

Explosives

Malfunctions Involving Ammunition and Explosives (RCS CSGLD-1961 (MIN))

Headquarters
Department of the Army
Washington, DC
20 August 1993

UNCLASSIFIED

SUMMARY of CHANGE

AR 75-1

Malfunctions Involving Ammunition and Explosives (RCS CSGLD-1961 (MIN))

This revision--

- o Excludes developmental or experimental ammunition from the reporting requirements of this regulation (para 1-1c(4)).
- o Clarifies responsibilities of a DA investigation team for malfunctions (para 1-4d(6) and chap 3).
- o Includes a requirement to provide an automated suspension and restriction system (paras 1-4d(8) and 1-4e(7)).
- o Includes the responsibility of the U.S. Army Technical Center for Explosives Safety to notify the U.S. Army Safety Center of all ammunition malfunctions (para 1-4f).
- o Establishes the reportable rate for missile misfires and duds(para 2-1a(3)(c)).
- o Clarifies preliminary reporting methods (para 2-1f(1) and (4)).
- o Clarifies the requirement that all type, block or serious impact suspensions be forwarded to Commanding General, Army Materiel Command(CG, AMC) for review and action (para 2-4b).

Effective 20 September 1993

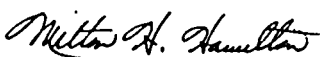
Explosives

Malfunctions Involving Ammunition and Explosives (RCS CSGLD-1961 (MIN))

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:


MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

History. This UPDATE printing publishes a revision of this regulation. Because the publication has been extensively revised, the changed portions have not been highlighted.

Summary. This regulation sets forth policy, procedures, and responsibilities for reporting malfunctions involving ammunition and explosives. It provides guidance for reporting ammunition malfunctions and instructions for preparing malfunction reports.

Applicability. This regulation applies to the

Active Army, Army National Guard (ARNG), and U.S. Army Reserve (USAR). Specifically, it applies to agencies, installations, units, and military assistance advisory groups that work with ammunition items and explosives. This includes conventional ammunition, guided missiles, large rockets, chemical ammunition, and nuclear munitions. It excludes developmental and experimental ammunition.

Proponent and exception authority.

The proponent of this regulation is the Deputy Chief of Staff for Logistics (DCSLOG). The DCSLOG has the authority to approve exceptions to this regulation that are consistent with controlling law and regulation. The DCSLOG may delegate this approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

Army management control process.

This regulation is subject to the requirements of AR 11-2. It contains internal control provisions but does not contain checklists for conducting internal control reviews. These

checklists are being developed and will be published at a later date.

Supplementation. Supplementation of this regulation and establishment of local and command forms is prohibited without prior approval from HQDA (DALO-SMA), WASH DC 20310-0541.

Interim changes. Interim changes to this regulation are not official unless they are authenticated by the Administrative Assistant to the Secretary of the Army. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HQDA (DALO-SMA) WASH DC 20310-0541.

Distribution. Distribution of this publication is made in accordance with the requirements on DA Form 12-09-E, block number 2079, intended for command level A for Active Army, Army National Guard, and U.S. Army Reserve.

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*This regulation supersedes AR 75-1, 1 March 1989.

RESERVED

Chapter 1 Introduction

1-1. Purpose

a. This regulation prescribes policies, responsibilities, and procedures for reporting malfunctions of ammunition and explosives and for conducting subsequent Department of the Army (DA) investigations.

b. This regulation also covers standard items—

(1) Used with developmental or experimental ammunition; for example, a charge used to propel experimental projectiles.

(2) When issued for comparison purposes during research, developmental, or test phases of new items.

(3) When used for seating, warming, spotting, or other purposes during testing.

(4) When being evaluated for lot acceptance purposes or for fly-to-buy contracts (guided missiles and large rockets only).

c. This regulation does not include developmental or experimental ammunition.

1-2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

1-4. Responsibilities

a. The Deputy Chief of Staff for Logistics (DCSLOG) will provide a final decision on type, block, or serious impact suspensions or restrictions affecting the readiness of the Army.

b. The Commanding General, U.S. Army Materiel Command (CG,AMC) (AMCAM-LG) will—

(1) Manage the malfunction investigation program as executive agent for DA.

(2) Manage the suspension and release program for DA.

(3) Budget and manage program for the malfunction investigation and suspension and release programs.

(4) Review type, block, or serious impact suspensions recommended by the U.S. Army Armament, Munitions and Chemical Command (AMCCOM) and the U.S. Army Missile Command (MICOM)—

(a) Approve the type, block, or serious impact suspensions if the readiness of the Army is not affected and notify HQDA(DALO-SMA), WASH DC 20310-0541.

(b) Notify HQDA (DALO-SMA), WASH DC 20310-0541 by the quickest means for a decision by HQDA (DALO-SMA) if it is judged that any suspension will affect the readiness of the Army. An information copy will be provided to HQDA(DAMO-RQD), WASH DC 20310-0430.

(5) Review recommendations for suspension of nuclear munitions and make appropriate recommendations to HQDA (DALO-SMA), WASH DC 20310-0541.

c. Commanders of major Army commands (MACOMs) will designate a point of contact to perform the following functions:

(1) Upon receipt of suspension or restriction notices from AMCCOM or MICOM, ensure that all potentially affected units within their command have been notified.

(2) Receive, coordinate, or initiate actions on all reports of “serious mission impacts” resulting from ammunition suspension or restrictions of command ammunition stocks.

(3) Report to AMCCOM and MICOM all serious mission impacts that are not within the ability of the MACOMs to correct.

(4) Support the DA investigation team for malfunctions (DAITM) during on-site investigations. (See chap 3 for guidance.)

d. The Commanding General, U.S. Army Armament, Munitions and Chemical Command will—

(1) Issue suspension or restriction notices for individual lots of all types of conventional and chemical ammunition.

(2) Recommend suspension or restriction of nuclear munitions to the Commander, U.S. Army Materiel Command, ATTN: AMCAM-LG, ALEX VA 22333-0001.

(3) Issue temporary notices for type, block, or serious impact suspensions or restrictions of conventional and chemical ammunition referred to AMC for approval. Referrals for approval will be made to the Commander, U.S. Army Materiel Command, ATTN: AMCAM-LG, ALEX VA 22333-0001. These referrals will include but not be limited to stockpile impact (training and war reserve), substitute items (when applicable), production status and security assistance recipients for the last 7 years.

(4) Monitor individual and accumulated suspensions or restrictions and assess the effect on readiness at the wholesale level and, as much as possible, at the retail level.

(5) Notify the Commander, U.S. Army Materiel Command, ATTN: AMCAM-LG, ALEX VA 22333-0001, when a significant readiness impact is identified or a “serious mission impact statement” received from a MACOM indicates an impact on Army readiness at the retail level.

(6) Investigate malfunctions of conventional, chemical, and nuclear ammunition. Identify requirements for on-site investigations and conduct DAITM investigation if required.

(7) Forward information copies of DA Form 4379-R (Ammunition Malfunction Report) and malfunction investigation results to Director, U.S. Army Technical Center for Explosives Safety, ATTN: SMCAC-ES, Savanna, IL 61074-9639.

(8) List in an official DA level publication and an accessible automated database all class V items/lots and/or serial numbers (to include MICOM managed items) which are suspended or restricted. Publication will be updated no less frequently than annually and the automated database will be updated no less frequently than monthly. Suspension/restriction actions or releases disseminated between updates will be issued by an interim message system and will make reference to the governing suspension/restriction publication for inclusion, change or deletion (as appropriate).

e. The Commanding General, U.S. Army Missile Command will—

(1) Issue suspension or restriction notices for individual lots of guided missiles and large rockets.

(2) Issue temporary notices for type, block, or serious impact suspensions or restrictions of guided missiles and large rockets referred to AMC for approval. Referrals for approval will be made to the Commander, U.S. Army Materiel Command, ATTN: AMCAM-LG, ALEX VA 22333-0001. These referrals will include, but not be limited to stockpile impact (training and war reserve), substitute items (when applicable), production status and security assistance recipients for the last 7 years.

(3) Constantly monitor individual and accumulated suspensions or restrictions and assess the effect on readiness at the wholesale level and, as much as possible, at the retail level.

(4) Notify the Commander, U.S. Army Materiel Command, ATTN: AMCAM-LG, ALEX VA 22333-0001, when a significant impact is identified or a “serious mission impact statement” received from a MACOM indicates an impact on Army readiness at the retail level.

(5) Investigate all reported malfunctions of guided missiles and large rockets. Identify requirements for on-site investigations and conduct DAITM investigation if required.

(6) Forward information copies of completed DA Form 4379-1-R (Missile and Rocket Malfunction Report), and malfunction investigation results to Director, U.S. Army Technical Center for Explosives Safety, ATTN: SMCAC-ES, Savanna, IL 61074-9639.

(7) Provide a list of all MICOM managed class V items/lots and/or serial numbers which are suspended or restricted to AMCCOM for publication in a DA level publication and an accessible automated database. Suspension/restrictions actions or releases disseminated between updates, will be issued by an interim message system and will make reference to the governing suspension/restriction publication for inclusion, change or deletion (as appropriate).

f. The Director, U.S. Army Technical Center for Explosives Safety (USATCES) will—

(1) Notify the U.S. Army Safety Center (USASC) when notified of a malfunction.

(2) Provide technical assistance to a DA Centralized Accident Investigation, Ground (CAIG) Board when requested by USASC according to chapter 6 of AR 385–40.

Chapter 2 Procedures

2–1. Malfunction investigation and reporting procedures

a. Conventional ammunition and guided missiles.

(1) The activity commander, unit commander, or senior person in charge, will ensure that all available information on ammunition malfunctions are promptly obtained and reported for early determination of the cause of the malfunction and timely action to prevent similar malfunctions.

(2) The commander or person in charge of the firing unit will—

(a) Immediately cease firing suspected ammunition and notify range control or equivalent.

(b) Immediately contact the local ammunition officer or QASAS at the ammunition supply point (ASP) where the ammunition was stored and issued.

(c) Relate all available information on the malfunction to the local ammunition officer.

(d) Secure the malfunction site to prevent the removal or relocation of ammunition or ammunition components, weapons or weapons debris and ammunition packaging until authorized by the ammunition officer or the locally assigned quality assurance specialist (ammunition surveillance) (QASAS).

(3) The ammunition officer, with the locally assigned QASAS, if available, and the AMC weapon representative, when appropriate, will—

(a) Gather data as necessary for all reported malfunctions.

(b) Locally suspend affected ammunition and immediately notify all units in possession of suspended stock (see para 2–4c).

(c) Ensure prompt and complete reporting of ammunition malfunctions (see app B for dud and misfire reporting rates) to AMC as stated in *f* and *g* below for review and action. All missile malfunctions will be reported. The reportable rate for missile misfires and duds is one.

(4) Activities responsible for ammunition involved in the malfunction will send reports of interest to other commands, installations, or agencies for review and action as appropriate.

(5) Unless overriding safety or security considerations exist, the immediate malfunction area, including equipment and weapons, will not be disturbed before an investigation is conducted. The appropriate AMC commodity command will notify the malfunction location within the continental United States (CONUS) or the MACOM outside the continental United States (OCONUS) within 24 hours from receipt of the preliminary report as to whether or not an on-site DAITM investigation will be conducted. Where no DAITM on-site investigation is conducted, a local investigation will be conducted.

(6) Fragments and residue will be kept for 90 days after the malfunction. If disposition instructions are not received within 90 days, local disposition is authorized, unless the malfunction involved personal injury or property damage of civilians. In such cases, fragments and residue should not be disposed of until after the command's staff judge advocate or legal advisor concurs.

(7) Accidents or incidents will be reported according to AR 385–40, chapter 3. Accidents in which an ammunition malfunction is thought to be a direct or contributing factor will also be reported according to this regulation.

(8) Ammunition items to be reported according to appendix B, if not imminently hazardous, will be retained by the firing unit pending an investigation or until disposition instructions are received from the local ammunition officer.

b. Nuclear materiel.

(1) Malfunctions classed as nuclear weapons accidents or incidents will be reported as stated in AR 50–5 paragraph 5–5 and local directives.

(2) A malfunction of ancillary gear or nonexplosive components will be reported as stated in TB9–1100–803–15, paragraph 5–1, unless it is a contributory safety hazard; for example, premature arming or nuclear incident or accident. In such a case, a report of malfunction, incident, or accident will be submitted as applicable.

(3) The ammunition officer will impound nuclear weapons involved in accidents, incidents, or malfunctions until an investigation is complete or waived by the technically responsible AMC element. Items are impounded to prevent removal, alteration, or tampering.

c. *Security Assistance materiel.* If malfunctions involve U.S. Army munitions supplied under security assistance, the U.S. Government Military Assistance Advisory Group (MAAG), Defense Attache Office, or embassy representative will—

(1) Notify the host country of the requirement to report all malfunctions of security assistance ammunition.

(2) Advise and assist the host country ammunition officer on the preparation and submission of the report.

(3) Provide weapons or munitions expertise through the U.S. Army Security Affairs Command to assist in the investigation of malfunctions when requested by the host country.

d. *Ammunition malfunctions in combat.* Although the enforcement of all provisions of this regulation during combat operations may not be practical, preliminary reports are required. Detailed reports are desired if possible. The identity of lot numbers for ammunition involved in malfunctions is very important. If lot numbers cannot be determined, report the malfunction as “lot unknown.” With or without a known lot number, the reports and investigation will be as complete as possible within combat operation limits.

e. *Test range and proving ground reporting.* Ammunition test ranges and proving grounds with an ammunition test mission will report malfunctions of standard ammunition as follows:

(1) The local ammunition officer will submit both a preliminary and a detailed report for all malfunctions. The reports will be distributed as stated in *f* and *g* below.

(2) Installations testing under the Centralized Control Function Test Program may submit a DA Form 984 (Munitions Surveillance Report Descriptive Data of Ammunition Represented by Sample) in lieu of the DA Form 4379–R.

(3) Information copies of all malfunction reports will be forwarded to the Commander, U.S. Army Test and Evaluation Command, ATTN: AMSTE–LG–C, Aberdeen Proving Ground, MD21005–5055.

f. Preliminary reports.

(1) After being informed by the firing unit of a malfunction, the local ammunition officer of the storage activity or the QASAS will immediately make a preliminary report. These reports will be submitted in accordance with (4) and (5) below. Reports for class A and B malfunctions will be made by the fastest means available such as telephone, telegraph, teletype, radio, or cable. Class C malfunctions will be submitted using DA Form 4379–R or DA Form 4379–1–R. A class C malfunction may be submitted using class A or B procedures if special assistance is required or an unusual circumstance exists. Preliminary reports will be continued under condition MINIMIZE.

(2) The preliminary report will not be delayed if an ammunition officer or QASAS is not available.

(3) When malfunctions occur in an overseas command, the preliminary report will be relayed to the commander or designated representative. This information, in turn, will be properly relayed to the proper address in (4) or (5) below by the end of the day during which the malfunction occurred.

(4) Preliminary reports on malfunctions of conventional ammunition and nuclear materiel will be patterned after DA Form 4379–R, including all Army-designated Class V items except guided missiles and large rockets. This includes warheads and warhead sections (when not assembled to guided missiles or large rockets) and small

rockets (2.75 inch and smaller). The preliminary report should contain all applicable information requested in the DA Form 4379-R, but will not be delayed if some of the information is not immediately available. Preliminary reports of class A and B malfunctions will be submitted (by telephone if possible) to Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN:AMSMC-QAS-C, Rock Island, IL 61299-6000, DSN 793-7570, Commercial 309-782-7570 (FAX DSN 793-7136, Commercial 309-782-7136). During non-duty hours (including holidays and weekends), reports should be made to the AMCCOM staff duty officer, DSN 793-5621, Commercial 309-782-5621. Class C malfunctions may be reported by routine message.

(5) Preliminary reports of class A and B malfunctions for guided missiles and large rockets will be patterned after DA Form 4379-1-R. These reports will be submitted to Commander, U.S. Army Missile Command, ATTN: AMSMI-MMC-AM, Redstone Arsenal, AL 35898-5679, DSN 746-0341, Commercial 205-876-0341.

(6) The appropriate commodity command will report by telephone all class A malfunctions to U.S. Army Materiel Command, ATTN:AMCAM-LG, DSN 284-5544, Commercial 703-274-5544. During non-duty hours (including holidays and weekends), reports should be made to the AMC staff duty officer, DSN 284-9223, Commercial 703-274-9223.

(7) Identical report numbers should be referenced in all correspondence covering the same malfunction. To ensure uniform procedures, assign report numbers consecutively, show the symbol of the reporting unit, the number of reports submitted, and the two digit calendar year. For example, the report of a unit's first malfunction for calendar year 1993 would be numbered "Unit Symbol-1-93"; the unit's second report for 1993 would be numbered "Unit Symbol-2-93."

(8) All preliminary reports of malfunctions involving ammunition and explosives will include the RCS CSGLD-1961.

g. Detailed report.

(1) A detailed written report, with pictorial evidence of class A and B malfunctions if possible, will follow the preliminary report. These reports will be sent through proper channels within 10 days of the reported malfunction. The report should be expedited through channels to ensure prompt arrival at the investigating office.

(2) The detailed report will include all points specified on DA Form 4379-R or DA Form 4379-1-R, as appropriate, and any other available pertinent information. Eyewitness accounts or statements should be included if available.

(3) Identify all correspondence covering the same malfunction with identical report numbers in according to (6) and (7) above.

(4) Instructions for completing detailed reports are given in paragraph 2-2.

2-2. Preparing DA Form 4379-R (RCS CSGLD-1961 (MIN)) and DA Form 4379-1-R (RCS CSGLD-1961 (MIN))

a. DA Form 4379-R (fig 2-1).

(1) This form is used to submit detailed reports to the Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN:AMSMC-QAS-C, Rock Island, IL 61299-6000. DA Form 4379-R will be locally reproduced on 8 1/2 by 11-inch paper. A copy for reproduction purposes is located at the back of this regulation. Additionally, DA Form 4379-R may be electronically generated. The electronically generated form must contain all data elements and follow the exact format of the existing printed form. The form number of the electronically generated form, will be shown as DA Form 4379-R-E and the date will be the same as the date of the current edition of the printed form.

(2) Since this form is designed for reporting a wide variety of malfunctions, some of the data requested will not apply in every case. If the data do not apply to the malfunction being reported, enter "Not Applicable" or "NA"; if the data is not available within the specified reporting time, enter Unknown or UNK.

(3) An information copy should be sent to the local safety office and to the command safety office.

(4) Information copies of reports on HYDRA-70/2.75 inch rockets and warheads, or warhead sections not assembled to guided missiles or large rockets, will be sent to Commander, U.S. Army Missile Command, ATTN: AMSMI-MMC-AM, Redstone Arsenal, AL 35898-5679.

(5) For CONUS malfunctions, information copies of all completed reports will be sent to commander of the appropriate MACOM, ATTN: Ammunition Officer.

b. DA Form 4379-1-R (fig 2-2).

(1) This form will be used to report all malfunctions involving guided missiles and large rockets assembled with nuclear or non-nuclear warhead sections and all separately packaged components required to assemble a complete missile or large rocket (except unassembled warheads). DA Form 4379-1-R will be locally reproduced on 8 1/2 by 11-inch paper. A copy for reproduction purpose is located at the back of this regulation. Additionally, DA Form 4379-1-R-E may be electronically generated. The electronically generated form must contain all data elements and follow the exact format of the existing printed form. The form number of the electronically generated form will be shown as DA Form 4379-1-R-E and the date will be the same as the date of the current edition of the printed form.

(2) Detailed reports will be sent to the Commander, U.S. Army Missile Command, ATTN: AMSMI-MMC-AM, Redstone Arsenal, AL 35898-5679.

2-3. Notification of defects in ammunition and explosives

a. Defective ammunition as noted below will not be fired. The officer in charge of firing will notify the following of ammunition showing defects that was issued to troops for firing (RCS exempt: AR 335-15, para 5-2c):

(1) The local ammunition officer, QASAS, or both.

(2) The responsible combat support force.

b. Typical defects to be reported include, but are not limited, to the following:

(1) Projectiles of fixed rounds found loose in cartridge cases when this characteristic is representative of the entire lot or a large part of it.

(2) Fuzes on fuzed rounds that are—

(a) Inadequately tightened.

(b) Insecurely staked (when required).

(c) Missing safety devices.

(3) The safety and arming mechanism is in an armed position.

(4) Ammunition that shows serious deterioration or corrosion.

(5) Ammunition that shows any evidence of incipient or latent defects in material or assembly.

c. The ammunition officer, QASAS, or both will investigate all observed or reported defects. They will report and handle defects per DA Pam 738-750.

d. Defective ammunition found before firing will not be fired. If procedures to make it safe are not required, the ammunition will be properly repackaged, marked to show defective contents, and turned in to the supporting ammunition supply point.

2-4. Suspensions

a. General. These procedures apply to suspension of all munitions by type, model, or individual lot, and their eventual disposition. The CG, AMCCOM, or the CG, MICOM, as applicable, will—

(1) On receiving a report of a malfunction that presents an immediate threat of inflicting death or major injury to user personnel or friendly forces (class A malfunction), immediately take action, to include non-duty hours, to suspend affected stocks. The following will be notified of the suspension or restriction action by the quickest means:

(a) Consignees, field installations, depots, proving grounds, loading plants, and other Army areas or commands affected.

(b) Other appropriate agencies.

(c) The Department of the Navy.

(d) The Department of the Air Force.

(2) Provide instructions for lifting suspensions or restrictions.

(3) Provide needed replacements when requisitions are received.

- (4) Provide disposition instructions for suspended stocks.
- (5) Notify SA recipients through the U.S. Army Security Affairs Command channels of suspension, restriction, and release actions when it is known that they received affected lots. When message supplements to TB 9-1300-385 are sent to MAAGs, Defense Attache Offices, embassies, or other non-U.S. addressees within the affected country, this notification is not required.
- (6) Send a summary of the investigation results to each SA recipient that reports a malfunction. Include corrective action. This information will be sent through U.S. Army Security Affairs Command channels.
- b. Type, block, or serious impact suspensions and restrictions.*
- (1) The CG, AMC (AMCAM-LG) will—
- (a) Approve type, block, or serious impact suspensions and restrictions of conventional and chemical ammunition, guided missiles and large rockets according to paragraph 1-4b(4).
- (b) Lift suspensions and restrictions previously approved by CG, AMC (AMCAM-LG).
- (2) HQDA (DALO-SMA) will provide final decisions on suspension and lifting of suspensions or restrictions for—
- (a) Any nuclear munitions.
- (b) Type, block, or serious impact suspensions or restrictions for conventional chemical weapons, guided missiles and large rockets referred by CG, AMC (AMCAM-LG) to DALO-SMA for decision.
- (3) AMCCOM or MICOM, as applicable, will forward all type, block, or serious impact suspensions and restrictions of conventional and chemical ammunition, guided missiles and large rockets to CG, AMC(AMCAM-LG) for review according to paragraph 1-4b.
- (4) These decisions will be published by the applicable commodity command as suspensions or releases.
- c. Local suspensions of ammunition.* Activities will locally suspend a lot of ammunition from use if—
- (1) Ammunition is the possible cause of an accident causing death or lost-time injury.
- (2) Any lot of ammunition or a component of it has malfunctioned so that its further use will probably cause injury or equipment damage. (See AR 385-62, AR 385-63, and paragraphs 2-3a through d of this regulation).
- (3) Instance of same lot being involved in two Class C malfunctions within 48 hours.
- d. Disposition instructions.* Installations storing ammunition that is suspended will—
- (1) Hold suspended munitions until disposition instructions are

received from AMCCOM or MICOM (as appropriate). To get disposition instructions for permanently suspended munitions managed by AMCCOM, units will report involved quantities and related information per DA Pam 738-750 after fix is included in TB 9-1300-385 or its supplement.

(2) Assure all suspensions remain in effect until AMCCOM or MICOM releases or directs release for issue and use when—

(a) Munitions have been locally suspended.

(b) Temporary suspension has been issued by AMCCOM or MICOM.

e. Lot inventory data. Units receiving a temporary suspension notice from AMCCOM or MICOM will—

(1) Report on-hand quantities of the concerned materiel to AMCCOM or MICOM as appropriate within 5 days. For each report on conventional or chemical ammunition sent to AMCCOM, an information copy should also be sent to Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-DSM-A, Dover, NJ 07801-5000. Negative reports are not required unless specified in the suspension notice. The report(RCS exempt: AR 335-15, para 5-2c) will include the on-hand quantity by—

(a) Nomenclature.

(b) National stock number (NSN).

(c) Department of Defense Identification Code(DODIC).

(d) Lot number.

(e) Serial number when appropriate.

(2) Using units reporting quantities on-hand should assess the effect of suspensions or restrictions. Suspension or restriction actions resulting in a serious mission impact should be promptly reported to the proper MACOM.

(3) Commands receiving “serious mission impact statements” concerning conventional or missile ammunition from subordinate using units, will assess and report the overall impact on mission readiness to the Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-DSD, Rock Island, IL 61299-6000 or Commander, U.S. Army Missile Command, ATTN: AMSMI-MMC-AM, Redstone Arsenal, AL 35898-5290 as appropriate, with an information copy to Commander, U.S. Army Materiel Command, ATTN: AMCAM-LG, 5001 Eisenhower Avenue ALEX VA 22333-0001. Negative impact responses are not required.

AMMUNITION MALFUNCTION REPORT For use of this form, see AR 75-1; the proponent agency is DCSLOG				1. REPORT NO. W16R5K-3-93		Requirements Control Symbol - CSGLD 1961	
2. MALFUNCTIONING ITEM Chg, 1-lb TNT Demo Blk, IOP-5-26, 1375-00-935-6139-M032				3. ITEM COMPONENTS (See back of form)			
4. MALFUNCTION DESCRIPTION Premature detonation							
5. SITE OF MALFUNCTION Range 50		6. UNIT CONTROLLING SITE Commander Fort Drum ATTN: AFZS Watertown, NY 13602-5000		7. UNIT USING AMMUNITION Commander Fort Drum Company A, 41st Engineer Bn Watertown, NY 13602-50000			
9a. DATE MALFUNCTION OCCURRED 15 Feb 93		8b. TIME 0615 hrs		9b. CASUALTIES (Hospitalized) 1		9c. CASUALTIES (Other Injuries) 0	
9a. CASUALTIES (No. Killed) 0							
9d. DESCRIPTION TNT Blk detonated while setting charge. Soldier lost right forearm.							
10. DAMAGE a. WEAPON DAMAGED? ☐ Yes ☐ No ☒ N/A b. DAMAGE REPAIRABLE AT UNIT LEVEL? ☐ Yes ☐ No ☒ N/A				10c. DESCRIPTION Detonation occurred in Range 50. No weapon or property damage.			
11. DETONATION ☐ a. None ☐ b. In Weapon				c. M FROM WEAPON NA		d. M FROM NEAREST PERSON .25	
12. Quantity Remaining a. FIRING SITE See back b. LOCAL STORAGE See back c. SUSPENDED? ☒ YES ☐ NO				13. EXHIBITS AVAILABLE (Hold Exhibits Pending Disposition Instructions per AR 75-1, para 2-1) ☐ a. Fragments ☐ b. Intact Components ☐ c. Weapon ☒ d. None			
14. Firing Conditions for Malfunction Lot							
a. WEAPON NA				b. TARGET NA			
c. RANGE NA M		d. AZIMUTH NA		e. ELEVATION NA		f. ZONE NA	
g. FIRED HOW MANY ROUNDS PER MINUTE FROM WEAPON NA		h. FOR HOW MANY MINUTES BEFORE MALFUNCTION NA		i. TOTAL FIRED FROM WEAPON ON DAY OF MALFUNCTION NA			
j. TOTAL MALFUNCTIONED 1		k. TOTAL FIRED 1		l. MALFUNCTION RATE 100 %			
15. Terrain							
a. FIRING SITE Dry grassy plain		b. DOWN RANGE Dry grassy plain		c. POSSIBLE OBSTRUCTIONS None		d. CLEAR VIEW OF FLIGHT PATH NA M	
16. Weather Conditions							
a. VISIBILITY 2000 meters		b. PRECIPITATION Clear		c. TEMPERATURE 70 F		d. PRIOR 24 HOURS HIGH 80 F LOW 65 F	
						e. RELATIVE HUMIDITY 85%	
17. Malfunction Lot Storage Conditions				18. Packaging of Malfunction Lot			
a. Firing Site: ☒ Open ☐ Enclosed				b. Local Storage: ☐ Open ☒ Enclosed			
c. UNPACKED HOW MANY HRS. BEFORE MALFUNCTION .5 hrs		d. MAGAZINE TYPE 80-ft earthcovered magazine		e. STORED HOW MANY MONTHS 8		f. Original Package? ☒	
						g. Original Seal? ☒	
						h. Package Adequate? ☒	
						i. Package Damaged? ☒	
19. ADDITIONAL DATA (If more space is needed, use continuation sheet or back of form)							
20a. FOR ADDITIONAL DATA, CONTACT Mr. R. Johnson (Surv1 Ofc)				21a. PERSON COMPLETING REPORT Mr. R. Johnson			
b. TELEPHONE NO. (Include Area Code) DSN 341-5596				b. TELEPHONE NO. (Include Area Code) DSN 341-5596		c. DATE 15 Feb 93	

DA FORM 4379-R, JAN 89

DA FORM 4379, JUN 75 MAY BE USED

Figure 2-1. Sample of a completed DA Form 4379-R

Additional information:

Blk. 3. Item Components:

- a. M60 Fuse igniter, NSN: 1375-00-691-1671-M766, Lot: SGK85A010-003.
- b. M700 Safety fuse, NSN: 1375-00-028-5246-M670, Lot: ENB86L011-005.
- c. M7 Blasting cap, NSN: 1375-01-193-2976-M131, Lot: HEC84B007-003.

Blk. 12. Quantity remaining:

	Firing Site	Local Storage
a. 1375-M032	66	1206
b. 1375-M131	100	852
c. 1375-M670	125	2458
d. 1375-M766	110	1933

Blk. 19. Additional data:

Soldier taped 2 one-pound TNT blocks together, primed each separately, and then ignited fuse. Soldier walked with charge approximately 13 seconds. When he started to emplace charge, one block functioned. Second block did not detonate. Fuse burn time tested at 51 seconds per foot. Length of fuse on charge was fifteen inches.

Figure 2-1. Sample of a completed DA Form 4379-R—Continued

Legend for Figure 2-1:

Figure 2-1

Preparation instructions for DA Form 4329-R (RCS CSGLD-1961(MIN))

Block 1. Enter report number (para 2-1f(7)). The report number will be identical for both preliminary and detailed reports covering the same malfunction. Enter the date of the preliminary report beneath the report number.

Block 2. Enter complete nomenclature for the item that malfunctioned. Include as applicable the caliber, type, model, NSN, DODIC, lot number, and serial number (if available).

Block 3. Provide the following information, as applicable (if necessary, continue on the back of form or on a separate sheet of paper):

a. For small arms and fixed and semifixed conventional ammunition (including mortar rounds)—

- (1) Fuze type, model, and lot number.
- (2) Headstamp of cartridge case (manufacturer's symbol and year of manufacture).

b. For separate loading conventional ammunition.

(1) Projectile caliber, type, model, NSN, DODIC, lot number, and kind of filler.

(2) Type and lot number of booster or burster.

(3) Propelling charge caliber, type, model, NSN, DODIC, and lot number.

(4) Weight of propelling charge, to include a statement of the number of increments used with the round that malfunctioned.

(5) Physical condition of propelling charge bag and wrappings.

(6) Pressure and velocity of round that malfunctioned (if available).

(7) Fuze type, model, NSN, DODIC, and lot number.

(8) State whether the fuze was properly assembled and seated with a fuze wrench prior to loading.

(9) Primer type, model, NSN, DODIC, and lot number.

c. For all other conventional munitions (for example, grenades, rockets, mines, smoke pots, pyrotechnics, demolition materiel, cartridge actuated devices, and propellant actuated devices)—

(1) Type, model, NSN, DODIC, and lot number of end item and components such as fuzes, rocket motors, and bursters.

(2) Type of filler (chemical munitions).

d. For warheads and warhead sections (conventional or chemical filler) not assembled to guided missiles or large rockets—

(1) Type of filler (chemical munitions).

(2) Type, model, and lot number of fuze.

(3) Type, model, and lot number of propulsion system.

(4) Type, model, and lot number of adaption kit or adaption kit component involved in malfunction.

e. For nuclear weapons projectiles—

(1) Warhead type, model, and serial number.

(2) Yield option (if selectable).

(3) Propelling charge type, model, lot number, and weight, with number of increments used.

(4) Pressure and velocity of round that malfunctioned (if available).

f. For nuclear weapons warhead sections—

(1) Warhead type, model, and serial number.

(2) Yield option (if selectable).

(3) Fuze type, model, and lot number.

(4) Propulsion system type, model, and lot number.

(5) Type, model, and lot number of adaption kit or adaption kit component involved in malfunction.

g. For nuclear demolition munitions—

(1) Warhead type, model, and serial number.

(2) Yield option (if selectable).

(3) Fuze or firing device type, model, and lot number.

(4) Mode of operation (if optional).

Block 4. Enter brief description of malfunction.

Block 5. Enter the name of the geographic location or military installation where the malfunction occurred, including the range number.

Block 6. Enter the complete identification and mailing address of the organization or military unit that must be contacted in order to arrange a visit to the malfunction site.

Block 7. Enter the complete identification and mailing address of the organization or military unit that was using the ammunition at the time it malfunctioned (if different from block 6.).

Block 8. Enter the date and local military time of the malfunction.

Block 9. Enter the number of personnel casualties inflicted by the malfunctioning item. Hospitalization refers to in-patient hospital care only. Describe all injuries, using the back of the form or a continuation

sheet if necessary. Indicate the location of casualties with respect to the weapon.

Block 10. Indicate whether the weapon was damaged by the malfunction and, if so, whether or not the damage could be repaired at the unit level. Describe the damage, using the back of the form or a continuation sheet (if necessary), and attach any photographs, sketches, measurements, or other relevant description. Provide information on damage to materiel not associated with the weapon when such information supports the suspected cause of the malfunction or helps define the extent of the hazard (as in the cases of chemical exposure or radioactive contamination).

Block 11. Self-explanatory.

Block 12. Enter the quantity of the malfunctioning ammunition on hand, and state whether or not a local suspension is in effect for the malfunctioning lot.

Block 13. Self-explanatory.

Block 14. Enter an abbreviated item nomenclature and enter the NSN and serial number of the weapon or launcher in which the malfunctioning item was fired. Fill in the remaining blanks as applicable. Provide the following information (when appropriate) on the back of the form or on a continuation sheet:

- a. Name of manufacturer (plant or arsenal).
- b. For mortar rounds, include the number of propellant increments fired.
- c. Length of recoil.
- d. Condition of weapon or launcher prior to the malfunction. Include (as applicable) the date of last overhaul, overhauling installation, the timing and headspace dimension of the weapon (by actual gage check), the date of the last cleaning, and the date of the last boresight.
- e. For weapons 37-mm or over, enter the total number of round fired through the tube before the malfunction. Read and report the pullover gage reading of the damaged gun tube. If the tube has been destroyed or the gage is not available, extract the most recent pullover gage reading from the log book and list the total number of rounds fired subsequent to that reading.

Block 15. Briefly describe the general conditions at the firing site and along the flight path of the item (for example, marsh, jungle, woods, dry grassy plain, or muddy hillside). Describe any natural or artificial barriers, such as overhanging trees or heavy camouflage, that may have been an obstruction in the line of fire. Enter the distance for which witnesses to the malfunction had an unobstructed view of the flight path.

Block 16. Enter the estimated visibility limit due to atmospheric conditions such as haze, smoke, rain, or fog. Briefly describe the nature and quantity of any precipitation such as rain, sleet, or snow, either at the time of, or shortly before, the malfunction. Enter the temperature and relative humidity.

Block 17. Self-explanatory.

Block 18. Mark the appropriate blocks. If the package was determined to be inadequate or damaged, provide a description on the back of the form or on a separate continuation sheet.

Block 19. On the back of the form or on a separate continuation sheet (as applicable)—

- a. Describe the events immediately before the malfunction and actions of personnel following the malfunction.
- b. Indicate the location of casualties with respect to the weapon and the malfunctioning item.
- c. Describe the most probable path of fragments, the distance fragments were found from the malfunction site, and their weight and appearance. Attach photographs if available.
- d. For nuclear or chemical items, describe the extent and type of contamination resulting from the malfunction. Provide radiation readings if applicable.
- e. Indicate whether operation of the weapon was normal just before the malfunction and describe the action of the weapon at the time of the malfunction.
- f. Indicate whether there is evidence or possibility that foreign objects such as pebbles, gravel, or stones could have been blown into the bore from the previous rounds.
- g. Indicate whether there was any evidence of unburned powder or residue in the tube.
- h. If the round detonated in the gun tube, indicate where in the tube the detonation occurred, that is, at breech, or muzzle, or half way.
- i. Indicate whether the projectile reached the anticipated point of impact or intercept.
- j. If a premature detonation, indicate whether it functioned at high or low order.
- k. Indicate the setting of the dual purpose or time fuze.
- l. For electrically initiated ammunition or explosives, describe any nearby sources of electrical or electromagnetic energy, including power lines, generators, microwave towers, and radar antennae. Include the power rating of the source and its distance from the ammunition at the time of malfunction.
- m. Describe any nonstandard condition such as the use of extra propellant beyond that specified for the weapon and round, or any deviation from instructions in the technical manuals.
- n. Indicate whether unauthorized modifications to the weapon or ammunition had been made and if so, whether the modification is believed to have contributed to the malfunction.
- o. Provide a copy of the press release, if any.
- p. For a 2.75-inch hangfire, include the tube number in which the hangfire occurred, type of aircraft involved, location of the launcher on aircraft, and number of rockets fired through the tube before hangfire.
- q. For malfunctions of rifle grenades, indicate whether bulletted ammunition was in use.

Block 20. Enter the names and phone numbers of witnesses or other persons who can provide additional first-hand information.

Block 21. Enter the name, signature, and phone number of the person who compiled the information for the report and the date of the report.

MISSILE AND ROCKET MALFUNCTION REPORT For use of this form, see AR 75-1; the proponent agency is DCSLOG				Requirements Control Symbol - CSGLD 1961	
TO Commander U.S. Army Missile Command ATTN: AMSMI-LC-AM Redstone Arsenal, AL 36809			FROM Commander 2044th CSG (ORD) ATTN: ASP # 1, Surveillance APO NY 09112		
1a. DATE OF MALFUNCTION 27 Feb 93	1b. TIME OF MALFUNCTION 1037 hrs	2. MALFUNCTION REPORT NO. WHHF8P-1-93	3. DATE OF REPORT 27 Feb 93		
4a. UNIT (Battery) C Company		4b. BATTALION 1/7 Inf			
4c. DIVISION 3rd Inf		4d. OTHER (Specify)			
5. LOCATION OF FIRING Range 301, position 2.2 Grafenwoehr, Germany		6. TYPE AND METHOD OF FIRING		7. MISSILE TIME OF FLIGHT (SEC)	
		a. Type of Firing Troop training		1.5 sec	
		b. Method of Firing Surf. to Surf.			
8a. MISSILE OR ROCKET TYPE TOW GM, Surface Attack, BGM-71A2		8b. MODEL NO. BGM-71A2			
9a. MISSILE SERIAL NO 004498	9b. MISSILE LOT NO HAQ-104-10A		9c. MISSILE NSN 1410-01-139-1512-PB94		
10a. WARHEAD TYPE HEAT M207E1	10b. SERIAL NO NA		10c. LOT NO. IOP-3-5		
11a. ROCKET MOTOR MODEL N-14	11b. SERIAL NO NA		11c. LOT NO. RAD-1-8-70		
12a. MOTOR CLUSTER MODEL NA	12b. SERIAL NO NA		12c. LOT NO NA		
13a. IGNITER MODEL NA	13b. SERIAL NO NA		13c. LOT NO NA		
14a. FUZE MODEL NA	14b. SERIAL NO. NA		14c. LOT NO. NA		
15a. S&A DEVICE MODEL NA	15b. SERIAL NO NA		15c. LOT NO NA		
16a. LIQUID PROPELLANTS (Fuel) NA		16b. LIQUID PROPELLANTS (Oxidizer) NA			
17a. LAUNCHER MODEL M220A1		17b. SERIAL NO. (If damaged, explain in Item 32) 21174			
18a. WEATHER CONDITIONS (Wind) 0-5 MPH		18b. WEATHER CONDITIONS (Visibility) Overcast		18c. WEATHER CONDITIONS (Temperature) 40 degrees F.	
19. TARGET RANGE (Meters or Kilometers) 1500 meters	20. TARGET ALTITUDE (Feet or Kilometers) NA	21. TARGET AZIMUTH (MILS) NA		22. TARGET SPEED (Knots or Meters Per Sec) Stationary	
23. TELEMETRY SYSTEM NA		24. STORAGE CONDITIONS PRIOR TO FIRING OR OPERATION Stored in original containers in an 80-foot earthcovered magazine. Item was unpacked 30 minutes prior to firing.			
25. NATURE OF PROPERTY DAMAGE None		26. NUMBER OF FATALITIES OR INJURIES None			
27. DESCRIPTION OF MALFUNCTION (Erratic Flight, Short Round, In-Flight Breakup, Down-Range Premature, Etc.) (Continue on Reverse Side) Missile fired, flew down range, and nosed into ground. Impact was approx. 128 meters from launcher. Investigation revealed the guidance wires were either disconnected at launch or cut after launch. Missile did not detonate upon impact. A MICOM representative was on site during the initial investigation.					

DA FORM 4379-1-R, JAN 89

DA FORM 4379-1-R, JUN 75 MAY BE USED

Figure 2-2. Sample of a completed DA Form 4379-1-R

27. DESCRIPTION (Continued)

28a. NO. ROUNDS/MISSILES FIRED FROM SUSPECT LOT ON DAY OF MALFUNCTION	28b. NO. ROUNDS/MISSILES REMAINING FROM SUSPECT LOT ON DAY OF MALFUNCTION	29. LOCATION OF MALFUNCTION IN RELATION TO WEAPON OR LAUNCHER (Yards or Meters)
1	3	128 meters downrange

30. CORRECTIVE ACTION TAKEN (Such as Withdrawal of Missiles/Rockets from Use)

31a. FRAGMENTS OR COMPONENTS OF INTEREST TO MALFUNCTION INVESTIGATION ARE AVAILABLE? ☐ YES ☒ NO	31b. TECHNICAL ASSISTANCE FROM COMMODITY COMMAND IS NECESSARY TO DETERMINE CAUSE OF MALFUNCTION? ☐ YES ☒ NO
---	---

32. OTHER PERTINENT INFORMATION (Include Sketches or Photographs of Important Features that may Assist in Establishing the Cause of the Malfunction)

None

33a. NAME OF WITNESS WHO CAN PROVIDE ADDITIONAL INFORMATION REQUIRED		33b. TELEPHONE NO. OF WITNESS	
SFC Steve Nelson		DSN 323-8813	
34a. TYPED NAME OF AMMUNITION OFFICER OR PERSON MAKING REPORT	34b. RANK	34c. SIGNATURE OF AMMUNITION OFFICER OR PERSON MAKING REPORT	34d. DATE
Lt. Joe Higgins	O-2		27 Feb 93

REVERSE OF DA FORM 4379-1-R, JAN 89

Figure 2-2. Sample of a completed DA Form 4379-1-R—Continued

Legend for Figure 2-2;

Figure 2-2

Preparation instructions for DA Form 4379-1-R (RCS CSGLD-1961(MIN))

Block 1. Self-explanatory.

Block 2. Give unit identification symbol and report number(para 2-1f(7)).

Block 3. Self-explanatory.

Block 4. Enter battery, battalion, division, or organization that experienced the malfunction.

Block 5. Enter location of malfunction (for example: McGregor Range, Fort Bliss, TX).

Block 6.

a. **Line a.** Enter type of firing, for example, troop training, fire demonstration, standardization flight, or annual service practice.

b. **Line b.** Enter method of firing such as surface-to-surface or surface-to-air.

Block 7. Enter missile flight time in seconds (length of time from launch until malfunction occurred).

Block 8. Enter missile type and model number (for example, SHIL-LELAGH-MTM-51A).

Block 9. Enter missile serial number, lot number, and NSN from missile body.

Block 10. Enter warhead type and the serial numbers from DD Form 1650 (Ammunition Data Card).

Block 11. Enter rocket motor model designation, serial, and lot numbers from DD Form 1650.

Block 12. Enter rocket motor cluster, model identification(where applicable), serial, and lot numbers from DD Form 1650. (If additional space is needed, continue under block 27 below.)

Block 13. Enter igniter model identification, serial, and lot numbers from DD Form 1650.

Block 14. Enter fuze model, serial, and lot numbers from DD Form 1650.

Block 15. Enter safe and arming device model, serial, and lot numbers from DD Form 1650.

Block 16. For missiles using liquid propellants include name of fuel and oxidizer (for example, IRFNA and UDMH).

Block 17. Enter model and serial number of launcher.

Block 18. Under weather conditions, include wind (speed and direction), visibility (for example, clear, foggy, or rain), and temperature(in degrees Fahrenheit) at time of malfunction.

Block 19 through 22. Self-explanatory.

Block 23. Enter model number of telemetry, where appropriate.

Block 24. Include information such as—

a. Conditions before malfunction.

b. Whether materiel was received in original sealed containers.

c. Length of time exposed to climatic conditions.

d. Whether materiel was stored in uncovered open storage.

Block 25. Describe damage to launcher or other property.Include photographs, sketches, and measurements of important features.

Block 26. Enter number of fatalities or injuries resulting from the malfunction. Classify injuries as minor or major. Classify as major only if lost-time, inpatient hospitalization is required.

Block 27. Describe missile or rocket. If flight was abnormal or erratic give details; for example, "the missile flew a normal trajectory for about 100 meters. At that time, it made a sharp downward turn to the right and detonated on impact with the ground."

Block 28. Enter number of missiles fired from the lot on the day the malfunction occurred. Give quantity of rounds of that lot remaining on hand.

Block 29. Enter estimated or actual distance, in yards or meters, from launcher where malfunction occurred.

Block 30. State whether or not the involved lot was temporarily suspended from further issue and use.

Block 31. Check applicable blocks, stating whether fragments or

other components of interest are available. Also indicate whether technical assistance is needed from the commodity command.

Block 32. Give other pertinent information for personnel evaluating the report (data helpful in determining the reason for the unsatisfactory performance). Include photographs or sketches of important features as appropriate. In addition, include all personnel actions or errors that may have contributed to the malfunction. If any unusual observations were made during preparation for firing, include a history statement.

Block 33. Enter names and phone numbers of witnesses (for example, REDEYE gunner) or other persons who can provide added first-hand information.

a. Typed or printed name. Enter the name of the person submitting the report.

b. Signature. Enter the signature of the person submitting the report.

Chapter 3

Support of DA investigation team for malfunctions

3-1. General

a. The DA investigation team for malfunctions is authorized to perform a comprehensive, first hand inquiry on-site, directed toward establishing conditions and the chain of events leading to the malfunction. DA investigation is designed to determine probable cause and initiate appropriate corrective action Army-wide.

b. Subject to the exercise of the U.S. Army Criminal Investigation Command (USACIDC) jurisdiction according to paragraphs 3-1 and 3-2 of AR 195-2, the CAIG will exercise coordination control of the accident investigation actions and access to the accident site.

c. The DA investigation team for malfunctions will coordinate on-site requirements with the CAIG in conduct of the malfunction investigation and will provide the CAIG a technical advisor upon the request of the CAIG.

d. Common source factual information will be freely exchanged between the CAIG and DAITM.

e. The names of witnesses interviewed may be shared between the CAIG, USACIDC and the DAITM. The contents of the interview statements will not be released between the investigatory bodies nor to any other investigatory bodies, although each body may conduct separate interviews with the witnesses.

f. AMC commodity commands (AMCCOM and MICOM)will—

(1) Perform DA investigations of class A and B malfunctions involving ammunition and explosives. This may include an on-site investigation.

(2) Determine within 24 hours of receipt of a preliminary report whether an on-site investigation by DAITM is required and advise reporting organization immediately by priority message.

(3) Direct shipment of samples and malfunction residue as required.

(4) Ensure DAITM provides exit briefing as required by the MACOM concerned.

g. MACOM experiencing a malfunction will—

(1) Designate a senior point of contact (POC)for subsequent inquiries and coordination of collateral investigations involving the reported malfunction. The designated POC will ensure that information gathered by collateral investigations is provided to DAITM.

(2) Coordinate the shipment of samples or malfunction residue as directed by the DAITM or AMC commodity command for support of the malfunction investigation.

(3) Ensure personnel of subordinate organizations involved in the malfunction are available to DAITM for interviews.

(4) Coordinate with the installation commander to assure explosive ordnance disposal (EOD) support is available.

h. Installation commanders will—

(1) Preserve the class A or B malfunction site intact until DAITM conducts the investigation or until advised that DAITM will

not investigate on-site. This does not preclude necessary safety and security actions regarding the malfunction site. If the site must be disturbed, obtain photographs of ammunition, fragments, weapons, and launchers for use during the DAITM malfunction investigation. If an on-site DAITM investigation is not made, assure that a local investigation is conducted and include results in the detailed malfunction report (para 2-2).

(2) Provide liaison to the DAITM. The liaison will act as initial POC for the installation, arrange local transportation, and provide other local support as requested.

(3) Obtain local EOD support, if requested by DAITM. This may involve personnel, x-ray equipment, metal detectors for fragment search, cameras.

(4) Coordinate with the commander of the unit experiencing malfunction and arrange for interviews of appropriate personnel as requested by DAITM. This may include the range safety officer, forward observers, witnesses, the gun crew, and other personnel.

(5) Arrange for expeditious shipment of samples or malfunction residue as requested.

i. The Director, U.S. Army Technical Center for Explosives Safety will provide a team member or technical assistance when requested by AMCCOM or MICOM.

3-2. Procedures

During the on-site investigation, DAITM will—

- a. Interview witnesses and other involved personnel.
- b. Examine the malfunction site. This includes examination and measurement of craters, fragments (in place), and the weapon involved in malfunction. The team may also require photographs of the site, materiel, and other related subjects.
- c. Examine storage facilities and review records for involved ammunition.
- d. Examine the condition of materiel remaining in storage.
- e. Review the weapon/missile log book.
- f. Search for fragments.
- g. Review other material as dictated by circumstances of the malfunction.

3-3. OCONUS points of contact

Coordination of the DAITM OCONUS travel schedule will be made with the following offices if the senior POC designated by the MACOM cannot be reached:

- a. Europe: AMC-Europe AMXEU-LA.
- b. Far East: AMC-Far East, AMXLA-FE.
- c. U.S. Army Pacific (USARPAC): LAO-Pacific, AMXLA-C-P.
- d. U.S. Army South (USARSO): LAO-Panama, AMXLA-C-E-PAN.
- e. Alaska: LAO-Alaska, AMXLA-C-W-AK.

Appendix A References

Section I Required Publications

AR 50-5

Nuclear Surety. (Cited in para 2-1b.)

AR 195-2

Criminal Investigation Activities. (Cited in para 3-1b.)

AR 335-15

Management Information Control System. (Cited in paras 2-3a and 2-4e.)

AR 385-40

Accident Reporting and Records. (Cited in paras 1-4f and 2-1a.)

AR 385-62

Regulations for Firing Guided Missiles and Heavy Rockets for Training, Target Practice, and Combat. (Cited in para 2-4c.)

AR 385-63

Policies and Procedures for Firing Ammunition for Training Target Practice and Combat. (Cited in para 2-4c.)

DA Pam 738-750

Functional Users Manual for the Army Maintenance Management System (TAMMS). (Cited in paras 2-3c and 2-4d.)

TB 9-1100-803-15

Army Nuclear Weapons Equipment Records and Reporting Procedures. (Cited in para 2-1b.)

TB 9-1300-385

Munitions Restricted or Suspended. (Cited in para 2-4a and d.)

Section II Related Publications

A related publication is merely a source of additional information. The user does not have to read it to understand this publication.

AR 702-12

Quality Assurance Specialist (Ammunition Surveillance).

AR 740-1

Storage and Supply Activity Operations.

FM 9-6

Munitions Support in Theater of Operations.

FM 9-38

Conventional Ammunition Unit Operations.

TM 9-1300-206

Ammunition and Explosives Standards.

Section III Prescribed Forms

DA Form 4379-R

Ammunition Malfunction Report. (Prescribed in paras 1-4d, 2-1e, 2-1f, 2-1g, 2-2a, and fig 2-1.)

DA Form 4379-1-R

Missile and Rocket Malfunction Report. (Prescribed in paras 1-4e, 2-1f, 2-1g, 2-2b, and fig 2-2.)

Section IV Referenced Forms

DA Form 984

Munition Surveillance Report Descriptive Data of Ammunition Represented by Sample

DD Form 1650

Ammunition Data Card

Appendix B Dud and Misfire Reporting Rates—Conventional Ammunition

B-1. Reporting malfunctions

a. Report dud and misfire rates greater than or equal to those in this appendix the same as other types of malfunctions. To be reportable, a lot of ammunition must meet or exceed both the minimum number of duds or misfires as well as the reportable malfunction rate shown in table B-1.

b. Malfunction reports for excessive duds and misfires are required so that timely corrective action may be taken for the rest of the lot. Note that rates in table B-1 are reportable rates, not expected rates.

B-2. Calculating percentage rates

a. When calculating percentage rates for duds or misfires, the total quantity used in the calculation will normally be the quantity fired by the using unit on a particular day.

b. Cumulative totals for the lot in question involving other days or units may be used only when local procedures require reporting and recording of lots fired and duds or misfires that occur; this applies even if they are less than the reportable rates in table B-1.

c. Records for time periods up to 30 days, may be combined if satisfactory records exist.

d. Examples of calculations are as follows:

(1) Unit A expends 30 fragmentation grenades with 2 duds. Records are not kept at this range on lots expended. However, this lot should be reported since 2 grenades were duds (reportable number) and the rate exceeded the 5 percent reportable rate (2 divided by 30 times 100 equals 7 percent).

(2) Unit B fires 62 mortar rounds of which 4 are duds. Since accurate records are kept at this range and the records show that within the past 30 days several other units have fired 238 rounds of the same lot and had 6 duds, the failure rate is figured using the total duds and total rounds during the 30-day period. The formula is as follows: Total duds divided by total rounds fired times 100 equals the percent failure rate: $((4 \text{ plus } 6) \text{ divided by } (62 \text{ plus } 238)) \text{ equals } (10 \text{ divided by } 300) \text{ equals } (.0333 \text{ times } 100) \text{ equals } 3.33 \text{ percent}$. Even though more than the minimum reportable number of duds occurred, no report should be made in this case because the cumulative dud rate is less than the reportable rate (3.33 percent versus 5.0 percent).

Table B-1
Reportable rates

Type of ammunition	Reportable malfunction rate in percent	Minimum Number ¹
High-explosive, target-practice, and chemical ammunition with all types of fuzes:		
Duds	5	2
Misfires	1	2
HEAT and HEP ammunition:		
Duds and failure to penetrate	5	2
Misfires	1	2
AP type:		
Failure to penetrate or poor performance	5	2
Misfires	1	2
Anti-personnel rounds:		
Failure to function	5	2
Misfires	1	2
Rockets:		
Duds and poor performance	5	2
Misfires	1	2
Guided Missiles:		
Duds	NA	1
Misfires	NA	1
Mines, grenades:		
Duds	5	2
Pyrotechnics (flares, signals, and so forth):		
Duds or poor performance	10	2
Illuminating shells:		
Failure to illuminate	15	2
Misfires	1	2
Bombs:		
Duds	5	4
Small arms (through .50 caliber):		
Misfires	0.1	4
Exception to the above:		
Artillery with fuzes set DELAY-duds	15	5
Burning-type grenades-duds	20	5
Failure to trace (20-mm and above)	20	5
Failure to self-destroy (if applicable)	10	5
Flare, surface, trip M49 series-duds	10	2
Projectile, 155-mm; illuminating, M118 series-duds	20	4
Simulator, booby trap, illuminating, M188-duds	10	2
Ammunition, 20-mm duds, 150 rounds	3	5

Notes:

¹ Minimum number of dud or misfire malfunctions that are required to be reported for the reportable percent defect rate listed.

Glossary

Section I Abbreviations

AMC

U.S. Army Materiel Command

AMCCOM

U.S. Army Armament, Munitions and Chemical Command

AP

armor piercing

CAIG

centralized accident investigation, ground

CONUS

continental United States

Ctg

cartridge

DA

Department of the Army

DAITM

Department of the Army investigation team for malfunctions

DCSLOG

Deputy Chief of Staff for Logistics

DODIC

department of defense identification code

EOD

explosive ordnance disposal

HEAT

high explosive, anti-tank

HEP

high explosive plastic

HEP-T

high explosive plastic, tracer

MAAG

Military Assistance Advisory Group

MACOM

major Army command

MICOM

U.S. Army Missile Command

NSN

national stock number

OCONUS

outside the continental United States

POC

point of contact

QASAS

Quality Assurance Specialist (Ammunition Surveillance)

RCS

requirement control symbol

USARPAC

U.S. Army Pacific

USASC

U.S. Army Safety Center

USARSO

U.S. Army South

Section II Terms

Ammunition

All Army-designated class V items, which include conventional ammunition, guided missiles and large rockets, and nuclear weapons.

Conventional ammunition

Ammunition that includes—

a. Grenades, cartridges, projectiles, mines, pyrotechnics, bombs warheads, with all type fillers (for example, high explosives or chemical), simulated nuclear weapons, bulk explosives, demolition materiel, and rockets without nuclear capability.

b. Propellant and cartridge-actuated devices as well as air-drop and air crew escape systems components, for example, line cutters, delay cartridges ejection seats, and extraction systems.

c. Missile parachute airdrop and recovery systems.

d. Chemical ammunition.

e. Other special purpose munitions.

Dud

Explosive munition that has not been armed as intended or failed to explode after being armed.

Guided missiles and large rockets

Guided missiles and large rockets that include—

a. All guided missiles and large rockets with non-nuclear, nuclear or chemical capability either in complete round configuration or in separately packaged items for issue in complete round assembly.

b. Solid and liquid propellants.

c. Explosive components for guided missiles and large rockets.

Hangfire

An undesired delay in the functioning of a firing system. A hangfire for a rocket occurs if the rocket propellant is ignited by the firing impulse, but the rocket fails to exit the launcher within the expected time (applies to HYDRA-70/2.75 inch rocket).

Incident

An unintentional or chance event considered likely to result in property damage or injury to personnel. In regard to ammunition and explosives, this specifically includes the suspected or detected presence of unexploded explosive ordnance that constitutes a hazard

to operations, installations, personnel, or materiel.

Malfunction

Failure of an ammunition item to function as expected when fired or launched, or when explosive items function under conditions that should not cause functioning. Malfunctions include hangfires, misfires, duds, abnormal functioning, and premature functioning of explosive ammunition items under normal handling, maintenance, storage, transportation, and tactical deployment. Malfunctions do not include accidents or incidents that result solely from negligence, malpractice, or situations such as vehicle accidents or fires. Malfunctions are divided into three classes, (class A, class B, and class C).

a. *Class A.* Malfunctions that have resulted in death or lost-time injury, are similar to previous malfunctions that have resulted in death or lost-time injury, are judged as having had an appreciable probability of causing death or lost-time injury, or that have adverse political implications.

b. *Class B.* Malfunctions that have resulted in damage to major equipment that cannot be repaired at the unit level of maintenance, or have resulted in an ammunition suspension that significantly impacts readiness or training.

c. *Class C.* Malfunctions that are neither class A nor class B.

Misfire

Failure of a primer, propelling charge of a round, or rocket or guided missile ignition and/or propulsion system to function, wholly or in part.

Nuclear weapons

Ammunition that includes—

a. Complete nuclear projectile rounds.

b. Nuclear warheads and associated adaptation kits for atomic demolition munitions.

c. Guided missile and rocket nuclear warhead sections including nuclear warheads, nuclear warhead components, and adaptation kits.

Quality assurance specialist (ammunition surveillance)

A member of the civilian career program established to develop, manage, and execute the worldwide Ammunition Surveillance Program. A QASAS is responsible for conducting examinations, tests, and investigations required to evaluate the current degree of stockpile serviceability and determine future stockpile trends. A QASAS also performs logistics functions and provides technical advice relative to ammunition storage, issue, maintenance, demilitarization, transportation, explosives safety, and chemical and nuclear surety.

Release or release action

An order that rescinds a previously imposed

suspension or restriction and restores the materiel to serviceable status. This includes munitions that are released with a restriction.

Restricted munitions

Munition items that cannot be expected to meet required performance under all conditions but may be issued and used with qualifications on its use; for example, method of launch, temperature limitations, and weapon applicability.

Suspended munitions

Munition items withdrawn from issue, or use, with or without qualifications, because of suspected or confirmed unsafe conditions. Suspended munitions are either temporarily or permanently suspended.

a. Temporarily suspended munitions. An interim order prohibiting issue, use, and when necessary, movement of a munition item, with or without qualifications, due to an unsafe or defective condition that is unconfirmed.

b. Permanently suspended munitions. A permanent order prohibiting issue, use, and when necessary, movement of a munition item. Munitions are permanently suspended when an investigation confirms that they are unsafe or otherwise defective.

Suspension or restriction

An administrative procedure used to identify all munitions that have been withdrawn from issue, or use, with or without qualifications, because of a suspected or unsafe condition; or cannot be expected to meet required performance under all conditions but may be issued and used with qualifications on their use. Suspensions and restrictions may be categorized by type, block, or serious impact.

a. Type suspension or restriction. A suspension or restriction applied to all lots of one model number, including all modifications or variations produced; for example, Ctg 105-mm HEP-T M393 series.

b. Block suspension or restriction. A suspension or restriction applied to all lots of one particular modification or variation of a model number; for example, Ctg 105-mm HEP-T M393A1.

c. Serious impact suspension or restriction. A suspension or restriction that results in reducing serviceable assets of a munitions item to less than 50 percent of the stockpile; is determined to have a significant impact on Army readiness irrespective of percentage of stockpile affected; or prevents a unit from meeting its operational commitment.

d. Specific suspension or restriction. A suspension or restriction may also be applied to a specific lot, group of lots or serial numbered items without being categorized as defined in subparagraphs *a* through *c* above.

Weapon

Any device used to launch a projectile, rocket, or guided missile; for example, cannon, rifle, rocket launcher, guided missile launcher, pistol, machine gun, and mortar. There are no entries in this section.

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AMMUNITION MALFUNCTION REPORT For use of this form, see AR 75-1; the proponent agency is DCSLOG				1. REPORT NO.		Requirements Control Symbol - CSGLD 1961	
2. MALFUNCTIONING ITEM				3. ITEM COMPONENTS			
4. MALFUNCTION DESCRIPTION							
5. SITE OF MALFUNCTION		6. UNIT CONTROLLING SITE		7. UNIT USING AMMUNITION			
8a. DATE MALFUNCTION OCCURRED	8b. TIME						
9a. CASUALTIES (No Killed)		9b. CASUALTIES (Hospitalized)		9c. CASUALTIES (Other Injuries)			
9d. DESCRIPTION							
10. DAMAGE				10c. DESCRIPTION			
a. WEAPON DAMAGED? ☐ Yes ☐ No ☐ N/A b. DAMAGE REPAIRABLE AT UNIT LEVEL? ☐ Yes ☐ No ☐ N/A							
11. DETONATION ☐ a. None ☐ b. In Weapon				c. M FROM WEAPON		d. M FROM NEAREST PERSON	
12. Quantity Remaining				13. EXHIBITS AVAILABLE (Hold Exhibits Pending Disposition Instructions per AR 75-1, para. 2-1). ☐ a. Fragments ☐ b. Intact Components ☐ c. Weapon ☐ d. None			
a. FIRING SITE	b. LOCAL STORAGE	c. SUSPENDED? ☐ YES ☐ NO					
14. Firing Conditions for Malfunction Lot							
a. WEAPON				b. TARGET			
c. RANGE M	d. AZIMUTH	e. ELEVATION	f. ZONE		g. FUZE SETTING		
h. FIRED HOW MANY ROUNDS PER MINUTE FROM WEAPON		i. FOR HOW MANY MINUTES BEFORE MALFUNCTION		j. TOTAL FIRED FROM WEAPON ON DAY OF MALFUNCTION			
k. TOTAL MALFUNCTIONED		l. TOTAL FIRED		m. MALFUNCTION RATE %			
15. Terrain							
a. FIRING SITE	b. DOWN RANGE	c. POSSIBLE OBSTRUCTIONS			d. CLEAR VIEW OF FLIGHT PATH M		
16. Weather Conditions							
a. VISIBILITY	b. PRECIPITATION		c. TEMPERATURE F		d. PRIOR 24 HOURS HIGH F LOW F		e. RELATIVE HUMIDITY
17. Malfunction Lot Storage Conditions				18. Packaging of Malfunction Lot		YES	NO
a. Firing Site: ☐ Open ☐ Enclosed b. Local Storage: ☐ Open ☐ Enclosed				a. Original Package?			
c. UNPACKED HOW MANY HRS. BEFORE MALFUNCTION		d. MAGAZINE TYPE	e. STORED HOW MANY MONTHS		b. Original Seal?		
					c. Package Adequate?		
					b. Package Damaged?		
19. ADDITIONAL DATA (If more space is needed, use continuation sheet or back of form)							
20a. FOR ADDITIONAL DATA, CONTACT				21a. PERSON COMPLETING REPORT			
b. TELEPHONE NO. (Include Area Code)				b. TELEPHONE NO. (Include Area Code)		c. DATE	

MISSILE AND ROCKET MALFUNCTION REPORT

For use of this form, see AR 75-1; the proponent agency is DCSLOG

Requirements Control
Symbol - CSGLD 1961

TO Commander U.S. Army Missile Command ATTN: AMSM-LC-AM Redstone Arsenal, AL 36809		FROM	
1a. DATE OF MALFUNCTION	1b. TIME OF MALFUNCTION	2. MALFUNCTION REPORT NO.	3. DATE OF REPORT
4a. UNIT (Battery)		4b. BATTALION	
4c. DIVISION		4d. OTHER (Specify)	
5. LOCATION OF FIRING	6. TYPE AND METHOD OF FIRING		7. MISSILE TIME OF FLIGHT (SEC)
	a. Type of Firing		
	b. Method of Firing		
8a. MISSILE OR ROCKET TYPE		8b. MODEL NO.	
9a. MISSILE SERIAL NO.	9b. MISSILE LOT NO.	9c. MISSILE NSN	
10a. WARHEAD TYPE	10b. SERIAL NO.	10c. LOT NO.	
11a. ROCKET MOTOR MODEL	11b. SERIAL NO.	11c. LOT NO.	
12a. MOTOR CLUSTER MODEL	12b. SERIAL NO.	12c. LOT NO.	
13a. IGNITER MODEL	13b. SERIAL NO.	13c. LOT NO.	
14a. FUZE MODEL	14b. SERIAL NO.	14c. LOT NO.	
15a. S&A DEVICE MODEL	15b. SERIAL NO.	15c. LOT NO.	
16a. LIQUID PROPELLANTS (Fuel)		16b. LIQUID PROPELLANTS (Oxidizer)	
17a. LAUNCHER MODEL		17b. SERIAL NO. (If damaged, explain in Item 32)	
18a. WEATHER CONDITIONS (Wind)	18b. WEATHER CONDITIONS (Visibility)	18c. WEATHER CONDITIONS (Temperature)	
19. TARGET RANGE (Meters or Kilometers)	20. TARGET ALTITUDE (Feet or Kilometers)	21. TARGET AZIMUTH (MILS)	22. TARGET SPEED (Knots or Meters Per Sec)
23. TELEMETRY SYSTEM		24. STORAGE CONDITIONS PRIOR TO FIRING OR OPERATION	
25. NATURE OF PROPERTY DAMAGE		26. NUMBER OF FATALITIES OR INJURIES	
27. DESCRIPTION OF MALFUNCTION (Erratic Flight, Short Round, In-Flight Breakup, Down-Range Premature, Etc.) (Continue on Reverse Side)			

27. DESCRIPTION (Continued)

28a. NO. ROUNDS/MISSILES FIRED FROM SUSPECT LOT ON DAY OF MALFUNCTION	28b. NO. ROUNDS/MISSILES REMAINING FROM SUSPECT LOT ON DAY OF MALFUNCTION	29. LOCATION OF MALFUNCTION IN RELATION TO WEAPON OR LAUNCHER (Yards or Meters)
---	---	--

30. CORRECTIVE ACTION TAKEN (Such as Withdrawal of Missiles/Rockets from Use)

31a. FRAGMENTS OR COMPONENTS OF INTEREST TO MALFUNCTION INVESTIGATION ARE AVAILABLE?

☐ YES ☐ NO

31b. TECHNICAL ASSISTANCE FROM COMMODITY COMMAND IS NECESSARY TO DETERMINE CAUSE OF MALFUNCTION?

☐ YES ☐ NO

32. OTHER PERTINENT INFORMATION (Include Sketches or Photographs of Important Features that may Assist in Establishing the Cause of the Malfunction)

33a. NAME OF WITNESS WHO CAN PROVIDE ADDITIONAL INFORMATION REQUIRED

33b. TELEPHONE NO. OF WITNESS

34a. TYPED NAME OF AMMUNITION OFFICER OR PERSON MAKING REPORT

34b. RANK

34c. SIGNATURE OF AMMUNITION OFFICER OR PERSON MAKING REPORT

34d. DATE

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