

INCH-POUND

MIL-P-46329A(AR)
AMENDMENT 5
15 JUNE 1998
SUPERSEDING
AMENDMENT 4
03 JULY 1992

MILITARY SPECIFICATION

PERISCOPE, TANK: M13, M14A1, M17, M17C, M26, M27, M37, M45,
PERISCOPE, 15° UPLOOK AND PERISCOPE, 20° UPLOOK

MIL-P-46329 was inactivated after 29 November 1995 for new design.

This amendment forms a part of MIL-P-46329A (AR), dated 03 MARCH 1972, and is approved for use by the US Army Armament, Research, Development, and Engineering Center, and is available for use by all Departments and Agency of the Department of Defense.

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* Specification Title: Delete in its entirety and substitute the following:

“PERISCOPE, TANK: M13, M14A1, M17, M17C, M26, M27, M37, M45, PERISCOPE, 15° UPLOOK AND PERISCOPE, 20° UPLOOK”.

* 1.1: Delete in its entirety and substitute the following:

“1.1 Scope. This specification covers 10 configurations of Plastic Periscopes known as Periscope, Tank: M13, M14A1, M17, M17C, M26, M27, M37, M45, 15° Uplook and 20° Uplook. These periscopes are used as vision devices in combat type vehicle.”

* 2.1:

Drawings: Delete “D7578357” and substitute “F7597754”.

Add: “K12294254, Periscope, 15° Uplook” and “E12297131, Periscope, 20° Uplook”.

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* 3.1: Delete in its entirety.

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* 3.4.1: Delete in its entirety and substitute the following:

“3.4.1 Weathering. After meeting all other requirements of this specification, the periscope shall be capable of meeting the requirements of 3.4.1.1, 3.4.1.2, 3.4.1.3 and 3.4.4, and shall be otherwise functional and undamaged subsequent to exposure as specified below.

a. At least 350 hours simulated “sunshine” per MIL-STD-810, except that light intensity shall be controlled such that the recorded temperature at the geometric center of the periscope block is 160° F ± 5° F. Intensity shall be controlled by adjustment of the light source to periscope distance and not by varying voltage to the source.

b. At least 420 hours steady state, hot-humid (110° F ± 10° F, relative humidity 70% ± 10%).

c. At least 420 hours cold temperature (20° F ± 5° F).

Environmental conditions a. and b. above shall be cycled such that no one condition exposure exceeds 10 hours duration. Environmental condition c. above shall be cycled such that the condition shall not be maintained beyond 70 continuous hours. No test exposure will be followed by a like exposure.”

* 3.4.1.1, 3.4.1.2, and 3.4.1.3: Delete “Following Weathering and Shelf Life” and substitute “Following Weathering”.

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* Add new paragraph 3.4.5:

“3.4.5 Leakage. The periscope shall exhibit no evidence of leakage when subjected to a one foot head of water against the periscope top for 3 to 5 minutes.”

* 3.6: Table I: Delete in its entirety and substitute the following:

“Table I

<u>Periscope</u>	<u>Diameter (Inch)</u>				
	.040	.030	.020	.010	.005
M13	2	4	8	32	128
M14A1, M17, 15° Uplook, 20° Uplook	3	10	12	48	92
M17C, M26, M27, M37, M45	5	10	21	83	332

The maximum combination of bubbles and inclusion shall not be permitted because a less number than permissible is found in one area.”

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* 3.6.1: Delete and substitute:

“3.6.1 Lint. No lint particles shall exceed 0.25 inch in projected length (perpendicular to the light path). Not more than one such lint particle shall be permitted. No additional lint particles shall exceed 0.125 inch in projected length. The cross-sectional area of all lint particles shall be computed on the basis of 0.003 inch width and included in the computation of total projected area. The total projected length (inches) of all lint particles shall not exceed the following:

M13, M14A1, M 17, 15° Uplook and 20° Uplook	– 0.75 inch
M26, M27, M37, M45 and M17C	-0.1.35 inch

The maximum combination of lint with bubbles and inclusions shall not be permitted because a lesser number than permissible is found.”

* 4.1.2: Delete: “a. Qualification Tests (see 4.2)”.

* 4.2: Delete in its entirety.

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* 4.2.1: Delete in its entirety.

* 4.2.2: Delete in its entirety.

* 4.3: Delete in its entirety and substitute the following:

“4.3 First Article (Initial Production) approval. The requirements for First Article approval and the responsibility (Government or Contractor) for First Article Testing, shall be as specified in the contract. The sample for First Article approval tests shall consist of six periscopes, six each of all items covered by SQAP plus six plastic bodies applicable to the periscope under test. The plastic bodies part numbers are listed below with their respective periscope. The sample shall be manufactured in the same manner, using the same materials, equipment, processes and procedures intended for production. To the maximum extent possible, all parts and materials, including packaging and packing to be used in production, shall be obtained from the same source of supply as used in the First Article.

<u>Periscope</u>	<u>Plastic Body</u>
M13	D7669322
M14A1	D7676876
M17	D7674952
M17C	F7595729
M26	D7688880
M27	F7633133
M37	F8635077
M45	F8213427
15° Uplook	E12308260
20° Uplook	E12308249”

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* 4.3.1: Delete “Sunshine” and substitute “Weathering”.

* 4.4.2.1: Last sentence: Delete in its entirety and substitute the following:

“In addition to 100% inspection as specified in 4.4.2.3, the tabulated classification of defects in Table I and II shall constitute the minimum inspection to be performed by the supplier after First Article approval and prior to Government acceptance or rejection by item or lot.”

* 4.4.2.2: Delete in its entirety and substitute the following:

“4.4.2.2 First Article. First article testing shall be conducted in accordance with Tables I and II and then meet the weathering test of paragraph 3.4.1 and 4.7.1.3.”

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Add new paragraph 4.4.2.3 as follows:

“4.4.2.3 100 Percent inspection. The following requirement and related test shall be subjected to 100% inspection:

<u>Characteristic</u>	<u>Requirement</u>	<u>Test Procedure</u>
1. Leakage	3.4.5	4.7.1.4”

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* 4.7.1.3: Delete in its entirety and substitute the following:

“4.7.1.3 Weathering. This test is to be conducted on the First Article sample only. Upon completion of all other acceptance tests listed in this specification, the periscope shall be subjected to the environmental conditions specified in paragraph 3.4.1. A testing cycle, in accordance with paragraph 3.4.1, shall be submitted to the procuring activity for approval prior to test initiation. The periscope shall show no evidence of physical failure and shall meet the requirements of 3.4.4 and 3.5.1 through 3.5.4 inclusive, except that the required values of optical performance shall be as specified in 3.4.1.1 through 3.4.1.3 inclusive.”

* 4.7.1.4: Delete in its entirety and substitute the following:

“4.7.1.4 Leakage. The test units shall be in the test fixture. Use wing nut fasteners and tighten finger tight. This test fixture will be representative of the mating surface between the periscope and vehicle while having sufficient depth to satisfy the requirements of 3.4.5. During this test there shall be no signs of leakage.”

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* 4.11: Delete in its entirety.

* 4.11.1: Delete in its entirety.

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- * 4.11.2: Delete in its entirety.
- * 4.11.2.1: Delete in its entirety.
- * 4.11.2.2: Delete in its entirety.
- * 4.11.3: Delete in its entirety.
- * 5.1: Delete in its entirety and substitute the following:

“5.1 Packaging, packing and marking. Packing and marking shall be in accordance with the applicable packing data sheet for the model periscope designated in the contract or purchasing order.

MODEL PERISCOPE

M13
M14A1
M17
M17C
M26
M27
M37
M45
15° Uplook
20° Uplook

APPLICABLE PACKAGING

Packaging Data Sheet – 7597754
Packaging Data Sheet – 7694072
Packaging Data Sheet – 7043549
Packaging Data Sheet – 7595727
Packaging Data Sheet – 7688875
Packaging Data Sheet – 7633132
Packaging Data Sheet – 8635100
Packaging Data Sheet – 8213430
Packaging Data Sheet – 12294254
Packaging Data Sheet – 12297131”

- * 6.2: Delete sentence f.

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- * 6.3: Delete in its entirety.
- * 6.3.1: Delete in its entirety.

NOTE: The margins of this amendment are marked with asterisk or vertical lines to indicate where changes (additions, modifications, corrections, and deletions) from the previous amendment were made. This was done as a convenience only, and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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