

**BY ORDER OF THE COMMANDER  
3D WING**

**3d WING INSTRUCTION 21-101**

**23 OCTOBER 2024**



***Maintenance***

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

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Department of the Air Force Instruction (DAFI) 21-101\_Pacific Air Force Supplement (PACAFSUP), *Aircraft and Equipment Maintenance Management*, requirements and procedures for Crashed, Damaged, or Disabled Aircraft Recovery (CDDAR) and is used in conjunction with Air Force Instruction (AFI) 21-101\_3d Wing Supplement (3WGSUP), *Aircraft and Equipment Maintenance Management*; DAFI 10-2501, *Emergency Management Program*; Joint Base Elmendorf-Richardson Installation Emergency Management/Continuity of Operations Plan (IEMP/COOP) 10-2; Technical Order (TO) 00- 105E-9, *Aerospace Emergency Rescue and Mishap Response Information*; DAFI 21- 103\_PACAFSUP, *Equipment Inventory, Status and Utilization Reporting*, and aircraft specific Dash-2 and Dash-3 series TOs. This publication may not be supplemented or further implemented or extended. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route DAF 847s from the field through the appropriate functional chain of command.

## 1. Roles and Responsibilities.

1.1. The 3d Wing Commander (WG/CC) has the primary responsibility for sustaining a CDDAR capability.

1.2. The 3d Maintenance Squadron (MXS) will:

1.2.1. Manage the CDDAR program and has the primary responsibility for conducting CDDAR operations on all assigned and transient aircraft on Joint Base Elmendorf-Richardson (JBER).

1.2.2. Develop crash recovery procedures in coordination with all host and tenant units, 673d Civil Engineer Squadron Fire and Emergency Services (CES/FES), 673d Civil Engineer Squadron (CES), 673d Logistics Readiness Group (LRG), 673d Civil Engineer Squadron Explosive Ordnance Disposal (CES/CED) (referred to as EOD within this instruction), Security Forces, 673d Operational Medical Readiness Squadron Surgeon General Readiness Bioenvironmental (673 OMRS/SGXB), Airfield Management and Wing Safety.

1.2.3. Provide a Maintenance Officer/Senior Non-commissioned Officer (SNCO) or waived Technical Sergeant (TSgt) to act as the CDDAR Team Chief.

1.2.4. Provide a Crash Response Team (CRT) of at least three members from the Crash Recovery/Wheel and Tire (W&T)/Repair and Reclamation Section to respond to aircraft emergencies.

1.2.4.1. The CRT will consist of a CDDAR qualified 7-level, a vehicle operator and a CDDAR qualified 5/7-level. The MXS CRT 7-level will determine if additional personnel are needed.

1.2.4.2. Ensure that all CRT personnel are trained and certified to drive on the airfield IAW DAFI 13-213\_3WGSUP, *Airfield Driving*. This includes being trained and certified to operate vehicles and equipment in the Controlled Movement Area (CMA).

1.3. The Maintenance Flight Chief will:

1.3.1. Maintain CRTs on duty during scheduled local flying hours.

1.3.1.1. During non-flying periods, the CRT will be on standby status.

1.3.1.2. The weekend duty standby team will serve as the CRT as required. Upon notification by the Maintenance Operations Center (MOC), the weekend duty standby CRT will respond.

1.3.2. Ensure Crash Recovery section is assigned with at least the minimum required equipment listed in DAFI 21-101 and TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*.

1.3.3. Ensure 2A3 (Fighter) manning requirements are met to sustain mission requirements IAW DAFI 21-101 and TO 00-80C-1.

1.4. 3d Maintenance Group (MXG) will:

1.4.1. Provide two Team Chiefs that are 2A377 personnel, Master Sergeant, or TSgt (waivered Team Chief). They will be fully qualified 7-levels with CDDAR experience and will fulfill the CDDAR instructor role after attending the Principles of Instruction course.

1.4.2. Provide six 2A357A personnel as CDDAR Team Members.

1.4.2.1. Assigned CDDAR/W&T personnel will have 36 months retainability. If they elect to In Place Consecutive Overseas Tour or extend, personnel will be considered for rotation back to flightline duties.

1.4.2.2. Individuals on long-term profiles/fitness restrictions which render them non-deployable will be re-assigned.

1.5. Maintenance Flight's Crash Recovery Section will provide coverage for all aircraft, including transient aircraft, on JBER. When assistance is required, coordinate with the 3d MXS Production Superintendent.

1.6. The MXS Crash Recovery Section Chief will:

1.6.1. Perform duties as CDDAR Team Chief on Wing assigned and transient aircraft.

1.6.2. Train all personnel assigned to the CRT in accordance with course control documents developed in conjunction with the Maintenance Training Flight.

1.6.3. Ensure there are a minimum of two qualified CDDAR Team Chiefs available which will be tracked on the Special Certification Roster.

1.6.4. Ensure certified individuals are readily available to drive/tow a 30-foot trailer or equivalent. **Note:** Drivers must have a current government owned vehicle license that has endorsement for the vehicle being driven.

1.6.5. Ensure individual team member qualifications for specific equipment (i.e., towing, jacking, support equipment use, special purpose vehicle) are identified and documented.

1.6.6. Keep an updated recall roster of all CDDAR trained individuals on JBER and external crane operating agencies in Alaska.

1.6.7. Maintain a list of all CDDAR tools and equipment.

1.6.8. Maintain required equipment to perform recovery of an aircraft containing composite/hazardous materials as established by technical data and 673 OMRS/SGXB.

1.6.9. Maintain a CDDAR trailer for weatherproof storage and mobility with minimum required equipment listed in DAFI 21-101 and TO 00-80C-1.

1.6.10. Ensure all crash recovery equipment is serviceable and available for use. As a minimum for CDDAR response, the crash trailer, tow vehicle and tow bars will be readily available at all times.

1.6.10.1. The CDDAR Team Chief will coordinate with Wing agencies for additional equipment required for a recovery operation.

1.6.10.2. Inform 3 WG/CC of equipment shortages in writing.

1.6.11. Review support agreements, base disaster response plans, and the CDDAR lesson plan annually.

1.6.12. Coordinate with C-17, E-3, C-12 and F-22 units for equipment and personnel particular to their specific aircraft for use in a crash recovery situation. If required, contact Oklahoma City Air Logistics Complex prior to recovery operations of an E-3 aircraft.

1.7. The CDDAR Team Chief/alternate will:

1.7.1. Be a SNCO/Civilian equivalent or waived TSgt (approved by the Maintenance Group Commander [MXG/CC]) and tracked on the Special Certification Roster.

1.7.2. Ensure sufficient personnel/teams are trained in CDDAR operations.

1.7.3. Ensure serviceability, availability, and proper use of all required Personal Protective Equipment (PPE) and other equipment as determined by technical data or applicable Air Force Occupational Safety and Health (AFOSH) standards and 673 OMRS/SGXB.

1.7.4. Ensure written Respiratory Protection Program is current.

1.7.5. Forward personnel roster to 673 OMRS/SGXB Respiratory Program Manager any time the roster changes.

1.7.6. Conduct/participate in annual training exercises.

1.8. The 673d Civil Engineer Group (CEG) will:

1.8.1. Provide initial response via FES

1.8.2. Assist in mapping and surveying crash site for investigation purposes.

1.8.3. Assist in coordinating clean-up procedures and make notifications as necessary to ensure compliance with governing environmental laws.

1.8.4. Assist the CRT with any equipment and skills within unit capability and beyond those of CRT for the purposes of aircraft removal/site clean-up.

1.8.5. Supply heavy machinery and earth moving equipment (i.e., bulldozer, crane, etc.) and operators as requested by the Incident Commander (IC) or CDDAR Team Chief.

1.9. FES will:

1.9.1. The Senior Fire Official will be Incident Commander until the aircraft is deemed fire safe and incident command is either terminated, transferred to a Recovery Operations Chief, or the CDDAR Team Chief. This will all be done in coordination with the Interim Safety Board President if an investigation is deemed necessary.

1.9.2. The IC will consider recommending activation of the Emergency Operation Center (EOC) for coordination with all required agencies.

1.9.3. Provide fire suppression/protection and remain on site until released by the IC.

1.9.4. Ensure composite materials are cooled to ambient temperatures before the CRT performs containment clean-up and disposal operations.

1.10. EOD will:

1.10.1. Coordinate with the IC and CDDAR Team Chief upon arrival to the mishap site and assist with emergency extraction of aircrew personnel, if necessary.

- 1.10.2. Provide assessments to the IC and CDDAR Team Chief to determine the initial cordon area.
- 1.10.3. Determine if any explosive hazards or forward exclusion areas exist. Advise on cordon adjustment and forward exclusion areas. If possible, adjust orientation of aircraft if necessary.
- 1.10.4. Provide munitions safing prior to recovery operations.
- 1.10.5. Coordinate with MOC for armament storage.
- 1.10.6. Advise the IC on weapons recovery. Coordinate with owning Aircraft Maintenance Unit (AMU) or Fighter Generation Squadron (FGS) for weapons de-arm and additional support.
- 1.10.7. Provide technical guidance on explosive components/hazards.
- 1.11. 673d Security Forces Squadron (673 SFS) will:
  - 1.11.1. Provide personnel to set up safety cordons and provide security for incident site.
  - 1.11.2. Set up an Entry Control Point as directed by the IC.
- 1.12. 673 OMRS/SGXB will:
  - 1.12.1. Conduct Health Risk Assessments and communicate directly with the IC and CDDAR Team Chief.
  - 1.12.2. Provide PPE recommendation to the IC and CDDAR Team Chief.
  - 1.12.3. Monitor air conditions through all phases of recovery to evaluate airborne hazard potential.
- 1.13. Airfield Management will:
  - 1.13.1. Provide services to the CRT, as needed, as it pertains to the airfield/aerodrome.
  - 1.13.2. Ensure that the Wing Airfield Driving Program Manager assists the 3 MXS Unit Airfield Driving Program Manager with airfield driving requirements as outlined in DAFI 13-213\_3WGSUP, *Airfield Driving*.
- 1.14. 3d Wing Safety (WG/SE) will coordinate with the IC and/or Recovery Operations Chief for mishap evidence preservation per DAFI 91-204\_PACAFSUP, *Safety Investigation and Reports*.
- 1.15. Transient Alert will:
  - 1.15.1. Provide initial response to in-flight emergencies (IFEs)/ground emergencies (GEs) during non-normal duty hours until the standby CRT arrives if required.
  - 1.15.2. Assist CRT personnel with IFE/GE for transient aircraft.
- 1.16. Host/tenant units will:
  - 1.16.1. Ensure knowledgeable and qualified individuals are available and provide personnel as needed to support recovery operations for unit's aircraft.
  - 1.16.2. Ensure technical data is available for their airframes and provide CRT and TA with airframe familiarization.

1.16.3. Ensure Mission Design Series (MDS) equipment/specific tools are available, or 21-10121-101 procedures are in place to obtain equipment necessary for the safe recovery of the unit's aircraft.

1.16.4. Provide a qualified tow team to respond to all IFE/GE, hot brakes, or to remove aircraft capable of being towed using standard towing procedures.

1.16.5. Remain on site until released by the IC.

1.16.6. Appoint a primary and alternate CDDAR program representative in writing.

1.16.6.1. Tenant unit CDDAR program representatives will work closely with the MXS Crash Recovery Section to coordinate participation in CDDAR exercises, training, and equipment inventories as applicable to their respective aircraft.

1.16.6.2. Host units will provide a minimum of two 5-level personnel to assist with recovery operations from the following Air Force Specialty Codes (when required): Crew Chiefs, Avionics, Electrical Systems, Egress, Engines, Fuels, Structures, Metals Technology and Hydraulics. **Note:** More than two individuals may be required based on the circumstances of the crashed, damaged, or disabled aircraft being recovered.

1.16.6.2.1. Individuals will be trained by the Crash Recovery Section on CDDAR response, equipment use and lifting techniques.

1.16.6.2.2. Trained individuals will receive, at a minimum, annual training following their initial training.

1.17. MOC will:

1.17.1. Coordinate with assigned and associate units for assistance in the reclamation of their aircraft.

1.17.2. Coordinate support and equipment as requested by the CDDAR Team Chief from other base agencies and the United States Army at Fort Richardson.

1.18. 673d Logistics Readiness Squadron (LRS) will:

1.18.1. Supply special purpose vehicles and operators as requested by the IC or CDDAR Team Chief.

1.18.2. Fuels Management Flight will process fuel and oil samples, maintain a crash kit, and abide by all other CDDAR requirements IAW TO 42B-1-1, *Quality Control of Fuels*, and DAFI 23-201, *Fuels Management*.

**2. Typical Sequence of Events. NOTE:** CRT personnel will not approach an emergency aircraft until cleared by the IC.

2.1. Immediately after the incident, first responder operations will proceed IAW JBER Installation Emergency Management Plan (IEMP) 10-2 or local civilian response plans. This initiates the Response Phase of the plan.

2.2. The IC ensures initial rescue, firefighting, security, and safety of the aircraft is performed.

2.3. No one other than first responders may enter the mishap area. The mishap scene must be determined safe by the IC prior to any investigation or CDDAR actions.

2.4. The incident aircraft and its equipment must not be disturbed or removed unless directed or released by the IC, Interim Safety Board President/Safety Investigation Board President, or Impound Official/3 MXG representative. Control of the mishap scene remains with the IC until access control is granted to the Safety Board President, Vice President or Impound Official/MXG Representative appointed by the Investigating Authority.

2.5. Under emergency or urgent removal conditions, the recovery/investigation phase may be postponed or waived by the 3 WG/CC.

2.6. While the initial response is in progress, the CDDAR Team Chief along with the team members should plan and posture the equipment and materials required to recover the aircraft. If possible, one team member should use binoculars to monitor the mishap site from a safe distance approved by the IC.

2.7. When first-responder actions are complete, the Response Phase will end and the Recovery Phase, which includes investigation actions, will begin.

2.7.1. The IC will transfer access control of the mishap site over to the appointed Recovery Operations Chief (ROC). The ROC is normally an aircraft maintenance Officer or SNCO appointed by the EOC Director in consultation with the MXG/CC.

2.7.2. The ROC will coordinate both the efforts of the Investigating Authority officials and the CDDAR Team Chief.

2.8. Emergency or Urgent removal conditions may bypass the deliberate Recovery Phase and investigation, and dictate expedient ad-hoc planning and execution, of CDDAR duties.

2.9. Under routine removal conditions, the Investigation Authority advises the ROC that control of the aircraft can be given to the CDDAR Team Chief or salvage teams to restore, reclaim, or dispose of the aircraft when the investigation is complete.

2.10. During the beginning of the Recovery Phase and/or investigation, the EOC may continue to provide support to the ROC as needed, directed by the EOC Director.

2.10.1. The EOC Director and MXG/CC will collaborate and determine when the recovery efforts become routine support actions.

2.10.2. At this point, the EOC and ROC will stand down and mishap support will be transferred to the designated MXG function.

### **3. On-base Recovery.**

3.1. The CDDAR Team Chief/alternate will:

3.1.1. Report to the IC when requested and stand by until the IC, with the coordination of the safety representative and the accident board president, indicates the aircraft is safe for recovery.

3.1.2. Coordinate with all agencies required to perform recovery operations. These can include 773d Civil Engineer Squadron Operations Flight (CES/CSO), EOD, FES, LRS, 673 OMRS/SGXB, Security Forces, Airfield Management, 673d Civil Engineer Squadron Engineering Assistants (CES/CEN), tenant unit or any other agency as applicable.

3.1.3. Conduct a crew briefing stating specifically what is to be done, how it will be done and assign specific responsibilities to each CRT member.

3.1.4. Make every effort to ensure the wreckage is removed from the runway in the least amount of time as possible in accordance with requirements to reopen the runway for operational use, prevent unnecessary secondary damage to aircraft and preserve evidence for the accident investigation.

3.1.5. Notify MOC and Airfield Management when recovery operations are complete.

#### **4. Off-base Recovery.**

4.1. The CDDAR Team Chief will:

4.1.1. Work within close coordination with local authorities. JBER has no specific authority when responding off-base other than as the property owner for the resources involved.

4.1.2. Respond at the request of the IC after the crash site has been located.

4.1.3. Determine the personnel and equipment required to remove the wreckage.

4.1.4. Advise MOC of requirements for personnel, equipment, transportation, and housing when the mishap aircraft has been released for recovery.

#### **5. Crash Recovery Procedures.**

5.1. In the event of a crashed/disabled aircraft incident, JBER IEMP 10-2 or local civilian response plans will be implemented, and all applicable checklists will be started.

5.2. Airfield Management will notify MOC and CDDAR via the secondary crash net whenever there is an in-flight emergency, ground emergency or hot brake condition.

5.3. MOC will:

5.3.1. Record the condition, type of aircraft, tail number, location, armament, total fuel remaining and time of notification.

5.3.2. Notify applicable units to ensure appropriate checklists are initiated.

5.3.2.1. For HC-130, HH-60 and transient aircraft: coordinate communications with the owning units for CRT guidance and support.

5.3.3. Notify the 3 MXS Crash Recovery Section Chief/CDDAR Team Chief to assemble the CRT. After activation of the CRT, the Crash Recovery Section Chief/CDDAR Team Chief will do a recall of all CRT personnel needed for the incident.

5.3.4. Monitor all radio transmissions. Enforce radio discipline on all nets. Ensure BAKER net is emergency use only.

5.4. The CDDAR Team Chief will:

5.4.1. Coordinate with the IC, 3 WG/SE, and EOD, as applicable, to determine what needs to be accomplished and when the CRT will be allowed to enter the area.

5.4.2. Consult with 673 OMRS/SGXB for any recommended personal air sampling before work in potentially hazardous conditions.

5.4.3. Brief all personnel on the site condition, review individual responsibilities of team members, and set up the work schedule.

5.4.4. Review all safety precautions and ensure all personnel have proper PPE.

5.4.5. Once directed by the IC to conduct recovery procedures, the CDDAR Team Chief will ensure the aircraft is safe for recovery operations, configure aircraft and begin recovery/removal actions.

## 6. In Flight Emergency/Ground Emergency (IFE/GE) Procedures.

6.1. MDS specific tech data will be used for IFE/GE purposes. The following is a general outline of procedures:

6.1.1. CDDAR will provide primary coverage for all fighter aircraft and for all heavy aircraft on JBER. Coordination for additional support will be made via the 3 MXS Production Superintendent.

6.1.2. Upon notification of an IFE/GE, Crash Recovery initial response will be limited to the primary crash vehicle and tow vehicle with applicable tow bar. There will be a minimum of three qualified personnel, one of which will be a fully qualified 7-level.

6.1.3. The CRT will coordinate with the IC on Crash net to determine a rendezvous location. **Note:** CRT vehicles will remain behind all FES vehicles until the aircraft has been declared safe.

6.1.4. Once the aircraft has been declared safe by the IC, the CRT will approach the aircraft. If the aircraft is disabled on the runway and unable to move under its own power, the CRT will remove the aircraft from the runway.

6.1.5. If aircraft can be towed under normal conditions, the owning AMU will be responsible for towing the aircraft back to the designated parking spot after the CRT removes it from the runway.

6.2. TA will provide initial response during non-normal duty hours.

## 7. Hot Brakes Procedures.

7.1. MDS specific technical data will be used for hot brake purposes. The following is a general outline of procedures:

7.1.1. There are no mechanical means to determine if an aircraft has hot brakes (TO 4B-1-1, *Use of LDG Wheel Brakes and Wheels During Ground Operations*) therefore hot brakes can only be declared by the Aircraft Commander (AC), Fire Emergency Services (FES), or CRT personnel.

7.1.2. IAW TO 4B-1-1, a hot brakes condition exists if any of the following conditions exist:

7.1.2.1. Aircrew has reported possible hot brakes.

7.1.2.2. Wheel thermal plugs have melted.

7.1.2.3. A visible fire has been observed.

7.1.2.4. Wheel drive keys are glowing red or white.

7.1.2.5. The axle over temperature indicator (if equipped) has extended.

7.1.2.6. The reading from an infrared heat gun indicates an over temperature condition.

## 7.2. Hot Brakes Procedures:

7.2.1. If the aircraft is on rollout, the tower will direct the aircraft to taxi to the nearest hot brakes area IAW 3WGI 13-204, *Elmendorf Airfield and Air Traffic Control Procedures*.

7.2.2. If the aircraft is already at End of Runway, the aircraft will remain in position IAW TO 4B-1-1.

7.2.3. If hot brakes are suspected, the brakes will not be checked until 10-15 minutes have passed since the last application of brakes/initial temperature readings, due to heat transfer from the brakes to the wheel assemblies. All personnel will remain clear of an area 300 feet from both sides of the wheel in a 45-degree angle until the brakes have cooled or the thermal release plugs have deflated the tires.

7.2.4. FES or Crash Recovery personnel will chock the aircraft. Personnel will approach aircraft from a forward or aft direction.

7.2.4.1. CRT personnel will check brake temperatures with an infra-red heat gun to establish a baseline temperature. After consulting with CRT and determining brake temperatures have dropped below unsafe levels IAW TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, FES personnel will conduct a check of the aircraft brakes for excessive heat and ensure the aircraft is safe to taxi.

7.2.4.2. Fighter aircraft engines will not be shut down unless directed by the IC.

7.2.5. If the AC, FES, or CRT personnel declare hot brakes, the aircraft will remain in the designated area for a minimum of 30 minutes to allow adequate cool-down time IAW TO 4B-1-1.

7.2.5.1. The IC will direct a fire vehicle to remain with the aircraft for the allotted cool down time.

7.2.5.2. Once the allotted cool-down time has expired, CRT will check brake temperatures and compare them to the technical data.

7.2.6. Aircraft with engines running may taxi back to the designated parking area after the allotted cool-down time and after brake temperatures have dropped to accepted levels.

7.2.7. If the aircraft is disabled on the runway and unable to move under its own power, the CRT will remove the aircraft from the runway.

7.2.8. If the aircraft can be towed under normal conditions, the owning AMU will be responsible for towing the aircraft back to the designated parking spot after the CRT removes it from the runway.

## 8. Barrier Engagements.

8.1. MDS specific technical data will be used for barrier engagement purposes. Procedures will be IAW but not limited to AFMAN 32-1040, *Civil Engineer Airfield Infrastructure Systems*, and TO 35E8-2-5-4, *Illustrated Parts Breakdown-Aircraft Arresting Barrier*. The following is a general outline of procedures:

8.1.1. FES personnel will ensure the aircraft is safe and chocked. The IC will then turn control of the aircraft over to the CRT supervisor for barrier extraction.

8.1.2. In the event CRT personnel are not available, or there is an imminent danger to the pilot (i.e., smoke in the cockpit, aircraft fire, etc.), FES will safe the landing gear and direct the AC to shut down engines.

8.1.3. IAW AFMAN 32-1040, alternate extraction procedures are commonly referred to as “sling shotting” the aircraft. Potential for aircraft damage is high when using these methods; therefore, use these procedures only during contingencies or IFEs that require rapid removal of an aircraft from a cable, IAW TO 00-80C-1. **Exception:** This procedure must be approved by the 3 WG/CC (not to be confused with the incident commander) before being used for routine disengagement of aircraft during local exercises or scheduled testing of the arresting system (e.g., certification).

8.1.4. The CRT will ensure the aircraft is safe prior to towing the aircraft off the runway. At a minimum, the aircraft landing gears, and all live forward firing ordnances will be pinned.

8.1.5. Immediately upon exiting the active runway, the tow team will stop the aircraft and all remaining safing operations will be completed.

## 9. Vehicle and Equipment Requirements.

9.1. Crash recovery sections will be equipped with a crash hotline and base station radio for monitoring the crash dispatch network.

9.2. Crash recovery emergency response vehicles will be inspected daily by the on-coming shift for verification of response capability and will be documented on the AF Form 1800, *Operator's Inspection Guide and Trouble Report*.

9.3. Vehicles will be equipped with emergency lights, siren, radio (capable of monitoring all maintenance nets to include the Secondary Crash Net independently), TOs, tools, and safety equipment to perform immediate response operations. The following vehicles are required for IFE response and crash recovery capability:

9.3.1. One 5-passenger, 1-ton, 4x4 pickup with heavy-duty pintle-hook and utility body (or equivalent).

9.3.2. Two 6-passenger, 1.5-ton, 4x4 pickups with heavy-duty pintle-hook and utility body (or equivalent) for storage and security of all equipped tools and crash equipment.

9.3.3. Unit assigned aircraft tow tractors (one MB-2 and one U-30) maintained by 673d Logistics Readiness Squadron Vehicle Management Flight (LRS/LGRV) for recall and tow bar maintained by 3 MXS Aerospace Ground Equipment (AGE).

9.3.4. Heavy industrial crane capabilities, readily available with operator.

9.3.5. 10K All-terrain forklift for CDDAR equipment transportation and aircraft removal provided by 673 LRS/LGRV.

9.4. A minimum of three wheeled dollies for disabled aircraft.

9.5. Powered and Non-Powered AGE as required (e.g., aircraft jacks, light carts, compressors, tow bars, etc.).

9.6. Dedicated CDDAR Consolidated Tool Kit managed IAW DAFI 21-101.

9.7. Two assigned crash trailers with at least the minimum required equipment listed below and PPE.

9.7.1. Air bags and control consoles in sufficient quantity to support the aircraft assigned to the wing.

9.7.2. General lifting/securing devices such as belly bands, shackles, chains, cargo tie-down straps, TIRFOR® winch, slings and sling adapters, jack adapters, nylon/cotton rope and snatch cables.

9.8. One assigned Composite Response trailer with at least the minimum required Consolidated Tool Kit, equipment, and PPE managed IAW DAFI 21-101.

9.9. Equipment not available on JBER will be sourced from other military installations in Alaska. If unavailable, civilian companies will be contracted.

## **10. Coordinating External Assistance.**

10.1. The CDDAR Team Chief will make every effort to identify all support requirements to the IC during the rescue and recovery operations phase. Requirements identified after the aircraft has been released to the Investigation Authority will be identified to the 3 MXG/CC through the chain of command.

10.2. The CDDAR Team will fill requirements from CDDAR program equipment first. When requirements exceed possessed CDDAR program assets, requirements will be filled from base resources, then off-base resources. When general support resources or capability is needed, the CDDAR Team will coordinate as follows:

10.2.1. All crash recovery support requirements will be forwarded to the EOC for base-level resourcing and accounting purposes.

10.2.2. The EOC will seek to satisfy materiel, equipment, and personnel requirements from base resources.

10.2.3. The EOC will coordinate the transportation of base materials, equipment, and detailed personnel to the incident site.

10.2.4. Vehicles and support equipment are subject to recall and re-assignment to CDDAR operations.

10.2.5. Personnel detailed from base agencies will assist in loading the wreckage for its return to JBER or designated assembly point.

10.2.6. Requirements not available through base resources will be forwarded to the 673d Contracting Squadron for procurement action.

10.3. When aircraft-specific support exceeding available resources or capability is needed, the CDDAR Team will coordinate as follows:

10.3.1. For E-3 Sentry Aircraft:

10.3.1.1. Notify Contractor Logistics Support to obtain necessary support. Reference E-3 aircraft-specific equipment requirements.

10.3.1.2. Submit Request for Engineering Disposition Instruction IAW TO 00-25-107, *Maintenance Assistance*.

10.3.2. For F-22A aircraft:

10.3.2.1. Request support for technical/engineering expertise, aircraft specific equipment, and/or additional specialized manpower through the F-22A Field Service Representative.

10.3.2.2. The Field Service Representative will forward the request to Air Force Engineering and Technical Services for further actions.

10.3.3. For C-17A aircraft:

10.3.3.1. Notify Contractor Logistics Support to obtain necessary support. Reference C-17A aircraft-specific equipment requirements.

10.3.3.2. Submit Request for Engineering Disposition Instruction processes for on-base resources or AFTO 107 for off-base resources.

CHARLES E. SCHUCK, Colonel, USAF  
Commander

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

DAFI 10-2501, *Emergency Management Program*, 10 March 2020

DAFI 13-213\_3WGSUP, *Airfield Driving*, 22 September 2023

DAFI 23-201, *Fuels Management*, 23 August 2023

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***Prescribed Forms***

None

***Adopted Forms***

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***Acronyms and Abbreviations***

**AC**—Aircraft Commander

**AFI**—Air Force Instruction

**AFOSH**—Air Force Occupational Safety and Health

**AGE**—Aerospace Ground Equipment

**AMU**—Aircraft Maintenance Unit  
**CDDAR**—Crashed, Damaged, or Disabled Aircraft Recovery  
**CLS**—Contractor Logistics Support  
**CMA**—Controlled Movement Area  
**CRT**—Crash Response Team  
**DAFI**—Department of the Air Force  
**EOC**—Emergency Operation Center  
**EOD**—Explosive Ordinance Disposal  
**FGS**—Fighter Generation Squadron  
**GE**—Ground Emergency  
**IAW**—In Accordance With  
**IC**—Incident Commander  
**IEMP**—Installation Emergency Management Plan  
**IFE**—In Flight Emergency  
**JBER**—Joint Base Elmendorf-Richardson  
**MDS**—Mission Design Series  
**MOC**—Maintenance Operations Center  
**OPLAN**—Operations Plan  
**PPE**—Personal Protective Equipment  
**ROC**—Recovery Operations Chief  
**SNCO**—Senior Non-Commissioned Officer  
**TA**—Transient Aircraft  
**TO**—Technical Order  
**TSgt**—Technical Sergeant  
**W&T**—Wheel and Tire  
**3WGSUP**—3d Wing Supplement

*Office Symbols*

**ABW/SE**—Air Base Wing Safety  
**CEG**—Civil Engineer Group  
**CES**—Civil Engineer Squadron  
**CES/CED**—Civil Engineer Squadron Explosive Ordinance Disposal (also known as EOD)  
**CES/CEF**—Civil Engineer Squadron Fire Department

**CES/CEN**—Civil Engineer Squadron Engineering Assistants

**CES/CSO**—Civil Engineer Squadron Operations Flight

**CES/FES**—Civil Engineer Squadron Fire Emergency Services

**LRG**—Logistics Readiness Group

**LRS**—Logistics Readiness Squadron

**LRS/LGRV**—Logistics Readiness Squadron Vehicle Management Flight

**LRS**—Logistics Readiness Squadron

**MXG**—Maintenance Group

**MXG/CC**—Maintenance Group Commander

**MXS**—Maintenance Squadron

**MXS/AGE**—Maintenance Squadron Aerospace Ground Equipment

**OMRS/SGXB**—Operational Medical Readiness Squadron Surgeon General Readiness Bioenvironmental

**SFS**—Security Forces Squadron

**WG**—Wing

**WG/CC**—Wing Commander

**WG/SE**—Wing Safety