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**NORTH ATLANTIC TREATY ORGANIZATION
ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD**

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AIR BOARD

MAS(AIR)118-AA/3575

22 April 1996

To : See Distribution List Air B

Subject : STANAG 3575 AA (EDITION 5) - AIRCRAFT STORES
EJECTOR RACKS

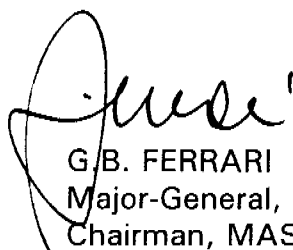
References : a. MAS(AIR)529-AA/3575 dated 15 December 1992
(Edition 4)
b. MAS(AIR)336-AA/3575 dated 13 September 1995
(Edition 5)(Ratification Draft 1)

Enclosure : STANAG 3575 (Edition 5)

1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in page iii is promulgated herewith.
2. The references listed above are to be destroyed in accordance with local document destruction procedures.
3. AAP-4 should be amended to reflect the latest status of the STANAG.

ACTION BY NATIONAL STAFFS

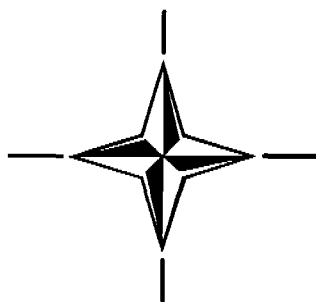
4. National staffs are requested to examine page iii of the STANAG and if they have not already done so, to advise the Air Board, MAS, through their national delegation as appropriate of their intention regarding its ratification and implementation.


G.B. FERRARI
Major-General, ITAF
Chairman, MAS

NATO UNCLASSIFIED

STANAG No. 3575
(Edition 5)

**NORTH ATLANTIC TREATY ORGANIZATION
(NATO)**

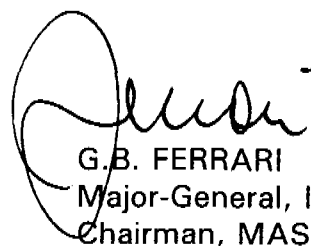


**MILITARY AGENCY FOR STANDARDIZATION
(MAS)**

**STANDARDIZATION AGREEMENT
(STANAG)**

SUBJECT: AIRCRAFT STORES EJECTOR RACKS

Promulgated on 22 April 1996


G.B. FERRARI
Major-General, ITAF
Chairman, MAS

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Agreed English/French Texts

STANAG 3575
(Edition 5)

NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

AIRCRAFT STORES EJECTOR RACKS

- Annexes: A. Sway Brace and Ejector Areas for Stores with
14 inch Suspension
B. Sway Brace and Ejector Areas for Stores with
30 inch Suspension

Related Documents: STANAG 3441 AA - DESIGN OF AIRCRAFT STORES
STANAG 4187 AA - *FUZZING SYSTEMS - SAFETY*
DESIGN REQUIREMENTS
STANAG 3556 AA - AIRCRAFT STORE EJECTOR
CARTRIDGE
STANAG 3605 AA - COMPATIBILITY OF ARMING
SYSTEMS AND EXPENDABLE
AIRCRAFT STORES
STANAG 3726 AA - BAIL (PORTAL) LUGS FOR THE
SUSPENSION OF AIRCRAFT
STORES

Annex 2

AIM

1. The aim of this agreement is to establish the interface and design criteria for aircraft stores ejector racks.

AGREEMENT

2. Participating nations agree that the interface and design criteria for aircraft stores ejector racks are as detailed herein.

GENERAL

3. This agreement covers aircraft stores ejector racks which will accept, suspend, release and eject stores of the 500 kg (1000 lb) and 1000 kg (2000 lb) classes.

DETAILS OF THE AGREEMENT

4. The ejector rack shall be capable of retaining the combined reaction load of the store at the maximum "g" loading of the aircraft on which the store is carried.

5. The suspension hooks shall be compatible with the suspension lugs as detailed in STANAG 3726.

6. Whether or not sway braces are used or required does not depend on the type of suspension lug used. If sway braces are used they must conform to the following requirements:

- a. Be capable of interfacing with stores having the following cross-sectional profile characteristics:

SUSPENSION	STORE RADIUS
14 inch	100 - 250 mm (4 - 10 inch)
14/30 inch	100 - 380 mm (4 - 15 inch)
30 inch	100 - 380 mm (4 - 15 inch)

- b. Be located symmetrically about the suspension hooks and lie within the sway brace location areas defined in Annexes A and B.

7. Stores arming or fuzing provisions may be an integral part of the ejector rack and shall be in accordance with STANAGs 3525 and 3605.

8. All racks must provide some type of pitch control for the store on ejection. The mechanism for adjusting pitch control shall be accessible and easily adjustable with the rack installed on the aircraft.

9. Two independent sources of release shall be provided. When such release energy is provided by cartridges only, two independent means of firing the cartridges shall be provided and the design of the rack shall provide sympathetic ignition of the other cartridge(s). The position of the ejector piston centrelines shall be within the areas indicated in Annexes A and B.

10. The maximum ejection force that should be applied to the store by the rack is 100 kN (22,500 lb). In the case of a twin piston rack this force will normally be distributed equally between the two pistons, but due allowance shall be made for differential thrust distribution to provide store pitch control. In such cases the maximum ejection force shall be assumed to act at either of the two pistons. During the store ejection process the pressure on the store shall not exceed 1034 bar (15,000 psi). There may be requirements for ejecting a store with a greater pressure than 1034 bar, but facilities should exist in the rack to restrict the ejection pressure on the store to 1034 bar or less.

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11. The rack breech (or cartridge holder, if used) shall have a straight bore of $27.46 + 0.08$ mm ($1.081 + 0.003$ in) over
- 0.00 mm - 0.000 in
its full length. Any taper which exists within these limits shall be uniform with the maximum diameter at the end adjacent to the cartridge flange.

12. The cartridge and firing pin characteristics and interfaces shall be as follows:

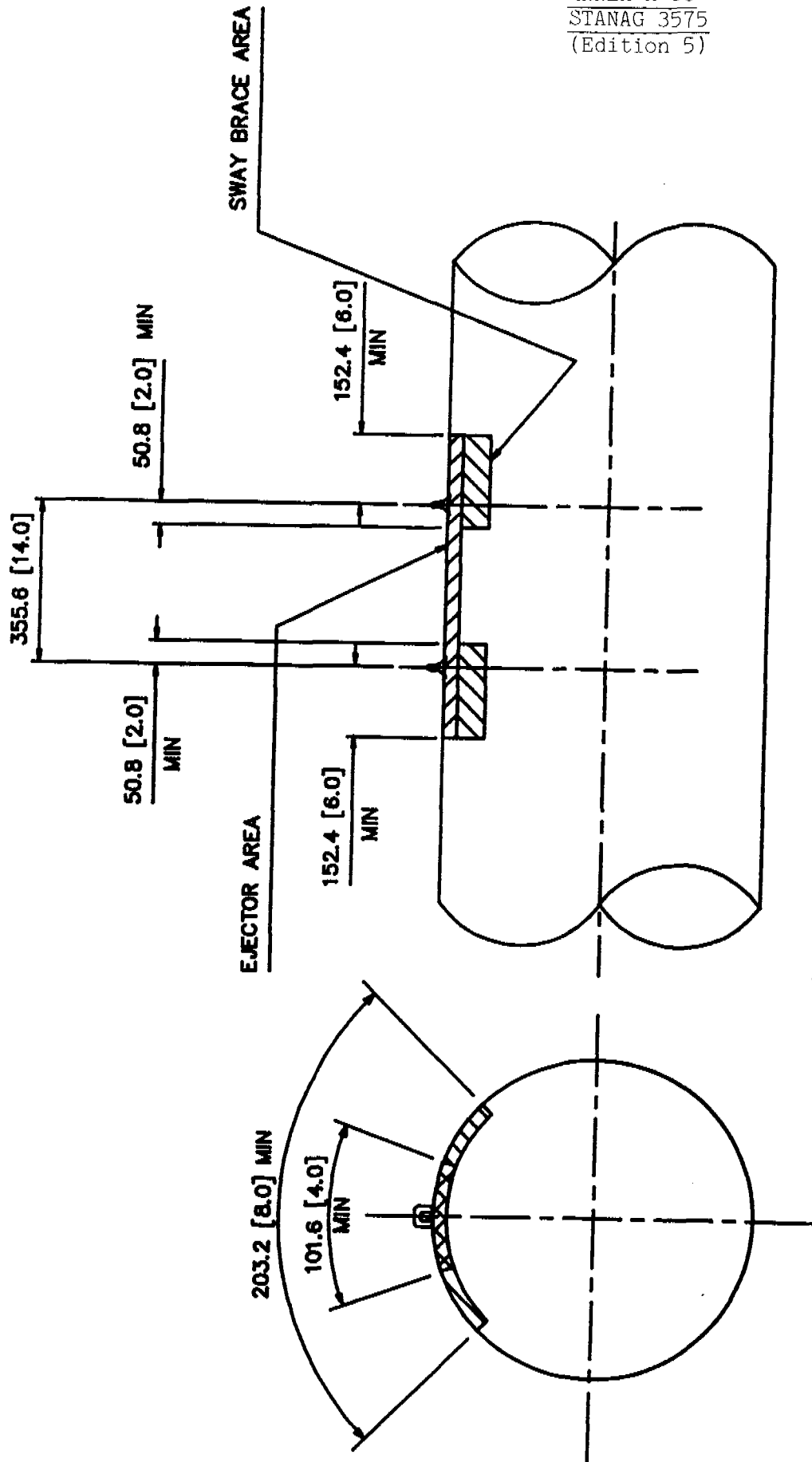
- a. The included angle of the point of the firing pin shall be between 58° and 90° , and the diameter of the flat of the point shall not exceed 0.18 mm (0.007 in).
- b. The hardness of the pin shall be in the range 674 - 746 Vickers Diamond Hardness (Rockwell Hardness C59 - C62).
- c. The concentricity of the firing pin to the breech cartridge bore shall be within 0.38 mm (0.015 in).
- d. The cartridge base, when installed and during firing, shall be fully supported by the breech or cartridge holder.
- e. If a spring loaded firing pin is used the firing pin/cartridge electrode contact force shall be in the range 177 - 730 N (40 - 164 lbf).
- f. In a fixed pin system (or in a semi-fixed pin system with the pin stopped) the point of the pin shall not protrude more than 0.50 mm (0.020 in) nor less than 0.35 mm (0.014 in) beyond the base of the breech or cartridge holder.

13. Adequate safeguards against electromagnetic radiation hazards should be incorporated.

14. A ground inserted safety pin or other ground settable device that can withstand all the forces generated by the ejector rack shall be provided to prevent inadvertent store release. The design of the safety pin or device, when inserted or activated, shall provide complete and positive retention of the store on the ejector rack regardless of the method of attempted release or accidental functioning of the ejector rack. The safety pin or device is to be capable of being inserted or activated immediately after loading the store on the rack, and capable of being removed or de-activated just prior to flight or alternatively removed or de-activated in flight.

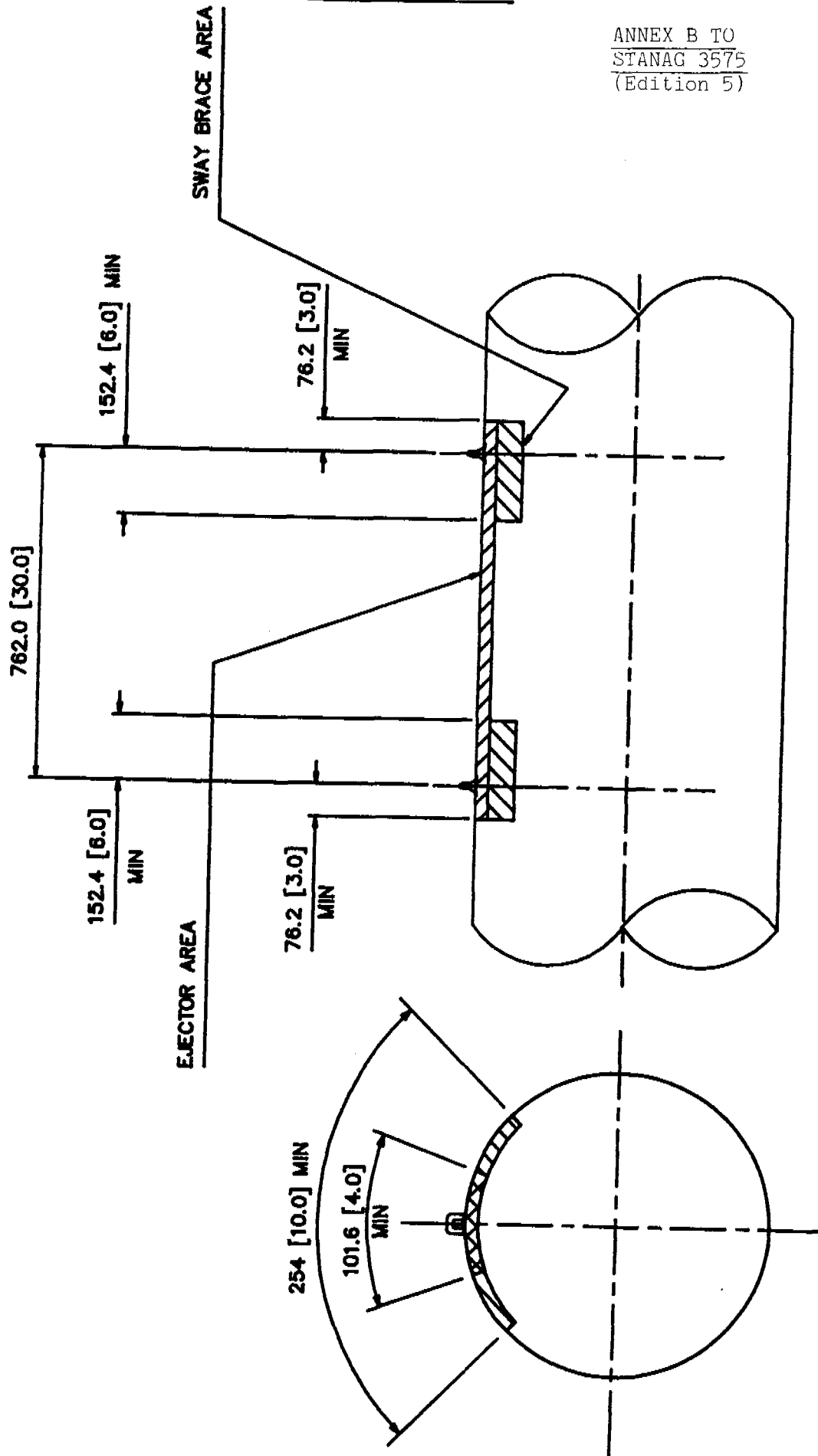
IMPLEMENTATION OF THE AGREEMENT

15. This STANAG is implemented when a nation has issued instructions that all future equipment procured for its forces will be in accordance with the specifications detailed in this agreement.



ALL DIMENSIONS IN mm. THE IMPERIAL EQUIVALENT IS SHOWN IN PARENTHESIS

SWAY BRACE AND EJECTOR AREAS FOR STORES WITH 14 INCH SUSPENSION



ALL DIMENSIONS IN mm. THE IMPERIAL EQUIVALENT IS SHOWN IN PARENTHESIS

SWAY BRACE AND EJECTOR AREAS FOR STORES WITH 30 INCH SUSPENSION