BY ORDER OF THE COMMANDER
36TH WING

36TH WING INSTRUCTION 21-107

24 AUGUST 2020

Maintenance

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

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at **www.e-Publishing.af.mil** for downloading or ordering

RELEASABILITY: There are no releasability restrictions on this publication

---

OPR: 36 MXS/MXMT

Certified by: 36 MXG/CC
(Colonel Jeffrey Russell)

Supersedes: 36WGI21-107, 1 November 2017

Pages: 18

The 36th Wing Instruction (WGI) 21-107 is required by AFI21-101 to assign specific responsibilities and procedures to implement a CDDAR program IAW TO 00-80C-1. It establishes recovery procedures for aircraft involved in a ground or air incident to include contingency planning considerations for 24/7/365 coverage. The instruction applies to all 36th Wing (36 WG) organizations and personnel including associate and deployed units that maintain aircraft, aircraft systems, equipment, support equipment and components regardless of Air Force Specialty Code (AFSC). This publication does not apply to Air Force Reserve Command (AFRC) and Air National Guard (ANG) Units. It will be used in conjunction with other agency policies and all applicable Technical Orders (TOs) pertaining to the disabled aircraft. It establishes policies and procedures and assigns responsibilities for Crashed, Damaged or Disabled Aircraft Recovery (CDDAR). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of IAW Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System (AFRIMS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This publication has been slightly revised. It updates the previous edition with changes to the frequency and documentation of training. It has had some items removed because they were not requirements. Although the 36th Wing (36 WG) does not possess assigned aircraft, transient and deployed aircraft rely on Andersen Air Force Base (AAFB) for support.

1. Crashed, damaged, or disabled aircraft recovery on Andersen AFB is: Augmented by the deployed Aero-Repair and Reclamation (AR) Shop, by personnel from the Expeditionary Aircraft Maintenance Unit (AMUs), Temporary Duty (TDY) Maintenance Units, by the 734th Air Mobility Squadron (734 AMS), by the 319th Operations Group Detachment 1 (319 OG DET 1), and by United States Navy Helicopter Sea Combat-25 unit (USN HSC-25) as applicable. The 36th Maintenance Group (36 MXG) Commander will assist the Incident Commander (IC), Recovery Operations Chief (ROC), or the Interim Safety Board (ISB) President for the initial crash response support and immediate recovery/removal as required of damaged or disabled aircraft until the owning unit takes responsibility. The 36 WG/CC or designated representative will determine the degree of emergency and make the initial decision regarding the speed with which the runway is cleared. This decision is dictated by evaluation of alert status, number of returning aircraft, available weather alternates and other operational criteria.

1.1. Team composition:

1.1.1. CDDAR Team Chief (TC) – Responsible for the overall CDDAR Program development, implementation, and management. CDDAR TC(s) will be a Senior Noncommissioned Officer (SNCO) or as designated by 36 MXG/CC in writing. All CDDAR operations will be coordinated through the TC who will act as the single on scene focal point for all CDDAR operations. The TC will maintain and provide a current recall roster for the Maintenance Operations Center (MOC) and the Wing Command Post.

1.1.2. CDDAR Team Leader (TL) – CDDAR TL(s) will be trained in CDDAR supervisory duties by the TC and report directly to the TC. TLs may be designated upon notification of a recovery operation. For extended recovery operations, two CDDAR TLs may be designated to cover 24-hour operations.

1.1.3. CDDAR Team Member (TM) – Works directly for and reports to the CDDAR TL. These individuals must be trained as CDDAR TMs by the CDDAR TC. CDDAR TL trained personnel may be utilized as TMs during CDDAR operations.

1.1.4. Deployed or owning units are responsible to provide trained TLs and TMs. The 36th Maintenance Squadron (36 MXS) TC will provide local familiarization training to qualified deployed personnel within 7 days of arrival. A Memorandum for Record (MFR) will be maintained by the 36 MXS TC.

2. Responsibilities.

2.1. 36th Wing Safety Office shall:

2.1.1. Prior to initial CDDAR team walkthrough of the crash site, brief all organizations directly involved in CDDAR operations on the importance of preserving evidence.

2.1.2. Advise Incident Commander (IC) and Recovery Operations Chief (ROC) on proper documentation of incident site prior to the initial removal of any wreckage to include: complete photographic coverage, notes, liquid samples, and measurements.

2.2. 36th Maintenance Group Commander shall:

2.2.1. Manage the CDDAR program, ensure all permanently assigned personnel in 36 MXS' Maintenance Flight attend the Air Education and Training Command (AETC) Recovery Operations formal course and verify essential equipment is maintained and available for use IAW AFI 21-101 **Chapter 11**.

2.2.2. Appoint a CDDAR TC as the focal point for the wing's CDDAR program.

2.2.3. Ensure the CDDAR TC coordinates with base and commercial agencies to source heavy equipment not available on base but required for recovery operations.

2.2.4. Ensure initial and recurring CDDAR training is conducted on an annual basis and is annotated on a MFR that is maintained in the CDDAR binder. The training audience will include: Andersen Transient Alert contractors, 734 AMS, 319 OG DET 1, deployed and associate units (as applicable).

2.2.5. Coordinate with deployed maintenance supervision on crash recovery equipment availability, direct CDDAR teams be tracked on the 36 MXS recall roster, and verify composite response capabilities.

2.2.6. Provide composite response capability with assistance from the deployed maintenance units. 36 MXS composite response capabilities include trained personnel in composite response with required Personnel Protective Equipment (PPE).

2.2.7. 36 Maintenance Squadron will ensure that TA contract requirements provided to 36th contracting Squadron includes CDDAR support.

2.3. CDDAR Team Chief shall:

2.3.1. Ensure that prior to conducting composite response activities, CDDAR TC will consult with Bioenvironmental and Environmental Engineering to determine risk specific to the incident. All Crash Recovery Team (CRT) members shall be trained and familiar with T.O. 00-105E-9, *Emergency Rescue Information*.

2.3.2. Establish a CDDAR continuity book which contains: a training plan, copy of the CDDAR TC appointment letter, memorandums of agreement with other units, and an inventory to identify the locations of all CDDAR equipment to include any deployed equipment.

2.3.3. Establish and maintain a CDDAR initial response trailer.

2.3.4. Coordinate with other host bases and tenant organizations to establish memorandums of agreement to establish mutual support for CDDAR operations.

2.3.5. Maintain a secondary crash phone.

2.4. Transient Alert shall:

2.4.1. Respond to aircraft related emergencies as directed by IC and/or TC. These efforts and costs are included as part of the existing contract.

2.4.2. Assist in aircraft crash and recovery operations to include removal of disabled aircraft from the runway at the request of the CDDAR team as required.

2.5. 36th Mission Support Group Commander shall:

2.5.1. Provide an Incident Commander (IC). The IC (most often the Fire Chief) will take command of the crash site and control access (for more information see AFMAN 10-2504 *Air Force Incident Management* para 3.5.2). The IC will be the focal point for all base agency coordination and direct all support requests to the Installation Control Center (ICC).

2.5.2. Provide Explosive Ordnance Disposal (EOD) personnel on site to render safe aircraft explosive hazards and munitions as required upon request from the IC.

2.5.3. Provide emergency crash/fire response, as well as hazardous materials and spill containment capability beyond the scope of the unit through coordination with 36th Civil Engineering Squadron (36 CES) Environmental Flight (CEV).

2.5.4. Provide Security Forces personnel to secure mishap scene and the wreckage assembly point, as directed by the IC.

2.5.5. Provide tractor trailers and forklifts, as necessary, to transport CDDAR support equipment (such as pneumatic air bags and recycled plastic lumber) to the mishap site, as well as transport wreckage to the wreckage assembly point. (This may include an all-terrain forklift depending on the mishap site conditions).

2.5.6. Provide on-scene fuel servicing of recovery support equipment, to include Aerospace Ground Equipment (AGE) and heavy equipment as required.

2.5.7. Provide contracting support for specialized equipment as necessary to support recovery operations as necessary to support recovery operations as required not already covered under the transient alert contract.

2.5.8. Provide additional personnel, equipment, and services. This may include field GPS/optical surveying and mapping equipment and support as required by the IC, Mortuary Affairs, and/or Investigation team (AFH 10-247 v4). Personnel may need PPE for working near damaged airframe; e.g. respirator and Tyvek suit.

2.5.9. Ensure 36th Contracting Squadron (36 CONS) includes CDDAR options in the TA contract.

2.6. 36th Medical Group Commander shall:

2.6.1. Provide Bioenvironmental capabilities as per 36 WG Installation Emergency Management Plan (IEMP) 10-2.

2.6.2. Provide on-scene respirator fit tests for composite response as required.

2.6.3. Provide on-scene medical assistance, Flight Medicine mishap support, and transport wounded as required IAW 36WGI 91-204, *36th Wing Mishap Response Plan*.

2.7. 36th Operational Group Commander shall:

2.7.1. Ensure notification of all in-flight emergency (IFE) aircraft inbound to Andersen AFB using the secondary crash net (SCN) and land mobile “ramp” net.

2.7.2. Establish clearances for access to the active runway and publish NOTAMs as required.

2.7.3. Reroute aircraft traffic as required.

2.8. US Navy Helicopter Sea Combat-25 Commander shall:

2.8.1. Provide Subject Matter Expertise (SME), manpower, technical data, and specialized equipment to assist in CDDAR operations for HSC-25 assigned aircraft. If available, provide personnel to augment the 36 MXG upon request for operations involving other aircraft.

2.8.2. Provide familiarization training of assigned aircraft to 36 MXG CDDAR members annually.

2.8.3. Provide aerial survey support, if available, for ISB Investigating Officer and combat camera. At a time determined by the convening authority representative, provide support for CDDAR TC and transport for CDDAR TMs if location of crash is inaccessible via roadways.

2.9. 734th Air Mobility Squadron Commander shall:

2.9.1. Provide SME, manpower, technical data, and specialized equipment to assist in CDDAR operations for AMC aircraft. If available, provide personnel to augment the 36 MXG upon request for operations involving other aircraft.

2.9.2. Coordinate CDDAR equipment and maintenance recovery team (MRT) support requests with HQ AMC for incidents involving AMC aircraft. 734 AMS personnel will maintain tow qualifications on C-5 and C-17 aircraft to support the removal of aircraft from runway, or any affected locations, for crash/recovery purposes.

2.10. 319th Operations Group, Detachment 1 Commander shall:

2.10.1. Provide SME, manpower, technical data, and specialized equipment to assist in CDDAR operations for assigned RQ-4 aircraft. If available, provide personnel to augment the 36 MXG upon request for operations involving other aircraft.

2.10.2. Provide RQ-4 familiarization training to 36 MXG CDDAR members annually.

2.10.3. Provide tow vehicle and RQ-4 tow bar for crash/recovery purposes as required.

3. Training.

3.1. The 36 MXS CDDAR TC will:

3.1.1. Develop and implement a training program IAW AFI 21-101, AFI 36-2201, and T.O. 00-80C-1 Pg.2-8 para. 2.3.2 and 2.3.2.2. Training plans will be reviewed and updated annually by the TC.

3.1.2. Assign recovery duties to permanent party task-qualified maintenance personnel within 30 days of arrival and within 7 days for deployed personnel. Special equipment qualifications are recorded in the automated Training Business Area (TBA) Career Field Education and Training Plan (CFETP), AF IMT 797, or the Maintenance Information System (MIS) as applicable.

3.1.3. Provide annual training and document in MFR to include:

3.1.3.1. Basic concepts of crash/disabled recovery procedures.

3.1.3.2. Safety precautions to include hazards associated with initial response, hazardous liquids, composite materials and potentially hazardous cargo.

3.1.3.3. Aircraft lifting bag and control console operations.

3.1.3.4. Crash trailer equipment, location of secondary equipment, and inspection requirements.

4. Procedures.

4.1. Upon declaration of a potential or actual major aircraft accident on the runway or in close proximity, the following sequence of events will occur:

4.1.1. All accident response agencies are notified according to 36 WG IEMP 10-2.

4.1.1.1. 36 MXG Maintenance Operations Center (MOC) Controller will notify the 36 MXS Production Superintendent of the mishap and provide type of aircraft, location, amount of fuel on board, explosives on board and known extent of aircraft damage. The MOC Controller will designate one aircraft maintenance radio net as the primary maintenance recovery operation net and direct all personnel who are not directly involved in the recovery operation to switch to an alternate net and will use Crash Net as required. The MOC will also notify a supervision representative from each 36 MXG squadron (per MOC checklists) that a crash recovery is in progress and to stand by to respond with additional personnel and equipment as directed by IC or CDDAR TC.

4.1.1.2. Once alerted for a recovery operation, the 36 MXS CDDAR TC will assemble a recovery team and designate a Crash Recovery TL(s) in coordination with 36 MXS Supervision. A second team will be identified with a TL to sustain around the clock recovery operations, if necessary. CDDAR TC will ensure that the team consists of qualified personnel as required for the event. Personnel qualifications include: jack, airbag, tow, and forklift operators.

4.1.1.3. 36th Operations Support Squadron (OSS) will notify 36 WG Command Post on secondary crash net to enable proper execution of appropriate notifications and checklists.

4.1.2. The Impoundment Official will implement impoundment procedures for the: aircraft, records, tools (CTK items) and all Aerospace Ground Equipment (AGE) that may have played a role in the mishap sequence.

4.1.3. Other MXG squadrons will provide manpower and aircraft system expertise to the Crash Recovery TC as required.

4.1.4. The 36 WG/CC or designated representative will notify the IC of any special considerations for wreckage removal.

4.1.5. Control of the mishap scene belongs to the IC until released to the Recovery Operations Chief (ROC) or president of the ISB/SIB.

4.1.6. Removal or crash recovery of an aircraft begins when directed by the ROC/ISB/SIB. Depending upon circumstances, considerations for CDDAR operations may include: preventing further damage to personnel or equipment, EOD considerations, and mission continuation time constraints.

4.1.7. Coordination with the ISB President, 36th Wing Safety (36 WG/SE) and 36 MXG/QA are required to determine when all photographic and cataloging documentation for the incident is complete.

4.1.8. Do not remove or disturb equipment unless directed by the ISB President or the IC, to accomplish recovery operations or for security reasons. TC will seek approval from the IC/ICC (ROC or ISB/SIB President, if responsibility has been transferred).

4.1.9. The IC will ensure the aircraft is fire safe (hydrazine safe if applicable) and explosive safe prior to any removal operations. If required, CDDAR team will don full faced filtered mask and PPE for composite aircraft incidents based on aircraft technical data from T.O. 00-105E-9, **Chapter 3** and input from the Bioenvironmental Engineering office.

4.1.10. Once the emergency is over and recovery starts, the IC must officially transfer control of the site to the Recovery Operations Chief (ROC). The EOC Director selects the ROC IAW 36 WG PLAN 91-204 pg. 7 para. 3.3 *Aircraft Mishap Response*. The ROC taking control of the site will have working knowledge on the hazards, activities, Hazardous Material (HAZMAT) and recovery procedures specific to the incident site (e.g. maintenance officer for an aircraft mishap or a medical officer for a pandemic incident).

4.2. The CDDAR TC will advise the ROC of the most prudent method of aircraft removal given the condition of the incident site. The CDDAR TC and ROC will identify any equipment (e.g. bulldozers, flatbed trucks, front-end loaders, cranes or forklifts) or disaster response activities, (e.g. EOD, firefighting, decontamination or rescue) required for removal operations and begin coordinating for the additional support IAW 36 WG IEMP 10-2. The CDDAR TC's goal will be to limit additional damage to the aircraft during removal operations to preserve evidence for the investigation.

4.2.1. If heavy equipment is required on the airfield then the CDDAR TC will coordinate closely with the Airfield Manager or designated representative.

4.2.2. The ROC will use all resources required to safely account for the CDDAR aircraft. Under certain conditions, time may not permit the use of normal procedures. Under those conditions, every on-base asset may be called into the recovery operation.

4.3. Civil aircraft CDDAR is normally accomplished by the owning company due to damage and liability issues. Owning company will coordinate with Judge Advocate (36 WG/JA) to provide a recommendation to the 36 WG/CC before removal or recovery of a civil aircraft is attempted by a military CDDAR team.

4.4. Off-base crash recovery.

4.4.1. 36 MXG/MOC will alert the Vehicle Operations Dispatcher that the following vehicles may be required for dispatch. The dispatcher will reserve the following vehicles.

4.4.1.1. One six-passenger, four-wheel-drive truck.

4.4.1.2. One 1.5-ton truck or equivalent.

4.4.1.3. Two 7.5-ton tractors or larger and 40-feet trailers for transporting equipment and wreckage, as needed.

4.4.2. Once the wreckage is released to the CDDAR team, augmented support will help load the wreckage for return to Andersen AFB (or designated wreckage assembly point). A facility large enough to house wreckage will be identified and secured, allowing only essential authorized personnel access to the facility.

5. Equipment.

5.1. The CDDAR initial response trailer will store initial response equipment, CDDAR Team PPE (e.g. gloves, hard hats, reflective vests, composite material protective equipment), and other equipment deemed necessary by the CDDAR TC. All equipment will have identification numbers and be on an equipment inventory list that will stay with the trailer. The trailer and equipment will be inspected and inventoried at least once a year by the CDDAR Team and documented in TCMax® tool accounting software.

5.1.1. If required, 36 CONS will contract for applicable tonnage hoist crane and operator.

5.1.2. The following equipment, tools, vehicles and other supplies/consumables may be required for CDDAR operations:

5.1.2.1. Aircraft lifting bags and control consoles.

5.1.2.2. Air compressors (MC-7) or equivalent.

5.1.2.3. Proper tow vehicle equivalent.

5.1.2.4. Tow bars for assigned and deployed aircraft.

5.1.2.5. Light carts as required for night recovery operations.

5.1.2.6. Ensure one toolbox is available for the crash crew at all times.

5.1.2.7. Shoring.

5.1.2.8. Semi-trailer, 40-ton minimum capacity, low bed.

5.1.2.9. Temporary runway matting and 50 Ton load meters for aircraft debogging

5.1.2.10. Disabled Wheel Dolly

5.2. The Recovery Operations Chief will coordinate with Wing units for additional recovery operations support as required. 36 LRS will anticipate a requirement for: 7.5-ton or larger tractor, 40- foot trailer and 10K forklift with driver. 36 CES will anticipate supply front-end loaders with driver.

6. Special Circumstances.

6.1. 36 WG leadership will initiate requests for Navy diving or salvage operations as required.

GENTRY W. BOSWELL,
Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

36WG *Installation Emergency Management Plan (IEMP) 10-2*

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*

AFPD 21-1, *Maintenance of Military Material*

AFI 21-101 and CAF SUP 1, *Aerospace Equipment Maintenance Management, Documentation, Policy, and Procedures*

AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*

36WG PLAN 91-204, *Aircraft Mishap Response Plan*

T.O. 00-105E-9, *Emergency Rescue Information*

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

Prescribed Forms

NONE

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFMAN—Air Force Manual

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AGE—Aerospace Ground Equipment

CEMP—Comprehensive Emergency Management Plan

CDDAR—Crashed, Damaged, Disabled Aircraft Recovery

CRT—Crash Recovery Team

CTK—Composite Tool Kit

EOC—Emergency Operations Center

EOD—Emergency Ordnance Disposal

HAZMAT—Hazardous Materials

HQ—Headquarters

IAW—In Accordance With

IC—Incident Commander

ICC—Installation Control Center

IEMP—Installation Emergency Management Plan

IFE—In-Flight Emergency

ISB—Interim Safety Board

JAG—Judge Advocate General

MOC—Maintenance Operations Center

MRT—Maintenance Recovery Team

NOTAM—Notice to Airmen

OPR—Office of Primary Responsibility

PPE—Personal Protective Equipment

QA—Quality Assurance

R&R—Repair and Reclamation

RDS—Records Disposition Schedule

REDHORSE—Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer

ROC—Recovery Operations Chief

SCN—Secondary Crash Net

SIB—Safety Investigation Board

TC—Team Chief

TL—Team Lead

TO—Technical Orders

USN—United States Navy

Terms

Carbon Fiber—A strong, stiff, thin fiber of nearly pure carbon, made by subjecting various organic raw materials to high temperatures, combined with synthetic resins to produce a strong, lightweight material used in construction of aircraft and spacecraft.

Debogging—Recovery of an aircraft that has sunk into a soft surface (to include asphalt).

Decontamination—The physical or chemical process of reducing and preventing the spread of contaminants from persons and equipment used at HAZMAT incident.

Emergency Operations Center (EOC)—The physical location at which the coordination of information and resources to support attack response and incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines such as fire, security forces and medical services, by jurisdiction such as Federal, State, regional, county, city, tribal or a combination thereof.

Hydrazine—Hydrazine is highly alkaline. Hydrazine at room temperature is a clear, oily, fuming liquid with an odor similar to ammonia. It is hazardous to health in both the liquid and vapor form and is combustible and explosive. Hydrazine fuel (H-70) is a blend of 70% Hydrazine and 30% water and is used to power the Emergency Power Unit (EPU) on F-l6 series aircraft and the Emergency Start System (ESS) on U-2 series aircraft.

Incident Commander (IC)—The command function is directed by the IC, who is the person in charge at the incident and who must be fully qualified to manage the response. Major responsibilities for the IC include: performing command activities, such as establishing command; protecting life and property; controlling personnel and equipment resources; maintaining accountability for responder and public safety, as well as for task accomplishment; establishing and maintaining an effective liaison with outside agencies and organizations, including the EOC, when it is activated.

Initial Response—Resources initially committed to an incident.

Personal Protective Equipment (PPE)—Personal Protective Equipment (PPE) is equipment designed to protect individuals exposed to hazards from injury or illness in non-military unique occupational environments where OSHA or applicable AFOSH standards apply, including emergency response to CBRNE incidents in the United States.

Recovery—The development, coordination and execution of service- and site-restoration plans for impacted communities and the reconstitution of government operations and services through individual, private-sector, nongovernmental and public assistance programs that: identify needs and define resources; provide housing and promote restoration; address long-term care and treatment of affected persons; implement additional measures for community restoration; incorporate mitigation measures and techniques, as feasible; evaluate the incident to identify lessons learned; and develop initiatives to mitigate the effects of future incidents.

Recovery Operations Chief—The Recovery Operations Chief must be a subject matter expert in the hazards or activities within the incident site. If it is a HAZMAT incident, the organization or individual that assumes control of the site must be knowledgeable of the hazards and recovery procedures. The person in charge of that work should have an environmental engineering background and be familiar with HAZMAT clean-up requirements. If it is an aircraft incident, the recovery operations chief should be familiar with that aircraft or be a member of the interim aircraft mishap investigation team. The EOC Director should select the individual that will be in charge of the site.

Attachment 2

BARRIER ENGAGEMENT CHECKLIST

Figure A2.1. Barrier Engagement Checklist.

NOTE: Aircraft commander and/or IC will determine if the aircraft is capable of self-extraction based on aircraft type and mechanical state. Self-extraction is only possible if the aircraft engages the BAK-12 barrier

SELF-EXTRACTION (SLINGSHOT METHOD)

STEP	C/W	N/A	PROCEDURE
1			Request barrier maintenance to lock cable in place
2			Marshall aircraft forward to place tension on the barrier cable. When all slack has been removed and cable appears to be taut, inform pilot to hold brakes and retard throttle to idle
3			When engine(s) is/are at idle, signal the pilot to release the brakes. If the aircraft does not roll far enough back to release the barrier cable, repeat steps 2 and 3.
4			Retract tail hook when hook is free from cable
5			Taxi aircraft to parking location.
6			Request barrier maintenance to rewind cable.

PULLING CABLE FROM TAIL HOOK (MANUAL METHOD)

STEP	C/W	N/A	PROCEDURE
1			Establish communication with aircraft commander and brief pilot on the procedure
2			Install all safety devices
3			Attach barrier tow cable to barrier cable next to tail hook
4			Position tow vehicle in front of aircraft and attach barrier tow cable to the tow vehicle
5			Pull barrier cable far enough forward to release aircraft tail hook
6			Retract tail hook
7			Remove barrier tow cable and tow vehicle
8			Taxi aircraft to parking location
9			Request barrier maintenance to rewind cable

AIRCRAFT SHUT DOWN AND TOW (ALTERNATE METHOD)

STEP	C/W	N/A	PROCEDURE
1			Install all safety devices
2			Shut aircraft down
3			Attach tow bar to aircraft and tow vehicle
4			Push aircraft back to release barrier cable
5			Raise aircraft tail hook
6			Proceed on with normal aircraft towing procedure
7			Request barrier maintenance to rewind cable

Attachment 3

BLOWN TIRE CHECKLIST

Figure A3.1. Blown Tire Checklist.

STEP	C/W	N/A	PROCEDURE
1			CONTACT OWNING AGENCY
2			PICK UP TOW VEHICLE & APPLICABLE TOW BAR
3			CALL/PICK UP WHEEL DOLLY (AGE)
4			AFTER FD RELEASES ACFT/CHECK HOT BRAKES
5			SAFE AIRCRAFT
6			SHUTDOWN AIRCRAFT
7			CALL TOWER FOR TOW CLEARANCE
8			HOOK UP TOW BAR AND TOW VEHICLE
9			PUT ACFT ON DISABLED WHEEL DOLLY
10			TOW VEHICLE TO PARKING SPOT
11			CALL TOWER TO CANCEL TOW

Attachment 4

AIRCRAFT DEBOGGING

Table A4.1. Aircraft Debogging.

AIRCRAFT DEBOGGING			
Task	**ITEM (Circle if Applicable)**	**X IF ACTION IS REQUIRED**	**NOTES**
Stop or slow the Aircraft sinking	Reduce tire air pressure Defuel Remove cargo Remove munitions Other		
Assess extent of bog	NLG sunk to_____ Rt MLG sunk to_____ Lt MLG sunk to_____		
Assess aircraft structural integrity	Good, ready to tow Damaged, replace gear Damaged, consult engineering		
Aircraft preparation	Safety landing gear Reduce weight Jack aircraft Bag lift aircraft Other		
Tow plan	**Note**: transition NLG from soft ground to pavement on a shallow slope and straight on) Use winch Tow backward Tow forward, create ramp, then tow back Tow backward then turn before transition		
Ground preparation needed for aircraft movement	None Excavate Plywood or steel plate over timbers Plywood Compacted gravel Pierced steel planking Cargo pallets Rapid runway material Portable Roadway material Other		Width of path: Length of path:

Additional preparation for NLG transition	None Create ramp (write desired materials here)		Width of ramp: Length of ramp:
Ground preparation for Tow Vehicle	None Sand Other (write desired materials here)		
Estimate towing force needed	Level pavement drawbar pull_____ Multiply by additions_____ Added resistance of soft ground_____ Estimated force on tow ropes_____		
Tow rope	Quantity_____ Length_____		
Bridging material	Rope Chain Ground stakes (Quantity)_____ Other		Length of bridging material (Not the length of tow rope)
Tow Vehicles	Type_____ Quantity		