

EADS Astrium HERSCHEL H-EPLM	ACTIVITY	CONTROL	SHEET	HP-2-ASED-SD-0360 Iss: 1	Page 1 of 7
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Location : ETS	Title Removing of airlock and helium vent line before mechanical tests			
Facility : Class 100000	Model: PFM	Subsystem: S/C		Date: 02.06.08
CI No 12100	Test Conductor: Herschel Team			NCR Ref:
	Prepared By: J. Huber			CIL No:

Scope: This Procedure covers the removing of airlock and helium vent-line before mechanical tests.		Procedures and reference documents:- HP-2-ASED-TP-0181_2 Leading procedure for Herschel S/C FM mechanical tests	
Facilities required: CR 100000	MGSE: VIS or similar Toucan	Drawings:- N/A	
Personnel required:	AIT personnel for operation 1 cryo operator 1 mechanics 1 CCS operator 1 QA	MASS:-	
Safety and Hazards:	No specific safety precautions or hazards identified.		
Constraints:	none		

No:	Activity	Proc/Drg	Results	Responsible & sign off
01	Inform the floor manager of the start of this ACS..			04.06.08 Jhu
02	If other functional testing is ongoing, inform the test conductor of the start of this ACS.			
03	Configuration: <ul style="list-style-type: none"> S/C is in vertical position. ✓ Helium of HTT is venting through V104 and external vent line Y601-3 connected to V502. ✓ Plug of SV 121 installed and spindle of airlock in safety position. ✓ 			04.06.08 Jhu

Release AIT: <i>[Signature]</i> 03.06.08 18:45 17.12.08	Release SE: J. Krocker 4.6.2008 Y. Roche 04 JUN 08 <i>[Signature]</i>	Release PA/Safety: 04.06.08 <i>[Signature]</i>	Sign off (PA/QC/Team Leader) 6.6.08 <i>[Signature]</i> <i>[Signature]</i>
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No:	Activity	Proc/Drg	Results	Responsible & sign off
	<ul style="list-style-type: none"> Cryostat vent line connected to frog and Gas-meter. ✓ S/C and CCU on ✓ 			<i>ku</i>
04	Connect second vent line to A-frame/large nozzle adapter and flow-meter-unit (with frog enabled)		<i>o.k.</i>	<i>ku</i>
05	Dismount Airlock from filling port and record weight		<i>o.k.</i>	<i>04.06. ku</i>
	Integrate catching device on air lock I/F (4 x M6; Torque 7.5 Nm) Note: in this configuration the SV 121 is still operational		<i>o.k.</i>	<i>04.06. ku</i>
06	Verify the spacecraft to EGSE connectivity is as per Article I and Article II of this procedure. Ensure the Sections are signed off by the floor manager.		<i>o.k.</i>	<i>ku</i>
Start Test Session and power-up spacecraft, if not already running				
07	If a test session is not already running on the CCS, then,		<i>Session already running.</i>	<i>ech</i>
08	With S/C powered off, start and join a new session on the CCS and note down the session name and tag name: Session name: <i>2008-03-19-45-hercdmu-hpws22-REACTIVE</i> Tag name: <i>HP-2-ASED-TP-0224-ISS1-SAT-AFT2-GND-001</i>			<i>ech</i>
09	Open and position the following essential CCS windows: Synoptic windows MIM: SAT.ilv			

Release AIT:	Release SE:	Release PA/Safety:	Sign off (PA/QC/Team Leader)
			<i>04.06.03 ku</i>

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B.G.B. ✓

No:	Activity	Proc/Drg	Results	Responsible & sign off
	MIM: CCU.ilv Telemetry windows AND: KA001319 (All Cryostat A valves status) AND: KA002319 (All Cryostat B valves status) TM packets History window Window filtered on APID 16 On board Event History window Command History Out of limits Display window		OK	<u>ed</u>
10	Perform the start-up sequence from the Herschel SVM Switch-ON/OFF procedure (HP-2-ASED-PR-0070, sections 7.2 to 7.5, inclusive)		S/C already on for ATT2	<u>ed</u>
11	On a CCS workstation, via the Test Sequence Control, start the script : K102999ECVT001_ASDGENCCU_ABPWRON This will switch on the CCU-A and CCU-B. Wait for the script to complete.		CCU already on for ATT2	<u>ed</u>
12	When the previous script is completed, on a CCS workstation, via the Test Sequence Control, start the script : K102999ECVT001_ASDGENCCU_MnEBOTH2 This will configure the CCU-A and CCU-B. Wait for the script to complete.		CCC enabled in Mode 1 for ATT2 PIS#07 to TP-0224 in to switch to Mode 2	<u>ed</u> 04 June '08 13:40
13	On a CCS workstation, via the Test Sequence Control, start the script : K102999ECVT031_ASDGEN_CCU_LOG.tcl This will store the CCU-A and CCU-B telemetry onto the CCS file space.		Already running from ATT2	<u>ed</u>

Release AIT: <u>ed</u>	Release SE:	Release PA/Safety: <u>D. Lamonby</u>	Sign off (PA/QC/Team Leader) 04.06.08 <u>ed</u>
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No:	Activity	Proc/Drg	Results	Responsible & sign off
14	Note the CCS system time :			
	Verify initial valve status			
15	On a CCS workstation, check valve status at from the AND telemetry windows KA001319 (All Cryostat A valves status) and KA002319 (All Cryostat B valves status).	V501 : CLOSED V503 : CLOSED V504 : OPEN V505 : OPEN	<i>closed</i> <i>closed</i> <i>open</i> <i>open</i>	<i>ed</i>
	Command valves V501 & V503 and check valve status			
16	After authorisation from the Cryo Engineer, on a CCS workstation, via the Manual command window, issue the command to ARM the valve V501: ZC0Z4999 (CCUA_ARM_V501) Verify the telemetry parameter KM120300 reflects the ARM status.			<i>ed</i> 13:52
17	On a CCS workstation, via the Manual command window, issue the command to switch the valve V501 to the open position ZC0Z5999 (CCUA_OPEN_V501) Verify the telemetry parameter KM270302 reflects the Operating status.	V501 : OPEN	<i>OPEN.</i>	<i>ed</i> 13:52
18	After authorisation from the Cryo Engineer, on a CCS workstation, via the Manual command window, issue the command to ARM the valve V503: ZC0ZD999 (CCUB_ARM_V503) Verify the telemetry parameter KM120301 reflects the ARM status.			<i>ed</i> 13:54

Release AIT:	Release SE:	Release PA/Safety:	Sign off (PA/QC/Team Leader)
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No:	Activity	Proc/Drg	Results	Responsible & sign off
19	On a CCS workstation, via the Manual command window, issue the command to switch the valve V503 to the open position: ZC0ZE999 (CCUB_OPEN_V503) Verify the telemetry parameter KM270303 reflects the Operating status.	V503 : OPEN	OPEN	13:55 <i>ed</i>
Check Helium Flow				
20	Check He-flow on flow-meter		Flow, OK	<i>lu</i>
Close valve V502				
21	Close V502 manual		V502 closed	<i>lu</i>
22	Dismount vent line Y601-3 and record weight		dismounted	<i>lu</i>
23	Install Blind-cap with Viton-seal on V502 (Torque 4.2 Nm)		O.K.	<i>lu</i>
Power-down spacecraft and stop the Test Session				
24	If a test session was started by the ACS then,		N/A	
25	On a CCS workstation, in the "K102999ECVT031_ASDGEN_CCU_LOG" window, select the button " STOP recording and exit ".		✓	
26	Perform the shutdown sequence from the Herschel SVM Switch-ON/OFF procedure (HP-2-ASED-PR-0070, section 7.7).		"	
27	Inform the floor manager (and functional test conductor, if appropriate) of the conclusion of this ACS.		O.K.	<i>lu</i>

Release AIT:	Release SE:	Release PA/Safety:	Sign off (PA/QC/Team Leader)
			04.06.03 <i>lu</i>

6.6.03

Article I. EGSE connection (to be confirmed by AIT)

Of all EGSE cables, only those below are mandatory for this test. Other cables can remain as defined for the S/C AFT or the Acoustic tests.

SCOE CABLES CONNECTION to HERSCHEL S/C				
UMBILICAL				
Connector Function	Connector	S/C unit	SCOE CABLE	
Power/Data	HU1J01	SYSTEM	SCOEs cable Plugged	<i>[Signature]</i>
Power/Data	HU1J01 <i>HU2J01</i>	HU1J02	SCOEs cable Plugged	<i>[Signature]</i>
to be approved & released before start of ACS/PR/TP by Floor-Manager	Date: <i>4.6.08</i>		Sign: <i>[Signature]</i>	

Article II. CCU – Cryo SCOE Connection Status

Cryo SCOE connections status is not applicable for this test

Release AIT:	Release SE:	Release PA/Safety:	Sign off (PA/QC/Team Leader)
			<i>04.06.08</i> <i>6.6.08</i> <i>[Signature]</i>

	Name	Dep./Comp.		Name	Dep./Comp.
	Baldock Richard	FAE12		Steininger Eric	AED321
	Barlage Bernhard	AED13		Stiehle Hubert	AET32
X	Bayer Thomas	ASA42	X	Stritter Rene	AED11
	Brune Holger	ASA45		Suess Rudi	OTN/ASA44
	Chen Bing	HE Space		Theunissen Martijn	DSSA
	Davis William	Captec		Vascotto Riccardo	HE Space
	Edelhoff Dirk	AED21		Wagner Klaus	ASG23
	Fehringer Alexander	ASG15		Wietbrock Walter	AET12
	Fricke Wolfgang Dr.	AED 65	X	Wöhler Hans	ASG23
	Geiger Hermann	ASA42		Wössner Ulrich	ASE252
	Grasl Andreas	OTN/ASA44		Zumstein Armin	AED15
	Grasshoff Brigitte	AET12			
	Hamer Simon	Terma			
	Hanka, Erhard	FI522			
	Hendrikse Jeffrey	HE Space			
	Hendry David	Terma			
	Hengstler Reinhold	ASA42			
	Hinger Jürgen	ASG23			
X	Hohn Rüdiger	AED65			
	Hofmann Rolf	ASE252			
	Hopfgarten Michael	AET32			
X	Huber Johann	ASA42			
	Hund Walter	ASE252			
	Idler Siegmund	AED312			
	Ivány von András	FAE12			
	Jahn Gerd Dr.	ASG23	X	ESA/ESTEC	ESA
	Jolk Matthias	AET1	X	Thales Alenia Space Cannes	TAS-F
	Klenke Uwe	ASG72		Thales Alenia Space Torino	TAS-I
	Koelle Markus	ASA43			
	Koppe Axel	AED312		Instruments:	
	Kroeker Jürgen	AED65		MPE (PACS)	MPE
	La Gioia Valentina	Terma	X	RAL (SPIRE)	RAL
	Lang Jürgen	ASE252		SRON (HIFI)	SRON
	Langenstein Rolf	AED15			
X	Langfermann Michael	ASA41			
	Liberatore Danilo	Rhea		Subcontractors:	
	Martin Olivier	Altec		Austrian Aerospace	AAE
	Maukisch Jan	ASA43		Austrian Aerospace	AAEM
	Much Christoph	ASA43		BOC Edwards	BOCE
X	Müller Martin	ASA43		Dutch Space Solar Arrays	DSSA
	Pietroboni Karin	AED65		EADS Astrium Sub-Subsyst. & Equipment	ASSE
X	Reichle Konrad	ASA42		EADS CASA Espacio	CASA
X	Runge Axel	OTN/ASA44		EADS CASA Espacio	ECAS
	Schink Dietmar	AED321		European Test Services	ETS
	Schmidt Thomas	AED15		Patria New Technologies Oy	PANT
X	Schweickert Gunn	ASG23		SENER Ingenieria SA	SEN
	Sonn Nico	ASG51		Thales Alenia Space, Antwerp	TAS-ETCA