



Minutes of Meeting

SPIRE-AST-MOM-003057

Date: 23.11.07

Herschel

Doc.-No.: HP-2-ASED-MN-1444

Meeting place: FN

Chairman: U. Gageur

Date/Time: 23.11.07

Secretary: B. Barlage

Agenda dated: IRR standard agenda

Close of Meeting:

Subject: IRR for OBS and UB Thermal Shields integration

Participants: Gageur ESA
Barlage ASED
Stritter ASED
Sawyer RAL by tel.
Bauer MPE by tel.
Evers SRON by tel.
Jacobs SRON by tel.

U. Gageur
B-X

Additional Distribution: ESA
TAS-F
TAS-I

Page: 1 of 5 Page(s) & Annex

Brief-Minutes (except following sheets)

Summary of Results of Sheets 2 till

Summary and Conclusion :

Pending successful MIP and closure of open work the OBS and UB Thermal Shields are released for integration.



Reference	Results	Remarks
	<p>IRR Agenda :</p> <ol style="list-style-type: none"> 1. H/W Identification (Model, SN#, CI#, CIL) 2. DRB MoM/ EIDP Ref 3. Qualification / Acceptance Reference / Status of H/W to be integrated 4. H/W ABCL /EICD /ICD Reference / Status 5. Integration Procedure / Status 6. NCRs /RFWs potentially affecting integration 7. Open Work Status 8. Cleanliness / Inspection Report / Reference 9. Safety and ESD Constraints 10. Problem areas still blocking 11. AOB 12. Release for Integration 	



Reference	Results	Remarks						
	<p>Introduction:</p> <p>The integration of the OBS and the Upper Bulkhead Thermal Shields. Since the same hardware has already been integrated several times before, this is a delta IRR.</p> <p>1. H/W Identification (Model, SN#, CI#, CIL)</p> <table data-bbox="376 697 1019 807"> <tr> <td>PLM</td> <td>PFM, CI# 121000</td> </tr> <tr> <td>OBS</td> <td>PFM, CI# 121142</td> </tr> <tr> <td>UB-Thermal Shields</td> <td>PFM, CI# 121330</td> </tr> </table> <p>2. DRB MoM/ EIDP Ref</p> <p>As for previous IRRs / MIPs (HP-2-ASED-MN-1021 & MN-1430)</p> <p>3. Qualification / Acceptance Reference / Status of H/W to be integrated</p> <p>As for previous IRRs / MIPs (HP-2-ASED-MN-1021 & MN-1430)</p> <p>4. H/W ABCL /EICD /ICD Reference / Status</p> <p>E-PLM status is given in ISL HP-2-ASED-LI-0032_6. Red tag covers are removed apart from HIFI cover LO inputs. Red tag status list is attached.</p>	PLM	PFM, CI# 121000	OBS	PFM, CI# 121142	UB-Thermal Shields	PFM, CI# 121330	
PLM	PFM, CI# 121000							
OBS	PFM, CI# 121142							
UB-Thermal Shields	PFM, CI# 121330							



Reference	Results	Remarks
	<p>5. Integration Procedure / Status</p> <p>Integration procedure HP-2-ASED-PR-0064_2 is in approval cycle. The procedure was recently updated to issue 2 to include some minor improvements found during last integration.</p> <p>6. NCRs /RFWs potentially affecting integration.</p> <p>NC-3789: Degraded and damaged Internal MLI after third dismounting of Upper Bulkhead Baseline is to use the old MLIs, pending on availability of people and material the new MLI blankets will be installed.</p> <p>NC-3743: Contamination of PACS mirror. Mirrors have been cleaned, NCR closure is pending on analysis results of wipes at ESTEC. Not relevant for OBS closure.</p> <p>7. Open Work Status</p> <p>Completion of MIP Removal of HIFI cover LO inputs Removal of PFO Removal of blue protective tape HIFI SMA connector currently covered by protective foil. To be inspected as soon as accessible.</p> <p>8. Cleanliness / Inspection Report / Reference</p> <p>A visual inspection combined with vacuum cleaning was performed on 22.11.07 and finally the level visibly clean was achieved for OBA and FPUs. This was verified by 4 tape lift samples of which the</p>	



Reference	Results	Remarks
	<p>results are between 67 ppm and 320 ppm, i. e. the average is better than 200 ppm. Molecular wipes were also taken, but could not yet be evaluated.</p> <p>The OBS and UB-TS will be visually inspected before intagration.</p> <p>9. Safety and ESD Constraints</p> <p>Standard ESD constraints for Herschel S/C apply.</p> <p>During integration the S/C shall be off, at least for OBS closure.</p> <p>Operators doing the closure shall not wear wrist watches; the bottom side of the cleanroom boots shall be cleaned before entering the scaffolding.</p> <p>10. Problem areas</p> <p>None</p> <p>11. AOB</p> <p>The MIP shall be completed on Monday, 26.11.07. OBS and TS1 shall be integrated directly after release by the MIP members.</p> <p>12. Release for Integration</p> <p>Pending successful MIP and closure of open work the OBS and UB Thermal Shields are released for integration.</p>	

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
<i>R 01.01</i>	OBA alignment mirror	OBA		OBA	1	off	off		16.08.2007 Geiger	
<i>R 01.02</i>	OBA alignment mirror cover	OBA		OBA	1	off	off		16.08.2007 Geiger	
<i>R 02.01</i>	PACS alignment mirror	PACS PFM		OBA	1	on	on	requested by MPE		
<i>R 02.02</i>	entrance aperture foil	PACS PFM		OBA	1	off	off		30.10.07 MPE	
<i>R 02.03</i>	CU Block for Bonding	PACS PFM		OBA	1	off	off		10.07.07 MPE	
<i>R 02.04</i>	Lifting Beam	PACS PFM		OBA	1	off	off		09.07.07 Bayer	
<i>R 02.05</i>	Lifting Ring	PACS PFM		OBA	3	off	off		09.07.07 Bayer	
<i>R 02.06</i>	Mounting tool Blue detector	PACS PFM		OBA	1	off	off		10.07.07 MPE	
<i>R 02.07</i>	Mounting tool Red detector	PACS PFM		OBA	1	off	off		10.07.07 MPE	
<i>R 02.08</i>	Short Circuit Connectors Blue detector	PACS PFM		OBA	1	off	off		19.10.07 MPE	
<i>R 02.09</i>	Short Circuit Connectors Red detector	PACS PFM		OBA	1	off	off		19.10.07 MPE	
<i>R 02.10</i>	Diode Connectors	PACS PFM		OBA	16	off	off		19.10.07 MPE	
<i>R 02.11</i>	pin saver	PACS PFM		OBA	51	off	off		19.10.07 MPE	
<i>R 02.12</i>	short circuit connector	PACS PFM		OBA	47	off	off		19.10.07 MPE	
<i>R 02.13</i>	Connector grating	PACS PFM		OBA	2	off	off		11.07.07 Grasl	
<i>R 02.14</i>	Plastic caps	PACS PFM		OBA	2	off	off		11.07.07 Grasl	
<i>R 03.01</i>	SPIRE alignment mirror	SPIRE PFM		SPIRE	1	off	off		16.08.2007 Geiger	

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
R 03.02	SPIRE aperture cover	SPIRE PFM		SPIRE	1	off	off		22.11.07 Geiger	
R 03.03	Save plug Type III	SPIRE JFP PFM		SPIRE JFP J25,J26,J27, J28	4	off	off		17.04.2007 SPIRE	
R 03.04	Save plug Type III	SPIRE JFS PFM		SPIRE JFS J09,J10,J27, J28,J29,J30	6	off	off		17.04.2007 SPIRE	
R 04.01	HIFI Cover LO	HIFI FM		HIFI LOU Baffle	1	off	on		30.10.07 SRON	20.11.07 SRON
R 04.02	HIFI Cover M3	HIFI FM		HIFI Entrance Mirror	1	off	off		22.11.07 SRON	
R 04.03	Connector saver	HIFI FM		HIFI FM	53	off	off		25.07.2007 Grasl HIFI Team	
R 04.04	short circuit connetors	HIFI FM		HIFI FM	53	off	off		25.07.2007 Grasl HIFI Team	
R 04.04	Short Circuit Plug P01	HIFI PFM		CB 311100	1	off	off		08.08.07 Grasl	
R 04.05	Short Circuit Plug P02	HIFI PFM		CB 311100	1	off	off		08.08.07 Grasl	
R 04.06	Short Circuit Plug P03	HIFI PFM		CB 311100	1	off	off		08.08.07 Grasl	
R 04.07	Short Circuit Plug P04	HIFI PFM		CB 311100	1	off	off		08.08.07 Grasl	
R 04.08	Short Circuit Plug P05	HIFI PFM		CB 311100	1	off	off		08.08.07 Grasl	
R 06.01	Magnetic Coils	VG 901&VG 902	-Z		2	on	on	both installed		
R 07.01	LOU Waveguide tapes	LOU	-Y	WG	192	on	on			
R 07.02	Bluetapes on LOU Optical Windows	LOU	-Y	Optical Windows LOU	7	on	on			
R 08.01	Safety Screws on Cryo Cover	HDRM		Top Plate	2	on	on			25.05.07 AAE

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
<i>R 09.01</i>	SAFE Plug P03	CVV ext. CCH	+Y	CB314200	1	on	on	380FS007M1404 G3		

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
<i>R 09.02</i>	SAFE Plug P04	CVV ext. CCH	+Y	CB314200	1	on	on	380FS007M1404 G3		
<i>R 09.03</i>	SAFE Plug P05	CVV ext. CCH	+Y	CB314200	1	on	on	380FS007M1002 G3		
<i>R 09.04</i>	SAFE Plug P06	CVV ext. CCH	+Y	CB314200	1	on	on	380FS007M1002 G3		
<i>R 09.05</i>	Termination Plug P03	CVV ext. SIH	-Z'	CB312300	1	off	off	STP-VIII- PFM(Attention)	22.10.07 Koppe	
<i>R 09.06</i>	Termination Plug P04	CVV ext. SIH	-Z'	CB312300	1	off	off	STP-VIII-PFM	22.10.07 Koppe	
<i>R 09.07</i>	Termination Plug P05	CVV ext. SIH	-Z'	CB312300	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.08</i>	Termination Plug P06	CVV ext. SIH	-Z'	CB312300	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.09</i>	Termination Plug P01	CVV ext. SIH	-Z'	CB312200	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.10</i>	Termination Plug P02	CVV ext. SIH	-Z'	CB312200	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.11</i>	Termination Plug P03	CVV ext. SIH	-Z'	CB312200	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.12</i>	Termination Plug P04	CVV ext. SIH	-Z'	CB312200	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.13</i>	Termination Plug P05	CVV ext. SIH	-Z'	CB312200	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
<i>R 09.14</i>	Termination Plug P06	CVV ext. SIH	-Z'	CB312200	1	off	off	STP-VI-PFM	22.10.07 Koppe	

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
R 09.15	Termination Plug P02	CVV ext. SIH	-Z'	CB312100	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
R 09.16	Termination Plug P03	CVV ext. SIH	-Z'	CB312100	1	off	off	SBP-VII-PFM	22.10.07 Koppe	
R 09.17	Termination Plug P04	CVV ext. SIH	-Z'	CB312100	1	off	off	STP-V- PFM(Attention)	22.10.07 Koppe	
R 10.01	PACS Shorting Plug P1-3	PACS PFM	SVM -Z	CB 313100	1	off	off		26.10.2007 Lang	
R 10.02	PACS Shorting Plug P2-3	PACS PFM	SVM -Z	CB 313100	1	off	off		26.10.2007 Lang	
R 10.03	PACS Shorting Plug P7-3	PACS PFM	SVM -Z	CB 313100	1	off	off		26.10.2007 Lang	
R 10.04	PACS Shorting Plug P8-3	PACS PFM	SVM -Z	CB 313100	1	off	off		26.10.2007 Lang	
R 10.05	PACS short circuit plug 100polig NR1	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.06	PACS short circuit plug 100polig NR.2	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.07	PACS short circuit plug 100polig NR.3	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.08	PACS short circuit plug 100polig NR.4	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.09	PACS short circuit plug 100polig NR.5	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.10	PACS short circuit plug 100polig NR.6	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.11	PACS short circuit plug 100polig NR.7	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.12	PACS short circuit plug 128polig NR.1	PACS PFM			1	off	off		19.10.2007 Lang	

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
R 10.13	PACS short circuit plug 128polig NR.2	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.14	PACS short circuit plug 128polig NR.3	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.15	PACS short circuit plug 128polig NR.4	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.16	PACS short circuit plug 128polig NR.5	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.17	PACS short circuit plug 128polig NR.6	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.18	PACS short circuit plug 128polig NR.7	PACS PFM			1	off	off		19.10.2007 Lang	
R 10.19	PACS short circuit plug 128polig NR.8	PACS PFM			1	off	off		19.10.2007 Lang	
R 11.01	Warning Label	LLP 101 / 102		HTT	2	off	off	The Covers removed and the Warning Labels installed	02.11.2007 Schmidt	
R 11.02	Warning Label	LLP 701 / 702		HOT	2	off	off	The Covers removed and the Warning Labels installed	25.05.2007 Huber	
R 12.01	Protective Cap	rupture disk RD124		HTT	1	off	off		02.11.2007 R. Hengstler	

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
R 12.02	Protective Cap	rupture disk RD724		HOT	1	off	off	original Cap doesn't f it(only red dust cover)	25.05.2007 Bayer T.	
R 13.01	ITO Protective foil	Y Panel + Side	+Y	SVM Thermal shield	1			PFM not installed		
R 13.02	ITO Protective foil	Y Panel - Side	-Y	SVM Thermal shield	1			PFM not installed		
R 14.01	Fixation plates on Telescope	Telescope		struts I/F to CVV	3			PFM not installed		
R 15.01	Hand Rail on V506	V 506	-Z	External Tub.	1	on	on			
R 15.02	Foam Block	V 502	-Z	External Tub.	1	off	off			
R 16.01	Fixation bar on OBS	OBS		OBS	1	off	off			

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
G01.01	ARMING Plug P03	CVV ext. CCH	Cryo Cover	CB314200	1	off	off			
G01.02	ARMING Plug P04	CVV ext. CCH	Cryo Cover	CB314200	1	off	off			
G01.03	ARMING Plug P05	CVV ext. CCH	Cryo Cover	CB314200	1	off	off			
G01.04	ARMING Plug P06	CVV ext. CCH	Cryo Cover	CB314200	1	off	off			
G01.05	ARMING Plug P01	CVV ext. CCH	Umb. I/F	CB321100	1	off	off			
G01.06	ARMING Plug P02	CVV ext. CCH	Umb. I/F	CB321100	1	off	off			
G01.07	ARMING Plug P07	CVV ext. CCH	Umb. I/F	CB321100	1	off	off			
G01.08	ARMING Plug P08	CVV ext. CCH	Umb. I/F	CB321100	1	off	off			
G 02.01	Short Circuit Connector P07	Cryo Cover	UB Cryo cover	CB 211311	1	off	off		25.05.07 Lang	
G 02.02	Bridge Connector P01	CVV external CCH	Umb. I/F ext.Ventl	CB321100	1	off	off			
G 02.03	Bridge Connector P02	CVV external CCH	Umb. I/F ext.Ventl	CB321100	1	off	off			
G 02.04	Bridge Connector P03	CVV external CCH	Umb. I/F ext.Ventl	CB321100	1	off	off			
G 02.05	Bridge Connector P04	CVV external CCH	Umb. I/F ext.Ventl	CB321100	1	off	off			
G 02.06	Bridge Connector P07	CVV external CCH	Umb. I/F ext.Ventl	CB321100	1	off	off			

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
G 02.07	Bridge Connector P08	CVV external CCH	Umb. I/F ext.Ventl	CB321100	1	off	off			
G02.08	ACC Cover P02	CVV lower Ring		CB211123	1	off	off			
G02.09	ACC Cover P38	CVV Upper Ring		CB211121	1	off	off			
G02.10	DMS Cover P02	SVM Upper closure Panel		CB311200	1	off	off			
G02.11	Cover P01	SVM Upper closure Panel		CB315100		off	off			
G02.12	Cover P03	SVM Upper closure Panel		CB315100		off	off			
G02.13	Cover P03	SVM Upper closure Panel		CB321100		off	off			
G02.14	Cover P04	SVM Upper closure Panel		CB321100		off	off			
G02.15	Cover P05	SVM Upper closure Panel		CB321100		off	off			
G02.16	Cover P06	SVM Upper closure Panel		CB321100		off	off			
G 03.01	HIFI Cover& I/F Screws	HIFI	HIFI	Near HIFI M3	1	on	on			
G 03.02	Termination Plug FHFPU P59/SIH side	HIFI FPU	HIFI	OBA SIHarness	1	on	on	potted		
G 03.03	Termination Plug FHFPU P60/ SIH side	HIFI FPU	HIFI	OBA SIHarness	1	on	on	potted		
G 04.01	Oscillation Dämper OD 101(S/N2)	Filling Port	HSS	on Filling plate	1	off	off			

Item- No.	Item description	Unit	System	Location	QTY	required Status for re-closure	actual Status	Remarks	removed	fitted
G 04.02	Oscillation Dämper OD 101(S/N2)	Filling Port	HSS	on Filling plate	2	off	off			
G 05.01	ESD Cap P1-3	PACS ESD CB	SVM -Z	CB 313100	1	on	on			26.10.07 Lang
G 05.02	ESD Cap P2-3	PACS ESD CB	SVM -Z	CB 313100	1	on	on			26.10.07 Lang
G 05.03	ESD Cap P7-3	PACS ESD CB	SVM -Z	CB 313100	1	on	on			26.10.7 Lang
G 05.04	ESD Cap P8-3	PACS ESD CB	SVM -Z	CB 313100	1	on	on			26.10.07 Lang

Herschel H-EPLM Integration Status for MIP OBS-TS closure after PACS cleaning

Status: 22.11.2007

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Equipment / CI-No.	Integr. Date	Model, Serial No	ABCL Ref. (or EIDP)	Qualified	Remarks / Open Work / NCR's
121110 CVV	(02.06.05)	PFM, SN01	HP-2-APCO-AB-0043, Issue 1, 19.01.05	y	NC-1161: One flange bolt broken at 30 Nm, torque reduced to 28 Nm, NC is closed. 09.12.05: 12 bolts removed for pull test & replaced by new ones from stock NC-1257: Positions of harness fixation brackets on CVV changed
121111 CVV Upper Bulkhead		PFM, SN01	HP-2-APCO-AB-0043, Issue 1, 19.01.05	y	NC-1174: Leakage at seal I/F to filling port; status of top plate see cryo cover 121131. Re-mated; NC-2558: Traces of contamination/corrosion found inside UB Molecular wipes taken, no aggressive radicals included, use as is for STM2. CVV screws preliminary mated: only each 4th screw inserted and torqued with 24Nm 27.07.2006 HP-2-ASED-SD-0116_REWORK OF SEALING SURFACE ON UPPER BULKHEAD AND FILLINGPORT performed (closeout of NC-1174) NC-1476: 2 stand-offs are detached, repair is open work Final integration of all I/F screws and torque with MA= 25Nm and second torque, final with MA= 31Nm , performed on 14.08.06 Screws LN 65056, 056-08028 charge FA 05/2146, nuts LN 65410-08, charge FA 05/2146 Removed acc. PR-0049 Issue2 23.03.2007 R.K. Preliminary Integration acc.PR-0064 T.B. Removal after Leaktest acc.PR-0049.2 T.B. Preliminary Integration acc.PR-0064 H.G.. Removal for PACS FPU final el. connection acc.PR0049 H.G.
121112 CVV cylinder	15.10.04	PFM, SN01	HP-2-APCO-AB-0043, Issue 1, 19.01.05	y	Integration acc. to HP-2-ASED-PR-0020 /-0021 Report: HP-2-ASED-RP-0145 on 1.2.05: check of helicoils M8x1 on flanges, 5 helicoils on upper flange exchanged HP-2-ASED-SD-0115_RE- FASTENING OF CONNECTORS MOUNTED ON CVV CYLINDER_performed on 28.07.06 For integration and torque of I/F screws, See UB and LB
121112 Dummy receptacles on FT J03 and J04	21.03.05	PFM			FT J03 and J04 not used for wiring, integrated dummies are leak tested
121113 CVV Lower Bulkhead	06.06.07	PFM, SN01	HP-2-APCO-AB-0043, Issue 1, 19.01.05	y	Remated CVV screws preliminary mated: only each 4th screw inserted and torqued with 24Nm Final integration of all I/F screws and torque with MA= 25Nm and second torque, final with MA= 31Nm performed on 14.08.06 Screws LN 65056; 056-08028 ; charge FA 05/2146 Nuts LN 65410-08, charge FA 05/2146 Removed acc. PR-0049 Issue2 23.03.2007 R.K. Final Integration acc. PR-0023 Iss2 T.B.
121114 Radiator on -Z		PFM	HP-2-APCO-AB-0052, issue 2, 28.09.05	y	2 Parts pre-integration on 17.9.05 Integration acc. to HP-2-APCO-MA-0048 Both removed 05.04.2006
121115 Radiator on +Y		PFM	HP-2-APCO-AB-0052, issue 2, 28.09.05	Y	2 Parts, NC-1508: MLI too short, bolt torque 29 Nm Integration acc. to HP-2-APCO-MA-0048 NC-1851; Upper part removed on 19.12.05 due to interference with HSS strut 5, radiator reworked, new bracket added. Upper part re-installed 10.01.2006, bolt torqued 29 Nm

Equipment / CI-No.	Integr. Date	Model, Serial No	ABCL Ref. (or EIDP)	Qualified	Remarks / Open Work / NCR's
					Both removed 31.03.2006
121116 Radiator on -Y		PFM	HP-2-APCO-AB-0052, issue 2, 28.09.05	y	Lower part removed 16.11.05; reintegrated 15.12.2005 Removed 30.03.2006
121117 IMT Crown	05.08.06	FS	HP-2-ASED-DW-0135		Glued and screwed to PFM Top Plate acc. to DW-0135, same configuration as used on EQM-PLM
121118 Heaters, TC's and PT1000 for TB/TV test on CVV,	27.08.2007	PFM Instrumentation	HP-2-ASED-PL-0046 Iss.1	n a	NC-1595: Heater burnt during TB/TV test Removed the damaged heaters on LBH acc- PR-0097 and integrated new test heaters on CVV_05_LB; CVV_06_LC-pz and CVV_35_LB
121121-01 TSS chain pos. 1	23.12.04	PFM, SN 18	HP-2-ECD-AB-0001, Issue 1, 29.07.04	y	Pre-integrated on 23.12.04, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-01 TSS chain pos. 2	03.01.05	PFM, SN 3	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-01 TSS chain pos. 3	03.01.05	PFM, SN 7	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-01 TSS chain pos. 4	03.01.05	PFM, SN 13	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-01 TSS chain pos. 5	03.01.05 19.07.06	PFM, SN 16	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05, one washer at Th. Shield 3 had to be reworked in order to remove an interference with the shield bracket Thermal bonding jumper integrated, isolation stand-offs for SPIRE JFET harness fixed iaw. ASE- SD-0101. load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-01 TSS chain pos. 6	03.01.05 19.07.06	PFM, SN 4	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05 Thermal bonding jumper integrated, isolation stand-offs for SPIRE JFET harness fixed iaw. ASE- SD-0101. load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-01 TSS chain pos. 7	03.01.05	PFM, SN 2	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN
121121-01 TSS chain pos. 8	03.01.05	PFM, SN 14	"	Y	Pre-integrated on 03.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 9	04.01.05	PFM, SN 11	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 10	04.01.05	PFM, SN 9	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 11	04.01.05	PFM, SN 17	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 12	04.01.05	PFM, SN 6	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 13	04.01.05	PFM, SN 5	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 14	04.01.05	PFM, SN 12	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 A cut was missing in outer MLI blanket. Photos taken, cut made with sharp scissors load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm

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121121-02 TSS chain pos. 15	04.01.05	PFM, SN 15	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-02 TSS chain pos. 16	04.01.05	PFM, SN 8	"	Y	Pre-integrated on 04.01.05, adjusted and tensioned on 17.1.05 load cells remounted on 07.08.06 adjusted to 5-6kN; adjustment 26.10.06 to 25 Nm
121121-04 Strap pre-tensioning devices	22.-24.09.04	PFM	HP-2-ECD-AB-0001, Issue 1, 29.07.04	y	Leak test after integration was successful
121122-01 Upper SFW	19.10.04 19.07.06	PFM	HP-2-HTSZ-LI-0008 Iss. 2, 23.10.03	y	Lateral struts adjusted and 21 Nm applied on bolt nuts; wire locking on all struts performed ASED-NC-0481, X-ray investigation of all strut fittings performed, all are ok. New Al-angles and Vespel stand-offs glued with EC 2216 on Y-side of frame, SD-0101
121122-02 Lower SFW	05.05.04 27.06.06	FM, SN 01	HP-2-HTSZ-LI-0008 Iss. 2, 23.10.03	y	wire locking on struts performed; New stand-offs and sensors on LSFW acc. to ASED-SD-0100 Harness Brackets Struts SLI on LSFW installed acc to ACR:SD-0102
121131 Cryo Cover incl. Top Plate	22.05.07	PFM, SN 01	HP-2-AAE-AB-0002, Issue 2, 07.03.05	y	NC-2316: Rework on cryo cover mirror, mirror polished. Deintegrated and shipped to AAE 02.04.2007 K.R. Final Integrated acc. PR-0091 22.05.2007 K.R.
121132 Cryo Baffle	22.05.07	PFM, SN-01	HP-2-AAE-AB-0003, issue 2, 31.05.05	y	HP-2-AAE-MA-0004 Baffle cover removed for inspection on 7.12.05, re-mounted on 22.12.06 Removed 05.04.2006 HP-2-ASED-SD-0093 Final Integrated acc. PR-0091 22.05.2007 K.R.
121140 Optical Bench Assembly	into CVV on 24.01.05 24.07.06	PFM, SN 003	HP-2-SEN-AB-0002 Issue 2, 16.11.04 additional holes acc. to NC-0678 and HP-2-ASED-ID-0096 OBHCL1 modified iaw. HP-2- ASED-DW-0234-01-0A	y	NC-0644: Several heli-coils were not mounted properly, replaced by ASED NC-0565: Cooling loop interference, rework performed by AIRL NC-0961: OBA labels covered with AL-tape MLI Straylight covers mounted on L 0 -Pod MLI SPIRE cooler pump and evaporator , Stray Light Cover, L 0 -Pod MLI SPIRE Detector , Stray Light Cover, HIFI LO, PACS Cooler Pump and Evaporator, PACS LO, according to HP-2-ASED-PR-0059_as run OBA cooling loop: straylight protection orifices mounted on inlet, add. holes for T-sensors drilled in OBHCL1 iaw. HP-2-ASED-DW-0234-01-0A
121140 L0 Light tightness devices	19.01.05	PFM	HP-2-SEN-AB-0002 Issue 2, 16.11.04 (HP-2-SEN-DW-2200)	y	incl. harness routing, modified acc. to ASED-SD-0101
121140 OBA	24.01.05	PFM	OBA integration status list of 24.01.05	y	shimmed and aligned Tubing fit check: 4 mm offset in X-dir. OBA outlet tube / shield inlet, on 1.2.05 adjusted with 2 mm shims at tripod
121141 Fixation bars for HIFI harness brackets	04.01.2005	PFM	HP-2-ASED-DW-0080-01-0A, NC-0678	n. a.	4 additional holes drilled into OB plate acc. to HP-2-ASED-ID-0096-01-0A "OB Fixation Bar I/F", four harness bracket nuts mounted with one screw each, see NC-0678 Cut-out Cover 3 removed 11.05.2006
121142 OB instrument shield		PFM	HP-2-SEN-AB-0002 issue 2, 16.11.2004	y	Pre-integration acc. to HP-2-ASED-DW-0140-01-0A NC-0961: OBA labels covered with AL-tape Harness for T211, T212, T213 connected and tested AL-tapes applied on gaps for straylight protection OBS plate and OBS mounted according to HP-2-ASED-PR-0064 on 24.07.06 NC-xxxx: OBS plate reworked, see pics. 1082 & 1083 of 21.7.06 Removal for PACS FPU final el. connection acc. PR0049 H.G. Final integration acc. PR-0064 K.R. Removal acc. PR-0049 Iss.3 20.11.2007

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121142-01 HIFI Baffle Assy	21.07.06	PFM	HP-2-ASED-DW-0090-01-0A HP-2-ASED-DW-0130-01-0A HP-2-ASED-DW-0131-01-0B	y	De- integrated from PLM 26.04.2006, re-mounted acc. to PR-0064. FPU baffle DW-0130 and OBS baffle DW-0131 are black anodized.
121144 Thermal links					Integration of thermal flex links is reported in HP-2-ASED-SD-0004
121144-01 PACS Evaporator, L0 Open Pod	11.6.04 11.07.07	H-0400-E-150	HP-2-AIRL-AB-0002, issue 1, 27.05.2004	y	Integrated by Airl (protective cover installed) Integr. procedure: HP-2-AIRT-PR-0001 Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS Evaporator flex link	08.05.07 11.07.07	2000_14C101 S/N:1	HP-2-AIRL-AB-0002, issue 1, 27.05.2004	y	integr. by ASEd acc. to HP-2-ASED-PR-0026 NC-0807: Thermal I/F improved:CQM removed 19.04.2007 Geiger;NC-3256 Re-Integration acc-PR-0086 T.Bayer 08.05.2007 Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 SPIRE Evaporator, L0 Open Pod	11.6.04	H-0400-E-149	HP-2-AIRL-AB-0002, issue 1, 27.05.2004	y	Integrated by Airl (protective cover installed) Integr. procedure: HP-2-AIRT-PR-0001
121144-01 PACS L0 cooler evaporator rigid pod	26.11.04 11.07.07	H-0400-E-121	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 cooler evaporator flex link	13.01.05 11.07.07	H-0400-E-110	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	integr. by ASEd acc. to HP-2-ASED-PR-0026 Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 cooler pump rigid pod	26.11.04 11.07.07	H-0400-E-105	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 cooler pump flex link	08.05.07 11.07.07	2000_14C102 S/N1	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	integr. by ASEd acc. to HP-2-ASED-PR-0026 NC-0807: Thermal I/F improved CQM removed 19.04.2007 Geiger;NC-3256 Re-Integration acc-PR-0086 T.Bayer 08.05.2007 Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 red detector rigid pod	11.07.07	H-0400-E-108	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 red detector flex link	08.05.07 11.07.07	520_5119_2A S/N.III	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	integr. by ASEd acc. to HP-2-ASED-PR-0026, NC-0434; NC-0807: Thermal I/F improved CQM removed 19.04.2007 Geiger;NC-3256 Re-Integration acc-PR-0086 T.Bayer 08.05.2007 Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 blue detector rigid pod	20.01.05 11.07.07	H-0400-E-122	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 PACS L0 blue detector flex link	07.05.07 11.07.07	520_5118_2A S/N:II	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	integr. by ASEd acc. to HP-2-ASED-PR-0026; fixed to MTD on 08.02.05 NC-0807: Thermal I/F improved CQM removed 19.04.2007 Geiger;NC-3256 Re-Integration acc-PR-0086 T.Bayer 07.05.2007 Final integrated on PACS acc. PR-0089 by MPE 10.07.07
121144-01 SPIRE L0 cooler evaporator	06.12.04	H-0400-E-117	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	NC-0571: defect heli-coils replaced by ASEd NC-2301: Discolouration of gold plating

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rigid pod					
121144-01 SPIRE LO cooler pump rigid pod	06.12.04	H-0400-E-117	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	NC-0571: defect heli-coils replaced by ASED NC-2301: Discolouration of gold plating
121144-01 SPIRE LO SM detector rigid pod	26.11.04	H-0400-E-106	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	
121144-01 HIFI LO rigid pod	06.12.04	H-0400-E-107	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	NC-0571: defect helicoils replaced by ASED
121144-01 HIFI LO flex link	24.07.2007	H-0400-E-114 STM	HP-2-AIRL-AB-0004, issue 2, 29.09.2004	y	NC-0434; SRON-NC-0653: Modified by removing 10 Cu-layers, perf. on 5.4.05 Removed on 12.07.06 H.G.; N/A for STM2 test Final integration H.G. acc. HP-2-ASED-PR-0090_1
121144-02 L1 PACS Photometer Thermal Link	10.02.05 11.07.07	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Torque on M4: 2.1 Nm + RT; Torqued with 3,25 Nm Final integrated on PACS acc. PR-0089 by MPE & H.G: 11.07.07
121144-02 L1 PACS Collimator Thermal Link	08.02.05 11.07.07	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Torque on M4: 2.1 Nm + RT; Torqued with 3,25 Nm Final integrated on PACS acc. PR-0089 by MPE & H.G: 11.07.07
121144-02 L1 PACS Spectrometer Thermal Link	08.02.05 11.07.07	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Torque on M4: 2.1 Nm + RT; Torqued with 3,25 Nm Final integrated on PACS acc. PR-0089 by MPE & H.G: 11.07.07
121144-02 L1 SPIRE 1 Thermal Link	29.05.06	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Procedure Variation on torque: M4: 2.1 Nm + RT; M8: 10.5 Nm acc. to SPIRE ICD Remounted acc HP-2-ASED-PR-0061_1
121144-02 L1 SPIRE 2 Thermal Link	29.05.06	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Remounted acc HP-2-ASED-PR-0061_1 Final integration H.G. acc. HP-2-ASED-PR-0090_1
121144-02 L1 HIFI Thermal flex Link	24.07.2007	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Torque on M4: 2.1 Nm + RT Removed on 12.07.06; N/A for STM2 test
121144-03 L3 JFET 6 (P) Thermal Link	29.05.06	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Remounted acc. HP-2-ASED-PR-0061_1
121144-03 L3 JFET 2 (S) Thermal Link	29.05.06	PFM	HP-2-AIRL-AB-0003 issue 1, 30.07.2004		Remounted acc. HP-2-ASED-PR-0061_1
121210 HTT	25.5.04	PFM, SN01	HP-2-AIR-AB-0001 Iss. 2, 22.7.04	y	
121221 PPS	10.6.04	PFM, SN01	HP-2-LIND-AB-3511 Iss. 4, 19.1.04	y	NCR-0256 Helicoflex HN 100 used instead of HN 200
121222 DLCM 1	25.5.04	PFM, SN01	HP-2-LIND-AB-4511 Iss. 4, 19.1.04	y	-y position, Ty-rap fixed with AL-tape, NCR-0256 Helicoflex HN 100 used instead of HN 200; SLI covered acc. to ASED-PR-0059
121222 DLCM 2	25.5.04	FM, SN02	HP-2-LIND-AB-4512 Iss. 4, 19.1.04	y	+y position, Ty-rap fixed with AL-tape, NCR-0256 Helicoflex HN 100 used instead of HN 200; SLI covered acc. to ASED-PR-0059

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121223 Cryo Components					General: all VCR initially torqued 45°, after detecting leak at V701/702 25° added to each valve VCR connection around lower SFW
121223-01 L101	25.5.04	PFM, SN01	HP-2-LIND-AB-5611 Iss. 3, 28.11.03	y	+y position NCR-0256 Helicoflex HN 100 used instead of HN 200 See NCR HP-2-ASED-NC-121223-ASED-NC-2339 pin bended Protection cover removed prior to cryostat closure
121223-01 L102	03.05.07	FM, SN02	HP-2-LIND-AB-5612 Iss. 3, 28.11.03	y	+y / -z position NCR-0256 Helicoflex HN 100 used instead of HN 200 Protection cover removed prior to cryostat closure NC-2659: LLP L 102 Zero reading on SCOE STM2 Ex-changed the L102 acc. PR-0088 03.05.07 M.L.
121223-02 L 701	03.05.07	PFM, SN 03	HP-2-LIND-AB-5513 Iss. 3, 28.11.03	y	Protective cover removed before LBTS1 mounting Protection cover removed prior to cryostat closure NC-2590: Ex-changed the L701 acc. PR-0088 03.05.07 M.L. (leak)
121223-02 L 702	29.03.04	FM, SN 02	HP-2-LIND-AB-5512 Iss. 3, 28.11.03	y	Protective cover removed before LBTS1 mounting Protection cover removed prior to cryostat closure
121224-02 H 701	30.07.04	FM 03	HP-2-ASED-DP-0035 Iss. 1, 17.03.04	y	incl. connector brackets
121224-02 H702	30.07.04	FM 04	HP-2-ASED-DP-0035 Iss. 1, 17.03.04	y	incl. connector brackets
121224-02 H103	3.8.04	FM01	HP-2-ASED-DP-0035 Iss. 1, 17.03.04	y	SLI covered acc. to ASED-PR-0059
121224-02 H104	3.8.04	FM02	HP-2-ASED-DP-0035 Iss. 1, 17.03.04	y	SLI covered acc. to ASED-PR-0059
121224-03 Ventline Heater H501	13.05.05	PFM, SN 1	HP-2-LIND-AB-7511, Issue 2, 17.03.05	y	Part of harness integrated by ASED acc. to CCH-PFM Wiring list NC-2305: Power cables of H501 partially bent.
121225 RD 724	29.03.04	FM2, SN 311148/4	HP-2-ASED-DP-0042 Iss. 1, 18.03.04	y	NC-0212: Mounted with HN 100 seal instead of HN 200; HP-2-ASED-DP-0042 includes Rembe EIDP HP-2-REMB-DP-0081(1) protective cover removed, RD housing SLI covered acc. to ASED-PR-0059
121225 RD124	24.11.04	FM1, SN 311148/9	HP-2-ASED-DP-0042 Iss. 1, 18.03.04	y	NC-0212: Mounted with HN 100 seal instead of HN 200 HP-2-ASED-DP-0042 includes Rembe EIDP HP-2-REMB-DP-0081(1) SLI covered acc. to ASED-PR-0059, protective cover removed
121226-01 SV 723	24.11.04	FS2, SN IA-81824/1/4	HP-2-ASED-DP-0040 Iss. 1, 18.03.04	y	with VCR coupling SLI covered acc. to ASED-PR-0059
121226-01 SV 123	26.01.05	FM1, SN IA-81824/1/1	HP-2-ASED-DP-0040 Iss. 1, 18.03.04	y	with flanges, helicoflex seals installed, final torque on flange bolts applied fits without the shims from the dummy!
121226-02 SV 521	16.09.05	SN 02	Swagelock SS-12C-VCR-WD-5 HP-2-ASED-TR-0097, issue 1, 26.09.05	y	Qualified acc. SD-0136 see NC-2452
121226-03 SV 921		SN 02	HP-2-ASED-DP-0039, issue -, 16.03.04	Y	Flange 922-3, +plate 922-2 mounted on -Y M6 x 35 Fixationscrews torqued with 7 Nm acc. to Stoehr drwing 08-616 issue 05.05.03 Vacuumpump mounted on SV921 place; 07.08.06 SV921 should be tested after Mech.Test AI: Hans Huber

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					SV921 is tested acc.SD-0136 see NC 2452 SV921 integrated acc. HP-2-STOE-ID-0001 H.Huber 19.01.2007 T=7 Nm; Removed for Evacuation TB/TV test;J.Huber 23.01.2007; re-integrated acc. HP-2-STOE-ID-0001 H.Huber 23.01.2007; Removal after abort 27.01.2007 Huber; Vacuum pump mounted Installed for restart TB/TV test 04.02.2007 A.Runge; Removed after TB/TV test acc.SD-0151 28.02.2007 A.Runge; re-installed for Transport acc. PR-0036 05.03.2007 Huber J. Removed acc PR-0045 Issue2 R.K. 23.03.07
121226-03 SV 922	07.08.06	SN 03	HP-2-ASED-DP-0039, issue -, 16.03.04	Y	Flange 922-2, +plate 922-4 mounted on +Y M6 x 35 Fixationscrews torqued with 7 Nm acc. to Stoehr drwing 08-616 issue 05.05.03 SV 922 should be tested after Mech.Test AI: Hans Huber SV 922 is tested acc. SD-0136 see NC 2452
121227 Adsorbers	23.05.07 14.08.07	- X-FM SN ?? +X-FM SN 05- SN 21	HP-2-ASED-DP-0064	y	Not mounted since not needed on STM level Non used I/Fs covered with SLI blankets and tape, ref. HP-2-ASED-PR-0059-1_as_run Final integrated of 3 Adsorbers at lower Part acc. PR-0094 Final integrated of 17 Adsorbers at upper part acc.PR-0094 14.08.2007
121228-01 External Filling Port	10.08.06	PFM	HP-2-LIND-AB-6611, iss. 3, 13.12.04	y	External Filling Port Re-integrated on 10.08.06 Viton ring 169,2x 5,7 STM taken, MA 7,5 Nm Pressure plate S/N 02 PFM integrated 10.08.06 torqued with 10Nm Helicoflex seal HNV 200 batch 138512/ 03; 29.09.2005 used
121228-02 Internal Filling Port with OD 101		PFM OD; SN 2	HP-2-LIND-AB-6511 Iss. 4, 11.02.05	y	LIND-NC-0546: Weak design, stiffener bonded on tube weld on 11.02.05 ASED-NC-0905: I/F from Y201 transferline to the ext. FP did not fit, repaired, closed NC-1174: I/F sealing surface reworked according to HP-2-ASED-SD-0116_REWORK OF SEALING SURFACE ON UPPER BULKHEAD AND FILLINGPORT Helicoflex sealing used HN200, Helicoflex 122.3 x 132.1 x 4.9 Retorqued finally to MA: 24,3Nm OD 101 integrated 24.10.06, OD removed according DW at ESTEC 16.11.2006
121228-02 Thermal Strap (filling port to TS1)	19.05.05	PFM	HP-2-AIRT-ID-1084-00-A1, 05.01.05		Improved according to HP-2-ASED-PR-0059
121231 V 105	23.11.04	FM1, SN 3R	HP-2-ASIP-AB-0004 Iss. 3, 29.09.04	y	HP-2-ASIP-RD-0001/-0002/-0003/-0004, HP-2-ASED-RD-0024 SLI covered acc. to ASED-PR-0059
121231 V 701	23.11.04	FM3, SN 5R	HP-2-ASIP-AB-0006 Iss. 3, 11.10.04	y	HP-2-ASIP-RD-0001/-0002/-0003/-0004, HP-2-ASED-RD-0024 SLI covered acc. to ASED-PR-0059
121231 V 702	23.11.04	FM4, SN 6R	HP-2-ASIP-AB-0007 Iss. 3, 21.10.04	y	HP-2-ASIP-RD-0001/-0002/-0003/-0004, HP-2-ASED-RD-0024 NC-0812: Incorrect pin allocation for heater foil, use as is, change on EGSE harness SLI covered acc. to ASED-PR-0059
121231 V102	15.04.05	FM 5, SN07	HP-2-ASIP-AB-0008 Iss. 3, 02.11.04	y	NC-0530: Pull in current scatter high - use as is. NC-0011/NC-0017: Change from Cajon- to Hope glands EI- I/F Connector covered with kapton acc. To NCR 2437. MLI cover (BBP 1413, 1641 SBP 400-08) repaired iaw. NC-1609 and applied, stainless steel bonding leads mounted; ASED- PR-0060
121231 V103	15.04.05	FM 8, SN10	HP-2-ASIP-AB-0012 Iss. 2, 04.03.05	y	NC-0011/NC-0017: Change from Cajon- to Hope glands EI- I/F Connector covered with kapton acc. To NCR 2437. MLI cover (BBP 1408, 1577

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					SBP 400-10) repaired iaw. NC-1609 and applied, stainless steel bonding leads mounted;ASED-PR-0060
121231 V104	24.02.2005	FM 7, SN09	HP-2-ASIP-AB-0010 Iss. 3, 28.01.05	y	NC-0011/NC-0017: Change from Cajon- to Hope glands El- I/F Connector covered with kapton acc. To NCR 2437. MLI cover (BBP 1482, 1470 SBP 400-09) repaired iaw. NC-1609 and applied, stainless steel bonding leads mounted; ASED-PR-0060
121231 V106	15.04.05	FM 9, SN11	HP-2-ASIP-AB-0013 Iss. 2, 17.03.05	y	NC-0011/NC-0017: Change from Cajon- to Hope glands El- I/F Connector covered with kapton acc. To NCR 2437. MLI cover (BBP 1510, 1488 SBP 400-01) repaired iaw. NC-1609 and applied, stainless steel bonding leads mounted; ASED-PR-0060
121232 Liquid Helium Valve V 501	22.08.05	FM 10 S/N 12	HP-2-ASIP-AB-0014, issue 2, 15.06.05	y	Valve 501 should be tested after Mech.Test AI: Hans Huber Valve 501 is tested see NC 2452
121232 Liquid Helium Valve V 503	22.08.05	FM 11 S/N 13	HP-2-ASIP-AB-0015, issue 2, 15.06.05	y	
121232 Liquid Helium Valve V 504	22.08.05	FM 12 S/N 14	HP-2-ASIP-AB-0016, issue 2, 07.07.05	y	
121232 Liquid Helium Valve V 505	22.08.05	FM 13 S/N 15	HP-2-ASIP-AB-0017, issue 2, 07.07.05	y	
121241-01 HTT HST	see below & 19.06.06	PFM, SN01	HP-2-AIRT-AB-0003 Iss. 2, 22.07.04	y	Pipe supports improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support, see as run
121241-01 Line 1 of HOT HST	y		HP-2-AIRT-AB-0001 (2)	y	mounted with 3 brackets on HTT
121241-01 Line 1	y		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 16	y		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Line 2	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 15	11.6.04 & 29.06.06		HP-2-AIRT-AB-0003 (2)	y	Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run
121241-01 Support bkt 17	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 18	11.6.04 & 29.06.06		HP-2-AIRT-AB-0003 (2)	y	Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run
121241-01 Line 3	11.6.04		HP-2-AIRT-AB-0003 (2)	y	NCR-279, holes elongated to fit to SV123 (angular displacement at I/F flange) NCR-273, tube re-bent to fit to V104
121241-01 Support bkt 6	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 19	11.6.04		HP-2-AIRT-AB-0003 (2)	y	

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121241-01 Line 4	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 1	8.6.04 & 19.06.06		HP-2-AIRT-AB-0003 (2)	y	Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run, SLI covered acc. to ASED-PR-0059
121241-01 Support bkt 9	8.6.04 & 19.06.06		HP-2-AIRT-AB-0003 (2)	y	Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run SLI covered acc. to ASED-PR-0059
121241-01 Support bkt 27	8.6.04 & 19.06.06		HP-2-AIRT-AB-0003 (2)	y	Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run SLI covered acc. to ASED-PR-0059
121241-01 Support bkt 11,12,13	8.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 14	8.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Line 5	19.01.05		HP-2-AIRT-AB-0005 (2)	y	to filling port
121241-01 Support bkt 5 & 35	19.01.05 & 19.06.06		HP-2-AIRT-AB-0005 (2)	y	Pipe supports 5 & 35 improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run
121241-01 Line 6	11.6.04		HP-2-AIRT-AB-0003 (2)	y	NCR-273, I/F problems corrected by re-bending
121241-01 Support bkt 31	8.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 22,23,24	8.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 25,26	8.6.04 & 19.06.06		HP-2-AIRT-AB-0003 (2)	y	Pipe supports 25 & 26 improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run Supports 25 & 26 SLI covered acc. to ASED-PR-0059
121241-01 Line 7	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 3	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Line 8	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 2	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Support bkt 4	11.6.04		HP-2-AIRT-AB-0003 (2)	y	
121241-01 Line 9	19.01.05		HP-2-AIRT-AB-0005 (2)	y	SV 123 to FP wire locking done
121241-01 Support bkt 20	y		HP-2-AIRT-AB-0005 (2)	y	
121241-01 Support bkt 34	y & 13.07.06		HP-2-AIRT-AB-0005 (2)	y	Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run

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121241-01 Support bkt 36	y		HP-2-AIRT-AB-0005 (2)	y	
121241-02 HOT HST	on HTT		HP-2-AIRT-AB-0001 Iss. 2, 22.06.04	y	HOT HST "red tags": All removed before LBTS1 mounting <ul style="list-style-type: none"> Flushing system Manometer Tooling bracket / support, pressure sensor line Tooling cap pressure sensor line
121241-02 Line 1	on HTT		HP-2-AIRT-AB-0001 (2)	y	
121241-02 HOT HST Bkt 7	15.12.04 & 19.06.06		HP-2-AIRT-AB-0001 (2)		mounted on lower SFW Pipe support improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run
121241-02 HOT HST Bkt 10	on HTT		HP-2-AIRT-AB-0001 (2)		
121241-02 HOT HST Bkt 11	on HTT		HP-2-AIRT-AB-0001 (2)		
121241-02 HOT HST Bkt 12	on HTT		HP-2-AIRT-AB-0001 (2)		
121241-02 Line 2	6.5.04		HP-2-AIRT-AB-0001 (2)	y	wire locking line 2 to line 3 done NC-0817: wrong routing, clash with TS, reworked to fit by bending - closed
121241-02 HOT HST Bkt 5	6.5.04		HP-2-AIRT-AB-0001 (2)		
121241-02 HOT HST Bkt 6	6.5.04		HP-2-AIRT-AB-0001 (2)		
121241-02 Line 3	6.5.04		HP-2-AIRT-AB-0001 (2)	y	30.6.06: Thermal connection of Line 3 to LSFW improved by mounting a Cu-wire between tube and frame.
121241-02 HOT HST Bkt 2	6.5.04		HP-2-AIRT-AB-0001 (2)		
121241-02 HOT HST Bkt 3	6.5.04		HP-2-AIRT-AB-0001 (2)		
121241-02 Line 4	6.5.04		HP-2-AIRT-AB-0001 (2)	y	wire locking line 4 to line 5 done
121241-02 HOT HST Bkt 1	6.5.04		HP-2-AIRT-AB-0001 (2)		
121241-02 Line 5	6.5.04 14.07.06		HP-2-AIRT-AB-0001 (2)	y	Pipe supports improved wrt thermal behavior in lower HTT area according to HP-2-ASED-SD-0099_Thermal_Decoupling_of_Tubing_Support see as run
121241-02 HOT HST Bkt 9	6.5.04		HP-2-AIRT-AB-0001 (2)		
121242-01 External Tubing		PFM	HP-2-AIRT-AB-0006, issue 2, 02.08.05	y	HP-2-ASED-DW-0180-01, issue A, 19.07.05 Hand rails on Pos. V506 is missing & Part 380 missing(Modification of A-frame); all screws are torqued External Tubing removed 30.04.06 Final Integration of external tubing 22.11.2006 acc. SD 0063

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					Removed acc. SD-0063 Iss.2 22.03.2007
121242-01 External Tubing Brackets		PFM	HP-2-ASED-DW-0158-01, issue A, 25.05.05	y	Removed acc. SD-0063 Iss.2 22.03.2007
121242-04 Nozzle support structure (A-frame)		PFM	HP-2-ASED-DW-0158-01, issue A, 25.05.05	y	NC-1451: Modified for Radiator Mounting See OW124/closed; removed 31.08.05 Integration on 14.09.2005; Removed 15.09.05 -A-Frame blocked the Harness Integration, finally integrated 17.09.05; removed 05.04.06 HP-2-ASED-SD-0063 Final integration 21.11.2006 acc. SD 0063 Removed acc. SD-0063 Iss.2 22.03.2007
121242-05 Nozzles	03.01.2007	FM Large S/N1 Small S/N 1-2	HP-2-AIRT-AB-0006, issue 2, 02.08.05	Y	Acc. HP-2-ASED-DW-0159-01-0B & HP-2-ASED-DW-0180-04-0A NC-1553: Diameter of big nozzle enlarged to 3.3 mm Remove of STM nozzles and integration of FM nozzles acc. SD 0063 ; 21.11.06, removed 3 Nozzles and 2 distance rings on +Y / -Y side. Exchange sealing ring -> Helicoflex reintegration of Nozzles acc. SD-0063 03.01.07
121250 HOT	05.05.04	PFM 02	HP-2-AIR-AB-0002 Iss. 2, 01.07.04 except: new Fix. pads HP-2-ASED-DW-0200-01, A	y	Including 4 adjusted shim pads (FM1 to FM4) between each pad and the lower SFW (ref:HP-2-AIR-DW-2141), shim thickness see HP-2-ASED-PR-0015, para 5.1.12.3* 09.06.05: HOT fixation pads replaced by new ones made from stainless steel, see HP-2-ASED-SD-0098_as_run. Blade thickness 1,21- 1,22mm, old shims from STM campaign used
121263 VG 901 / 902	08.06.05 03.05.07	F-No. 387 / 388 F-No. 394	HP-2-ASED-DP-0036 /1 (Balzers No. BGG 18753)	y	VG 901 see NC-2574: VG 901 not functioning STM2 CVV; Exchange of VG901 (SN387) see NC-2574 03.05.2007 M.L.
121264 Ventline Test Valve V 506	09/2005	SN 02	Swagelock SS-4BG-VCR-HC-TUV HP-2-ASED-TR-0098, issue 1, 23.09.05	y	Valve 506 should be tested after Mech.Test AI: Hans Huber Valve 506 is tested acc. SD.0136 see NC 2452
121311 Lower bulkhead thermal shield 1	25.05.2007	PFM 01	HP-2-AIRS-AB-0003, Issue 1, 17.12.04	Y	Closure of MLI with Cyl. TS on 13.04.05, harness for T421 & T422 connected and tested De-mating 10.05.2006; Re-installed acc.PR-0023 on 03.07.06 Deintegrated 23.03.2007 K.R Final integrated acc.PR-0023 H.G.
121312 Lower bulkhead thermal shield 2	30.05.2007	PFM 01	HP-2-AIRS-AB-0003, Issue 1, 17.12.04	Y	Closure of MLI with Cyl. TS on 20.04.05, harness for T441 & T442 connected and tested NC-0649: I/F holes for T-sensor missing, reworked by ASED, closed. De-mating 10.05.2006; re-installed acc.PR-0023 on 04.07.06 NC-2409: Teflon tube bracket reworked to provide more clearance to TS3 Deintegrated 23.03.2007 K.R Final integrated acc.PR-0023 H.G.
121313 Lower bulkhead thermal shield 3	01.06.07	PFM 01	HP-2-AIRS-AB-0003, Issue 1, 17.12.04	Y	Closure of MLI with Cyl. TS ongoing, harness for T461 & T462 connected and tested De-mating 10.05.2006 Re-installed acc.PR-0023 on 06.07.06 Deintegrated 24.03.2007 K.R Final integrated acc.PR-0023 H.G.
121320 Cyl. Thermal Shields	20.12.04	PFM	HP-2-AIRS-AB-0002, Issue 2, 13.12.04	y	Positioned on Rotary Table around Tanks, supported on AI stands Sensors incl. harness were mounted at AIRS before MLI integration NC-2351: Delamination of NI-coating on cyl. TS1 at TSS 07 I/F, covered with S-425 AI-tape.

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121331 Upper bulkhead thermal shield 1		PFM 01	HP-2-AIRS-AB-0004, Issue 2, 24.02.05	y	Harness for T423, T424 & A421, A422 connected and tested NC-1047: Enlarge cut-out at filling port, reworked, closed NC-2448: Cut-outs at TSS chains 5, 6, 7 enlarged due to new SPIRE harness routing Deintegrated 24.03.2007 K.R Final integrated acc.PR-0064 Iss1 22.10.07 Removal acc. PR-0049 Iss.3 14.11.2007
121331-01 TS1 LOU Baffle		PFM	HP-2-ASED-DW-0125-01-0A		Baffle sheets black anodized acc. to HP-2-ASED-DW-0124-01-0A Modified LOU baffle mounted to TS1 according to HP-2-ASED-SD-0112 Removed acc. PR-0049 T.B. 03.04.07 Final integrated acc.PR-0064 Iss1 22.10.07 Removal acc. PR-0049 Iss.3 14.11.2007
121332 Upper bulkhead thermal shield 2		PFM 01	HP-2-AIRS-AB-0004, Issue 2, 24.02.05	y	24.05.2005: Closure of MLI with Cyl. TS, Harness for T443, T444 connected and tested NC-1043: Cut-out reworked; NC-1098: Broken stand off repaired. Re- integrated; NC-2448: Cut-outs at TSS chains enlarged Deintegrated 25.03.2007 K.R Final integrated acc.PR-0064 Iss1 23.10.07 Removal acc. PR-0049 Iss.3 15.11.2007
121332 Entrance Baffle		PFM	HP-2-AIRS-AB-0004, Issue 2, 24.02.05	y	Re- integrated Removed acc. PR-0049 T.B. 03.04.07 Final integrated acc.PR-0064 Iss1 23.10.07 Removal acc.PR-0049 Iss.3 15.11.2007
121332 LOU Baffle		PFM	HP-2-AIRS-AB-0004, Issue 2, 24.02.05	y	Re- integrated with new HIFI stray light baffle Removed acc. PR-0049 T.B. 03.04.07 Final integrated acc.PR-0064 Iss1 23.10.07 Removal acc.PR-0049 Iss.3 15.11.2007
121332 LOU Window Plate		PFM			Re- integrated acc. to HP-2-ASED-TP-0064 Removed acc. PR-0049 T.B. 03.04.07 Final integrated acc.PR-0064 Iss1 23.10.07 Removal acc.PR-0049 Iss.3 15.11.2007
121333 Upper bulkhead thermal shield3		PFM 01	HP-2-AIRS-AB-0004, Issue 2, 24.02.05	Y	02.06.2005: Closure of MLI with Cyl. TS, Harness for T463, T464 connected and tested NC-1044: Cut-out reworked Re- integrated; NC-2448: Cut-outs at TSS chains enlarged Deintegrated 26.03.2007 K.R Final integrated acc.PR-0064 Iss1 05.11.2007 Removal acc.PR-0049 Iss.3 15.11.2007
121341 MLI on lower bulkhead thermal shields	01.06.07 By AAEM	PFM 01	HP-2-AAEM-LI-0024, Issue 1, 11.08.04	Y	Stand offs inside all 3 LB shields covered with AL tape (close out of open work item) NC-0946: Small damages on MLI repaired MLI at TSS chain feed throughs closed acc. to NC-0950 Partly opened for TS De-Mating 11.05.2006, finally closed 10.07.06 Partly opened for TS De-Mating 26.03.07 AAEM Final closed acc.HP-2-AAEM-PR-0003 J.H.
121342 MLI on cyl. th. shields	by AAEM 11/04	PFM	HP-2-AAEM-LI-0024, Issue 1, 11.08.04	y	MLI was integrated on Cy. Shields by AAEM at AIRS before shields delivery NC-0483: Cut-outs on MLI templates do not fit to cyl. TS, reworked, closed.
121343 MLI on upper bulkheads	01.06.2005 by AAEM	PFM 01	HP-2-AAEM-LI-0024, Issue 1, 11.08.04	Y	Stand offs inside UB shield 1 covered with AL tape, 20.4. (close out of open work item) Partly removed for De-Mating of TS; NC-2295: Damages found on MLI - closed.

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thermal shields	06.07.06 05.11.2007 By AAEM				New final installation 06.07.06 by AAEM see PR-0023; see IR42 Cu bonding leads replaced by steel leads acc. to ASED-PR-0060 NC-2459: MLI repaired with Mylar-VDA tapes, additional SLI patches on TS1 MLI. Partly opened for TS De-Mating 26.03.07 AAEM Final closed acc. HP-2-AAEM-PR-0003 J.H. 05.11.2007 Partly opened for TS De-Mating 16.11.2007 AAEM
121343-02 LOU Baffle MLI		PFM	HP-2-AAEM-LI-0024, Issue 1, 11.08.04	y	NC-1162: LOU Baffle MLI bonding leads not connected for STM Modified and re-integrated and HP-2-ASED-PR-0059_1_AS_RUN See also AAEM-PR-0003 as run
121345 <u>HTT MLI</u>	30.09.-08.10.04	PFM	HP-2-AAEM-LI-0024 Iss. 1.0, 11.08.04 & HP-2-ASED-PR- 0059_1_AS_RUN	y	IRR: HP-2-ASED-MN-0770; Procedure: HP-2-AAEM-PR-0003 (1) See HP-2-ASED-PR-0059_1_AS_RUN: modification performed in order to close open areas and mount SLI patches over Accelerometer, heater, DLCM 1 and 2, H103, H104, not needed interface flanges (Adsorber I/F)
121345 MLI grounding wires	y	PFM	HP-2-AAEM-LI-0024 Iss. 1.0, 11.08.04		See HP-2-ASED-PR-0059_1_AS_RUN
121345-01 LO pods MLI	LB 19.07.06 UB 28.07.06	PFM	HP-2-ASED-DW- 0212/213/....225/226-01-0A		L0 pods SLI covered acc. to HP-2-ASED-PR-0059_1_AS_RUN
121345-02 SV 123 MLI cap	27.07.06	PFM	HP-2-ASED-DW-0204-01-0A		SLI covered acc. to HP-2-ASED-PR-0059_1_AS_RUN
121345-03 PPS MLI cap	27.07.06	PFM	HP-2-ASED-DW-0205-01-0A		SLI covered acc. to HP-2-ASED-PR-0059_1_AS_RUN
Valve MLI covers V102, V103, V104, V105 integrated	27.07.06	PFM			acc. to HP-2-ASED-PR-0059_1_AS_RUN
121345-04 SLI for HTT open areas (tubing, flanges etc.)	27.07.06	PFM	HP-2-ASED-PR-0059-1_as_run		no drwg. issued, as built doc. is the as run procedure.
121346 HOT MLI	16.-19.08.04 & 06.10.04 & 12.06.06	PFM	HP-2-AAEM-LI-0024 Iss. 1.0, 11.08.04		IRR: HP-2-ASED-MN-0729; Procedure: HP-2-AAEM-PR-0003 (1) All integrated on 16.-19.8.04, except closure at accelerometer / harness region, closed on 06.10.04 See NCR: HP-2-ASED-121346-NC-2353 Outer layer tape opened and re-fixed, grounding cable cut and re-crimped with longer cable status 20.06.06 OW 279 closed 21.06.06
121346 MLI grounding wires GP1, GP2	Y	PFM			Grounding cables integrated see EIDP HP-2-ASSE-DP-0006
121347 Filling port MLI	28.07.06	PFM	HP-2-ASED-DW-0227-01-0A HP-2-ASED-DW-0228-01-0A		modified FP MLI mounted acc. to ASED-PR-0060
121348 SLI on (cryo) components at low. SFW	Y	PFM	HP-2-ASED-PR-0059-1_as_run		as built doc. is the as run procedure, all accessible tubing parts covered with SLI; Components covered with SLI: V701, V702, SV723, V105, RD724 flange, P701.

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121351-01 Ext. Lower Bulkhead MLI -Layer 1 -Layer 2 -Layer 3 -Layer 4	02.08.07	PFM	HP-2-AAEM-DP-0005, Iss: 2.0	y	HP-2-AAEM-PR-0004 Removed 28.02.2007 J.H. & AAEM; Visual Inspection performed
121351-02 Ext. CVV Cylinder MLI -Layer 1 -Layer 2 -Layer 3 -Layer 4		PFM	HP-2-AAEM-DP-0005, Iss: 2.0	Y	HP-2-AAEM-PR-0004 Modified in order to give access to P02 Closure of NCR 1508: CVV blankets too short. Repaired for STM, some new blankets needed for PFM MLI at +Y radiator closed on 11.01.06 Removed 23.03.2006 HP-2-ASED-SD-0092; NC-1595
121351-03 Ext. Upper Bulkhead MLI -Layer 1 -Layer 2 -Layer 3 -Layer 4		PFM	HP-2-AAEM-DP-0005, Iss: 2.0	y	HP-2-AAEM-PR-0004 Removed 23.03.2006 HP-2-ASED-SD-0092; NC-1595
121353 LOU MLI		PFM	HP-2-AAEM-LI-0037, issue draft 2, 01.07.05	y	De-integrated
121421-01 T 702	23.07.04	JX 74	HP-2-ASED-DP-0050, Issue 1, 25.04.05	y	C 100
121421-01 T 703	23.07.04	JX 75	HP-2-ASED-DP-0050, Issue 1, 25.04.05	y	C 100
121421-01 T106	3.8.04	JX72	"	y	C100, covered with 5 layer crinkled MLI on 01.04.05
121421-01 T107	3.8.04	JX73	"	y	C100
121421-01 T113	cancelled	KJ 03	"	y	C100 with reduced width, glued to Filling Port, NC-2307: disintegrated on 13.07.06, SD 101
121421-01 T114	cancelled	KJ 09	"	y	C100 with reduced width, glued to Filling Port, NC-2307: disintegrated on 13.07.06, SD 101
121421-01 T 115	18.07.06	KT90	HP-2-ASED-DP-0051, issue 1, 25.04.05	y	PT 1000 ASED-SD-0101, connected to T113 connector
121421-01 T 116	18.07.06	KR34	"	y	PT 1000 ASED-SD-0101, connected to T114 connector
121421-01 Temp. Sensor T117	17.07.06	KV 90	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C 100, electr. checked and torqued 19.07.06 ASED-SD-0101, harness re-routed
121421-01 Temp. Sensor T118	17.07.06	KV 91	"	Y	C 100, electr. checked and torqued 19.07.06 ASED-SD-0101, harness re-routed
121421-01	17.11.04	KO 38	"	Y	C 100, electr. checked and torqued 09.02.05

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Temp. Sensor T202					
121421-01 Temp. Sensor T208	17.11.04	KO 40	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T254	01.12.04	KO 68	"	Y	C 100 electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T256	14.12.04	KO 69	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T258	14.12.04	KO 70	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T221	15.05.2007	KO45	"	Y	C 100, electr. checked and torqued on 09.05.05 removed 19.04.2007 Geiger Final Integration acc.PR-0086 H.G. on Red Detector flex link
121421-01 Temp. Sensor T222	15.05.2007	KO46	"	Y	C 100, electr. checked and torqued removed 19.04.2007 Geiger Final Integration acc.PR-0086 H.G. on Evaporator flex link
121421-01 Temp. Sensor T223	15.05.2007	KO47	"	Y	C 100, electr. checked, torqued NC-0775: broken bolt, closed removed 19.04.2007 Geiger Final Integration acc.PR-0086 H.G. on Cooler Pump flex link
121421-01 Temp. Sensor T224	15.05.2007	KO48	"	Y	C100, electr. checked and torqued 15.02.05 removed 19.04.2007 Geiger Final Integration acc.PR-0086 H.G. on Blue Detector flex link
121421-01 Temp. Sensor T225	14.02.05	KO49	"	Y	C 100, P01 had to be rotated by 180° electr. checked and torqued 15.02.05
121421-01 Temp. Sensor T226	20.07.06	KV89	"	Y	C 100, electr. checked and torqued 20.07.06 (old KO50 replaced by KV89)
121421-01 Temp. Sensor T227	14.02.05	KO51	"	Y	C 100, P01 had to be rotated by 180° electr. checked and torqued 15.02.05
121421-01 Temp. Sensor T228	14.02.05	KO52	"	Y	C 100, electr. checked and torqued 15.02.05
121421-01 Temp. Sensor T231	17.11.04	KO 53	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T232	17.11.04	KO 54	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T233	17.11.04	KO 55	"	Y	C 100, electr. checked and torqued 09.02.05 NC-0683: AI closed by shimming on 3.2.05 NC-1015: broken bolt, fixed with Kapton tape
121421-01 Temp. Sensor T234	17.11.04	KO 56	"	Y	C 100 electr. checked and torqued 09.02.05

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121421-01 Temp. Sensor T235	17.11.04	KO 57	"	y	C 100, electr. checked and torqued 09.02.05 NC-0683: AI closed by shimming on 3.2.05
121421-01 Temp. Sensor T236	17.11.04	KO 58	"	Y	C 100, electr. checked and torqued 09.02.05 NC-0683: AI closed by shimming on 3.2.05
121421-01 Temp. Sensor T237	17.11.04	KO 60	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T238	13.07.06	MH 20	"	Y	PT 1000, electr. checked and torqued 19.07.06 ASED-SD-0101, harness re-routed
121421-01 Temp. Sensor T239	13.07.06	MH 21	"	Y	PT 1000, electr. checked and torqued 19.07.06 ASED-SD-0101, harness re-routed
121421-01 Temp. Sensor T242	11.02.05	KO 61	"	Y	C 100, electr. checked and torqued 11.02.05
121421-01 Temp. Sensor T244	25.07.2007	KO 62	"	Y	C 100, electr. checked and torqued 11.02.05 C 100, electr. checked and torqued 25.07.2007 A.G.
121421-01 Temp. Sensor T248	11.02.05	KO 65	"	Y	C 100, electr. checked and torqued 11.02.05
121421-01 Temp. Sensor T246	17.11.04	KO 63	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T247	17.11.04	KO 64	"	Y	C 100, electr. checked and torqued 09.02.05
121421-01 Temp. Sensor T250	15.02.05	KO66	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C 100, electr. checked and torqued 16.02.05
121421-01 Temp. Sensor T252	15.02.05	KO67	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C 100, electr. checked and torqued 16.02.05
121421-01 Temp. Sensor T212	25.04.05	KO42	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C 100, glued to OB shield with Stycast 2850 ST electr. grounding done with AL-tape
121421-01 Temp. Sensor T213	25.04.05	KO43	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C 100, glued to OB shield with Stycast 2850 ST electr. grounding done with AL-tape
121421-01 T862	17.03.05	KV84	HP-2-ASED-DP-0050, Issue 1, 25.04.05	y	C 100
121421-02 T 321 T 322 T 323 T 324	22.08.05	LS 19 LS 20 LS 25 LS 26	HP-2-ASED-DP-0051, issue 1, 25.04.05	y	PT 1000 on SVM TS

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121421-02 T 501	15.09.05	LS23	HP-2-ASED-DP-0051, issue 1, 25.04.05	y	PT 1000
121421-02 T 505	16.09.05	LS29	"	y	PT 1000
121421-02 T 506	16.09.05	LS34	"	y	PT 1000
121421-02 T 506	16.09.05	LS36	"	y	PT 1000
121421-02 T 601	y	ISO 8	"	y	PT 1000 on cover
121421-02 T 602	y	ISO 9	"	y	PT 1000 on cover
121421-02 T 651	y	KR32	"	y	PT 1000 on cryo baffle
121421-02 T 652	y	KR33	"	y	PT 1000 on cryo baffle
121421-02 T 901		LS27	"	y	PT 1000 Removed during TMS installation 31.05.2007
121421-02 T 902	09.09.05	LS28	"	y	PT 1000
121421-02 T 903	12.09.05	LS38	"	y	PT 1000
121421-02 T 904	12.09.05	LS40	"	y	PT 1000
121421-02 T 905	09.09.05	LS35	"	y	PT 1000
121421-02 T 906	y	LS43	"	y	PT 1000
121421-02 T 907	10.01.06	LS17	"	y	PT 1000; NC-1851: +Y Radiator Upper part removed for repair. Radiator Upper part installed; T907 connected ; NC-1941: one bolt on sensor connector slightly bent, to be replaced for PFM
121421-02 T 908	13.09.05	LS18	"	y	PT 1000
121421-02 T 909	12.09.05	KR20	"	y	PT 1000

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121421-02 T 910	12.09.05	LS30	"	y	PT 1000
121421-02 T 911	12.09.05	LS41	"	y	PT 1000
121421-02 T 912	12.09.05	KO22	"	y	PT 1000
121421-02 T 931	13.09.05	MH22	"	y	PT 1000 on LOU
121421-02 T 932	13.09.05	MH25	"	y	PT 1000 on LOU
121421-02 T 933	y	LS33	"	y	PT 1000 on LOR; final integration after LOR integration
121421-02 T 934	15.09.05	KO23	"	y	PT 1000 with cut ears on LOU
121421-02 T 935	15.09.05	LS42	"	y	PT 1000 with cut ears on LOU
121421-02 T 701	06.08.04	KR 23	HP-2-ASED-DP-0051, Issue 1, 28.01.05	y	PT 1000 NCR: 0354, T701 changed from original SN KO 05 due to broken connector screw
121421-02 T 704	06.08.04	KR 26	HP-2-ASED-DP-0051, Issue 1, 28.01.05	y	PT 1000, T704 changed from original SN KO 09
121421-02 T103	3.8.04	KH10		y	PT1000, covered with 5 layer crinkled MLI on 01.04.05
121421-02 Temp. Sensor T207	17.11.04	KR 27	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000, electr. checked and torqued 09.02.05
121421-02 Temp. Sensor T253	01.12.04	KR 31	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000, electr. checked and torqued 09.02.05
121421-02 Temp. Sensor T255	01.12.04	KT 97	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000, electr. checked and torqued 09.02.05
121421-02 Temp. Sensor T249	15.02.05	KR29	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000, electr. checked and torqued 16.02.05
121421-02 Temp. Sensor T251	15.02.05	KR30	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000, electr. checked and torqued 16.02.05
121421-02 Temp. Sensor T211	25.04.05	KR28	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000, glued to OB shield with Stycast 2850 ST electr. grounding done with AL-tape
121421-02 Thermistor T462 & CCH DCB22 on cyl. thermal shield 3	11 / 04	KU01	HP-2-ASED-DP-0051, Issue 1, 25.04.05; HP-2-CASA-AB-0002, issue 1, 07.07.04	Y	PT 1000 Procedure: HP-2-ASED-TP-0028

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121421-02 Thermistor T442 & CCH DCA 21 on cyl. thermal shield 2	11 / 04	KH13	"	Y	PT 1000 Procedure: HP-2-ASED-TP-0028
121421-02 Thermistor T422 & CCH DCB 21 on cyl. thermal shield 1	11 / 04	KU02	"	Y	PT 1000 Procedure: HP-2-ASED-TP-0028 NC-0504: broken screw, reworked, closed.
121421-02 T801	See remark	KR34	HP-2-ASED-DP-0051, Issue 1, 25.04.05 PT 1000	Y	Procedure: HP-2-ASED-TP-0047, bonded with Stycast 2850 FT acc. to ISO-MP-BEB00.020, Issue 1 on AlMgSi 1Cu washers acc. to HP-2-ASED-DW-0138-01-0B NC-0820: Bonding directly on Ni coated CuBe failed during sample test, NRB: Introduction of additional AlMgSi 1Cu washers acc. to HP-2-ASED-DW-0138-01-0B T801 removed and changed with T 872, harness extended
121421-02 T802	08.03.05	KH11	"	Y	Al tape over sensor "
121421-02 T803	08.03.05	KH12	"	Y	"
121421-02 T804	See remark	KT90	"	Y	T804 removed and changed with T 871, harness extended
121421-02 T805	09.03.05	KT93	"	Y	Al tape over sensor "
121421-02 T806	09.03.05	KT94	"	Y	"
121421-02 T851	09.03.05	KT95	"	Y	Procedure: HP-2-ASED-TP-0046, NC-0820 and bonding remarks as for T801
121421-02 T852	09.03.05	KT98	"	Y	"
121421-02 T853	09.03.05	KU04	"	Y	"
121421-02 T861	17.03.05	KO09	"	Y	"
121421-02 T871 LSFW near TSS 13	20.06.06	LS 39	HP-2-ASED-DP-0051, Issue 1, 25.04.05	Y	PT 1000 Procedure HP-2-ASED-SD-0101_1_PLM MLI modifications_add sensors New sensor, changed with T 804 see SD-0101, Harness extended from T804
121421-01 T872 LSFW near TSS 13	20.06.06	KV 85	HP-2-ASED-DP-0050, Issue 1, 25.04.05	Y	C100 Procedure HP-2-ASED-SD-0101_1_PLM MLI modifications_add sensors New sensor, changed with T 801 see SD-0101, Harness extended from T 801
121421-02 Thermistor T461 & CCH DCA23 on lower bulkh. thermal shield 3	12.01.05	KO20	HP-2-ASED-DP-0051, Issue 1, 25.04.05; HP-2-CASA-AB-0002, issue 1, 07.07.04	Y	PT 1000 Procedure: HP-2-ASED-TP-0045 (NC-0651: M3 holes in connector brackets changed to 4.3, covered by HP-2-ASED-DP-0028, issue 2)
121421-02 Thermistor T441 & CCH	12.01.05	KO12	"	Y	PT 1000 Procedure: HP-2-ASED-TP-0045

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DCB 23 on lower bulkh. thermal shield 2					
121421-02 Thermistor T421 & CCH DCA 22 on lower bulkh. thermal shield 1	12.01.05	KO11	"	Y	PT 1000 Procedure: HP-2-ASED-TP-0045
121421-02 Thermistor T463 & CCH DCE11 on upper bulkh. thermal shield 3	04.03.2005	KO14	"	Y	See also drawing 2547-121430-100-1B-0B, "Herschel PFM Cryostat harness internal CCH & SIH"
121421-02 Thermistor T464 & CCH DCA11 on upper bulkh. thermal shield 3	04.03.2005	KO15	"	Y	See also drawing 2547-121430-100-1B-0B, "Herschel PFM Cryostat harness internal CCH & SIH"
121421-02 Thermistor T443 & CCH DCE12 on upper bulkh. thermal shield 2	07.03.2005	KO13	"	Y	
121421-02 Thermistor T444 & CCH DCB11 on upper bulkh. thermal shield 2	07.03.2005	KO25	"	Y	
121421-02 Thermistor T423 & CCH DCE13 on upper bulkh. thermal shield 1	08.03.2005	LS31	"	Y	
121421-02 Thermistor T424 & CCH DCA12 on upper bulkh. thermal shield 1	08.03.2005	LS32	"	Y	
121422-01 Pressure Sensor P501	01.09.05	PFM S/N 510214	HP-2-ASED-DP-0033 Iss. 1, 16.03.04	Y	
121422-01 P701	13.01.05	FM2, SN 510212	HP-2-ASED-DP-0033 Iss. 1, 16.03.04	y	NC-0307: New design of pressure sensor bracket NC-0442: I/F deviation btw. P701 and int. CCH (different connector types, harness adaptor added)
121422-01 P101	preliminary fixed for test 11.6.04; final mech. integr. 13.1.05	FM1, SN 510211	HP-2-ASED-DP-0033 Iss. 1, 16.03.04	y	NCR-0272, Press sensor dropped NCR-0277, incorrect p. sensor bracket design NCR-0442, P701 harness (CCH CCA11) has a MDM 9P, this will not fit to sensor, ASE / CASA have to make an adaptor to sensor circular connector; adaptors with FM connector (baked) installed on 21.2.05, finally fixed and mated on 9.3.05
121422-01 P101 Support Plate	y			y	
121422-01 P101 bkt (front/rear)	y		NCR-0277	y	NCR-0277, incorrect p. sensor bkt design, corrected, closed

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121422-01 P701 upper / lower bracket	y		NCR - 0307	y	NCR - 0307: re-design and manufacture at AIR, closed
121422-02 Pressure Sensor P502	16.11.06	QM, SN 951634	HP-2-ASED-DP-0032 Iss. 1, 16.03.04	Y	NC-1519: Harness adapter installed for TB/TV test to correct contact problem, adapter removed before sine test Remove of QM 13.06.06 H. Huber Reintegration acc. SD 0063 16.11.06 Torque 20 Nmr.; harness adapter should be integrated see NC-1519; harness adapter integrated 23.11.2006 A.G.
121423 A701	24.9.04	Endevco SN 11837	Endevco Model 2272 HP-2-ASED-TR-0031 /1	y	calibrated together with accel. harness
121423 A702	24.9.04	Endevco SN 11585	"	y	calibrated together with accel. harness
121423 A703	24.9.04	Endevco SN 11841	"	y	calibrated together with accel. harness
121423 Accelerometer (A201 to A206)	3.1.05	Endevco 11842 11840 Endevco 11844 Endevco 11826 Endevco 11851 Endevco 11848	"	y	first Hammertest performed 19.01.05 Observation at A 206 on 18.4.05: Shrink sleeve bend at connector to A 206. Kapton tape wrapped around for protection, health check and noise measurement on 21.4.05 ok.
121423 Accelerometer (A207 and A208)	See remark	Endevco 11865 Endevco 11843		y	PACS MTD accelerometers; Removed 12.04.07 acc. PACS MTD removal T.B. Harness for Accelerometer finally terminated
121423 Accelerometer A421 on upper bulkhead thermal shield 1	xx.03.2005	SN 11847	"	Y	
121423 Accelerometer A422 on upper bulkhead thermal shield 1	xx.03.2005	SN 11850	Endevco Model 2272 HP-2-ASED-TR-0031 /1	Y	
121423 A101	24.9.04	Endevco SN 11833	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A102	24.9.04	Endevco SN 11846	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A103	24.9.04	Endevco SN 11839	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A104	24.9.04	Endevco SN 11849	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A105	24.9.04	Endevco SN 11825	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A106	24.9.04	Endevco SN 11845	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A107	24.9.04	Endevco SN 11832	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121423 A108	24.9.04	Endevco SN 11580	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape

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121423 A109	24.9.04	Endevco SN 11876	"	calibrated	calibrated together with accel. harness; insulated with Kapton tape
121424 HOT Accelerometer block type 1	28.7.04		HP-2-ASED-DW-0046	n.a.	Installed on HOT
121425 Adaptor Block Type 2 (4 x)	3.1.05		HP-2-ASED-DW-0047-01-0A	n.a.	LN 9016 washers used for mounting instead of HV 100
121426 Accel. blocks type 3 (+x / -x)	3.8.04		HP-2-ASED-DW-0059-01-0A	n.a.	(Qty = 2)
121427 Accel. block type 4	24.9.04		HP-2-ASED-DW-0060-01-0A	n.a.	Hammer test on A101 - A109 performed on 27.9.04
121431-01 <u>HOT CCH Bundles</u>			see below	y	From cryo components to Lower SFW CBs Ref: HP-2-ASED-TP-0022 (1) IRR: HP-2-ASED-MN-0729
121431-01 DCE 28	4.8.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	L701 / H701 NCR 0343 - , LLP wiring change (closed)
121431-01 DCE 29	4.8.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	L702 / H702 NCR 0343 - , LLP wiring change (closed)
121431-01 DCB 24	30.7.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	T701 / T703 NC-0833, insulation damaged at HOT HST brkt 7, repaired and checked - closed
121431-01 DCE 24	30.7.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	T702 / T704
121431-01 DCE 25	27.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	A701, 702, 703 hammer test performed on 27.9.04
121431-01 CCH			HP-2-CASA-AB-0011 Iss. 1, 22.02.05	y	AB-0011 is the cover-ABCL for all internal CCH, IRR: HP-2-ASED-MN-0749 ASED-SD-0101: Routing of internal CCH modified
121431-01 DCM22	7.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCM21	7.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCA24	y		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCB25	7.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCE32	6.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCE33	24.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	

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121431-01 DCE34	24.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCM23	2.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	
121431-01 DCE27	2.9.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	
121431-01 DCE30	7.9.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	ASED-NC-0343 (closed): Pin allocation for L101 & L102 corrected
121431-01 DCM24	2.9.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	
121431-01 DCE26	15.9.04		HP-2-CASA-AB-0006 Iss. 1, 10.09.04	y	
121431-01 DCE31	7.9.04		HP-2-CASA-AB-0004 Iss. 1, 28.07.04	y	ASED-NC-0343 (closed): Pin allocation for L101 & L102 corrected
121431-01 DCB17	15.9.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	
121431-01 DCA18	15.9.04		HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	
121431-01 DCE 22	13.01.05		HP-2-CASA-AB-0006 Iss. 1, 10.09.04	y	to A20X
121431-01 DCE 23	13.01.05		HP-2-CASA-AB-0006 Iss. 1, 10.09.04	y	to A20X, DCE 23 re-routed on after OBA fit check on 21.01.2005, see log book and HP-2-ASED-TP-0044
121431-01 DCE 16	23.07.06		Acc.: HP-2-ASED-SD-0101	Y	Harness for new Sensors: T117 (C100; tubing), T118 (C100; tubing), T238 (PT1000; OBA ventline), T239 (PT1000; existing sensor T207
121431-01 DCE 17	10.05.05		HP-2-CASA-AB-0002, issue 1, 07.07.04	y	
121431-01 DCA 17	10.05.05		HP-2-CASA-AB-0002, issue 1, 07.07.04	y	
121431-01 DCB 16	10.05.05		HP-2-CASA-AB-0002, issue 1, 07.07.04	y	
121431-01 DCE 21	xx.03.2005	PFM	HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	
121431-01 DCA 13	02.02.05	PFM	HP-2-CASA-AB-0003 Iss. 1, 20.07.04	y	CCH integration acc. to HP-2-ASED-TR-0065
121431-01 DCB 12	02.02.05	PFM	"	y	
121431-01 DCA 14	03.02.05	PFM	"	y	Thermal brackets not yet fastened - open work #45, closed on 3.2.05
121431-01 DCB 13	03.02.05	PFM	"	y	

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121431-01 DCE 15	03.02.05	PFM	"	y	NC-0766: wires broken (T249), repaired on 15.2.05, NCR closed.
121431-01 DCA 16	02.02.05	PFM	"	y	
121431-01 DCB 15	02.02.05	PFM	"	y	
121431-01 DCE 16	02.02.05 17.07.06	PFM	"	y	Remounted after modifications performed according to ACR-SD-0111 add temp sensor lines
121431-01 CCE11	21.02.2005	PFM	HP-2-CASA-AB-0009, issue 1, 17.12.04	Y	thermal bracket on TSS strap 11
121431-01 CCE12	21.02.2005	PFM	HP-2-CASA-AB-0005, issue 1, 06.08.04	Y	thermal bracket on TSS strap 11
121431-01 CCA11	21.02.2005	PFM	HP-2-CASA-AB-0009, issue 1, 17.12.04	Y	thermal bracket on TSS strap 18
121431-01 CCB11	22.02.2005	PFM	HP-2-CASA-AB-0009, issue 1, 17.12.04	Y	thermal bracket on TSS strap 18
121431-01 CCA12	22.02.2005	PFM	"	Y	thermal bracket on TSS strap 17
121431-01 CCB12	22.02.2005	PFM	"	Y	thermal bracket on TSS strap 17
121431-01 CCE13	22.02.2005	PFM	"	Y	thermal bracket on TSS strap 16
121431-01 CCE14	22.02.2005	PFM	"	Y	thermal bracket on TSS strap 16
121431-01 CCA10	23.02.2005	PFM	"	Y	thermal bracket on TSS strap 8 short jackposts exchanged by long ones to allow mounting of lock washers
121431-01 CCB10	23.02.2005	PFM	"	Y	thermal bracket on TSS strap 8 short jackposts exchanged by long ones to allow mounting of lock washers
121431-01 CCE10	23.02.2005	PFM	"	Y	thermal bracket on TSS strap 8 short jackposts exchanged by long ones to allow mounting of lock washers NC-0825: Two broken wires to T249 & T253, repaired, closed.
121431-01 CCE20	23.02.2005	PFM	HP-2-CASA-AB-0005, issue 1, 06.08.04	Y	thermal bracket on TSS strap 8 short jackposts exchanged by long ones to allow mounting of lock washers
121431-01 CCS11	See remark	SPARE	HP-2-CASA-AB-0009, issue 1, 17.12.04	y	SPARE, will not be integrated, no T/C bracket potted
121431-02 CCH-ICA-10	28.07.05	PFM	HP-2-CASA-AB-0018, issue 2, 29.07.05	y	ext. CCH: HP-2-ASED-TP-0076
121431-02 CCH-ICB-10	27.08.05	PFM	"	y	
121431-02 CCH-ICE-10	y	PFM	"	y	

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121431-02 CCH-ICE-20	y	PFM	"	y	
121431-02 CCH-ICE-11	28.07.05	PFM	"	y	
121431-02 CCH-ICE-12	y	PFM	"	y	
121431-02 CCH-ICE-13	27.07.05	PFM	"	y	
121431-02 CCH-ICE-14	27.07.05	PFM	"	y	
121431-02 CCH-ICA-11	26.07.05	PFM	"	y	
121431-02 CCH-ICA-12	28.07.05	PFM	"	y	
121431-02 CCH-ICB-11	28.07.05	PFM	"	y	
121431-02 CCH-ICB-12	28.07.05	PFM	"	y	
121431-02 CCH-ICE-31	31.08.05	PFM	"	y	
121431-02 CCH-ICE-32	31.08.05	PFM	"	y	
121431-02 CCH-ICE-33	y	PFM	"	y	
121431-02 CCH-ICE-34	y	PFM	"	y	
121431-02 CCH-ICE-36	y	PFM	"	y	
121431-02 CCH-ICA-31	27.07.05	PFM	"	y	
121431-02 CCH-ICB-31	27.07.05	PFM	"	y	

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121431-02 CCH-ICA-33	27.08.05	PFM	"	y	
121431-02 CCH-ICB-33	18.09.05	PFM	"	y	
121431-02 CCH-ICS-31	29.08.05	PFM	"	y	
121431-02 CCH-ICA-34	18.09.05	PFM	"	y	
121431-02 CCH-ICB-34	18.09.05	PFM	"	y	
121431-02 CCH-ICS-36	29.08.05	PFM	"	y	
121431-02 CCH-ICS-32	y	PFM	"	y	
121431-02 CCH-ICS-33	y	PFM	"	y	
121431-02 CCH-ICE-35	27.09.05	PFM	"	y	
121431-02 CCH-ICS-37	y	PFM	"	y	
121431-02 CCH-ICS-38	y	PFM	"	y	
121431-02 CCH-ICA-32	01.08.05	PFM	"	y	NC-1941: one connector bolt bent on 21T907-P01, bolt to be replaced for PFM
121431-02 CCH-ICB-32	17.08.05	PFM	"	y	
121431-02 CCH-ICA-51	See remark	PFM	"	y	HSS Sunshade; not integrated on STM level
121431-02 CCH-ICB-51	See remark	PFM	"	y	HSS Sunshade; not integrated on STM level
121431-02 CCH-ICA-41	22.09.05	PFM	"	y	SVM TS
121431-02 CCH-ICB-41	22.09.05	PFM	"	y	SVM TS

Equipment / CI-No.	Integr. Date	Model, Serial No	ABCL Ref. (or EIDP)	Qualified	Remarks / Open Work / NCR's
121432 Harness anchors (cable support rails)	05.10./ 21.10.04	PFM	2547-121432-155-01-0A HP-2-ASED-DP-0028, iss. 2	n.a.	bonded with EC 2216; on 03.11.04 eight anchors removed and re-bonded in corrected position; position of all anchors checked and now ok. After harness integration lock wires applied on all upper and lower anchors
121432 Thermal bracket Assy on TSS chains 11, 16, 17, 18 (lower SFW)	22.03.05	PFM	2547-121432-156-01-0A 2547-121432-157-01-0A HP-2-ASED-DP-0028, iss. 2	y	Spacer width: 39.2 on chain 11 and 16; Spacer width: 43.2 on chain 17 and 18
121432-01 SIH-CH-01	14.07.06	PFM	HP-2-CASA-AB-0012, iss. 2, 18.04.05	y	finally routed and connected to HIFI CQM, ASED-SD-0110
121432-01 SIH-CH-02	14.07.06	PFM	"	y	finally routed and connected to HIFI CQM, ASED-SD-0110 NC-0816: Width of thermal bracket, reworked by ASED
121432-01 SIH-CH-03	14.07.06	PFM	"	y	finally routed and connected to HIFI CQM, ASED-SD-0110
121432-01 SIH-CH-04	14.07.06	PFM	"	y	finally routed and connected to HIFI CQM, ASED-SD-0110 NC-0816: Width of thermal bracket, reworked by ASED
121432-01 SIH-CH-05	22.03.05 14.07.06	PFM	"	y	FT connector J17 installed with non baked O-ring seal, accepted for this single case.
121432-01 SIH-CS-01 SPIRE J-FET harness	06.05.05 19.07.06	PFM	HP-2-CASA-AB-0013, iss. 1 rev.1, 18.07.05	y	finally routed and connected to SPIRE CQM, re-routed acc. to ASED-SD-0101 NC-0805: Backshell modified NC-0975: Outer and inner SPIRE wire shield contact, repaired by CASA.
121432-01 SIH-CS-02 SPIRE J-FET harness	15.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM, re-routed acc. to ASED-SD-0101 NC-0805: Backshell modified; NC-0895: Error in ICD, H/W is o.k.
121432-01 SIH-CS-03	06.05.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM NC-0805: Backshell modified NC-0975: Outer and inner SPIRE wire shield contact, repaired by CASA.
121432-01 SIH-CS-04	15.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM
121432-01 SIH-CS-05	15.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM
121432-01 SIH-CS-06	15.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM
121432-01 SIH-CS-07	15.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM
121432-01 SIH-CS-08	18.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM
121432-01 SIH-CS-09	18.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM
121432-01 SIH-CS-10	18.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM, re-routed acc. to ASED-SD-0101
121432-01 SIH-CS-11	15.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM, re-routed acc. to ASED-SD-0101
121432-01 SIH-CS-12	18.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM, re-routed acc. to ASED-SD-0101

Equipment / CI-No.	Integr. Date	Model, Serial No	ABCL Ref. (or EIDP)	Qualified	Remarks / Open Work / NCR's
121432-01 SIH-CS-13	14.04.05 19.07.06	PFM	"	y	finally routed and connected to SPIRE CQM, re-routed acc. to ASED-SD-0101
121432-01 SIH-CP-01	20.04.05	PFM	HP-2-CASA-AB-0014, iss. 1, 30.03.05	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-02	20.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-03	19.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-04	19.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-05	20.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-06	20.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-07	21.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-08	21.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-09	21.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-10	21.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-11	21.04.05	PFM	"	y	finally routed and connected to PACS MTD; NC0917: Bent pin in FTH, reworked.
121432-01 SIH-CP-12	21.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-13	20.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-14	19.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-01 SIH-CP-15	19.04.05	PFM	"	y	finally routed and connected to PACS MTD
121432-02 SIH-IH-01	15.07.05 02.08.06	PFM	HP-2-ASSE-AB-0002, issue 1, 10.06.05	y	SIH-IH: HP-2-ASED-TP-0077 HIFI CQM
121432-02 SIH-IH-02	15.07.05 02.08.06	PFM	"	y	HIFI CQM
121432-02 SIH-IH-03	15.07.05 02.08.06	PFM	"	y	HIFI CQM
121432-02 SIH-IH-04	15.07.05 02.08.06	PFM	"	y	HIFI CQM
121432-02 SIH-IH-05	02.08.06	PFM	"	y	removed 07.07.06, NC-1171: Contact swap HIFI CQM

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121432-02 SIH-IH-06		PFM	HP-2-ASSE-AB-0003, issue 1, 16.08.05	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IH-07		PFM	"	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IH-08		PFM	"	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IH-09		PFM	"	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IH-10		PFM	"	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IH-11		PFM	"	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IH-12		PFM	"	y	LOU-Removed 21.03.2006 HP-2-ASED-SD-0054
121432-02 SIH-IS-01	18.07.06	PFM	HP-2-ASSE-AB-0005, issue 1, 15.07.05	y	
121432-02 SIH-IS-02	18.07.06	PFM	"	y	
121432-02 SIH-IS-03	18.07.06	PFM	"	y	
121432-02 SIH-IS-04	18.07.06	PFM	"	y	
121432-02 SIH-IS-05	18.07.06	PFM	"	y	
121432-02 SIH-IS-06	18.07.06	PFM	"	y	
121432-02 SIH-IS-07	18.07.06	PFM	"	y	
121432-02 SIH-IS-08	18.07.06	PFM	"	y	
121432-02 SIH-IS-09	18.07.06	PFM	"	y	
121432-02 SIH-IS-10	18.07.06	PFM	"	y	

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121432-02 SIH-IS-11	18.07.06	PFM	"	y	
121432-02 SIH-IS-12	18.07.06	PFM	"	y	
121432-02 SIH-IS-13	18.07.06	PFM	"	y	
121432-02 SIH-IP-01	18.07.06	PFM	HP-2-ASSE-AB-0004, issue 1, 10.06.05	y	
121432-02 SIH-IP-02	03.09.05	PFM	"	y	
121432-02 SIH-IP-03	01.09.05	PFM	"	y	
121432-02 SIH-IP-04	01.09.05	PFM	"	y	
121432-02 SIH-IP-05	02.09.05	PFM	"	y	
121432-02 SIH-IP-06	02.09.05	PFM	"	y	
121432-02 SIH-IP-07	05.09.05	PFM	"	y	
121432-02 SIH-IP-08	06.09.05	PFM	"	y	
121432-02 SIH-IP-09	06.09.05	PFM	"	y	
121432-02 SIH-IP-10	06.09.05	PFM	"	y	
121432-02 SIH-IP-11	06.09.05	PFM	"	y	
121432-02 SIH-IP-12	06.09.05	PFM	"	y	
121432-02 SIH-IP-13	02.09.05	PFM	"	y	
121432-02 SIH-IP-14	01.09.05	PFM	"	y	

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121432-02 SIH-IP-15	02.09.05	PFM	"	y	
121432-04 HIFI SIH-IH-21 to 24 (external coax cables)	05.07.2007	PFM	HP-2-ASED-PS-0048, issue 3;18.10.07 HP-2-ASED-DW-0252_01_A_Part 21 HP-2-ASED-DW-0253_01_A_Part 22 HP-2-ASED-DW-0254_01_A_Part 23 HP-2-ASED-DW-0255_01_A_Part 24	y	MA = 0,8 Nm, bonding measurement done Due to bad HF performance for STM use only; External Coax Cable Integration by ELSPEC
121432-04 HIFI SIH-CH-21 to 24 (internal coax cables)	25.05.07	PFM	HP-2-ASED-PS-0048, Iss 3 HP-2-ASED-DW-0183_01_B_Part 21 HP-2-ASED-DW-0186_01_B_Part 22 HP-2-ASED-DW-0189_01_B_Part 23 HP-2-ASED-DW-0192_01_B_Part 24	y	STM parts removed from PLM, new type of coax needed for FM, no COAX cables necessary for STM 2 tests. Final Integration on PFM acc. PR-0152 on 25.05.07 A.K. & Elspec
121432-04 HIFI SIH-SH-21 to 24 (SVM coax cables)		PFM	HP-2-ASED-PS-0048, issue 3;18.10.07 HP-2-ASED-DW-0279_01_0A_Part 21 HP-2-ASED-DW-0280_01_0A_Part 22 HP-2-ASED-DW-0281_01_0A_Part 23 HP-2-ASED-DW-0282_01_0A_Part 24	y	
121433 CB 212420	16.09.05	PFM	HP-2-ASED-DP-0028, issue 2	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 311100	12.07.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 311200	12.07.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 311300	12.07.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 312100	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 312200	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 312300	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 313100	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 313200	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated

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121433 CB 314200	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 (changed to CI 314200 due to writing error) Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 315100	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 316100	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 321100	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 321200	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 CB 321300	27.08.05	PFM	"	Y	Mating acc. HP-2-ASED-TP-0077 Brackets mounted to SVM according to HP-2-ASED-TP-0087 1.1 MLI standoffs integrated
121433 Harness Rails	18.07.05	PFM	HP-2-ASED-DP-0028, Issue 2	y	Part No. 3132, 2900, 2728, 2526, 2400, 2300, 2122, 4344, 4200. Drwg. No. 2547-121430-200-07-0D; NC-1256: Fixed with bolts & nuts instead of helicoils
121433 Harness Rails	20.07.05	PFM	HP-2-ASED-DP-0028, Issue 2	y	Part No. 3334, 3800, 3900, 4041, 2 x 2100. Drwg. No. 2547-121430-200-07-0D; NC-1256: Fixed with bolts & nuts instead of helicoils
121433 P-clamps	27.08.05			y	on struts No. 22, 33, 38, 39, 40.
121433 LOU HRN Support Structure		PFM	HP-2-ASED-DW-0162-01 issue A, 31.05.05	y	Brackets -Z & +Z to be removed after mechanical tests at ESTEC (see OW 122) On + Z modify the hole M4 Removed 30.03.06 HP-2-ASED-SD-0053
121433 <u>Lower SFW Harness CBs</u>					
121433 CB 214341	29.7.04		HP-2-ASED-DP-0028 (A)	n.a	Lower SFW CB +Y, connector labels exchanged on 21.01.05 SLI covered acc. to ASED-PR-0059
121433 CB 214342	29.7.04		HP-2-ASED-DP-0028 (A)	n.a	Lower SFW CB +Z SLI covered acc. to ASED-PR-0059
121433 CB 214343	29.7.04		HP-2-ASED-DP-0028 (A)	n.a	Lower SFW CB -Y; marking of connectors performed on 21.01.05 L-bracket for J01 exchanged on 3.12.04, SLI covered acc. to ASED-PR-0059
121433 CB 214344	29.7.04		HP-2-ASED-DP-0028 (A)	n.a	Lower SFW CB -Z SLI covered acc. to ASED-PR-0059
121433 CB 212510 + support	Y		HP-2-ASED-DP-0028 (A)	n.a	H701/702 CB

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121433 L701 P-Clamp + CB/Backshell	Y		HP-2-ASED-DP-0028 (A)	n.a	preliminary test bracket replaced by flight item
121433 L702 P-Clamp + CB/Backshell	Y		HP-2-ASED-DP-0028 (A)	n.a	preliminary test bracket replaced by flight item
121433 Harness CBs					In total 9 CB, 7 x 9 pole; 2 x 15 pole
121433 H103 CB	3.8.04	PFM		n.a	9 pole
121433 H104 CB	3.8.04	PFM		n.a	9 pole
121433 PPS CB	28.9.04	PFM		n.a	9 pole, preliminary test bracket replaced by flight item
121433 DLCM1 CB	28.9.04	PFM		n.a	(Qty = 2) 1 x 9 pole; 1 x 15 pole, preliminary test bracket replaced by flight item
121433 DLCM2 CB	28.9.04	PFM		n.a	(Qty = 2) 1 x 9 pole; 1 x 15 pole, preliminary test bracket replaced by flight item
121433 L101 conn. bkt. support (P-Clamp)	21.9.04	PFM		n.a	9 pole, preliminary test bracket replaced by flight item
121433 L102 conn. bkt. support (P-Clamp)	21.9.04	PFM		n.a	9 pole, preliminary test bracket replaced by flight item
121433 Pos. 110 Harness- Support 1 Cutout 1	04.01.2005	PFM	2547-121432-16I-01-0A	n. a.	
121433 Pos. 115 Harness- Support 1 Cutout 1	04.01.2005	PFM	2547-121432-16I-01-0A	n. a.	
121433 Pos. 120 Harness- Support 1 Cutout 2	04.01.2005	PFM	2547-121432-16J-01-0A	n. a.	
121433 Pos. 130 Harness- Support 2 Cutout 2	14.01.2005	PFM	2547-121432-16K-01-0A	n. a.	
121433 Pos. 140 Harness- Support 3 Cutout 2	04.01.2005	PFM	2547-121432-16L-01-0A	n. a.	
121433 (143134) Pos. 150 HIFI Harness Bracket	19.07.07	PFM	HP-2-ASED-DW-0211-01-0A (2547-121432-185-01-0A)	n. a.	New drwg. for PFM, positions of venting holes changed. Not installed for STM 2. Installed 19.07.07 ASE-DW-0133

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121433 Pos. 160 Harness-Support 1 Cutout 3	18.01.2005	PFM	2547-121432-16M-01-0A	n. a.	NC-0681: Modification of fixation holes I/F ASED-SD-0101: Rail wrapped with gore-tex
121433 Pos. 170 Harness-Support 2 Cutout 4	18.01.2005	PFM	2547-121432-16O-01-0A	n. a.	NC-0681: Modification of fixation holes I/F ASED-SD-0101: Rail wrapped with gore-tex ASED-SD-0111: Supports thermally decoupled with CFRP washers
121433 Pos. 180 Harness-Support 1 Cutout 4	14.01.2005	PFM	2547-121432-16N-01-0A	n. a.	ASED-SD-0101: Rail wrapped with gore-tex
121433 OB Harness-bracket 1	15.04.05	PFM	2547-121432-16Q-01-0A	n. a.	2 parts
121433 OB Harness-bracket 2	15.04.05	PFM	2547-121432-16R-01-0A	n. a.	
121433 OB Harness-bracket 3	15.04.05	PFM	2547-121432-16S-01-0A	n. a.	3 pcs
121433 OB Harness-bracket 4	15.04.05	PFM	2547-121432-16T-01-0A	n. a.	
121433 OB Harness-bracket 5	18.03.2005	PFM	2547-121432-16U-01-0B	n. a.	NC-0838: reworked to comply with drwg. issue B
121433 OB Harness-bracket 6	15.04.05	PFM	2547-121432-16V-01-0A	n. a.	
121433 OB Harness-bracket 7	15.04.05	PFM	2547-121432-16W-01-0A	n. a.	
121433 Upper SFW harn. CBs	14.12.04	PFM	HP-2-ASED-DP-0028 (A)	na	acc. to HP-2-ASED-DW-0086-01 NC-0842, backshells of connectors had to be turned 180°
121433 TSS Harness supports	21.07.06	PFM	HP-2-ASED-DW-0203-01-0A	n.a.	new Vespel supports on TSS chains iaw. ASED-SD-0101
121500 (CFE) LOU Radiator		FM	CFE	y	16.11.2005: removed after TB/TV test Mounted 21.12.05; HP-2-ASED-SD-0030 Iss.1;removed 24.02.06 HP-2-ASED-SD-0042
121510 LOU Baffle		PFM			Mounted 07.07.05, removed on 08.07.05 after negative fit check, ref. NC-1245
121520 LOU Support Structure incl. Support Plate and I/F struts		PFM	HP-2-ECAS-DP-0004, iss. 1, 13.12.04	y	Mating acc. to HP-2-ASED-PR-0024 Wire locking done 02.08.05 Removed 29.03.2006 HP-2-ASED-SD-0053
121530 HIFI-LOU Windows assy	22.-25.04.05	PFM, SN see under remarks	HP-2-QMC-AB-0001, Issue 2, 24.01.05	y	Incl. clamps, bolts and o-rings SN: B1/31, B2/28, B3/03, B4/12, B5/13, B6L/21, B6H/22
121530 Alignment windows assy	25.04.05	PFM SN: OA#3, OA#8	..	y	Incl. clamps, bolts and o-rings
121550 LOU Waveguide Assy		PFM, SN 01	HP-2-RYM-AB-0030, issue 1, 31.10.04	y	WG Tapes removed 05.10.05 Lower section removed after TB/TV and re-mounted on 30.11.05; Screws secured with EC 2216; removed 24.03.2006 HP-2-ASED-PR-0053

Equipment / CI-No.	Integr. Date	Model, Serial No	ABCL Ref. (or EIDP)	Qualified	Remarks / Open Work / NCR's
122000 122300 122500 TMS incl. CB's	12.06.07	PFM-0300	HP-2-ECAS-DP-0009, issue 1, 31.08.05	Y	Integration acc. to HP-2-ASED-SD-0043 NCR generated during Incoming and Integration see NC-1437 NC-1481: Flatness out of tolerance, to be reworked for PFM final installation and alignment check on 12.09.05 Mirror bracket -Z, -Y side installed on 09.09.05 Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122100 TMS Strut	12.06.07	PFM 0166	"	y	TMS/CVV_1 Strut blade at CVV wrongly installed see NC-1437 2 mm shim; Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122100 TMS Strut	12.06.07	PFM 0152	"	y	TMS/CVV_6 1mm shim; Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122100 TMS Strut	12.06.07	PFM 0151	"	y	TMS/CVV_5 2 mm shim; Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122100 TMS Strut	12.06.07	PFM 0163	"	y	TMS/CVV_4 Strut blade at CVV wrongly installed see NC-1437 2 mm shim; Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122100 TMS Strut	12.06.07	PFM 0154	"	y	TMS/CVV_3 2 mm shim; Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122100 TMS Strut	12.06.07	PFM 0165	"	y	TMS/CVV_2 Strut blade at CVV wrongly installed see NC-1437 2 mm shim Removed 27.03.06 HP-2-ASED-SD-0042 MLI installed for sine test; Final integrated acc.PR-0092 B.K.
122200 MLI on TMS struts		PFM	HP-2-AAEM-LI-0037, issue draft 2, 01.07.05	Y	For sine test only partly installed: on TMS/CVV_2, TMS/CB 3, TMS/CB 4; TMS Removed 27.03.06 HP-2-ASED-SD-0042
122400 TMS Strut	12.06.07	PFM 0246	HP-2-ECAS-DP-0009, issue 1, 31.08.05	y	TMS/CB 2 Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122400 TMS Strut	12.06.07	PFM 0245	"	y	TMS/CB 1 Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122400 TMS Strut	12.06.07	PFM 0250	"	y	TMS/CB 6 Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122400 TMS Strut	12.06.07	PFM 0249	"	y	TMS/CB 5 Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122400 TMS Strut	12.06.07	PFM 0248	"	y	TMS/CB 4 MLI installed for sine test TMS Removed 27.03.06 HP-2-ASED-SD-0042 Final integrated acc.PR-0092 B.K.
122400 TMS Strut	12.06.07	PFM 0247	"	y	TMS/CB 3 MLI installed for sine test TMS Removed 27.03.06 HP-2-ASED-SD-0042

Equipment / CI-No.	Integr. Date	Model, Serial No	ABCL Ref. (or EIDP)	Qualified	Remarks / Open Work / NCR's
					Final integrated acc.PR-0092 B.K.
123110 Solar Array Structure		STM	HP-2-DSSA-DP-0001, issue 1, Aug. 2005	pending	Finally installed on 19.12.2005 HP-2-ASED-TP-0085 Iss.2 Removed 01.03.2006 HP-2-ASED-SD-0042
123112 Strut 1 HSS/SVM		S/N 0101	HP-2-ECAS-DP-0008, issue 1, 03.08.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042; final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 2 HSS/SVM		S/N 0202	HP-2-ECAS-DP-0008, issue 1, 03.08.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 3 HSS/SVM		S/N 0203	HP-2-ECAS-DP-0008, issue 1, 03.08.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 4 HSS/SVM		S/N 0104	HP-2-ECAS-DP-0008, issue 1, 03.08.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 5 HSS/CVV		S/N 0405	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 6 HSS/CVV		S/N 0306	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 7 HSS/CVV		S/N 0307	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123112 Strut 8 HSS/CVV		S/N 0408	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123120 Sunshade Structure		STM	HP-2-DSSA-DP-0001, issue 1, Aug. 2005	pending	Final Installation on 19.12.2005 HP-2-ASED-TP-0085 Iss.2 STM shall be refurbished to FM after S/C STM test Removed 01.03.2006 HP-2-ASED-SD-0042
123122 Strut 9 HSS/CVV		S/N 0109	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123122 Strut 10 HSS/CVV		S/N 0210	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123122 Strut 11 HSS/CVV		S/N 0211	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B
123122 Strut 12 HSS/CVV		S/N 0112	HP-2-ECAS-DP-0005, issue 1, 31.05.05	Y	NC-1602: HSS STM sine test aborted, dampers introduced on struts 1-12. Dampers are mounted. Removed 01.03.2006 HP-2-ASED-SD-0042 final integration of Dampers 23.08.2007 R.Hengstler acc. DW 2547-123130-500-01-0B

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123311 Solar Array MLI		STM	HP-2-AAEM-LI-0037, issue draft 2, 01.07.05 HP-2-AAEM-DP-0005	Y	Integration of the panel for FM only after refurbishment Removed 01.03.2006 HP-2-ASED-SD-0042
123322 Sunshade MLI		STM	HP-2-AAEM-LI-0037, issue draft 2, 01.07.05 HP-2-AAEM-DP-0005	Y	Integration of the panel for FM only after refurbishment Removed 01.03.2006 HP-2-ASED-SD-0042
124100 PLM/SVM I/F Struts	08.07.05 - 20.07.05	PFM	HP-2-ECAS-DP-0002, iss. 1, 01.06.05	y	Mating acc. to HP-2-ASED-PR-0023
124200 PLM/SVM Strut MLI		PFM	HP-2-AAEM-LI-0037, issue draft 2, 01.07.05 HP-2-AAEM-DP-0005	y	Partly disintegrated For sine test MLI was integrated only on 2 Struts: (SN 22 &23) Removed 21.03.06
124300 SVM Thermal Shield		PFM	HP-2-ECAS-DP-0007, issue 1.1, 04.08.05	y	Removed after TB/TV test 15.11.05 Re-mounting on 12.01.2006 acc.HP-2-ASED-SD-0031 Iss.1 Release 2 Removal 25.02.2006 HP-2-ASED-SD-0042; Re-mounting for TB/TV Test STM2 acc.SD-0031 15.01.2007; Removed 14.03.2007 acc.SD-0042
124320 SVM Thermal Shield MLI		PFM	HP-2-AAEM-LI-0037, issue draft 2, 01.07.05 HP-2-AAEM-DP-0005	y	Integrated 12.01.2006 for Vibration Removal 25.02.2006 HP-2-ASED-SD-0042 Re-mounting for TB/TV Test STM2 acc.SD-0031 15.01.2007 Removed 14.03.2007 acc.SD-0042
Temporary Installed Items : MGSE, OGSE, CVSE		PFM	Alenia ABCL tbd	N/A	Mating to PLM according to HP-2-ASED-TP-0087 "1.1" De-Mating 02.03.2006 HP-2-ASED-SD-0042
130000 SVM Grounding lines installed: (SVM) 3000HP207-401 3000HP207-403 3000HP207-405 3000HP207-407		ID NR: 25, 33 ID NR: 27, 35 ID NR: 37 ID NR: 31			Removed on 02.03.2006 acc. To HP-2-ASED-SD-0042
142270 Load cells (Pretension Device)	28.02.2007	MGSE			Re-Integrated after TB/TV Test; Removed for Vibration Test 09.01.2006; installed -Z Side 07.03.2006; Installed on +Z Side 24.03.06 Re-integrated for adjustment of chains on 08.08.06 Removed for TB/TV Test STM2 10.01.2007 acc. SD-0145; covered with protective cap; Protective cap removed and installed the Pretension Device acc. TP-0133 R.Suess 28.02.2007
142300 Airlock Filling Port / CVV	15.06.07	MGSE			Re-integrated 17.11.05 Removed 12.04.2006; re-integrated SD0113; Removed 21.01.2007 acc. SD-0146; Prep. For TB/TV Test; TB/TV Safety Adapter installed; removed after TB/TV test 27.02.2007 a.. SD-0151 and installed the filling port A.Runge Removed acc.SD-0151; 22.03.2007 Integrated for Leaktest M.L. 15.06.07
142400 Alignment cubes -Z, +Y	01.08.05	OGSE			on CVV UB, Alignment Cube Cover removed 2x Alignment Cube Cover on -Z installed no cover on +y cube (under MLI) all Alignment Cube Covers installed 07.04.06 (Green Tag Items)

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142410 HACS Camera +Z		OGSE	HP-2-TER-AB-0001, iss. 2-A, 03.06.05	Y	17.11.2005: removed after TB/TV test
142410 HACS Camera -Z		OGSE	HP-2-TER-AB-0001, iss. 2-A, 03.06.05	Y	17.11.2005: removed after TB/TV test
142410 HACS Harness - 2x power cables - 2x glass fibre cables		OGSE		y	17.11.2005: removed after TB/TV test
PLM Instruments					
142511-01 HIFI FPU	17.07.2007	FM	ABCL by SRON		MTD removed 07.07.06 acc.PR-0057; HIFI CQM integrated acc. PR-0063 12.07.2006, NC-2330: CQM covered with SLI iaw. SD-0109, connector fit check done iaw. SD-0105 Deintegrated 12.04.2007 K.R Final Integration acc.HP-2-ASED-PR-0090_1 HIFI Team & AESD Team
142511-01 HIFI Harness Bracket Fixation Clamp	20.07.2007	FM	HP-2-ASED-DW-0115-01 issue B, 27.04.2005		Integration acc. to HP-2-ASED-DW-0133-01 issue A, 17.12.2004 NC-0730: HIFI harness frame does not fit to HIFI MTD Removed, fixation clamps not used for STM2, no I/F to HIFI CQM. Intergration of Harness Rail acc HP-2-ASED-PR-0090(NC-3417 raised)
142511-02 LOU PFM		PFM	HP-2-PROT-AB-0002, iss. B, 17.01.05	y	Mating acc. to HP-2-ASED-PR-0024 Alignment wrt. FPU done on 14.07.05 Removed 29.03.2006 HP-2-ASED-SD-0053
142512-01 SPIRE FPU	18.04.2007	PFM	SPIRE-RAL-DOC-001971		MTD removed 08.05.2006 Not all temp sensors mounted, aperture cover removed CQM removed acc.PR-0057 11.04.2007;return to Supplier Final Integration acc.PR-0083 K.R. 18.04.2007
142512-022 SPIRE JFET Photometer	18.04.2007	PFM	SPIRE-RAL-DOC-001971		MTD Removed 05.05.2006; CQM removed acc.PR-0057 11.04.2007;return to Supplier Final Integration acc.PR-0083 K.R. 18.04.2007
142512-021 SPIRE JFET Spectrometer	18.04.2007	PFM	SPIRE-RAL-DOC-001971		MTD Removed 05.05.2006 P04 repaired on 14.07.06 according to NCR1394 CQM removed acc.PR-0057 11.04.2007;return to Supplier Final Integration acc.PR-0083 K.R. 18.04.2007
142513 PACS single axis support	y		HP-2-PROT-AB-0006 issue C, 03.02.2005		
142513 PACS FPU	09.07.07	PFM	HP-2-PROT-AB-0006 issue C, 03.02.2005		NC-0650 and 0658: Rework on MTD after interference was found during fit check NC-631 (= PROT-NC-0006) deviation in connector 131100 J67 M8 bolts torqued 22 Nm; NC-0807: L0 I/F bad contact, reworked, closed. Deintegrated 12.04.2007 K.R Final Integrated by MPE & T.B. acc.PR-0089 Failure Investigation: Contamination on PACS Mirror Cleaning of trog 1 by KT&ESA acc.PR-042

End of list

	Name	Dep./Comp.		Name	Dep./Comp.
	Alberti von Mathias Dr.	ASG23	X	Schmidt Thomas	AED15
	Baldock Richard	FAE12		Schweickert Gunn	ASG23
X	Barlage Bernhard	AED13		Sonn Nico	ASG51
X	Bayer Thomas	ASA42		Steininger Eric	AED32
	Brune Holger	ASA45	X	Stritter Rene	AED11
	Edelhoff Dirk	AED2		Suess Rudi	OTN/ASA44
	Fehringer Alexander	ASG13		Theunissen Martijn	DSSA
X	Fricke Wolfgang Dr.	AED 65	X	Vascotto Riccardo	HE Space
	Geiger Hermann	ASA42		Wagner Klaus	ASG23
	Grasl Andreas	OTN/ASA44	X	Wietbrock Walter	AET12
	Grasshoff Brigitte	AET12		Wöhler Hans	ASG23
	Hamer Simon	Terma		Wössner Ulrich	ASE252
	Hanka, Erhard	FI552	X	Zumstein Armin	ASQ42
	Hendrikse Jeffrey	HE Space			
X	Hendry David	Terma			
	Hengstler Reinhold	ASA42			
	Hinger Jürgen	ASG23			
X	Hohn Rüdiger	AED65			
	Hölzle Edgar Dr.	AED32			
X	Hopfgarten Michael	AED32			
	Huber Johann	ASA42			
	Hund Walter	ASE252			
X	Idler Siegmund	AED312			
	Ivány von András	FAE12			
X	Jahn Gerd Dr.	ASG23			
	Kalde Clemens	ASM2	X	ESA/ESTEC	ESA
	Kettner Bernhard	AET42	X	Thales Alenia Space Cannes	TAS-F
	Klenke Uwe	ASG72	X	Thales Alenia Space Torino	TAS-I
	Knoblauch August	AET32			
	Koelle Markus	ASA43		Instruments:	
	Koppe Axel	AED312	X	MPE (PACS)	MPE
X	Kroeker Jürgen	AED65	X	RAL (SPIRE)	RAL
	La Gioia Valentina	Terma	X	SRON (HIFI)	SRON
	Lang Jürgen	ASE252			
X	Langenstein Rolf	AED15			
	Langfermann Michael	ASA41		Subcontractors:	
	Martin Olivier	ASA43		Austrian Aerospace	AAE
	Maukisch Jan	ASA43		Austrian Aerospace	AAEM
	Much Christoph	ASA43		BOC Edwards	BOCE
	Müller Jörg	ASA42		Dutch Space Solar Arrays	DSSA
X	Müller Martin	ASA43		EADS Astrium Sub-Subsyst. & Equipment	ASSE
	Pietroboni Karin	AED65		EADS CASA Espacio	CASA
	Platzer Wilhelm	AED2		EADS CASA Espacio	ECAS
	Reichle Konrad	ASA42		European Test Services	ETS
	Runge Axel	OTN/ASA44		Patria New Technologies Oy	PANT
	Sauer Maximilian Dr.	AED65		SENER Ingenieria SA	SEN
X	Schink Dietmar	AED32		Thales Alenia Space, Antwerp	TAS-ETCA