

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

**ROBINS AIR FORCE BASE  
INSTRUCTION 21-115**



**14 JULY 2022**

**Maintenance**

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

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: 78OSS/OSQ

Certified by: 78OSS/CC  
(Lt Col Mark D. Struska)

Supersedes: ROBINSAFBI 21-115, 21 February 2018

Pages: 19

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This publication implements AFI21-101\_AFMCSUP\_ADD\_A, *Non Standard Organization (NSO) Logistics Maintenance Management*. This instruction establishes joint procedures for the recovery of crashed, damaged or disabled aircraft on Robins AFB or within the geographical area of responsibility of the base. This instruction meets the requirements for a complex OI, and can be implemented in conjunction with Robins AFB Plan 10-2, Installation Emergency Management Plan (IEMP), and Robins AFB Plan 91-204 Mishap Response Plan. This instruction is applicable to all units that may be tasked to support aircraft recovery operations, including Robin's Mission Partner units. These units must be prepared to rapidly deploy crash recovery equipment and personnel for crashed, damaged or disabled aircraft when required. Additionally, it applies to the Air National Guard, and other mission partner flying units, except where noted otherwise. This publication may not be supplemented at any level. Requests for waivers must come through the chain of command from the commander of the office seeking relief from compliance. Waiver requests must be submitted to the office of primary responsibility (OPR); waiver authority has not been delegated. The waiver approval authority for all compliance items within this publication are at Wing Level (Tier T-3). Refer recommended changes and questions about this publication to the OPR, 78th Operations Support Squadron (78 OSS), using AF Form 847, Recommendation for Change of Publication. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>.

***SUMMARY OF CHANGES***

This document has been substantially revised and requires a complete review. This revision removes redundancy in text and organizes responsibilities, procedures and operating instructions to align RAFBI 21-115 closer to RAFB Installation Emergency Management Plan (IEMP) 10-2 and RAFB Plan 91-204 Mishap Response Plan.

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## 1. General Information.

1.1. The Crashed, Damaged or Disabled Aircraft Recovery (CDDAR) program applies to all host and mission partner flying organizations. It will also be used to recover transient aircraft if within the capability of the CDDAR Team with guidance from the owning organization. It is designed to recover crashed, damaged or disabled aircraft in a minimum time period and return the airfield to operational status 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. Preservation of evidence for mishap or accident investigations IAW AFI 91-202.

1.1.4. Mitigate the mishap's impact on the owning organization's flying mission requirements.

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

1.2. There are two distinct phases of an aircraft mishap--response and recovery/investigation.

1.2.1. First responders face the probability of an aircraft fire. As an aircraft burns, gases, vapors and solid particles from items such as composite materials are released into the smoke plume. Recovery team members may be exposed to fibers and inhalable dusts as aircraft parts are moved, modified by cutting, breaking, twisting, or hammering.

1.2.2. Personnel tasked to participate in a crash or post-crash response, recovery, maintenance and/or clean-up operation must be aware of/briefed on all possible health issues involved.

1.2.3. Units must ensure local policies and procedures for handling crash damaged composites are addressed to include training and personal protective equipment (PPE).

1.2.4. The crash site will only be disturbed to the extent necessary to eliminate a situation that is detrimental to the aircraft, support equipment or personnel. The area will be maintained in an undisturbed state until the aircraft is released to the Interim Safety Board (ISB) or Safety Investigation Board (SIB) by the Incident Commander (IC) or appropriate authority. Once the ISB/SIB has determined the aircraft can be moved, the aircraft will be turned over to maintenance by the ISB/SIB President. Once recovery actions begin, ONLY personnel designated by the CDDAR Team Chief will enter the recovery area.

1.3. Response Times. Immediate response by the CDDAR Team and required mission partner organizations is required during normal operating periods or duty hours. Normal duty hours are described as 0800-1500, M-F. If Transient Alert is on site, they will be the first maintenance personnel to respond, IAW their PWS. **NOTE.** To remove redundant text, all references to MOC will be applicable to respective units (402 AMXG or JSTARS).

1.4. All units will develop emergency recall or mobilization rosters to identify and notify required recovery team members outside normal operating hours. Units must also account for team members being deployed, TDY, and on leave.

1.4.1. When the Robins Air Traffic Control (ATC) receives information concerning an **on-base** aircraft accident, the Primary Crash Alarm System (PCAS) shall be activated and AMOPS shall activate the Secondary Crash Network (SCN), both IAW with IEMP 10-2 and/or Mishap Response Plan (MRP).

1.4.1.1. Upon notification of an event, the 78 OSS/OSQ and/or the 78 OSS/DO will confirm with the MOC that the CDDAR team chief has been alerted to the potential need to standup/activate the CDDAR response team.

1.4.2. Upon notification of an **off-base** aircraft accident, the 78 OSS/CC and or his/her designated representative, will notify the 78 OSS/OSQ and/or 78 OSS/DO who will then confirm with the MOC that the CDDAR team chief has been alerted to the potential need to standup/activate the CDDAR response team.

1.4.3. IAW Robins AFB IEMP 10-2, off-base responders must observe the jurisdictional rights of civilian authorities and private citizens. Off-base accidents may require the establishment of a National Defense Area (NDA), approved by 78 ABW/CC, to permit control of civilian property by military forces. Even after establishment of the NDA, close coordination with civil law enforcement agencies is essential to ensure an effective security program.

1.4.4. The initials of the MOC controller and/or CDDAR Team Chief will be documented on appropriate MOC events log as warranted to ensure notification verification in either event.

1.5. During all emergency response situations the IC is the final authority for determining when the mishap site is safe.

1.5.1. The IC will decide which first responder actions may or may not proceed as well as when the investigating authority and/or CDDAR Team may approach the mishap site to conduct recovery or investigation operations. The Incident Commander/Recovery Operation Commander (IC/ROC), in consultation with the Airfield Manager, Base Safety Office (78 ABW/SE) and the CDDAR Team Chief, will then decide which removal methods are best.

1.6. If a CDDAR event occurs on or near the airfield, it will be necessary to clear the aircraft/wreckage as soon as possible to facilitate resuming aircraft operations. This action will be directed by 78 ABW/CC upon the recommendation of the IC, Airfield Manager or designated official.

## **2. Host Installation/Mission Partner CDDAR Program Responsibilities.**

2.1. The 78 ABW, as host wing, has ownership of the Robins AFB CDDAR program. The 78 OSS/OSQ, on behalf of the 78 ABW, is the overall program manager for CDDAR on Robins AFB. The 402 AMXG has been delegated execution of the CDDAR program by the 78 ABW/CC IAW AFSCMAN 21-102, AFI21-101\_AFMCSUP\_ADD\_A, and SA.

2.2. The 78 ABW, in collaboration with tenant units, has overall responsibility for recovery of host, mission partner, or transient crashed, damaged, or disabled aircraft on or off Robins AFB. Since mission partners are responsible for the condition/repair of assigned or possessed aircraft, mission partners must be actively involved in assisting the host wing in recovery operations during exercises and real world responses.

2.2.1. Technical expertise, technical data, mission design series (MDS) unique tools/special equipment, expert manpower and airframe/system familiarization are all valuable contributions tenant units make to the host CDDAR program.

### 2.3. Exercises

2.3.1. CDDAR operations/exercises should be funded by the 78 ABW as the host wing or by owning unit if aircraft not assigned to RAFB.

2.3.2. Normally, funding requests are routed through the MXG IAW DAFI 21-101. However, Robins AFB has unique circumstances as the 402 AMXG (delegated CDDAR execution responsibility) is a tenant unit on the installation and does not align under the host wing (78 ABW).

2.3.3. Exercises involving the entire CDDAR team are to be limited to no more than once per year due to significant budgetary impact to ALC/Depot Production schedule and ANG units.

2.3.4. Exercises are to be aligned with the annual CDDAR training/inventory event (typically in Apr/May timeframe).

2.3.5. Any additional exercises will be Team Chiefs only and must be coordinated at least 60 Days in advance.

2.4. The 402 AMXG and Team JSTARS, are responsible for program support to include aircraft recovery operations, qualification and training of assigned recovery team members and inspection/maintenance of assigned equipment used for CDDAR operations.

2.5. CDDAR operations will be accomplished using a Team Robins approach. In the event of a JSTARS aircraft incident, JSTARS will assign a Primary and Alternate (if required) SME to assist with recovery operations while 402 AMXG Team Chief(s) will retain full custodial responsibility of all CDDAR equipment and operations. SME(s) will be present during all CDDAR operations using equipment on or around their aircraft.

2.5.1. 402 AMXG/CC shall appoint personnel from the 402 AMXG/MXA as the overall CDDAR Team Chief(s).

2.5.2. The 402 AMXG and JSTARS will each provide enough team members to field a team with a minimum of eight members to include Team Chiefs. Team members executing CDDAR operations will consist of individuals from all Robins mission partner flying units.

2.5.3. Team members from the unit owning or possessing the aircraft will be represented during aircraft recovery, real world or exercise. If the team or owning unit requires assistance, qualified members from other mission partners may be requested.

2.5.4. If ANG Technicians are requested for airframes other than JSTARS, 78 ABW must provide/coordinate funding to place technicians in military status. This process may/will delay Team JSTARS response.

2.6. Equipment, vehicles, PPE and any other CDDAR requirements needed to recover Robins assigned aircraft will be identified by each mission partner flying unit to the CDDAR Team Chief.

2.6.1. The CDDAR Team Chief will best maximize sharing of resources and specifically identify to each mission partner which resources they will be responsible for maintaining and providing.

2.7. Host units provide recovery support for all mission partners as established in support agreements (SA). CDDAR procedures will be coordinated with aircraft maintenance (402 AMXG and JSTARS), Fire Department (778 CES/CEXF), Safety (78 ABW/SE), Civil Engineer (78 CEG), Emergency Management (78 CEG), Explosive Ordnance Disposal (116 CES/CED), Security Forces (78 SFS), Bioenvironmental (78 AMDS/SGPB), Airfield Manager (78 OSS/OSA), Logistics Readiness Squadron (78 LRS), Operational Contracting (AFSC/PZIO-R) and other on/off-base agencies as applicable. **NOTE:** 116 CES/CED can only perform emergency ground safing of most ejection systems. Egress technicians must be consulted to conduct render safe procedures to ensure area is safe for investigation and recovery operations. If weapons are on board the aircraft, support will need to be called in IAW RAFB Plan 10-2.

2.8. 78ABW Program Manager will ensure the support agreement office (78 LRS/LGRDX) includes CDDAR support in the agreements with tenant flying units.

2.9. 402AMXG/CC has been delegated the authority to approve selections for CDDAR Team Chief, including rank waivers for team chiefs, as well as approve waivers to required training in emergency situations for team members.

### 3. Typical Sequence of Events.

3.1. Immediately after notification of the incident, first responders proceed IAW RAFB Plan 10-2 checklists. This initiates the Response Phase of the plan. **WARNING:** Incidents involving aircraft made up of a composite structure may cause serious injury or death to those in contact with it. Technical Order (TO) 00-105E-9, Aerospace Emergency Rescue and Mishap Response Information (Emergency Services) contains information regarding aircraft-specific composite component locations, and should be consulted when responding to aircraft incidents. Contact base Bioenvironmental Engineering and the transient aircraft's home base to determine composite material risks and requirements for Personal Protective Equipment (PPE). **WARNING:** Ensure that it is safe to approach the aircraft, all explosives, ejection seat cartridges, tires, fluids, flares, and munitions have been de-armed, expended, or otherwise rendered safe by Explosive Ordnance Disposal (EOD) and proclaimed safe by the Incident Commander (IC). **WARNING:** Due to the many unknown factors of airframe condition immediately following a crash landing, do not attempt to use special equipment or procedures not included in the specific aircraft technical orders, or without approval of the specific airframe system manager/engineer. The owning agency of any transient aircraft will be contacted for technical advice pertaining to the specific aircraft. **WARNING:** Make sure the aircraft remains stable at all times and that personnel use extreme caution when working in and around a disabled aircraft. Before any ground handling activities take place on or around the aircraft, CDDAR personnel will ensure that it is properly stabilized to prevent movement or shifting. It may be necessary to moor the aircraft or stabilize using air bags. **CAUTION:** The aircraft and crash site will be disturbed only to the extent required to eliminate any potentially dangerous situation to the aircraft, support equipment, or personnel, and will remain in an undisturbed state until the aircraft is released to the ROC by the IC.

3.2. The IC ensures initial rescue, firefighting, security and safing of the aircraft is performed. No one other than first responders may enter the mishap area. CDDAR team members may enter the incident site to assist first responders, if IC requests them. The mishap scene must be determined safe by the IC prior to any investigation or further CDDAR actions.

3.2.1. The incident aircraft and its equipment must not be disturbed or removed unless directed or released by the IC, ISB President or Impoundment Official/owning unit representative. Control of the mishap scene/site remains with the IC.

3.2.2. While the initial response is in progress, the CDDAR Team members should prepare and posture their equipment and materials required to recover the aircraft.

3.3. The unit owning the aircraft will work through their designated representatives to the Emergency Operations Center (EOC) to advise the IC of any special considerations. When the incident site is secure, the owning unit representatives will coordinate actions through the EOC to provide assistance or information on special recovery requirements (e.g. classified material/equipment).

3.4. When first-responder actions are complete and the site is safe, the Response Phase will end and the Recovery Phase, which includes investigation actions, will begin. The CDDAR Team Chief then coordinates recovery actions with the Recovery Operation Commander (ROC) and/or appointed investigation officials.

3.4.1. Once command of the incident aircraft/wreckage is transferred from the IC to the ROC, Board President (BP) or Impoundment Official (IO)/owning unit representative appointed by the Investigating Authority, he/she will reach out to agencies, as required, per applicable MRP checklist(s). BP, IO, or ROC will contact the CDDAR team Chief and request CDDAR assistance. If/when CDDAR is required, the Team Chief will initiate recall procedures.

3.4.2. In emergency situations, the recovery/investigation phase may be waived by the 78 ABW/CC with consideration to reopening the airfield.

3.5. Under routine removal conditions when the investigation actions are complete, the Investigation Authority transfers command of the incident aircraft/wreckage to the ROC to have the recovery or salvage teams restore, reclaim or dispose of the aircraft. Once incident aircraft/wreckage is recovered, command of the aircraft/wreckage is transferred back to the Investigative Authority.

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

4.1. The 402 AMXG/CC will make the final determination on unit vehicle/support equipment requirements, within the limits provided by allowance standard(s). See [Attachment 3](#) for minimum vehicle/support equipment requirements.

4.2. Vehicle Operations, 78 LRS/LGRDDO, will assist in the movement and locating of additional trucks, tractor trailers, etc. up to the limits of the u-drive fleet, to transport CDDAR support equipment to the mishap site, as well as transport wreckage to the wreckage assembly point. 78 LRS/LGRV may institute the Vehicle Priority Recall Roster to provide support as needed. 78 LRS/LGRV can establish lease agreements for additional tractors and trailers if required.

4.2.1. Depending on the nature of the mishap, tenant units may be required to supply additional specialized equipment to support the recovery of their aircraft.

4.3. 78 CEG will provide available heavy equipment (bulldozers, dump trucks, etc.) and drivers to support recovery operations. Additionally, 78 CEG will provide hazardous materials and spill containment capability beyond the capacity of the CDDAR Team.

4.4. FSC/PZIO-R, maintains a contingency vendor listing of contractors to provide cranes and other equipment for emergency operations. These are established with local suppliers in accordance with lease procedures established in AFI 24-302 paragraph 2.10.

4.5. Leases must be coordinated through 78 LRS/LGRVM prior to submission to contracting. AFSC/PZIO-R representative to the EOC will be contacted to implement these leases IAW Federal Acquisition Regulation procedures.

## **5. Inspection and Inventory.**

5.1. The entire CDDAR team will inspect all recovery equipment to include air bags, manifolds, jacks, slings, shoring, etc., for serviceability before and after each incident/exercise use.

5.2. Periodic equipment inspections must be accomplished per intervals established in technical orders or annually as a minimum.

5.3. Perform operational checks according to applicable directives during exercise and/or inventory reviews. Document inspections and maintenance on AFTO Form 244, Industrial/Support Equipment Record, or on MAJCOM approved form.

5.3.1. Mission partner organizations may record inventory documentation according to their own procedures.

## **6. 78 OSS Program Manager will:**

6.1. Ensure Major Accident/Incident checklist(s) is/are initiated.

6.2. When notified of an aircraft mishap, ensure CDDAR Team Chiefs are notified who, in turn, will notify applicable CDDAR qualified personnel. Notification will include the type of aircraft, location, amount of fuel and or explosives on board and known extent of the aircraft damage.

6.3. For WR-ALC aircraft, ensure all aircraft records are secured by the respective maintenance squadrons. All other aircraft records will be obtained IAW RAFB Plan 91-204.

6.4. If mishap occurred after aircraft refueling or in Programmed Depot Maintenance Scheduling System (PDMSS), contact the Fuels Flight Management (78 LRS/LGRF) to impound any fuel trucks used during ground refueling operations.

6.5. Request 78 LRS/LGRF de-fuel equipment be placed in standby status for possible uses in recovery operations (i.e., aircraft nose gear collapse).

6.6. Notify WR-ALC/QPC, Quality Assurance, of the incident.

6.7. Support CDDAR Team as requested by CDDAR Team Chief.

6.8. Maintain recall rosters. During off duty hours when notified of a CDDAR event, coordinate with the MOC for the status of the CDDAR Team, as applicable.

6.9. Coordinate and maintain CDDAR share point page, This page will be the collection point for all CDDAR program documents such as Team Rosters, Team Qualifications, Equipment lists, etc.

6.10. Mission Partner units will provide their team roster and CDDAR Team qualifications to the CDDAR Program Manager.

6.10.1. Access to page will be limited to unit CDDAR Leads and Team Chiefs.

## **7. Maintenance Operations center (MOC).**

7.1. There are two functional MOCs at Robins AFB.

7.1.1. 402 AMXG MOC manages all ALC/Depot aircraft maintenance/support requests.

7.1.2. 116 MOC manages all JSTARS aircraft maintenance/support requests.

## **8. Team Chief will:**

8.1. Execute and maintain CDDAR requirements and be the OPR for unit CDDAR instructions, as applicable. NOTE: Aircraft recovery efforts may require AFSC specific personnel to accomplish special tasks such as identifying and handling of classified equipment, life support, egress systems, etc.

8.2. Team Chief will develop a specific action plan for the incident using CDDAR Planning Checklists in T.O. 00-80C-1, Tables A-3 through A- 8.

8.3. Develop, in conjunction with the Maintenance Training Flight (MTF), or Field Training Detachment if MTF is not available, course control documents for CDDAR training.

8.4. Review support agreements, RAFB Plan 10-2 (IEMP), and RAFB Plan 91-204 (MRP), annually. Provide inputs to 78 OSS for changes as required.

8.5. Ensure CDDAR procedures are coordinated with the Fire Department, Safety, CE Readiness and Emergency Management Office, EOD, Security Forces, Bioenvironmental Engineering, Airfield Manager, and on/off-base agencies (as required) IAW AFMAN 10- 2502 .

8.6. Inform 402 AMXG/CC, 78 ABW/CC and the 78 OSS CDDAR Program Manager in writing of equipment shortages/serviceability that preclude effective CDDAR support.

8.7. Team Chiefs are responsible for team member training oversight on job specific tasks not directly associated with CDDAR (jacking, towing, etc). Ensure sufficient personnel and teams are trained and equipment is available to support CDDAR operations. This includes:

8.7.1. Basic equipment operation (e.g. light carts, air bag blowers, generators, etc.).

8.7.2. Familiarization and training on any unique characteristics/hazards/materials for aircraft (i.e. F-16 EPU hydrazine, depleted uranium used as ballast, aircraft composite materials, etc.) and document training.

8.7.3. Availability and proper use of PPE as determined by technical data and Base Bioenvironmental Engineering (BEE).

- 8.8. Ensure special qualifications for personnel are identified and documented. Identify individual team member qualifications for specific equipment operations (e.g., towing, jacking, support equipment, special purpose vehicle, respiratory protection, etc.). (See [Attachment 2](#)) Mission Partner units will provide their team roster and CDDAR Team qualifications to the CDDAR Team Chief.
- 8.9. Conduct/participate in annual training and exercises. Coordinate exercises with the 78 ABW CDDAR Program Manager and applicable supporting base agencies.
- 8.10. Annually demonstrate team's capability to recover assigned crashed/damaged aircraft.
- 8.10.1. CDDAR exercises will consist of one or more of the following: lifting device positioning, sling hookup, and simulating hoisting or lifting.
- 8.10.2. Accomplish hoisting or lifting IAW applicable aircraft T.O. During hoisting or lifting exercises, observe surface wind limitations. **NOTE:** When using a crash crane, the CDDAR Team will accomplish removal procedures up through attaching the lifting sling to aircraft and applying tension to cables.
- 8.10.3. When Ground Instructional Trainer Aircraft (GITA) or Aircraft Battle Damage Repair (ABDR) aircraft is used, the aircraft may be lifted as long as Weight and Balance is maintained and current.
- 8.11. Coordinate with unit Weight and Balance manager when weight and center of gravity (CG) conditions are unknown.
- 8.12. Coordinate recovery actions with the appropriate contractor(s) and weapons system expert(s) as needed.
- 8.13. Carry out custodial and storage responsibilities for special purpose equipment specifically assigned to the crash recovery mission. (See [Attachment 3](#))
- 8.14. Update Recall rosters. During off duty hours when notified of a CDDAR event, coordinate with MOC for the status of the CDDAR Team.
- 8.15. Recall and ensure the CDDAR Team is assembled at a pre-designated location and available to respond to the recovery site when directed by the IC. Additionally, establish a work schedule for CDDAR personnel.
- 8.16. Ensure CDDAR trailer and equipment is assembled for rapid response to crash site upon IC request. Transportation of the CDDAR crash recovery trailer and equipment in support of an off-base mishap operation will be made available upon the authorization of the IC.
- 8.17. Ensure complete safety briefings are given, detailing hazards to personnel and equipment and ensure proper PPE is available and properly used.
- 8.18. Notify the MOC who, in turn, will report and provide the IC with the number of qualified CDDAR personnel and status of available equipment.
- 8.19. If required, ensure a tow vehicle with tow bar, tow vehicle operator and tow team are available during recovery operations if incident is beyond TA's response capabilities or occurs during off-shifts.

8.19.1. Tow team will take directions from the CDDAR Team Chief or the IC. The tow team will remain available to the CDDAR Team for any assistance necessary to aid in aircraft recovery operation.

8.20. Request additional expertise or equipment through the MOC. If the items or personnel are not under the jurisdiction of 402 AMXG, they will be requested through the MOC or EOC.

8.21. Be responsible for directing and coordinating CDDAR operations as directed by the IC, ROC, BP, or other 78 ABW/CC designated personnel.

8.22. For longer term recovery operations, request a portable toilet be placed near the incident site through 78 CEG, Customer Service Desk, 468-5657. This must be approved by Airfield Management Operations, 78 OSS/OSAA, 468-2114/2115 and the Team Chief will need to arrange to escort the delivery vehicle while on the airfield.

8.23. Ensure BEE is consulted and directly involved in determining personnel health hazards, training required and appropriate levels of PPE.

8.24. Provide additional support and equipment as requested.

## **9. 78 ABW Response Teams.**

9.1. The IC, normally the Fire Chief, will:

9.1.1. Ensure all emergency response actions are completed and it is safe to approach the aircraft before directing the CDDAR Team Chief to begin recovery operations.

9.1.2. Establish a staging area, as necessary, to hold equipment until required at the site.

9.2. The maintenance representative on site will ensure CDDAR Teams and all additional maintenance response personnel are briefed on staging area procedures and site safety requirements.

9.3. 78 SFS will provide incident site security and maintain the site cordon as long as necessary as directed by the IC.

9.4. 78 LRS will provide vehicle support and obtain required fuel samples IAW RAFB Plan 91-204.

9.5. The EOC/Crisis Action Team (CAT) (as applicable) will direct all personnel to stay clear of the recovery site unless requested by the IC.

9.6. AFSC/PZIO-R will maintain an Emergency Management Contingency Kit (kit contains binder with contracting & emergency management regulations, contingency vendor listing, laptop, maps, admin forms, etc.) to obtain any required equipment and supplies not available on base. The contingency vendor listing contains names/numbers of contractors who have verbally pledged to respond 24-7 if called. The AFSC/PZIO-R representative to the EOC will establish a contract with the vendor for the required material when notified by the CDDAR Team.

9.7. Upon EOC request, 78 ABW/CE will provide relief facilities (portable toilet) to the incident site as needed. These will be requested through the 78 ABW/CE Customer Service Desk, 468-5657. Movement to the site must be coordinated with 78 OSS/OSA, if located on the airfield.

**10. 78ABW/SE will:**

- 10.1. Ensure requirements of RAFB Plan 91-204 are accomplished. (78 ABW/SE)
- 10.2. Notify base where aircraft was last fueled to obtain required fuel samples.
- 10.3. 78 ABW/IG will assist the host wing, 402 AMXG Training Office and unit training offices in scheduling and managing training exercises for CDDAR recovery personnel. This can be done in conjunction with a scheduled MARE or as a separate training event.
- 10.4. 78 MDG Bioenvironmental Engineering Flight will provide comprehensive just-in-time training for emergency and first responders, as well as CDDAR Team members to include the potential health hazards associated with the downed aircraft and the appropriate protective measures to be utilized during response or recovery operations. This may also be required for non-assigned aircraft mishaps that Robins AFB responds to.
- 10.5. 78 ABW Command Post will submit all required incident reports to the AFMC Command Center and higher headquarters IAW AFMAN 10-206, Operational Reporting. **NOTE:** Mission Partner command posts will be required to submit reports to their respective command centers as required.

**11. Robins AFB Mission Partners will:**

- 11.1. Assign unit personnel to support CDDAR duties, and provide roster to CDDAR Program Manager and Team Chiefs. Mission partner units will be prepared to perform assigned maintenance duties and assist and provide expertise in CDDAR situations to the CDDAR Team Chief for the recovery effort.
- 11.2. Determine type and quantity of specialized CDDAR tools, equipment and personnel required to recover their organization's aircraft. Mission partner units will procure and maintain specialized equipment to support recovery of their aircraft. Mission Partner units will establish an inventory listing and coordinate with 78 LRS to ensure accountable items are listed on organizational equipment accounts. Changes in required resources will be identified to the CDDAR Team Chief within 60 days.
  - 11.2.1. Mission partner units will coordinate their specialized equipment requirements with other flying units and the CDDAR Team Chief to avoid duplication of inventories.
  - 11.2.2. If the CDDAR Team Chief needs a piece of specialized equipment possessed by any mission partner unit to recover an aircraft, the Team Chief will direct the possessing unit to provide the needed equipment for the recovery operation.
- 11.3. Provide support augmentees to the CDDAR Team Chief as needed (consider personnel from all AFSCs for unique aircraft requirements, e.g. classified handling). If necessary, just-in-time training may be conducted.
- 11.4. Inspect and maintain assigned CDDAR resources. Notify CDDAR Team Chief in writing if any of their assigned equipment/resources are out of service.
- 11.5. Initiate their organization's crash recovery checklist in the event of a mishap.
- 11.6. Take part in all training required by CDDAR Team Chief.
- 11.7. Submit all required reports to their organization's higher headquarters in the event of a mishap.

11.8. Provide the EOC, MOC and the CDDAR Program Manager with points of contact for recall of their organization's CDDAR support team. When appointing new personnel, mission partner organizations should notify the CDDAR Program Manager within 24 hours of any change in key personnel. The CDDAR Program Manager will maintain copies of all organization's support team rosters which will include the team member's CDDAR qualifications. These rosters will be reviewed and updated at least annually.

## **12. Transient Aircraft.**

12.1. Transient Alert (78 OSS) will respond to the IC as requested to provide initial assistance for the aircraft involved.

12.2. The CDDAR Team will recover transient aircraft if possible. If the expertise and equipment required to perform CDDAR operations are beyond Transient Alert or 402 AMXG capabilities, the aircraft's home station will be required to provide support.

12.3. The 402 AMXG CDDAR Team Chief or the IC may request assistance from Mission Partner units or another installation's Expeditionary Maintenance (EDMX), if available, for the recovery of transient aircraft.

12.4. If weapons are on board the aircraft, an EOD team will need to be requested IAW RAFB Plan 10-2.

## **13. CDDAR Recovery Team Qualifications.**

13.1. All team members will attend AETC CDDAR Formal Training at Sheppard AFB, TX and must be qualified in basic CDDAR operations IAW T.O. 00-80C-1.

13.2. All qualifications for civilian team members will be recorded in Production Acceptance Certification (PAC). Qualifications for military team members will be recorded in their organization's appropriate training records.

## **14. Training Requirements.**

14.1. All team members must be trained in recovery procedures IAW T.O. 00-80C-1, MDS specific technical data, other applicable Air Force and MAJCOM directives and unit-developed training guide.

14.2. All recovery team members must receive initial training comprised of both academic and hands on training/exercises which should include the actual lifting of an aircraft. Aircraft lifting exercises may be accomplished by using owned aircraft, utilizing training hulks or participating with other organizations possessing training assets.

14.3. Ensure all training is documented in the appropriate system for civilians and military members. **NOTE:** According to T.O. 00-80C-1, all initial training must be hands-on, and although the T.O. states that training should include lifting a unit possessed aircraft, it is recommended all new team members attend an AETC formal training course.

14.4. Although 402 AMXG aircraft are "depot possessed," they are not "unit" possessed. 402 AMXG will not accept the risk of lifting "depot possessed" aircraft. Also, if 402 AMXG personnel attempt actual lifts on aircraft, this would require scheduling depot aircraft for this training and impact production.

- 14.5. Follow on (refresher) training can be accomplished organically at the unit's discretion.
- 14.6. If possible, all team members may be able to train on one of the mission partner's aircraft when that unit accomplishes their training.
- 14.7. All recovery team members must receive annual refresher training following initial training comprised of both academic and hands-on training/exercises following the prescribed methods as described above.
- 14.8. Ensure all training is documented in the appropriate system for civilians and military members.

LINDSAY C. DROZ, Colonel, USAF  
Commander

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

AFMAN 10-206, *Operational Reporting*, 18 Jun 2018

DAFGM to DAFI 10-2501, *Air Force Emergency Management Program*, 17 Jun 2021

DAFGM to DAFI 21-101, *Aircraft And Equipment Maintenance Management*, 1 Oct 2021

AFI 21-101\_AFMCSUP\_ADDENDUM\_A, *Non Standard Organization (Nso) Logistics Maintenance Management*, 10 Dec 2020

AFI 21-103, *Equipment Inventory, Status, And Utilization Reporting*, 30 Apr 2020

AFGM to AFI 91-202, *Us Air Force Mishap Prevention Program*, 15 April 2021

DAFGM to DAFMAN 91-203, *Air Force Occupational Safety, Fire, And Health Standards*, 5 Oct 2021

AFMAN 13-204V2, *Nuclear, Space, Missile, Command And Control Operations, Airfield Management*, 22 Jul 20

DESR6055.09\_AFMAN91-201\_AFGM2022-01, *Explosives Safety Standards*, 9 March 2022

TO 00-105E-9, *Aircraft Emergency Rescue Information*, REVISION 15, 31 March 2011

TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, CHANGE 2, 20 March 2015

Robins AFB Plan 10-2, *Installation Emergency Management Plan (IEMP)*, 12 Oct 2020

Robins AFB Plan 91-204, *Mishap Response Plan (MRP)*, 1 Apr 2021

***Prescribed Forms***

None

***Adopted Form***

AFTO Form 244, *Industrial/Support Equipment Record*

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 244, *Industrial/Support Equipment Record*

***Abbreviations and Acronyms***

**ABDR**—Aircraft Battle Damage Repair

**ABW**—Air Base Wing

**AFB**—Air Force Base

**AMOPS**—Airfield Management Operations

**AMXG**—Aircraft Maintenance Group

**BEE**—Base Bioenvironmental Engineering  
**CDDAR**—Crashed, Damaged or Disabled Aircraft Repair  
**CE**—Civil Engineering  
**CG**—Center of Gravity  
**CP**—Command Post  
**DAFGM**—Department of the Air Force Guidance Memorandum  
**DAFI**—Department of the Air Force Instruction  
**DAFMAN**—Department of the Air Force Manual  
**EDMX**—Expeditionary Maintenance Team  
**EOC**—Emergency Operations Center  
**EOD**—Explosive Ordnance Disposal  
**GITA**—Ground Instructional Training Aircraft  
**HAZMAT**—Hazardous Materials  
**IC**—Incident Commander  
**IEMP**—Installation Emergency Management Plan  
**ISB**—Interim Safety Board  
**MTF**—Maintenance Training Flight  
**MDS**—Mission Design Series  
**MIS**—Maintenance Information System  
**MOC**—Maintenance Operations Center  
**PAC**—Production Acceptance Certification  
**PPE**—Personal Protective Equipment  
**PWS**—Performance Work Statement  
**ROC**—Recovery Operations Chief  
**SA**—Support Agreements  
**SCR**—Special Certification Roster  
**SIB**—Safety Investigation Board  
**TA**—Transient Alert  
**TO**—Technical Order  
**USAF**—United States Air Force

**Attachment 2****CDDAR TEAM POSITIONS AND DUTIES****A2.1. CDDAR Team Chief.**

- A2.1.1. Coordinate, lead, direct crash recovery operation, including placement of equipment.
- A2.1.2. Brief safety and scenario situation/concerns.
- A2.1.3. Assist agency officials in recovery method determination.
- A2.1.4. Assemble information from Bio-environmental Engineering and Fire Department officials on site hazards and brief team members.

**A2.2. Inflation Bag Control Console Operator (varies based on number of consoles in operation).**

- A2.2.1. Inspect, monitor and operate control console before and during lifting operation.
- A2.2.2. Direct hose to inflation bag connections during inflation and deflation operations.
- A2.2.3. Assist in equipment placement, removal and area cleanup.
- A2.2.4. Spreader beam guide line operator during crane lift.

**A2.3. Observer (1 each).**

- A2.3.1. Monitor aircraft height/plumb bob during lifting and report back to the CRTTC and/or console operator.
- A2.3.2. Assist in equipment placement, removal and area cleanup.

**A2.4. Equipment Custodian (1 each).**

- A2.4.1. Monitor, control and issue all dispatched crash recovery equipment.
- A2.4.2. Clean, inventory and account for issued equipment/material.
- A2.4.3. Assist team as needed.

**A2.5. Equipment Handlers (2 each).**

- A2.5.1. Assist in dunnage/cribbing/jack placement.
- A2.5.2. During bag lift, monitor bag/jack progress.
- A2.5.3. Assist in equipment placement, removal and area cleanup.

**A2.6. Crane operator (1 each).**

- A2.6.1. Coordinate with team chief for the placement of crane and rigging method for recovery operation.
- A2.6.2. Operate crane during all phases of aircraft lift and movement.

**A2.7. Subject Matter Experts (min 1 each).**

- A2.7.1. Coordinate with Team Chief for aircraft specific recovery operations

## Attachment 3

## CDDAR VEHICLE/SUPPORT EQUIPMENT REQUIREMENTS

Table A3.1. Minimum CDDAR Vehicle/Support Equipment Requirements.

Item	Quantity
Air bags (26 Ton)	20
Air bags (15 Ton)	20
Air bag hoses	120
Air bag pads	29
Pneumatic manifold	7
Shackle (8 ton)	8
Shackle (12 ton)	2
Shackle (20.5 ton)	3
Shackle (55 ton)	2
TIRFOR ground plates	27
TIRFOR ground spikes	108
TIRFOR mooring devices	6
TIRFOR handle	6
TIRFOR cable on wheels	3
TIRFOR cable w/o wheels	4
TIRFOR tethering cables	4
Snatch cable/straps	2
Chain binders/AC tie down chains	10
Cargo straps (5K)	8
Slings (50 ft)	2
Slings (48 ft)	1
Slings (33 ft)	2
Slings (20 ft)	2
Slings (15-20 ft)	4
MC-7 or equivalent	As req'd
Dunnage	240
15K forklift	1
Tow vehicle, aircraft	1
40' trailer	1
<p><b>Note 1.</b> These are minimum requirements and should not be assumed all-encompassing. MDS-specific equipment may also be required.</p> <p><b>Assumption 1.</b> Additional time may be required to obtain necessary equipment that is not listed.</p> <p><b>Assumption 2.</b> Common equipment (e.g. aircraft jacks, tow bars, -86 generators, light carts, heaters) is not listed but may be required depending on the conditions of the crash site.</p> <p><b>Assumption 3.</b> This list does not include ancillary equipment or supplies that may be required during a crash recovery (e.g. hand tools, PPE, consumables).</p>	

## Attachment 4

## CHECKLIST - CRANE OPERATOR REPRESENTATIVE

Figure A4.1. Checklist - Crane Operator Representative.

1. Equipment Readiness:
  - 1.1 Ensure all vehicles and equipment are fueled.
  - 1.3 Conduct vehicle/equipment, operator maintenance inspection for serviceability.
  - 1.4 Ensure all slings and shackles are loaded and secured properly for overland movement.
  - 1.5 Ensure Lift Bags are loaded and secured for overland movement.
  - 1.6 Ensure Crash Blowers are loaded and secured for overland movement.
2. Technical Data:
  - 2.1 Respective Weapons system will have and furnish all TO references.
  - 2.2 CDDAR Team will supply appropriate TO's pertaining to equipment required by team.
  - 2.3 TOs for CDDAR Team are kept in eTools.
  - 2.4 TOs will be signed out by the CDDAR Team Chief, or delegated to another CDDAR Team member.
3. On-Base Accident--Immediate Actions:
  - 3.1 Assemble at a pre-designated location. Report to the accident scene when requested by the Incident Commander.
  - 3.2 Provide the Incident Commander with equipment listing and capabilities.
  - 3.3 Take part in Recovery planning meetings.
  - 3.4 Notify equipment operators of recovery plan.
  - 3.5 Shift equipment operators work schedules to accommodate recovery plan time limit.