

COMMONWEALTH OF AUSTRALIA

#### AUSTRALIAN DEFENCE STANDARD

# DEF(AUST)1000C ADF PACKAGING; STANDARD

## **PART 2: PACKAGING REQUIREMENTS**

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# DEF(AUST)1000C The following Government and industry departments and organisations were consulted during the preparation of this document: ARMY, RAN and RAAF Defence National Storage and Distribution Centre Potential Suppliers from Industry Prepared by the ADF Packaging Committee of the Defence Standardisation Coordination Group

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#### AUSTRALIAN DEFENCE STANDARD

#### DEF(AUST)1000C

#### ADF PACKAGING;

#### **PART 2: PACKAGING REQUIREMENTS**

#### **JULY, 2000**

Prepared by the ADF Packaging Committee under the Authority of the Defence Standardisation Coordination Group.

Specific inquiries regarding the application of this Standard to Requests for Tender or contracts should be addressed to the Procurement Authority named in the Request for Tender, or to the Quality Assurance Authority named in the contract, as appropriate.

This Standard is mandatory for use by the RAN, Australian Army and RAAF, and Contractors to the ADF.

This Standard supersedes DEF(AUST)1000B PART 2: Packaging Requirements.

This Standard supersedes the following RAAF AAP Packaging Specifications:

AAP 3531.013 Canvas Stores

AAP 3531.014 Rubber Goods

AAP 3531.019 Packaging of Metallic Items

AAP 3531.052 Loops Antenna (All types)

AAP 3531.053 Voltage Regulators (Aircraft Type)

**AAP 3533.007 Aircraft Tyres** 

AAP 3533.016 Leather Goods

AAP 3533.026 Capacitors, Resistors and Electrical Components

AAP 3533.030 Aircraft Drop Tanks

**AAP 3533.036 Photographic Materials** 

AAP 3533.037 Switches, Junction boxes (Testing and Jointing boxes).

**AAP 3533.043 Generators and Converters** 

AAP 3533.051 Hub Main Wheel Aircraft (All types)

AAP 3533.054 Ball & Roller Bearings

AAP 3533.056 Ground Support Equipment

AAP 3533.057 Parachutes (All types)

AAP 3533.063 Magnetic Tapes

PART 2, Section C, implements the requirements of QSTAG 1151: Levels of Packaging.

#### WARNING

This Standard may call for use of substances and test procedures that may be injurious to health if adequate precautions are not taken. It refers only too technical suitability and in no way absolves either the supplier or user from statutory obligations relating to health and safety at any stage of manufacture or use.

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DEF(AUST)1000C is issued in 20 parts, with each part sub-divided into Sections. The 20 parts are:

PART 1:	General Information
PART 2:	Packaging Requirements
PART 3:	Packaging Practices and Materials
PART 4:	Standard Packaging Test Procedures
PART 5:	Marking of Packages
PART 6:	Packing of Dangerous Goods (Except Dangerous Goods Class 1); Packaging
	Requirements and Packaging Mediums
PART 7:	Packaging for Materiel Susceptible to Damage by Electrostatic Discharge
PART 8:	Defective Packaging Reporting System
PART 9:	Requirements for Reusable Containers
PART 10:	Australian Quarantine Inspection Service (AQIS) Requirements
PART 11:	Unitisation
PART 12:	Bar Code Symbology
PART 13:	Packaging Material Catalogue
PART 14:	Minimum Packaging Specifications of Commercial Items
PART 15:	Packaging Specifications and Classification Systems
PART 16:	Creative Brief Template
PART 17:	Packaging ILS Checklist
PART 18:	Life Cycle Analysis
PART 19:	Caching
PART 20:	Techniques for Deployment, Packaging and Storage for Tropical Conditions.

Two or more parts may apply to any one packaging requirement and it is essential that all parts be considered and used where appropriate.

This PART of the Defence standard concerns the military packaging levels and specifies the general requirements to be observed in the packaging of Defence materiel.

The military packaging levels provide a choice of protection for defence materiel appropriate to the particular needs of each Service.

This standard does not apply to the packaging of ammunition and explosives (for packaging information refer to Joint Ammunition Logistic Organisation [JALO] ).

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#### **SECTION A - INTRODUCTION**

#### 1. **FOREWORD**

- 1.1 The Standards Australia (SA) Packaging Code, AS 2400 contains guidance for dealing with packaging, however, the Services have special requirements beyond the scope of the code. Commercial packages are, therefore, often inadequate to satisfy the levels of performance demanded by the Services.
- 1.2 In military language the term "packaging" embraces packing, preservation, marking, distribution, and storage. The object of packaging, to ensure that material reaches the user in an acceptable condition with proper regard to economy, is broadly the same for both Commerce and the Services. Beyond that point, however, there are frequently wide differences.
- 1.3 In the commercial field the degree of packaging afforded to goods is often determined on the basis of economic factors which permit a measure of loss in distribution. The pattern of distribution can usually be foreseen with some accuracy and a long storage period is unlikely.
- 1.4 The Services, however, are concerned with operational readiness and human lives, which necessitates virtually a guarantee that materiel will be serviceable when needed for use. The Services may be unable to accurately forecast when or where materiel will be required for use, therefore, the duration of storage can be lengthy.
- 1.5 Most Service requirements can be met by specified levels of packing performance known as the Military Packaging Levels. The details of a design to one of the levels may be recorded in a Specification or Packaging Instruction (P.I.). It is, however, the responsibility of the package designer to ascertain whether a packaging specification or instruction already exists for the particular requirement and to consider the practicability of adapting the form of package used by the manufacturer for commercial deliveries.
- Packages should be designed to keep costs as low as possible. The number of items per unit pack is very significant. Generally, the cost of labour is greater than the cost of materials. However, cost is not merely a matter of expenditure on labour and materials in the packaging processes. The effect on the cost of movement, particularly when air transport is involved, must be considered.
- 1.7 Although this Defence Standard provides instructions for packaging to the Military Packaging Levels, other degrees of protection may be demanded by the Services by the statement of a Special Requirement to meet particular operational or financial considerations.

#### 2. SCOPE

- 2.1 The protection provided by any specific package depends upon the severity of risk to which it is expected to be subjected during transport, handling, storage and distribution. Since these factors are too broad to permit development of individual item requirements in one standard, the levels of packaging specified herein are defined so that an appropriate selection can be made to meet the conditions anticipated.
- 2.2 The levels of packaging stated in this Standard shall be used, as a guideline to determine the degree of protection required. The specific technical requirements applicable to the level of packaging shall be referenced in the procurement documents.

DEF(AUST)1000C PART 2 SECTION A

2.3 The proper selection of the appropriate level of packaging is directly related to currently available information as to probable distribution, methods of transportation and handling envisaged, storage conditions likely to be encountered prior to issue to the consumer, and storage life of the item and capital cost. Levels of packaging are defined in terms of performance expected. The application of the levels, therefore, must be translated into specific technical requirements for each items or group of items, and used by the respective user authority accordingly.

#### **SECTION B - SERVICE REQUIREMENTS**

#### 1. **GENERAL**

- 1.1 Packages shall be designed in accordance with this Defence Standard unless:
  - a. agreed specifications which require the packaging of specific materiel state otherwise; or
  - b. the Service specifically requires the packaging of certain materiel to have qualities additional to those which are provided by this Defence Standard; or
  - c. trade packages are specified.
- 1.2 The following requirements shall be observed in the design of Military Level packages:
- 1.2.1 **Mass and Size**. The mass and size of every package shall be the minimum practicable to meet the requirements having due regard to economy.
- 1.2.2 **Shape**. Packages shape should, wherever practicable, be rectangular.
- 1.2.3 **Container Reinforcement**. Container reinforcement must not entail the use of specialised equipment or undue time to open the container.
- 1.2.4 **Dismantling or Breaking Down of the Materiel to be Packaged**. Where technical and/or economic advantage is to be gained, large single items may be dismantled or broken down into two or more parts. The package designer shall be responsible for submitting proposals to this effect to the ordering Service whose prior agreement must be obtained before any dismantling or breaking down is carried out.
- 1.2.5 **Package Markings.** Packages shall be identified precisely as stated by the Service in its demand.
- 1.2.6 **Handling Facilities**. Unless the ordering Service has stipulated differently, the handling aids prescribed shall be the minimum necessary to meet Australian Defence requirements. These are applicable irrespective of the configuration of the package.

# TABLE I HANDLING AIDS

GROSS MASS OF PACKAGE	LENGTH OF PACKAGE	HANDLING AID
Up to 10 kilogram	Under 1 metre	Handles should be considered
10 to 35 kilogram	Under 1 metre	Handles are desirable
Up to 35 kilogram	1 metre and over	Fork lift skids and/or 2 lifting handles
35 to 75 kilogram	Under 1 metre	Fork lift skids and/or 2 lifting handles
35 to 75 kilogram	1 metre and over	Fork lift skids and/or 2 lifting handles
Over 75 kilogram	All sizes	Fork lift skids and/or sling device

Decked pallet bases shall meet the general requirement of AS 1899 and AS 2068 (1100 x 1100 and  $1165 \times 1165 \text{ mm}$  pallets).

#### 2. OTHER REQUIREMENTS

- 2.1 When packages other than those conforming to paragraph 1.1 of DEF(AUST)1000, PART 2, SECTION B are required, the Ordering Authority shall supply the following information, as appropriate:
- 2.1.1 **Storage Conditions**. The storage conditions which the packaging is required to withstand (see DEF(AUST)1000, PART 2, SECTION D, paragraph 2.1).
- 2.1.2 **Marking**. Any marking requirements other than those specified in PART 5 of this standard.
- 2.1.3 **Handling**. Any special handling facilities required.
- 2.1.4 **Mass, Shape and Dimensions**. Any limitations on mass, shape and dimensions, e.g. necessity to conform to unit load requirements, or to conform to standard hatchway and door sizes on RAN Vessels.
- 2.1.5 **Special Requirements**. Any special requirements, e.g. flotation or immersion.

#### 3. INFORMATION TO BE SUPPLIED BY THE SERVICES

The Services are to provide the Ordering Authorities with the following information:

- a. the Military Packaging Level(s) required and, when appropriate, additional or alternative packaging requirements;
- b. the Primary Packaging Quantity (PPQ); and
- c. whether reusable containers are required.

#### SECTION C - LEVELS OF PACKAGING

#### 1. **GENERAL**

1.1 The levels of packaging, definitions, requirements, and uses are as follows:

#### 2. **DEFINITIONS**

- 2.1 **Indeterminate Use**. This term shall be applied to those items for which the ultimate designation, handling, storage conditions and duration cannot be determined at the time of procurement.
- 2.2 **Immediate Use.** This term shall be applied to those items for which procurement is initiated to satisfy an immediate consumer requirement. The item(s) may be supplied direct to the consumer or via a receiving depot.
- 2.3 **Packaging**. This term shall be applied to the application of those measures including cleaning, drying, treatment and preservation, wrapping, interior and exterior containers, closure and securing, blocking and bracing, cushioning, weatherproofing, complete identification markings, to the packaging of an item or items of supply.
- 2.4 **Unit Package**. Also known as the 'primary package'. The first tie, wrap, or container applied to a single item, quantity or group of items of a single stock number, packaged to constitute a complete or identifiable package.

#### 3. **REQUIREMENTS**

3.1 **Classification**. There shall be two basic standards of packaging:

#### a. Service Standard

- (i) Level A Pack
- (ii) Level B Pack
- (iii) Level C Pack

#### b. Industry Standard

- (i) Commercial Trade Pack
- (ii) Export Trade Pack

#### 3.2 Service Standard

- 3.2.1 **Level A Pack**. This standard of packaging shall ensure serviceability of supplies for a minimum period of three years from the date of packaging, including all weather protection for consignment, multiple handling, indeterminate conditions of storage and redistribution.
- 3.2.2 **Level B Pack**. This standard of packaging shall ensure serviceability of supplies for a minimum period of three years from the date of packaging for consignment, multiple handling and known conditions of storage and redistribution.
- 3.2.3 **Level C Pack.** This standard of packaging shall ensure serviceability of supplies for a minimum period of one year from the date of packaging, including protection against climatic and physical damage during consignment, handling and storage from supply source to the receiving authority.

#### 3.3 **Industry Standards**

- 3.3.1 Commercial Trade Pack. This package shall normally be used by the manufacturer for commercial deliveries to a destination within the Commonwealth of Australia and its Territories that would involve movement by any medium of transport. The standard of packaging shall ensure that the condition of the item or supplies, upon delivery to the nominated receiving authority is identical to the condition in which it was packed by the supplier. The supplier shall provide complete identification markings in accordance with DEF(AUST)1000, PART 14, Marking and Packaging of Commercial Items: (Minimum Requirements) Specification or the terms of the contract.
- 3.3.2 **Export Trade Pack**. This package shall normally be used by the manufacturer for commercial deliveries of supplies overseas. The standard of packaging shall ensure the delivery of the supplies in a serviceable condition to the nominated receiving authority complete with identification marking in accordance with the terms of the contract.

#### 4. NOTES

#### 4.1 **Intended Use**

- 4.1.1 **Level A Packs**. Items in this category are those for which the ultimate destination, handling, storage conditions and duration are unknown and cannot be determined at the time of procurement. Generally related to packs prepared for overseas combat destinations.
- 4.1.2 **Level B Packs**. Items in this category are those for which the ultimate destination, handling, storage conditions and duration are known at the time of procurement. Generally includes covered storage for a period of not less than three years in temperate climates, transportation, handling and redistribution within mainland Australia.
- 4.1.3 **Level C Packs**. Items in this category are those for which the ultimate destination, handling, storage conditions and duration are known. Generally includes covered storage for up to one year in temperate climates, with limitations on handling, transportation and redistribution.
- 4.1.4 **Commercial Trade Pack**. Items in this category are those for which procurement action has been initiated to satisfy an immediate need and where they are consigned by the supplier to the receiving authority for use.
- 4.1.5 **Export Trade Pack**. Items in this category are those supplied in the manufacturer's normal commercial package.
- 4.2 **Deviations**. The specific technical packaging requirements referenced in procurement documents shall be mandatory upon suppliers. Request to depart from the requirements shall be made in writing, showing justification, costings and proposals, to the appropriate Service's Procurement Authority. No deviation shall be anticipated or action taken until official written approval has been received.

# 5. AMERICAN BRITISH CANADIAN AUSTRALIAN (ABCA) PACKAGING LEVELS COMPARISON

5.1 In accordance with the ABCA agreement for standardisation and interoperability the following Table details a comparison between the levels of packaging of the ABCA members and some NATO members.

TABLE I
COMPARISON OF ABCA PACKAGING LEVELS

	NATIONAL LEVELS					NATO	NATO
UNITED STATES	UNITED KINGDOM	CANADA	AUSTRALIA	GERMANY	ITALY	LEVEL SE	SEVERITY
A	SPECIAL	A	A	SPECIAL	A	1	SEVERE
A	J	A	A	A	A	2	HIGH
В	N	В	В	В	В	3	MEDIUM
С	S or U	С	С	С	С	4	LOW

DEF(AUST)1000C PART 2 SECTION C

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# SECTION D - REQUIREMENTS FOR PREMISES, PACKAGING MATERIALS, TRANSPORT AND HANDLING PRIOR TO PACKING

#### 1. CONDITION OF PREMISES

- 1.1 Those sections of buildings, which receive, store or package materiel shall be maintained at an acceptable standard. All stages of packing should, where practicable, be carried out under one roof, or in separate buildings connected by completely enclosed passages. Where this is not practicable, materiel and packing materials shall be suitably protected against climatic and environmental conditions and physical damage, during transit between the separate buildings.
- 1.2 The floor surfaces of buildings where packaging processes are carried out shall be constructed from materials having a high resistance to wear with low dust-generating properties and shall be impervious to cleaning and preservation materials.
- 1.3 The atmosphere in the separate sections where materiel is packaged shall be kept free from harmful concentrations of dust, fumes, gases or vapours thus reducing the risk of contaminants from one process affecting an adjacent process. Products of combustion, steam from water jackets or other sources, shall not be allowed to escape or be discharged inside any section.
- 1.4 Processing and storage sections shall be controlled to ensure a minimum temperature of 15.5°C and a maximum relative humidity of 75 per cent.

#### 2. STORAGE OF PACKAGING MATERIALS

- 2.1 **General**. Materials for use in the packaging of Defence material shall be stored under cover at a relative humidity of between 40 and 50 per cent, wherever practical.
- 2.1.1 These conditions shall apply to all materials except in so far as they are modified by the specific requirements set out below.
- 2.2 **Containers**. Containers shall be stacked in such a manner as to preclude crushing, puncture, and abrasion.
- 2.2.1 Drums and casks shall be stored in such a position as to prevent the ingress of water or dirt.
- 2.2.2 Wooden containers shall be stacked so as to allow free circulation of air through and around the stacks. They may be stored in the open provided they are adequately sheeted to exclude rain, etc.
- 2.3 **Adhesive Tapes**. Adhesive tapes shall not be held in store for more than one year. Reels of pressure-sensitive and gummed tapes shall be stored flat, away from direct sunlight, and shall be supported to prevent the core of the reel falling away under its own mass.
- 2.4 **Desiccants**. Desiccants shall be stored in airtight containers.
- 2.5 **Plastics**. Plastics shall be stored away from direct sunlight and protected from contaminants, particularly oils and greases. Rolls of material shall be suspended by their formers. Sheet material shall be laid flat and stacking liable to cause compression and folds shall be avoided.
- 2.6 **Rubber**. Rubber shall be stored in accordance with the recommendations of AS CK15 Code of recommended practice for the storage of vulcanised elastomers.
- 2.7 **Waxed Wrappings**. Rolls of waxed wrappings shall be stored on end or suspended by their formers. Individual stacks of sheet material shall not exceed 1 metre in height.

- 2.8 **Barrier Materials**. Protect from contaminants store on end or suspended by their formers.
- 2.9 **Volatile Corrosion Inhibitor Papers**. VCI papers may be stored for up to 12 months (shelf-life) in their unopened wrappings, and should be stored in a cool, dry place

#### 3. TRANSPORT AND HANDLING OF MATERIEL PRIOR TO PACKAGING

- 3.1 During transportation of materiel, interim protection against climatic and physical damage shall be provided. During loading and unloading of vehicles all materiel shall be protected against the direct effects of the weather.
- 3.2 Care must be taken in handling all materiel particularly those items that are fragile or small.
- 3.3 Materiel shall not be handled with bare hands if deterioration might be caused. Gloves worn during handling shall be replaced when they become soiled or contaminated.
- 3.4 Materiel shall be inspected on receipt at the packaging site to verify that it is in an acceptable condition and in accordance with the accompanying documentation.
- 3.5 Materiel about which there is doubt shall be placed in quarantine and referred back to the originator.
- 3.6 Unless it is to be cleaned or preserved by methods involving heating, material consisting mainly of metal shall be stored for a minimum period of 24 hours to allow it to reach equilibrium with the atmosphere conditions of the packaging section before any processes are applied.
- 3.7 Interim protection against climatic and physical damage shall be provided. If practicable, materiel shall be stored on pallets, stillages or racks in such a manner that neither physical damage nor deterioration can occur through contact. Large and heavy equipments shall be kept out of direct contact with floors and walls. Materiel received in specially designed transit containers or within protective coverings shall not be removed from them until the packaging operations commence.
- 3.8 Materiel shall not be placed near any heating apparatus.

#### SECTION E - PACKING OF INSTRUMENTS AND DELICATE ITEMS

#### 1. INTRODUCTION

1.1 Instruments provide accurate information to aid decision making. Faulty instruments can not only lead to costly repairs, but may cause loss of life. Instruments must be given proper care to enable them to perform the function for which they were designed. The packing instructions detailed in this Chapter are to be applied to all instruments and delicate technical equipment. Unserviceable (repairable), and defective instruments are to be handled, packed and stored in the same manner as serviceable items.

#### 2. **GENERAL**

- 2.1 Reusable Special-to-Contents Containers (STCC) are usually identified in 8145 NATO Supply Class Code. Other containers for packaging instruments are identified in 8115 NATO Supply Class. At ANNEX B is a list of shipping and storage containers suitable for instruments, which are not supplied with their own container.
- 2.2 STCCs are intended to last for the life of the article for which they were designed and they function as an integral part of that equipment. The containers listed at ANNEX B, although expendable, are reusable and are to be treated in a similar manner. There must always be a two way flow of contents; for example, when a serviceable instrument moves to a unit to replace an unserviceable instrument, or an instrument which has completed its authorised service life, the same container is used to return the unserviceable instrument to the repair or overhaul facility. Manufacturer's packs comprising single wall or double wall corrugated and solid fibreboard cartons are not to be discarded, neither are special internal fittings such as high density polyurethane foam cushioning sheets and discs, corner fitments, fibreboard and contoured expanded polystyrene moulds. The one in, one out concept must be rigidly applied to every changeover of instruments.
- All instruments are to be packed or unpacked in accordance with this instruction by, or under the supervision of Avionics personnel (except for oxygen components which must be packed or unpacked by suitably trained Avionics personnel). Unqualified personnel are not to broach, pack or unpack the primary instrument container. Incorrectly packed items should be returned to the packaging facility for repacking in accordance with this instruction. Instruments received at equipment stores packed in single or double wall corrugated or solid fibreboard cartons for forwarding to a repair/overhaul facility, or destined for overseas shipment, must be overpacked in either triple wall cartons (Tri-wall) or boxes (wood nailed) as appropriate.

#### 2.4 **Pre-Packing**

- 2.4.1 The following pre-packing instructions are applicable to instrument equipment:
  - a. Check the identity of the instrument and complete Form EE202 (Contents label);
  - b. Ensure all openings and connectors have blanking plugs fitted. Ensure Pitot-Static vent plugs are pierced to prevent damage to pressure sensitive items;
  - c. Demand Diluter Oxygen Regulators On/Off lever must be in the OFF position and have the Normal/100% lever placed in the 100% position;
  - d. Ensure caging mechanisms and locking devices are properly engaged to prevent damage during transit (for gyroscopic instruments);
  - e. Moving coil meters are to have their mechanisms mechanically or electrically damped; and
  - f. Float-arm type fuel tank units are to be packed so as to prevent the float-arm from being closed too far and bending the actuator arms (e.g.: taping the float arm to a board having wooden or rubber stops).

2.4.2 An appropriate Serviceable Technical Equipment Tag (Form EE209, NSN 9905-66-051-4116), or Unserviceable Tag (Form EE59, NSN 9905-66-050-3741) are to be attached to the item being packed. Other Forms such as EE515 Component Log, NSN 7530-66-024-8771, are to be used when required.

#### 2.5 **Primary Wrapping**

- 2.5.1 All instrument equipment is to be primary wrapped in an appropriate polyethylene bag before being placed in a packing container. The bag is to be sealed using pressure sensitive tape or by heat sealing (DO NOT VACUUM PACK) using one of the following procedures:
  - a. **Oxygen Equipment.** All oxygen equipment is to be placed in a polyethylene bag displaying red oxygen-warning markings (see ANNEX A) and sealed at both ends (See NOTE);

**NOTE:** Diluter demand regulators, because they contain an aneroid capsule, are to have the bag sealed at ONE END ONLY. All other items of oxygen equipment are to have the bag sealed at both ends.

#### CAUTION

DO NOT PLACE DOCUMENTATION AND DESICCANT (SILICA GEL) PACK INSIDE THE POLYETHYLENE BAG WHEN PACKAGING OXYGEN EQUIPMENT.

- b. **Instruments Containing Capsules**. Instruments, which contain capsules, are to be wrapped in a polyethylene bag with its associated document and a desiccant pack and sealed at ONE END ONLY.
- c. **All Other Instrument Equipment.** Providing that none of the above restrictions apply, instrument equipment should be sealed in a polyethylene bag along with an appropriate quantity of desiccant and applicable documentation.
- d. Accessories. Where an item has several accessories included under the one stock number and it is considered desirable to pack them in the one container, pre-wrap each item separately and ensure that sufficient polyurethane foam is placed between each item to prevent contact even when the items are forced together.

#### 2.6 Packing Materials (Metal Drums or Fibreboard Cartons)

2.6.1 Select a suitable container (see NOTE) and inspect for serviceability ensuring the container is not damaged or internally contaminated. Metal containers (listed at ANNEX B, example FIGURE 1) are to be the packaging container for gyroscopic, pitot static equipment, oxygen equipment and delicate instruments. For instruments that are not of a very delicate nature the Fibreboard Boxes (listed at ANNEX B) are to be utilised (as the chance of contamination by water ingress is reduced).

**NOTE**: Most Instruments require a minimum of 50 mm (2in) of polyurethane foam between the item and any point of contact in the container to provide cushioning against shock and vibration. Gyroscopic, oxygen equipment and other delicate instruments require a MINIMUM of 100mm (4ins) of polyurethane foam.

Reference: AAP: 7055.001-99 Liquids and Gaseous Dry Breathing Oxygen Maintenance Instruction.

#### CAUTION

WHEN PACKING GYRO'S, THEY MUST BE PLACED IN A POLYETHYLENE BAG, AND POSITIONED IN THE PACKAGING CONTAINER AS THEY ARE FITTED TO THE AIRCRAFT.

# THIS WILL ALLEVIATE UNNECESSARY DAMAGE TO BEARINGS AND COMPONENTS. DESICCANT IS ALSO TO BE PLACED IN THE PACKAGE.



#### FIGURE 1 DRUM CONTAINERS

2.6.2 Cut suitable sections of polyurethane foam (listed at ANNEX A) to fill the selected container. A shape suitable to receive the instrument should be cut from the centre sections of foam (a star shape is considered suitable for cylindrical instruments) removing slightly less foam than the instrument cross section so that a snug fit is achieved. The foam should compress when the instrument is fitted. To ensure correct fitment of the instrument it may be necessary to overwrap primary package with glazed wadding. An Electric Knife, NSN 5130-66-093-3208 is ideal to cut foam.

#### WARNING

Where sheets of polyurethane foam are unavailable, offcuts of polyurethane foam free from oil and grease are acceptable providing the foam meets the following requirements:

- a. dust free;
- b. free from contamination; and
- c. not in a deteriorated condition.
- 2.6.3 Fit the primary wrapped instrument into the pre-cushioned packaging container/carton. Add desiccant packs (if not included in the polyethylene bag) and seal the container/carton lid (snap down and lockwire the toggle clamps on metal containers). Check that the Contents Label, Form EE202 (NSN 7690-66-081-1262) is completed (include the date packed, shelf life expiry date where applicable) and affix the label to the container/carton.
- 2.6.4 Complete the supply and issue documentation or deliver the package to a supply or dispatch section for completion of relevant documentation (process is dependant on local procedures). Technical personnel are encouraged to seek advice from Supply Sections on the correct documentation to be completed and the correct procedures that are to be followed. The completed documentation should be inserted into a plastic self-adhesive shipping label holder attached to the packaging container.

**RAAF NOTE:** To provide ready identification of **RAAF** repairable items packed in instrument drums/boxes, the Contents Label S1218 is to be completed in **RED**. The abbreviation "**REP**" in the Stock Number Panel is to be circled in **RED**.

2.6.5 Warning and handling labels (listed at ANNEX C) are to be affixed to the container in accordance with DEF(AUST)1000 Part 5. Pressure sensitive labels are to be used, as new labels can be placed over old labels without disfiguring to container/carton. Directly marking the container/carton using paints, ink or pencil is to be discouraged.

#### 2.7 Instrument Test Equipment

2.7.1 Care is to be taken to ensure that instrument test equipment is packed complete with cables, accessories and handbooks. Prior to packing, non-rechargeable dry cell batteries are to be disconnected and removed. Fluids, which are likely to leak during transit, are to be drained from the equipment.

#### 2.8 Special Requirements

- 2.8.1 **Instrument Flyaway Kits**. Instrument flyway kits are special packaging containers that are constructed to allow the transportation of aircraft spares on operations from bases and allow technical personnel quick access to essential aircraft spares. Instrument flyaway kits are to be constructed so as to achieve the same protection for instruments detailed in this instruction.
- 2.8.2 **Magnetic Components.** Packaging of magnetic components for all methods of shipping, including air, is contained in the following steps:
  - a. Clean magnetic components with a lint clean cloth dampened in cleaning solvent (Mil Spec, MIL-C-18718).
  - b. Fabricate top, middle and bottom sections of dunnage from 15cm by 5cm sections of virgin polyester polyurethane (Mil Spec, MIL-P-26514, Type 1,Class II). Cut a cavity in the centre section in which to seat the magnetic components.

#### CAUTION

## DO NOT USE A METAL BOX FOR SHIPMENT AS IT MAY EFFECT UNIT CALIBRATION.

- c. Place unit in barrier bag and install in a square box with dunnage.
- d. Label contents and secure box with gummed tape

#### CAUTION

# DO NOT USE STAPLES, METAL BANDS, OR ANY OTHER MAGNETIC MATERIAL TO SEAL SHIPPING CARTON.

#### 3. CONCLUSION

3.1 Transportation is perhaps the most severe hazard to which any item of supply is subjected. Added to this are the possibilities of damage caused by handling, storage, corrosion, dust, temperature and humidity. The best form of protection for instruments is to pack them in accordance with the instruction.

#### ANNEXES:

- A. Materials for Packaging Instruments.
- B. Shipping Containers.
- C. Warning and Handling Labels.

#### ANNEX A

#### MATERIALS FOR PACKAGING INSTRUMENTS

NSN	ITEM DESCRIPTION
8135-66-022-4474	Cushioning Material, 50 mm thick Polyurethane Foam Sheet
8135-66-022-4475	Cushioning Material, 76 mm thick Polyurethane Foam Sheet
8135-66-022-4476	Cushioning Material, 101 mm thick Polyurethane Foam Sheet
4720-66-035-2352	Sleeving Polyurethane Oxygen Warning marked
8135-66-081-1349	Plastic Film Tubing 300 mm wide 150 µm thick
8135-66-081-1450	Plastic Film Tubing 400 mm wide 150 µm thick
7510-66-020-2629	Tape Pressure Sensitive 50 mm wide

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#### ANNEX B

#### **SHIPPING CONTAINERS**

#### METAL SHIPPING CONTAINERS

NSN	SIZE	ITEM DESCRIPTION	DIMENSIONS
8145-66-034-1844	Size 1	Shipping & Storage Container Delicate Aircraft Components	178mm Dia x 210mm High
8145-66-034-1847	Size 2	Shipping & Storage Container Delicate Aircraft Components	178mm Dia x 311mm High
8145-66-034-1845	Size 3	Shipping & Storage Container Delicate Aircraft Components	216 mm Dia x 311mm High
8145-66-036-8315	Size 4	Shipping & Storage Container Delicate Aircraft Components	216mm Dia x 374mm High
8145-66-036-8314	Size 5	Shipping & Storage Container Delicate Aircraft Components	254mm Dia x 444mm High
8145-66-036-8312	Size 6	Shipping & Storage Container Delicate Aircraft Components	280mm Dia x 470mm High
8145-66-034-1846	Size 7	Shipping & Storage Container Delicate Aircraft Components	343mm Dia x 287mm High
8145-66-036-8313	Size 8	Shipping & Storage Container Delicate Aircraft Components	343mm Dia x 508mm High
8145-66-040-0948	Size 9	Shipping & Storage Container Delicate Aircraft Components	406mm Dia x 597mm High
8145-66-047-5107	Size 10	Shipping & Storage Container Delicate Aircraft Components	406mm Dia x 1011mm High
8145-66-057-6198	Size 11	Shipping & Storage Container Delicate Aircraft Components	406mm Dia x 292mm High
8145-66-062-3233	Size 12	Shipping & Storage Container Delicate Aircraft Components	406mm Dia x 762 mmHigh

#### FIREBOARD SHIPPING CONTAINERS

NSN	SIZE	ITEM DESCRIPTION	DIMENSIONS
8115-66-133-3525	Size 1	Shipping & Storage Container Delicate Aircraft Components	178mm (long) x 178mm (wide) x 210mm (high)
8115-66-133-3524	Size 2	Shipping & Storage Container Delicate Aircraft Components	178mm (long) x 178mm (wide) x 311mm (high)
8115-66-133-3526	Size 3	Shipping & Storage Container Delicate Aircraft Components	216mm (long ) x 216mm (wide) x 311mm (high)
8115-66-133-3527	Size 4	Shipping & Storage Container Delicate Aircraft Components	216mm (long) x 216mm (wide) x 374mm (high)
8115-66-133-9285	Size 5	Shipping & Storage Container Delicate Aircraft Components	254mm (long) x 254mm (wide) x 444mm (high)
8115-66-133-8474	Size 6	Shipping & Storage Container Delicate Aircraft Components	280mm (long) x 280mm (wide) x 470mm (high)
8115-66-133-8475	Size 7	Shipping & Storage Container Delicate Aircraft Components	343mm (long) x 343mm wide x 287mm (high)
8115-66-133-8476	Size 8	Shipping & Storage Container Delicate Aircraft Components	343mm (long) x 343mm (wide) x 508mm (high)

ANNEX C
WARNING AND HANDLING LABELS

NSN	ITEM DESCRIPTION	DIMENSIONS
7690-66-062-4438	This Way Up	50 mm x 50 mm
7690-66-062-4439	This Way Up	100 mm x 100 mm
7690-66-062-4420	Fragile	50 mm x 50 mm
7690-66-062-4421	Fragile	100 mm x 100 mm
7690-66-062-4431	Method II Pack	50 mm x 20 mm
7690-66-062-4430	Method II Pack	100 mm x 40 mm
7690-66-065-4330	Address Priority 1	100 mm x 75 mm
7690-66-065-4089	Address Priority 1	150 mm x 125 mm
7690-66-065-4335	Address Priority 2	100 mm x 75 mm
7690-66-065-4333	Address Priority 2	150 mm x 125 mm
7690-66-065-4085	Address Priority 3	100 mm x 75 mm
7690-66-065-4087	Address Priority 3	150 mm x 125 mm
7690-66-065-4081	Address Priority 4	100 mm x 75 mm
7690-66-065-4083	Address Priority 4	150 mm x 125 mm
7690-66-091-3510	Delicate Precision Instrument	100 mm x 100 mm

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#### SECTION F - SPECIALISED PACKING REQUIREMENTS

#### 1. INTRODUCTION

- 1.1 A number of in-service items require specialised packaging requirements due to their unique characteristics and susceptibility to deterioration. This section is provided order to address individual requirements for specific types of stores and equipment.
- 1.2 Information provided in this section has been extracted from **RAAF AAP packaging specifications**, which will be withdrawn on date of issue of this amendment. Additional information has been extracted from Army packaging instructions (PIs) where applicable.

#### 2. GENERAL

- 2.1 Packaging requirements set-out in this section apply to routine domestic and national delivery of stores and equipment.
- Users of this Standard are advised that additional packaging considerations, relating to overseas deployment, are detailed in DEF(AUST)1000 Parts 10 & 20.
- 2.3 Entries included in this section address the following items:
  - a. Aircraft Drop Tanks. (From Pkg Spec. AAP 3533.030).
  - b. Aircraft Hub Main Wheel. (From Pkg Spec. AAP 3533.051).
  - c. Aircraft Tyres. (From Pkg Spec. AAP 3533.007).
  - d. Antenna Loop (all types). (From Pkg Spec. AAP 3533.052).
  - e. Ball & Roller Bearings. (From Pkg Spec. AAP 3533.054).
  - f. Canvas Stores. (From Pkg Spec. AAP 3531.013 Canvas Stores).
  - g. Electrical Components (Including Capacitors & Resistors). (From Pkg Spec. AAP 3533.026).
  - h. Electronic Equipment. (From Pkg Spec. AAP 3533.028).
  - i. Switches, Junction Boxes (Testing and Jointing Boxes). (From Pkg Spec. AAP 3533.037).
  - j. Ground Support Equipment (GSE). (From Pkg Spec. AAP 3533.056).
  - k. Leather Goods. (From Pkg Spec. AAP 3533.016).
  - 1. Magnetic tapes (From Pkg Spec. 3533.063).
  - m. Pre-packed Parachutes. (From Pkg Spec. 3533.057).
  - n. Photographic Materials (From Pkg Spec. 3533.036).
  - o. Rubber Goods (except tyres). (From Pkg Spec. 3531.014).
  - p. Tyres Vehicle General.

#### 3. SPECIALISED PACKING METHODS

#### 3.1 Packing of Aircraft Drop Tanks

- 3.1.1 Preparation for delivery
- 3.1.1.1 Internally. The interior is to be cleaned by flushing out with an organic solvent degreaser, a detergent cleaner, a de-ionised water rinse and drained with all drains opened. Follow up by blowing clean dry air through filler cap opening.
- 3.1.1.2 Externally. The exterior is to be cleaned by brushing and wiping as per previous.
- 3.1.1.3 Rotation method. After cleaning internally and externally treat the interior of the item with an approved protective, by using eighteen (18) to thirty-six (36) litres of protective, according to the size of the item. The item is to be rotated in a manner to ensure complete coverage of the interior by the protective.
- 3.1.1.4 Spray method. If the item is of a size that rotation is not possible, the protective may be sprayed in to the interior through the filler cap. After treatment the item is to be thoroughly drained by opening the drainage holes. After internal protective treatment has been carried out, seal all outlets and orifices with a class 1 barrier material conforming to DEF(AUST)1000 Part 3. Secure barrier material with pressure sensitive adhesive tape. Spray or brush all unpainted surfaces with PX104.
- 3.1.2 The drop tank shall be blocked out and braced within a box, wood, special to contents, fitted with wooden contoured cradles. Cushioning material shall be applied to the formers so that abrasive action does not occur between the item and the bracing and cradles. The box shall be lined with a class 4 barrier material.
- 3.1.3 Where the liner is pierced for the applying of blocks, braces and cradles, suitable gaskets and gasket adhesives will be applied. Secure the box by nailing.

#### 3.2 Packing of Aircraft Hub Main Wheel.

- 3.2.1 The item shall be treated with a corrosion preventive compound PX 105, oil, type C, grade 2 conforming to DEF(AUST) 206, by coating all untreated metal surfaces, as per application method stated in DEF(AUST) 206.
- 3.2.2 The Hub Assembly should be placed into a lightweight battened box selected from DEF(AUST)1000 Part 15, Section B. Each item shall be over wrapped in greaseproof paper or equivalent material.
- 3.2.3 The Hub assembly primary pack shall be placed into a class 1, style 5 lightweight battened box.

#### 3.3 **Packing of Aircraft Tyres**

- 3.3.1 Aircraft tyres shall be wrapped or enclosed in an envelope of suitable dimensions of heavy reinforced bitumen laminated Kraft conforming to DEF(AUST)1000 Part 3.
- 3.3.2 Transportation primary packs are to be packed vertical (standing on the tread) in a suitable heavy-duty twin cushion or triple-wall fibreboard container.

#### 3.4 Packing of Antenna Loops (all types).

3.4.1 The antenna shall be treated with an approved corrosion preventive compound conforming to DEF(AUST)206, by brushing all exposed untreated ferrous metal parts.

3.4.2 The Antennas should be placed into a lightweight battened box IAW with DEF(AUST)1000 Part 15.

#### 3.5 Packing of Ball & Roller Bearings

- 3.5.1 Primary Packaging (All Levels). Primary packaging is the wrap applied by the manufacturer, or approved bearing facility as long as it is of good commercial standard and each individual bearing is completely enclosed by the wrap.
- 3.5.2 Secondary Packaging (Manufacturer or Service Warehouse). Bearings received in vacuum-sealed packages conforming to this specification do not require further packaging.

3.5.3 **NOTE** 

BEARING PRIMARY PACKAGING IS NOT TO BE BROACHED.
ALL BEARINGS WHERE THE PRIMARY PACK HAS BEEN BROACHED ON RECEIPT ARE NOT TO BE SECONDARY PACKED BUT PLACED INTO QUARANTINE.

- 3.5.4 Place each pack in to bag manufactured from a material conforming to MIL-PRF-131J. A size range is provided at table 1 or if the primary pack is too large, fabricate a bag using the roll of material identified in Table 1.
- 3.5.5 Using vacuum sealing equipment (NSN 3540-66-105-3771 or equivalent) vacuum seal the envelope using the sealing temperature, pressure and duration recommended by the machine manufacturer.
- 3.5.6 A printed label showing the following information is attached to the outside of the secondary package:
  - a. DO NOT OPEN PRIOR TO USE IF FOUND BROACHED DISCARD CONTENTS
  - b. NATO stock code;
  - c. Part No/Manufacturers P/No, date of Manufacture;
  - d. Item name;
  - e. Primary packaging quantity;
  - f. Serial No; and
  - g. Storage Life, date of expiry
- 3.5.7 Table 1 Secondary Packages.

NSN	ITEM DESCRIPTION	DIMENSIONS
8105-66-131-2520	BAG	400mm x 430mm
8105-66-131-2521	BAG	350mm x 380mm
8105-66-131-2522	BAG	300mm x 330mm
8105-66-131-2523	BAG	250mm x 280mm
8105-66-131-2524	BAG	200mm x 230mm
8105-66-131-2525	BAG	175mm x 195mm
8105-66-131-2526	BAG	150mm x 170mm
8105-66-131-2527	BAG	125mm x 145mm
8105-66-131-2528	BAG	100mm x 120mm
8105-66-131-2529	ROLL	1000mm x 200mm

#### 3.6 Packing of Canvas Stores. Refer also to ANNEXES A & B.

- 3.6.1 Examples of canvas stores include belts, buoys, covers, gloves, tarpaulins, tents and webbing.
- 3.6.2 These items should be initially wrapped in either rot-proofed hessian or a heat sealable laminate (AL/PE).
- 3.6.3 They can then be packed in a carton or box, which can be sealed with pressure sensitive adhesive tape. If a Level A pack is required, void filler may be used in the carton and additional securing applied, by the use of strapping.

#### 3.7 Packing of Electrical Components, Capacitors & Resistors

- 3.7.1 Refer to ANNEXES A & C.
- 3.8 Packing of Switches, Junction boxes (Testing & Jointing boxes).
- 3.8.1 Packed in accordance with the method specified for electrical components. Refer to ANNEXES A & C. In addition any metal surfaces are to be coated with corrosion, preventative compound, solvent cutback, cold application conforming to MIL-PRF-16173 (NSN 8030-66-086-8905).
- 3.8.2 All switches shall be wrapped in VCI paper, conforming to CL1 GDE 8 (NSN 8135-66-068-0765).
- 3.9 Packing of Generators & Converters (from Pkg Spec. AAP 3533. 043) Protective Treatment.
- 3.9.1 Wherever possible, all exposed metal surfaces shall be treated with corrosion preventive compound, solvent cut back, cold application conforming to MIL-PRF-16173 (NSN 8030-66-086-8905).

#### 3.10 Packing of Ground Support Equipment

- 3.10.1 All exposed metal surfaces shall be coated with an approved corrosion preventative.
- 3.10.2 All cables and wires are to be coiled and taped into a suitable position to prevent unnecessary movement and resultant damage.
- 3.10.3 Hydraulic arms and booms are to be lowered or retracted and all valves and cocks shall be shut off.
- 3.10.4 All openings and orifices shall be blanked off with blanking plugs.
- 3.10.5 The prepared item shall be blocked and braced within a wooden box refer to DEF(AUST)1000 Part 15.
- 3.10.6 Cushioning or other suitable material to be applied to the formers so that abrasive action does not occur between the item and the bracing and the cradles.

#### 3.11 Packing of Leather Goods. Refer also to ANNEXES A & D.

- 3.11.1 Examples of leather goods include boots, gloves, bags, washers and brief or suitcases.
- 3.11.2 Many of these items can be initially wrapped in a heat sealable laminate (AL/PE). They can then be packed in a carton or box, which can be sealed with pressure sensitive adhesive tape.
- 3.11.3 If a Level A pack is required, void filler may be used in the carton and additional securing, by the use of strapping, applied.

#### 3.12 Packing of Magnetic Tapes

- 3.12.1 The tape spooled on either plastic or metal spools shall be wrapped in double layer aluminium foil conforming to AS/NZS 1734.
- 3.12.2 The foil wrap shall be sealed using pressure sensitive adhesive tape.
- 3.12.3 A pressure sensitive label showing tape identification details shall be affixed to the foil wrap.
- 3.12.4 Each primary wrapped item shall be placed in the manufacturer supplier container and enclosed in a fibreboard tape transit box. The box shall be sealed with pressure sensitive adhesive tape.
- 3.12.5 Each primary package shall have a 'FRAGILE MAGNETIC TAPE' pressure sensitive label affixed to the front face and one end of the primary pack. Label to be in accordance with FIGURE 1.
- 3.12.6 Figure 1 Label, Magnetic Tape Packing, NSN 7690-66-103-2373.



#### 3.13 Packing of Photographic Film and Paper Unprocessed.

- 3.13.1 Photographic films and paper are perishable products that high temperatures and high relative humidity can easily damage. Some photographic characteristics e.g.: speed, contrast, colour balance and fog level, change gradually after manufacture. Adverse transport and storage conditions accelerate these changes. Colour films are more seriously affected than black and white films due to the varying effects adverse conditions will have on different emulsion layers.
- 3.13.2 Chemical fumes may also cause harm to photographic products. Some sources of chemical fumes can be traced to motor exhausts, paints, solvents, cleaners, mothballs, chipboard, glue, mildew, and foam in place insulation. Many of these contain formaldehyde or aldehyde derivatives, sulphides, or other agents that can harm photographic material.
- 3.14 **Packing of Rubber Goods.** Refer also to ANNEXES A & E.
- 3.14.1 Examples of rubber goods include airbags, boots, cords, rubberised couplings, covers, cups, diaphragms, dinghies, gaskets, glands, grommets, hoses, mounting assemblies, 'O' rings, rubber sheet, seals, sleeves, tanks flexible, tyres tubing, washers and windscreen wipers.
- 3.14.2 Many of these items can be initially wrapped in either waxed wrapping paper or a heat sealable laminate (AL/PE). They can then be packed in a carton or box (some items may require a PE gusset

inside the carton) which can be sealed with pressure sensitive adhesive tape.

- 3.14.3 If a Level A pack is required, void filler may be used in the carton and additional securing, by the use of strapping, applied.
- 3.15 Packing of Metallic Items
- 3.15.1 Refer to ANNEXES A & F.
- 3.16 Packing of (Packaged) Parachutes.
- 3.16.1 Refer to DEFWEB Publication as follows:
  - a. ALI MM 16-5 Operating Principles and Policy for Parachute Maintenance Units
- 3.17 Packing of Tyres Vehicle General.
- 3.17.1 Refer ANNEX E.

#### ANNEXES:

- A. Specialised Packing Method Key
- B. Canvas Stores Specialised Packing Data
- C. Capacitors and Resistors-Specialised Packing Data
- D. Leather Goods Specialised Packing Data
- E. Rubber Goods Specialised Packing Data
- F. Metallic Items Specialised Packing Data

# ANNEX A SPECIALISED PACKING METHOD KEY

TABLE A1
ABBREVIATIONS USED IN THE FOLLOWING TABLES

AL	ALUMINIUM		
CFB	CORRUGATED FIBREBOARD		
EPS	EXPANDED POLYSTYRENE		
H DUTY	HEAVY DUTY		
L DUTY	LIGHT DUTY		
M DUTY	MEDIUM DUTY		
PE	POLYETHYLENE		
PFS	POLYURETHANE FOAM SHEET		
PSAT	PRESSURE SENSITIVE ADHESIVE (PSA)TAPE		
PSAT 1	WATER RESISTANT TAPE		
PSAT4	WATER VAPOUR PROOF TAPE		
PVDC	POLYVINYLDENE CHLORIDE		
VCI	VOLATILE CORROSION INHIBITOR		
WR	WATER RESISTANT		
WVP	WATER VAPOUR PROOF		

TABLE AII
ALPHABETICAL CODES USED WITH TABLE AIII

CODE	A	В	C	D	E	
INITIAL WRAPPING MATERIALS (IW) Refer D(A)1000 PT 3 SECT F ANNEX A	Heat Sealed	Sealed With PSAT 1		With Desiccant Charge	Stitched With Twine	
CUSHIONING Refer D(A)1000 PT 3 SECT F ANNEX B Tables 1 & 2	Sealed With PSAT 1	Surround To Be 25mm				
CONTAINER	NOT USED					
INTERNAL FITTINGS  Refer D(A)1000  PT 3  SECT F Para 18		Sealed With PSAT 1	Sealed With PSAT 4			
EXTERNAL REQUIREMENT	Heat Sealed	Sealed With PSAT 1	Sealed With PSAT 4	2 0r More Not More Than 1 Metre APT		
LABELS	NOT USED					

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#### TABLE NO. AIII PACKAGING METHOD KEY - NUMERICAL CODES (Refer Tables AI & A11)

No	INITIAL WRAPPING MATERIALS (IW)	CUSHIONING Refer DEF(A)1000 PT 3 SECT F ANNEX B Tables 1 & 2	CONTAINER Refer D(A)1000 PT 15	INTERNAL FITTINGS D(A)1000C PT 3 SECT F & G	CLOSURE D(A)1000 PT 3 SECT K	EXTERNAL REQUIREMENT D(A)1000 PT 3	LABEL
1	D(A)1000 PT 3 SECT I CL 1GDE 1	Polyurethane Foam Sheet	CFB Single Wall	Liner LB2/C1 Data Sheet No. 2	PSAT 1 (WR)	SECT H ANNEX A CL 1	Fragile
2	D(A)1000 PT 3 SECT I CL 1GDE 2	Polyurethane Moulded Sheet	CFB Double Wall	Liner LB2/C2 Data Sheet No. 2	PSAT 4 (WVP)	SECT H ANNEX A CL 2	Method II
3	D(A)1000 PT 3 SECT I CL 1GDE 3	EPS Foam sheet	CFB Triple Wall	Liner LB1/PE Data Sheet No. 1		SECT H ANNEX A CL 3	Use No Hooks
4	D(A)1000 PT 3 SECT I CL 1GDE 4	Moulded EPS full coverage	Wood Type 1 Lightweight	Liner LB1/WV1 Data Sheet No. 1		SECT H ANNEX A CL 4	Keep Dry
5	D(A)1000 PT 3 SECT I CL 1 GDE 5	Moulded EPS blocks, strips, corners	Wood Type 1 Lightweight	Liner LB1/WV2 Data Sheet No. 1	Staples Metal	SECT H ANNEX A CL 5	Keep Away From Heat
6	D(A)1000 PT 3 SECT I CL 1 GDE 6	Folded CFB (trays, pads)	Wood Type 1 Lightweight	Liner LB3/C2 Data Sheet No.3	Nailed	SECT H ANNEX A CL 6	Magnetised Material
7	D(A)1000 PT 3 SECT I CL 1 GDE 7	Diecut CFB sections	Wood Type 1 Lightweight	Liner LB3/C3 Data Sheet No.3	Screwed	SECT H ANNEX A CL 7	This Way Up
8	D(A)1000 PT 3 SECT I CL 1 GDE 8	CFB Partitions	Wood Type 1 Lightweight	Liner LB3/C7 Data Sheet No.3	Clips & Lock-wire	SECT H ANNEX A CL 8	Centre Of Gravity
9	D(A)1000 PT 3 SECT I CL 1 GDE 9	Bubblewrap	Wood Type 2 Medium weight	Liner LB3/C8 Data Sheet No.3	Strapping Metallic ANNEX A		
10			Wood Type 2 Medium weight	Liner LB3/WV1 Data Sheet No.3	Non-	apping Metallic NEX A	
11	D(A)1000 PT 3 SECT L Table III MIL-PRF-131J	CFB Wrap (Single wall)	Wood Type 2 Medium weight	Liner LB3/WV2 Data Sheet No. 3		Lifting Attachments	
12	D(A)1000 PT 3 SECT L Table III MIL-PRF-131J	Bonded Urethane Chipfoam	Wood Type 3 Heavyweight	Liner LB4/C1 Data Sheet No. 4		FLT Handling Ability	
13	D(A)1000 PT 3 SECT I CL 1 GDE 4 Kraft Heavily Reinforced PE Woven Or Hessian Woven	Bonded Rubber Shock Mounts	Wood Type 3 Heavyweight	Liner LB4/C2 Data Sheet No.4		CFB Sleeve	
14	Rot Proofed Hessian		Crate CL 1 Style 1	Liner LB4/C6 Data Sheet No.4			
15	D(A)1000 PT 3 SECT L Table I Conforming Wrap		Crate CL 1 Style 2	Block and brace with timber			
16			Crate CL 1 Style 3	Anchor with bolts & Screws			
17			Crate CL 1 Style 4	VOID FILLER REQUIRED			
18	Cotton Wadding		Crate CL 1 Style 5	Block and brace with CFB			
19				Block and brace with EPS			
20	Single Faced CFB		Crate CL 2 Style 2				
21			Crate CL 1 Style 3				
22			Drum delicate instrument				
23			Box, foam padded				
24			Bag padded				
25			Paper Board Box				

#### TABLE A IV PACKAGING METHOD KEY - WORKED EXAMPLE

						L	EVEI	L B			I	LEVEL	Α		
	No.		ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	REMARKS
	1	BELTS	•	14E	IW	1		1		IW	3	17	1	10D	*COIL BELTS
	2	BOUYS													AS ITEM 1
	3	BOUYS													AS ITEM 1 AS ITEM 1
	5	COVER	KS JOB	11A	IW	3	X	1	10D	IW	4	3B 17	1	9D	ASTILIVIT
SECT 14 Kr Reinfor Or He	aft Hea rced PE essian V	1 GDE 4 wily E Woven	ACKAGI	NG MF	u	Crate L 1 Sty p to 50	yle 1 ) kg	UMF	ERICAL	, COI	DES				
110011								<u> </u>		1			_		
	N	METHOD		CODE			A		В		C		]	D	$\left(\begin{array}{c} \mathbf{E} \end{array}\right)$
		Refer D(A)	TERIAI	LS 3 SECT			leat aled		Sealed With PSAT 1				Desi	ith ccant arge	Stitched With Twine

FROM TABLE AII - ALPHABETICAL CODES USED IN ANNEXES B, C, D, E & F.

## ANNEX B CANVAS STORES - SPECIALISED PACKING DATA

				L	EVEI	L B			J	LEVEL	A		
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	REMARKS
1	BELTS	14E	IW	1		1		IW	3	17	1	10D	*COIL BELTS
2	BOUYS												AS ITEM 1
3	BOUYS LIFE												AS ITEM 1
4	CARRIERS JOB												AS ITEM 1
5	COVER	11A	IW	3	17	1	10D	IW	4	3B 17	1	9D	
6	GLOVES	*11A						IW	3	17	1	10D	
7	SIGNALS GROUND TO AIR												AS ITEM 6
8	TARPAULINS												AS ITEM 5
9	TENTS												AS ITEM 5
10	WEBBING												AS ITEM 1

## ANNEX C CAPACITORS & RESISTORS - SPECIALISED PACKING DATA

				L	EVEL	В				LE	VEL A			
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	PRE PACK / CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	LABELS
1	CAPACITORS & RESISTORS	2B, 11A	IW		2	17	1B		IW	7	3, 17	6	9D	1
2	CIRCUIT BREAKERS	1B, 11 A	IW	1 OR 2	3	17	1	10D	IW	4	1, 17	6	9D	1
3	CONNECTORS	1B, 11 A	IW	1 OR 2	3	17	1	10D	IW	4	1, 17	6	9D	1
4	CRYSTALS		IW						IW					
5	FILTERS	11A	IW						IW					
6	FUSES	1B, 11A	IW	1 OR 2	3	17	1	10D	IW	4	1, 17	6	9D	1
7	RECTIFIERS	11A	IW						IW					
8	RELAYS	1B, 11A	IW	1 OR 2	3	17	1	10D	IW	4	1, 17	6	9D	1
9	RHEOSTATS	1B, 11A	IW	1 OR 2	3	17	1	10D	IW	4	1, 17	6	9D	1
10	SERVO MECHANISMS	11A	IW	1	3	17	1	10D	IW	4	1B, 17	6	9D	1, 4
11	SOLENOIDS	11A	IW	1	3	17	1	10D	IW	4	1B, 17	6	9D	1, 4
12	SWITCHES	1B, 11A	IW	1	3	17	1	10D	IW	4	1, 17	6	9D	1

For LEVEL C Packaging refer to DEF(AUST)1000C Part 14

## ANNEX D LEATHER GOODS - SPECIALISED PACKING DATA

				LF	EVEL	В			]	LEVEL	, <b>A</b>			
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT		REMARKS
1	BELTS		ITEM	2	17	1	10D	ITEM	3	17	1	10D		
2	GAUNTLETS	*2	IW	2	17	1	10D	IW	3	17	1	10D		* TIE IN PAIRS
3	GLOVES													AS PER ITEM 2
4	HANDBAGS													AS PER ITEM 2
5	SHOES													AS PER ITEM 2
6	WASHERS	*11 A						IW	3	17	1	10L		TTEWI Z
7	BOOTS FLYING	1						IW	4	1, 17	6	9D 11,	12	
8	BOOTS LEATHER	*	ITEM	3	17	1	10D	ITEM	4	1, 17	6	9D 11,	12	* TIE IN PAIRS
9	CASES ATTACHE	2	IW	3	17	1	10D	IW	4	1, 17	6	9D 11,	12	
10	CASES BRIEF													AS PER ITEM 9
11	CASES LEATHER													AS PER ITEM 9
12	CASES SUIT													AS PER ITEM 9
13	CASES SURGICAL													AS PER ITEM 9
14	CASES VALISE													AS PER ITEM 9

## ANNEX E RUBBER GOODS - SPECIALISED PACKING DATA

				LI	EVE	L B			LI	EVEL A	<b>\</b>		
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	PRE PACK	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	LABELS
1	AIRBAGS BRAKE	7B	IW	1		1		IW	3	17	1	10D	5
2	BOOTS DE-ICER	7B	IW	1		1		IW	3	17	1	10D	5
3	CELLS FLEXIBLE	7B, 11A	IW	3	17	1	10D	IW	4	3B, 17	1	9D	5
4	CORDS ELASTIC	7B	IW	1		1		IW	3	17	1	10D	5
5	CORK RUBBER BONDED	7B, 11A	IW	3	17	1	10D	IW	4	3B, 17	1	9D	
6	COTTON FABRIC RUBBERIZED	7B, 11A	IW	3	17	1	10D	IW	4	3B, 17	1	9D	5
7	COUPLING DRIVE RUBBER	7B	IW	1		1		IW	3	17	1	10D	5
8	COVERS	7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
9	CUPS	7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
10	DIAPHRAMS	7B,12A	IW	3	17	1	10D	LEVC	4	3B,17	1	9D	5
11	GASKETS	7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
12	GLANDS	7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
13	GROMETS	7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
14	HOSE ASSEMBLIES	7B,12A	IW	3	17	1	10D	LEVC	4	3B,17	1	9D	5
15	MOUNTINGS ANTIVIBRATION	7B,12A	IW	3	17	1	10D	LEVC	4	3B,17	1	9D	5
16	"O" RINGS	7B,12A	IW	3	17	1	10D	LEVC	4	3B,17	1	9D	5
17	PADS PETAL	7B	IW	1	17	1	100	IW	3	17	1	10D	5
18	RUBBER SHEET SEALS	7B,11A 7B,11A	IW IW	3	17 17	1	10D 10D	IW IW	4	3B,17 3B,17	1	9D 9D	5
20	SLEEVES	7B,11A 7B,12A	IW	3	17	1	10D	LEVC	4	3B,17	1	9D	5
21	STOPS	7B,12A 7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
22	TANKS FLEXIBLE	7B,11A	IW	3	17	1	10D	IW	4	3B,17	1	9D	5
23	TUBES TYRE	7B,777	IW	1	1,	1	TOD	IW	3	17	1	10D	5
24	TUBING (COILED)	7B,11A	IW	3	17	1	10D	IW	4	3B	1	9D	5
25	TYRES NEW	*14B	IW					IW					5
26	` '	e printed Number/N t of Issue	Manu (5	factu	rer's	Namo	e/com		nd ba	atch Nun	ibers		Limit
27	WINDSCREEN WIPER	7B	IW	1		1		IW	3	17	1	10D	5
-,		'5	l * ''	1	1	1	1	- ' '	,	1 1	*	100	l

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## ANNEX F METALLIC ITEMS - SPECIALISED PACKING DATA

					LF	EVE	L B					LE	VEL	. <b>A</b>				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
1	Accessories Camera		IW	4B 1A or	3		1			IW	4B 1	4	3, 17	6	9D		1,2, 4	
	a. general			5B			1											
	b. optical			1A														As Item 1
2	Aerial System																	
	a. Small components	11A or B								IW		3	17	1	10 D	1**		*9 Acceptable if very small **If applicable
	b. Large components	11A or B							***	IW		10	1,1 5C	6	9D 12			*** A heavier box may be necessary depending on mass
3	Aileron assembly						***			AS' A'	ITE M	12*	1,7 B1	6	9D	8		A lighter box may be used if item mass permits **Sheathed ***
4	Amplifying Units	11,B ,D	IW	5	2		1			IW			3	17	1	10 D	1,2	
5	Antennas																	
	a. heavy	7,11 B1								IW	12	10	2,1 5C	6	9D			
	b. light	7,11 B1								IW	1	3		1	10 D			
	I	F	or LI	EVEI	L C F	acka	ging	refe	r to D	EF(A	UST	Γ)100	00C F	Part 1	4	I	<u>I</u>	

					LE	VEI	B					LE	VEI	A				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
37	Converters, Rotary																	See SECT F Par 3.8
38	Couplings		$\vdash$															As Item 35
39	Diagram Wiring		-															As Item 23
40	Die-heads	8,1 1A							AS' C'	LEV	/C	3	17	1	10D			As Item 23
41	Dippers	2							AS' C'	LEV	/C	3	17	1	10D			
42	Drill Chuck																	As Item 21
44	Dynamotors																	See SECT F Par 3.8
45	Edge Assembly																	As Item Rudder Assembly
46	Elements air driers																	As Item 35
47	Elevator Assembly																	As Item Rudder Assembly
48	Field Coil																	As Item 11
49	Film Plates																	As Item 1b
50	Filter Elements	7B	IW	11 A	25		1			LE	VB	3	17	1	10 D			
51	Filter Hydraulic																	As Item 50
52	Filter Oil (Canister Type)																	As Item 50
53	Type)																	As Item 50
54	Filter Unit																	As Item 50
55	Flap Assembly																	As Item Rudder Assembly
56	Frequency Meter																	As Item 9
57	Fuel Pumps																	As Item 35

					LF	EVE	L B					LE	VE	L A				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
58	Fuselage Assy																	As Item Rudder
59	Governors, Voltage																	Assembly As Item 11
60	Ingots																	As Item Plates
																		Alloy Steel
61	Injector Assembly																	As Item 11
62	Injector Nozzle Spares																	As Item 11
63	Instruments Measuring & Testing																	
	a. ferrous	8,1 1A							AS' C'	LE	VC	4	1,1 7	6	9D		1	
	b. non ferrous	11 A							AS' C'	LE	VC	4	1,1 7	6	9D		1	
64	Insulators																	
	a. light weight	2	IW	1	3													
	b. heavy weight	2							AS' C'	IW	12	10	2	6	9D		1,3	
65	Inverters																	As item 35
66	Leads Branch																	As Item 5b
67	Leads Double Plug																	As Item 5b
68	Leads Power Leads Remote Control									_								As Item 5b As Item 5b
70	Leads Tail									-								As Item 5b As Item 5b
71	Loading Coil																	As Item 11
72	Measuring & Testing Equipment																	As Item 63
73	Optical Fibre								be ad				rdin	g mii	nimu	m		Supply in continuous length
74	Pipe Flexible *																	Including Aero Grades
	For	: LE	VEL	C Pa	acka	ging	refe	r to I	DEF(	(AUS	ST)1	0000	C Pai	rt 14				

					L	EVE	L B					LI	EVE	L A				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
75	Pipe thin Walled *																	* Package tubes 30mm or less are to be strapped to timber of not less than 30mm or 19mm the full length of the tube.
76	Piston, Hydraulic	7 or 12 A	IW								AS" A"	LE VC	4	3D, 17	6	9D		* Package tubes 30mm or less are to be strapped to timber of not less than 30mm or 19mm the full length of the tube.
77	Plates Alloy Steel		**							AS' A'								**As LEVC with fully sheathed crate
78	Stainless Steel																	As Item 77
79	Steel, Carbon																	As Item 77
80	Pneumatic Tools a. light weight	7B	IW							AS" C"	LE	VC	17	1				
	b. heavy weight	7B	IW									AS" C"	LE VC	*15 ,17	6	9D, 11, 12		* If required for mass
81	Racking General	6B	IW						AS' C'	LE	VC	4	1,1 7	6	9D			
82	Rectifier																	As Item 11
83	Regulator and regulator, aircraft	2, 11 A, D	IW	1, B4	22		8										1	

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					LE	VEL	В					LE	VEL	A				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
84	Regulator Field																	As Item 83
85	Regulator Voltage																	As Item 83
86	Relays																	As Item 7
87	Resistors																	As Item 7
88	Rheostat																	As Item 7
89	Rivets	2	IW	11	1	17	1	10 D		IW		4	8D, 17	6	9D		1	
	Rod Hot Rolled																	As Item 4
	Rope Steel Wire																	As Item 77
92	Rotor Arm Assembly																	As Item 7
93	Rotor Squirrel Coil																	As Item 7
94	Rudder Assembly	3b, 11 A	IW							IW						LEV C		*4-13 dependant on mass ** As applicable
95	Sheet Coil																	As Item 77
96	Sheet Cold Rolled																	As Item 77
97	Springs																	
	a. small	2	IW		1		1				LEVC	3	17	1	10 D			
	b. large	7								AS' C'	IW		7	1,1 7	6	9D, 11, 12		
98	Stabiliser Assy																	As Item 94
99	Stays, Antenna																	As Item 2
100	Steel Glands																	As Item 11

For LEVEL C Packaging refer to DEF(AUST)1000C Part 14

					L	EVE	L B					LI	EVEI	L A				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
75	Pipe thin Walled *																	* Package tubes 30mm or less are to be strapped to timber of not less than 30mm or 19mm the full length of the tube.
76	Piston, Hydraulic	7 or 12 A	IW								AS" A"	LE VC	4	3D, 17	6	9D		* Package tubes 30mm or less are to be strapped to timber of not less than 30mm or 19mm the full length of the tube.
77	Plates Alloy Steel		**							AS' A'								**As LEVC with fully sheathed crate
78	Stainless Steel																	As Item 77
79	Steel, Carbon																	As Item 77
80	Pneumatic Tools																	
00	a. light weight	7B	IW							AS" C"	LE	VC	17	1				
	b. heavy weight	7B	IW									AS" C"	LE VC	*15 ,17	6	9D, 11, 12		* If required for mass
81	Racking General	6B	IW						AS' C'	LE	VC	4	1,1 7	6	9D			
82	Rectifier												/					As Item 11
83	Regulator and regulator, aircraft	2, 11 A, D	IW	1, B4	22		8										1	A STORE II

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					LE	VEL	В					LE	VEL	A				
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
84	Regulator Field																	As Item 83
85	Regulator Voltage																	As Item 83
86	Relays																	As Item 7
87	Resistors																	As Item 7
88	Rheostat																	As Item 7
89	Rivets	2	IW	11	1	17	1	10 D		IW		4	8D, 17	6	9D		1	
	Rod Hot Rolled																	As Item 4
	Rope Steel Wire																	As Item 77
92	Rotor Arm Assembly																	As Item 7
93	Rotor Squirrel Coil																	As Item 7
94	Rudder Assembly	3b, 11 A	IW							IW						LEV C		*4-13 dependant on mass ** As applicable
95	Sheet Coil																	As Item 77
96	Sheet Cold Rolled																	As Item 77
97	Springs																	
	a. small	2	IW		1		1				LEVC	3	17	1	10 D			
	b. large	7								AS' C'	IW		7	1,1 7	6	9D, 11, 12		
98	Stabiliser Assy																	As Item 94
99	Stays, Antenna																	As Item 2
100	Steel Glands																	As Item 11

For LEVEL C Packaging refer to DEF(AUST)1000C Part 14

			LEVEL B					LEVEL A										
No.	ITEM NAME	INITIAL WRAPING METHOD	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	PRE PACK	CUSHIONING	CONTAINER	INTERNAL FITTINGS	CLOSURE	EXTERNAL REQUIREMENT	OTHER INFORMATION	LABELS	REMARKS
101	Steel High Speed																	
	a. Sheet or Plate																	As Item 77
	b. Bar or Rod																	As Item 3
102	Steel Products																	As Item 3
103	Steel Tool, General	8B, 11 A	IW					2	17	1		LE VB	*	2,1 7	6	9D, 11, 12		*4-13 Dependant on mass
104	Strip Cold Rolled																	As Item 77
	Strut Assembly																	As Item 94
	Suction Pump																	As Item 3
	Tables Console																	As Item 6
108	Tubes Rigid Metal																	As Item 3
	Tubing Hot Rolled, Cold Drawn																	As Item 4
110	Universal Joints																	As Item 16
111	Valves Hydraulic																	As Item 249
112	Voltage Governors																	As Item 11
113	Voltage Regulators																	As Item 9
	Volt Meter																	As Item 9
115	Washers																	As Item 51
116	Water Pumps																	As Item 183
117	Watt Meter																	As Item 9
118	Wire Bare																	As Items 2b & 73
119	Wires Electric																	As Items 2b & 73
120	Wire High Carbon																	As Items 2b & 73
121	Wire Low Carbon																	As Items 2b & 73

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AO 011 Revised Oct 2007

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