PUBLICLY AVAILABLE SPECIFICATION

ISO/PAS 21308-1

First edition
2007-09-01

Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) —

Part 1: General principles

Véhicules routiers — Échange de données de produit entre les fabricants de châssis et de carrosseries (BEP) —
Partie 1: Principes généraux

Reference number
ISO/PAS 21308-1:2007(E)

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Published in Switzerland

Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

— an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;

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An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/PAS 21308-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 6, *Terms and definitions of dimensions and masses*.

ISO 21308 consists of the following parts, under the general title *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP)*:

— *Part 1: General principles* [Publicly Available Specification]

— *Part 2: Dimensional bodywork exchange parameters*

— *Part 3: General, mass and administrative exchange parameters*

— *Part 4: Mapping to STEP application protocol 239*

Introduction

Truck chassis manufacturers deal with configuration of chassis in infinite numbers of possible combinations, and bodywork manufacturers produce highly customised superstructures on these chassis. Bodywork manufacturers build their superstructures on chassis of several different truck brands.

The production efficiency of a specific truck chassis and its body combinations can be greatly improved by communicating in advance with the bodywork manufacturer the correct technical and commercial information about the specific chassis. The information needs to be reliable and to give the bodywork manufacturer sufficient confidence to prefabricate the body or the superstructure before the chassis is delivered. With uniform conditions, unambiguous dimensions and supplementary information can be established, transferred and correctly interpreted by the receiver. Increased information efficiency will improve the quality and reduce the lead times.

ISO 21308 specifies a system of codes to exchange specific data between chassis and bodywork manufacturers, providing a platform for efficient communication between the parties. The process of exchanging data in accordance with this part of ISO 21308 is not dependent on a particular level of IT sophistication. Any medium can be used, from fax or e-mail to STEP protocol.

Exchanging codes according to the ISO 21308 standard is useful in various situations, e.g. for design and manufacturing, technical specifications, technical drawings and leaflets.

ISO 21308 uses the applicable definitions from the related International Standards ISO 612 and ISO 7656 and adds a number of dimensional codes, together with general, mass and administrative codes.

Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) —

Part 1: General principles

1 Scope

ISO 21308 describes general principles for the exchange of data between truck chassis manufacturers and bodywork manufacturers. It applies to commercial vehicles as defined in ISO 3833, having a maximum gross vehicle mass greater than 3 500 kg.

The process of exchanging product data can involve

— chassis manufacturer,

— chassis importer,

— chassis dealer,

— one or more bodywork manufacturers, and

— bodywork component suppliers, e.g. manufacturers of demountable bodies, cranes and loading equipment and tipping equipment.

This part of ISO 21308 provides an overview and recommendations to assist the parties implementing BEP codes for their communication process. The recommendations cover different ways of communicating and presenting the BEP codes. This part of ISO 21308 also contains some examples of experience from practical use.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 612, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*

ISO 7656, *Commercial road vehicles — Dimensional codes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 612 and ISO 7656 apply.

4 Benefits of using BEP codes for the involved parties

4.1 Bodywork manufacturer

The bodywork manufacturer's use of the BEP system will give the following benefits:

— clear understanding;

— prefabrication;

— internal time reduction;

— reliable documentation and information;

— fewer conflicts between chassis and body parts;

— detailed information for re-production (additional copies of the bodywork);

— feedback process easier;

— fewer late changes and order modifications;

— easier to work with several different chassis manufacturers;

— possibilities for outsourcing parts of the job.

4.2 Chassis manufacturer

The chassis manufacturer's use of the BEP system will give the following benefits:

— clear understanding;

— cut in lead time, better cash flow;

— communication of chassis features and interfaces;

— bi-directional communication;

— fewer late changes and order modifications;

— internal communication between the departments involved;

— higher quality of the complete work;

— cost reductions;

— documentation of the complete vehicle;

— data for homologation type approval.

4.3 Chassis dealer

For the chassis dealer, use of the BEP system will give the following benefits:

— clear understanding;

— cut in lead time;

— cost savings as a result of cut in turnaround time;

— clear specifications and information to/from the customer;

— fewer late changes and order modifications;

— improved quality of the complete vehicle.

4.4 End customer

The end customer will benefit from:

— improved quality;

— clear specifications and information;

— shorter delivery time;

— cost savings.

4.5 Homologation bodies and inspection

For homologation parties, the following benefits can be obtained:

— BEP data related to the legal requirements could be extracted;

— annual inspection would be facilitated.

5 Communication of the BEP codes

5.1 Communication methods

The following are examples of communication methods:

— fax;

— e-mail;

— web site (which could include, for example, a STEP browser and drawing information);

— online databases, IT networks;

— internal PDM systems.

5.2 Formats of BEP representation

The following are possible formats of BEP representation:

— plain text;

— comma-separated text (simplest form of structured information);

— spread-sheets;

— XML;

— STEP file (or information derived from a STEP file).

5.3 Communication of BEP codes and values

It is recommended to use the following simple rules:

— BEP code to the left; value to the right (see Table 1);

— the unit should be specified (see Table 1);

— in drawings, the BEP code relation to the measurement value should be clearly indicated.

Table 1 — Example of communication of a BEP code

BEP code	Description	Value	Unit
BEP-H079	Fifth-wheel coupling above ground, laden, lowest position	1230	mm

6 Advanced communication of BEP data

Advanced communication of BEP data in accordance with Figure 1, with the use of STEP, is covered in ISO 21308-4.

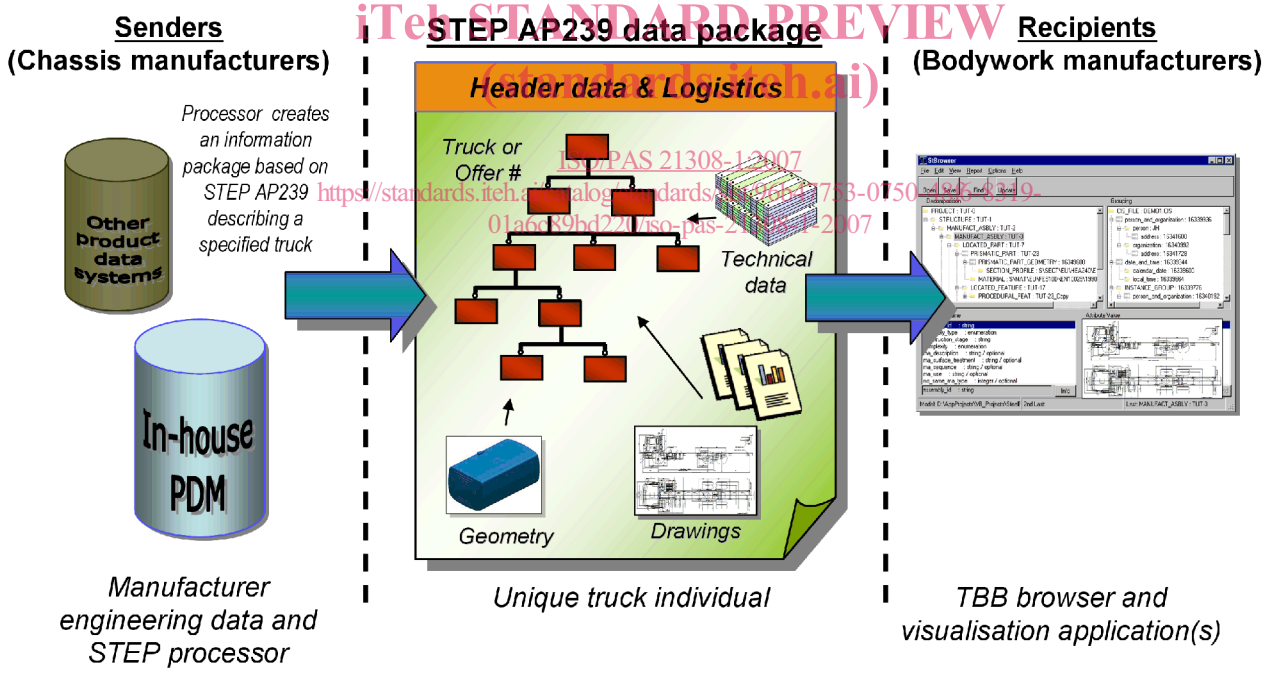

Figure 1 — Communication of BEP data between chassis manufacturer and bodywork manufacturer

Bibliography

[1] ISO 3833, *Road vehicles — Types — Terms and definitions*

[2] ISO 21308-2, *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 2: Dimensional bodywork exchange parameters*

[3] ISO 21308-3, *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 3: General, mass and administrative exchange parameters*

[4] ISO/TS 21308-4 [1)], *Road vehicles — Product data exchange between chassis and bodywork manufacturers (BEP) — Part 4: Mapping to STEP application protocol 239*

1) Under preparation.