Packaging Guidelines APRIL 2002

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PART 1

General Requirements

Applies to all European suppliers supplying components to Ford manufacturing locations, both in Europe and Export Locations.

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1.1 Introduction

These guidelines are to be used for all European sourced PRODUCTION PARTS shipped to Ford European manufacturing plants, or to Ford Trading Companies for Export shipments. The guidelines have been up-dated to re-enforce the policies laid out in the April 2000 issue, and reflect Fords' strategic packaging objectives, container selection process and operating procedures.

To summarise, these guidelines are in place to ensure the following:

• Clarity of Ford packaging requirements for all European sourced material.

• Transparency of container and packaging material costs, which must be included in all quotations.

• Quality of the product to point of use

• Support of lean material flow by supplying parts to the production operator in the optimum sized standard container/IMC carton range

• Containers are optimised for manual handling. Gross weight must not exceed 12Kg for manually handled containers, and 313kg for FLC/FSC containers (if fork truck free delivery to line), or 563kg (FLC) and 543kg (FSC) (if items are to be fork trucked to the line).

• Use of standard containers/IMC cartons specified in these guidelines wherever possible. If they are not suitable for a particular product, the supplier will be required to fund 100% returnable packaging for European destinations, or an agreed dedicated carton for export destinations - (authorisation and specification to be agreed individually with Ford MH&PE and Ford Purchasing)

• Use of durable packaging and IMC cartons will optimise transport cube utilisation.

• Please note that different pallet bases are required for European shipments (metric 1200 x 1000), and Export Markets (Imperial 45” x 39” = 1140 x 980). This is to maximise freight cube for European trucks and trains, and ISO containers for export markets.

• MH&PE and manufacturing plant packaging contacts are provided on separate sheets, and will be updated and re-issued periodically.

Remember, the responsibility for ensuring component quality from your plant to the point of use remains with you - the supplier of the product.
1.2 Guidelines Application

Packaging Guidelines January 2002 now incorporate both European domestic and export packaging requirements, and are applicable for all components shipped from European suppliers to the following locations:

PART 2 - European Manufacturing plants
Use Durable Packaging for:

- 0134A Cologne Body and Assembly Operations
- 0096A Genk Body and Assembly Operations
- 0097A Saarlouis Body and Assembly Operations
- 0145A Valencia Body and Assembly Operations
- 0118A Southampton Body and Assembly Operations
- 0116A Croydon Stamping Operations
- 0119A Dagenham Stamping Operations

PART 3 – Export operations through the following Ford Trading Companies
Use Export Packaging for:

- 0134D, 0134F, 0134T, 0134H Brazil, Argentina P. Huppertz
- 0134R, 0134U Mexico, South Africa
- 0142S, 0142T, 0142W, AYFUA Turkey, Taiwan, Russia
- 0134E, 0134G, 0134L Brazil, Argentina, India Dagenham
- 0134Q, 01420, 0142U Mexico, South Africa, Russia 'H' Building
- 0142V, 0142X Taiwan, China
- 0145B, 0145C Brazil, Argentina Transfesa
- 0145H, 0145J Russia, South Africa
- AP16A, AP24A USA, Mexico Coughlin

NOTE: This revision supersedes all previous versions of the Ford Packaging Guidelines and Export Packaging Guidelines. Use these specifications for all parts that do not yet conform to this Ford packaging standard, and for all new business.

EXISTING CONFIRMED PACKAGING DOES NOT HAVE TO BE RE-ENGINEERED
1.3 Supplier Responsibility

- All business must be quoted in compliance with these guidelines, and include a breakdown of packaging costs agreed by Ford Purchasing (including any container hire charges and durable/expendable dunnage costs where applicable).

- The supplier is responsible for product quality from the manufacturing source to the point of use (linefeed at the assembly line).

- All packaging must be developed in accordance with these guidelines, applicable regulatory requirements, QS9000 Quality Systems and Purchase Order Terms and Conditions.

- Working in conjunction with MH&PE and the customer plant, the supplier is responsible for the design, development and procurement (where appropriate) of their own packaging, and establishing approval from the customer plant. For special containers, specific approval is also required from Ford MH&PE.

- Packaging design must protect the product, be ergonomic for users, and meet lowest total cost requirements.

- All packaging containing hazardous material must have the appropriate regulatory labelling.

- Once a packaging specification has been confirmed, the supplier must continue to use this pack, unless otherwise directed by Ford MH&PE or the receiving plant.

- To change a confirmed packing specification, the supplier must submit a new EU1121 Packaging Data Form for approval, one month in advance of the proposed change, to the Ford Packaging Engineer at the receiving plant.

- As part of the Ford Policy of continuous improvement, alterations to the approved pack may be requested by the receiving plants. Suppliers are required to respond quickly to these requests, and manage the packaging change.

- In all correspondence with Packaging Engineering, ensure that full contact details are provided, including contact name, Ford Vendor Code (5 digit GSDB Code), e-mail address, and telephone and fax numbers.

1.4 Ford's Environmental Commitment

Ford is committed to protecting the environment at every stage of the production process including transportation of parts to the assembly plants. For this reason packaging must be designed with respect to the following objectives:

- Use durable packaging for all Ford European domestic plants

- Use of IMC cartons for Export Markets

- Use a minimum of internal expendable packaging

- Use expendable materials which can be recycled

- All plastics (expendable & durable) must be marked with the material identification symbol to aid recycling (see Appendix 5)
1.5 Lean Manufacturing

Ford Motor Company’s objective is to be a World Class Automotive Lean Manufacturer. A key enabler of the lean manufacturing process is the packaging for production part shipments from its suppliers. Through the use of optimum sized containers, material flow through the system and line-side ergonomics are improved. The overall effect for packaging is a shift from large packs containing many hours stock, to Small Lot Packaging (i.e. use of smaller containers), containing a target of one hours stock per container.

Why Small Lot Packaging?

When combined with the Synchronous Material Flow (SMF) program, Small Lot Packaging generates the following benefits within the production cycle:

- Eliminates waste at all stages of the production cycle
- Supports the European greening strategy by eliminating cardboard packaging
- Reduces freight requirements for European and Export markets by maximising cube utilisation.
- Manual delivery replaces mechanical delivery to line-side. Fork lift movements can be replaced by dedicated replenishment cycles
- Reduction in physical space requirements. Line-side stock location, and market place storage areas can be significantly reduced
- Improves direct labour efficiency. The containers can be ergonomically presented to the operator to maximize their efficiency
- Increases inventory turn-over rates
- Reduces non-value added inventory
- Smoothes production flow
- Reduces batch sizes. Modular small lot packaging can be ordered and manufactured in smaller units whilst maintaining level load units

With the necessary focus on material flow processes, all these efficiencies can be realized by both Ford and the supplier. Overall, there is no on-cost for operating small-lot packaging.

The Ford Packaging Guidelines have now been up-dated to reflect this on-going Ford commitment to greening and lean manufacture, and emphasize the use of small lot durable containers for European manufacturing plants, and small lot IMC cartons for export manufacturing locations
1.6 Packaging Approval Process

All packaging must be confirmed as acceptable by the user plant before being implemented, normally through timely submission of a EU1121 form.

However, durable packaging and unique containers will involve buy-off of production level prototypes at the plant location before final approval, and this must be included in your timing. For current model approvals, contact the user plant Packaging Engineer or Export Packaging contact. For new model programs, contact the MP&L MH&P Engineer contact, who will monitor and gain plant approvals.

For any part, you may be asked to send a trial production level pack before confirmation is given. You may also elect to send a trial production level pack before finalising your packaging details – contact the appropriate Packaging Engineer. For Export Packaging, provisional acceptance will be given for compliance with these guidelines, and final acceptance after successful audit by the receiving location.

Remember that you, as the supplier, are responsible for the quality of your product to the point of fit.

1.7 Database Update Process

Packaging data drives a number of processes, including logistics planning (trucks, warehousing, ISO container loading) and scheduling, industrial vehicle and labour requirements, in addition to market place and production layouts. It is essential that timely and accurate data be provided to support the central database (CMMS3), which feeds many other areas, and that completed EU1121 forms be provided where appropriate.

1.7.1 New Model Programs

For new model programs, packaging data is required 12 months before Job 1, to support the planning and development of the activities mentioned above. To support this, you are required to provide best estimate packaging data as soon as a part is released to you. This will be reviewed by the plant and accepted in principle.

Minimum data required is as follows:

- Supplier code (Ford 5 digit GSDB code)
- Part number and description
- Container type, and estimated number of parts in the container.
- Piece weight of the component
- If available, projected daily volume.

The packaging data will then remain firm, unless an engineering change demands a change in specification, or the supplier and/or user plant require a change.

Your MH&P Engineer will get the required approvals from the plant and arrange for the necessary CMMS3 update. Any further developments, trial shipments, buy-offs, and EU1121 provision, must then take place before the 1PP part of the program.
1.7.2 Current Model Packaging Changes

Changes to current model packaging, or the introduction of new parts to current models, must be done in line with the appropriate VO (see Section 2.3) or Export Packaging (see Section 3.3) selection process, and involve the plant Packaging Engineer or Export Packaging contact. When the EU1121 has been confirmed together with an implementation date, the plant Packaging Engineer will input the revised data to CMMS3.

1.8 Approved Packaging Conformance Process

Following these guidelines means that no parts will be shipped without a confirmed EU1121 specifying the packaging. It is a mandatory requirement for the Supplier to continue to supply in accordance with the confirmed EU1121 and the requirements of these guidelines. The receiving plant will monitor packaging received to ensure conformance with the information logged in the central database (CMMS3). Non-conformance will result in automatic rejection and Purchase involvement, and may result in the supplier being de-merited, and charged for any subsequent re-packing (see Appendix 3 - form EU2714)

IMPORTANT NOTE FOR VO DOMESTIC SHIPMENTS: Whilst Ford expects all suppliers to ship parts in the approved durable container, emergency expendable packaging is sometimes unavoidable. If this situation occurs the receiving plants must be informed prior to shipment, and packs must be identified as emergency packaging (see section 2.10, Emergency Expendable Packaging User Guide). Failure to do so will result in automatic part rejection.

In order to support the lean manufacturing system, it is important for suppliers to develop emergency expendable packaging, which replicates the durable solution in size, pack density and stack height during transport. A minimum of 3 days stock of emergency expendable packaging should be available to meet any such contingency.

If costs are to be claimed against Ford or the third party container provider, details of the reasons and associated costs for using emergency expendable packaging must be kept. If the third party container provider fails to deliver the required durable containers, details of the specific container orders and the failed deliveries (including dates and quantities) must be provided in support of any claims for costs against the provider.

1.9 Continuous Improvement

Ford operate a policy of continuous improvement, and requests to change confirmed packaging may be sought by the supplier, or Ford, in pursuit of this. Suppliers are asked to respond quickly to any requests for change, and re-submit an amended EU1121 for confirmation and CMMS3 update, at least one week prior to the implementation date of the revised packaging.
1.10 Final Checklist

To ensure that you have used these Packaging Guidelines correctly please use the following checklist to tick off that all key steps have been taken:

1. You have selected an approved standard container or an agreed durable alternative for European Shipments, or an approved IMC carton for Export Shipments, using the guidelines, flowcharts and tables in these Guidelines.

2. You have sent an EU1121 (European/Export Shipments – Appendix 2) to the Ford Packaging Engineering contact.

3. You have received 'Confirmed' approval for European shipments, or 'Provisional Approval' (Export Shipments) for the proposal(s).

4. You have selected the appropriate labels, and for Export Shipments the correct pallet base, weight disc, stickers and handles to be used when shipping this packaging.

5. For Export Packaging, you have selected a packaging supplier that can provide the approved carton to the performance specification detailed in Section 2.2

6. You have selected appropriate supplier(s) that can provide each of the above and can support your shipping volumes and program dates.

7. You have provided appropriate training for staff to ensure that user, consolidation and shipping guidelines are complied with.

8. You have the appropriate documentation and internal processes to ensure that container ordering and tracking both inbound and outbound are robust, and shipments are always shipped to the approved specification.
PART 2

EUROPEAN MANUFACTURING PLANTS

Applies to all European suppliers supplying components to Ford manufacturing locations in Europe.

Use Durable Packaging for shipments to the following plants:

- 0134A Cologne Body and Assembly Operations
- 0096A Genk Body and Assembly Operations
- 0097A Saarlouis Body and Assembly Operations
- 0145A Valencia Body and Assembly Operations
- 0118A Southampton Body and Assembly Operations
- 0116A Croydon Stamping Operations
- 0119A Dagenham Stamping Operations

**NOTE:** This revision supersedes all previous versions of the Ford VO European Packaging Guidelines. Use these specifications for all parts that do not yet conform to this Ford packaging standard, and for all new business.

**EXISTING CONFIRMED PACKAGING DOES NOT HAVE TO BE RE-ENGINEERED**
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2.1 Introduction to European Durable Containers

Durable packaging solutions are required for all shipments to the above plants and standard containers are preferred. Optimal are the small manually handled KLT containers. If your part is too large for these, the FSC/FLC container should be selected for shipments to PTA plants, or Ford owned Odette/UZE5/ZE39 containers for shipments to MS&B plants. If these are also unsuitable, a unique durable container is required, and you must contact Ford Purchasing and MP&L MH&PE before proceeding further.

Ford steel containers are available through the receiving MS&B plants, and plastic containers through third party container providers, viz.:

- Volvo Emballage for FLC/FSC containers (from June 2002).
- Chep Automotive for KLT containers (and FLC/FSC until June 2002)

Before a supplier can order containers through the third party provider, he must have signed a standard agreement (this agreement is pre-arranged with Ford and applies to all suppliers). The supplier is then entitled to order containers within the limits of his allocation.

It is the suppliers' responsibility to ensure that this agreement is in place on a timely basis.

The durable Ford standard containers specified below must be used wherever possible. If they are not suitable for your product, 100% returnable packaging funded by the supplier must be used (authorisation and specification to be agreed individually with Ford Packaging Engineering and Ford Purchasing). Follow the container selection process in Section 2.3.

2.2 Standard Container Details

Third Party Containers

(Note: Container details are for guidance – precise details can be obtained from the container provider)

KLT 3214

- External cms: 30 x 20 x 14
- Internal cms: 27.1 x 13.6 x 13
- Tare weight: 0.7 kg
- Net capacity: 11.3 kg
- Max gross weight: 12 kg

KLT 4314

- External cms: 40 x 30 x 14
- Internal cms: 33.4 x 24.7 x 10.4
- Tare weight: 1.6 kg
- Net capacity: 10.4 kg
- Max gross weight: 12 kg
KLT 4328

External cms: 40 x 30 x 28
Internal cms: 33.4 x 24.7 x 23.6
Tare weight: 2.6 kg
Net capacity: 9.4 kg
Max gross weight: 12 kg

KLT 6428

External cms: 60 x 40 x 28
Internal cms: 53.2 x 34.6 x 23.1
Tare weight: 4.4 kg
Net capacity: 7.6 kg
Max gross weight: 12 kg

Trim and Assembly Containers

FSC 1206

External cms: 120 x 100 x 59.5
Internal cms: 111.5 x 91.5 x 38.2
Folded height: 41 cms
Tare weight: 43 kg
Net capacity for internal Ford use:
* 270 kg for non-fork truck handling
* 500 kg for fork truck handling
Max gross weight: 543 kg

FLC1210

External cms: 120 x 100 x 97.5
Internal cms: 111.5 x 91.5 x 75.7
Folded height: 41 cms
Tare weight: 63 kg
Net capacity for internal Ford use:
* 250 kg for non-fork truck handling
* 500 kg for fork truck handling
Max gross weight: 563 kg
MS&B Containers

**UZE 038/039**
- **External:** 220 x 120 x 101
- **Internal:** 206.5 x 113.0 x 70.5
- **Tare weight:** 241 kg
- **Net Capacity:** 2000 kg
- **Max gross weight:** 2241 kg

**UZE 039**
- **External:** 220 x 120 x 101
- **Internal:** 120 x 100 x 101
- **Tare weight:** 241 kg
- **Net Capacity:** 2000 kg
- **Max gross weight:** 2241 kg

**UZE 05**
- **External:** 120 x 100 x 101
- **Internal:** 113 x 83.5 x 70.5
- **Tare weight:** 180 kg
- **Net Capacity:** 2000 kg
- **Max gross weight:** 2180 kg

(All dimensions are in centimeters)

**Odette 8401/8402**

**Odette 8401:**
- **External cms:** 120 x 100 x 75
- **Internal cms:** 113 x 93 x 55.6
- **Folded Height:** 30
- **Tare weight:** 127 kg
- **Net capacity:** 1000 kg
- **Max gross weight:** 1127 kg

**Odette 8402:**
- **External cms:** 120 x 100 x 100
- **Internal cms:** 113 x 93 x 80.6
- **Folded height:** 40cms
- **Tare weight:** 138 kg
- **Net capacity:** 1000 kg
- **Max gross weight:** 1147 kg

**Odette 8421/8422**

**Odette 8421:**
- **External cms:** 120 x 100 x 75
- **Internal cms:** 113 x 93 x 55.6
- **Folded Height:** 30
- **Tare weight:** 117 kg
- **Net capacity:** 1000 kg
- **Max gross weight:** 1117 kg

**Odette 8422:**
- **External cms:** 120 x 100 x 100
- **Internal cms:** 113 x 93 x 80.6
- **Folded Height:** 40 cms
- **Tare weight:** 137 kg
- **Net capacity:** 1000 kg
- **Max gross weight:** 1137 kg
2.3 Container Selection Process

Now that small lot packaging is firmly established the container selection process has been simplified to reflect current requirements. The flow chart opposite (see 2.3.2) will ensure that your container selection meets European production requirements.

2.3.1 Selecting the Container – Trim and Assembly Plants

Container selection must be made on the basis that the smallest container is used to meet Ford requirements.

1. Establish how many shifts the destination plant is working for the plant(s) you are supplying – multiply by 7.1 hours to give the hours worked per day.
2. Next, take your projected daily delivery and divide by the hours worked per day (from (1) above). This is the optimum container quantity and gives 1 hour of stock for your component.
3. From the standard container range, select the smallest container that will hold this 1 hours worth of stock. Now fill the container. This is the optimum container specification.
4. Is the gross weight of the container within the allowed maximum:
   a). 12 kg for KLT containers?
   b). 313kg for FLC/FSC for fork truck free handling OR
   c). 563kg for FLC/FSC for fork truck handling
   If YES, this is your container specification. If NO, contact your Ford Packaging Engineer.
5. Determine if any internal packaging is required to ensure quality.
6. Complete the EU1121 form, including details of any internal dunnage used, and submit to Ford Packaging Engineering (include photograph of all FLC/FSC and unique containers, and any KLT container with internal dunnage).
7. Once confirmed (see 1.4 below), use only this specification to ship into Ford.

Exceptions

- If the component will not fit a standard container according to the above process, contact your Ford Packaging Engineer.
- Hardware (fasteners etc) and small parts should automatically be specified in a KLT3214 container and filled (not exceeding the 12kg limit).
- If a part is already supplied to another plant in Ford approved packaging which meets these guidelines.
- If a new part is to be shipped to more than one plant, use the packaging specification for the user with the highest daily volume.
- FSC containers should only be specified where use of an FLC would compromise quality or exceed the weight limit.
- If durable dunnage or unique containers (FORD or SUPPLIER OWNED) are specified, contact Packaging Engineering before proceeding. These items will be subject to a full cost analysis, including the return freight costs. If agreed, method of payment must be authorised by Purchase, before any commitments are made. Design must proceed in conjunction with Packaging Engineering to ensure ergonomic and process requirements are met.
- Durable dunnage must be designed, developed, and operated in accordance with the Durable Insert and Stretch Container Standard - see Appendix 6
2.3.2. Container Selection Flowchart

Select part in question

Does it fit a standard container?

Yes

Part will fit a standard container

No

Is it a fastener? (screw, clip, plug etc)

Yes

Part is not a fastener

No

Determine number of shifts worked and multiply by 7.1 = hours worked per day

Example:

2 shift operation
2 x 7.1hrs
= 14.2 hours/day

Take projected daily delivery quantity and divide by hours worked per day = optimum container quantity

Example:

Projected DPV = 2800
2800 / 14.2 = 197 parts
Optimum quantity = 197

Select KLT3214

Select the smallest standard container to hold this quantity:
Trim and Assy = KLT/FLC/FSC
MS&B = KLT/Odette/ZE range - now fill the container

Example:

Smallest container to hold 197 parts is KLT6428
To fill container takes 230 parts

Is container within specified weight range?

Yes

Advertise the Packaging Engineering contact, obtain approvals, and provide packaging specification/documentation

Example:

KLT6428 tare weight = 4.4kg
230 Parts x 0.032kg = 7.36kg
Total weight = 7.36kg + 4.4kg = 11.76kg

Contact Ford Packaging Engineer and/or Purchase

Example:

Container specification is:
KLT6428 with 230 parts and gross weight of 11.76kg
2.3.3 Selecting the Container – Metal Stamping and Body Parts

The Ford policy of 100% durable packaging applies equally to European MS&B plants, but the different nature of the products is reflected in the different containers available. The container range is as follows:

- **KLT containers** - to be used for small parts and hardware. Selection process is the same as Trim and Assembly (see section 2.3), with a maximum gross weight of 12kg.
- **Odette containers** – to be used for all other medium sized parts that can be loaded to the container.
- **ZE 39 containers** – to be used for parts too large to fit into an Odette container.
- **UZE 5 containers** – for heavy parts, or small parts unsuitable for meshed containers.
- **Unique containers** – used for skin surface parts. Unique containers will involve additional investment for design/development/procurement. Suppliers must not proceed with unique containers before consulting MH&PE and Ford Purchase, to clarify funding arrangements and technical requirements.

2.3.4 Packaging Costs

Packaging costs must be identified and integrated as part of your piece price at the quotation stage, and can only be agreed by Ford Purchase (your commodity buyer). Confirmation of an EU1121 advises that your packaging proposals are acceptable to the user plant, and does not infer or imply acceptance or agreement of any associated costs with that packaging.
2.4 Container Control

Suppliers are responsible for ensuring the ordering, control, and documentation procedures appropriate to the type of container they are using. Failure to do so may result in emergency packaging and transport being used, and any costs for this will be the sole responsibility of the supplier.

There are three types of container control potentially required:
 a). Ford Owned Containers (see 2.4.1)
 b). Third Party Owned Containers (see 2.4.2)
 c). Supplier Owned Containers (see 2.4.3)

2.4.1 Ford Owned Containers
These include the steel Odette/UZE5/ZE39 containers, and special racks. Arrangements for the supply and control of these containers must be made through your MPL contact of the receiving plant. Details may vary according to the local conditions and specific requirements for each container.

2.4.2 Third Party Container Management
For Paint, Trim and Assembly standard containers, Vehicle Operations employ a container strategy with containers owned and managed by Ford approved third party container management companies. Containers are shipped from the European supply base to the following assembly and body construction locations:
Southampton, Saarlouis, Valencia, Genk, Cologne, Croydon, Dagenham

When empty, the containers are consolidated, and returned via the most efficient routing (i.e. not necessarily their customer plants). (NB! Containers must not be shipped to any location, other than those listed above. Containers shipped to other destinations will remain on the supplier account and be deemed lost. Lost containers fees will be levied by the 3rd party provider, in line with the standard agreement).

A standard agreement must be signed before containers can be issued, and the allocated account manager will then provide details on specific container ordering and shipping procedures.

For FLC and FSC containers, a container allocation is calculated, providing the supplier with a maximum 5 day float. The allocation is based on projected volumes of parts to be shipped to the various plants, and is reviewed periodically. Containers are only provided to support shipment from the last manufacturing operation in the contracted supplier plant, to point of use in Ford. Containers are not provided for supplier intra plant movements, in-process handling, stockpiling or emergency needs, which remain the responsibility of the supplier.
It is the supplier’s responsibility to ensure that container ordering, control, and documentation procedures are fully complied with, including records of containers and dates when ordered, and any failed deliveries. The supplier must also ensure container returns are fully documented and advised on time, and that the approved allocation of containers is not exceeded.

Failure to comply with any of the above may result in the 3rd party container provider assuming the supplier has received the allocated container requirement, and further containers will then be denied. The cost of any emergency packaging and transportation measures resulting from such a situation will be the sole responsibility of the supplier.

From June 2002 the Internet can be used to order FLC/FSC containers, and monitor their delivery status and the account balance. Suppliers will be expected to use these facilities to ensure the use of emergency expendable packaging is minimised (further details will be issued prior to launch).

### 2.4.3 Supplier Owned Containers

These can include any type of standard or special racks, but must not be used without completing the Container Selection Process (see Section 2.3) and gaining the necessary approvals. Particular attention must be paid to the identification of supplier owned containers, to aid recognition and indicate return delivery location in the event of a mis-directed shipment. Unique numbers are issued by Ford MH&PE for each insert or special container type e.g. FE10946 or FLCDU6. These numbers not only aid identification, but are entered into the Ford CMMS3 system for container control.

Arrangements for control and routing of these containers must be made through your MP&L contact at the receiving plant. Details may vary according to local conditions and the specific requirements for each container.

If the packaging concerned is a durable insert used in conjunction with a standard container, or a stretch container, ensure that the Durable Insert and Stretch Container Standard (see Appendix 6) is complied with, including completion of the specifications and Tracking Sheet, to identify the routing and responsibilities of the return process.

It is recommended that this process is adopted for returns of all supplier owned containers to identify routing and responsibilities, before shipments are commenced.
2.5 KLT User Guide

The KLT container system comprises a range of four modular box sizes combined with two pallet sizes and lids (see section 2.2.1). The KLT ordering and control system is administered through the 3rd party provider (Chep Automotive), details of which are available through your account manager. All KLT containers are limited to a maximum gross weight of 12kg (i.e. including the weight of the container and any dunnage used) – there are no exceptions to this requirement.

- KLT’s should always be shipped in unit load format with one or more complete layers of KLT containers up to a maximum of 1.00 metre high. Unit loads may comprise one part number, or multi-part numbers in a mixed load.

- Note: Some parts have a very low daily call-in and it is difficult to make up a single layer of containers for inbound shipment. Under these circumstances, contact the Plant Supply Chain Management analyst responsible for the part concerned, and agree upon one of the following options:
  - Review feasibility of mixed load shipments from supplier to plant.
  - Request Release and Follow Up to adjust call-in frequency to allow a minimum of one layer of KLT containers to be shipped (at more extended periods).

2.5.1 KLT Labelling Requirements

Container labels are based on the current Odette standard, printed on white weather resistant paper of weight 160-170g/m² with black text. These printed labels must be to latest MP&L requirements, and must include ILVS (In-Line Vehicle Sequencing) and
'Control Item' marking where appropriate. Please refer to the MP&L contact person shown in Appendix 1 for further information.

- **Use** a minimum of (1) Odette standard label, coloured white, per KLT container
- **Locate** "A5" sized Odette label in label holder, ensuring label is of sufficient thickness to remain securely located in holder - (if necessary, a small sticker may be required to secure a label. This must be a "low adhesion" sticker, one sticker per label, with majority of sticker on label and not KLT)
- **Ensure** that label is positioned outwards within the unit load wherever possible
- **For KLT3214** containers fold the label top and bottom to reduce label size to fit label holder – ensure that part number, quantity and supplier code are clearly visible.

**If a single part number is being shipped:**

- **Use** (2) master labels, coloured green. The master labels should be attached to adjacent sides of the unit load, attaching across lid and KLT using "low adhesion" stickers. Master labels must show part number, and total quantity of parts.

**If multiple part numbers are being shipped within a unit load:**

- **Use** (2) mixed load labels, coloured green. The mixed load labels should be attached to adjacent sides of the unit load, attaching across lid and KLT using "low adhesion" stickers. Mixed load label must show all part numbers, with total quantities of all parts shipped.

- **DO NOT** use self adhesive Odette labels under any circumstances
### 2.5.2 Construction Guidelines

The Unit Load is designed to maximise Freight, Logistics and In-Plant Handling efficiencies. When constructing the Unit load, follow the guides listed below:

1. **Ship with Complete Unit load of full KLT containers**
   - a) One part number
   - b) Mixed part numbers
   - Example:
     - 98AB 12K531 BC
     - XS41 7A512

If a complete unit load is not possible.....

2. **Ship with Complete Layer(s) of full KLT containers.**
   - a) One part number
   - b) Mixed part numbers
   - Example:
     - 98AB 12K531 BC
     - XS41 7A512 DD

### NOTE

The modular nature of KLT containers means complete layers of 4314's, 4328's or 6428's can be shipped within the same unit load. Complete layers of 3214's can also be included within a larger load unit, provided they form the base layer(s).
2.5.3 KLT Unit Load Construction
The following rules apply to all KLT unit loads:

- **DO** ensure that all containers are clean, serviceable and free from redundant labels, prior to loading components.
- **DO** report complaints to your 3rd Party contact if received containers are in an unacceptable condition.
- **DO** assemble KLT unit loads using only the specified 3rd Party pallet base and cover.
  - KLT 4314, 4328 and 6428 can only be assembled on 100 x 120 pallet.
  - KLT 3214 can be supplied on either 100 x 120 pallet or 100 x 60 pallet.
- **DO** ensure that 6428, 4328 and 4314 container unit loads are "brick built" as shown.
- **DO** position KLT containers on pallet base with product labels facing outwards.
- **DO** use two plastic bands to secure the KLT unit load to the pallet base.
- **DO NOT** ship "pyramid loads" under any circumstances.
- **DO NOT** exceed a unit load height greater than 100 cm.
- **DO NOT** mix loads of cardboard boxes and KLT containers.
- **DO NOT** ship empty KLT containers to make up complete layers.
- **DO NOT** exceed 12kg gross weight of each container.
- **DO NOT** compromise access to pallet base with banding straps.
- **DO NOT** use steel banding as it is difficult to remove and can cause injury.
- **DO NOT** use shrink or stretch wrap.
2.6 FLC/FSC User Guide (Trim & Assembly Plants only)

The FLC 1210 (Folding Large Container) is a unit load sized (120 x 100 x 97.5 cm) container with drop-down access doors on two adjacent sides. The FSC (Folding Small Container) shares a common base, with a reduced overall height (120 x 100 x 59.5 cm), and no access doors. Both containers are intended for 'clean' parts only (i.e. Trim and Assembly parts), and fold to improve cube utilisation for the return journey. FSC containers are only used where use of an FLC would compromise quality or exceed the weight limit. In addition to the containers, there is a separate non-load bearing dust cover, which can be fitted to both containers (not normally used with FSC containers).

2.6.1 FLC / FSC Container Labeling Requirements

- Container labels are based on the current Odette standard, printed on white weather resistant paper of weight 160-170g/m² with black text. These printed labels must be to latest MP&L requirements, and must include the dock code and marketplace address, in addition to ILVS (In-Line Vehicle Sequencing) and 'Control Item' marking where appropriate. Please refer to the appropriate plant MP&L contact person for further information.

- **Use** a minimum of two "A5" Odette labels, on adjacent sides of the container

- **Locate** labels in the label holders provide.

- **DO NOT** use self adhesive Odette labels

Affix label using low adhesion sticker, if required.
2.6.2 FLC / FSC Operating Rules

- **DO** ensure that all containers are clean, serviceable and free from redundant labels, prior to loading.
- **DO** report complaints to your 3rd Party contact if received containers are in an unacceptable condition.
- **DO** ensure the lugs clip into dedicated location points in the container when fitting the dust cover to the containers.
- **DO** fold containers sides in the correct sequence if required (refer to 3rd Party Container Supplier operating guide).
- **DO** develop and ensure 3 shipments worth of an emergency expendable pack is always available. This must mirror the FLC / FSC in size, pack density and stackability. Refer to guidelines in section 2.10.
- **DO** only ship to approved locations.
- **DO** stay within your 5 days container allocation.

- **DO NOT** floor stack erected containers more than 5 high.
- **DO NOT** use any form of banding on the container (unless expressly required to by Ford Packaging Engineering).
- **DO NOT** store obsolete stock in Ford containers.
- **DO NOT** use durable containers for export destinations.
- **DO NOT** exceed the gross weight capacity of the container:
  
  FLC/FSC  313Kg gross weight for fork truck free handling (normal)
2.7 Ford ODETTE / ZE38/39 / UZE5 Container User Guide (MS&B Plant Only)

KLTs must be used wherever possible within the 12kg maximum weight limit. However, when this is not feasible for your product, select:

1. **Odette** container for normal parts
2. **ZE38/39** for parts too heavy or large for an Odette container
3. **UZE5** for very heavy small/medium parts
4. **Special** containers for major skin panels and/or quality sensitive parts

2.7.2 Ford ODETTE / ZE38/39 / UZE5 Operating Rules

- **DO** ensure that all containers are clean, serviceable and free from redundant labels, prior to loading.
- **DO** ensure that the pallet is properly labeled – for Odette containers follow the FLC/FSC labeling procedure (see section 2.6.1).
- **DO** report complaints to your supplying plant contact if received containers are in an unacceptable condition.
- **DO** ensure containers are securely erected before loading.
- **DO** fold containers sides in the correct sequence as required.
- **DO** ensure container control is operated for Odette/UZE5/Z39 containers, (see Section 2.4 Container Control).
- **DO** develop and ensure 3 shipments worth of an emergency expendable pack is always available. This must mirror the Odette Container in size, pack density and stackability (see section 2.10).

- **DO NOT** floor stack erected containers more than 6 high.
- **DO NOT** exceed the net capacity of the container:
  
<table>
<thead>
<tr>
<th>Container Type</th>
<th>Net Weight for Fork Truck Handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODETTE</td>
<td>1000kg</td>
</tr>
<tr>
<td>UZE 039/038</td>
<td>2000kg</td>
</tr>
<tr>
<td>UZE 05</td>
<td>3000kg</td>
</tr>
</tbody>
</table>
2.8 Special Container User Guide

- Where special packaging is required please contact MH&PE to discuss the specific requirements.
- All special packaging economics (including, where relevant, any container hire charges and durable or expendable internal dunnage costs as applicable) must be reviewed and agreed by Ford Purchase and Packaging Engineering.
- All special packaging must be formally approved by the appropriate Ford customer location(s) in conjunction with your Ford MH&PE contact.
- It is Ford Motor Company's long term objective, to adopt 100% supplier ownership for all special packaging. It will be a supplier's responsibility to design, develop and procure special packaging. This on-going process will be implemented on an individual basis in close conjunction with Ford Purchase and MH&PE.
- The supplier must also ensure that all special packaging is clean, serviceable and free from redundant labels, prior to packing components. Damaged and/or dirty containers will not be accepted by your customer.
- It is the Supplier's responsibility to repair and maintain special packaging. All special packaging fleets to be determined in conjunction with Ford MH&PE.
- Ford MH&PE will advise on quality assured packaging development service providers.
- For special containers, Container Control (see Section 2.4) is still applicable.

Example of special rack
with unique internal fittings
designed for a specific part.
Odette type labels
positioned on adjacent corners in label holders provided.

Example of extended
KLT container with special durable inserts

Example of extended
FSC container with unique identification on base
2.9 Internal Packaging

In line with Ford's greening policy, internal packaging should be kept to an absolute minimum, consistent with ensuring product quality to the point of use, and product function during the product life-cycle.

Where use of expendable packaging becomes a significant operating cost/piece price element, durable inserts or packaging should be evaluated in conjunction with Ford Packaging Engineers.

All expendable packaging must be re-cyclable and all plastics (expendable & durable) must be marked with the appropriate material identification symbol to aid recycling (see Appendix 5)

2.9.1 Internal Packaging Rules

- **DO** ensure that part quality is maintained using the minimum of internal packaging
- **DO** ensure that it is not possible for parts to tangle during transportation (consider banding/bundling parts together to minimise the risk).
- **DO** ensure that all expendable dunnage is re-cyclable (see section 2.10.2)
- **DO** pack containers to utilize at least 95% of internal volume
- **DO** ensure that expendable dunnage can be easily removed from the container
- **DO** ensure that your internal dunnage costs are included in ESTA quotes

- **DO NOT** use shrink or stretch wrapping materials for VO European shipments
- **DO NOT** wrap parts in plastic bags (consider using inter-woven foam layer pads). Use of plastic bags requires specific written agreement from MH&PE or the user plant MP&L contact.
- **DO NOT** mix different part numbers within the same container, unless requested in writing by the user plant MP&L contact.
2.10 Emergency Expendable Packaging User Guide

Expendable packaging is **only** to be used for emergency shipments when the durable containers are not available due to unforeseen circumstances.

It is essential that an emergency expendable packaging solution is developed and 3 shipments worth are always available at the supplier location. **THE EMERGENCY EXPENDABLE PACKAGING MUST EXACTLY REPLICATE THE DURABLE SOLUTION IN SIZE, PACK DENSITY AND STACKABILITY,** and be agreed by the receiving plant SMF team. This is absolutely mandatory since the part ordering and external and internal logistics systems are based specifically on the container size and part quantity.

Under no circumstances should emergency expendable packaging be used to ship production material to markets outside Europe (see Part3 Export Operations).

---

**ACCEPTABLE**

- Able to safely stack in storage and transit to same height as durable equivalent
- Max. height 100 cm
- Full Perimeter pallet

**UNACCEPTABLE**

- Collapsed stack
- No banding
- Pyramid load
- Banding under pallet base (restricts fork)

1. Two way entry
2. Fibre pallet
3. OK for Europe
Use full perimeter base for exports
2.10.1 Emergency Expendable Material Rules

- **DO** develop and ensure 3 shipments worth of emergency expendable packaging is always available.
- **DO** only use expendable external packaging in an emergency when no durable containers are available and after concurrence by the receiving plant.
- **DO** make all packaging into unit loads (for fork lift handling of packaging units).
- **DO** make unit loads flat topped. Incomplete layers (pyramid loads) are not allowed under any circumstances.
- **DO** label all emergency expendable packaging clearly, stating that the pack is emergency packaging.
- **DO** use banding or strapping made of plastic.
- **DO** use pallets made of solid wood with four way entry.
- **DO** always use full perimeter expendable pallets (see drawing on previous page).
- **DO NOT** use steel banding as it is difficult to remove and can cause injury.
- **DO NOT** use shrink wrap or stretch wrap without written permission from the local Material Handling Engineer. Ford fire regulations do not permit this practice.
- **DO NOT** allow cardboard packaging to overhang the pallet, it does not stack properly and is likely to get damaged.
- **DO NOT** use paper board, moulded chip or plastic expendable pallets.
- **DO NOT** staple carton to the base pallet.

2.10.2 Emergency Expendable Material Selection Guide

When selecting expendable material for use in emergency packs, or internal dunnage, ensure that all national legislation is adhered to. The Ford preferred materials are:

**Timber:**
- must be untreated, natural solid wood.
- fibreboard, chipboard etc. are not allowed.
- no additional coatings or preservatives are permitted.
- must not have plastic foil adhered to it.

**Paper, cardboard:**
- must not include additives in the raw paper or board.
- materials used for waterproofing, impregnation, gluing etc. must not inhibit re-cycling.

**Plastic Sheets and Foils:**
- use polyethylene, polypropylene or ABS
- where printed, the surface area of the ink must not exceed 3% total surface.
- adhesive tapes and stickers should be polyethylene or polypropylene.
PART 3

Export Operations

Applies to all suppliers shipping exports through the following Ford Trading Companies:

Use Export Packaging for:

<table>
<thead>
<tr>
<th>Plant Code</th>
<th>Destination</th>
<th>Consolidator</th>
</tr>
</thead>
<tbody>
<tr>
<td>0134D, 0134F, 0134T, 0134H</td>
<td>Brazil, Argentina</td>
<td>P. Huppertz</td>
</tr>
<tr>
<td>0134R, 0134U</td>
<td>Mexico, South Africa</td>
<td></td>
</tr>
<tr>
<td>0142S, 0142T, 0142W, AYFUA</td>
<td>Turkey, Taiwan, Russia</td>
<td></td>
</tr>
<tr>
<td>0134E, 0134G, 0134</td>
<td>Brazil, Argentina, India</td>
<td>Dagenham</td>
</tr>
<tr>
<td>0134Q, 01420, 0142U</td>
<td>Mexico, South Africa, Russia</td>
<td>'H' Building</td>
</tr>
<tr>
<td>0142V, 0142X, 0142W, AYFUA</td>
<td>Taiwan China</td>
<td></td>
</tr>
<tr>
<td>0145B, 0145C</td>
<td>Brazil, Argentina</td>
<td>Transfesa</td>
</tr>
<tr>
<td>0145H, 0145J</td>
<td>Russia, South Africa</td>
<td></td>
</tr>
<tr>
<td>AP16A, AP24A</td>
<td>USA, Mexico</td>
<td>Coughlin</td>
</tr>
</tbody>
</table>

**NOTE:** This revision supersedes all previous versions of the Ford Export Packaging Guidelines. Use these specifications for all parts that do not yet conform to this Ford packaging standard, and for all new business.

**EXISTING APPROVED EXPORT PACKAGING DOES NOT HAVE TO BE RE-ENGINEERED**
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3.1 Introduction

Export packaging differs from the European domestic production requirements by using IMC (International Modular Cartons) packs instead of durable standard containers. To support lean production and minimise freight costs for our export locations, the IMC cartons have been developed using the same principles applied in Europe.

Please note that there is no longer any re-pack operation for Trim and Assembly parts, and the IMC cartons are consolidated by the Ford Trading Companies as received, for onward shipment to the final destination.

This section of the Packaging Guide is to advise Ford suppliers of the packaging requirements, and standardise the method of shipment to all export markets.

If you are unsure as to which territories are deemed as export for your company, please contact either your Ford buyer, Supply Chain Management contact or MP&L MH& PE contact.

An EU1121 must be completed for each part/destination shipped and returned to the appropriate Ford Packaging Engineering department.

Please ensure you communicate your proposals via e-mail - to obtain an electronic version of the EU1121 either contact the appropriate email address below or visit the Global Terms & Conditions Page in the Ford Intranet.

Contact the following for parts exported from:

<table>
<thead>
<tr>
<th>EUROPE Metric Units</th>
<th>NORTH AMERICA Imperial Units</th>
<th>INDIA Metric Units</th>
<th>SOUTH AMERICA Metric Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel: 44 (0) 1708 67 3089</td>
<td>Tel: (313) 845-4315</td>
<td>Tel: 91 4114 54375 x3029</td>
<td>tbe</td>
</tr>
<tr>
<td>Fax: 44 (0) 1708 67 2211 <a href="mailto:Eu1121e@ford.com">Eu1121e@ford.com</a></td>
<td>Fax: (313) 323-8279 <a href="mailto:na1121e@ford.com">na1121e@ford.com</a></td>
<td>Fax: 91 4114 54081 <a href="mailto:in1121e@ford.com">in1121e@ford.com</a></td>
<td>tbe <a href="mailto:sa1121e@ford.com">sa1121e@ford.com</a></td>
</tr>
</tbody>
</table>

[NOTE: EU1121 forms for North American destined material, must have details stated in English Imperial measurements (inches, pounds, lbs), all other destinations are to use Metric measurements (mm, kg)]
### 3.2 IMC Carton Specifications

#### ISO-MODULAR CARTON – PERFORMANCE SPECIFICATION

<table>
<thead>
<tr>
<th>Carton Number</th>
<th>Exterior Dimensions (mm)</th>
<th>Exterior Dimensions (in)</th>
<th>Weight (est.) Kg. (lbs)</th>
<th>CARTON SPECIFICATION</th>
<th>Box Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMC010#</td>
<td>140 240 120</td>
<td>9.5 5.5 4.75</td>
<td>0.1(0.2)</td>
<td>208 1320 6</td>
<td>201</td>
</tr>
<tr>
<td>IMC011*</td>
<td>140 240 120</td>
<td>9.5 5.5 4.75</td>
<td>0.3 (0.7)</td>
<td>208 1320 6</td>
<td>0422x2*</td>
</tr>
<tr>
<td>IMC020#</td>
<td>140 240 240</td>
<td>11 9.5 4.75</td>
<td>0.2 (0.4)</td>
<td>243 1320 6</td>
<td>201</td>
</tr>
<tr>
<td>IMC030#</td>
<td>280 480 120</td>
<td>19 11 9.5</td>
<td>0.4 (0.9)</td>
<td>294 1320 6</td>
<td>201</td>
</tr>
<tr>
<td>IMC031*</td>
<td>280 480 120</td>
<td>19 11 9.5</td>
<td>0.8 (1.8)</td>
<td>294 1320 6</td>
<td>201</td>
</tr>
<tr>
<td>IMC040#</td>
<td>280 480 240</td>
<td>22 9.5 9.5</td>
<td>0.3 (0.7)</td>
<td>243 1320 6</td>
<td>201</td>
</tr>
<tr>
<td>IMC050#</td>
<td>280 480 240</td>
<td>22 9.5 9.5</td>
<td>0.4 (0.9)</td>
<td>243 1320 6</td>
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<tr>
<td>IMC060#</td>
<td>280 480 240</td>
<td>22 9.5 9.5</td>
<td>0.8 (1.8)</td>
<td>294 1320 6</td>
<td>201</td>
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<tr>
<td>IMC070#</td>
<td>560 960 120</td>
<td>38 22 9.5</td>
<td>2.7 (5.9)</td>
<td>1179 2800 15.2</td>
<td>201</td>
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<td>IMC080#</td>
<td>560 960 240</td>
<td>38 22 9.5</td>
<td>2.7 (5.9)</td>
<td>1179 2800 15.2</td>
<td>201</td>
</tr>
<tr>
<td>IMC090</td>
<td>560 960 480</td>
<td>38 22 9.5</td>
<td>2.7 (5.9)</td>
<td>1179 2800 15.2</td>
<td>201</td>
</tr>
<tr>
<td>IMC100</td>
<td>1120 960 120</td>
<td>44 38 9.5</td>
<td>3.3 (6.8)</td>
<td>1815 3800 19.5</td>
<td>201</td>
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<tr>
<td>IMC110</td>
<td>1120 960 240</td>
<td>44 38 9.5</td>
<td>3.3 (6.8)</td>
<td>1815 3800 19.5</td>
<td>201</td>
</tr>
<tr>
<td>IMC120</td>
<td>1120 960 480</td>
<td>44 38 9.5</td>
<td>3.3 (6.8)</td>
<td>1815 3800 19.5</td>
<td>201</td>
</tr>
<tr>
<td>IMC130</td>
<td>1120 960 960</td>
<td>44 38 38</td>
<td>8.3 (18.3)</td>
<td>1010 2500 14.2</td>
<td>201</td>
</tr>
</tbody>
</table>

Tolerance: Exterior dimensions must be maintained to +0.0 and -5.0mm (+0” and -0.2”).

* Note: IMC011/031 are for Hardware and very small parts only, and consist of base + lid.

# Recommended max. loading = 30kg. (62lbs)

<table>
<thead>
<tr>
<th>Carton Weight</th>
<th>Weight Disc</th>
<th>Handles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 12kg (26lbs)</td>
<td>Red discs</td>
<td>No handles</td>
</tr>
<tr>
<td>Up to 30kg (66lbs)</td>
<td>Yellow discs</td>
<td>2 handles</td>
</tr>
<tr>
<td>Up to 60kg (132lbs)</td>
<td>Green discs</td>
<td>4 handles</td>
</tr>
<tr>
<td>Specials and above 60kg</td>
<td>Blue discs</td>
<td>On Pallet Base</td>
</tr>
</tbody>
</table>

Conversion Factors: 1" = 25.4mm 1kg = 2.2lbs
3.3 IMC Carton Selection Process

To establish the most suitable container from the Ford IMC Container Range (see Section 3.2), follow the flow chart shown opposite. The overall process can be summarised as follows:

1. **Does the part fit into a manually handled IMC carton?**
   (i) Establish the smallest carton (see Section 3.2) into which the part fits, and fill the carton fully.
   (ii) Based on current production volumes, ensure that the carton holds a minimum of 1 hours’ stock. If not, investigate the next largest carton.
   (iii) Ensure the final pack does not exceed 12Kg.
   (iv) If the gross weight is greater than 12 Kg or no small container is suitable, investigate the larger carton range (IMC120 upwards).

2. **Is the part unsuitable for a manually handled IMC carton?**
   (A) **Trim and Final Assembly Parts:**
   (i) Starting with the IMC 120, establish the smallest IMC carton into which the part fits, then fill the container fully.
   (ii) Based on current production volumes, ensure that the carton holds a minimum of 1 hours’ stock and a maximum of 8 hours stock. If not, investigate the next largest carton.
   (iii) Ensure the full unit load (including pallet base) does not exceed 500Kg (1100 lbs). If the gross weight exceeds 500Kg contact Packaging Engineering, for investigation into a unique/special container.
   (iv) If the part meets all criteria, but has a poor pack density, contact Packaging Engineering for further advice.

   (B) **Metal Stamping and Body Parts**
   (i) If the part requires a special rack, contact IEO Packaging Engineering in Ford Cologne, to establish special expendable packaging.
   (ii) If part is suitable for a standard IMC carton, proceed as above [Section 3.3 (A)].

   a) Consider the **DO’S** and **DO NOTS** before finalising your pack proposals (see Section 3.4).
   b) Advise Packaging Engineering of your provisional packaging solution by e-mailing a copy of the 1121E - (see Section 3.1).
   c) Packaging Engineering - IEO will then provide provisional approval (assuming pack spec. is acceptable).
   d) Suppliers must then ensure that all shipments are made in line with the IMC Carton User Guide (see section 3.6)
   e) Complete the final checklist to ensure that all steps have been covered
   f) Final packaging approval will be given after production shipments have been audited

3.3.1 Packaging Costs

Packaging costs **must be identified and integrated as part of your piece price** at the quotation stage, and can only be agreed by Purchase (your commodity buyer). Confirmation of an 1121E advises that your packaging proposals are acceptable, and **does not infer or imply acceptance or agreement of any associated costs** with that packaging.
### 3.3.2 IMC Carton Selection Flowchart

#### 3.2E.1 Export Container Selection Flowchart

1. **Select the part in question.**
2. **Is the part to be loaded into a hand-held IMC?**
   - **Yes:** Select the smallest available IMC into which the part fits.
   - **No:** Proceed to the next step.
3. **Fill the IMC with as many parts as possible.**
4. **Is the IMC filled to an optimum level (>95%), considering the part details?**
   - **Yes:** Proceed to the next step.
   - **No:** Select the next largest IMC.
5. **Is the IMC within the 12kg weight limit?**
   - **Yes:** Proceed to the next step.
   - **No:** Select the next largest IMC.
6. **Does the IMC hold more than 30 minutes’ worth of stock?**
   - **Yes:** Proceed to the next step.
   - **No:** Select the next largest IMC.
7. **Will the part fit into an IMC120?**
   - **Yes:** Proceed to the next step.
   - **No:** Select the next largest IMC.
8. **Fill the IMC with as many parts as possible.**
9. **Is the IMC filled to an optimum level (>95%), considering the part details?**
   - **Yes:** Proceed to the next step.
   - **No:** Select the next largest IMC.
10. **Is the IMC within the 500kg weight limit?**
    - **Yes:** Proceed to the next step.
    - **No:** Select the next largest IMC.
11. **Does the IMC hold less than 8 hours’ worth of stock?**
    - **Yes:** Contact Ford Packaging Engineering for investigation into special container types.
    - **No:** Proceed to the next step.
12. **Is the part supplied to Trim & Assembly plants?**
    - **Yes:** Contact Ford Packaging Engineering for involvement and provide packaging specification documentation.
    - **No:** Proceed to the next step.
13. **Is the part a standard EP part?**
    - **Yes:** Proceed to the next step.
    - **No:** Proceed to the next step.
14. **Fill the IMC carton with as many parts as possible.**
15. **Is the IMC carton filled to an optimum level (>95%), considering the part details?**
    - **Yes:** Proceed to the next step.
    - **No:** Select the next largest IMC.
16. **Is the IMC carton within the 1000kg weight limit?**
    - **Yes:** Proceed to the next step.
    - **No:** Select the next largest IMC.
17. **Does the IMC carton hold less than 8 hours’ worth of stock?**
    - **Yes:** Contact Ford Packaging Engineering for investigation into special container types.
    - **No:** Proceed to the next step.
18. **Is the part supplied to Metal Stamping & Body Construction plants?**
    - **Yes:** Contact Ford Packaging Engineering for investigation into special container types.
    - **No:** Proceed to the next step.
19. **Contact Ford Packaging Engineering for involvement.**
20. **Ensure all part shipments are sent in approved packaging.**

---

**Advice to users:**
- Ensure all parts are sent in approved packaging.
- Contact Ford Packaging Engineering for involvement when necessary.
- Follow the flowchart to select the correct IMC or container type based on the part details and requirements.

---

**Notes:**
- **EU1750A**
- **January 2002**
- **Page 36**
3.4. **DO’s**

- **DO** use corrosion inhibiting materials (e.g. VCI products, etc.) where rusting is a risk. For other components use the appropriate product quality protection material, as required; e.g. bubble wrap, static-proof bags, etc. Although Packaging Engineering will provide advice, the responsibility for ensuring part protection and quality remains with the supplier.

- **DO** ensure that you use only IMC modular cartons and pallets to the exact specification - this is a fully integrated system that requires each element to meet its specification.

- **DO** ensure that you utilise the maximum cube of the carton - if utilisation is less than 95% try a smaller carton, if available from supplied table.

- **DO** ensure quantity of handles fitted is suitable for the pack weight (see specification)

- **DO** inform Packaging Engineering via the EU1121 form if parts are temperature sensitive. (Temperatures over 70°C can be reached during transport to some destinations).

- **DO** monitor the effect of engineering changes on packaging and submit a new EU1121 one month prior to any packaging change.

- **DO** select reliable suppliers to provide pallets, stickers and cartons - if you need assistance Ford has approved companies that currently stock IMC boxes. Please contact your local Packaging Engineering IEO Helpline to obtain contact information.

- **DO** ensure your labelling conforms to Ford Guidelines.

- **DO** ensure that weight identification discs are displayed (recommended disc size 50 mm diameter). Discs may be stickers or similar markings e.g. stamp, marker etc.

- **DO** ensure that all cartons have the appropriate ISO-Modular Carton Number printed on two adjacent sides. See Example:

  IMC100

  (ISO-Modular Carton Number)  

  (Weight Identification Disc 50mm dia.)
3.5 **DO NOTS**

- **DO NOT** use a carton that is not specified in **Section 3.2 - no exceptions are permitted without prior written approval from Packaging Engineering.**

- **DO NOT** allow your product quality to be compromised due to inadequate packaging - zero defect is the required norm.

- **DO NOT** pack different parts within the same carton - only one part number per carton is allowed. The packaging of “handed” pairs may be considered, after evaluation by Packaging Engineering.

- **DO NOT** use additional aids to strengthen IMC cartons (e.g. belly bands, etc). Heavy unit loads that require the use of corner posts must be specifically approved by Packaging Engineering.

- **DO NOT** allow cartons to overhang pallets. Ensure they are correctly stacked and positioned.

- **DO NOT** use staples for carton closure (top or bottom). Staples may damage both the parts and the operators during the unload operation.

- **DO NOT** ship pyramid loads - these are not acceptable under any circumstances.

- **DO NOT** use horizontal banding to improve load stability – IMC board specification is sufficiently strong.

- **DO NOT** use steel banding to secure loads - use plastic banding and/or stretch wrapping.

- **DO NOT** use packaging material that cannot be re-cycled, or could be environmentally harmful after disposal.

- **DO NOT** modify modular boxes. Example 1: do not cut side seams to make a box smaller. Example 2: do not telescope two boxes together to create a larger box.

- **DO NOT** exceed 300 parts per carton unless the smallest IMC in Section 3.2 has been selected, in which case the carton should be filled to capacity irrespective of quantity.

- **DO NOT** allow the maximum weight of a unit load including pallet base to exceed 500kg (1,100lbs) without Packaging Engineering approval. Those that are approved must be marked "BOTTOM LOAD ONLY" on two adjacent sides of the carton.
3.6 IMC Carton User Guide

Once the optimum export carton has been selected and approved for your part, it is essential that you prepare and consolidate the cartons in the correct manner for shipment:

- Unit loads must be constructed in accordance with the guidelines in Section 1.10.
- Pallet bases must conform to the specification in Section 3.8.
- Each carton must at least be labelled with Ford standard Odette or AIAG labels on two adjacent sides. For IMC cartons where height is less than 120mm (4.75") the chosen label data format must be used but the label must be reduced to fit onto the side of the carton.
- Maximum height of any unit load must not exceed 1100mm (43") unless approved by Packaging Engineering.
- If you supply more than one part number to Export Markets, mixed loads of various cartons on a single pallet are permissible to achieve a realistic unit load, provided they are for the same plant destination.
- Carton flaps must be completely sealed with tape or spot gluing.
- All modular carton loads must be secured to the pallet with plastic banding and/or clear plastic stretch wrap. Under no circumstances should steel banding be used. Nailing, stapling or gluing is not acceptable.

3.6.1 Loading Cartons to Pallet Base

Carton alignment:
3.6.2 Loading Cartons to Base by IMC Type

Mixed unit loads of different part numbers and/or carton sizes ARE acceptable, the modular carton design allowing all cartons to be inter-stacked. Homogeneous unit loads are shown simply to illustrate relative carton size and orientation on the ISO-Modular pallet.
3.8 ISO Modular Pallet Dimensions

All export market shipments must conform to the 980mm (39") x 1140mm (45") full perimeter pallet specification below, designed specifically for ISO container shipments. **Alternate dimensions are NOT acceptable.** Corrugated pallets are not acceptable unless approved by Packaging Engineering.

**EXPORT SHIPMENT PALLET BASE SPECIFICATION**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>LENGTH</th>
<th>WIDTH</th>
<th>HEIGHT</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Softwood</td>
<td>1140</td>
<td>100</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Softwood</td>
<td>980</td>
<td>100</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Softwood</td>
<td>150</td>
<td>100</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Softwood</td>
<td>100</td>
<td>100</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>Softwood</td>
<td>780</td>
<td>100</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>

* ALL MATERIAL MUST CONFORM TO PROCEDURE KDP-p-3

**ALL DIMENSIONS IN MM**

**ASSEMBLY TOLERANCE +/-3MM**

**THIRD ANGLE PROJECTION**

* BOTTOM OF PALLET MUST BE FLAT

* NO STEPS ALLOWED AT CORNERS
APPENDICES

1. Glossary of Terms
2. EU1121 - Packaging Data Form VO Production
3. Packaging Non-Conformance Form
4. Transport Mode Dimensions
5. Re-cycling and Plastics Identification Symbols
6. Durable Insert Standard
## Appendix 1: Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMMS3</td>
<td>“Common Material Management System”. Global Logistics / Packaging Database (replaced NewPac)</td>
</tr>
<tr>
<td>Cube Utilisation</td>
<td>A measure of efficiency of space used within transport trailers</td>
</tr>
<tr>
<td>Dunnage</td>
<td>Packing material within the container used for part protection</td>
</tr>
<tr>
<td>Durable Packaging</td>
<td>Packaging material designed to last a minimum of 5 years</td>
</tr>
<tr>
<td>Expendable Packaging</td>
<td>Packaging material designed to be used for a single trip only</td>
</tr>
<tr>
<td>FLC 1210</td>
<td>Folding Large Container - Unit Load sized plastic container with drop-down access doors, which can be folded for return journey</td>
</tr>
<tr>
<td>FSC 1206</td>
<td>Folding Small Container - Half-Height Unit Load sized plastic container without drop-down access doors, which can be folded for return journey</td>
</tr>
<tr>
<td>FPS</td>
<td>“Ford Production System” - World Class Lean Manufacturing Strategy</td>
</tr>
<tr>
<td>IEO</td>
<td>“International Export Operation” - new name for KD Operations</td>
</tr>
<tr>
<td>ILVS</td>
<td>“In-Line Vehicle Sequencing” - Parts shipped to point of use in vehicle build order</td>
</tr>
<tr>
<td>IMC</td>
<td>“ISO Modular Carton” - Standard Cartons used for export shipping</td>
</tr>
<tr>
<td>ISO14001</td>
<td>Environmental Quality Standard</td>
</tr>
<tr>
<td>JIT</td>
<td>“Just In Time” - Scheduled time-slot delivery system</td>
</tr>
<tr>
<td>KD</td>
<td>“Knock-Down” - Now replaced by “International Export Operation” (IEO)</td>
</tr>
<tr>
<td>KLT</td>
<td>“Klein Ladungs Traeger”. A range of plastic modular containers</td>
</tr>
<tr>
<td>Master Label</td>
<td>Label used on unit load of modular containers, when all parts are the same</td>
</tr>
<tr>
<td>Mixed Load Label</td>
<td>Label used on unit load of modular containers with mixed part numbers</td>
</tr>
<tr>
<td>MS&amp;B</td>
<td>“Metal Stamping and Body Construction”. Vehicle operations plants</td>
</tr>
<tr>
<td>Odette Label</td>
<td>European Automotive Industry Standard Label</td>
</tr>
<tr>
<td>QS9000</td>
<td>Automotive Quality Standard</td>
</tr>
<tr>
<td>PTA</td>
<td>“Paint, Trim and Assembly”. Vehicle operations plants</td>
</tr>
<tr>
<td>Shipping Trials</td>
<td>Test shipment completed with the receiving plant to ensure packaging is acceptable</td>
</tr>
<tr>
<td>SMF</td>
<td>“Synchronous Material Flow” - Optimum material flow to support Ford Production System</td>
</tr>
<tr>
<td>Special Container</td>
<td>Container designed with unique fittings to suit a particular part</td>
</tr>
<tr>
<td>Third Party Hire</td>
<td>Container leasing &amp; management from external supplier</td>
</tr>
<tr>
<td>VCI</td>
<td>Vapour Corrosion Inhibiting - Coating or material to prevent rust forming on parts</td>
</tr>
<tr>
<td>Unit Load</td>
<td>Typically 1200mm x 1000mm x 1000mm packaging unit</td>
</tr>
<tr>
<td>Weight - Gross</td>
<td>Total weight of container and contents including dunnage</td>
</tr>
<tr>
<td>Weight - Net</td>
<td>Weight of parts in container (excluding container and dunnage weight)</td>
</tr>
<tr>
<td>Weight - Tare</td>
<td>Weight of empty container</td>
</tr>
</tbody>
</table>
### Supplier Details

- **Ford Supplier Code:**
- **Today’s Date:**
- **Supplier Name & Address:**
- **Contact Person:**
- **E-mail:**
- **Phone Number:**
- **Fax Number:**

### Ford Part Number

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Base</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Photo / Sketch of packaging

Please display a picture here if:

1. The part is an FLC or FSC container.
2. The part is packed in a KLT with internal packaging, either durable or expendable.
3. The part is in a “special” container - i.e. a non-standard returnable or supplier owned container.
4. The part is in an IMC or export carton with internal packaging or corrosion protection.

The picture must clearly show part orientation within the container, and internal packaging details must be recorded in the boxes below with additional details in Packaging Description if necessary.

### Packaging Data

<table>
<thead>
<tr>
<th>1</th>
<th>Packaging type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Effective Date</td>
</tr>
<tr>
<td>3</td>
<td>Confirm code</td>
</tr>
<tr>
<td>4</td>
<td>Container type or Number</td>
</tr>
<tr>
<td>5</td>
<td>Places Per Container</td>
</tr>
<tr>
<td>6</td>
<td>Length (cm)</td>
</tr>
<tr>
<td>7</td>
<td>Width (cm)</td>
</tr>
<tr>
<td>8</td>
<td>Height (cm)</td>
</tr>
<tr>
<td>9</td>
<td>Tare Weight (kg)</td>
</tr>
<tr>
<td>10</td>
<td>Piece Weight (kg)</td>
</tr>
<tr>
<td>11</td>
<td>Gross Weight (kg)</td>
</tr>
</tbody>
</table>

#### Expendable Packaging

- **Expendable Packaging cost (per piece):**
- **Durable Packaging cost (per piece):**

#### Carton Details (for expendable type COP & PTP only)

- **Pieces Per Carton**
- **Cartons per Layer**
- **Layers per Pallet**
- **Length (cm)**
- **Width (cm)**
- **Height (cm)**

### Durable Inserts

<table>
<thead>
<tr>
<th>Qty per Container</th>
<th>Foam</th>
<th>Paper</th>
<th>PE Bags</th>
<th>Oil</th>
<th>Type/Ref. Number</th>
<th>Layer Pads</th>
<th>Bubble Wrap</th>
<th>Polystyrene</th>
<th>VCI</th>
<th>Cells</th>
</tr>
</thead>
</table>

### Expendable Inserts (Insert quantity per container)

<table>
<thead>
<tr>
<th>Qty per Container</th>
<th>Foam</th>
<th>Paper</th>
<th>PE Bags</th>
<th>Oil</th>
<th>Type/Ref. Number</th>
<th>Layer Pads</th>
<th>Bubble Wrap</th>
<th>Polystyrene</th>
<th>VCI</th>
<th>Cells</th>
</tr>
</thead>
</table>

### Approvals

- **Signed**
- **Name (Printed)**
- **Date**

### Return Form to:

- **European Prod.**
- **SMF**
- **Ford Packaging**
- **Production**
- **Quality**

### Packaging Description

- (complete if internal packaging used) OR
- **Reason for non-IMC (Export only)**

### Reasons

- **Hazardous Mat'l (Y/N)**
- **Weight Disc (Y/N)**
- **Temperature Sensitive (Y/N)**

### Contact Information

- **European Prod.:** eu1121e@ford.com
- **Ford Packaging:** eu1121e@ford.com
- **Production:** eu1121e@ford.com
- **Quality:** eu1121e@ford.com
- **SMF:** eu1121e@ford.com

**Version:** January 2002

**Form number:** EU 1121C


This form may be photocopied.
Appendix 3: Packaging Non-Conformance Form

PACKAGING NON-CONFORMANCE

<table>
<thead>
<tr>
<th>Suppliers/Carriers or Shipping Address</th>
<th>Receiving Plant:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plant Contact Person:</td>
</tr>
<tr>
<td></td>
<td>Phone No:</td>
</tr>
<tr>
<td></td>
<td>Fax No:</td>
</tr>
<tr>
<td></td>
<td>Location Code:</td>
</tr>
<tr>
<td></td>
<td>Date of Issue:</td>
</tr>
<tr>
<td></td>
<td>Reference No:</td>
</tr>
<tr>
<td></td>
<td>Date Received:</td>
</tr>
<tr>
<td>SUPPLIERS CODE NO:</td>
<td>Innovative Packaging No:</td>
</tr>
</tbody>
</table>

The following deviation from the agreed packaging has been identified.
Please refer to Packaging Requirements Brochure EU 1750A.
You must respond to the plant contact above within 48 hours and arrange correction within 20 days.

<table>
<thead>
<tr>
<th>INCORRECT PACKAGING TYPE</th>
<th>KLT 3214</th>
<th>4314</th>
<th>4328</th>
<th>6428</th>
<th>FLC</th>
<th>SPE</th>
<th>EXP</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPROVED PACKAGING TYPE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACKAGING TYPE SUPPLIED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Issues

- □ Wrong part quantity for container
- □ Parts are not packaged correctly
- □ Container is not clean
- □ Container is not in good repair
- □ Container is labeled incorrectly

KLT Specific Issues

- □ Load unit not supplied with specified base or lid
- □ Load unit incorrectly assembled or secured
- □ Mixed load unit incorrectly labeled
- □ Weight is greater than 15kg

FLC Specific Issues

- □ FLC net weight exceeds 500kg requirement requirements.
- □ Container sides are not correctly erected / secure

Special Durable / Expendable / Other

- □ Container does not conform to...

Further Comments

E EU 2714

Reported By:Authorized By

EU1750 April 2000
## Appendix 4: Transport Mode Dimensions

(Internal dimensions are indicative - for absolute dimensions consult)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Max Payload</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mega Trailer</strong></td>
<td>13.52</td>
<td>2.42</td>
<td>2.99</td>
<td>24T</td>
<td>96.81m³</td>
</tr>
<tr>
<td><strong>SuperCube</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top Deck</td>
<td>3.45</td>
<td>2.30</td>
<td>2.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Deck</td>
<td>9.01</td>
<td>2.3</td>
<td>3.05</td>
<td>24T</td>
<td>83m³</td>
</tr>
<tr>
<td><strong>HTM</strong></td>
<td>13.60</td>
<td>2.50</td>
<td>2.8 or 2.35</td>
<td>24T</td>
<td></td>
</tr>
<tr>
<td><strong>12M</strong></td>
<td>12.20</td>
<td>2.42</td>
<td>2.42</td>
<td>20T</td>
<td>71m³</td>
</tr>
<tr>
<td><strong>Tautliner/Curtainsider</strong></td>
<td>13.30</td>
<td>2.40</td>
<td>3.35</td>
<td>23T</td>
<td>105m³</td>
</tr>
<tr>
<td><strong>Mega TIR</strong></td>
<td>13.60</td>
<td>2.50</td>
<td>2.97</td>
<td>22T</td>
<td>104m³</td>
</tr>
<tr>
<td><strong>13.6 Tilt TIR</strong></td>
<td>13.45</td>
<td>2.44</td>
<td>2.58</td>
<td>22.5T</td>
<td>84m³</td>
</tr>
<tr>
<td><strong>Rail Wagon</strong></td>
<td>13.94</td>
<td>2.62</td>
<td>2.01</td>
<td>28T</td>
<td>84.7m³</td>
</tr>
<tr>
<td><strong>SwapBody</strong></td>
<td>13.37</td>
<td>2.44</td>
<td>2.24</td>
<td>20T</td>
<td>73.08m³</td>
</tr>
</tbody>
</table>
APPENDIX 5: Recycling and Plastics Identification Symbols

Sources:

Recycling symbols are those proposed by European Union

Plastics Identification codes are those devised by the Society of Plastics Industry (SPI) in USA

1. Polyethylene Terephthalate
2. High Density Polyethylene
3. Polyvinyl Chloride (PVC)
4. Low Density Polyethylene
5. Polypropylene
6. Polystyrene
7. Other
DURABLE INSERT & EXTENDED CONTAINER STANDARD

APRIL 2002

MH&PE Standard Procedure
Contents

Introduction

Development Process

1. Insert/Extended Container Requirement
2. Funding
3. Development
4. Identification
5. Return Process

Operating Process

A). Supplier Responsibilities
B). Ford VO Location Responsibilities
C). Third Party Container Supplier Responsibilities

Appendices

a) Identification Label
b) Completed Return Specification
   • Additional Return Specification Information (optional)
c) Pallet Return Label
d) Tracking Form
e) Durable Insert Follow-Up Process
f) Schematic Timing
Durable Inserts/Extended Container Standard

Introduction

The use of 100% durable packaging is a long-term aim of Ford Motor Company, to support both greening and environmental objectives. The introduction of standard durable outer packaging for all Ford European plants is now complete, and the emphasis in future will be on providing economic durable internal packaging, and non-standard sized (extended) durable containers.

Unlike standard containers, which are pooled and can be used by any supplier, inserts and extended containers are dedicated to specific commodities and hence suppliers. The smooth flow of inserts and extended containers between the supplier and Ford must be recognised as an integral part of the production process, and a robust process for their return must be established if progress towards this objective is to be achieved.

The purpose of this standard is to support this objective by:

- ensuring that durable inserts/extended containers meet both supplier and Ford requirements
- enabling all affected parties to recognise and know how to handle durable inserts/extended containers.
- ensuring that a return process is established before durable inserts/extended containers are introduced.

Application of this standard will provide a common approach for:

- Identifying suitable products for durable inserts/extended containers.
- Funding of durable inserts/extended containers.
- Timing, development, identification, and approval of durable inserts/extended containers.
- Establishing a robust return process to ensure inserts/extended containers are returned to the correct source supplier on a timely basis.
- Operating and follow-up procedures

Adherence to this standard will ensure that your durable inserts/extended containers will be used and returned by the receiving plant, and any operational concerns can be quickly identified and addressed.
**Insert/Stretch Container Development Process**

1) **Insert/Extended Container Requirement**

The component supplier and Ford MH&PE agree in principle that a durable insert/extended container is needed, to meet quality, ergonomic, or cost reduction requirements.

2) **Funding**

- For inserts, the supplier provides MH&PE with cost breakdown for both durable and expendable insert alternatives, including potential savings (avoiding use of cardboard, improved density) plus tooling and investment costs.
- For extended containers, the supplier provides details of the best standard container option together with any specific quality concerns.
- MH&PE complete cost analysis of options, including material savings and freight costs for both inbound and return shipments.
- If cost analysis meets acceptance criteria, MH&PE advise Purchase, user plant and supplier.
- If costs are already included in piece price then supplier proceeds with development in conjunction with MH&PE.
- If costs are not included in piece price then supplier/Purchase negotiate to confirm funding arrangements before development commences.

3) **Development**

Supplier discusses requirements with MH&PE and receiving plant to establish insert/extended container type, ergonomics, and any special requirements. Items to be agreed include:

- Type of insert/material
- Container size and any internal separation
- Component orientation
- Method of handling
- Approximate size and weight. Please note that maximum external dimensions for inserts to be used with an FLC container **must not exceed 1100 x 890** – this is to allow for worst case manufacturing tolerances on the side walls of the (FLC) container.
- Identification method, including Ford reference number
- Method of return – collapse ratio for inserts
- Any special requirements
- Supplier to establish timing plan (see **Appendix (f)**) to meet program/plant requirements - to be agreed by MH&PE and receiving plant.
- Development to take place with support of MH&PE.
3) Development (cont'd)

- Production level prototype pack to be trialled to the receiving plant(s) for acceptance by MH&PE and affected receiving plant departments, including:
  - Packaging Engineering
  - MPL (local plant and central logistics)
  - Production
  - Quality
  - Safety
  - FPS/Layout

- Once plant acceptance has been obtained, main production of the inserts/extended containers can commence.
- Inserts/extended containers must be manufactured and identified in accordance with this standard.

4) Identification

1. Insert/extended container identification is required for operators to identify empty inserts/containers in transit (inbound inserts are identified by the product in the pallet).

2. Identification to be as follows:
   Each insert must be individually identified on 2 sides. This is to ensure that if a pallet lid is raised for inspection of the contents, the identifying label can be seen irrespective of which side the pallet is viewed from. If inserts are to be returned inverted, then the labels should be on the underside of the inserts.

4. Extended containers to be identified on two sides

3. Labelling/identification (Appendix (a)) must include the following:
   - Part description (eg. cluster/radiator etc)
   - Model line (eg. Mondeo/Fiesta/Focus etc)
   - Return location (Supplier name and town)
   - Ford GSDB code (5-digit supplier code)

4. Inserts/extended containers may be clearly printed with contrasting colour if size allows, or coloured self-adhesive labels may be applied.

5. Labelling must be clearly legible.
   (NB. Embossed information on the surface of the insert is not adequate for identification purposes, and if used should be considered as supplementary identification only).

6. Labelling must be approved by MH&PE (Aveley 20/220) and the user plant.

7. Poke Yoke principles to be agreed with user plant and included if appropriate (failsafe features that help prevent incorrect use of the equipment).
5) Return Process

Not later than two months prior to introduction the following items must be provided to MH&PE:

1. Completed EU1121 Packaging Form with photographs (Packaging Guidelines Appendix 2) showing part orientation/location in the insert/extended container, including any instructions for loading/unloading.

2. Completed Return Specifications (Appendix (b)) showing:
   - Method of collapsing/nesting inserts
   - Location/orientation within the container
   - Quantity per container
   - Any special instructions

3. Completed return Label (Appendix (c))

4. Completed Tracking Form (Appendix (d))

5. Routing for both inbound and return shipments must be defined at the procurement stage, as this will affect the number of inserts to be purchased. Routing should identify:
   - Direct or indirect shipments, both inbound and return
   - If indirect, actual routing through logistics suppliers
   - Frequency of shipments
   - Number of days float associated with each of the above.
   - Float requirements at the supplier.
   - Float requirements at the user plant.
   - Float requirements for return organisation

6. Details of calculation showing number of inserts purchased.
   (NB. Ford policy is to provide sufficient packaging to ship the finished product from the supplier to the user plant, and return. For the Supplier, this includes one day of inserts waiting to be used, one day in production, and a one day shipping bank awaiting collection. It does not include Supplier in-process requirements, batch production requirements, or stock piling. Deviations from this policy must be agreed between MH&PE, Purchase, and the user plant).

7. One week prior to first shipment supplier to advise receiving plant and MH&PE of first shipment date.
Operating Process

The following procedures are recommended to suppliers and Ford VO locations to ensure that the movement of inserts/extended containers operates smoothly and any concerns can be identified and addressed promptly.

A). Supplier Responsibilities

a) Inserts/extended containers must be developed and supplied in accordance with this standard.

b) The supplier must provide a timing program in line with Appendix (f) at the start of the program.

c) Supplier must provide the following at least two months before inser/container introduction:

- EU1121 Packing Specification Form (Packaging Guide - Appendix 2)
- Insert/extended container Return Specifications (Appendix (b))
- Pallet labels (Appendix (c)):
  - Labels must be in this format for identification and tracking purposes.
  - Local language identification can be inserted on a middle line to aid recognition.
  - Labels to be provided by the source location (supplier) by e-mail - local supervision will print off the labels as required and ensure availability to the insert/extended container consolidation area.
- Completed Tracking Sheets (Section A Insert Details and Section B Quantity Details only to be completed by supplier) for each Ford VO destination that the inserts are shipped to (Appendix (d)).

d) Supplier to designate insert/extended container ‘Champion’, to log receipts and follow-up delinquencies.

e) Supplier ‘Champion' to log inserts/extended containers received, by quantity and user location:
  - The description (e.g. ZD - Orange Radiator) identifies the VO location and insert/extended container type. By recording returns and the returning VO location on a daily basis (e.g. on a spreadsheet) any delinquencies in the return process can be identified and addressed quickly.

For durable inserts only:

- Having previously specified the quantity of inserts per container (from Return Specification and Tracking Sheet), the number of inserts can be determined and added to the available inventory.
- The number of FLC’s recorded can be collated daily and the quantity subtracted from the FLC order quantity - this will vary by source location according to their arrangement with the third party container supplier.

f) In the event of an identified delinquency in the return process, source plant to apply the ‘Durable Insert/Stretch Container Follow Up Process’ - Appendix (e).
B). Ford VO Location Responsibilities

1. Ensure that return packing specifications are available (from supplier) and displayed to affected operators.

2. Pallet labels and Tracking Sheets (from supplier) are available prior to insert introduction.

3. VO user location to pack inserts/extended containers according to the return packing specification, for return:
   - On the production line
   - or in the satellite plant
   - or in the EPC

   using Ford or contract labour according to local conditions and processes.

4. When pack is complete, dust cover is fitted and two off specified labels are inserted, one to each of the two label holders on the FLC (inserts), in two adjacent label holders for extended containers.

5. Local supervision to ensure that specified return labels are available to operators.

6. Ford responsible EPC personnel (Ford or contractor according to local conditions) to advise 3rd Party EPC Logistics office personnel by 8.00am each morning of the type and number of pallets of each insert/extended container ready to ship.

C). 3rd Party Container Provider EPC Logistics Office Responsibilities

1). Once per day, the 3rd party container supplier will raise shipping documents for each destination and arrange transport with Ford Fleet via the 3rd party container supplier logistics office in Hurth.

   - Shipping (5427x) document will contain full description of inserts/extended containers (e.g. "ZD - Orange Radiator Inserts") as it appears on the return label.

   - Shipper will be addressed to destination (supplier/source location) - this will enable consignments of inserts/extended containers to be tracked via traffic.

   - It will also enable the source plant to monitor returns by type and quantity from specific user (VO) locations.

2). The third party container supplier will log the documentation number (5427x) plus the trailer number (or vehicle registration number):

   - This will allow both inserts and containers to be traced through Traffic in the normal way, irrespective of source or destination.

   - For durable inserts, using the 5427x document enables the source location to quantify the additional FLC’s arriving in plant, and adjust their FLC call-off accordingly.
APPENDICES

a) Identification Label

b) Completed Return Specification
   • Additional Return Specification Information (optional)

c) Pallet Return Label

d) Tracking Form

e) Durable Insert/Extended Container Follow-Up Process

f) Schematic Timing
Insert/Extended Container Identification Label

Suitable for:
- extended containers
- vacuum formed trays
- foam/moulded inserts
- any insert where there is insufficient area to paint or print a contrasting colour identification

AME Drawing Number: FE10766 MONDEO RADIATOR MODULE
Model: MONDEO RADIATOR MODULE
Part Description: RETURN TO:
Supplier 5-digit GSDB Code: 0114A
Supplier name: VISTEON BASILDON
Town: UK
Country:

Note! For durable inserts, two labels per insert should be provided. They should be positioned such that if the container lid is lifted to inspect the container contents, at least one label is clearly visible.
Genk - Return Specification for CD132 buckle Layerpads

CD132 Layerpad - buckles from ABC Polska

Make sure that there are 20 empty layerpads in each FLC.

Only one type of layerpad in each FLC.

Load trays Up Side Down into FLC

Empty Layerpad
Identification Label = White

For any further informations don’t hesitate to contact:
Joe Bloggs
ABC Polska, Czestochowa, POLAND
Tel: #48 34123 4567
Fax: #48 34123 4568
E-mail: jbloggs@abc.com
2C - Mondeo
Cluster
20 inserts
Return to Enfield
UK - 6620A

2C - Mondeo
Cluster
20 inserts
Return to Enfield
UK - 6620A
# Durable Insert/Extended Container Tracking Form

## A Supplier/Product Details (Supplier Completion)

<table>
<thead>
<tr>
<th>Supplier Name</th>
<th>User Plant</th>
</tr>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Supplier Code</th>
<th>Model Line</th>
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<table>
<thead>
<tr>
<th>Supplier contact</th>
<th>Part Number</th>
<th>Description</th>
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<tr>
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</tbody>
</table>

| Supplier Phone | |
|----------------||
|                | |

## B Quantity Details (Supplier Completion)

<table>
<thead>
<tr>
<th>DPV:</th>
<th>Durable Inserts</th>
<th>Extended Containers</th>
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<tbody>
<tr>
<td></td>
<td>Type:</td>
<td>Type:</td>
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<td></td>
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<table>
<thead>
<tr>
<th>Transit Inbound</th>
<th>Ford Ref. Number:</th>
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<tbody>
<tr>
<td>Ford</td>
<td></td>
</tr>
<tr>
<td>Tare weight:</td>
<td></td>
</tr>
<tr>
<td>Parts/Pack:</td>
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</table>

<table>
<thead>
<tr>
<th>EPC</th>
<th>Inserts/Container Inbound:</th>
<th>Container Dims L&quot;W&quot;H cms:</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Quantity Purchased</th>
<th>UL/day Inbound:</th>
<th>UL/day Return:</th>
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<tr>
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<table>
<thead>
<tr>
<th>Standard Labels Complete</th>
<th>Yes / No</th>
<th>UL/day Return:</th>
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<tbody>
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</table>

<table>
<thead>
<tr>
<th>Return Specs Complete</th>
<th>Yes / No</th>
<th>UL/day Return:</th>
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<tbody>
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<td></td>
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<td></td>
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</tbody>
</table>

## C Tracking Sequence (Plant Completion)

**Operation**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Responsibility</th>
<th>Location</th>
<th>Frequency (days)</th>
<th>Duration (days)</th>
<th>Telephone Number/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisors/Operators name</td>
<td>Plant location (grid reference) or Supplier Park location or Logistics Supplier name</td>
<td>How often the event occurs, in days</td>
<td>How long the event typically takes, in days</td>
<td>Telephone number to contact in the event of concerns arising</td>
</tr>
</tbody>
</table>

**In-Plant Routing:**

| Specs displayed? | Yes / No | Line Location: | |
|------------------|----------|----------------||
|                  |          | Market Place:  | |
|                  |          | Empty return location: | |
|                  |          | Re-pack/Consolidation: | |
|                  |          | Milk round collection: | |
|                  |          | Return to EPC Compound: | |
|                  |          | EPC advised of empties: | |

**Logistics Co-ordinator:**

| Traffic advised: | |
|------------------||
| Freight organised: | |

**Freight Functions:**

| Traffic collect inserts: | |
|--------------------------||
| Freight movement 1:     | |
| Consolidator 1:         | |
| Freight movement 2:     | |
| Consolidator 2:         | |
| Freight movement 3:     | |

**Supplier Functions:**

| Delivery receipt: | |

**Total: days**

## D Concurrency

<table>
<thead>
<tr>
<th>Name (printed)</th>
<th>Signature</th>
<th>Date</th>
<th>Return To: Ford Motor Company Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH&amp;PE:</td>
<td></td>
<td></td>
<td>AME MH&amp;PE GB-20/220</td>
</tr>
<tr>
<td>Plant:</td>
<td></td>
<td></td>
<td>Arisdale Avenue</td>
</tr>
<tr>
<td>Supplier:</td>
<td></td>
<td></td>
<td>South Ockendon</td>
</tr>
<tr>
<td>Traffic:</td>
<td></td>
<td></td>
<td>Essex RM15 5TW</td>
</tr>
<tr>
<td>LLP Co-ordinator</td>
<td></td>
<td></td>
<td>Tel / Fax: +44 (0)1708 672156 / 211</td>
</tr>
</tbody>
</table>
**Durable Insert/Stretch Container Follow-Up Process**

In the event of concern regarding return of inserts/extended containers, use the Tracking Form to:

1. Identify the VO location causing concern - this will be apparent as labels carry the VO plant code e.g. ZF, ZS, 1Y, 3C, 2C, V5. Inserts will not be arriving from the location causing concern.

2. Contact the appropriate 3rd party EPC or Supplier Park contact.

3. Ask if the particular insert/extended container has been shipped within past 24 hours.

4. If yes, ask the document number and trailer number - go to item 6.

5. If no, contact the plant MP&L Manager to establish why inserts/containers are not being returned. (Note! 3rd Party do not control insert/extended container movement - they record information supplied by Ford responsible EPC staff to facilitate tracking).

6. If inserts/containers are coming from a domestic location (i.e. within FoB, FoS, or FoG) contact traffic.

7. Give them the trailer number and advice note number.

8. They will advise trailer location and estimated time of arrival.

9. If inserts/extended containers are coming from abroad, contact the LLP
   - Hays storage for inserts/containers coming into FoB locations
   - Antriss & Schneider for inserts/containers coming into FoG locations
   - Transvesa for inserts/containers coming into FoS locations

10. Give them the trailer no. and advice note number. They will advise if the inserts/containers have come through their area.

11. If yes, they will be able to give an ETA.

12. If no, they will advise the consolidator the material will come from eg. Inserts/containers coming into FoB from the continent via Hays will be shipped from Transvesa (FoS) or Antriss & Schneider (FoG).

13. Contact the specified consolidator and give them the trailer no. and advice note number. They will advise if the inserts have come through their area.

14. If yes, they will be able to give an ETA.

15. If no, contact Traffic - under these circumstances 3rd Party have provided the trailer number and advice note number and the trailer cannot be located.
Durable Insert/Extended Container Schematic Timing

1. Initial Supplier Meeting
   Collect data/Cost analysis

2. Confirm Funding
   Identify source

3. Specification Meeting
   Confirm design parameters

4. Provide Quotation
   If appropriate

5. Manufacture Prototype Tools
   Produce samples

6. Review Samples
   Plant buy-off/Agree modifications

7. 1PP Shipments
   Use Samples for 1PP shipments

8. Manufacture Final Tools
   Produce samples

9. Submit Documentation
   EU1121/Return Specification/Tracking Form/Labels

10. Review Final Samples
    Produce samples

11. Finalise Production Schedule
    To support Job 1 and Launch

12. Manufacture and Deliver Bulk Production
    In-line with schedule