

**BY ORDER OF THE COMMANDER
HILL AIR FORCE BASE**

**HILL AIR FORCE BASE INSTRUCTION
21-101**



31 MAY 2023

Maintenance

**CRASH, DAMAGED OR DISABLED
AIRCRAFT RECOVERY (CDDAR)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This publication implements Air Force Instruction (AFI) 21-101 Chapter 14, *Aircraft and Equipment Maintenance Management*, AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, AFMAN 10-206, *Operational Reporting (OPREP)*, AFI 10-2501, *Air Force Emergency Management Program Planning and Operations*, Hill AFB Installation Emergency Management Plan (IEMP) 10-2, Air Force Occupational Safety and Secretary of the Air Force Health Standard (AFOSHSTD) 48-137, *Respiratory Protection Plan*, AFI 48-145, *Occupational and Environmental Health Program*, 29 Code of Federal Regulations (CFR) 1910.134, *Respiratory Protection*, Hill Air Force Base (AFB) Instruction 48-102, *Respiratory Protection*, Technical Orders (TO) 00-80C-1, *Crash, Damaged, Disabled Aircraft Recovery Manual*, TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information*, and aircraft specific series TOs to include specific A-10, F-16, F-22, F-35 and C-130 Dash-2/Dash-3/Dash-6 series TOs. This publication also establishes joint responsibilities, procedures, and operating instructions for crashed, damaged, or disabled aircraft recovery (CDDAR) in the Hill AFB area of responsibility to include host, tenant, and transient aircraft on Hill AFB or within the geographical area of responsibility of the base. This instruction is applicable to organizations tasked to support aircraft recovery operations including Hill AFB associate units. These organizations must be prepared to rapidly deploy crash recovery equipment and personnel for crashed, damaged or disabled aircraft. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, Management of

Records, and disposed of IAW Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System (AFRIMS).

SUMMARY OF CHANGES

This document has been substantially updated and must be reviewed in its entirety. Key changes include but are not limited to: notification chain updates, changes to CDDAR status reporting requirements, redundant information removal, and more appropriately aligning responsibilities to include; ensuring 75 ABW Transient Alert (TA) serves as the CDDAR initial response with the 309 AMXG and 388 MXG/419 MXG serving in an augmentation role for their assigned MDS.

1. Responsibilities:

1.1. **General.** CDDAR recovery program applies to host and mission partner flying organizations as well as the recovery of transient aircraft if within the Team Hill CDDAR response capability. It is designed to recover crashed, damaged or disabled aircraft in a minimum time period and return the airfield to operational status using the following considerations to return the airfield to full operational capabilities while preserving evidence and reducing further damage consistent with the following consideration(s):

1.1.1. Open runway for operational use.

1.1.2. Prevent secondary damage to the aircraft.

1.1.3. Preserve evidence for mishap or accident investigations.

1.1.4. Mitigate the mishap or incident's impact on the assigned organization's flying mission requirements.

1.1.5. Input from the flying organizations mission requirements must be considered.

1.1.6. The primary unit responsible for CDDAR shall be the assigned or sponsor unit of the aircraft, whether the unit resides at Hill AFB or another base. Mission partners are responsible for the condition and repair of assigned aircraft. Mission partners must be actively involved in assisting the host-wing in recovery operations during real-world responses. Technical expertise, technical data, mission design series (MDS) unique tools and special equipment, expert manpower, and airframe familiarization are valuable contributions mission partners make to the host CDDAR program.

1.1.7. Hill AFB is a single runway airfield. The 75 ABW/CC or designated representative, in consultation with the IC, Airfield Manager (75 OSS/OSAM), 75 ABW Safety Officer (75 ABW/SE), the CDDAR Team Chief, and the aircraft's flying organization (if possible), determines the removal conditions for CDDAR operations which are designated as:

1.1.7.1. Emergency In Progress. This condition requires immediate runway clearance at the risk of losing airborne equipment. The runway must be cleared in 30 minutes or less, or as directed by the IC to safely land aircraft. This timeline may be extended to "as soon as possible" after normal duty hours to allow recalled members time to arrive on-base/on-scene.

1.1.7.2. Urgent. This condition requires runway clearance as soon as possible after completion of rescue, firefighting, and explosive ordinance disposal (EOD) operations. The runway must be cleared in less than 1 hour and 30 minutes or as directed by the IC, unless EOD considerations dictate otherwise, using techniques identified in applicable technical publications. The IC will make this determination.

1.1.7.3. Routine. This condition allows sufficient time to use recovery techniques to minimize further damage to aircraft, preserve evidence, and preclude exposing personnel or equipment to danger. Under routine removal conditions, when the investigation actions are complete, the Investigation Authority transfers possession of the incident aircraft and wreckage to the Recovery Operations Chief to have the recovery or salvage team relocate the aircraft to a secure location. Once the incident aircraft and wreckage is recovered, possession of the aircraft and wreckage is transferred back to the Investigation Authority.

1.2. Hill Command Post.

1.2.1. When 309th Aircraft Maintenance Group (AMXG) or 388th Maintenance Group (MXG)/419th Maintenance Group (MXG) support is required, the Hill Command Post (HCP) or Emergency Operations Center (EOC) will notify the respective Maintenance Operations Center (MOC).

1.2.1.1. 309 AMXG MOC is the focal point for CDDAR support for the 309 AMXG.

1.2.1.2. 388 MXG/419 MXG MOC is the focal point for CDDAR support for the 388 FW/419 FW.

1.2.2. Submits Operational Reports (OPREPs) to the Headquarters (HQ) Air Force Materiel Command (AFMC) Command Center, and higher Headquarters (HHQs) as required IAW AFMAN 10-206, Operational Reporting (OPREP).

1.3. Incident Commander (IC).

1.3.1. Aircraft recovery actions are coordinated through the Incident Commander (IC) or the EOC. Operations at the incident location are under the purview of the IC. If the incident location is not Department of Defense (DoD) owned land, the IC may be the senior DoD representative designated as liaison with the civilian IC from the owning jurisdiction. Regardless of organizational affiliation, IAW the National Incident Management System (NIMS), the IC retains tactical control and decision making on scene.

1.3.2. During emergency response situations, the IC is the final authority for determining when the mishap site is safe and when the Investigation Authority and CDDAR team may approach the mishap site and conduct recovery operations.

1.3.3. Immediately after the incident or mishap notification, first responders shall proceed IAW Hill AFB IEMP 10-2, Annex A, Appendix 2.

1.4. 75 ABW (75 OSS):

1.4.1. The 75 ABW has overall responsibility for recovery of host, mission partner, or transient crashed or disabled aircraft on Hill AFB and for off-base incidents.

1.4.1.1. The 75 OSS is the overall program manager for the CDDAR program on Hill AFB. The 75 OSS will oversee and review each mission partner's training and equipment rosters and will coordinate a review of CDDAR equipment and personnel twice a year. Additionally, the CDDAR program will be subject to the BOS inspection schedule.

1.4.1.2. TA (within 75 OSS) will initially respond to any incident and can be available to assist or augment mission partners' CDDAR Teams, when requested. Coordination is initiated through the Hill Command Post, Emergency Operations Center, or Airfield Management Operations (AMOPS) to the 75 OSS Commander (CC) or Director of Operations (DO).

1.4.2. CDDAR is accomplished using a Team Hill approach. It is initiated IAW Hill AFB IEMP 10-2 and Hill AFB IEMP 91-1, Aircraft Mishap Response, procedures. Team members executing CDDAR capability consist of individuals from 75 ABW and Hill AFB mission partner units with CDDAR expertise.

1.4.3. The 75 ABW provides initial response and augmented recovery support IAW TA Performance Work Statement (PWS) and this operating instruction. CDDAR procedures are coordinated through host-wing, assigned units, and mission partner senior leader command chains with emphasis on Aircraft Maintenance, Fire Department, Flight Safety, Civil Engineer, Emergency Management, EOD, Security Forces, Bioenvironmental Engineering, Airfield Management, Logistics, Contracting, and other on or off-base agencies as applicable. If assistance is required, the EOC, or IC coordinates with the appropriate agency's MOC.

1.4.4. If the CDDAR Team or the mishap aircraft's assigned unit requires assistance, qualified CDDAR team members and equipment from other mission partner units may be requested. This request requires coordination, usually through the EOC, or IC for action. If the aircraft is one in which we do not possess the required equipment, an example would be a C-17, TA will provide initial response to safe the aircraft, protect the environment, and preserve the evidence. The assigned wing, or TACC for AMC assets, will need to send a maintenance recovery team (MRT) for assistance.

1.5. **The 388 MXG/419 MXG:**

1.5.1. Responsible for responding to major accidents on or off the active airfield and providing sufficient equipment, specialized tools, and technical assistance, when requested by the host wing through the EOC or IC.

1.5.2. Responsible for program support to include 388/419 FW aircraft recovery operations, qualification, and training of assigned recovery team members, and inspection and maintenance of assigned equipment used for this operation.

1.5.3. Identifies the equipment, vehicles, personal protective equipment (PPE), and any other CDDAR team requirements needed to recover 388/419 FW assigned aircraft. Also provides CDDAR team personnel, participates in required host-training exercises, and maintains specialized equipment inventories.

1.5.3.1. The 388 MXG and 419 MXG determine the type and quantity of specialized CDDAR tools, vehicles, equipment, and personnel required to recover their organization's aircraft IAW AFI 21-101. The 388 MXG and 419 MXG establish an inventory listing and coordinate with 75 LRS to ensure accountable items are listed on organizational equipment accounts. Changes in resources that negatively impact CDDAR capability are identified to the 75 OSS/DO as soon as possible.

1.5.3.2. The 388 MXG and 419 MXG house and inspect recovery equipment, to include air bags, manifolds, jacks, slings, and shoring, for serviceability before and after each incident or exercise use IAW AFI 21-101, the equipment owner's manual, or other applicable local or technical publications. Periodic equipment inspections must be accomplished per intervals established in TOs or at least annually. Perform operational checks according to applicable directives during exercise and inventory reviews. Document inspections and maintenance on the AFTO Form 244, Industrial/Support Equipment Record, or on a MAJCOM approved form.

1.5.4. Provide, when requested, a QA Weight and Balance Manager to determine Center of Gravity (CG) conditions.

1.5.5. Dispatch Composite Handling and Clean-up teams if requested by the IC or CDDAR Team Chief.

1.5.6. Dispatch a fully qualified weapons crew if requested by the IC or CDDAR Team Chief.

1.5.7. Provide wing walkers where required by technical order.

1.5.8. The tasked QA team ensures aircraft records are secured by the respective maintenance squadrons. Other aircraft records are obtained IAW Hill AFB Plan 91-1, Mishap Response Plan.

1.6. The 309 AMXG:

1.6.1. Responsible for responding to major accidents on or off the active airfield and providing sufficient equipment, specialized tools, and technical assistance, when requested by the host wing through the EOC or IC.

1.6.2. Responsible for program support to include 309 AMXG aircraft recovery operations, qualification and training of assigned recovery team members, and inspection and maintenance of assigned equipment used for this operation.

1.6.3. Identifies the equipment, vehicles, personal protective equipment (PPE), and any other CDDAR team requirements needed to recover 309 AMXG assigned aircraft. Also provides CDDAR team personnel, participates in required host-training exercises, and maintains specialized equipment inventories.

1.6.3.1. The 309 AMXG determines the type and quantity of specialized CDDAR tools, vehicles, equipment, and personnel required to recover their organization's possessed aircraft IAW AFI 21-101. The 309 AMXG establishes an inventory listing and coordinate with 75 LRS to ensure accountable items are listed on organizational equipment accounts. Changes in resources that negatively impact CDDAR capability are identified to the 75 OSS/DO as soon as possible.

1.6.3.2. The 309 AMXG houses and inspects recovery equipment, to include air bags, manifolds, jacks, slings, and shoring, for serviceability before and after each incident or exercise use IAW AFI 21-101, the equipment owner's manual, or other applicable local or technical publications. Periodic equipment inspections must be accomplished per intervals established in TOs or at least annually. Perform operational checks according to applicable directives during exercise and inventory reviews. Document inspections and maintenance on the AFTO Form 244, Industrial/Support Equipment Record, or on a MAJCOM approved form, as applicable.

1.6.4. Request Weight and Balance records from the F-35 operations Joint Program Office as the F-35 does not currently have a local Weight and Balance program. Weight and Balance records will be used to determine Center of Gravity (CG) conditions.

1.6.5. Dispatch Composite Handling and Clean-up teams if requested by the IC or CDDAR Team Chief.

1.6.6. Dispatch hydrazine response personnel, team, or trailer if requested by IC.

1.6.7. Upon direction from 309 AMXG/MOC, the 576 AMXG Transportation Section will provide qualified operators and equipment i.e. cranes, tractor trailers, forklifts, and or other support equipment as directed. 576 AMXG Transportation Section will transport CDDAR support equipment to mishap site and provide rigging, slings, spreader bars, and other crane support related equipment as applicable.

1.7. CDDAR Team Chief Duties, Responsibilities, and Training Requirements:

1.7.1. CDDAR Team Chief is a Senior Non-Commissioned Officer (SNCO) or civilian equivalent. NOTE: 388 MXG/CC or 419 MXG/CC may waive the grade requirement. This qualification is tracked on the Special Certification Roster (SCR). The 309 AMXG/MOC provides program management for the 309 AMXG CDDAR program. Team members are assigned by the individual squadrons representing the various weapon systems.

1.7.2. All CDDAR teams shall participate in annual CDDAR exercises and training events for currency. This exercise may be conducted as a tabletop discussion or hands-on exercise.

1.7.3. Upon notification of a mishap or incident, the Team Chief identifies and relays response time, assembly point for CDDAR Team personnel, and requested equipment to the MOC, EOC and IC.

2. Support Requirements.

2.1. On-base support for CDDAR during normal duty hours:

2.1.1. Immediate response by the responsible CDDAR team is required upon notification by the crash net or secondary crash net. NOTE: CDDAR tasked organizations review and provide required inputs and changes to the Support Agreements (SAs) and the Hill AFB IEMP 10-2 annually.

2.1.2. For aircraft assigned to Hill AFB, the assigned or possessing mission partner is responsible for the associated CDDAR team and immediate response. For aircraft not assigned to Hill AFB, Transient Alert, or the assigned unit if TDY locally, will be the primary POC responsible to the installation commander.

2.1.3. For in-flight emergency (IFE) or ground emergency (GE), assigned and sponsoring agencies should respond to location or designated staging area. Assigned unit shall respond to the IC for required actions and/or release from the declared emergency. 75 ABW TA is responsible for aircraft removal from Aircraft Arresting Systems and may defer to the assigned/sponsoring agency as part of the coordinated incident response.

2.2. On-base support for CDDAR outside of duty hours:

2.2.1. IAW Hill AFB IEMP 10-2, host and mission partner units develop emergency recall or mobilization rosters to identify and notify required recovery team members. Recall is initiated per the aircraft mishap notification and recall checklist processes. Affected units must account for team members being deployed, TDY, and on leave to ensure sufficiently trained and certified team members are available to provide constant coverage.

2.2.2. If an unscheduled transient aircraft is involved in a mishap outside of normal TA duty hours, TA personnel shall respond within 2-hours, in accordance with their performance work statement.

3. Incident Response.

3.1. Off-base Crash Recovery:

3.1.1. Upon notification of an off-base crash, Hill Command Post shall initiate the Off-Base Aircraft Incident checklist and notify 75 ABW/CC, 75 ABW/SE, 75 OSS, and MOC of the assigned or supporting unit. This section includes CDDAR events for Geographically Separated Units.

3.1.2. An advance group consisting of an IC and required first responders such as readiness, fire department, civil engineer, security forces, bioenvironmental engineering, medical, chaplain, communications, public affairs, contracting, aircraft structural engineers, and environmental management will depart for incident site as soon as possible. The Disaster Response Force (DRF) is responsible for responding to off-installation crashed or disabled aircraft. If assistance is required, Hill Command Post, EOC, or IC coordinates with the appropriate agency's MOC.

3.1.3. The DRF, IC, and local civilian agency representatives evaluate the situation to determine the requirements necessary to accomplish the recovery operation. Identified recovery requirements are communicated by telephone or radio as soon as possible to the EOC to prepare the main body of the response force IAW Hill AFB IEMP 10-2.

3.1.4. The EOC notifies 75th Logistics Readiness Squadron Vehicle Operations (75 LRS/LGRDD) to secure crash recovery vehicles required for dispatch off-base. The dispatcher recalls or reserves vehicles and drivers for dispatch.

3.1.5. 75 LRS/LGRDD provides qualified drivers and special purpose vehicles (movement and locating of additional trucks, tractor trailers, and other required vehicles) to transport CDDAR support equipment to the mishap site, as well as transport wreckage to the wreckage assembly point at the request of the IC or CDDAR Team Chief. 75 LRS/LGRDD may institute the Vehicle Priority Recall Roster or establish lease agreements for additional tractors, trailers, cranes, and other equipment for emergency operations.

3.1.6. The CDDAR Team Chief, in coordination with the IC, shall review the situation to determine equipment requirements.

3.1.7. Once wreckage is released by the IC, the aircraft is loaded and transported to Hill AFB to a secured facility large enough to house wreckage for investigation purposes.

3.2. Response Phase (IAW Hill AFB IEMP 10-2):

3.2.1. First responders and the IC shall conduct an initial site-survey safety briefing prior to entering the incident or mishap scene.

3.2.2. The IC ensures initial rescue, firefighting, security, and safing of the aircraft munitions are performed. The mishap scene must be determined safe by the IC prior to any investigation or CDDAR team recovery operations.

3.2.3. The IC ensures Bioenvironmental Engineering (75 AMDS/SGPB) conducts health risk assessments at the crash site and makes control recommendations.

3.2.4. The IC coordinates with assigned unit Quality Assurance (QA) Weight and Balance Manager when weight and balance conditions are unknown. If assistance is required, the EOC, or IC coordinates with the appropriate agency's MOC or TDY unit's chain of command.

3.2.5. The response will preserve the mishap scene and condition of the mishap aircraft to the extent practicable. Safety and operational concerns may require moving the aircraft and/or equipment. Such movement will be authorized IAW [paragraph 1.1.7](#) or by coordination with the Interim Safety Board (ISB) President. NOTE: The applicable safety office initiates impoundment procedures, in coordination with respective Quality Assurance Office, in the event of an aircraft mishap.

3.2.6. Once the scene is safe to enter and the IC has declared the transition to recovery operations, the IC transfers possession of the incident aircraft and wreckage to the ISB President, Impoundment Official, and assigned unit representative appointed by the Class A Convening Authority. NOTE: Under emergency or urgent removal conditions, the recovery and investigation phase may be waived by the 75 ABW/CC.

3.2.7. The CDDAR Team Chief should prepare and posture the required personnel, equipment, and materials to recover the aircraft and wreckage.

3.2.8. The assigned unit representatives coordinate actions through the EOC to provide assistance or information on special recovery requirements (e.g. classified materials and equipment).

3.2.9. When the first responder actions are complete, the Response Phase ends and the Recovery Phase, which includes investigation actions, begins. Prior to recovery actions, the Team Chief will coordinate through the Recovery Operations Chief (ROC) to ensure the ISB has given permission to begin the recovery of the aircraft (e.g. fiber clean-up, classified material recovery, etc). The ROC directly coordinates all actions with the EOC. The CDDAR Team Chief coordinates recovery actions with appointed investigation officials.

4. CDDAR Status Reporting:

4.1. CDDAR team recall rosters shall be provided quarterly to the 75 OSS/DO for consolidation. Units must notify 75 OSS/DO when key personnel manning falls below the minimum requirements. This may be accomplished via SharePoint or another designated method.

4.2. CDDAR equipment listings shall be provided quarterly to 75 OSS/DO for consolidation and availability. This may be accomplished via SharePoint on the 75 OSS CDDAR site.

4.3. CDDAR team training status shall be made available to the 75 OSS/75 ABW for review and verification if requested. This may be accomplished via SharePoint or another designated method.

4.4. The 75 OSS/DO or designated representative will send the annual CDDAR equipment report to AFMC.

JEFFREY G. HOLLAND, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION.*****References***

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 16 Jan 2020
AFI 21-101_AFMCSUP, *Aircraft and Equipment Maintenance Management*, 9 Nov 2020
AFMAN 10-206, *Operational Reporting (OPREP)*, 18 June 2018
Hill AFB Plan 10-2, *Installation Emergency Management Plan (IEMP)*, 21 April 2023
Hill AFB Plan 91-1, *Aircraft Mishap Response Plan*, 31 March 2023
T.O. 00-80C-1, *Crash, Damaged, Disabled Aircraft Recovery Manual*, 17 Nov 2020

Adopted Form

AFTO Form 244, *Industrial/Support Equipment Record*
AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

388 FW—388th Fighter Wing
75 ABW—75th Air Base Wing
75 ABW/CC—75th Air Base Wing Commander
75 ABW/IG—75th Air Base Wing Inspector General
75 ABW/SE—75th Air Base Wing Safety
75 AMDS/SGPB—75th Aerospace Medicine Squadron Bioenvironmental Engineering
75 LRS/LGRDD—75th Logistics Readiness Squadron Vehicle Operations
75 MDG—75th Medical Group
75 OSS/OSAM—75th Operations Support Squadron Airfield Manager
AFMAN—Air Force Manual
AFMC—Air Force Materiel Command
AMOPS—Airfield Management Operations
AMC—Air Mobility Command
AMXG—Aircraft Maintenance Group
BOS—Base Operating Support
CC—Commander
CDDAR—Crashed, Damaged or Disabled Aircraft Recovery
CG—Center of Gravity

DO—Director of Operations
DoD—Department of Defense
DRF—Disaster Response Force
EOC—Emergency Operations Center
EOD—Explosive Ordnance Disposal
HCP—Hill Air Force Base Command Post
HHQ—Higher Headquarters
HQ—Headquarters
IAW—In Accordance With
IC—Incident Commander
IEMP—Installation Emergency Management Plan
ISB—Interim Safety Board
MAJCOM—Major Command
MDS—Mission Design Series
MOC—Maintenance Operations Center
MRT—Maintenance Recovery Team
MXG—Maintenance Group
MXS—Maintenance Squadron
NIMS—National Incident Management System
OPREP—Operational Reporting
POC—Point Of Contact
PPE—Personal Protective Equipment
PWS—Performance Work Statement
QA—Quality Assurance
RDS—Record Disposition Schedule
SA—Support Agreement
SNCO—Senior Non-Commissioned Officer
SCR—Special Certification Roster
TA—Transient Alert
TACC—Tanker Airlift Control Center
TO—Technical Order