TC 20

International Standard 8267

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Aircraft — Tow bar attachment fittings — Interface requirements

Aéronefs — Ferrures de fixation de la barre de tractage — Caractéristiques d'interface

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8267 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

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Aircraft — Tow bar attachment fittings — Interface requirements

0 Introduction

The purpose of this International Standard is to standardize tow bar attachment fittings according to aircraft mass category (which determines tow bar forces), so that one tow bar can be used for all aircraft within that mass category.

1 Scope and field of application

This International Standard specifies the interface requirements for tow bar attachment fittings on the nose gear (when towing operations are normally done from the nose gear) in conventional tricycle type landing gears of civil transport passenger and freight aircraft.

2 Requirements

2.1 Location of aircraft attachment fittings

The fittings should be designed to enable straightforward attachment of the tow bar at the front and, where applicable, the rear of the aircraft nose landing gear for push/pull towing operations.

2.2 Design of aircraft attachment fittings

The allowable towing forces on the nose landing gear shall be specified by the aircraft manufacturer and shall conform to the design criteria laid down in 2.2.1 to 2.2.5.

2.2.1 The towing loads shall be applied to the tow bar attachment fittings and their immediate attaching structure.

2.2.2 The towing loads specified in 2.2.5 shall be considered separately. These loads shall be applied at the towing fittings and shall act parallel to the ground. In addition,

a) a vertical load factor equal to 1,0 shall be considered as acting at the centre of gravity of the aircraft, and

b) the shock struts and tyres shall be in their stationary positions.

2.2.3 If M is the design maximum ramp mass of the aircraft and g is the mean acceleration due to gravity, the towing load, F_{tow}, is equal to

a) $0{,}3\ M \times g$, when M is less than 13 600 kg;

b) $\dfrac{6\ M + 204\ 100}{70} \times g$, when M is between 13 600 and 45 360 kg;

c) $0{,}15\ M \times g$, when M is greater than 45 360 kg.

2.2.4 Where the specified angle of swivel cannot be reached, the maximum obtainable angle shall be used.

2.2.5 The stipulated towing loads are given in table 1.

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Table 1 — Stipulated towing loads

Position of the nose gear	Load	
	Magnitude	Direction
Swivelled forward	1,0 F_{tow}	Forward Aft
Swivelled aft	1,0 F_{tow}	Forward Aft
Swivelled 45° from forward	0,50 F_{tow}	Forward [1] Aft [1]
Swivelled 45° from aft	0,50 F_{tow}	Forward [1] Aft [1]

1) Parallel and midway between the planes of the wheels.