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SPECIFICATION

ISO/PAS
11154

First edition
2006-12-15

Road vehicles — Roof load carriers

Véhicules routiers — Porte-charges de toit

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

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order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn.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again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.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 11154 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 14, *Exterior fittings*.

This first edition cancels and replaces the first edition of ISO 11154-1 (ISO 11154-1:1995) and the first edition of ISO 11154-4 (ISO 11154-4:2004), which have been technically revised.

Introduction

Considering the state of the art and the ongoing work on the revision of DIN 75302, a city crash test and a short dynamic test were added. Furthermore, ISO 11154-1 and ISO 11154-4 were merged into a single document. German and French committee members declared their wish to replace their existing national standard by this revised version of ISO PAS 11154.

Standardized test bench method of subsystems which could be used as an alternative of the road test are still under development. Alternative method to city crash test might also be considered.

For some products, for example ladder holder, national regulation must be considered.

At the time of publication, dedicated roof bars complying with car manufacturers specifications already on sales or under development was considered satisfactory. They are encouraged to apply this Publicly Available Specification for their products as soon as possible.

At the time of publication, roof load carriers developed to previous ISO 11154 series or equivalent national standards were considered satisfactory.

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Road vehicles — Roof load carriers

SAFETY PRECAUTIONS — This Publicly Available Specification is not applicable to vacuum fixing devices and roof containers (boxes) with magnetic fixation. The experience with and testing results of those devices shows that they are not able to guarantee a minimum safety level for carrying goods on either vehicle roof or rear.

1 Scope

This Publicly Available Specification specifies the minimum safety requirements for all roof load carriers intended for mounting on or above the roofs of passenger cars and light commercial vehicles with a maximum authorized total mass up to 3,5 t (ISO M08) as defined in ISO 1176.

It applies to:

- a) mechanically attached general use roof bars suitable for carrying a load,
- b) accessories and their attachments to roof bars for special purpose applications,
- c) mechanically attached specific purpose roof devices suitable for carrying a defined load, and
- d) magnetic fixing devices suitable for carrying a defined load.

This Publicly Available Specification establishes technical specifications and test methods which offer the user of the roof load carriers, other road users and pedestrians a minimum level of safety when these fixing devices are being used in accordance with the manufacturer's instructions.

Moreover, the requirements of ISO/PAS 11154 complete the provisions of Directive 74/483 EEC and ECE R 26 concerning these products.

For additional devices intended for example to limit the movement of the load, requirements and test methods are not defined in this Publicly Available Specification. If needed, both manufacturer and laboratories will work out additional test(s) or choose the most appropriate test(s) described in this Publicly Available Specification.

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 179 (all parts), *Plastics — Determination of Charpy impact properties*

ISO 527 (all parts), *Plastics — Determination of tensile properties*

ISO 612: 1978, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*

ISO 1176, *Road vehicles — Masses — Vocabulary and codes*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 4130, *Road vehicles — Three dimensional reference system and fiducial marks — Definitions*

ISO 4892-2, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps*

ISO 6487, *Road vehicles — Measurement techniques in impact test — Instrumentation*

ISO 9227:2006, *Corrosion tests in artificial atmospheres — Salt spray tests*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4130 and the following apply.

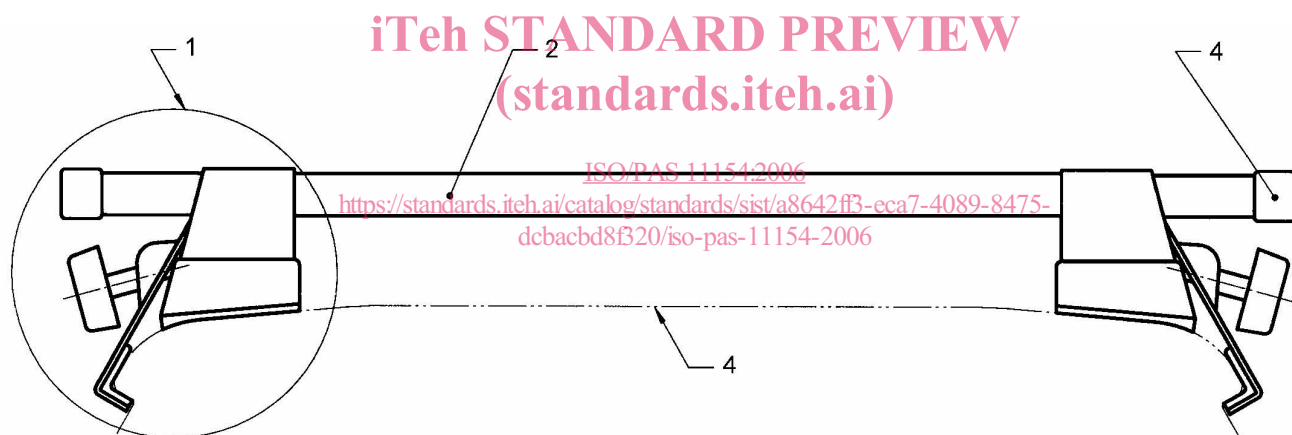
3.1 roof bar

supporting bar with connecting devices which enables a load to be carried on the roof of a vehicle

NOTE 1 Generally, roof bars are compatible with the use of additional accessories.

NOTE 2 Roofs bars are fixed on the roof or on original-equipment rails of the vehicle.

EXAMPLE See Figure 1.



Key

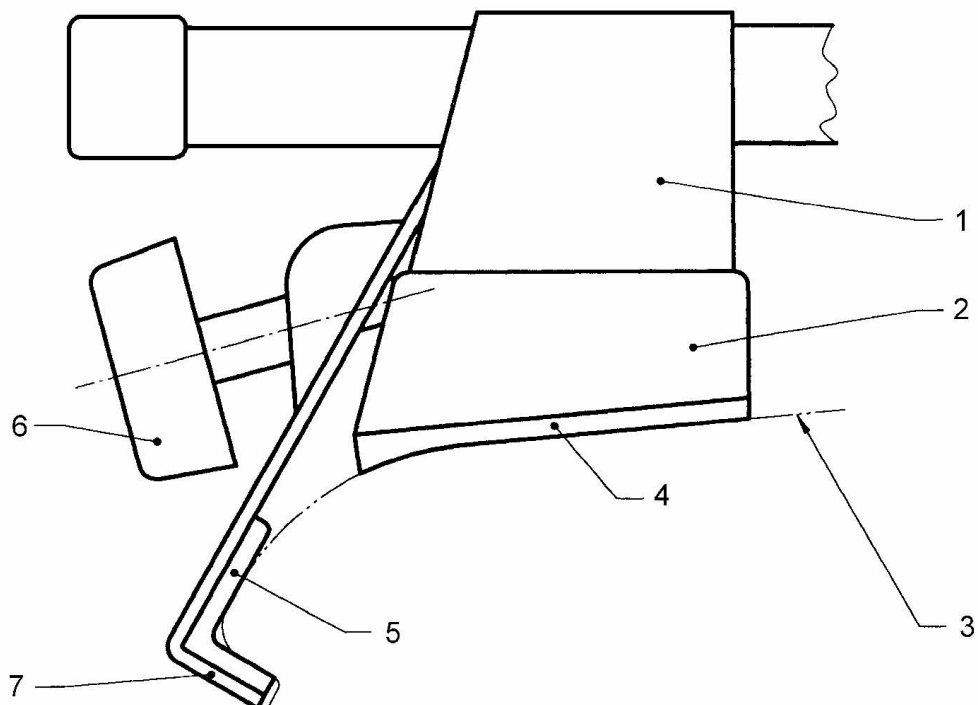
- 1 connecting devices
- 2 supporting bar
- 3 vehicle roof
- 4 end-cap

Figure 1 — Components of roof bar

3.2 connecting device

set of parts connecting the supporting bar to the vehicle

EXAMPLES See Figure 1 and 2.



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Key

- 1 foot
- 2 pad
- 3 vehicle roof
- 4 body protector
- 5 body protector
- 6 tightening system
- 7 fixing clamp

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Figure 2 — Components of connecting device

3.3

specific purpose roof device

roof device designed for a specific type of load or use having its own fixation to the vehicle

3.4

additional accessory

device used in conjunction with the roof bars, roof racks and roof decks to carry a specific type of load

3.5

bicycle carrier

any device intended for carrying bicycle(s) on roof bars

EXAMPLES See Figures 3 and 4.

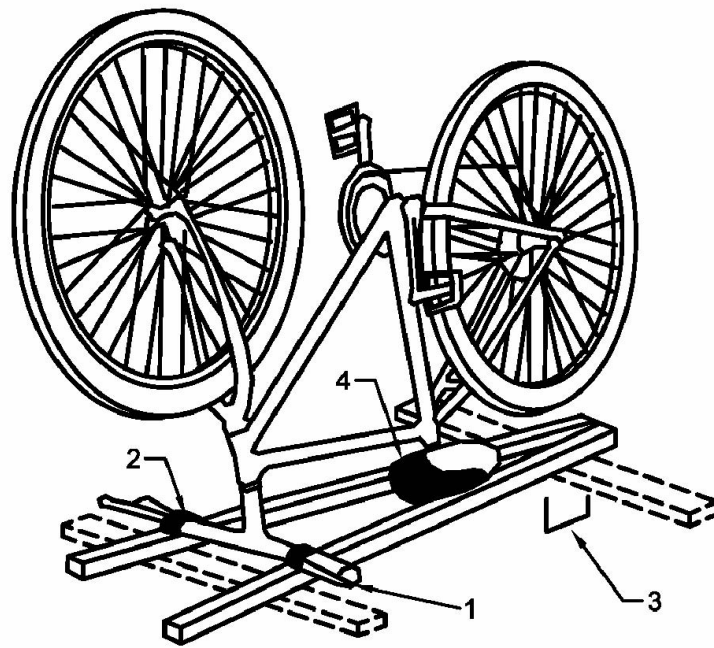
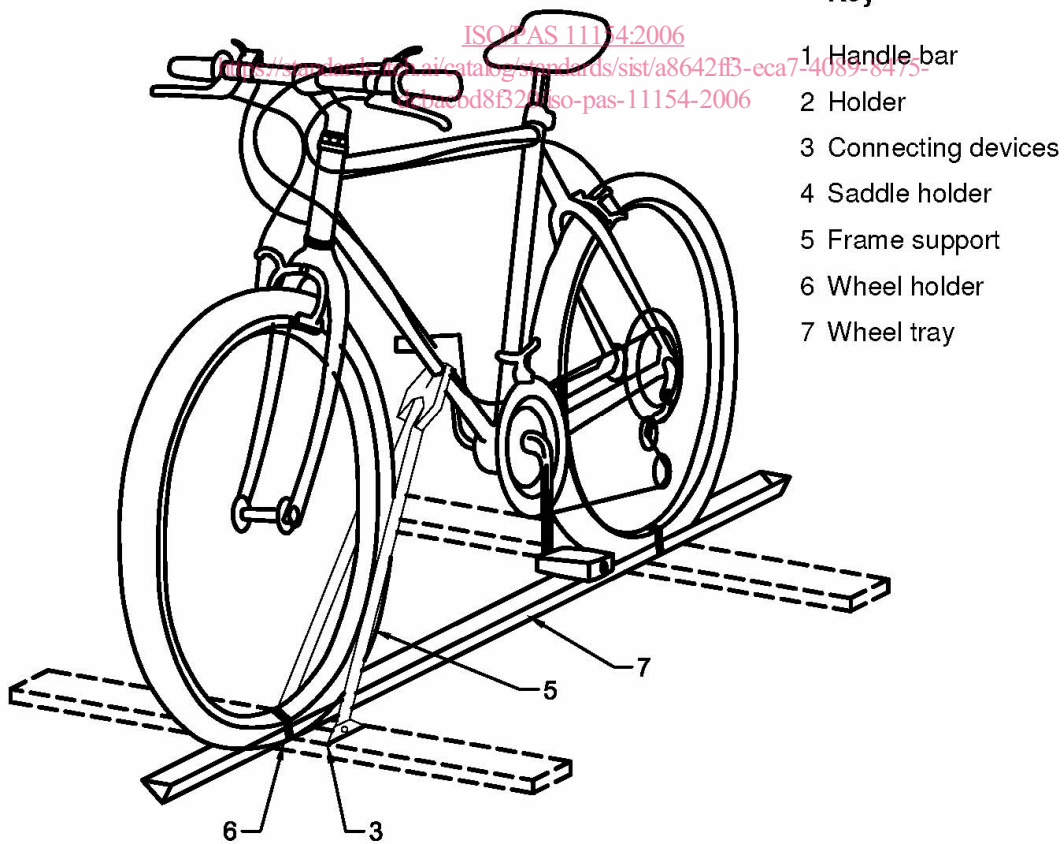


Figure 3 — Bicycle carrier, saddle down
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Key

- 1 Handle bar
- 2 Holder
- 3 Connecting devices
- 4 Saddle holder
- 5 Frame support
- 6 Wheel holder
- 7 Wheel tray

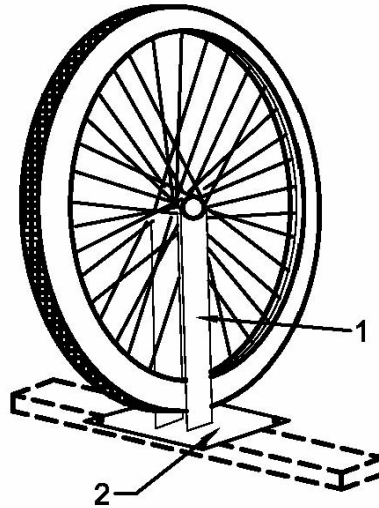
Figure 4 — Bicycle carrier, saddle up

3.6

bicycle-wheel carrier

any device intended for carrying bicycle wheel(s) on roof bars, roof decks or roof racks

EXAMPLE See Figure 5.



Key

- 1 wheel holder
- 2 connecting devices

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Figure 5 — Bicycle-wheel carrier

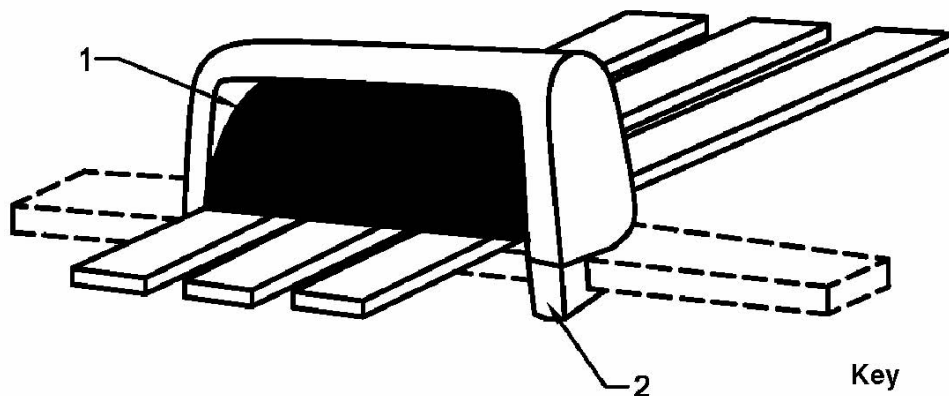
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3.7

ski and/or snow-board carrier

any device intended for carrying ski(s), snow-board(s) and/or sticks on roof bars , roof decks or roof racks

EXAMPLE See Figure 6.



Key

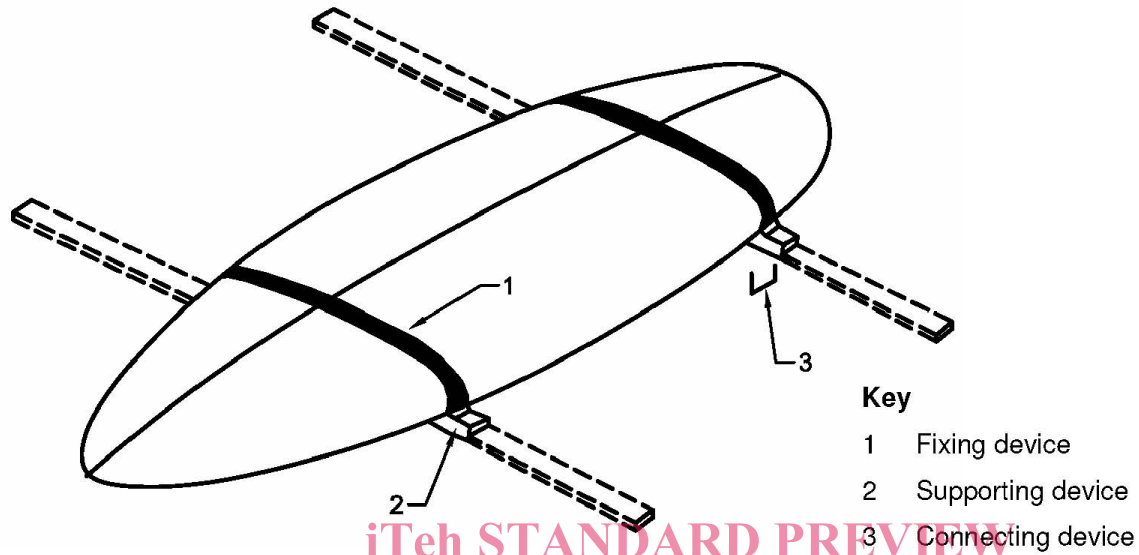
- 1 ski clamping
- 2 connecting devices

Figure 6 — Ski and/or snow-board carrier

**3.8
sailboard and/or surfboard carrier**

any device intended for carrying sailboard(s) with or without mast and boom and/or surfboard(s) on roof bars, roof decks or roof racks

EXAMPLES See Figure 7.



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Figure 7 — Sailboard and/or surfboard carrier

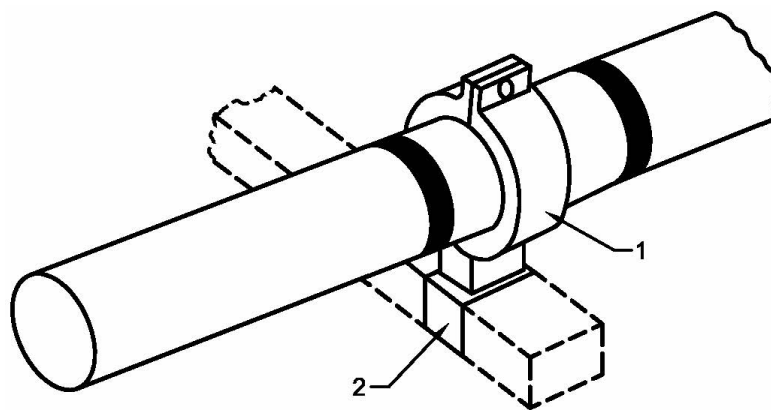
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**3.9
sailboard mast carrier**

any device intended for carrying sailboard mast(s) on roof bars, roof decks or roof racks

EXAMPLE See Figure 8.



Key

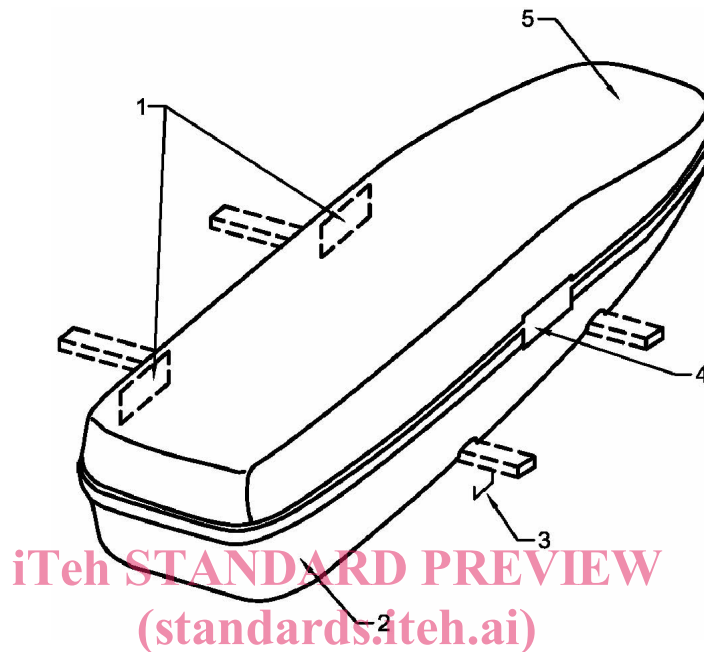
- 1 fixing device
- 2 connecting device

Figure 8 — Sailboard mast carrier

3.10 roof container

containers intended for the transport of different loads such as suit-cases, bags, skis, etc. on roof bars, roof decks or roof racks

EXAMPLE See Figure 9.



Key

- 1 hinge(s)
- 2 bottom section
- 3 connecting device
- 4 closing device
- 5 top section

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Figure 9 — Roof container

3.11 wind deflector

device intended for modifying the aerodynamic drag (e.g. when towing caravan) fixed on roof bars, roof decks or roof racks

EXAMPLE See Figure 10.

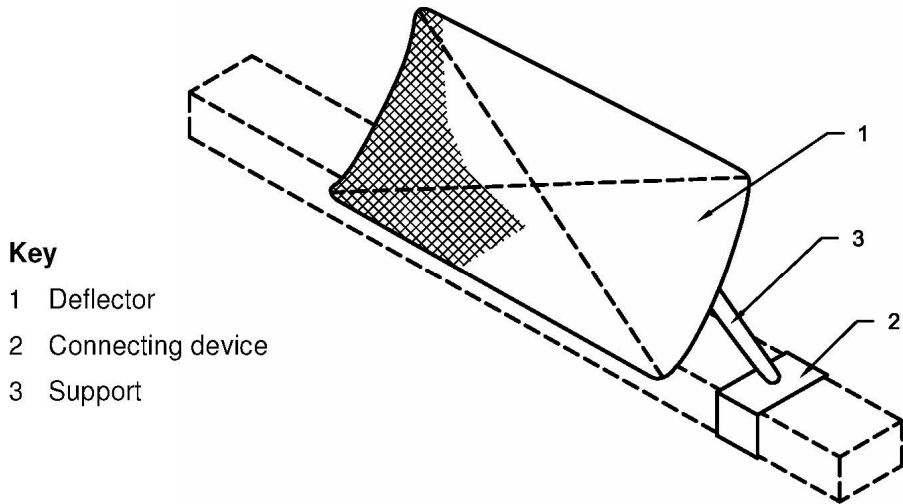


Figure 10 — Wind deflector

3.12 canoe and/or kayak carrier

any device intended for carrying canoe(s) and/or kayak on roof bars , roof decks or roof racks

EXAMPLE See Figure 11.

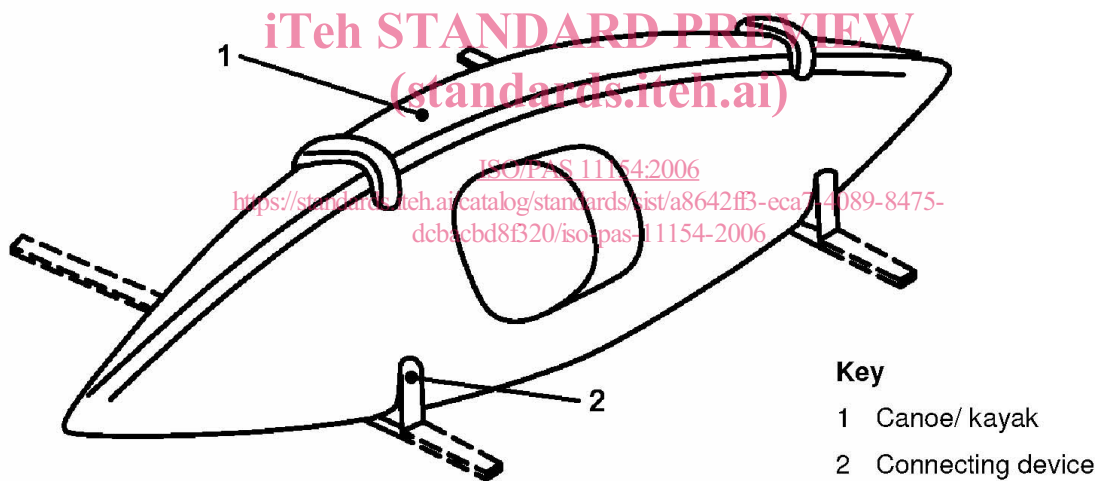


Figure 11 — Canoe and/or kayak carrier

3.13 roof deck (basket)

basket device or platform intended for carrying different loads such as suit-cases, bags, skis and/or roof deck

EXAMPLE See Figure 12.

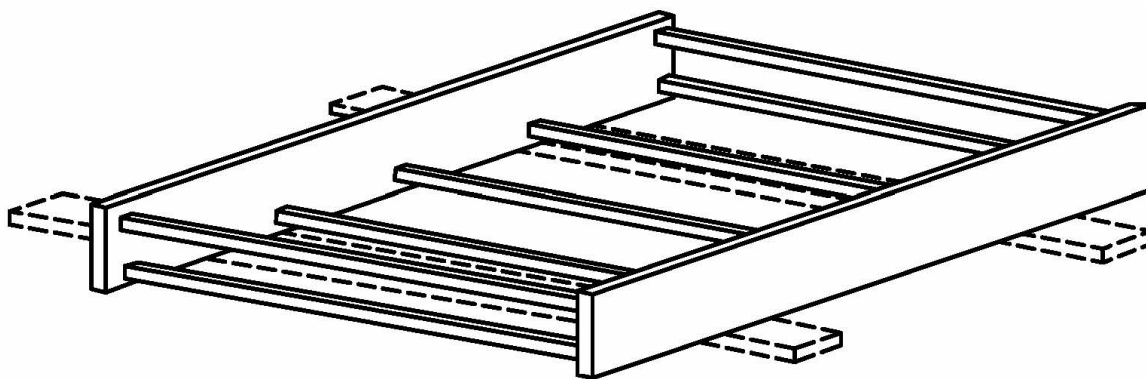


Figure 12 — Roof deck

3.14

adapter for roof bars accessories

any device intended for fixing accessories defined in 3.5 to 3.13 on roof bars

EXAMPLES See Figure 13 and 14.

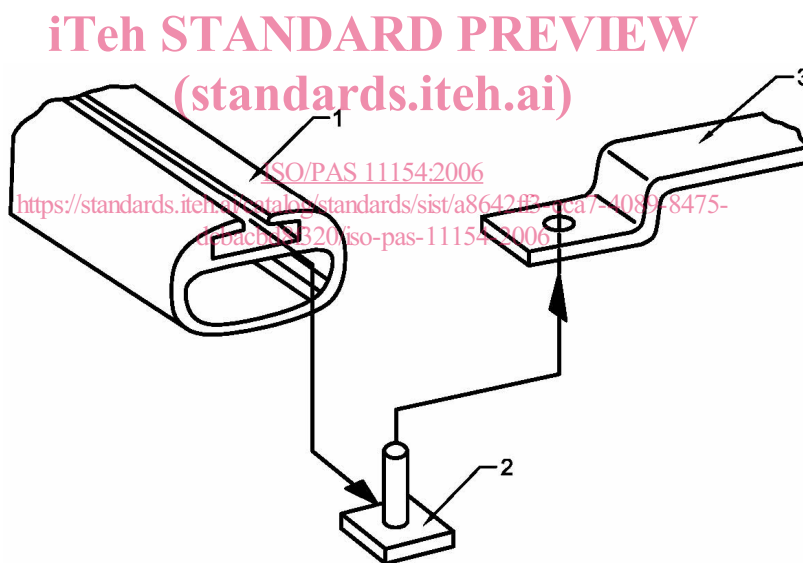


Figure 13 — adapter for roof bars accessories