



2. Distribution: Note this is an "Operational" Safety Of Use Message (SOUM). MACOM Commanders will immediately retransmit this message to all subordinate commands/activities within 24 hours of receipt of this message and acknowledge receipt of this message within five working days to Safety Office, Tank-automotive and Armament Command-Rock Island (TACOM-RI), AMSTA-CS-CZR, Rock Island, IL 61299-7630, e-mail: [amsta-cs-czr@ria.army.mil](mailto:amsta-cs-czr@ria.army.mil) <<mailto:amsta-cs-czr@ria.army.mil>> <<mailto:amsta-cs-czr@ria.army.mil>>.

3. Problem Discussion:

A. Summary Of Problem. During developmental testing of the Modular Artillery Charge System (MACS) M232 (DA13), firing Charge 5 from a M198 howitzer, one failure occurred. The firing mechanism housing NSN: 1025-01-030-3421 failed allowing the firing mechanism block "slider" NSN: 1025-01-031-7194 and the M35 firing mechanism NSN: 1025-00-895-9182 to be thrown to the rear of the howitzer.

B. This problem is specific to firing mechanism housings manufactured prior to a material change in 1981. Several of these housings still remain in the field and cannot be identified from stronger parts made since 1981. The purpose of this message is to notify units equipped with the M198 howitzer to restrict firing of the M232 at Charge 5 as noted in paragraph 4 below. Units need to make changes to the warning that appears in Charge 5 to Technical Manual, TM 9-1024-211-10 in accordance with Paragraph 4.A. of this SOUM. Additionally, units need to make changes to Charge 6 when it is distributed in accordance with Paragraph 4.B. of this SOUM. There are only 4 authorized projectile combinations using M232 Charge 5: M795 (HE), M864 (HE, ICM extended range), M549A1 (HERA) and the M825A1 (WP Smoke). Sufficient stocks of M203A1 Charge 8S (DODIC: D532) exist for firing to ranges equivalent to the M232 Charge 5.

C. Parts, Assembly, Or Components Affected. A M199 Cannon Breech Modification Kit has been designed, developed, and tested. With this modification both the "new" firing mechanism housing and the firing mechanism block "slider" will have an "M" stamped on it. The new parts of this kit have been manufactured so they cannot be used/interchanged with the originally designed mating parts. All original items,

housing assembly NSN: 1025-01-030-3421, firing mechanism block "slider" NSN: 1025-01-031-7194 and firing mechanism NSN: 1025-00-895-9182 will be removed and only the new kit items will be used. Application of this modification kit (managed by the Joint Program Management Office - Lightweight Howitzer 155mm) will be limited to M198 howitzers in the Active Army and the Army National Guard. The MWO will be applied between March 05 and Dec 05.

D. Delay of change to Technical Manual, TM 9-1024-211-10: Due to funding and timing issues the next change, Change 6, will not get to the field before the MACS M232 (DA13) propelling charge does. Change 6 includes a warning on Page 4-50 about procedures for firing the M232 charge 5 until the weapon is modified with the M199 Cannon Breech Modification Kit. The warning that is printed in Change 6 must be changed and corrected as outlined below in paragraph 4.B.

#### 4. User Actions:

A. Correction Procedures for TM 9-1025-211-10, Change 5 (until Change 6 is received). Crew personnel are instructed to make the following pen and ink changes to add the following Warning:

"Do not fire M232 charge 5 propelling charge in any cannon that has not had a M199 Cannon Breech Modification Kit installed. Cannons that have the Modification Kit installed will have a stamped, paint filled, letter M visible on both the breech housing and firing mechanism block and will also utilize a M49 Firing Mechanism."

B. Correction Procedures for TM 9-1025-211-10, Change 6. Crew personnel are instructed to make the following pen and ink changes upon receipt to page 4-50, Warning block to correct the following Warning (one deletion and one addition):

"Do not fire M232 charge 5 propelling charge in any cannon that has not had a M199 Cannon Breech Modification Kit installed. (NOTE: - LINE OUT THE FOLLOWING TEXT: UNLESS A COMBAT EMERGENCY EXISTS.) Cannons that have the Modification Kit installed will have a stamped, paint filled, letter M visible on (NOTE: - CORRECT TEXT TO READ: ---letter M visible on both the breech---.), the breech housing and firing mechanism block and will also utilize a M49 Firing Mechanism." Block out the last 5 words of the first sentence "unless a combat emergency exists" and add the word "both" to the second sentence as shown.

C. Place this SOUM to the front of the TM updated with pen and ink changes as a record of change.

#### 5. Risk Assessment:

A. Severity: Category II, Critical. Based on the mass of the components that were thrown to the rear of the howitzer, it is assumed that an unprotected individual will be injured if struck by these components. An individual in full combat gear will be better protected but could still be injured if struck on an extremity.

B. Probability: Category D, Remote. Based on the assumption that firing mechanism housings manufactured prior to a material change in 1981 still remain in the

field and cannot be identified from stronger parts made since 1981, it is believed that a failure can reasonably be expected to occur over the life of the inventory. Based on the random nature of the parts being thrown off the howitzer, it is assumed that a Soldier would be struck if a failure occurs, despite explicit procedures that personnel should not be in the path of recoil during firings. A conservative probabilistic analysis determined that the probability of an injury is approximately "nine-times-in-a-million".

C. Risk Level: Based on the above severity and probability, II-D, the risk level of this hazard is a MEDIUM risk. This level is gathered from the Decision Authority Matrix for AMC managed systems. As a MEDIUM risk, it is recommended that a Safety of Use Message (SOUM) be sent to the field on this issue.

6. Program Sponsor Action: Manual changes have been produced and sent for print. Initiate this SOUM for immediate distribution.

## 7. Points Of Contact:

A. Technical Information. Mr. Stanley H. Howell or Mr. Martin Nelson  
AMSTA-LC-CFTF, Rock Island, IL 61299-7630, DSN 793-1962 or 7852, Commercial  
(309) 782-1962 or 7852, Email: howells@ria.army.mil  
<mailto:howells@ria.army.mil> or nelsonm3@ria.army.mil  
<mailto:nelsonm3@ria.army.mil>.

B. Safety. Mr. Robert Davidson, AMSTA-CS-CZR, Rock Island, IL  
61299-7630, DSN 793-6820, Commercial 309-782-6820, E-Mail:  
davidson@ria.army.mil <mailto:davidson@ria.army.mil>.

8. Logistics Assistance Representative (LAR). To find your TACOM LAR, you must be a registered user in the Army Electronic Product Support (AEPS) database, click on this link:  
<<https://aeps2.ria.army.mil/Services/Lars/Tacom/larmap/LARlocate/larmap.cfm>>

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Then select the appropriate region, i.e. CONUS, USAREUR, Far East, Kuwait.  
Select the location nearest you and click on a name. This will give you a LAR's name, DSN and commercial phone number, email address, and photo.

If you are not a registered user, request access at the public page:

<<https://aeps.ria.army.mil/aepspublic.cfm>>, click on "Access Request Form" and follow the instructions for obtaining an AEPS userid.

If you don't have access to AEPS, you can also obtain this information by contacting the TACOM Senior Command Representative (SCR) for your area. CONUS-East (includes all units east of the Mississippi, FORSCOM, and all National Guard and Reserve units), DSN 236-6951, Commercial 910-396-6951. CONUS-Central (includes all units in North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Missouri, Kansas, Oklahoma, Arkansas, Louisiana, Texas, Colorado, New Mexico, and all National Guard and Reserve units), DSN 737-0263, Commercial 254-287-0263. CONUS-West (includes all units in Washington, Oregon, Nevada, California, Arizona, Utah, Idaho, Montana, Wyoming, and all National Guard and Reserve units), DSN 357-2991, Commercial 253-967-2991.

USAREUR (Great Britain, Germany, Belgium, Luxemburg, Italy, Bosnia, Kosovo, and Macedonia) DSN 314-375-3461, Commercial 01149 621-487-3461, in Germany, 0621-487-3461; Far East includes Alaska, Hawaii, Korea, Okinawa, Kwajlein, and Japan) DSN 315-722-3552, commercial 011 82 32 520-6552.

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