

**BY ORDER OF THE COMMANDER
WRIGHT-PATTERSON AIR FORCE
BASE**



**WRIGHT-PATTERSON AIR FORCE
BASE INSTRUCTION 21-102**

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Maintenance**

**CRASH DAMAGED/DISABLED
AIRCRAFT RECOVERY (CDDAR)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFI 21-101, AFMCSUP, Addendum A, *Non-Standard Organization (NSO) Logistics Maintenance Management*. It provides guidance, policy, responsibility and reporting procedures for Crash Damaged/Disabled Aircraft Recovery (CDDAR) in accordance with Technical Order (TO) 00-80C-1, *Crash Damaged/Disabled Aircraft Recovery* and DAFI 91-204, *Safety Investigations and Reports*. The primary purpose of this instruction is to provide basic procedures to be followed for physical aircraft recovery/removal of crash/disabled aircraft after all initial response events, including response to hydrazine spills, have been accomplished in accordance with IEMP 10-2, *Installation Emergency Management Plan* and AFMAN 10-2502, *Air Force Incident Management System (AFIMS) Standards and Procedures*. It applies to individuals at all levels who manage, fly, service, inspect, and/or repair Air Force, Aero Club and transient aircraft on WPAFB including active duty, Air National Guard (ANG), Air Force Reserve, civilian and contractor personnel. This publication may be supplemented at any level, but all supplements must be routed to the Office of Primary Responsibility listed above for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility listed above using the Air Force Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See Department of the Air Force Manual 90-161, *Publishing Processes and Procedures*, Attachment 10, for a description of the authorities associated with the Tier numbers. Submit

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SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed.

Chapter 1

GENERAL

1.1. Overview.

1.1.1. The CDDAR Program is established to recover damaged and disabled aircraft in minimum time and be consistent with the following considerations:

1.1.1.1. Ensure urgency to open the runway for operational use.

1.1.1.2. Prevention of secondary damage to the aircraft.

1.1.1.3. Preservation of evidence for mishap or accident investigation.

1.1.2. This CDDAR program instruction is a procedural guide and will not take precedence over specific TOs in the recovery of Crashed, Damaged or Disabled aircraft.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. The Logistics Readiness Squadron (88 LRS) shall:

- 2.1.1. Maintain a team of at least five qualified members to include, a Team Chief and four team members at a minimum, to accomplish a recovery of Mission Design Series aircraft that most frequently transit the airfield/runway.
- 2.1.2. Maintain the WPAFB CDDAR Instruction and maintain a local operating instruction that includes, as a minimum, internal operating requirements, notifications, an aircraft data checklist, a hazards checklist and a list of available CDDAR equipment with locations.
- 2.1.3. Maintain and inspect CDDAR equipment in accordance with applicable TOs (minimum annually), and notify 88 MSG/CC in writing of any equipment shortages/serviceability issues that may preclude effective CDDAR support.
- 2.1.4. Designate in writing a CDDAR Team Chief (CDDAR TC) and Alternate. Appointment will be approved by 88 MSG/CC.
- 2.1.5. Maintain an off-duty team recall roster.
- 2.1.6. Respond to aircraft crash recovery scenario when directed.
- 2.1.7. Train CDDAR team members.
- 2.1.8. Participate in annual CDDAR training exercises.
- 2.1.9. Once notified of a crash through the Command Post (CP), the CDDAR TC or Alternate TC will work with the appropriate response team and Incident Commander (IC) to coordinate recovery actions. The CDDAR TC or Alternate TC will ensure 88 ABW/CC is informed of all significant actions through the CP.
- 2.1.10. Provide vehicles/CDDAR trailers when required to transport equipment or to augment Civil Engineering forces when requested.
- 2.1.11. Provide fueling and defueling support when requested.
- 2.1.12. Provide cargo off-load capability when requested.
- 2.1.13. Review, at least annually, Host Tenant Support Agreements that include CDDAR support and provide inputs for change as required. Document reviews in CDDAR continuity book.
- 2.1.14. CDDAR TC or Alternate TC will provide assistance and coordinate host-wing support for the recovery of E-4B aircraft assigned to this operating location and act as the on-scene liaison.

2.2. The 445 AW shall:

- 2.2.1. Provide crash recovery support for assigned aircraft and will support the 88th LRS CDDAR program IAW WPAFBI 21-102, *Crash Damaged/ Disabled Aircraft Recovery* and Host Tenant Support Agreement WP-011. The 88 ABW CDDAR TC or Alternate TC will act as the 88 ABW CDDAR representative on-scene to assist and coordinate any host wing support in the recovery.

2.2.2. Provide academic and hands on CDDAR training on their specific aircraft to 88 ABW CDDAR personnel.

2.2.3. If recovery operations are under the supervision of the 445 MXG CDDAR TC, the team chief shall:

2.2.3.1. Assemble and brief the combined CDDAR teams on the location and condition of the damaged aircraft.

2.2.3.2. Review appropriate technical publications and establish a recovery plan.

2.2.3.3. Assemble and transport available recovery equipment and material to the crash site. If beyond 445 AW capabilities, request additional "as needed" supplies, transportation and equipment through 445th Maintenance Operations Center (MOC).

2.2.3.4. In the event 445 AW crash removal equipment proves inadequate, request support through 88 ABW MOC.

2.2.3.5. Coordinate all required 88 ABW host-wing support with 88 ABW CDDAR TC or Alternate TC.

2.2.4. Provide 88 ABW CDDAR TC with name and contact information for 445 AW CDDAR personnel.

2.3. The 595 AMXS (E-4B) shall:

2.3.1. Provide crash recovery support for assigned aircraft IAW TO 00-80C-1.

2.3.2. In the event 595 AMXS crash removal equipment proves inadequate, request support through 88 ABW MOC.

2.4. The AFLCMC/PK-PZ, Contracting shall:

2.4.1. Procure needed supplies and coordinate with the IC/CDDAR TC for availability and delivery of emergency requests as per WPAFB Continuity of Operations Plan. Such contracts may include, but are not limited to, obtaining cranes, heavy equipment, dollies, jacks, and tow-vehicles when not organically available. The point of contact for this plan is AFLCMC/PK-PZ.

2.4.2. Organizations shall use their Government Purchase Card to procure items and services in accordance with AFI 64-117, Government Purchase Card Program.

2.4.3. Will make provisions to recall a representative for non-duty hours.

2.5. The Wing Inspector General Office (88 ABW/IG) shall:

2.5.1. Develop a plan for conducting annual exercises IAW 00-80C-1 and AFI 21-101 AFMCSUPP Addendum A to discuss possible scenarios, assess personnel capabilities, exercise checklists, check validity of phone numbers, etc.

2.5.2. Such exercises should be conducted at same time as other installation major accident response exercises.

2.6. The Civil Engineer Directorate (88 CEG/CC) shall:

2.6.1. At the direction of the IC and/or Recovery Operations Commander (ROC) or Emergency Operations Center (EOC) Director, provide equipment and material for use during the recovery operations.

2.6.2. Direct activities during surface preparation, road building, etc...prior to and during recovery operations.

2.6.3. Assign qualified personnel to operate equipment as required.

2.7. The Wing Base Safety Office (88 ABW/SEF) shall:

2.7.1. Provide safety guidance to IC on removal, recovery, and cannibalization operations.

2.7.2. Provide guidance to recovery personnel on all potential hazards as applicable.

2.8. The Base Bio-Environmental Engineering Office (88 MDG/SGPB) shall:

2.8.1. Determine protective measures and equipment for personnel entering the mishap scene.

2.8.2. Specify proper personal protective equipment as required based on assessments.

2.8.3. Will complete Occupational and Environmental Health risk assessments and provide protective recommendations and brief recovery personnel on all potential hazards as applicable.

Chapter 3

RECOVERY OPERATIONS

3.1. Evaluation of Scene. The IC and/or ROC must ensure the security and preservation of any evidence from the wreckage through coordination with the Safety Investigation Board (SIB) president. Before beginning the recovery, the IC and/or ROC must obtain approval from Security Forces, EOD, Bio-Environmental Engineering (BEE), and the SIB to identify any real or potential hazards to recovery personnel. Gather all necessary information and evaluate the situation. The initial response team will be able to gather much of this data and initiate requests for additional information from appropriate sources. Gather all necessary information to accomplish risk assessment, using Risk Management (RM). **NOTE:** Safety, definitions, purpose, scope, and using RM is the common sense approach to making calculated decisions on human material and environmental factors. It enables those in charge to maximize operational capabilities while minimizing risks at all levels preserving assets and safeguarding health and welfare. Accept no unnecessary risk.

- 3.1.1. Availability of alternate runways/taxiways.
- 3.1.2. Availability of alternate airports.
- 3.1.3. Position of disabled aircraft relative to aircraft movement areas.
- 3.1.4. Cost of diversions/loss of operations.
- 3.1.5. Military alert commitments.
- 3.1.6. Adequacy of MISHAP scene photography and SIB to preserve evidence.

3.2. Aircraft Recovery. Aircraft recovery usually involves the following seven general steps which can be found in TO 00-80C-1, Crashed, Damaged, Disabled Aircraft Recovery Manual:

- 3.2.1. Overall assessment, analysis, planning and briefings.
- 3.2.2. Alteration of weight and center of gravity (CG). **NOTE:** In the event that an aircraft being recovered requires the removal of cargo, contact 88 LRS/LGRTT.
- 3.2.3. Functional and structural assessment of the aircraft.
- 3.2.4. Lifting aircraft.
- 3.2.5. Providing portability to the airframe.
- 3.2.6. Lowering the aircraft.
- 3.2.7. Movement of the aircraft.

3.3. Briefing. After initial planning steps have been completed a briefing will be conducted for all involved recovery personnel. This will allow all involved to begin thinking of various possible hazards and ways to minimize them. Detailed briefings are best broken down into several distinct tasks with one person appointed to be responsible for each task. Each team leader must fully understand his/her responsibilities and how they interface with each other. Team leaders will brief personnel involved in their task(s). Team leaders will ensure recovery personnel have the necessary Personal Protective Equipment for their assigned tasks and will brief personnel involved in their task(s) on the following. Briefings will cover the following topics (as a minimum):

- 3.3.1. The task to be accomplished (what).
- 3.3.2. The intended purpose of each task (why).
- 3.3.3. The sequence of the task (when).
- 3.3.4. Responsibility for each task (who).
- 3.3.5. Task accomplishment and coordination (how).
- 3.3.6. Any known hazards involved.
- 3.3.7. Evacuation procedures.
- 3.3.8. Personnel will sound an alarm if a serious hazard is observed (whistle, air horn, spot light, or megaphone). **NOTE:** Recovery and removal of the aircraft and aircraft parts will be IAW AFI 91-204, Safety Investigations Reports to ensure preservation of evidence for Safety/Accident Investigation Boards. Consult and obtain approval from the ROC, Safety/Accident Investigation Board president(s), and Bio- Environmental Engineer (to ensure site safety) before initiating recovery/removal actions.

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Commander

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

AFI 21-101_AFMCSUP, Addendum A, *Non-Standard Organization (NSO) Logistics Maintenance Management*, 10 November 2020

AFI 33-322, *Records Management and Information Governance Program*, 28 July 2021

AFI 64-117, *Government Purchase Card Program*, 19 May 2022

AFI 90-802, *Risk Management*, 1 April 2019

AFMAN 10-2502, *Air Force Incident Management System (AFIMS) Standards and Procedures*, 13 September 2018

DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 16 January 2020

DAFI 91-204, *Safety Investigations and Reports*, 10 March 2021

DAFM 90-161, *Publishing Processes and Procedures*, 15 April 2022

TO 00-80C-1, *Crash Damaged/Disabled Aircraft Recovery*

WPAFB *Installation Emergency Management Plan 10-2*

WPAFB *Aircraft Mishap Investigation Plan*

WPAFB *Continuity of Operations Plan*

Prescribed Forms

None

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

CDDAR—Crash Damaged/Disabled Aircraft Recovery

CP—Command Post

CRR—Crash Recovery Representative

IC—Incident Commander

ISB—Interim Safety Board

MOC—Maintenance Operations Center

SIB—Safety Investigation Board

TC—Team Chief

TO—Technical Order

Terms

Damaged Aircraft—an aircraft that cannot be removed under its own power or by towing on its own undercarriage without sustaining considerable secondary damage.

Disabled Aircraft—an aircraft that cannot or should not be moved under its own power, but can be towed using its own undercarriage.