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Draft Indian Standard

TRANSPORT TRACTORS AND TRAILERS— GLOSSARY OF TERMS —PART 1
BASIC TERMS

(ICS 43.040.70)

Transport Tractors, Trailers and Industrial Trucks

Sectional Committee, TED 22

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Transport Tractors, Trailers and Industrial Trucks Sectional Committee, TED 22

FOREWORD

(Formal clause to be added later on)

This standard was first published in 1975. It is prepared for the guidance of transport authorities, manufacturers, and users of transport tractors and trailers to enable them to interpret the common terms and to establish a generally recognized terminology to eliminate ambiguity in the use of various terms in this field.

This standard (Part I) covers the basic terms of tractors and trailers. Part II of this standard covers the terms relating to dimensions and weights of transport tractors and trailers.

This first revision has been undertaken to update the definitions based on the standards notified under Central Motor Vehicle rules (CMVR).

While preparing this standard considerable assistance has been derived from the SAE Handbook published by the Society of Automotive Engineers of USA.

The composition of the committee responsible for formulation of this standard is given as Annex A. (Will be added later)

Draft Indian Standard

**TRANSPORT TRACTORS AND TRAILERS—GLOSSARY OF TERMS—PART 1
BASIC TERMS**

1 SCOPE

1.1 This standard (Part 1) defines basic terms relating to transport tractors and trailers.

1.2 The terms defined in this standard do not include industrial, agricultural and crawler types of tractor or trailers.

2 REFERENCES

This standard does not contain any reference standard.

3 TERMINOLOGY

3.1 Transport Tractor — A vehicle constructed essentially for hauling another vehicle, namely a semitrailer or trailer. A tractor may have provision for carrying load, in addition to hauling a vehicle, especially in the case of tractors hauling a trailer.

3.1.1 Types of Transport Tractors

3.1.1.1 Cab over engine (COE) or forward control (FC) cab — This means a vehicle in which all or substantial part of its engine is located under the cab i.e. below driver and co-driver. Also in case of cab over engine vehicles, the steering system is positioned right at the front of the vehicle.

3.1.1.2 Cab behind engine (CBE) or normal control (NC) cab or conventional cab — In cab-behind-engine vehicles, the engine transmission assembly is mounted ahead of the cab.

3.1.1.3 Short conventional cab — When compared to the normal conventional cab, the short conventional cab has a shortened hood and front fenders and the engine extends into the cab area.

3.2 Trailers — A non-self propelled driven road vehicle having at least two wheels which on account of its design and technical features is used to transport persons or goods and is intended to be towed by a motor vehicle; semitrailer is included in this category.

3.2.1 Fig. 1 shows the different types of transport tractor and trailer combinations. It is based on the use of the digit system of identifying combinations by axles. In this system of identification each digit indicates the number of axles on a vehicle which is entirely supported on its own wheels such as a transport tractor or full trailer. The first digit refers to the tractor and the second single digit refers to a full trailer, while a second digit with S-prefix refers to semi-trailers.

Example:

2— S1 indicates two axle tractor and one axle semi-trailer;

3— 2 indicates three axle tractor and two axle full-trailer; and

2 — S1 — 2 indicates two axle tractor, one axle semi-trailer and two axle full trailer.

3.2.2 Types of Transport-Trailers

3.2.2.1 Semi-trailer — A trailer, which is intended to be connected to a motor vehicle and which is so constructed that a portion of it is superimposed on and a part of whose weight is borne by the haulage tractor (*see* Fig. 1, type S1 and S2).

3.2.2.2 Full-trailer — A full trailer means a towed vehicle having at least two axles, and equipped with a towing device which can move vertically in relation to the trailer and controls the direction of the front axle(s), but which transmits no significant static load to the towing vehicle. (*see* Fig. 1, type 2 — 2).

3.2.2.3 Balanced full-trailer — A trailer which is equipped with a towing device which cannot move vertically (in relation to the trailer) and in which the axle(s) is (are) positioned close to the centre of gravity of the trailer (when uniformly loaded) such that only a small static vertical load, not exceeding 10 percent of that corresponding to the maximum mass of the trailer or a load of 1000 daN (whichever is lesser) is transmitted to the towing vehicle. (*see* Fig. 1, type 2 — 1).

3.2.2.4 Trailer converter dolly — A truck trailer with one or more axles equipped with a fifth wheel, a draw bar, and other parts necessary to convert a semi-trailer to a full trailer

3.2.2.5 Load dividing dolly — Load dividing dolly is coupled between a Truck Tractor and semi-trailer to reduce the load imposed by the semi-trailer on the truck tractor. It is a truck trailer with one or more axles equipped with a fifth wheel, drawbar, and other parts necessary for its use.

3.2.2.6 Pole trailer — A mechanical trailer consisting of single central pole of steel with a carriage at each end. The carriages are fitted with poles and the mechanical trailer with length up to 18.75 meters maybe extended up to 50 meters depending on the length of indivisible consignment while complying with Central Motor Vehicles Rules conditions like axle load, Turning radius, etc.

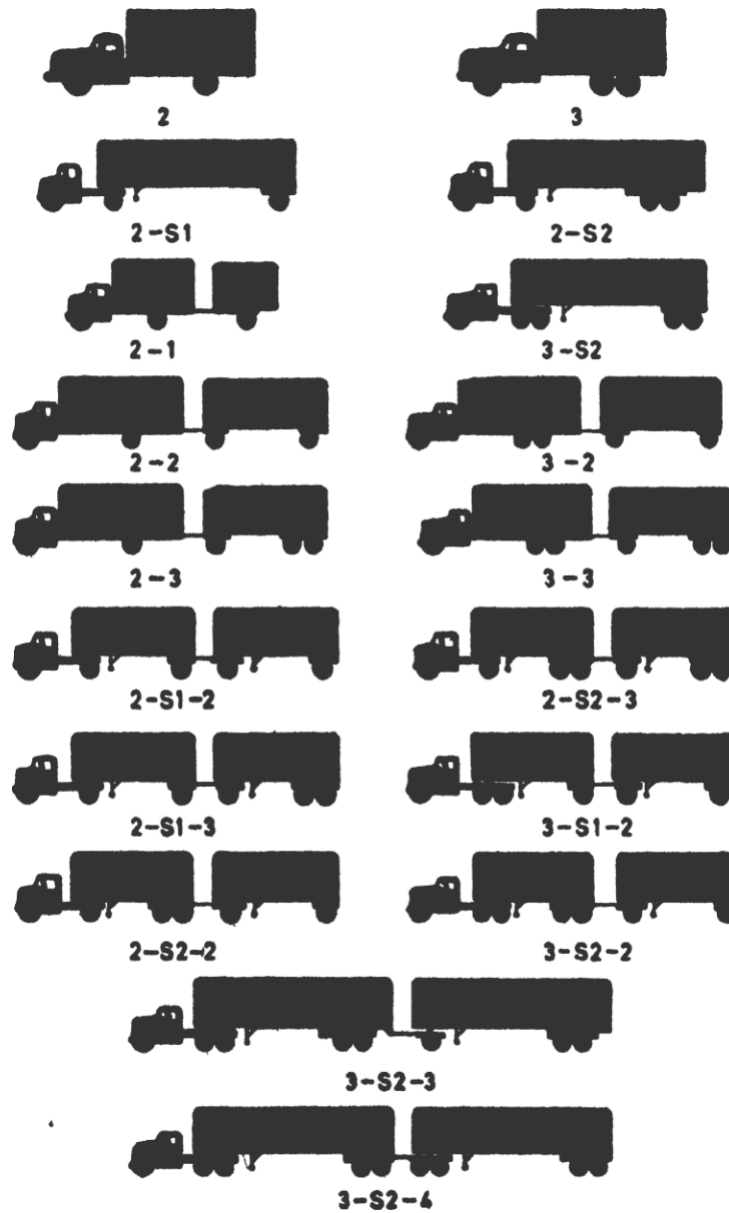


FIG. 1 TRACTOR TRAILER TYPES AS DESIGNATED BY CODE BASED ON
AXLE ARRANGEMENT

3.2.2.7 Articulated trailer — A trailer where the conventional towing device is replaced by means of coupling to an articulation attachment on a tractor. Jockey wheels are provided at the articulation end of the trailer to support it when not coupled to a tractor. These may be retractable (*see* Fig. 2).

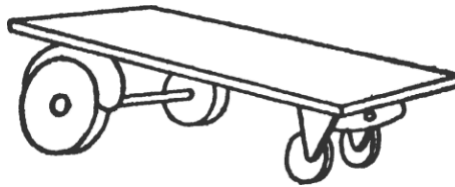


FIG. 2 ARTICULATED TRAILER

3.2.2.8 Low-bed trailer — Trailer with a flat loading platform but with a swan neck or a wheel arch both at the front and the rear end. The platform height may be lower than the trailer tyre diameter.

3.2.2.9 Semi-low-bed-trailer — Trailer with a flat loading platform but with a swan neck or a wheel arch at the front end. The height of the platform may be equal to or more than the trailer tyre diameter.

3.2.2.10 Drop frame trailers - double drop frame — The platform between the wheels is dropped as low as possible to facilitate loading from fitted outboard (*see* Fig. 3).

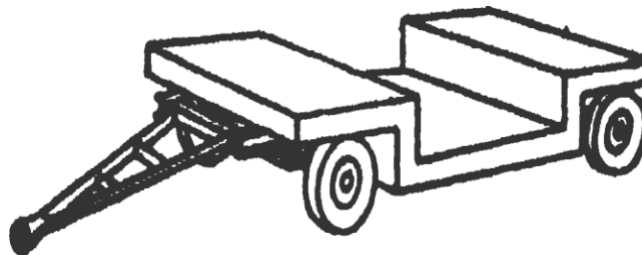


FIG. 3 DROP FRAME TRAILERS, DOUBLE DROP FRAME

3.2.2.11 Drop frame trailer - single drop frame — The platform is dropped behind the front wheels for loading either by means of a ramp or other suitable method. The rear wheels are usually fitted outboard (*see* Fig. 4).

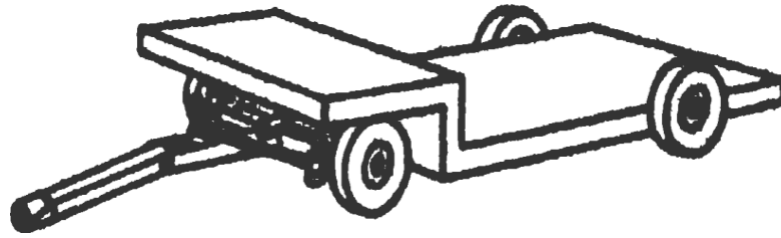


FIG. 4 DROP FRAME TRAILERS, SINGLE DROP FRAME

3.2.2.12 Flat platform trailers — Trailers with a flat loading platform without any swan necks or wheel arches.

3.2.2.13 Swan neck (gooseneck) — The raised portion of a trailer beyond the loading platform generally used to accommodate its own wheels or wheels of the towing vehicle.

3.2.2.14 Wheel arch — The raised portion on the platform of a trailer provided to accommodate the vertical travel of its own wheels.

3.3 Transport Tractor-Trailer — A mechanically propelled vehicle adopted for use upon roads coupled with one or more towed vehicles as defined in 3.2 [Definition of 'Trailers']. (Various combinations are illustrated in Fig. 1).

3.4 Towing Attachments

3.4.1 Tow Eye — The trailer part of the mechanical coupling of an independent trailer, normally attached to the pintle hook of the tractor (see Fig. 5).

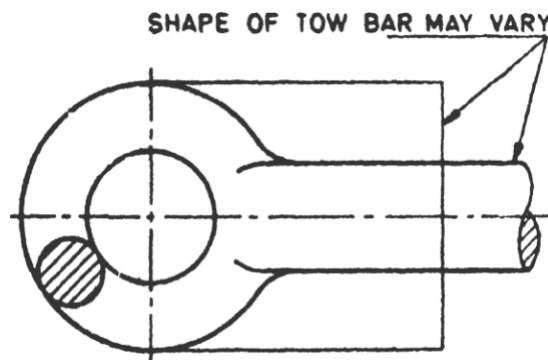


FIG. 5 TOW EYE

3.4.2 Towing Hook (Pintle Hook) — The tractor part of the mechanical coupling of an independent trailer normally attached to the tow eye of the trailer.

3.4.3 Fifth Wheel — A device used to connect a truck tractor to a semi-trailer and to permit articulation between the units. It is generally composed of a lower half, mounted on the tractor,

consisting of a trunnion, plate and latching mechanism, for connection with a kingpin mounted on the semi-trailer (*see* Fig. 6).

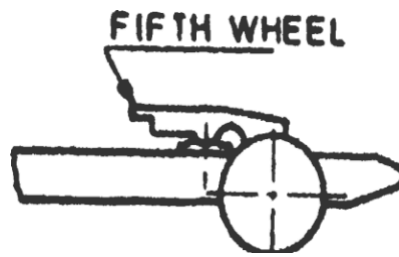


FIG.6 FIFTH WHEEL

3.4.4 King Pin — The trailer part of the mechanical coupling of a transport tractor-trailer normally attached to fifth wheel of the tractor (*see* Fig. 7).

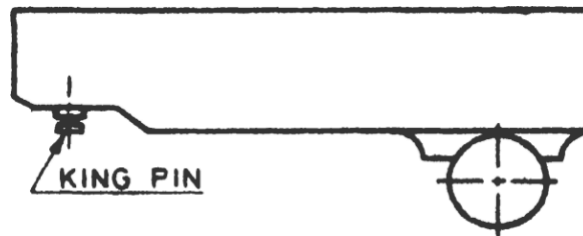


FIG.7 KING PIN