

SUBJECT**STANDARD HANDLING,
PACKAGING, & SHIPPING****CAGE CODE****64818****DATE****2/2/2016****SECTION****PAGE****i****CURRENT
REVISION****K**

Approvals:

Ralph Weller
Director of Manufacturing

Scott Miller
Aerospace Manufacturing Manager

Burt Tanaka
Quality Assurance Manager**NOTICE OF PROPRIETARY RIGHTS****NOTICE OF PROPRIETARY RIGHTS: THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA, INCLUDING TRADE SECRETS AND PROPRIETARY INFORMATION WHICH ARE THE PROPERTY OF FLUID COMPONENTS INTERNATIONAL LLC (FCI).**

SUBJECT STANDARD HANDLING, PACKAGING, & SHIPPING	CAGE CODE 64818	DATE 2/2/2016	SECTION	PAGE ii	CURRENT REVISION K
---	----------------------------------	--------------------------------	----------------	--------------------------	---

REVISION PAGE

REV	DESCRIPTION	DATE
N/C	Initial release	05-15-84
A	See DCN	02-06-85
B	See DCN	07-22-85
C	See DCN	06-11-87
D	Complete Rewrite. Changed number format. This procedure replaced 01QA704018.	01-23-98
E	Revised due to Aerospace customer requirement: ➤ Updated QAM # from 8003 to 07QA070003. ➤ Added "Bubble Wrap shall than be applied ..." sentence to para 3.1. ➤ Added "Speedy Packer Foam in a Bag Cushion, etc." to para 5.2. ➤ Deleted outline numbers "a.), b.), c.), etc. throughout the procedure.	12-08-99
F	Re-write – ISO	07-28-00
G	Updated cover page, revision page, and sections 1.0, 2.0, 3.0, 4.1 (removed Bubble Wrap requirement as the packaging methods used conforms with the Aerospace customer requirements), and 4.4.	07-10-03
H	Sec 1 & 2: Purpose and Scope to expand scope of the procedure. Sec 3.1: Revised title and added Polyethylene bags and Kraft Paper Sec 3.2: Added Requirements Sec 4.1: Added last two paragraphs Sec 4.2: Added "heat-sealed" Revised various headings for clarity. Sec 7: All changes were implemented to use procedure for supplier shipments. Added section 7.0 thru 7.4 for Aerospace requirements. CPAR 1878 ULDQS 2014 NCR 6	11-13-14
J	Sec 7: Reworded from "Aerospace packaging will be performed by Aerospace or Quality Personnel."	7-27-15
K	Per Westinghouse (WEC) 2015 Audit finding SCAR 100336897, the following change was made: Section 2.0 Scope – added a second paragraph referring NQA-1 requirements to bring into compliance with the Quality Manual and address special handling.	2-2-16

SUBJECT	CAGE CODE	DATE	SECTION	PAGE	CURRENT REVISION
STANDARD HANDLING, PACKAGING, & SHIPPING	64818	2/2/2016		1of 5	K

1.0 PURPOSE

This procedure was written to define the process for minimum parts protection requirements during handling, storage, packaging, preservation, and delivery of the product.

2.0 SCOPE

This procedure establishes the process for packaging and shipping equipment not having specific shipping and packaging requirements contained in the contract. This procedure also establishes handling and packaging requirements, for within the facility and for shipments to Customers/Vendors and other FCI Locations.

When NQA-1 (superceding document for ANSI N45.2) compliance is required by contract, procedure 04QA704010 Special Handling, Storage & Shipping shall be followed.

NOTE: For Aerospace additional requirements see Section 7.

3.0 HANDLING

3.1 Parts Protection Standards

Methods for handling product that prevent damage or deterioration include (but are not limited to) the following:

- Cardboard or PVC tubing used for protection of probes
- Antistatic Bags for circuit boards
- ESD handling procedure (01SF000006)
- Cushioning material used during production and/or shipping
- Custom carts
- Polyethylene Bags
- Kraft Paper

3.2 Requirements

- Thoroughly clean all metal parts or assemblies of all cutting oils, foaming oils or lubricants prior to storage with the exception of Magnesium, Aluminum or Carbon Steel Alloy machined parts.

SUBJECT	CAGE CODE	DATE	SECTION	PAGE	CURRENT REVISION
STANDARD HANDLING, PACKAGING, & SHIPPING	64818	2/2/2016		2 of 5	K

- All parts and work-in-process parts shall be individually packaged in accordance with commercial practices and in compliance with applicable rules and regulations pertaining to the handling, packaging and/or transportation of processed parts. No metal to metal contact shall occur between parts or between parts and container.
- Threaded openings and connections shall be protected with plastic plugs or caps at all times where possible.
- Always store or transport items in a manner that will protect from rain, fog or other corrosive environments.
- Work-in-process parts moving between operations in the same department do not require wrapping provided the next operation will remove all nicks, scratches and burrs incurred during handling between work stations.
- Work-in-process parts moving outside of an area or from one area to another by any other method other than hand carried or by hand pushed carts or trailers shall be wrapped to protect the parts.

4.0 PREPARATION FOR SHIPPING

4.1 All units

In addition to complying with those requirements of Paragraph 3, before packaging, the Shipping department checks all assemblies for cleanliness. Dirt, oil, residue, metal chips, entrapped water, or other forms of contamination shall be removed. Ink markings, except for circuit card identification, shall also be removed.

Appropriate size cardboard or PVC tubes shall be placed over each Sensor Head that is exposed to damage (unless already provided by Production personnel).

Any threaded housing covers shall be fastened in place with antiseize thread protectant grease applied (with the exception of those that come with a protectant already applied such as the 'ST' series housings)..

Newspapers, rags, loose paper and loose material such as cardboard or polyethylene chips are NOT acceptable as fill material or dunnage.

When more than one part is placed in a container (multiple quantities), each part shall be wrapped, bagged or protected with acceptable material to prevent

SUBJECT	CAGE CODE	DATE	SECTION	PAGE	CURRENT REVISION
STANDARD HANDLING, PACKAGING, & SHIPPING	64818	2/2/2016		3of 5	K

scratches or other damage to parts. The total quantity of parts shall not exceed the weight limitation of the container used and shall provide for ease in handling and storage.

4.2 ***Boxed Units, Probe Assemblies***

Products identified as “Controlled”: Each instrument shall be placed in a polyethelene bag and heat-sealed or sealed with tape and/or stapled.

Products not identified as “Controlled”: See 4.1

4.3 ***Crated Units, Probe assemblies***

No additional preparation required.

4.4 ***Crated Units, Electronics***

Extra large or heavy enclosures will not have any special preparation for packaging but are locked to the bottom of the crate with wood strips.

5.0 **PACKAGING FOR SHIPPING**

It is the responsibility of the shipping individual to determine the appropriate container (i.e.; box or crate) based on product size, weight, and level of protection deemed necessary.

5.1 ***All Units***

Documentation including manuals, certificates, and/or any other data/documents specified in the contract/order must be placed in a protective cover and placed in the carton or crate. Care is to be taken to assure all required documentation is included. If there is more than one container, the container carrying the documentation shall be clearly marked to this effect.

5.2 ***Boxed Units.***

SUBJECT	CAGE CODE	DATE	SECTION	PAGE	CURRENT REVISION
STANDARD HANDLING, PACKAGING, & SHIPPING	64818	2/2/2016		4of 5	K

Instruments shall be placed in appropriate sized, corrugated cardboard cartons (200# or 1100# test).

Cushioning material (i.e., pelaspan-pac, Speedy Packer Foam in a Bag Cushion, etc.) will be evenly distributed around each instrument to restrict movement in carton.

Cartons shall be sealed with carton sealing tape.

5.3 Crated Units

Probes and spool pieces shall be placed in the crate and blocked in-place in such a manner as to restrict any movement of the probe and prevent damage to the instrument.

Boxes shall be blocked in place.

Unboxed electronics are locked to the bottom of the crate with wood strips.

Crates shall be nailed/stapled shut.

6.0 LABELING FOR SHIPPING CONTAINERS

A Packing List shall be placed in a waterproof, sealed envelope and attached to the first shipping container of the shipment. There are no safety warnings needed for these types of product.

6.1 Boxed Units

A shipping label shall be affixed to each shipping container. The label has the FCI return address imprinted at the top, and space below where the shipping destination shall be written.

6.2 Crated Units

Marking of crates shall be large enough to be easily read. Markings should be directly applied to the crate and not a label.

SUBJECT	CAGE CODE	DATE	SECTION	PAGE	CURRENT REVISION
STANDARD HANDLING, PACKAGING, & SHIPPING	64818	2/2/2016		5 of 5	K

7.0 AEROSPACE PACKAGING AND SHIPPING

Aerospace Shipments that require customer specific packaging will be completed by Aerospace or Quality employees. Other personnel can be used with Aerospace supervision direction.

7.1 Handling

All handling and shipping protection standards required in section 3.0 apply to this section.

7.2 Preparation for Shipping

Prior to packaging the product, the Order Acknowledge data will be reviewed to determine if any customer special requirements for shipping and/or packaging need be applied. For special packaging requirements follow the Order Acknowledgement instructions.

7.3 Standard Aerospace Packaging

Units will be individually packaged. Packaging will be per MIL-STD-2073, packaged:

- a) Poly tubing bags or for ESD sensitive parts in ESD bags with Faraday cage capabilities,
- b) Dunnage will be Polyurethane Ether Foam per MIL-STD-26514,
- c) Final Shipment box will meet the requirements of ASTM-D5118. Multiple units may then be combined to ship in a larger box.

7.4 Aerospace Labeling

7.4.1 *Finished Goods Storage* - Boxes shall be labeled with the part number and serial number as a minimum for Finished Goods Storage. Other markings are allowed.

7.4.2 *Shipping* - Labels for shipping shall be per Section 6.0, unless there are instructions or directions on the Order Acknowledgement or by the Customer Personnel or Customer Designated Quality Representative.