"		
		Verify Telemetry TME_BITRATE DEMRF160	= 500 bps	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Xpnd1Tx_L23_S WM12D565		(None)
		Verify Telemetry Twta_1_L49_1S WM22E565		(None)
		Verify Telemetry Twta_1_L49_2S WM22K565		(None)
		Verify Telemetry Xpnd2Tx_L16_S WM92C565		(None)
		Verify Telemetry Twta_2_L50_1S WM92E565		(None)
		Verify Telemetry Twta_2_L50_2S WM92K565		(None)
		<u>XPND1/2 1553 S/C bus TMs</u>		
		Expected configuration: <u>XPND1</u> is expected to have the same configuration as before transition to survival mode.		
		<u>XPND2:</u> <ul style="list-style-type: none"> - TM MI=1.2 - RNG MI=0.6 - LR1="ON" - LR2="OFF" - MR="OFF" - HR="OFF" - RNG="OFF" - CM="OFF" - ER="OFF" - Output Power Level="OFF" - Internal Bit Pattern Generator="OFF" 		
		Verify Telemetry X1 TM MD ID-TMI RMB33442		(None)
		Verify Telemetry X1 RNGMD ID-RMI RMB32442		(None)
		Verify Telemetry X1 LowRate-1 MD RMB30442		(None)
		Verify Telemetry X1 LowRate-2 MD RMB31442		(None)
		Verify Telemetry X1 MedRate-MRM RMB29442		(None)
		Verify Telemetry X1 HIRateMD-HRM RMB28442		(None)
		Verify Telemetry X1 Rang MOD-RM RMB27442		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry X1 Coher MOD-CM RMB26442		(None)
		Verify Telemetry X1 Ext Ref - ER RMB25442		(None)
		Verify Telemetry X1 OutPowLevSet RMB35442		(None)
		Verify Telemetry X1 IntBitPatGen RMB34442		(None)
		Verify Telemetry X2 TM MD ID-TMI RMB54442		(None)
		Verify Telemetry X2 RNGMD ID-RMI RMB53442		(None)
		Verify Telemetry X2 LowRate-1 MD RMB51442		(None)
		Verify Telemetry X2 LowRate-2 MD RMB52442		(None)
		Verify Telemetry X2 MedRate-MRM RMB50442		(None)
		Verify Telemetry X2 HIRateMD-HRM RMB49442		(None)
		Verify Telemetry X2 Rang MD - RM RMB48442		(None)
		Verify Telemetry X2 Coher MOD-CM RMB47442		(None)
		Verify Telemetry X2 Ext Ref - ER RMB46442		(None)
		Verify Telemetry X2 OutPowLevSet RMB56442		(None)
		Verify Telemetry X2 IntBitPatGen RMB55442		(None)
		<u>XPND1/2 analogue TMs</u>		
		Expected configuration: - <u>TX1</u> ="OFF" - <u>TX2</u> ="ON" - <u>RF Output Power</u> (for active TX)= -4 dBm		
		Verify Telemetry TX1 ON-OFF Stat RMB15442		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RX1 125-4K Stat RMB17442	= 125 bps	(None)
		Verify Telemetry XPD1_RF1_OUT_PW RMB13442		(None)
		Verify Telemetry TX2 ON-OFF Stat RMB16442		(None)
		Verify Telemetry RX2 125-4K Stat RMB18442	= 125 bps	(None)
		Verify Telemetry XPD2_RF2_OUT_PW RMB14442		(None)
		<u>TWTA1/2 TMs</u>		
		Expected configuration: - <u>EPC1</u> = "OFF" - <u>TWT1</u> = "OFF" - <u>EPC2</u> = "ON" - <u>TWT2</u> = "ON"		
		Verify Telemetry EPC1_ONOFF_STS RMB05439		(None)
		Verify Telemetry TWT1_ONOFF_STS RMB09439		(None)
		Verify Telemetry EPC2_ONOFF_STS RMB07439		(None)
		Verify Telemetry TWT2_ONOFF_STS RMB10439		(None)
10		Acquire CCUs status from UIU table		Next Step: 11
		Verify Telemetry CcuAFuncSts DEL97171	= On	(None)
		Verify Telemetry CcuBFuncSts DEL96171	= On	(None)
11		Acquire CCUs status on the 1553 S/C bus		Next Step: 12
		Verify Telemetry CCUA_OnOff DED3G161	= ON	(None)
		Verify Telemetry CCUA_ValidInval DED3K161	= Valid	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry CCUB_OnOff DED41161	= ON	(None)
		Verify Telemetry CCUB_ValidInval DED45161	= Valid	(None)
12		Verify CCUs status in telemetry vs UIU table content		Next Step: 13
		Verify Telemetry Ccu_A_L37_S WM12A565	= ON	(None)
		Verify Telemetry Ccu_B_L38_S WMA2A565	= ON	(None)
13		Acquire HPSs status from UIU table		Next Step: 14
		Expected configuration: <u>HPS from 1 to 9:</u> - Fail="Not failed" - Functional="OFF" - Logical="Redundant" - Use="Not in use" <u>HPS from 10 to 18:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"		
		Verify Telemetry Hps1FailSts DEG76170		(None)
		Verify Telemetry Hps1FuncSts DEG77170		(None)
		Verify Telemetry Hps1LogSts DEG78170		(None)
		Verify Telemetry Hps1Use DEG79170		(None)
		Verify Telemetry Hps2FailSts DEG80170		(None)
		Verify Telemetry Hps2FuncSts DEG81170		(None)
		Verify Telemetry Hps2LogSts DEG82170		(None)
		Verify Telemetry Hps2Use DEG83170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Hps3FailSts DEG84170		(None)
		Verify Telemetry Hps3FuncSts DEG85170		(None)
		Verify Telemetry Hps3LogSts DEG86170		(None)
		Verify Telemetry Hps3Use DEG87170		(None)
		Verify Telemetry Hps4FailSts DEG88170		(None)
		Verify Telemetry Hps4FuncSts DEG89170		(None)
		Verify Telemetry Hps4LogSts DEG90170		(None)
		Verify Telemetry Hps4Use DEG91170		(None)
		Verify Telemetry Hps5FailSts DEG92170		(None)
		Verify Telemetry Hps5FuncSts DEG93170		(None)
		Verify Telemetry Hps5LogSts DEG94170		(None)
		Verify Telemetry Hps5Use DEG95170		(None)
		Verify Telemetry Hps6FailSts DEG96170		(None)
		Verify Telemetry Hps6FuncSts DEG97170		(None)
		Verify Telemetry Hps6LogSts DEG98170		(None)
		Verify Telemetry Hps6Use DEG99170		(None)
		Verify Telemetry Hps7FailSts DEH00170		(None)
		Verify Telemetry Hps7FuncSts DEH01170		(None)
		Verify Telemetry Hps7LogSts DEH02170		(None)
		Verify Telemetry Hps7Use DEH03170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Hps8FailSts DEH04170		(None)
		Verify Telemetry Hps8FuncSts DEH05170		(None)
		Verify Telemetry Hps8LogSts DEH06170		(None)
		Verify Telemetry Hps8Use DEH07170		(None)
		Verify Telemetry Hps9FailSts DEH08170		(None)
		Verify Telemetry Hps9FuncSts DEH09170		(None)
		Verify Telemetry Hps9LogSts DEH10170		(None)
		Verify Telemetry Hps9Use DEH11170		(None)
		Verify Telemetry Hps10FailSts DEG40170		(None)
		Verify Telemetry Hps10FuncSts DEG41170		(None)
		Verify Telemetry Hps10LogSts DEG42170		(None)
		Verify Telemetry Hps10Use DEG43170		(None)
		Verify Telemetry Hps11FailSts DEG44170		(None)
		Verify Telemetry Hps11FuncSts DEG45170		(None)
		Verify Telemetry Hps11LogSts DEG46170		(None)
		Verify Telemetry Hps11Use DEG47170		(None)
		Verify Telemetry Hps12FailSts DEG48170		(None)
		Verify Telemetry Hps12FuncSts DEG49170		(None)
		Verify Telemetry Hps12LogSts DEG50170		(None)
		Verify Telemetry Hps12Use DEG51170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Hps13FailSts DEG52170		(None)
		Verify Telemetry Hps13FuncSts DEG53170		(None)
		Verify Telemetry Hps13LogSts DEG54170		(None)
		Verify Telemetry Hps13Use DEG55170		(None)
		Verify Telemetry Hps14FailSts DEG56170		(None)
		Verify Telemetry Hps14FuncSts DEG57170		(None)
		Verify Telemetry Hps14LogSts DEG58170		(None)
		Verify Telemetry Hps14Use DEG59170		(None)
		Verify Telemetry Hps15FailSts DEG60170		(None)
		Verify Telemetry Hps15FuncSts DEG61170		(None)
		Verify Telemetry Hps15LogSts DEG62170		(None)
		Verify Telemetry Hps15Use DEG63170		(None)
		Verify Telemetry Hps16FailSts DEG64170		(None)
		Verify Telemetry Hps16FuncSts DEG65170		(None)
		Verify Telemetry Hps16LogSts DEG66170		(None)
		Verify Telemetry Hps16Use DEG67170		(None)
		Verify Telemetry Hps17FailSts DEG68170		(None)
		Verify Telemetry Hps17FuncSts DEG69170		(None)
		Verify Telemetry Hps17LogSts DEG70170		(None)
		Verify Telemetry Hps17Use DEG71170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Hps18FailSts DEG72170		(None)
		Verify Telemetry Hps18FuncSts DEG73170		(None)
		Verify Telemetry Hps18LogSts DEG74170		(None)
		Verify Telemetry Hps18Use DEG75170		(None)
14		Verify HPSs status in telemetry vs UIU table content		Next Step: 15
		Expected configuration: <u>HPS from 1 to 9: "OFF"</u> <u>HPS from 10 to 18: "ON"</u>		
		Verify Telemetry GRP1_HPS_STS WM12G565		(None)
		Verify Telemetry GRP2_HPS_STS WM22G565		(None)
		Verify Telemetry GRP3_HPS_STS WM22H565		(None)
		Verify Telemetry GRP4_HPS_STS WM32G565		(None)
		Verify Telemetry GRP5_HPS_STS WM32H565		(None)
		Verify Telemetry GRP6_HPS_STS WM42G565		(None)
		Verify Telemetry GRP7_HPS_STS WM42H565		(None)
		Verify Telemetry GRP8_HPS_STS WM52G565		(None)
		Verify Telemetry GRP9_HPS_STS WM52H565		(None)
		Verify Telemetry GRP10_HPS_STS WM62G565		(None)
		Verify Telemetry GRP11_HPS_STS WM62H565		(None)
		Verify Telemetry GRP12_HPS_STS WM72G565		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry GRP13_HPS_STS WM72H565		(None)
		Verify Telemetry GRP14_HPS_STS WM82G565		(None)
		Verify Telemetry GRP15_HPS_STS WM82H565		(None)
		Verify Telemetry GRP16_HPS_STS WM92G565		(None)
		Verify Telemetry GRP17_HPS_STS WM92H565		(None)
		Verify Telemetry GRP18_HPS_STS WMA2G565		(None)
15		Acquire HPSS thermal protections status from UIU table		Next Step: 16
		Verify Telemetry Hgps1FuncSts DEN74170	= Off	(None)
		Verify Telemetry Hgps2FuncSts DEN75170	= Off	(None)
		Verify Telemetry Hgps3FuncSts DEN76170	= Off	(None)
		Verify Telemetry Hgps4FuncSts DEN77170	= Off	(None)
		Verify Telemetry Hgps5FuncSts DEN78170	= Off	(None)
		Verify Telemetry Hgps6FuncSts DEN79170	= Off	(None)
		Verify Telemetry Hgps7FuncSts DEN80170	= Off	(None)
		Verify Telemetry Hgps8FuncSts DEN81170	= Off	(None)
		Verify Telemetry Hgps9FuncSts DEN82170	= Off	(None)
		Verify Telemetry Hgps10FuncSts DEN83170	= Off	(None)
		Verify Telemetry Hgps11FuncSts DEN84170	= Off	(None)
		Verify Telemetry Hgps12FuncSts DEN85170	= Off	(None)
		Verify Telemetry Hgps13FuncSts DEN86170	= Off	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Hgps14FuncSts DEN87170	= Off	(None)
		Verify Telemetry Hgps15FuncSts DEN88170	= Off	(None)
		Verify Telemetry Hgps16FuncSts DEN89170	= Off	(None)
		Verify Telemetry Hgps17FuncSts DEN90170	= Off	(None)
		Verify Telemetry Hgps18FuncSts DEN91170	= Off	(None)
16		Acquire CDMS equipments status from UIU table		Next Step: 17
		Expected configuration: <u>Equipment A/1:</u> - Fail="Not failed" - Functional="ON" - Logical="Redundant" - Use="Not in use" <u>Equipment B/2:</u> - Fail="Not failed" - Functional="ON" - Logical="Nominal" - Use="In use"		
		<u>MTL buffer A/B</u>		
		Verify Telemetry Mtl1FailSts DEH88170		(None)
		Verify Telemetry Mtl1FuncSts DEH89170		(None)
		Verify Telemetry Mtl1LogSts DEH90170		(None)
		Verify Telemetry Mtl1Use DEH91170		(None)
		Verify Telemetry Mtl2FailSts DEH92170		(None)
		Verify Telemetry Mtl2FuncSts DEH93170		(None)
		Verify Telemetry Mtl2LogSts DEH94170		(None)
		Verify Telemetry Mtl2Use DEH95170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<u>SGM A/B</u>		
		Verify Telemetry Sgm1FailSts DEH72170		(None)
		Verify Telemetry Sgm1FuncSts DEH73170		(None)
		Verify Telemetry Sgm1LogSts DEH74170		(None)
		Verify Telemetry Sgm1Use DEH75170		(None)
		Verify Telemetry Sgm2FailSts DEH76170		(None)
		Verify Telemetry Sgm2FuncSts DEH77170		(None)
		Verify Telemetry Sgm2LogSts DEH78170		(None)
		Verify Telemetry Sgm2Use DEH79170		(None)
		<u>CPDU A/B</u>		
		Verify Telemetry Cpdu1FailSts DEG08170		(None)
		Verify Telemetry Cpdu1FuncSts DEG09170		(None)
		Verify Telemetry Cpdu1LogSts DEG10170		(None)
		Verify Telemetry Cpdu1Use DEG11170		(None)
		Verify Telemetry Cpdu2FailSts DEG12170		(None)
		Verify Telemetry Cpdu2FuncSts DEG13170		(None)
		Verify Telemetry Cpdu2LogSts DEG14170		(None)
		Verify Telemetry Cpdu2Use DEG15170		(None)
		<u>Survival Register 1/2</u>		
		Verify Telemetry SurvReg1FailSts DEH96170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry SurvReg1FuncSts DEH97170		(None)
		Verify Telemetry SurvReg1LogSts DEH98170		(None)
		Verify Telemetry SurvReg1Use DEH99170		(None)
		Verify Telemetry SurvReg2FailSts DEL00170		(None)
		Verify Telemetry SurvReg2FuncSts DEL01170		(None)
		Verify Telemetry SurvReg2LogSts DEL02170		(None)
		Verify Telemetry SurvReg2Use DEL03170		(None)
		<u>TTR TM A/B</u>		
		Verify Telemetry Ttr1FailSts DEL09170		(None)
		Verify Telemetry Ttr1FuncSts DEL10170		(None)
		Verify Telemetry Ttr1LogSts DEL11170		(None)
		Verify Telemetry Ttr1Use DEL12170		(None)
		Verify Telemetry Ttr2FailSts DEL13170		(None)
		Verify Telemetry Ttr2FuncSts DEL14170		(None)
		Verify Telemetry Ttr2LogSts DEL15170		(None)
		Verify Telemetry Ttr2Use DEL16170		(None)
		<u>OBCP buffer A/B</u>		
		Verify Telemetry ObcplFailSts DEH64170		(None)
		Verify Telemetry ObcplFuncSts DEH65170		(None)
		Verify Telemetry ObcplLogSts DEH66170		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Obcp1Use DEH67170		(None)
		Verify Telemetry Obcp2FailSts DEH68170		(None)
		Verify Telemetry Obcp2FuncSts DEH69170		(None)
		Verify Telemetry Obcp2LogSts DEH70170		(None)
		Verify Telemetry Obcp2Use DEH71170		(None)
17		Verify CDMS LCLs		Next Step: 18
		Verify Telemetry CdmuColdA_L31_S WM22B565	= ON	(None)
		Verify Telemetry CdmuColdB_L32_S WM92B565	= ON	(None)
18		Call procedure to check the Survival Registers and verify the content vs UIU table		Next Step: 19
		WARNING: the called procedure must be executed twice to read Survival Register B and A. If both the registers are reset the transition to Survival mode has been caused by a SOHO.		
		Execute procedure H_FCP_DHS_3080.		
19		Acquire ACMS units status from Unit in Use table		Next Step: 20
		<u>CRS 1/2</u>		
		Verify Telemetry Crs1HFuncSts DEN68171	= On	(None)
		Verify Telemetry Crs2HFuncSts DEN69171	= On	(None)
		<u>Gyro</u>		
		Verify Telemetry Gyro1FuncSts DEH38171	= On	(None)
		<u>STR 1/2</u>		
		Verify Telemetry Str1FuncSts DEG01170	= Off	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Str2FuncSts DEG00170	= Off	(None)
		<u>RW 1/2/3/4</u>		
		Verify Telemetry Rw1FuncSts DEL38171	= Off	(None)
		Verify Telemetry Rw2FuncSts DEL37171	= Off	(None)
		Verify Telemetry Rw3FuncSts DEL36171	= Off	(None)
		Verify Telemetry Rw4FuncSts DEG33171	= Off	(None)
20		Verify ACMS (OP-)LCLs status in telemetry vs UIU table content		Next Step: 21
		Verify Telemetry AccColdA_L33_S WM62B565	= ON	(None)
		Verify Telemetry AccColdB_L34_S WM52B565	= ON	(None)
		Verify Telemetry RcsLvA_L47_1S WM12E565	= ON	(None)
		Verify Telemetry AccLvA_L47_2S WM12J565	= ON	(None)
		Verify Telemetry AccLvB_L48_1S WMA2E565	= ON	(None)
		Verify Telemetry AccLvB_L48_2S WMA2J565	= ON	(None)
		Verify Telemetry RcsThrsA_L45_1S WM22D565	= ON	(None)
		Verify Telemetry RcsThrsA_L45_2S WM22J565	= ON	(None)
		Verify Telemetry RcsThrsB_L46_1S WM92D565	= ON	(None)
		Verify Telemetry RcsThrsB_L46_2S WM92J565	= ON	(None)
		<u>RCS CBH A/B</u> Expected configuration: LCL 17=ON, LCL 18=OFF		
		Verify Telemetry CBH_N_L17_S WMA2H565		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry CBH_R_L18_S WM12H565		(None)
		Verify Telemetry STR_1_L21_S WMA2C565	= ON	(None)
		Verify Telemetry STR_2_L22_S WM12C565	= ON	(None)
		Verify Telemetry GyroA_L13_S WM92A565	= ON	(None)
		Verify Telemetry GyroB_L14_S WM22A565	= ON	(None)
		Verify Telemetry Rw1_1_L55_1S WM22F565	= ON	(None)
		Verify Telemetry Rw1_1_L55_2S WM22L565	= ON	(None)
		Verify Telemetry Rw1_2_L56_1S WM92F565	= ON	(None)
		Verify Telemetry Rw1_2_L56_2S WM92L565	= ON	(None)
		Verify Telemetry Rw1_3_L57_1S WM12F565	= ON	(None)
		Verify Telemetry Rw1_3_L57_2S WM12K565	= ON	(None)
		Verify Telemetry Rw1_4_L58_1S WMA2F565	= ON	(None)
		Verify Telemetry Rw1_4_L58_2S WMA2K565	= ON	(None)
		Verify Telemetry CRS1_L15_S WM22C565	= ON	(None)
		Verify Telemetry CRS2_L24_S WMA2D565	= ON	(None)
21		Acquire P/L units status from UIU table		Next Step: 22
		HIFI WOV/HRVWEV/WOH/WEH/HRH/LCU/IFV/LSU		
		Verify Telemetry HifiHrvFuncSts DEL41171	= Off	(None)
		Verify Telemetry HifiWovFuncSts DEL49171	= Off	(None)
		Verify Telemetry HifiWohFuncSts DEL40171	= Off	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry HifiWevFuncSts DEL53171	= Off	(None)
		Verify Telemetry HifiHrhFuncSts DEL46171	= Off	(None)
		Verify Telemetry HifiWehFuncSts DEL48171	= Off	(None)
		Verify Telemetry HifiIfvFuncSts DEL39171	= Off	(None)
		Verify Telemetry HifiLcuFuncSts DEL55171	= Off	(None)
		Verify Telemetry HifiLsuFuncSts DEL42171	= Off	(None)
		PACS BOLC/DEC/DPU		
		Verify Telemetry PacsDeclFuncSts DEL44171	= Off	(None)
		Verify Telemetry PacsBolclFuncSt DEL54171	= Off	(None)
		Verify Telemetry PacsDpuFuncSts DEL50171	= Off	(None)
22		Verify P/L (OP-)LCLs status in telemetry vs UIU table content		Next Step: 23
		HIFI WEV/WEH/HRV/HRH/LCU Nom/LCU Red/ICU Nom/ICU Red		
		Verify Telemetry HiFiWEV_L44_S WM32A565	= OFF	(None)
		Verify Telemetry HiFiWEV_L43_S WM82A565	= OFF	(None)
		Verify Telemetry HiFiHRV_L67_1S WM62C565	= OFF	(None)
		Verify Telemetry HiFiHRV_L67_2S WM62J565	= OFF	(None)
		Verify Telemetry HiFiHRH_L63_1S WM52C565	= OFF	(None)
		Verify Telemetry HiFiHRH_L63_2S WM52J565	= OFF	(None)
		Verify Telemetry HiFiLcuN_L53_1S WM72D565	= OFF	(None)
		Verify Telemetry HiFiLcuN_L53_2S WM72K565	= OFF	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry HiFiLcuR_L54_1S WM42D565	= OFF	(None)
		Verify Telemetry HiFiLcuR_L54_2S WM42K565	= OFF	(None)
		Verify Telemetry HiFiIcuN_L64_1S WM52D565	= OFF	(None)
		Verify Telemetry HiFiIcuN_L64_2S WM52K565	= OFF	(None)
		Verify Telemetry HiFiIcuR_L68_1S WM62D565	= OFF	(None)
		Verify Telemetry HiFiIcuR_L68_2S WM62K565	= OFF	(None)
		PACS BOLC Nom/BOLC Red/DPU Nom/DPU Red/SPU Nom/SPU Red/DEC-MEC 1/DEC-MEC 2		
		Verify Telemetry PacsB_N_L27_1S WM82D565	= OFF	(None)
		Verify Telemetry PacsB_N_L27_2S WM82K565	= OFF	(None)
		Verify Telemetry PacsB_R_L28_1S WM32D565	= OFF	(None)
		Verify Telemetry PacsB_R_L28_2S WM32K565	= OFF	(None)
		Verify Telemetry PacsD_N_L41_S WM72B565	= OFF	(None)
		Verify Telemetry PacsD_R_L42_S WM42B565	= OFF	(None)
		Verify Telemetry PacsS_N_L35_S WM52A565	= OFF	(None)
		Verify Telemetry PacsS_R_L36_S WM62A565	= OFF	(None)
		Verify Telemetry PacsMec1_L65_1S WM52E565	= OFF	(None)
		Verify Telemetry PacsMec1_L65_2S WM52L565	= OFF	(None)
		Verify Telemetry PacsMec2_L69_1S WM62E565	= OFF	(None)
		Verify Telemetry PacsMec2_L69_2S WM62L565	= OFF	(None)
23		Verify remaining (OP-)LCLs		Next Step: 24

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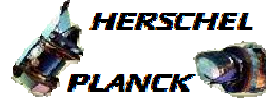
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<u>P/L (OP-)LCLs</u>		
		NCA Actuators		
		Verify Telemetry NCA_N_L71_1_S WM32F565	= OFF	(None)
		Verify Telemetry NCA_N_L71_2_S WM32M565	= OFF	(None)
		Verify Telemetry NCA_R_L72_1_S WM82F565	= OFF	(None)
		Verify Telemetry NCA_R_L72_2_S WM82M565	= OFF	(None)
		SREM		
		Verify Telemetry SREM_L19_S WM32B565	= OFF	(None)
		VMC		
		Verify Telemetry VMC_L20_S WM82B565	= OFF	(None)
		SPIRE HSDPU Nom/HSDPU Red/HSFCU Nom/HSFCU Red/Launch Lock Nominal/Launch Lock Redundant		
		Verify Telemetry SpirHsdN_L11_1S WM32C565	= OFF	(None)
		Verify Telemetry SpirHsdN_L11_2S WM32J565	= OFF	(None)
		Verify Telemetry SpirHsdR_L12_1S WM82C565	= OFF	(None)
		Verify Telemetry SpirHsdR_L12_2S WM82J565	= OFF	(None)
		Verify Telemetry SpirHsfN_L51_1S WM42C565	= OFF	(None)
		Verify Telemetry SpirHsfN_L51_2S WM42J565	= OFF	(None)
		Verify Telemetry SpirHsfR_L52_1S WM72C565	= OFF	(None)
		Verify Telemetry SpirHsfR_L52_2S WM72J565	= OFF	(None)
		Verify Telemetry SpireLL_N_L25_S WM12B565	= ON	(None)
		Verify Telemetry SpireLL_R_L26_S WMA2B565	= ON	(None)
		<u>TCS OP-LCLs</u>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry LouDecH1_L59_1S WM42F565	= ON	(None)
		Verify Telemetry LouDecH1_L59_2S WM42M565	= ON	(None)
		Verify Telemetry LouDecH2_L61_1S WM72F565	= ON	(None)
		Verify Telemetry LouDecH2_L61_2S WM72M565	= ON	(None)
		Verify Telemetry LouDecH3_L66_1S WM52F565	= OFF	(None)
		Verify Telemetry LouDecH3_L66_2S WM52M565	= OFF	(None)
24		Send TC(14,3) to verify that the generation of all the CDMS HK packets and CCU periodic HK packets has been enabled		Next Step: 25
		When this request is received, the enabled telemetry source packet of the CDMU are determined and a report (14,4) is generated.		
		Execute Telecommand ReportEnabledTm TC Control Flags : Subsch. ID : 10 Det. descr. : Report Enabled Telemetry Packets GBM IL DSE --Y -- YYY	DC904180	
25		Verify that TM(14,4) has been received		Next Step: 26
		The following HK have to be enabled: - CDMS: packet IDs 0x0 (High Rate), 0x8 (Low Rate), 0x40 (P1), 0x41 (P4), 0x42 (P64); - CCU: packet IDs 0x44 (CCU A Monit #1), 0x47 (CCU B Monit #1).		
		Verify Packet Reception TM Packet Generation Status Report Packet Details: APID: 16 Type: 14 Subtype: 4 PI1: PI2:	TMpktGenRep	
		Verify Telemetry N DE140180		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The following 3 parameters are repeated N times		
		Verify Telemetry Type DE141180		(None)
		Verify Telemetry Sub-Type DE142180		(None)
		Verify Telemetry Packet-ID DE143180		(None)
26		Send TC(14,6) to verify the downlink/storage status for all TM packets		Next Step: 27
		When CDMU receives this request, the real time down-linking and SSMM storage status are determined for all telemetry packet {Application ID, Type, Sub-Type} and a report (14,7) is generated.		
		Execute Telecommand RepDownlinkTMStorage TC Control Flags : Subsch. ID : 10 Det. descr. : Report Telemetry Packets Down-linking/Storage Status GBM IL DSE --Y -- YYY	DC141160	
27		Verify that TM(14,7) has been received		Next Step: 28
		Verify Packet Reception Telemetry Packets DownLinking-Storage Status Report Packet Details: APID: 16 Type: 14 Subtype: 7 PI1: PI2:	(14,7)-1400	
		Verify Telemetry N DE042160		(None)
		The following 3 parameters are repeated N times		
		Verify Telemetry APID DE047160		(None)
		Verify Telemetry Type DE043160		(None)
		Verify Telemetry Sub-Type DE046160		(None)
		Verify Telemetry Transmit_Flag DE048160		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Storage_Flag DE049160		(None)
28		Write Survival Registers?		Next Step: 29
		WARNING: the Survival Registers have to be written if the transition to Survival mode has been caused by a SOHO.		
29		IF		Next Step: YES 30 NO 31
TC Seq. Name :HRD3044B (Write Survival Registers) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
30		Call procedure to write the Survival Registers		Next Step: 31
		WARNING: the called procedure must be executed twice to write Survival Register B and A.		
		In the called procedure, in step 4, choose "YES".		
		Execute procedure H_FCP_DHS_3080.		
TC Seq. Name :HRD3044C (Dummy sequence) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
31		Reset DNEL?		Next Step: 32
32		IF		Next Step: YES 33 NO END
TC Seq. Name :HRD3044D (Reset DNEL.) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
33		<i>Call procedure to reset the DNEL</i>		Next Step: END
		Execute procedure H_CRP_EPS_DNELR.		
End of Procedure				