

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

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



7 AUGUST 2014

Maintenance

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

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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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), Appendix 2 to Annex A, Aircraft Accidents and Robins AFB Plan 91-1 *Aircraft Mishap Response*. 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, USMC, 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 OPR; waiver authority has not been delegated. Refer recommended changes and questions about this publication to the office of primary responsibility (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 Manual (AFMAN) 33-363, *Management of Records*, 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 91-1.

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1. Responsibilities:

1.1. General. 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. 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. Preserve evidence for mishap or accident investigations.

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. Support for CDDAR outside duty hours.

1.2.1. Immediate response by the CDDAR Team and required mission partner organizations is required during normal operating periods or duty hours. 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.

1.3. The 78 Air Base Wing Commander (78 ABW/CC) or designated representative, with the advice and assistance of the Airfield Manager (78 OSS/OSA), notifies the Emergency Operations Center (EOC) and determines the removal conditions which are designated as:

1.3.1. **Emergency.** This condition requires immediate runway clearance at the risk of losing equipment and evidence. The runway must be cleared in 30 minutes or less.

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

1.3.3. **Routine.** This condition allows sufficient time to use recovery techniques to minimize further damage to aircraft, preserve evidence and precludes exposing personnel or equipment to danger.

1.3.4. During all emergency response situations the IC is the final authority for determining when the mishap site is safe, and when the investigating authority and/or CDDAR team may approach the mishap site and/or conduct recovery operations.

1.3.5. The IC will decide which first responder actions may or may not proceed. The IC, 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.

1.3.6. Robins AFB only has a single runway. If an aircraft crash-lands, it may be necessary to clear the aircraft/wreckage as soon as possible to facilitate reactivation of the runway. If necessary, this action will be directed by 78 ABW/CC upon the recommendation of the Airfield Manager or designated official.

1.3.7. Typical incident sequence of events

1.3.7.1. Immediately after the incident, first responders precede IAW with RAFB Plan 10-2, Appendix 2 to Annex A. This initiates the Response Phase of the plan.

1.3.7.2. The IC ensures initial rescue, firefighting, security and safing of the aircraft is performed. No one other than first responders can enter the mishap area. The mishap scene must be determined safe by the IC prior to any investigation or CDDAR actions.

1.3.7.3. The incident aircraft and its equipment must not be disturbed or removed unless directed or released by the IC, Interim Safety Board (ISB) President or Impoundment Official/owning unit representative. Control of the mishap scene/site remains with the IC. Once the scene is safe to enter, command of the incident aircraft/wreckage is transferred from the IC to the Board President or Impoundment Official/owning unit representative appointed by the Investigating Authority.

1.3.7.4. Under Emergency or Urgent removal conditions, the recovery/investigation phase may be waived by the 78 ABW/CC.

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

1.3.7.6. The unit owning the aircraft will work through their designated representatives to the 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).

1.3.7.7. When first-responder actions are complete, the Response Phase will end and the Recovery Phase, which includes investigation actions, will begin. The CDDAR Team Chief then coordinates recovery actions with appointed investigation officials.

1.3.7.8. Emergency or urgent removal conditions may bypass the deliberate recovery/investigation phase and dictate expedient ad-hoc planning and execution of CDDAR duties.

1.3.7.9. Under routine removal conditions when the investigation actions are complete, the Investigation Authority transfers command of the incident aircraft/wreckage to the Recovery Operations Chief 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.

2. Host Installation/Mission Partner CDDAR Responsibilities

2.1. The 78th Operations Support Squadron (78 OSS), is the overall program manager for CDDAR on Robins AFB; however execution of the program is delegated to the 402d Aircraft Maintenance Group (AMXG). The 402 AMXG, 116 ACW, 461 ACW, and HMLA-773 are responsible for program support to include aircraft recovery operations, qualification and training of assigned recovery team members and inspection of and maintenance of assigned equipment used for this operation.

2.2. The host Wing, 78 ABW, in collaboration with 402 AMXG, has overall responsibility for recovery of host, mission partner, or transient crashed or disabled aircraft on or off Robins AFB. Since mission partners are responsible for the condition/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/special equipment, expert manpower and airframe/system familiarization are all valuable contributions tenant units make to the host CDDAR program.

2.3. CDDAR will be accomplished using a Team Robins approach. 402 AMXG/CC shall appoint personnel from the 402 AMXG/MXA as the overall CDDAR Team Chief(s). Team members executing CDDAR capability will consist of individuals from 402 AMXG and all Robins mission partner flying units. Team members from the unit owning or possessing the aircraft will be represented during aircraft recovery. If the team or owning unit requires assistance, qualified members from other mission partners can be requested. Equipment, vehicles, personal protective equipment (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. 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.

2.4. 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), Fire Department (778 CES/CEXF), Safety (78 ABW/SE), Civil Engineer (78 CEG), Emergency Management (778 CES/CEXM), Explosive Ordinance 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: 778 CES/CEXF 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.)

2.5. Host units must ensure they are capable of providing and supporting recovery operations for all base assigned aircraft, to include tenant aircraft. Tenant units are required to provide team personnel, participate in host training exercises and maintain specialized equipment inventories.

2.6. Tenant units must coordinate with the host for CDDAR recovery support, training, exercises and equipment inventories.

2.7. Host and tenant commanders are responsible for ensuring sufficient equipment is available for mobility/deployed operations, as authorized in the applicable allowance standards.

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

2.9. 402 AMXG/CC is 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.

3. Vehicle/Equipment Requirements

3.1. 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.

3.2. 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.

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

3.4. 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.

3.5. When 402 AMXG cannot support heavy equipment requirements such as additional cranes; AFSC/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, 4.29. 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.

4. Inspection and Inventory

4.1. 402 AMXG will inspect all recovery equipment to include air bags, manifolds, jacks, slings, shoring, etc., for serviceability before and after each incident/exercise use. Periodic equipment inspections must be accomplished per intervals established in technical orders or as a minimum annually. 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.

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

5. 402d Aircraft Maintenance Group Operations Control Center (MOC)

5.1. Initiate Major Accident/Incident checklist and notify the 402 AMXG/CC and CDDAR Team Chief of an incident upon notification by the Robins Command Post (CP).

5.2. When notified of an aircraft mishap, the MOC will notify the CDDAR Team Chief who, in turn, will notify applicable CDDAR qualified personnel (Attachment 2). Notification will include the type of aircraft, location, amount of fuel and or explosives on board and known extent of the aircraft damage.

5.3. 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 91-1.

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

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

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

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

6. 402d Aircraft Maintenance Group CDDAR Team Chief

6.1. Be a Senior NCO or civilian equivalent. 402 AMXG/CC may waive the grade requirement. This qualification will be tracked on the Special Certification Roster (SCR).

6.2. 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. 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.

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

6.4. Review support agreements, RAFB Plan 10-2, IEMP, and RAFB Plan 91-1, Aircraft Mishap Plan, annually. Provide inputs to 78 OSS for changes as required.

6.5. 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 10-2504 and AFMAN 32-4004.

6.6. 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.

6.7. Ensure sufficient personnel/teams are trained and equipment is available to support CDDAR operations. This includes:

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

6.7.2. Familiarization and training on any unique characteristics/hazards/materials for aircraft (i.e. F-16 EPU hydrazine, C-130 ballast depleted uranium, aircraft composite materials, etc.) and document training.

6.7.3. Availability and proper use of personnel protective equipment (PPE) as determined by technical data and Base Bioenvironmental Engineering (BEE).

6.8. 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.

6.9. Ensure adequate tools and support equipment for recovery (i.e. air bags, slings, manifolds, tow bars, shoring, etc.) are serviceable and available. Maintain a list of the minimum CDDAR requirement for CDDAR support equipment and vehicles. (See Attachment 3)

6.10. Conduct/participate in annual training and exercises. Coordinate exercises with the 78 ABW Inspector General office (78 ABW/IG).

- 6.10.1. Annually demonstrate team's capability to recover assigned crashed/damaged aircraft.
- 6.10.2. CDDAR exercises must be coordinated with applicable base agencies.
- 6.10.3. CDDAR exercises will consist of lifting device positioning, sling hookup, and simulating hoisting or lifting. 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. When ground instructional trainer aircraft (GITA) or aircraft battle damage repair (ABDR) aircraft is used, the aircraft may be lifted.
- 6.11. Coordinate with unit Weight and Balance manager when weight and center of gravity (CG) conditions are unknown.
- 6.12. Coordinate recovery actions with the appropriate contractor(s) and weapons system expert(s) as needed.
- 6.13. Carry out custodial and storage responsibilities for special purpose equipment specifically assigned to the crash recovery mission. (See Attachment 3)
- 6.14. Maintain recall rosters. During off duty hours when notified of a CDDAR event, coordinate with the MOC for the status of the CDDAR Team.
- 6.15. 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.
- 6.16. Ensure CDDAR trailer and equipment is assembled for rapid response to crash site upon request of IC. 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.
- 6.17. Ensure complete safety briefings are given, detailing hazards to personnel and equipment and ensure proper PPE is available and properly used.
- 6.18. Notify the MOC who, in turn, will report and provide the IC with the number of qualified CDDAR personnel and status of available equipment.
- 6.19. If required, ensure a tow vehicle with tow bar, tow vehicle operator and tow team are available during recovery operations. 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.
- 6.20. 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 IC.
- 6.21. Be responsible for directing and coordinating CDDAR operations as directed by the IC or the CDDAR Team Chief.
- 6.22. For longer term recovery operations, the Team Chief can 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/OSAB, 468-2114/2115, and the

Team Chief will need to arrange to escort the delivery vehicle while on the airfield. **CAUTION:** 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 Safety Investigation Board (SIB) President by the IC or appropriate authority. Once the SIB has determined the aircraft can be moved, the aircraft will be turned over to maintenance by the SIB President. Once recovery actions begin, ONLY personnel designated by the CDDAR Team Chief will enter the recovery area. **NOTE:** There are two distinct phases of an aircraft mishap—response and recovery. First responders face the probability of an aircraft fire. As the composite material burns, gases, vapors and solid particles 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. Personnel tasked to participate in a crash or post-crash response, recovery, maintenance and/or clean-up operations must be aware of/briefed on all possible health issues involved. Units must ensure local policies and procedures for handling crash damaged composites are addressed to include training and personnel protective equipment.

7. 78 ABW through the Emergency Operations Center (EOC) and the Incident Commander (IC)

7.1. Ensure all emergency response actions are completed and it is safe to approach the aircraft before directing the 402 AMXG CDDAR Team chief to begin recovery operations.

7.2. Provide incident site security and maintain the site cordon as long as necessary as directed by the IC. (78 SFS)

7.3. Provide vehicle and fuel support. (78 LRS)

7.3.1. 78 LRS/LGRF will obtain required fuel samples IAW RAFB Plan 91-1.

7.4. Direct all personnel to stay clear of the recovery site unless requested by the Incident Commander (IC).

7.5. The IC may establish a staging area to hold equipment until required at the site. 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.

7.6. Provide contracting support to obtain any required equipment and supplies not available on base. AFSC/PZIO-R maintains an Emergency Management Contingency Kit (kit contains binder with contracting & emergency management regulations, contingency vendor listing, laptop, maps, admin forms, etc.). 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 let a contract with the vendor for the required material when notified by the CDDAR team.

7.7. 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, if located on the airfield.

7.8. Ensure requirements of RAFB Plan 91-1, Aircraft Mishap Response Plan, are accomplished. (78 ABW/SE)

7.8.1. 78 ABW/SE will notify base where aircraft was last fueled to obtain required fuel samples.

8. Robins Command Post (CP)

8.1. Submit all required incident reports to the AFMC Command Center and higher headquarters IAW AFI 10-206, *Operational Reporting*. Note: Mission Partner command posts will be required to submit reports to their respective command centers as required.

9. CDDAR Recovery Team Qualifications

9.1. All team members must be qualified in basic CDDAR operations IAW AFI 21-101.

9.2. 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.

10. Training Requirements

10.1. All team members must be trained in recovery procedures IAW AFI 21-101, MDS specific technical data, other applicable Air Force and MAJCOM directives and unit-developed training guide.

10.2. All recovery team members must receive initial training comprised of both academic and hands on training/exercises which should include 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. Ensure all training is documented in the appropriate system for civilians and military members.

10.3. All recovery team members must receive annual training following initial training comprised of both academic and hands on training/exercises. Ensure all training is documented in the appropriate system for civilians and military members. **NOTE:** According to AFI 21-101 all initial training must be hands-on, and although the AFI states that training should include lifting a unit possessed aircraft, it is recommend all new team members attend an AETC formal training course. 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. Follow on (refresher) training can be accomplished organically at the unit's discretion. If possible, all team members may be able to train on one of the mission partner's aircraft when that unit accomplishes their training.

10.4. Environmental, Safety, and Health Hazards: The key for developing a safe and effective CDDAR program is communication and coordination. The CDDAR Team Chief must ensure BEE is consulted and directly involved in determining personnel health hazards, training required and appropriate levels of PPE.

10.5. 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.

10.6. 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 tenant 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.

11. Robins AFB Mission Partners

11.1. Assign unit personnel to support CDDAR duties, and provide roster to CDDAR Team Chief. 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. All units assigned to Robins AFB should be prepared to 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, 402 AMXG MOC and the CDDAR Team Chief with points of contact for recall of their organization's CDDAR support team. When appointing new personnel, mission partner organizations should notify the CDDAR Team Chief within 24 hours of any change in key personnel. The CDDAR Team Chief 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 78 OSS capabilities, the aircraft's home station will have to provide support. In some cases the 402 AMXG CDDAR

Team Chief or the IC may request assistance from mission partner units for the recovery of transient aircraft. In some cases the CDDAR Team Chief may be able to request support by the 402 AMXG or another installation's Expeditionary Maintenance (EDMX) team if available.

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

CHRISTOPHER D. HILL, Colonel, USAF
Commander

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

AFI 21-101, Aircraft and Equipment Maintenance Management, 26 July 2010

AFMC Supplement to AFI 21-101, Aircraft and Equipment Maintenance Management, 1 April 2014

AFI 21-103, Equipment Inventory, Status, and Utilization Reporting, 26 January 2012

AFI 91-203, Air Force Consolidated Occupational Safety Instruction, 15 June 2012

AFMAN 10-2504, Air Force Incident Management for Major Accidents and Natural Disasters, 13 March 2013

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

Robins AFB Plan 10-2, Installation Emergency Management Plan (IEMP), 18 February 2014

Robins AFB Plan 91-1, Aircraft Mishap Response Plan, 1 November 2011

Prescribed Forms

AFTO Form 244, Industrial/Support Equipment Record

AF Form 847, Recommendation for Change of Publication

Adopted Form

AFTO Form 244, Industrial/Support Equipment Record

AF Form 847, Recommendation for Change of Publication

Abbreviations and Acronyms

ABDR—Aircraft Battle Damage Repair

ABW—Air Base Wing

AFB—Air Force Base

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 (552 ACW/CP)

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—Personnel Protective Equipment
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**MINIMAL CDDAR TEAM POSITIONS AND DUTIES****A2.1. CDDAR Team Chief (1 each).**

- 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.

Attachment 3

MINIMUM 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 tiedown 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

Note 1. These are minimum requirements and should not be assumed all-encompassing. MDS-specific equipment may also be required.

Assumption 1. Additional time may be required to obtain necessary equipment that is not listed.

Assumption 2. 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.

Assumption 3. This list does not include ancillary equipment or supplies that may be required during a crash recovery (e.g. hand tools, PPE, consumables).

Attachment 4

CHECKLIST - CRANE OPERATOR REPRESENTATIVE

Table A4.1. Checklist - Crane Operator Representative

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