

| REPORT DOCUMENTATION PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             |                              |                                          | Form Approved<br>OMB No. 0704-0188                          |                                           |
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| 14. ABSTRACT<br>This document has been developed to address Department of Defense (DoD) identification marking of Munitions with less sensitive explosive fills, so that they can be distinguished from their more sensitive counterparts to enable appropriate application (or selection) of EOD procedures for disposal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                              |                                          |                                                             |                                           |
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# **DEPARTMENT OF DEFENSE**



## **JOINT ORDNANCE TEST PROCEDURE (JOTP)-070**

### **IDENTIFICATION MARKING FOR MUNITIONS**

**Joint Services Munition Safety Test Working Group**

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Joint Ordnance Test Procedure (JOTP)-070  
Identification Marking for Munitions

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| <b>DOCUMENT COMPLETION DATE:</b><br><br>30 July 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>TITLE AND SUBTITLE:</b><br><br>Joint Ordnance Test Procedure (JOTP)-070<br>Identification Marking for Munitions                                                                     |
| <b>PREPARING ACTIVITY:</b><br><br>PEO AMMO/Product Director for Joint Services<br>(SFAE-AMO-JS)<br>1 Buffington Road<br>Picatinny Arsenal, Picatinny, NJ 07806                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>SPONSORING ACTIVITY:</b><br><br>Range Infrastructure Division (CSTE-TM)<br>US Army Test and Evaluation Command<br>2202 Aberdeen Boulevard<br>Aberdeen Proving Ground, MD 21005-5001 |
| <b>DISTRIBUTION STATEMENT:</b><br><br>Distribution Statement A. Approved for public release; distribution is unlimited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                        |
| <b>ABSTRACT:</b><br>Joint Ordnance Test Procedure (JOTP)-070 has been developed to address Department of Defense (DOD) identification marking of munitions with less sensitive explosive fills (anything other than TNT, CompB or Tritonal), so that they can be distinguished from their more sensitive counterparts to enable appropriate application (or selection) of EOD procedures for disposal.. The purpose of this document is to establish procedures and standardize the content of the identification marking to be used for munitions containing less sensitive explosive fills. It also specifies marking locations within a munition family.                                      |                                                                                                                                                                                        |
| <b>COORDINATION DRAFT REVIEWED BY:</b><br>This document was coordinated with the following Standardization Offices: AR, AS, EA, MC, MI, MR, OS, TE, AF-2, AF-70, and AF-99. In addition, the document was also coordinated with the Joint Weapon Safety Working Group.<br><br><b>ASSIST COORDINATION DATE:</b> 18 April 2013                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                        |
| <b>IMPLEMENTATION PLAN:</b><br><br>1. This JOTP will be referenced in MIL-STD-709, DEPARTMENT OF DEFENSE DESIGN CRITERIA STANDARD, AMMUNITION COLOR CODING.<br><br>2. An attempt is being made to include the procedures of this JOTP into STANAG 2953, The Identification of Ammunition – AOP-2. There are differences of opinion between the US and Europe on various aspects of these procedures, but an attempt is being made to harmonize the documents and if possible eventually replace the JOTP with the STANAG. If this is not possible, the U.S. will still ratify the STANAG since the differences are fairly minor, but will not implement it, but will implement the JOTP instead. |                                                                                                                                                                                        |
| <b>APPROVING AUTHORITY:</b><br><br><br>JOSE GONZALEZ<br><br>7/29/13<br>Date<br><br>Director, Land Warfare & Munitions<br>Office of the Under Secretary of Defense for<br>Acquisition, Technology and Logistics                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                        |

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DEPARTMENT OF DEFENSE  
JOINT ORDNANCE TEST PROCEDURE

\*Joint Ordnance Test Procedure (JOTP)-070  
DTIC AD No.

30 July 2013

IDENTIFICATION MARKING FOR MUNITIONS

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## 1. INTRODUCTION.

This Joint Ordnance Test Procedure (JOTP) has been developed to address Department of Defense (DOD) identification marking of munitions with less sensitive explosive fills, so that they can be distinguished from their more sensitive counterparts to enable appropriate application (or selection) of Explosive Ordnance Disposal (EOD) procedures for disposal. This JOTP is referenced in Military Standard (MIL-STD)-709, Department of Defense Design Criteria Standard: Ammunition Color Coding, which is the overarching document describing the requirements for marking of munitions.

## 2. SCOPE.

### 2.1 Purpose.

The purpose of this document is to establish procedures and standardize the content of the identification marking to be used for munitions containing less sensitive explosive fills. It also specifies marking locations within a munition family.

### 2.2 Application.

These new procedures will apply to all munitions produced after this JOTP is released that contain less sensitive explosive fills, 60 millimeter (mm) or larger, except for the exempted items found in paragraph 3.g of this JOTP. A less sensitive explosive fill is defined as any fill that is not either TNT, Comp B or Tritonal. All munitions that contain less sensitive explosive fills will need to be marked, even if the fills have not been marked before. Exceptions will be for munitions in the current inventory, and to all munitions currently in production when this JOTP is approved, including munitions under production contracts (but not to include options for additional production), in Low Rate Initial Production, and those munitions awaiting acceptance or delivery.

### 2.3 Limitations.

This document is only applicable to conventional (non-nuclear) munitions.

## 3. PROCEDURES.

a. Identification. Items will be marked with item nomenclature and explosive fill name (i.e. PBXN-109, AFX-757, etc.).

b. Location. Identification markings will be in two locations, 180 degrees apart from one another.

c. Application. Identification markings will be applied in a permanent manner, such as, but not limited to, stamping or laser etching.

d. Performance. Item identification marking shall not interfere with item performance.



e. Family of Munition. Marking will be in a common location for each family of munition. Locations will be determined by the program office responsible for that munition, with coordination with NSWC IHEODTECHDIV and ARDEC EOD.

f. Size of Marking. Dependent upon physical space limitations of munition, minimum lettering dimensions will be 3.18 mm (0.125 inch) high by 2.38 mm (0.0937 inch) wide. Nominal depth will be 0.25 mm (0.01 inch) unless physical material characteristics of munition prohibits support of this depth.

g. Exempted Items. Items listed below are exempted from this document.

(1) Cartridge Actuated Devices (CADS) and Propellant Actuated Devices (PADS): The term CAD shall be synonymous with and collectively represent FSC 1377 cartridges.

(2) Actuated Devices/Detonating Cords: Actuated devices, and explosive detonating cords used in aircraft/helicopter emergency escape systems, fire extinguisher systems, and equipment/stores jettison and separation systems. The term PAD shall be synonymous with and collectively represent FSC 1377 rocket catapults and rocket motors used in aircraft escape systems. Data sheets for existing CADS and PADS can be found in Technical Manual (TM) 43-0001-39.

(3) Military Pyrotechnics: The term military pyrotechnic shall be synonymous with photoflash cartridges, flares, signals, simulators and markers. Data sheets for existing military pyrotechnics can be found in TM 43-0001-37.

(4) Demolition Materials: The term demolition material shall be synonymous with initiating and priming devices, explosive charges, demolition kits and assemblies and incendiary devices. Data sheets for existing demolition materials can be found in TM 43-0001-38.

(5) Inert filled ordnance.

(6) Thermally Coated and Carbon Fiber Bombs: Thermally protected and carbon fiber bombs are exempt from the location requirements above but will stamp the explosive fill on the aft of the bomb (e.g. base plate).

(7) Reactive Armor.

#### 4. INSPECTION.

Inspection of markings shall be through customary inspection methods found on item drawings and in technical data packages.

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Comments, suggestions, or questions on this document should be addressed to Range Infrastructure Division (CSTE-TM), US Army Test and Evaluation Command, 2202 Aberdeen Boulevard, Aberdeen Proving Ground, Maryland 21005-5001; or e-mailed to:

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