

**BY ORDER OF THE COMMANDER  
82D TRAINING WING (AETC)**

**SHEPPARD AIR FORCE BASE  
INSTRUCTION 21-207**



**30 JULY 2019**

**Maintenance**

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

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Instruction (AFI) 21-101, *Aerospace Equipment Maintenance Management*, requirements for the Crashed, Damaged or Disabled Aircraft Recovery (CDDAR) Program and Technical Order (T.O.) 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*. It applies to all units and activities assigned and/or attached to Sheppard Air Force Base (SAFB), including tenants. It does not apply to geographically separated units. This instruction includes responsibilities applicable to 82d Training Wing (82 TRW) and 80th Flying Training Wing (80 FTW) agencies (military, civilian and contractors) that have specific responsibilities to support CDDAR recovery efforts. Group Commander and Contract Maintenance Program Manager will ensure all personnel are familiar with these procedures and take appropriate action when notified of an aircraft mishap. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force (AF) Records Information Management System Records Disposition Schedule, or any updated statement provided by the AF Records Management office (SAF/CIO A6P). Refer recommended changes and questions about this publication to the Office of Primary Responsibility using AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional chain of command. This instruction may not be supplemented. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the AF. See Attachment 1 for a Glossary of References and Supporting Information.

## ***SUMMARY OF CHANGES***

This instruction has been revised to change all references to Maintenance Authority to Director of Maintenance or designated representative (in the Director of Maintenance's absence) throughout the document. Delete or replaced references to Transient Alert throughout the document to CDDAR or CDDAR team accordingly. Quality Control, Contracting Officer Representative (COR) and to include the requirements of T.O. 00-80C-1. Several roles and responsibilities clarified or corrected throughout the document with administrative corrections made as required for readability. Paragraph(s) 2.1., Added requirement for 82d Logistics Readiness Squadron (82 LRS) Fuels Management flight support. 82d Training Group (82 TRG), 82d Contracting Squadron (82 CONS), 982d Maintenance Squadron (982 MXS) support as required for mishap response and post mishap support. "Non" T-38 and/or T-6 aircraft weapon and egress safeing requirements. 2.5., Corrected Training guidance reference. 4.2., Added Tarps and stakes to CDDAR equipment/tool requirements. 7.2., T-38/T-6 Post Ejection safeing and disarming procedures/process. Attachment 1: Updated references to reflect most current version. Updated abbreviations listing. Attachment 2: Corrected recovery vehicle requirements. Attachment 3: Updated equipment requirements.

**1. Overview.** The CDDAR program is designed to recover crashed, damaged or disabled aircraft in a minimum time period. Requirements will consist of opening runways for operational use, prevention of secondary damage to the aircraft, and preservation of evidence for mishap or accident safety investigation.

1.1. CDDAR Program Instruction. The CDDAR program instruction is procedural and will not take precedence over aircraft specific technical data in the recovery of crashed, damaged or disabled aircraft.

**2. CDDAR Responsibilities.** 80 FTW is responsible under the host/tenant support agreement for immediate response, recovery, and preservation of evidence for mishap or accident investigations. 80 FTW/COR office is appointed as the focal point for the CDDAR Program. When notified of a crashed aircraft, either on SAFB or within the response area, the 80 FTW Maintenance Contractor will assemble their CDDAR team members (See Attachment 2) and await instruction from the Incident Commander and/or Director of Maintenance or designated representative. The CDDAR Team Chief will also advise the Incident Commander or Director of Maintenance or designated representative of equipment and support requirements not normally possessed by the maintenance contractor. (See Attachment 3) It will be the responsibility of the Incident Commander and Director of Maintenance or designated representative to coordinate these requirements in the most expeditious manner. For disabled aircraft, the contractor's CDDAR will respond to the scene and determine the most expeditious means to get the disabled aircraft back to the maintenance area. Until release by Incident Commander, aircraft movement will not be attempted.

2.1. 80 FTW. Will coordinate crash recovery support with the 82 LRS, Fuels Management flight fluids and/or gaseous samples, shipment, aircraft defueling support and Servicing truck isolation as required, 82 TRG, 82 CONS and 982 MXS as requested/required to support disabled aircraft recovery and/or aircraft Safety Investigation Boards in accordance with AFI 21-101 to include providing ample space in hangars for preservation of accident debris. 80 FTW will coordinate through 82 CONS for obtaining security fencing to erect around the investigation site inside the designated hangar and 82 LRS for heavy-duty containers (Boxes)

for collecting debris at the mishap site. 80 FTW will serve as Operations/Maintenance advisors to the Safety Investigation Board and Incident Commander, as required. 80 FTW will also coordinate with 82 MDG to conduct exposure assessments during recovery operations, as required. When civil aviation aircraft are involved, the CDDAR team members may respond when requested to do so by their Contracting Officer and a release has been granted by the aircraft owner/owning agency. In the event of an incident involving aircraft other than T-6 or T-38 aircraft, the Incident Commander, through the Emergency Operations Center, will coordinate with Dyess AFB or Ft. Sill Army Post to provide personnel to deactivate life support/egress systems and render safe spent munitions that could cause injury to CDDAR Team members.

2.2. 80 FTW Maintenance Contractor Quality Control. Will ensure all aircraft AFTO Forms 781, *ARMS Aircrew/Mission Flight Data Document*, documentation/historical records, servicing equipment, personnel training records, and Maintenance Information System and eTool(s) are impounded upon notification of an accident or mishap. 80 FTW Maintenance Operations Center (80 FTW/MOC) will also serve as the central point of coordination between CDDAR team chief and the Safety Investigation Board.

2.3. 80 FTW Maintenance Contractor.

2.3.1. Will serve as the CDDAR team chief. Responsibilities will include providing technical expertise, technical data, Mission Design Series unique tools/special equipment, and airframe/system familiarization, as required.

2.3.2. Will develop an emergency recall/mobilization roster identifying recovery team members outside of normal operating hours. A copy of the recall/mobilization roster will be sent to the 80 FTW/COR office and maintained on file in the 80 FTW/MOC to be utilized in the event an accident/mishap should occur during non-duty hours.

2.4. 80 FTW Maintenance Contractor CDDAR Team Chief. Will be familiar with the requirements in T.O. 00-80C-1. He/she is also responsible for training, recovery, participating in host training exercises, equipment inventories, various hazards associated with Mission Design Series aircraft, special equipment qualifications (i.e., tugs, slings, air bags, etc.), and proper Personal Protective Equipment related to recovering crashed/disabled aircraft to ensure proficiency in the CDDAR program. All CDDAR team members will be retrained and qualified at least annually on basic crash/damaged aircraft recovery operations. This will include indoctrination as to the necessity and importance of preserving all components of the wreckage whenever possible in accordance with AFI 91-204, *Safety Investigations and Reports*. All training will be documented in accordance with AFI 21-101 and AFI 36-2650, AETC Supplement, *Maintenance Training*. The responding team will proceed to the site only at the direction of the Incident Commander, 82 TRW/SE, 80 FTW Flight Safety Office, or Director of Maintenance or designated representative.

2.5. 80 FTW Control Tower. Will activate the primary crash net upon notification of an aircraft emergency or mishap. **Note:** Primary crash net is a direct line from the tower to the fire department, base hospital, and base operations.

2.6. 80 FTW Airfield Management Operations (80 FTW/AMOPs). Will activate the secondary crash net which will notify the Operations Group Commander, 80 FTW/MOC, and 80 FTW Flight Safety. Appropriate emergency action checklist will be accomplished.

2.7. 82 LRS/LGR. Will provide vehicular and other logistical support for the duration of recovery operations as required.

2.8. 82 CES Service Provider. Will provide a crane and trained/certified crane operator(s) capable of lifting aircraft weight as required.

2.9. 982d Trainer Maintenance Contractor. Will provide powered and non-powered Aerospace Ground Equipment to the recovery site for the duration of recovery operations. Notification of the 982d will be accomplished through 82 TRW Command Post (82 TRW/CP).

**3. Procedures.** 82 TRW/CP will be notified via the secondary crash net of aircraft accidents/mishaps. All accident/mishap procedures will be in accordance with SAFB Installation Emergency Management Plan 10-2 and Contractor Maintenance Directive. Request/Notification for CDDAR assistance will originate from the Emergency Operations Center Director. The Emergency Operation Center Director will also inform the 82 TRW/CP that CDDAR actions have been initiated. The Emergency Operations Center will notify the 80 FTW/MOC, who will in turn notify all CDDAR standby personnel on duty. 82 TRW/CP will inquire to the assistance required i.e., flare safety, landing gear safety, technical assistance, or other requested items and response area requirements. 82 TRW/CP will notify the 80 FTW/MOC for any requests/notifications of 80 FTW CDDAR assistance.

3.1. Upon notification of an aircraft accident/mishap. The 80 FTW/MOC will immediately notify all CDDAR response personnel and will initiate local Emergency Action Checklists. All 80 FTW radio nets will be notified of an on-base aircraft accident/mishap. Aircraft identification, personnel involved, possible reasons for accident/mishap will not be discussed on an open network utilizing radio nets.

3.2. CDDAR Team Chief and/or team upon arrival. Will coordinate with the 82 LRS, 82 CES or IC and assist with all crash recovery or disabled aircraft actions required in providing technical assistance and/or other support needed. CDDAR team chief will provide updates to the 80 FTW/MOC as warranted or directed on all crash recovery or disabled aircraft actions.

3.3. 82 CES Service Provider. Will mobilize the Mobile Emergency Communication Center to support Command and Control functions upon direction of the Incident Commander.

3.4. Security. All CDDAR sites and evidence will be the responsibility of the Incident Commander, Security Forces and/or appointed follow-on authority.

#### **4. Vehicle/Equipment Requirements.**

4.1. The 80 FTW Contract Maintenance Director of Maintenance or designated representative along with the Chief, COR. Will determine vehicle/equipment requirements. Vehicle requirements have been identified to the 82 TRW and are listed in Attachment 3.

4.2. Equipment/Tool Requirements. Have been identified and items are maintained by 80 FTW Maintenance Contractor. The CDDAR team is responsible for custodial and storage of equipment/tools/tarps and Stakes stored in the crash recovery trailer.

4.3. The T-6 Sling Assembly. Will be maintained by the T-6 Contractor Operated and Maintained Base Supply.

**5. Inspection and Inventory.** The CDDAR team is responsible for pre and post inspection of all recovery equipment to include air bags, manifolds, jacks, slings, and shoring. Periodic equipment inspections must be accomplished in accordance with intervals established in technical orders, commercial manual or annually, as a minimum. Document inspections, maintenance and operational checks in Maintenance Information System, on AFTO Form 244, *Industrial/Support Equipment Record*, or on other approved forms, in accordance with applicable directives.

**6. CDDAR Team Chief.**

6.1. 80 FTW Maintenance Contractor. Will maintain qualified CDDAR Team Chiefs in accordance with T.O. 00-80C-1, AFI 21-101, and contractor directives. CDDAR Team Chiefs are responsible for training CDDAR Team Members. This training will be documented on the Special Certification Roster as CDDAR Team Chiefs.

6.2. Team Chiefs. Will consider special tasks that may require identifying and handling aircrew life support or egress systems.

6.2.1. Develop and maintain course control documents and/or lesson plans for CDDAR training.

6.2.2. Ensure sufficient personnel are trained to support CDDAR program.

6.2.3. Ensure special qualifications for personnel are identified and documented such as tow supervisor team member.

6.2.4. Review support agreements and base disaster response plans annually.

6.2.4.1. Coordinate with Inspection Planner (82 TRW/IG) prior to annual Lift Exercise.

6.2.5. Ensure adequate tools and support equipment for recovery are serviceable and available. Inform the Director of Maintenance in writing of equipment shortages/serviceability that affect CDDAR support. The Director of Maintenance or designated representative will notify COR office immediately of any equipment shortages/serviceability issues.

6.2.6. Ensure adequate personal protective equipment is available and team members are properly trained in its wear.

6.2.7. Conduct a crash recovery exercise annually for each assigned Mission Design Series in accordance with AFI 21-101, AETC Sup.

6.2.8. Coordinate with Quality Control Weight & Balance Manager prior to lifting the mishap aircraft to verify weight and center of gravity.

**7. Recovery Team Requirements, Qualifications and Training Requirements.**

7.1. A CDDAR Team Chief. Is required for all CDDAR operations with the exception of T-6 and/or T-38 aircraft that can be safely towed from the active runway or taxiway. These instances, a qualified tow team, two or three person depending on hour of day, may recover the aircraft provided there is no damage to prevent towing.

7.2. Teams. Will be assembled depending on type of Mission Design Series. Team composition is identified in Attachment 2 and contractor directives. A two-person egress

team will be dispatched to pin (Safe) the ejection seats and the egress system as required before any lifting, jacking or towing is accomplished. Dis-arming the seats is not required for aircraft that can be towed normally. In the event of an aircrew ejection, the seats and egress system will require to be dis-armed and safed before they can be moved or recovered. The CDDAR Team Chief will coordinate with contractor Quality Control and egress lead man to have either an Emergency Telephone Request or Urgent 00-25-107 Request for Technical Assistance on disposition for dis-arming and safeing the ejection seats prior to them being moved or recovered.

7.3. CDDAR Team Members. Will be trained by qualified and will participate in the required annual Lift Exercise on the specific Mission Design Series prior to qualification. All personnel qualified to serve as a CDDAR Team Member will receive both academic and hands-on training annually.

## **8. Environmental, Safety, and Health Hazards.**

8.1. Personnel (Military or Civilian) Including Maintenance Contractor Personnel. Will not enter a CDDAR site until a health risk assessment has been performed by the Bioenvironmental Engineer and released by competent authority; Fire Chief, Incident Commander.

8.2. T-38 Aircraft. Do not possess composite materials but may still generate hazardous conditions. T-6 aircraft are constructed with some composite materials. Personnel entering the crash area may require personal protective equipment such as respirators, Tyvek type coveralls, nitrile inner gloves and leather external gloves. Personnel will wear protective equipment as determined by the Bioenvironmental Engineer and coordinated with the maintenance contractor's Environmental Safety and Health manager or industrial hygienist.

## **9. Hours of Support.**

9.1. CDDAR support. Will be available throughout the flying hours of 80 FTW through contact with the 80 FTW/MOC. During non-flying periods, CDDAR support will be accomplished through the recall process. The maintenance contractor will respond with a team as quickly as possible, but not later than two hours after notification through the 82 TRW/CP.

KENYON K. BELL, Colonel, USAF  
Commander, 82d Training Wing

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

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 21 May 2015

AFI 21-101\_AETCSUP, *Aircraft and Equipment Maintenance Management*, 18 September 2015

AFI 36-2650\_AETCSUP, *Maintenance Training*, 2 May 2017

AFI 91-204, *Safety Investigations and Reports*, 27 April 2018

AFMAN 33-363, *Management of Records*, 1 March 2008

Host/Tenant Support Agreement, 14 February 2012

SAFB Installation Emergency Management Plan 10-2, 1 June 2018

T.O. 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, 6 June 2019

***Prescribed Forms***

SAFB Form 71, *Training Asset List*, 6 February 2017

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 244, *Industrial/Support Equipment Record*

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*

***Abbreviations and Acronyms***

**80 FTW**—80th Flying Training Wing

**80 FTW/AMOP**—80th Flying Wing Airfield Management Operations

**80 FTW/MOC**—80th Flying Training Wing Maintenance Operations Center

**82 CES**—82d Civil Engineer Squadron

**82 CONS**—82d Contracting Squadron

**82 LRS**—82d Logistics Readiness Squadron

**82 MDG**—82d Medical Group

**82 TRG**—82d Training Group

**82 TRW**—82d Training Wing

**82 TRW/CP**—82d Training Wing Command Post

**82 TRW/IG**—82d Training Wing Inspector General

**82 TRW/SE**—82d Training Wing Safety Office

**982 MXS**—982d Maintenance Squadron

**AF**—Air Force

**AFMAN**—Air Force Manual

**AFTO**—Air Force Technical Order

**CDDAR**—Crashed, Damaged, Disabled Aircraft Recovery

**COR**—Contracting Officers Representative

**SAFB**—Sheppard Air Force Base

**T.O.**—Technical Order



**Attachment 2****CRASHED, DAMAGED OR DISABLED AIRCRAFT REPAIR (CDDAR) TEAM  
COMPOSITION****A2.1. AIRCRAFT TYPE - # OF PERSONNEL.**

A2.1.1. T-38 – 1 CDDAR Team Chief, 4 Team Members, Special Vehicle support: One crane with operator, and vehicle to support transporting the damaged aircraft with operator as required for real world recovery operations.

A2.1.2. T-6 – 1 CDDAR Team Chief, 4 Team Members, Special Vehicle support: One crane with operator, and vehicle to support transporting the damaged aircraft with operator as required for real world recovery operations.

A2.1.3. Non-Assigned Mission Design Series: A team will be assembled based upon input and approval of the Contracting Officer under direction of the Incident Commander or Director of Maintenance or designated representative.

A2.1.4. Other personnel: As determined necessary by the Incident Commander, Director of Maintenance or designated representative and/or CDDAR Team Chief.

### Attachment 3

#### EQUIPMENT REQUIREMENTS

**A3.1. The 80th Aircraft Maintenance.** Possesses all required slings, jacks, airbags, hand tools and vehicles to perform CDDAR responsibilities for 80 FTW assigned aircraft and like Mission Design Series aircraft with the exception of the following, which must be provided by the 82 TRW:

A3.1.1. Escort for contractor vehicles onto the airfield when Airfield Management is not available.

A3.1.2. Crane w/operator – 20 ton or greater.

A3.1.3. Forklift w/operator – All terrain.

A3.1.4. Tractor Truck and Flatbed Trailer w/operator – up to 40 foot.

A3.1.5. Required portable lighting units (Lite-Alls).

A3.1.6. For non-T-38/T-6 Mission Design Series transient and civil aircraft all equipment, vehicles and special tools must be provided by the 82 TRW and/or owning agency with the exception of airbags.