

Packaging Manual



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Objective

The Knorr-Bremse Systeme für Nutzfahrzeuge GmbH and its affiliates and subsidiaries - in the following mentioned as KB SfN – are partners of the international truck industry and develop, manufacture and distribute systems, equipment and units in the fields of braking systems for commercial vehicles, which must satisfy particularly high demands on safety and quality.

The logistic links between KB SfN and its suppliers become ever more extensive and closer. Logistic and qualitative efficiency of the partner enterprises gains ever more significance.

The international truck industry demands a punctual supply, outstanding quality, zero error and pollution free products from KB SfN and the supplier of KB SfN components, at economic prices.

In order to represent the various packing requirements in clear form, this packaging manual has been developed.

The manual (serves as the basis for the optimal partial protection considering logistical, economical and ecological aspects) follows the VDA recommendation 5000 from the federation of the automobile industry as the benchmark standard.

The following standards are intended to ensure rational and smooth material flow between supplier and KB SfN by:

- optimized container and packaging design,
- standardised dimensions and
- coordinated quantity contents of the packaging

In order not to burden the environment unnecessarily and to follow the packing regulation, the packaging will be selected through the following criteria:

- **Avoidance**
That is limiting the amount of materials used to the absolute minimum.
- **Reduction**
Returnable and one-way package are to be defined on the basis of ecological and economic criteria.
- **Recycling of materials**
Environmental acceptance that recycling has to be possible for both returnable and non-returnable packaging.

NOTICE:

This packing manual is intended as an overall guide, and due to the broad range of goods it is not intended as a specific instruction. Special requirements will be agreed in accordance with the mentioned priorities directly with the suppliers at product level.

Please copy this page and send the signed copy back to the following address:

INSERT LOCATIONALLY SPECIFIC ADDRESS

Quality Management Agreement

We hereby we confirm the receipt of the Packaging Manual, the understanding and the total fulfilment from now on of the described requirements with the exceptions of (if necessary use the backside, please):

Company: _____

Address: _____

Name: _____

Function: _____

Signature _____

Date _____

Email: _____

This agreement is a basis of the business relation with KB SfN. Suppliers which will not sign this agreement will not be considered for future business and will not get new inquiries!

In case of a conflict between the regulations of other agreements with the supplier and the regulations of this packaging manual, the packaging manual shall be neglected.

1. Manual for users

1.1 Where do I find this in the packaging manual?

- Where and how can I order the necessary containers?
- Who are the different partners?
- How must I mark packaging?
- How must I treat the containers?
- What does a packaging instruction look like?
- What information a packaging instruction contain?
- What is the process of a delivery to KB SfN?
- Which materials may I use for the packing?
- Who carries the responsibility and the costs?
- How can I change the packaging?
- How is the re-usable package booked?
- When do packaging materials require restoration?

Where and how can I order the necessary containers?

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Who are the different partners??

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How must I mark the packaging?

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Chapter 5.5 VDA goods tag..... p. 28

Chapter 5.6 Attachment point and method for goods tag..... p. 31

How must I treat the containers?

Chapter 6.7 Quality of carrier p. 36

What does a packaging instruction look like?

Chapter 3.2 Packaging instruction p. 13

What information must a packaging instruction contain?

Chapter 3.3 Explanation of the packaging instruction p. 15

What is the process of a delivery to KB SfN?

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Which materials may I use for the packaging?

Chapter 2.3 Permitted and non-permitted packaging materials p. 10

Who carries the responsibility and the costs?

Chapter 2.4 Chart showing assumption of costs and responsibilities p. 11

How can I change the packaging?

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How is the re-usable packaging booked??

Chapter 6.3 Account reconciliation p. 34

When do packaging materials require restoration?

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2. General data

2.1 Packaging requirements

Regardless of the type of packaging used, the following requirements must be satisfied:

- Protection of the part
- Formation of efficient load units
- Optimisation of efficient load units
- Secure transportation
- Easy to clean, and clean before use
- Problem-free unloading ability from the transportation vehicle by industrial forklift trucks
- Suitability for stacking
- Compliance with specified standard dimensions
- Designed for easy handling
- Convenient access to contents
- Materials suitable for recycling

On every load unit, every container and every individual package a VDA-goods tag is required – or a locally agreed variant.

All labels and further inspection labelling from the supplier must be easy to remove in the loading of the container.

Marking, e. g. paper, covers which goes beyond the outer contours of the load unit should be removed before dispatch as automatic material handling systems may include them at the contour control.

The supplier is responsible for impairment of quality resulting from deficient, wet, removed or contaminated packaging.

2.2 Avoidance of packaging waste

As a rule, packaging should always be planned to allow for both the economical and the ecological impact. Environmental legislation concerning waste focuses on the following principles, which reflect Ecological priorities:

- **Avoidance**
That is limiting the amount of materials used to the absolute minimum.

- **Reduction**
Returnable and one-way package are to be defined on the basis of ecological and economic criteria.
- **Recycling of materials**
In the reduction of environmental wastage recycling has to be possible for both returnable and non-returnable packaging.

In order to comply with the requirements of environmental protection (Packaging Directive) and in order to avoid unnecessary environmental pollution, only environmentally compatible materials are permitted.

2.3 Permitted and non-permitted packaging materials

The packaging material has to be **recyclable in each part of the country** and **has to be uniquely and visibly identified**. The packaging marking must not prohibit recycling of the material or processes involving heat treatment.

Material	Materials permitted	Materials not permitted
<u>Composite materials</u>		Composite materials are not permitted.
<u>Plastics</u>		
Non-returnable (One-way)	Only PE, PP have to be marked according to DIN 6120 (pictogram with abbreviation).	
Returnable	Approved for use: ABS, PE, and PP to be marked according to DIN 6120.	Not Permitted: EPS Only in special cases and after approval of KB SfN: PVC, PU, and PC.
<u>Paper and cardboard boxes</u>	Marking and administration must be in accordance with RESY. VCI papers which can be proven to be recyclable together with paper or card should be marked with the RESY symbol.	With water-insoluble coatings or adhesives (e.g. wax, paraffin, bitumen or oiled papers, paper adhesive tape).
<u>Plastic packaging</u>		
Protective and insulating caps	Natural-colour PE (if not specified otherwise).	

Packing chips	To specify according to agreement with the KB SfN	
Foam		
Non-returnable (One-way)	PE	
Returnable	PE, PP.	
Shrink- and stretch film	Only PE marked material designation according to DIN 6120.	
Film pockets and bags	Only PE marked material designation according to DIN 6120, labels or adhesive strips of the same material.	
Expanded polystyrene (Styrofoam)	Only by agreement with packaging planning department.	

2.4 Chart showing assumption of costs and responsibilities

Assumption of cost and responsibilities		
	Responsible part	
	Supplier	KB SfN
Procurement costs and responsibility for KB SfN standard and special containers	Individual agreement	
Costs of repair for KB SfN standard- and special containers	Individual agreement	
Delivery of damaged packaging materials and special containers without prior advice	X	
Packaging costs for internal special and standard containers	Individual agreement	
Costs and responsibility for using non-stated packaging	X	
Costs of non-approved scrapping of KB SfN own containers or cost of loss of containers	X	
Costs and responsibility for transport and development of packaging for sample components	Individual agreement	
Cost and responsibility for packaging, which is not stated or where packaging is not required	Individual agreement	
Cost and responsibility for defective, wet or poorly presented packaging	X	
Cost for non-compliant packaging (re-packaging costs)	X	
Procurement costs for containers for internal additional production demand of the supplier	Individual agreement	
Procurement costs for containers for intermediate storage of semi-finished products	Individual agreement	
Procurement costs for containers for supply to upstream suppliers	Individual agreement	

Procurement costs for containers for batch size production	Individual agreement
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2.5 Logistical supplier assessment

Compliance with the Packaging Manual and the packaging instruction influences the logistical supplier assessment.

Further information for the logistical supplier assessment is available on the KB SfN Homepage (www.knorr-bremse.com) or you can get it from your local partner by KB SfN.

2.6 Load safety

Load safety has to comply with national and international regulations. Maximum utilisation of the means of transport has to be ensured. The load has to be secured in accordance with the transport route and the type of load.

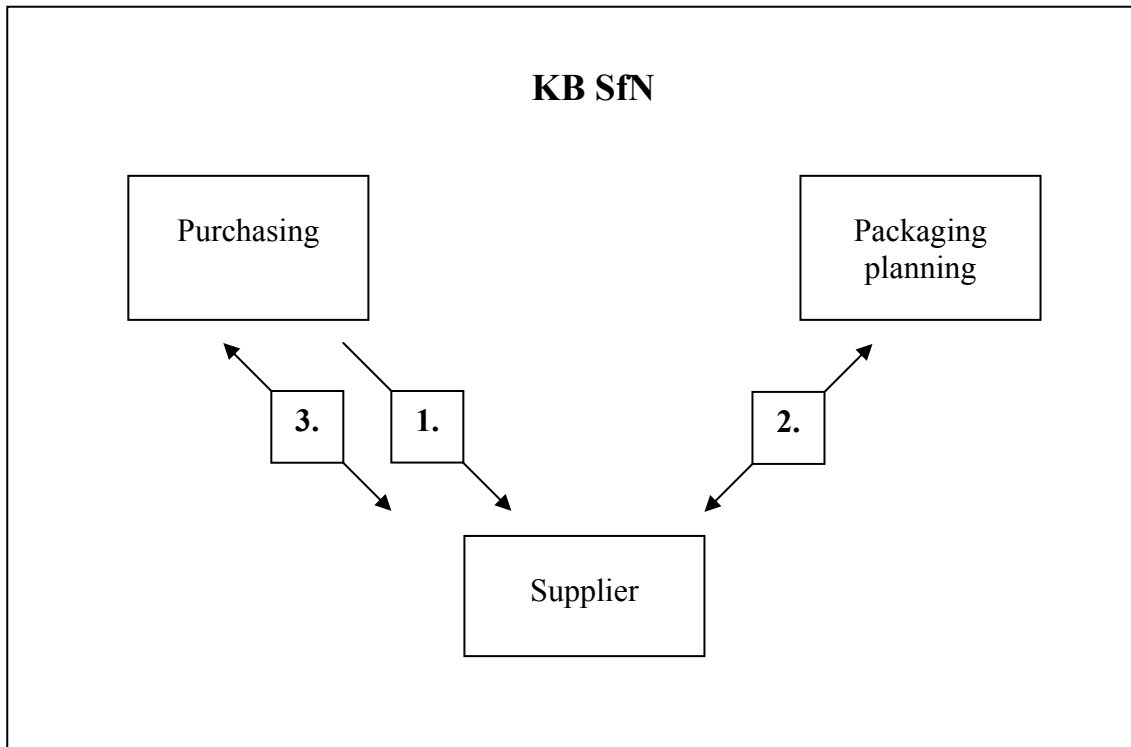
2.7 Optimisation of container fill level

Containers must always be provided by suppliers achieving a maximum fill level. If the fill level changes, the supplier is obliged to inform the KB SfN packaging planning department in advance.

Container fill level optimisation has to be proposed by the supplier and performed in cooperation with the KB SfN packaging planning department.

3. Packaging planning

3.1 Flowchart of the packaging planning



1. Inquiry from KB SfN purchasing department.
2. The packaging is specified between the packaging planning department of KB SfN and the supplier.
3. When ordering the packaging instruction, packaging terms are included as a component of the contract between KB SfN and the supplier.

3.2 Packaging Instruction

The packaging departments at KB SfN all use the same packaging instruction. All relevant packaging data is managed in this instruction and in an IT system per part number and supplier managed.

Control and planning systems at KB SfN access this data. The packaging data is acquired specific to part number with the packaging instruction.

The packaging instruction has to be completed by the supplier when defining or modifying the packaging instruction and has to be submitted to purchasing and packaging planning department.

After the quality regulations have been reviewed and after the packaging price has been included in the purchase order, the data of the packaging instruction is included in the packaging instructions.

Packaging instruction

Supplier: (1)
Supplier number: (2)
Part number: (3)
Name: (4)
Weight: (5)

Technical data of packaging:

Part number	Name	Type of packaging	Dimension in mm	Tare in kg	Permitted load capacity	Number/Transport units
(6)	(7)	(8)	(9)	(10)	(11)	(12)

Technical data of transportation goods:

Part number	Name	Fill-up quantity per load means	Fill-up quantity per transport unit	Weight of part in kg	Gross weight in kg	Colour of VDA goods tag
(13)	(14)	(15)	(16)	(17)	(18)	(19)

Photo of packaging

Photo of packaging

(20)

Notice	
Empties:	(21)
Delivery:	(22)
Container identification: (23)	
Comments:	(24)

In use since: (25)			
(26)	(27)	(28)	(29)
Date of preparation: (30)		Tel.: (33)	
Draughtsman: (31)		;Email: (32);	

(Illustration NOT scaleable)

3.3 Explanation of the packaging instruction

The following fields are important for the material flow at KB SfN:

Field No.	Contents	Description
1	Supplier	The name of the supplier
2	Supplier number	The 8 digit supplier number
3	Part number	The 6-13 digit part number from KB SfN
4	Name	The name of the part
5	Weight	The weight of the part
6	Part number	The 6-13 digits part number from KB SfN
7	Name	The identification number of the load means
8	Type of packaging	Reusable / non-reusable (one-way) packaging
9	Dimension in mm	The size of the packaging means: length x width x height
10	Tare in kg	The weight of the packaging means in kg
11	Permitted load capacity	The permitted load capacity of the packaging means
12	Number / transport unit	Number of transport units
13	Part number	The 6-13 digits part number from KB SfN
14	Name	The name of the part
15	Fill-up quantity per load means	The number of parts in each load means
16	Fill-up quantity per transport unit	The number of parts in each transport unit
17	Weight of part in kg	The weight of the part in kg
18	Gross weight in kg	Total weight of the shipped packaging
19	Colour of VDA goods tag	The colour of the paper used on the used goods tag.
20	Photo of packaging	Photos of the packaging
21	Empties	Details about empties
22	Delivery	Details about delivery
23	Container identification	Details about container identification
24	Comments	Details about the shipment
25	In use since	The date of origin of the document in the date format, DDMMYY
26	Packaging planner	The signature of the responsible person of packing planner at KB SfN
27	Quality management	The signature of the responsible person of quality management at KB SfN
28	Purchasing	The signature of the responsible purchaser at KB SfN
29	Supplier	The signature of the supplier
30	Date of preparation	The date of preparation, in the date format DDMMYY
31	Draughtsman	Name of the draughtsman
32	Email	Email address of the draughtsman
33	Telephone	Telephone number of the draughtsman

4. Determination of the packaging

The packaging requirements mentioned in the packaging data sheet become legally binding when it is signed by the supplier and the responsible person at KB SfN.

Once a packaging agreement has been reached with an internal/external supplier, it becomes a part of the terms of purchase.

If the mentioned form of packaging is not complied to, KB SfN reserves the right to charge the supplier in question with any handling, disposal or repacking costs incurred. Any deviation, that is not agreed prior to the change from standard packaging specifications will affect the supplier's logistical performance.

Any deviation from the packaging specification, in justifiable instances (e.g. alternative packaging at series launch, exceptional pre-launch circumstances) should be agreed with the relevant departments at KB SfN.

A corresponding note "Alternative Packaging!" and details (Name, Dept. Code, Telephone No.) of the contact at KB SfN, who has agreed on the packaging deviation, has to be stated on the delivery note.

If KB SfN has not specified the packaging, a type of packaging suggested by the supplier should be used after agreement with the relevant departments.

Whenever the packaging to be used is agreed for the first time or altered, the packaging instruction should be completed and sent to the purchasing department (copy to packaging planning department).

The release of a type of packaging does not release the supplier from his responsibility to deliver parts free of damage.

Containers which are the property of KB SfN may only be scrapped by agreement with the KB SfN packaging planning department. Otherwise the supplier will be charged the replacement costs.

Preferred packaging materials will be provided either by KB SfN or the supplier depending on the agreement (see Chapter 6.4).

4.1 Terms of Packaging / Types of Packaging

The overview shows the different packaging terms/ types of packing with KB SfN:

1. Non-returnable packaging

- Non-returnable packaging without coordination or no packaging
Cost of packaging and subsequent (repacking, disposal costs etc.) go debited to the supplier. A later subsequent billing is impossible.

2. Standard container

- Costs of non-approved scrapping of KB SfN own containers are charged to the supplier.

3. Special containers

- Development and procurement by supplier/ KB SfN according to agreement.

4. Containers from suppliers

- Procurement and administration by KB SfN. Before committing to an agreement between KB SfN packaging planning department and the supplier, an understanding and an agreement is necessary.

5. Electronic components

- Each container should be supplied with an ESDS warning symbol. An agreement between the KB SfN packaging planning department and the supplier is necessary.

**The Terms of Packaging are agreed between the suppliers and KB SfN,
and it is a part of the order.**

4.2 Non-returnable packaging

Non-returnable packaging is to be avoided as far as possible. Exceptions are to be co-ordinated in each case with the responsible persons of KB SfN. In principle the non-returnable packaging is placed by the supplier and must fulfil the following requirements:

- Easy, damage-free handling by industrial trucks (DIN 15140)
- Securing agents to match size and weight
- Stackable of at least two high
- Easy access to parts
- Environmentally acceptable disposal (see Chapter 2)
- Provides protection against moisture
- Identification of the max. lifting capacity or stack factor

4.3 Standard container

The standard container from KB SfN is defined as follows:

- Can be used for all plants and Divisions, in addition to externally
- Not assigned to specific part families

- No fixed fittings

The packaging planning department, in coordination with suppliers, decides on the use of KB SfN's own standard containers.

KB SfN standard containers are designed only for transporting the parts between the supplier and Knorr-Bremse.

They may not be put to other uses, such as:

- intermediate storage of semi -finished goods
- storage of goods which are surplus to the amount currently being called off from the supplier
- for supply to upstream suppliers

The number of containers required is calculated for each supply plant and is monitored by KB SfN administration.

The required containers for first deliveries have to be requested in sufficient time. In the event of any incorrect deliveries, the supplier is obligated to inform the responsible contact at KB SfN administration.

4.3.1 Complete Primary Packaging Materials

ENTER SPECIFIC PACKAGING MATERIALS AND COMPONENTS AS PER THE LOCATION – in the format:

Note in this section only completed packaging. i.e. Gitterbox, Whole Boxes (K-B branded boxes).

Photo of Packaging ←	Part no.: (1)			
	Name: (2)			
	Description: (3)			
	Tare in kg	Max. payload in kg	Outside dimensions in mm L x W x H	Internal dimensions in mm L x W x H
	(4)	(5)	(6)	(7)

(8)

4.3.2 Primary Packaging Components

Note in this section only part packaging components allowed, i.e. Pallet bases, white wooden collars, plastic/cardboard inserts,

Photo of Packaging	Part no.: (1)			
	Name: (2)			
	Description: (3)			
	Tare in kg	Max. payload in kg	Outside dimensions in mm L x W x H	Internal dimensions in mm L x W x H
	(4)	(5)	(6)	(7)

(8)
↖

4.4 Special purpose containers

KB SfN packaging planning department decides on the use of special-purpose containers. The tasks of planning, design and acceptance testing of the special-purpose containers are performed by KB SfN in coordination with suppliers.

The number of special-purpose containers required for circulation is determined by KB SfN.

They may not be put to other purposes. They are not for the use of:

- circulating goods as part of the internal production process at the supplier's plant
- intermediate storage of semi -finished goods
- storage of goods which are surplus to the amount currently being called off from the supplier
- for supply to upstream suppliers

Special-purpose containers are generally identified by a KB SfN identification number.

If identical, special-purpose containers are in use by several suppliers, the minimum level is monitored by load central administration at KB SfN.

4.5 Supplier-owned container

The supplying company may use its own containers or returnable packaging systems by agreement with KB SfNs packaging planning department or purchasing department.

The precondition for this is a proof of ownership on the containers. If the containers are to be used permanently, the supplier has to request a KB SfN identification number for container tracking from KB SfN packaging planning department.

4.6 Electronic products

The responsible KB SfN planner defines the electrical conductivity of packaging for transport of components.

The packaging has to be identified with the ESDS warning symbol in accordance with DIN EN 100 015, Part 1.



(Warning symbol for ESDS)

The suppliers must examine that on each container and on each individual package a warning symbol is placed.

4.7 Special situations

Special situations must be co-ordinated only in writing with the responsible person in procurement at KB SfN.

Special situations include:

- **Non-palletised goods**

Deliveries in cardboard boxes or bags without a pallet must be avoided as they may have to be handled manually.

- **Packaging for sample components**

Packaging for sample components have to always be agreed with Quality Inspection. The costs are assumed by the supplier on a general basis.

- **Non-returnable packaging**

Non-returnable packaging should be avoided wherever possible. Exceptions should always be agreed with KB SfN packaging planning department (see also chapter 4.2).

The standard dimensions of the load unit and its modular structure have to be complied with. Deviations from this stipulation should be agreed separately with the packaging planning department or with purchasing department. The packaging materials approved by KB SfN have a five-digit code. The suppliers are to co-ordinate with packing planning department and load central administration.

All special situations have to be co-ordinated with KB SfN packaging planning department and load central administration.

4.8 Grouped load unit

Only one part number is permitted per load unit. If no complete load units can be made up of a single part number as a result of small call-off quantities, additional labelled containers with different part numbers may be combined to form a grouped load unit.

The grouped load unit have to be co-ordinated in writing with the responsible person in procurement at KB SfN

Another condition for this is that the individual packaging is separately listed and that a master label is attached at a load unit of the consignment. In order to be able to recognize the grouped load unit in the incoming goods, it is necessarily to attach a package list (see manual chapter 5.7) to it.

Please refer to point "Booking several units with differing part numbers" for the right information on the delivery note.

Every grouped load unit must not be higher than one meter.

4.9 Changes of the packaging instruction

In principle, suggestions for improvement at packaging are to be co-ordinated in writing with the responsible person of KB SfN. A change to the packaging specification requires the written permission of KB SfN.

The supplier is responsible for duplication of packaging instructions for its internal use, in the event of changes – the supplier is responsible for the updating of the packaging instructions. Documents are

only sent once by KB SfN. In the case of changes the packaging instructions will be sent in writing to the supplier for a counter signature.

The supplier must confirm the receipt of the documents with the new amendment index and communicate this to KB SfN.

After a new agreement has been signed, suppliers must communicate to KB SfN the start date from which the new terms are to be followed.

5. Accompanying information for goods

5.1 Marking and identification

KB SfN containers are marked with an identification number. The five-digit identification number identifies the type of container or the entire load unit (#LXXX). It comprises basic information for the purposes of container control and must therefore always be stated in the dispatch papers for all consignments.

Identification numbers for the standard containers, special containers and load units are issued by the packaging planning department or purchasing department.

- Mention where to find specific identification numbers within the manual
- Indicate information to be shown on deliveries

5.2 Bordero-process

The Bordero process means that the completion between carrier and receiver KB SfN with Bordero papers is accomplished and that the Bordero data is made available by the carrier.

The basis for the transport transaction, creation of the Bordero paper and carrier-transport data forms the VDA shipment order provided by the supplier, and/or transport and transmission documents.

By using the Bordero paper, the process of receipt of goods, including receipt freight invoice and the damage transaction, are made on the basis of this document.

5.3 Shipment order

- Enter an example of a shipment order
- Denote key points within the shipment order by means of a description table (and associated numbers within the example illustration)

5.4 Delivery note

Brief description of what it is and the importance of it.

- Insert an illustration of a delivery note on a package
- Describe expected location, orientation on the package. End face/side face/top/right/left/middle ?

5.4.1 Example of Delivery Note & Required Information

- Insert an expected delivery note (illustration).
- Use arrow pointers to the delivery note to indicate essential sections and include a tabulated description of the information needed:

Field No.	Contents	Description
1	Supplying Plant	The supplying plant is to be clearly named to maintain accurate packaging records.
2	Identification Number	The identification number must be clearly visible in order to d
3	Delivery Contents	Delivery content in terms of part number content – and the package number wherein it is packaged.
4	Part Number QTY's	Exact part number QTY's contained within the individual package.
5	Post Code	
6	Freight Carrier	
7		
8		

Correct specification of the container identification number and quantity in the delivery note are the precondition for correct container inventory management and, thus, for correct supply of containers to the suppliers.

The delivery note has to be handled as an enclosure further to the freight documents. It may not be attached to the goods themselves. The delivery notes have to be submitted with the shipment order so that all data required for goods receipt is available at the goods receipt points.

The single delivery note may list only items for a part number which belong to a purchase order. If the prescribed processes are not observed, the process will be disturbed, thus causing additional costs which have to be borne by the supplier.

5.5 VDA-Goods tag

The supplier must make sure that a VDA goods tag has been attached to each load unit, each container and each individual package.

All labels and further labelling of the supplier have to be removed or cancelled in easily visible manner when the container is loaded.

This tag is as a matter of principles based on the recommendations of the Association of the German Car Industry (VDA). All explicitly not specified descriptions of the goods trailer are identical to the version 3 or 4 of the VDA 4902.

5.5.1 Goods tag for “x” Container

→ Insert information for goods-tag for container “x”

→ Provide visual illustration with key points numbered and explained in a tabulated description form as illustrated:

Field No.	Content	Remarks
1	Warenempfängers	The address must be complete with road, country, postal code and place.
2	Abladestelle/ Lagerort	Particularly with the suppliers, whose goods come into different stocks, here the stock location must be mentioned.
7	Anzahl Packstücke	Number of packages per part number and delivery note number.
8	Sachnummer KB SfN	The part number must be present as plain language and as barcode. The right range of the field must be free for gluing on notes.
9	Füllmenge	
11	Sachnummer Lieferant und Packmittelnummer Kunde	Is released to the supplier to write the part number into the field 11.1. The packaging means number of KB SfN must be located in field 11.2. If only one indication is registered, it must be the packaging means number of KB SfN.
12	Lieferantenummer	The supplier number is to be registered here with the 8-digit number. Shorter supplier numbers are to be filled with left-hand zeros.
13	Datum	Here the date of despatch with a placed in front D is registered in the format YYMMDD.
14	Änderungsindex	Here must the amendment index of the commodity be registered.
16	Chargennummer	With suppliers of batched parts, the batch number of the supplier must here be registered as barcode and in plain language.

All other fields of the goods tag also have to be completed according to the specifications of the VDA Recommendation 4902, Version 4.

5.6 Attachment point and method for goods tag

→ Advise how the goods-tag is to be fastened to the package & best means of doing so such that it will not be removed/fall off in transit.

→ Insert graphic illustration of location as required, orientation, where the tag is to be placed on the package.

→ Outline key points and guidelines to follow.

5.6.1 Special Conditions

Insert information of any special conditions and rules/guidelines to be followed in the fixing and placement of the goods tag as per location/package type/legislative requirements.

5.6.2 Overview of attachment points and methods for goods tags

→ Insert information into the following table as per the location requirements.

Identification number	Name	Outer package	Attachment method	Remarks

5.7 Packing list

In the case of mixed consignments (load units/ non-returnable packaging on pallets), it is necessary for the recipient to be able to recognise in what consignment the corresponding part number is located.

The following information, which has to be attached in clearly visible manner to the mixed consignment, is required:

→ Provide an illustration/template to ensure all information is achieved & entered.

Field Number	Information	Description
1	Sender	
2	Delivery note number	
3	Supplier number	
4	Part number	
5	Recipient	
6	Type of container	
7	Unloading point	

8	Number of containers	
9	Consignment number	
10	Total quantity	
11	Number of containers with more than one part number	
12	Packing number of the mixed consignment	

6. Inventory and accounting

6.1. Creation of a container account

- Enter how accounts for re-usable packaging are generated
- Indicate how Knorr-Bremse identify and mark re-usable packaging for tracking and accounting means

6.1.1 Guidelines of operation for Re-Usable Packaging Agreement

- Insert points of importance of guidelines and agreements
- Include information of packages not acceptable as a means of recyclable scheme.

6.2. Condition for normal account processing

The basic requirement for a normal account processing is, that the supplier makes an exactly documentation of the used reusable loading equipment at the time of delivery.

In addition to this KB SfN needs the following basic information:

- sender
- receiver (with statement of the respective unloading point)
- forwarding agency (named)
- number of pieces and marking (with KB SfN identification number) of all reusable loading equipment.

Three suggestions for documentation: (Offer specific generic form/template to work towards to ensure all fields and pieces of information is completed – on this form, provide instructions as per requirements and information needed – tabulated description)

- using a principle note for all reusable loading equipment at one delivery note
- using a self designed reusable packaging delivery note (by EDP), so far as this includes all dates KB SfN need

- using the KB SfN designed reusable packaging delivery note (see appendix)

At the time of delivery KB SfN immediately has to see, what reusable load unit the sending includes. Only this way an accordingly accounting can be guaranteed and the crediting of your account for load means, which is lead by us, can be done.

6.3 Account reconciliation

- Insert details of departments responsible for accounting
- Identify the process by which this is done, time scales and how in/out packaging is monitored
- Enter how the accounts are booked in terms of arrival and exits of packaging materials
- Provide an example of how monthly “balance statements” of materials will be presented
- Identify the appeal procedure by which Knorr-Bremse works and how to manage cases of dispute of materials.

6.3.1 Practical account processing

- Enter a booking example (and illustration) of how the in/out procedure is maintained and monitored
- Provide descriptions of actions and key points

6.4 Control of empties

The supplier is in writing obligated to order written the needed reusable package from KB SfN (department load central administration).

The supplier must remember a delivery time of app. 10 days.

In addition to this KB SfN needs the following basic information:

- receiver (main address or external storage area)
- number of pieces and name of the reusable loading equipment (with KB identification number)

Two suggestions for the order:

- using of the KB designed order form for reusable package
- using of a self designed order form for reusable package , so far as this includes all dates KB needs

Only written orders of empties are accepted.

6.5. Inventory analytics

The quantity required and the suppliers estimated balances must be specified (between the supplier and the packaging planner of the respective unit).

For each supplier individual minimum, maximum and circulation amounts are defined with the responsible packaging planner.

6.6 Procedure for stocktaking of load means

For preservation of functioning of the load equipment pool a yearly physical stocktaking (annual inventory count on December 31st) of the booked inventories with the actual available stock on hand is necessary.

For customer's loading equipments it can be necessary to make stocktaking during the year (e. g. bottle necks or customer preconditions). The suppliers are obligated to execution in time and do a conscientious of the stocktaking by a counting.

A prepared inventory list for the stocktaking of all managed loading equipment is made available by the load central administration. In that prepared inventory list the supplier has to fill in the results of the inventory with date, firm stamp and signature. The inventory list has to be sent to KB SfN not later than the given date.

Loading equipment, which is outside of your firm, has to be included at the inventory. This could be e. g. stock on hands at your sub-supplier or service provider.

When there are differences between debit and actual amount, KB SfN reserves the right to correct or to charge the quantity differences.

The inventory is due to the value as well as the smoothly supply extremely important. Within the scope of the transaction lost quantities are established for a repeated order. A yearly fill up of the loading equipment pools is necessary to guarantee the function of the loading equipment pools.

6.7 Quality of carrier

Packaging are paid values - so they are an aspect for economical calculation.

When using the reusable loading equipment you have to make sure that there are not any kinds of damages or contamination. In principle KB SfN makes clean reusable loading equipment available.

According to the packaging instruction the supplier is obligated to supply clean and undamaged loading equipments. So you have to look for a safe treatment, cleanliness, load capacity and regular handling (see chapter 2.7).

Damaged loading equipments (at delivery of goods) are received by KB SfN but they are not credited at the account for load means.

When the supplier gets damaged or dirty empties from KB SfN, please provide the information immediately, because later complaints are not accepted.

7. Damaged container, differences in Quality

7.1 Damaged Packaging Materials

KB SfN checks the condition of the containers at empties departure and at the incoming goods. KB SfN reserves the right to charge the supplier for repacking cost, caused by delivery of damaged, false used or contrary to the regulations loaded containers.

At supply of packages, which are in need of special attention in the decanting of products, the supplier has to pay the consequential costs. When a defect is first detected at the assembly line (concealed damage), you have to inform the receiving plant with a fax in advance.

7.1.1 Packaging Repair Requirements

- Description of repair requirements provided with illustrations are to be entered.
- Indicate areas that are easily damaged (provide clear examples) and footnote these with brief descriptions
- Enter general characteristics not to be accepted for specific package types

7.1.2 Special De-Canting Conditions

In special cases of damaged packages, through poor stacking, in-capable packaging, poor loading, suppliers may be responsible for consequences/costs.

- Insert illustrations of non-acceptable packaging through poor packaging/poor loading/poor stacking/poor packaging.



7.2 Inspection to detect fakes

7.2.1 EPAL-EUR-pallet

- Examples of all possible received fakes to provide full coverage of detecting non-authentic pallets into Knorr-Bremse SfN packaging loop.
- Enter information in tabulated form (below) as per possible countries of supply.



As example a EUR-pallet from DB is used.

On the left corner block	On the middle block	On the right corner block
		
<p>(See photo) The branding of the “Deutschen Bahn AG”, the DB mark</p>	<p>(See photo) a) The letter D (Deutschland), PL (Poland) etc. /manufacturer code, from manufacturer list with EPAL approval visible. b) The branding of the European Pallet Association, the EPAL mark c) The EPAL signing clamp.</p>	<p>(See photo) The branding of the European pallet pools of the railroads, the EUR mark.</p>

Further characteristics:

- Diagonal plank between 22 and 25 mm; no tree edges
- Soil planks: solid nailed
- Moisture content of wood: dried wood; no fungus growth
- Standardized nail picture:



- At least 78 nails with nail head marking:

More information can be found in Internet at <http://www.epal-pallets.org> and select preferred language of understanding.

7.2.2 Detection of Package “x”

- Insert diagrams used to clearly identify packages that are Non-Authentic
- Provide evidence of Non-Authentic packages – and show key points upon them that are not acceptable.

7.3 Characteristics of Non-Authentic Package “x”

→ Insert photos/means of visual identification of Non-Authentic characteristics, not accepted by Knorr-Bremse SfN.

→ Steps and procedures to follow should be outlined and easy to identify areas of defect mentioned/illustrated.

7.4 Receipt of defective containers at suppliers, difference in quantity

Delivery differences or defective containers	Procedure
Quantity differs from document or wrong delivery	Immediate complaint to carrier and information to shipping plant with shipping document
License plate number, container number, wagon number on documents not identical to delivery no.	Immediate complaint to carrier and information to shipping plant with shipping document
For empties supply not direct from a plant	Immediate complaint to carrier and information to the department which initiated the empties supply (with documents)

If the above points do not apply and damaged containers are delivered nevertheless, the following action has to be taken:

- The dispatcher has to be informed immediately with the shipping documents by facsimile specifying the type of complaint and quantity.
- As directed by KB SfN partner.
- Account clearing is only after written instruction of the partner at KB SfN. Containers do not neutralize, i.e. no old stickers etc. to be removed.

8. Example of a process for a delivery to KB SfN

- Brief introduction of means of receiving a delivery in terms of activity
- Describe the activity as per processes and procedures in the following format illustrating interactions between suppliers, goods-in, planning and packaging planning departments

8.1 Overview of the process

- Insert flow chart showing relationships of communications of departments
- Provide pictorially and easy to follow means of understanding the lines of interaction

8.2 Step 1: Planning phase

8.1.1 Packaging instruction

- Describe the process of supplying the packaging instruction and information required (where it may be found)

8.3 Step 2: Day to day business

8.2.1 VDA-goods tag and packing list

- Describe the process and activity relating to the goods-tags and packaging lists and where they fit into the delivery system

8.2.2 Shipping order

- Identify the shipping order as an illustration and the flow of it through the system

8.2.3 Reservation of re-usable packaging

- Indicate what happens when re-usable packaging is introduced into the system, and how interactions take place in terms of accounting, monitoring credit/debit.

8.2.4 Control of empties

- Identify the process for controlling empty packages and how they affect the system in terms of controlling credit/debit / application procedure.
- Indicate where further information may be found

Appendix A

Reusable packaging - Delivery note

Date: _____

 Delivery note No. _____ Overall weight of the shipment: _____
 Dispatcher: _____ Receiver: Knorr-Bremse S/N GmbH
 Knorrstraße 1
 D-94501 Aldersbach
 Unloading point: WE 1: WE 2:

Carrier: _____

Maker: _____

Phone-Number: _____

Type of Packaging	Client	Quantity	Changed
Gitterboxen (LE 11)	#L001		
Europaletten	#L002		
D 32 Deckel für KLT 3214	#L087		
D 43 Deckel für KLT 43...	#L085		
D 64 Deckel für KLT 64...	#L084		
KLT 3214 blau	#L086		
KLT 4314 blau	#L004		
KLT 4321 blau	#L008		
KLT 4328 blau	#L005		
KLT 6414 blau	#L007		
KLT 6414 / 3 Lila	#L252		
KLT 6421 blau	#L006		
KLT 6428 blau	#L003		
A 1208 Abdeckhauben	#L248		
SP 1218 Sicherungsplatte	#L189		
Zwischenlagen für KLT 64...	#L319		
Zwischenlagen für KLT 43...	#L025		
Zwischenlagen für LE 21	#L026		
Zwischenlagen blau ZW 64			
Zwischenlagen blau ZW 43			
Zwischenlage für Radialhebel	#L021		
Gefache für Radialhebel	#L022		
LE 12 Halbhohe Gitterbox	#L040		
LE 15 Bodenpalette	#L041		
LE 50 - gelber KLT 4328	#L042		
LE 30 - gelber KLT 6428	#L043		
LE 21 Knorr Gitterboxpalette	#L045		
LE 52 grün	#L090		
LE 34 grün	#L091		
Tiefziehfolien für Flansche	#L212		
Tiefziehfolien für Gewinderohre	#L308		
Tiefziehfolien für Brücken	#L230		
Tiefziehfolien für Hebel	#L229		
Tiefziehfolien für Gehäuse	#L224		
Deckel für Gitterboxen	#L306		
Auskleidung für Gitterboxen	#L305		

Poolbehälter

Knorr - eigene - Behälter

- No. = KB-Code number

Type of Packaging	Client	Quantity	Changed
E - Palette	MH - 1875 #L162		
E - Rahmen	MH - 1872 #L166		
E - Deckel	MH - 2318 #L170		
E - Zwischenlage	MH - 1867 #L175		
H - Palette	MH - 1874 #L163		
H - Rahmen	MH - 1871 #L167		
H - Deckel	MH - 2319 #L171		
H - Zwischenlage	MH - 1866 #L176		
H - Zwischenplatte	MH - 0240 #L314		
Tiefziehfolien für SB	MH - 0134 #L246		
Smallbox + Deckel	MH - 0164 #L172		
Minibox + Deckel	MH - 0144 #L173		
K - Palette	EMB 2 #L143		
K - Rahmen	EMB 22 #L144		
K - Deckel	EMB 72 #L145		
K - Zwischenlage	EMB 62 #L154		
L - Palette	EMB 1 #L146		
L - Rahmen	EMB 21 #L147		
L - Deckel	EMB 71 #L148		
L - Zwischenlage	EMB 61 #L153		
Zwischenlage	EMB 81 #L316		
Smallbox	EMB 780 #L149		
Smallbox-Deckel	EMB 781 #L150		
H - Palette	#L100		
H - Rahmen	#L101		
H - Deckel	#L102		
R - Palette	#L103		
R - Rahmen	#L104		
R - Deckel	#L105		
MN 600	#L323		
MN 100	#L325		
TPM 2002 Behälter	#L060		
TPM 2032 Behälter	#L064		
TPM 2071 Behälter	#L066		
TPM 2072 Behälter	#L067		
TPM 5003 Behälter	#L070		

Scania

VOLVO

DAF

RVI

-Chrysler

Appendix B

Information about contacts

→ Insert locationally specific contact details as per the format below:

The contacts in Load central administration by Knorr-Bremse SfN (Plant, -----):

Competence	Contacts	App.	Telephone / E-Mail	Fax
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----

The contacts in packaging planning by Knorr-Bremse SfN (Plant, -----):

Competence	Contacts	App.	Telephone / E-Mail	Fax
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----