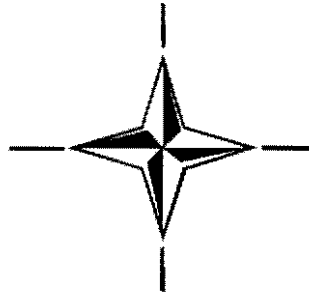


NORTH ATLANTIC TREATY ORGANIZATION
(NATO)



NATO STANDARDIZATION AGENCY
(NSA)

STANDARDIZATION AGREEMENT
(STANAG)

SUBJECT: CRITERIA FOR THE CLEARANCE OF HELICOPTER UNDERSLUNG LOAD EQUIPMENT (HUSLE) AND UNDERSLUNG LOADS (USL)

Promulgated on 28 February 2011

A handwritten signature in black ink, appearing to read 'Cihangir AKSIT', written in a cursive style.

Cihangir AKSIT, TUR Civ
Director, NATO Standardization Agency

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RECORD OF AMENDMENTS

No.	Reference/date of amendment	Date entered	Signature

EXPLANATORY NOTES

AGREEMENT

1. This STANAG is promulgated by the Director NATO Standardization Agency under the authority vested in him by the NATO Standardization Organisation Charter.
2. No departure may be made from the agreement without informing the tasking authority in the form of a reservation. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

4. Ratification, implementation and reservation details are available on request or through the NSA websites (internet <http://nsa.nato.int>; NATO Secure WAN <http://nsa.hq.nato.int>).

FEEDBACK

5. Any comments concerning this publication should be directed to NATO/NSA – Bvd Leopold III - 1110 Brussels - Belgium.

NATO STANDARDIZATION AGREEMENT
(STANAG)

CRITERIA FOR THE CLEARANCE OF HELICOPTER UNDERSLUNG LOAD
EQUIPMENT (HUSLE) AND UNDERSLUNG LOADS (USL)

- Annexes: A. National Agencies - Table 1
B. Syllabus for the Training of Helicopter Handlers

Related Documents:

STANAG 2286 HIS	Technical Criteria for External Cargo Carrying Slings, Nets and Strop/Pendants
STANAG 2970 HIS	Aerial Recovery Equipment and Techniques for Helicopters
STANAG 3117 FS	Aircraft Marshalling Signals
STANAG 3542 HIS	Technical Criteria for the Transport of Cargo by Helicopter
STANAG 3854 AT	Policies and Procedures Governing the Air Transportation of Dangerous Cargo
ATP-49	Use of Helicopters in Land Operations

AIM

1. The aim of this agreement is to define the minimum criteria for the clearance, rigging and lifting of helicopter underslung loads and HUSLE to permit interoperability.

AGREEMENT

2. Participating nations agree that the criteria established in the following paragraphs will apply for the carriage of underslung loads and HUSLE by helicopters.

DETAILS OF THE AGREEMENT

3. Any HUSLE (including nets) and loads must be cleared for flight before use. There are 2 elements to this clearance procedure required by each nation for each of its helicopter types: airworthiness clearance of the HUSLE and clearance of the rigging scheme for each load.
4. When the nation operating the aircraft has confidence in the nation supplying the HUSLE and loads, and the airworthiness, husbandry and training systems used for those loads and HUSLE, they may give more blanket clearance.
5. To facilitate interoperability, a list of agencies responsible for airworthiness clearance of HUSLE and USL at national level is available at Annex A.

HUSLE PANEL CONOPS

6. To develop interoperability between NATO and other partner nations, to enable the movement of loads cleared and rigged by one nation, to be lifted by a rotary wing aircraft of another nation.

LOAD RIGGING SCHEMES

7. To facilitate the acceptance of rigging schemes between nations the following procedures should be followed:

- a. Clearance of Netted Loads. Loads may be transported by cargo nets, meeting the technical criteria specified in STANAG 2286 and which have been given clearance to fly as HUSLE with a particular nation's ac, without individual clearance of the load.
- b. Clearance of Rigged Loads. Nations will clear items of equipment designated as helicopter underslung loads rigged in accordance with the following procedure:
- c. Load Assessment. Make an assessment of:
 - (1) The weight of the load.
 - (2) The weight of the HUSLE.
 - (3) The strength of the attachment points, which will be used for HUSLE attachment.
 - (4) The ability of the attachment points to meet the criteria specified in STANAG 3542.
 - (5) The maintenance programme for ensuring the continued serviceability of the attachment points.
 - (6) Any likely aerodynamic characteristics of the load throughout the potential air speed range.
- d. Slinging Scheme. Design a slinging scheme detailing:
 - (1) The HUSLE to be used.
 - (2) The method of attachment to the load. Recommendation should be made on the use or non-use of extension strops.
 - (3) Any additional precautions required. The text should include a list of items to be removed or secured and the appropriate method. Any measures needed to combat aerodynamic instability of the load are to be stated.
- e. Limitations. Document the following:

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- (1) State the maximum and minimum weight of the load when it is to be transported underslung.
- (2) State the actions required to ensure the in-flight integrity of the load.

f. Static Testing. The slinging scheme should be validated by means of a static test. The test should be used to:

- (1) Ensure that individual leg loads and sling leg angles of the HUSLE fall within the published limits for the slinging equipment in use, in accordance with STANAG 2286.
- (2) Ensure that the load is statically balanced.
- (3) Minimise the likelihood of damage to the load by the HUSLE.

g. Flight Trial. A flight trial should be carried out to determine:

- (1) The maximum speed of the helicopter when carrying the underslung load.
- (2) The maximum angle of bank permissible when carrying the underslung load.
- (3) The maximum rate of descent permissible when carrying the underslung load.
- (4) Any adverse flying characteristics.

h. Documentation. Clearance documentation should be produced which provides:

- (1) Diagrammatic and written instructions for the rigging and preparation of the load.
- (2) The range of possible load weights. The actual weight of each item and the weight of the HUSLE should be clearly specified.
- (3) The range of possible load combinations.
- (4) The maximum safe forward speed, angle of bank and rate of descent for a helicopter carrying the slung load.
- (5) Advice on load behaviour and appropriate warnings where the load may display poor flight characteristics.

8. Dangerous Air Cargo. Dangerous Air Cargo should be labelled, prepared, handled and flown in accordance with the agreed provisions of ATP-49 and associated STANAG.

9. Cross Operating Responsibilities. Once a load has been cleared in accordance with this STANAG, the responsibilities of the supporting/supported nation remain detailed in ATP-49. The supported nation is to rig the load in accordance with national procedures.

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10. Training. Each helicopter should be handled by a correctly trained helicopter handling team who should have undertaken a period of nationally accepted training in accordance with the syllabus at Annex B.

11. Maintenance. All HUSLE utilized under the terms of this agreement is to be inspected and maintained in accordance with the nationally approved maintenance schedule.

IMPLEMENTATION OF THE AGREEMENT

12. This STANAG is considered implemented when a nation has issued instructions that all future clearances for loads intended for cross-operations will be undertaken in accordance with the specifications detailed in this agreement, and that the training of helicopter handlers will be carried out in accordance with the syllabus at Annex B.

NATIONAL AGENCIES - TABLE 1

This table lists the National points of contact responsible for the airworthiness clearance of HUSLE and Underslung Load Clearances.

Nation	Organisation	Postal Address	Telephone	FAX	Email
United Kingdom	Joint Air Delivery Test and Evaluation Unit	OC Helicopter Section RAF Brize Norton Carterton Oxfordshire England OX18 3LX	0044 1993 896173	0044 1993 896281/6387	Jadteu-hels-oc
Netherlands	Armed and Transport Helicopter Division External Load Office	PO Box 9208 6800HK Arnhem	0031 26 35 33 690 Mobile 06 22 78 87 30	0031 26 35 33 694	P56677@mindef.nl
Belgium	Trainingcentre for Paratroopers Testboard - External Loads Section	Kazerne 0 B-3290 Diest - Schaffen Belgium	0032 13 35 30 80	0032 13 35 30 78	TrgCPara-TB@mil.be
Australia	Air Movement Training & Development Unit (AMTDU)	RAAF Base Richmond Richmond NSW 2755 Australia	0061 24587 3579	0061 24587 3819	

SYLLABUS FOR THE TRAINING OF HELICOPTER HANDLERS

1. This syllabus defines the minimum requirements for the training of helicopter handling team personnel in the preparation and handling of helicopter underslung loads and the marshalling of helicopters involved in underslung load operations.
2. Training Responsibility. Nations will nominate a specific agency to be responsible for the training of Helicopter Handlers.
3. Training Syllabus. The training is to include the following topics:
 - a. Preparation and rigging of underslung loads using national Helicopter Underslung Load Equipment (HUSLE).
 - b. Pre and post flight inspection of all national HUSLE.
 - c. Marshalling of helicopters and safety drills, in accordance with STANAG 3117 and ATP 49.
 - d. Helicopter underslung load carrying cargo hooks and their capabilities.
 - e. Hooking-up and unhooking of loads, and static discharge procedures.
 - f. Familiarity with relevant national publications, ATP-49 and STANAG 2445.
 - g. Use of national underslung load clearance schemes.
 - h. National procedures governing the transportation of Dangerous Air Cargo, and knowledge of STANAG 3854.
4. Scope of the Training. The training is to be both practical and theoretical with checks on student performance. Local re-examination of the qualified Helicopter Handler should be undertaken periodically, in accordance with national regulations. Helicopter Handling Instructions are to be re-examined annually.