

Mode\_ScuFunc07 Sorption Heater Cooler Check  
 File: H\_COP\_SPI\_SOHC.xls  
 Author: L.Lucas-hp



## Procedure Summary

### Objectives

The purpose of this procedure is a Sorption Coolers Heater Check  
 Based on Procedure:  
 Mode\_ScuFunc07 (v3)

### Summary of Constraints

This test should not be performed at He II temperatures, unless specifically instructed to do so by the ICC@MOC staff.  
 Ensure DRCU\_ON and SCU-02 have been performed.

### Spacecraft Configuration

**Start of Procedure**

Mode at least DRCU\_ON

**End of Procedure**

Mode at least DRCU\_ON

### Reference File(s)

**Input Command Sequences**

**Output Command Sequences**

HCSSOHC

### Referenced Displays

ANDs	GRDs	SLDs
SA_6_559	ZGZ46999	
ZAZ90999		
SA_1_559		

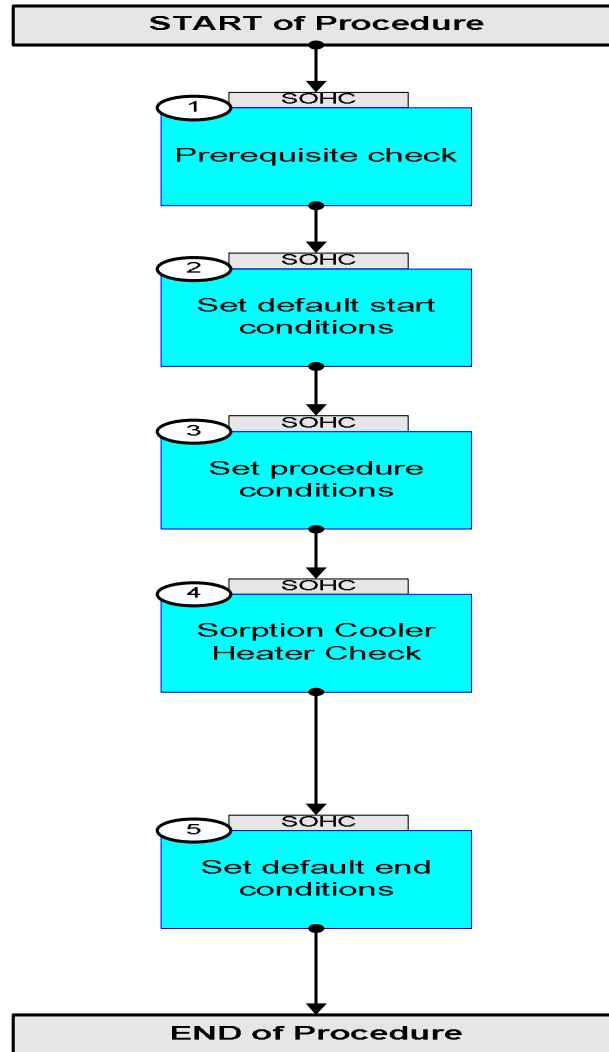
### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
22/12/08		1	Created	L.Lucas-hp	
23/01/09	2	2	AND Update	L.Lucas-hp	
24/03/09	2.2	2.01	Validation : Title Update	L.Lucas-hp	
21/04/09	2.3	2.02	Validation : Text Updates	L.Lucas-hp	

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## Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
TC Seq. Name :HCSSOHC (Sorp CoolHeatChk)				
TimeTag Type: Y				
Sub Schedule ID:				
□				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		□
		Verify that the HSC has supplied a valid OBSID value:  OBS_ID = 0xnnnn nnnn		
		This test should not be performed at He II temperatures, unless specifically instructed to do so by the ICC@MOC staff.		
		Verify Telemetry  SPHSV SMH0A520		AND=SA_6_559
		Verify Telemetry  EVHSV SMT0A520		AND=SA_6_559
		Verify Telemetry  SPHTRV SMT1A520		AND=SA_6_559
		Verify Telemetry  SPHTRV SMT1A520		GRD=ZGZ46999
		SPACON Continue and wait for the parameter BBFULLTYPE to be set to Cooler_Htr_Chk.		
		Verify Telemetry  BBFULLTYPE SM2LN500	= Cooler_Htr_Che	AND=SA_6_559
2		Set default start conditions		Next Step: 3
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500	SC003500  0 <hex>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID  SP01N500  80010001 <hex>	SC001500	
		Verify Telemetry  BBFULLTYPE	SM2LN500	= ClearObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500  1 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_OBSID  Command Parameter(s) : OBSERVATION_ID  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID  SP00N500  00000000 <hex>	SC000500	
		Verify Telemetry  OBSID	SM10N500	= 00000000 <hex>	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500  0 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID  SP01N500  80000000 <hex>	SC001500	
		Verify Telemetry  BBFULLTYPE	SM2LN500	= Null	AND=ZAZ90999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80020001 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= StartObs	AND=ZAZ90999
3		Set procedure conditions		Next Step: 4
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS  RESET_DRCU_COUNTERS  Subsch. ID : 370 Det. descr. : RESET DRCU COUNTERS	SCD00505	
		Verify that the TRESET parameter has the same value as the THSK parameter  TRESET SM01T500	same as THSK	AND=SA_1_559
		THSK SM00T500	any	AND=SA_1_559
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID  SET_OBSID  Command Parameter(s) : OBSERVATION_ID SP00N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SC000500  OBS_ID	
		Verify Telemetry  OBSID SM10N500	OBS_ID	AND=ZAZ90999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80000000 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  8A060001 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= Cooler_Htr_Che	AND=SA_6_559
4		Sorption Cooler Heater Check		Next Step: 5
	ET=+ UT=+00.00.02	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  TC Control Flags :  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>  GBM IL DSE --Y -- ---	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                        SPD9N505  TC Control Flags :  GBM IL DSE --Y -- --  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  A0C40801 <hex> 0 <hex> (Def)	
		TMCHECK Check the value of parameter SPHSV - the Sorption Pump Heat Switch Voltage. It should be ~323 mV.		
		Verify Telemetry  SPHSV                    SMH0A520		AND=SA_6_559
	ET=+ UT=+00.00.21	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                        SPD9N505  TC Control Flags :  GBM IL DSE --- -- --  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  a0c40000 <hex> 0 <hex> (Def)	
		TMCHECK Check the value of parameter SPHSV - the Sorption Pump Heat Switch Voltage. It should now be ~0 mV.		
		Verify Telemetry  SPHSV                    SMH0A520		AND=SA_6_559
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                        SPD9N505  TC Control Flags :  GBM IL DSE --- -- --  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  a0c50801 <hex> 0 <hex> (Def)	
		TMCHECK Check the value of parameter EVHSV - the Evaporator Heat Switch Voltage. It should be ~323 mV.		
		Verify Telemetry  EVHSV                    SMT0A520		AND=SA_6_559

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.21	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- --  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  a0c50000 <hex> 0 <hex> (Def)	
		TMCHECK Check the value of parameter EVHSV - the Evaporator Heat Switch Voltage. It should now be ~0 mV.		
		Verify Telemetry  EVHSV                   SMT0A520		AND=SA_6_559
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- --  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  a0c70708 <hex> 0 <hex> (Def)	
		TMCHECK Check the value of parameter SPHTRV - the Sorption Pump Heater Voltage. It should be ~8.8 V.		
		Verify Telemetry  SPHTRV                   SMT1A520		AND=SA_6_559
	ET=+ UT=+00.00.21	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- --  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  a0c70000 <hex> 0 <hex> (Def)	
		TMCHECK Check the value of parameter SPHTRV - the Sorption Pump Heater Voltage. It should be ~0 V.		
		Verify Telemetry  SPHTRV                   SMT1A520		GRD=ZGZ46999
5		Set default end conditions		Next Step: END



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		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP                    SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID                    SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80000000 <hex>	
		Verify Telemetry  BBFULLTYPE                    SM2LN500	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP                    SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID                    SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80030001 <hex>	
		Verify Telemetry  BBFULLTYPE                    SM2LN500	= EndObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP                    SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	SET_OBSID  Command Parameter(s) : OBSERVATION_ID  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID  SP00N500  00000000 <hex>	
		Verify Telemetry  OBSID  SM10N500	= 00000000 <hex>	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID  SP01N500  80000000 <hex>	
		Verify Telemetry  BBFULLTYPE  SM2LN500	= Null	AND=ZAZ90999
<b>End of Procedure</b>				