

PRODUCT ASSURANCE

Space Science and Technology Department

Spacecraft/Project	HERSCHEL	Document No	SPIRE-RAL REP-001904		)4
Instrument/Model	SPIRE / CQM	Issue No	1	REV	0
Subsystem	SORPTION Cooler	Date	16 <sup>th</sup> Dec 2003		

#### Report at receipt/delivery or other major movement of instrument/hardware and associated GSE.

Inspection Report	Return Sorption Cooler Incoming	CQM
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FROM	ТО
Collected from CEA SBT on 15 <sup>th</sup> December 03	Accepted visual check only for RAL in Grenoble by
Hand carried	Eric Clark

Inspection conducted by		Witnessed by (Pr	oduct Assurance)
Name	Signature / Date	Name	Signature / Date
Eric Clark		Eric Clark	



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# INTRODUCTION

This inspection report shall be completed for formal transfers of hardware between RAL and customers, agencies or collaborating organisations

The following must be inspected where Applicable as indicated:

	SECTION	No
Documentation	YES	1
Containers	YES	2
Visual Inspection of Hardware	YES	3
Connectors	YES	4
Harnesses	N/A	5
Pre Closure Checks	N/A	6
Interface Verification	YES	7

Each section contains a checklist that shall be completed.

Unused boxes should have N/A entered.

Deviations e.g. items not delivered or incomplete documentation must be noted in the comments column.

For previously agreed deviations refer to the Delivery Review Board (DRB) minutes of meeting (MOM) or similar.

NCR's must be raised for other deviations, damage or defects noted.



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### **SECTION 1: DOCUMENTATION**

Documentation shall be checked for completeness, any items not received or to be delivered later should be noted.

**Note 1:** The delivery review board minutes should list outstanding items, e.g. open work, open NCRs and Waivers etc. A copy should accompany or form part of the EIDP. If there is no EIDP then it should be referenced on this report.

**Note 2:** All items dispatched from the Laboratory must have a Dispatch Note completed and signed, with a copy filed in the appropriate section of the EIDP.

No.	Procedure	Comments (Include NCR Number if applicable)	Check N/A or ✓
1.1	Is the documentation complete		$\checkmark$
1.2	Is the accompanying documentation compliant with project requirements		$\checkmark$
1.3	Note DRB/MoM Document Number, minutes and note any discrepancies with respect to agreements recorded. OR attach copy of minutes.	First delivery covered by DRB-MoM SPIRE-RAL-MoM-001768 This is a return after rework No Further DRB held	
1.4	Additional Remarks	EIDP updated and returned with cooler. Ref SPIRE-RAL-REP-001856 Sorption Cooler outgoing inspection	



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### **SECTION 2: INSPECTION OF CONTAINERS**

No.	Procedure	Remarks (Include NCR Number if applicable)	Check N/A or ✓
	Transport Containers – External condition.		
2.1	Inspect the outside of the containers for obvious mechanical damage: Cracks, fasteners/locks clips, physical damage, dents or scratches etc. Handling provisions, Other damage		~
2.2	Markings for description and destination		$\checkmark$
2.3	Packing / unpacking instructions		✓
2.4	Warning labels relating to handling, lifting, stacking limits		~
2.5	Additional Remarks Check security of container		
	Transport Containers – Internal condition		
2.6	Check environmental monitors such as humidity indicators, shock recorders and record the location and readings on the inspection	Manometer attached to COOLER Transit Support reading 200mili-bar Relative pressure Shock recorder on end of Transit support OK	✓
2.7	Check mounting fixtures or brackets and screws, padding and packing.	Cooler mounted in a pressurised	
2.8	Additional Remarks Check security of container	(nitrogen) metal support that is suspended inside an outer container.	~



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### SECTION 3: VISUAL INSPECTION OF HARDWARE

#### Insert one copy of the following section for each configuration item, OR Individual unit.

**Note:** Section 3 when used with the front sheet may be used as a complete report for small units prior to final closure, if this is done confirm unit interior check carried out before closure. Interior check will be limited to visible items.

CI NUMBER SEF	
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No.	Procedure	Remarks (Include any NCR Numbers if Applicable	Check N/A or ✓
3.1	Check contents against shipping list		✓
3.2	Note external contamination		$\checkmark$
3.3	Inspect the outside for physical damage, cracks, dents, scratches		✓
3.4	Degradation of painting		N/A
3.5	Mounting provisions	See 2.8	✓
3.6	Fasteners correctly locked		✓
3.7	Check for protective covers on all electrical and fluid connectors and on optical and sensor apertures	No Electrical connector covers fitted	~



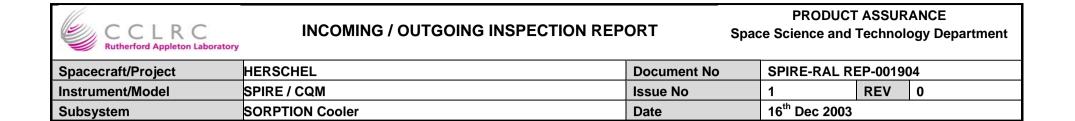
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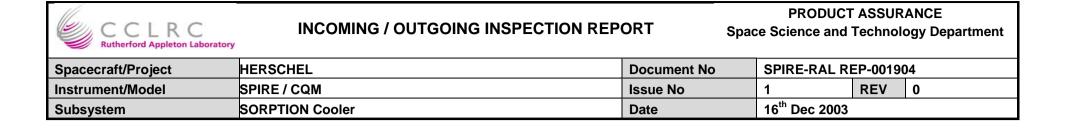
### **SECTION 4 CHECK ALL CONNECTORS**

No.	Procedure	Remarks (Include NCR Number if applicable)	Check N/A or ✓
3.8.1	Bent pins		$\checkmark$
3.8.2.	Internal / external damage		✓
3.8.3	Internal debris		$\checkmark$
3.8.4	Connector covers fitted	None Fitted	
3.8.5	Connector savers in position	None Fitted	
3.8.6	EMC Covers Fitted		N/A
3.8.7	RED tag items/covers fitted		N/A
3.8.8	Any other damage		$\checkmark$



## SECTION 5 CHECK ANY HARNESS AND ASSOCIATED CONNECTORS ASSOCIATED WITH THE HARDWARE. N/A

## SECTION 6 PRE CLOSURE CHECKS. N/A



## SECTION 7: VERIFICATION OF INTERFACES

#### Confirm all required interface-checking activities have been carried out.

- 4.1 Mechanical interface dimensions specified in the interface control documents such as mass, flatness of surfaces, location of fixing holes and overall dimensions should be measured accurately and recorded. Record Test Report Number, or confirm that measurement result is included in delivery documentation, (EIDP).
- **4.2 Electrical interfaces:** verifying the location and types of connectors against interface control document is normally carried as part of mechanical verification, confirm this has been done. Functional testing: final functional test report number should be noted.

No.	Procedure	Remarks (Include NCR Number if applicable)	Check N/A or ✓
4.1	Mechanical Interfaces Verification	Cooler has already been fitted and removed from FPU OK	
4.2	Electrical Interfaces Verification	Cooler has already been fitted and removed from FPU OK	