
INTERNATIONAL STANDARD



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Aircraft — Identification of servicing, maintenance, ground handling and safety/hazard points

Aéronefs — Identification des points d'alimentation au sol, des points d'entretien et de manutention, et des points danger/sécurité à bord

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

International Standard ISO 1950 was drawn up by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, and circulated to the Member Bodies in March 1970.

It has been approved by the Member Bodies of the following countries :

Australia	Greece	Switzerland
Belgium	Italy	Thailand
Canada	Japan	Turkey
Czechoslovakia	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Netherlands	U.S.A.
France	New Zealand	U.S.S.R.

The Member Body of the following country expressed disapproval of the document on technical grounds :

South Africa, Rep. of

Aircraft — Identification of servicing, maintenance, ground handling and safety/hazard points

1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies the symbols, and their positions and sizes, to be used for the marking of servicing, maintenance, ground handling and safety/hazard points on aircraft, to enable them to be quickly identified during intermediate stops on scheduled flights and during scheduled maintenance checks. Requirements for warning markings, to prevent damage to equipment or injury to personnel, and for the marking of hatches are also included.

1.2 Because of the variations in the size and distribution of servicing points, the requirements of this International Standard should be interpreted liberally.

NOTE — Emergency markings and the materials to be used for markings are outside the scope of this International Standard.

2 REFERENCE

ISO/R 408, *Safety colours*.

3 SERVICING, MAINTENANCE, GROUND HANDLING AND SAFETY/HAZARD POINTS

3.1 Markings

3.1.1 Servicing, maintenance and ground handling points

Servicing, maintenance and ground handling points shall be marked with the symbols described in Table 1 and shown in Figures 1 and 2, and, where applicable, with the additional information shown in Table 1.

The symbols shown in Figure 1 shall be black on a white background or white on a black background.

The yellow-orange colour of the basic symbols shown in Figure 2 shall be the national equivalent of "safety yellow" as defined in ISO/R 408.

3.1.2 Safety/hazard points

Safety/hazard points shall be marked in accordance with Table 2.

Except where otherwise indicated in Table 2, the markings shall be fluorescent red.

3.2 Position of markings

The markings shall be situated on the part concerned, or immediately adjacent to it, and on the access panel. When they are concealed, they shall be either accompanied or replaced by arrows bearing the same symbol which will assist in locating the markings.

3.3 Size of markings

3.3.1 The size of the markings shall be commensurate with the distance from which they must be visible.

3.3.2 The warning symbol for explosive-actuated devices (see Table 2) shall be of the largest practicable size up to 230 mm (9 in) sides. Other symbols shall be approximately 100 mm (4 in) in the longest dimension.

3.3.3 Unless otherwise specified, letters shall be 38 mm (1.5 in) high.

4 HATCHES

4.1 A hatch giving access to a servicing point shall be outlined, by an unbroken line, in the appropriate basic colour.

4.2 A hatch or panel covering several points shall be marked with all the appropriate basic colours. Other written markings may be added, but they shall not replace the individual identifications nor interfere with their interpretation.

TABLE 1 – Marking of servicing, maintenance and ground handling points

Function	Symbol			Additional information
	Description	Figure 1 No.	Figure 2 No.	
Air conditioning	Dot pattern	1.3		
Coolant	Two horizontal "S" s	1.11		Fluid specification No. ... % Water ... %
De-icing	Triangle	1.10		Fluid specification No.
Dinghy stowage	Vessel with main sail and fore sail		2.24	
Drinking water replenishment	Disc with "H ₂ O" superimposed in black		2.12	
Drop tank locking point	Disc with red fuel symbol superimposed		2.25	
Electrical connections (external)	"E" with bottom limb shortened	1.15		Voltage AC ... V ... Hz Voltage DC ... V
Fire extinguishing system	Horizontal diamond	1.14		Fluid specification No.
Flight data recorder	"R" inside a ring	1.17		
Fuel	Four-pointed star	1.6		Fuel specification No. Maximum filling pressure ¹⁾
Grounding (earthing) receptacle	Inverted "T" surmounting two parallel bars of diminishing length	1.16		
Hydraulic fluid	Circle	1.8		Fluid specification No. Maximum filling pressure ¹⁾
Inerting fluid	Pipe cross	1.9		Type of fluid Maximum filling pressure ¹⁾
Inspection of batteries	Flash of lightning		2.1	
Inspection of de-icing circuit	Disc with black triangle superimposed		2.2	
Inspection of electronic installation	Single cycle sine wave on base line		2.3	
Inspection of fuel filter	Outline filter with black fuel symbol superimposed		2.4	
Inspection of pitot/static connections (vents)	Disc with black vertical zig-zag line superimposed		2.5	
Jacking point	Square with two slanting legs on bottom side		2.16	
Jet engine start : ignition plug	Ignition plug		2.14	
Lubricating oil	Square	1.7		Oil specification No.
Mooring/picketing	Anchor		2.20	
No grip	Hand with red diagonal cross superimposed		2.21	
No step	Footprint with red diagonal cross superimposed		2.22	
Oil and water trap : pneumatic system	Outline trap with black pneumatic system symbol superimposed on body		2.9	

1) Unit of measurement to be stated.

TABLE 1 — Marking of servicing, maintenance and ground handling points (concluded)

Function	Symbol			Additional information
	Description	Figure 1 No.	Figure 2 No.	
Oxygen (breathing) : gas	Two horizontal rectangles with the word "GAS" underneath	1.4		Maximum charging pressure ¹⁾
Oxygen (breathing) : liquid	Two horizontal rectangles with the word "LIQUID" underneath	1.5		Capacity in litres
Oxygen connection	Outline valve with black breathing oxygen symbol superimposed on body		2.13	
Pneumatic starting	"X" circumscribed by a ring	1.2		Maximum starting pressure ¹⁾
Pneumatic system	"X"	1.1		Maximum charging pressure ¹⁾
Refrigerant replenishment	Two triangles with apexes joined on horizontal centre line	1.12		Type of fluid Fluid specification No.
Slings/hoisting point	Inverted hook on horizontal line		2.19	
Tail support	Disc centred on point of support		2.17	
Telephone connection ground to cockpit	Telephone handset		2.15	
Test points	Outline pipe connector with black symbol for the system superimposed on the left-hand end. Examples : For cabin pressure : dot pattern For hydraulic system : disc For inerting fluid system : pipe cross		2.6 2.7 2.8	
Toilet drain	Disc with black "T" superimposed		2.11	
Towing point	Ring		2.18	
Walkway	Border with red outer fringe		2.23	
Water drain : fuel tank	Outline trap with black fuel symbol superimposed on body		2.10	
Water injection	Chevron of inside angle not exceeding 90°	1.13		Fluid specification No. ... % Water ... %

1) Unit of measurement to be stated.

TABLE 2 — Marking of safety/hazard points

Function	Part to be marked	Marking method
Locking of controls and undercarriage	Uprights and cross bars (removable parts)	Painted red and white, and fitted with a red pennant
Position of control locks	Position on the aircraft of uprights and cross bars	Painted red
Pitot tube coverings	Cover	Painted red
Jet engine blanks	Blanks	Painted red
Prohibition of access	Weaker parts of aircraft	Red border band and diagonal cross
Explosive-actuated devices	External part of the aircraft adjacent to the device	See Figure 3, symbol No. 3.1
Static vents	Vent plug	Painted red and fitted with a red pennant
Airborne turbine auxiliary power plant inlet and/or exhaust	External part of the aircraft adjacent to the inlet/exhaust	See Figure 3, symbol No. 3.2

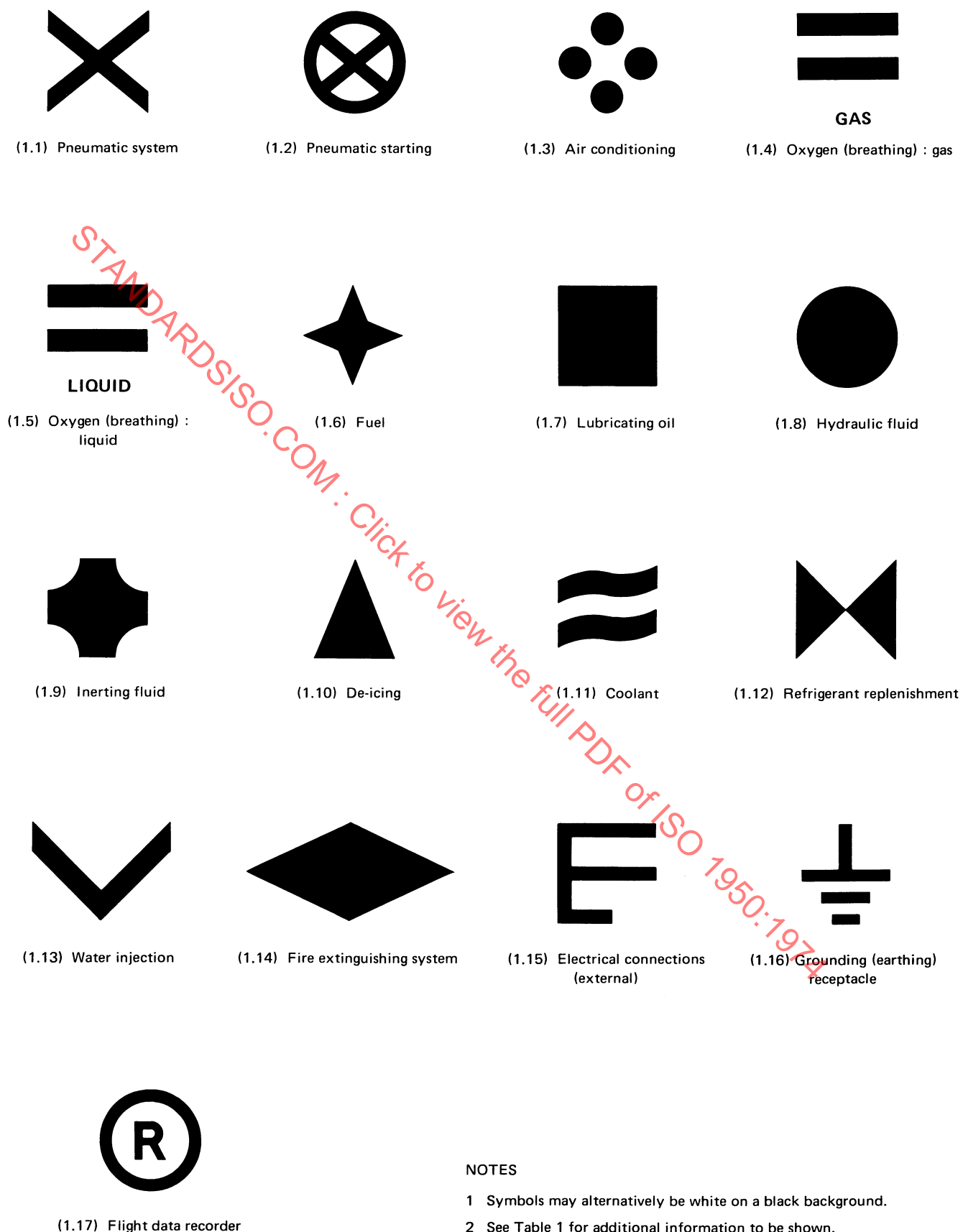


FIGURE 1 — Symbols for servicing, maintenance and ground handling points

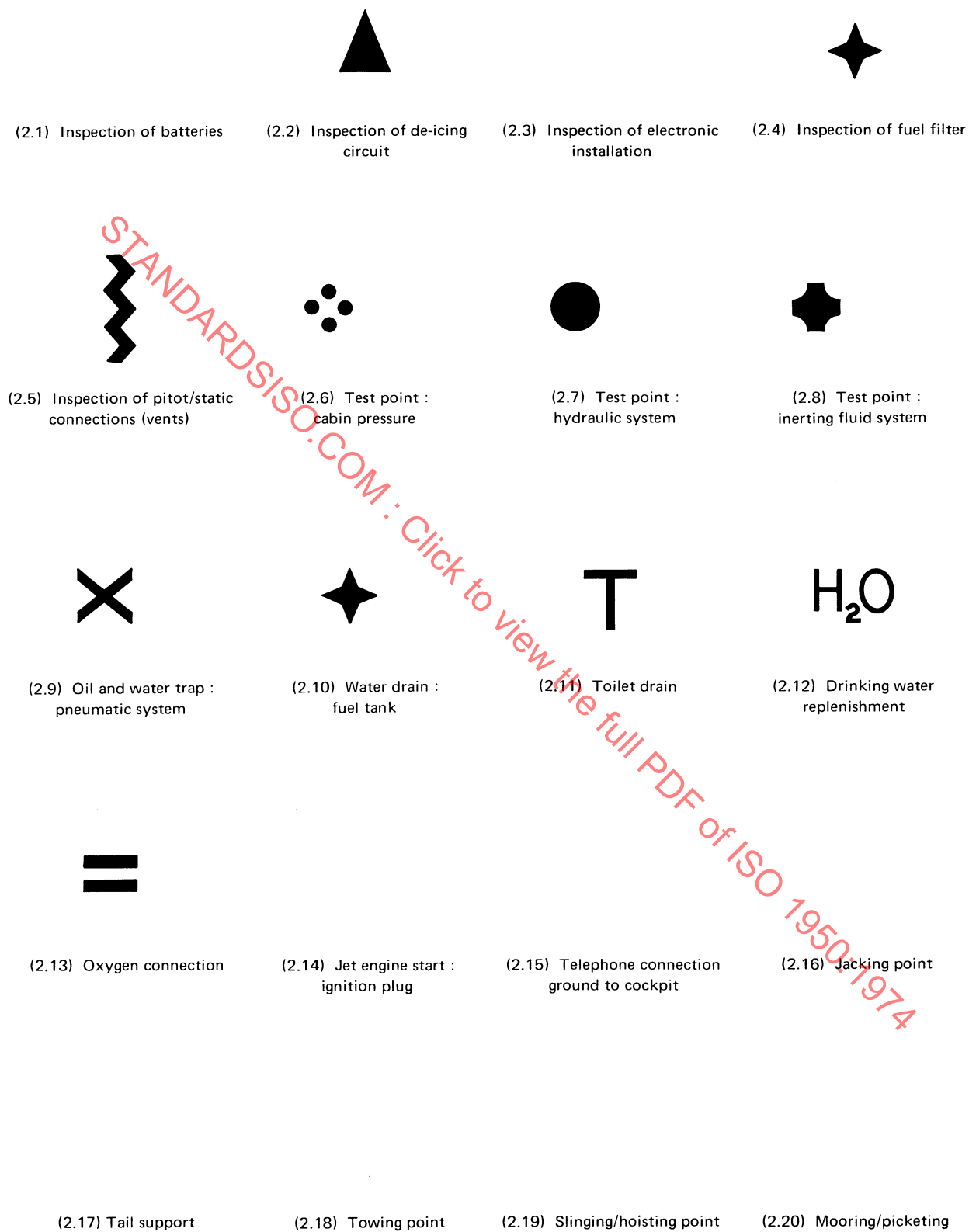


FIGURE 2 — Symbols for servicing, maintenance and ground handling points



(2.21) No grip



(2.22) No step



(2.23) Walkway



(2.25) Drop tank locking point

(2.24) Dinghy stowage

FIGURE 2 — Symbols for servicing, maintenance and ground handling points *(concluded)*



(3.1) Explosive-actuated devices



(3.2) Airborne turbine auxiliary power plant inlet and/or exhaust

FIGURE 3 — Symbols for safety/hazard points