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SECURITY CLASS



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1a. REPORT SECURITY CLASSIFICATION
UNCLASSIFIED

1b. RESTRICTIVE MARKINGS

2a. SECURITY CLASSIFICATION AUTHORITY

3. DISTRIBUTION / AVAILABILITY OF REPORT
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4. PERFORMING ORGANIZATION REPORT NUMBER(S)
DOD POP HMTR / AYD 94-005

5. MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION
PACKAGING DIVISION, AED

6b. OFFICE SYMBOL (if applicable)
SMCAR-AEP

7a. NAME OF MONITORING ORGANIZATION
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6c. ADDRESS (City, State, and ZIP Code)
U.S. ARMY, ARDEC
PICATINNY ARSENAL, NJ 07806-5000

7b. ADDRESS (City, State, and ZIP Code)
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8a. NAME OF FUNDING / SPONSORING ORGANIZATION

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9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
N/A

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10. SOURCE OF FUNDING NUMBERS
PROGRAM ELEMENT NO. PROJECT NO. TASK NO. WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
PERFORMANCE ORIENTED PACKAGING RECERTIFICATION TEST REPORT FOR THE FIRING DEVICE, DEMOLITION, TIME DELAY, M147

12. PERSONAL AUTHOR(S)
DZURY, R. CHRIS

13a. TYPE OF REPORT
FINAL

13b. TIME COVERED
FROM _____ TO _____

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16. SUPPLEMENTARY NOTATION
SEE ATTACHED

17. COSATI CODES		
FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

19. ABSTRACT (Continue on reverse if necessary and identify by block number)
THIS REPORT CONTAINS THE TESTS PERFORMED AND TEST RESULTS ON THE FIRING DEVICE, DEMOLITION, TIME DELAY, M147, PACKED 24 PER PA19 METAL AMMUNITION CONTAINER, TWO PA19'S PER WIREBOUND BOX FOR PERFORMANCE ORIENTED PACKAGING RECERTIFICATION.

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20. DISTRIBUTION / AVAILABILITY OF ABSTRACT
 UNCLASSIFIED/UNLIMITED SAME AS RPT. DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION
UNCLASSIFIED

22a. NAME OF RESPONSIBLE INDIVIDUAL
STEVE RUFFINI *Steve Ruffini*

22b. TELEPHONE (Include Area Code)
201-724-2515

22c. OFFICE SYMBOL
SMCAR-AEP



DEPARTMENT OF THE ARMY
U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NJ 07806-5000



REPLY TO
ATTENTION OF

15 MAR 1994

SMCAR-AEP (1mm)

MEMORANDUM FOR Commander, Defense Technical Information Center
Building 5, Cameron Station, Alexandria, VA
22304-6145

SUBJECT: Performance Oriented Packaging Recertification Test
Report for The M147 Time Delay Firing Device

1. The attached report (DOD POP HMTR/AYD 94-005) entitled:
"Performance Oriented Packaging Recertification Test Report For
The Firing Device, Demolition, Time Delay, M147" is hereby
submitted for formal release. Notification of the formal release
should be made to the letterhead address.
2. If there are any questions or comments regarding this report,
contact Mr. Chris Dzury at 201-724-2505 (DSN 880-2505).

Encl
as

Steve Ruffini
STEVE RUFFINI
Supervisory Packaging Engineer

FOR QUALITY INSPECTED

1. DATA SHEET:

Container:

Type: Box, Wood, Wirebound

UN Code: 4C1

Specification Number: PPP-B-46506

Material: wood and wire

Capacity: 1167.9 cubic inches

Drawing Number: 9366708

Dimensions: I.D. (in.): 12 1/2 X 12 1/16 X 10 3/8

Tolerance: +1/8

O.D. (reference, in.): 14 7/8 X 12 13/16 X 11 15/16

Closure (method/type): bent wire

Tare Weight: 7 lbs.

Packed Out Container Weight (48 Firing Devices): 52 lbs.

Product:

Name: Firing Device, Demolition, Time Delay, M147

Drawing Number: 12914600

Proper Shipping Name: Fuzes, Detonating

Identification Number: UN 0257

Physical State: Solid

Quantity Per Wirebound Wood Box: 48

2. BACKGROUND AND TESTING:

This report contains the tests performed and the test results of the Firing Device, Demolition, Time Delay, M147 packed twenty-four (24) per PA19 metal ammunition container, two (2) PA19's per wirebound box in accordance with drawing 12913801 for Performance Oriented Packaging (POP) recertification. Initially this configuration was certified as meeting POP requirements after successfully completing stack testing, loose cargo testing and drop testing in accordance with Code of Federal Regulations (CFR) Title 49. CFR Title 49 specifies that the Stacking Test and Drop Test are to be repeated yearly for recertification. The CFR does not require the Loose Cargo Test to be repeated at any interval. Therefore, for this POP recertification, the Stacking Test and Drop Test were conducted. Instead of testing this container configuration with the weight listed above, each PA19 container was loaded with steel weights weighing 34 lbs. and felt filler. The final packed out weight of the wirebound box tested was 98 lbs. This is an acceptable analogy in accordance with CFR Title 49. The following tests were performed in accordance with Performance Oriented Packaging test requirements of CFR Title 49:

a. Stacking Test: One wirebound wood box, containing 2 PA19 containers, was placed under weights which imparted a combined load of 1020 lbs. to the box. This load was maintained for six days. This exceeds the CFR requirement which is a load a box would experience when at the bottom of a stack of wirebound boxes measuring 10 feet high for a period of 24 hours.

b. Drop Test: After the wirebound box was stack tested, it was drop tested one time from 4 feet onto a steel plate in each of the following orientations: top, bottom, long side, short side and directly on a corner. These orientations are in accordance with the CFR requirement for a rectangular box.

3. TEST RESULTS: After each test, both PA19 containers remained consolidated in the wirebound box and there was no leakage or spillage of contents from any PA19 container. This is the criteria for successfully passing Performance Oriented Packaging Testing as prescribed in CFR Title 49. Therefore, this container configuration is considered safe for international shipment and is recertified as meeting Performance Oriented Packaging requirements.

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