

Supplier Quality Procurement Requirement

(SQPR- 03)

Supplier Packaging, Marking, Shipping and Preservation

TABLE OF CONTENTS

1. Document Revision History	Page 3
2. 1.0 Purpose.....	Page 4
3. 2.0 Related Documents	Page 4
4. 3.0 Definitions	Page 4
5. 4.0 General	Page 4
6. 5.0 Instructions - General	Page 5
7. 6.0 Raw Material	Page 6
8. 7.0 Casting and Forgings	Page 6
9. 8.0 COTS Items	Page 6
10. 9.0 Machined Components	Page 7
11. 10.0 Electronic Components	Page 8

DOCUMENT REVISION HISTORY
(SQPR-03)

Revision	Description of Changes	Date Released	Approved By
A	Initial Release	4/16/2014	JK

1.0 Purpose

- 1.1 This document outlines the minimum requirements for proper packaging and preservation of goods and supplies for transportation to Tactair, Young & Franklin, and designated locations. Specific requirements called out on a Purchase Order will take precedence over any requirement in this document.

2.0 Related Documents

- 2.1 SAE ARP 5316 - Storage of Elastomeric Seals and Seal Assemblies Which Include An Elastomer Element Prior to Hardware Assembly.
- 2.2 ANSI/ESD S20.20 - Protection of Electrical and Electronic Parts, Assemblies and Equipment

3.0 Definitions

- 3.1 Anchoring - The securing of an item to a base by means of bolts, tie-rods, tie-down timbers, steel strapping, etc., to prevent movement.
- 3.2 COTS - Commercial Off-The-Shelf.
- 3.3 Drayage - the act of transporting something a short distance by truck or other vehicle, and the charge made for such a transport.
- 3.4 Dunnage - Material used to fill space in shipping containers to prevent items from shifting during shipment.
- 3.5 FOD – Foreign objects and debris
- 3.6 VCI - Volatile Corrosion Inhibitor – Used for rust and corrosion protection of any metal surface; from raw materials preparation, through shipment and storage

4.0 General

- 4.1 Seller shall pack, mark and ship all goods and supplies in accordance with the requirements of the Purchase Order so as to be in compliance with transportation regulations and good commercial practice for protection and shipment and shall secure the most advantageous transportation service and rates consistent therewith.
- 4.2 No separate or additional charges are payable by Buyer for containers, crating, boxing, bundling, dunnage, drayage, or storage unless specifically stated in the Purchase Order.
- 4.3 Any expense incurred by Buyer as a result of improper preservation, packaging, packing, marking or method of shipment shall be reimbursed by Seller.

- 4.4 A packing list showing the Purchase Order number (and release number, if applicable) shall be included with each shipment.
- 4.5 The shipping label on the shipping container shall be marked to show the Purchase Order numbers of all Purchase Orders contained within, and each interior container shall also be marked to show the Purchase Order number.
- 4.6 Any transportation charges paid by Seller for which Seller is entitled to reimbursement shall be shown on Seller's invoices as a separate line item with the receipted freight bill attached to the invoice.
- 4.7 Purchased items will be packaged to a standard that provides protection against damage, deterioration, corrosion and other risks during handling and transportation until delivered to buyer's receiving inspection department.
- 4.8 Where a specific packaging requirement is NOT detailed within the Purchase Order; the appropriate packaging and corrosion prevention requirements listed below shall be used.

5.0 Instructions - General

5.1 General Requirements

- 5.1.1 Multiple part numbers shall be segregated.
- 5.1.2 Maintain PO line and lot segregation.
- 5.1.3 Waivered parts shall be segregated and accompanied by an approved SDWR copy.
- 5.1.4 Prior to packaging all parts must be clean and dry.
- 5.1.5 Supplied material shall be returned in same or better packaging.

5.2 Unacceptable packing materials:

- 5.2.1 Use of staples to seal bags and containers.
- 5.2.2 Newspaper, tissue paper, paper towel or any sulfur bearing paper
- 5.2.3 Egg carton
- 5.2.4 Expanded polystyrene and/or starch packing peanuts.
- 5.2.5 Must not have any restricted chemicals. See section 4.1

5.3 Preferred packing materials:

- 5.3.1 All packaging material used will be appropriate for the size, weight, and shape of the part being packaged.
- 5.3.2 All materials used for packaging and shipping shall be of good commercial quality suitable for the purpose for which intended. The material shall be free of defect and imperfection which will adversely affect the serviceability of the packaged item.

- 5.3.3 Parts having significant weight will be separated using plastic or other suitable material.
- 5.3.4 All packaging materials used shall not cause contact corrosion of parts being packaged.
- 5.3.5 Sharp edges or protrusions shall be adequately protected against physical damage of items and packaging during shipment.

5.4 Acceptable dunnage material:

- 5.4.1 Bubble pack
- 5.4.2 Polyethylene foam
- 5.4.3 Moldable polystyrene
- 5.4.4 Guard pack (foam cushion only)
- 5.4.5 Acceptable shipping containers:
- 5.4.6 Rigid plastic cartons
- 5.4.7 Wood or plywood cases
- 5.4.8 Double or triple walled corrugated container

6.0 Raw Material

- 6.1 Raw material includes; bar stock, sheet stock, tubing, cut stock and blanks including burnouts.
- 6.2 All items requiring preservation coating shall be wrapped and or packed in materials that shall resist the penetration of preservation coating through wrapping or packing material.
- 6.3 Oversize or heavy material shall be anchored to skids to prevent movement and damage in shipping.

7.0 Casting and Forgings

- 7.1 Shall be bulk packaged in wood or tri-wall corrugated with sufficient dunnage to protect parts from damage during shipping.
- 7.2 Oversize or heavy parts shall be anchored to skids to prevent movement and damage in shipping.

8.0 COTS Items

- 8.1 Hardware (Nuts, bolts, washers, etc.)
 - 8.1.1 All items requiring preservation coating shall be wrapped and or packed in materials that shall resist the penetration of preservation coating through wrapping or packing material
- 8.2 O-Rings and Seals

8.2.1 Shall be packaged and stored in compliance with section 5 & 6 of SAE ARP 5316

Note: Bulk packaging is acceptable must meet all other provisions of SAE ARP5316 section 5 & 6

8.3 Electrical Components

8.3.1 All items shall be cushioned in noncorrosive materials as required to prevent damage to the item

8.3.2 Preservation – Commercially expectable corrosion prevention such as VCI or desiccant shall be used to prevent corrosion to any metallic surfaces and preserve all non-metallic and or insulating materials

9.0 Machined Components

9.1 General Requirements

9.1.1 There shall be no part to part contact allowed

9.1.2 No metal surfaces shall be allowed to come in direct contact with wood or untreated corrugated packaging materials

9.2 Preferred packing material

9.2.1 Housing/body/manifolds; wrapped in VCI paper or plastic bag in individual box

9.2.2 Spool & Sleeve/pistons/output shafts: plastic tube w/screw-on cap or plastic bag encased in bubble wrap secured with adhesive tape

9.2.3 Retainer/end cap/etc.: individual plastic bag with acceptable dunnage

9.2.4 Parts having significant weight will have plastic or suitable separating material

9.3 Required corrosion prevention:

9.3.1 No metal surfaces shall be stored or transported contacting wood, corrugated, pig mats, or other moisture holding materials. Some form of moisture barrier must be used between contacting surfaces, such as plastic screen.

9.3.2 Aluminum parts - To reduce the potential effects of atmospheric corrosion on un-protected (i.e. non-anodized) aluminum parts

9.3.2.1 No rust inhibitor is to be applied to aluminum parts

9.3.2.2 All parts received in VCI paper or VCI bags are to remain in the protective packaging until the parts are ready to process. Once processed clean dry parts shall be repackaged in VCI as quickly as possible

- 9.3.2.3 If parts need to be inspected prior to or after processing, opening in an air conditioned environment is preferred. When completed return part to in their protective packaging
- 9.3.2.4 Parts being returned after processing shall be visually clean, dry and in VCI paper or VCI bags, unless the process performed supplied a protective coating (i.e. anodizing)
- 9.3.3 Steel parts having any un-protected (i.e. Non-painted or non-plated) surfaces shall be protected with an industry accepted corrosion prevention oil that is easily removable (i.e. LPS 2), applied before packaging then placed in plastic bags, plastic tubes with caps, bubble wrap secured with tape, or wrapped in coated kraft paper
- 9.3.4 Nylon parts will be shipped in oil to prevent moisture expansion. Parts will be placed in sealed container (heat sealed bags, screw on plastic tube, etc.)

10.0 Electronic Components

- 10.1 All ESD sensitive parts shall be individually packaged in appropriate level of ESD protection in compliance with ANSI/ESD S20.20