

**BY ORDER OF THE COMMANDER  
502D AIR BASE WING**

**JOINT BASE SAN ANTONIO INSTRUCTION  
21-105**



**30 MAY 2025**

***Maintenance***

***JOINT BASE SAN ANTONIO (JBSA)  
LACKLAND CRASHED, DAMAGED, OR  
DISABLED AIRCRAFT RECOVERY  
(CDDAR) PROGRAM***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directives (AFPD) 21-1, *Maintenance of Military Materiel*. Additional guidance is retrieved from Air Force Instruction (DAFI) 21-101 AETCSUP, *Aircraft and Equipment Maintenance Management*, Technical Order (TO) 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual* and applicable supplements. The instruction only applies to JBSA Lackland and JBSA Lackland assigned Air National Guard, 149th Fighter Wing (149 FW); and Air Force Reserve Command, 433d Airlift Wing (433 AW), units where applicable. The purpose of this instruction is to outline responsibilities, relationships and resources required for the recovery phase of CDDAR. This instruction must be used in conjunction with existing support agreements and plans. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (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 DAF Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. This publication may not be supplemented or further implemented/extended.

## ***SUMMARY OF CHANGES***

This document has been revised and should be completely reviewed. Changes include update to the regulations from AFI to DAFI.

### **1. Scope, Concept, and Responsibilities.**

**1.1. Scope.** The JBSA Lackland CDDAR program is limited to recovery and removal phase operations for crashed, damaged or disabled aircraft on the JBSA Lackland/Kelly Field Annex runway, taxiways, parking ramps or off-base incidents involving aircraft assigned to JBSA Lackland or transient aircraft.

**1.2. Concept.** The following concepts apply.

1.2.1. As per DAFI 91-204 AETCSUP, *Safety Investigations and Reports*, paragraph 7.2.5.6, the installation commander, in conjunction with the Interim Safety Board (ISB) president or Safety Investigation Board (SIB) president may choose to remove wreckage interfering with essential mission activities or causing hazard at the mishap scene. Wreckage may need to be removed or destroyed to prevent interference with operations or vital civil functions. If wreckage must be removed prior to the arrival of the SIB/SIO (Single Investigating Officer), thoroughly document the site (photographs, video) prior to moving if time permits. Coordinate with convening authority (AETC), if in doubt).

1.2.2. The 502d Installation Support Group Commander (502 ISG/CC) is responsible for removing the aircraft from the runway within resource capability. The 502d Operations Support Squadron (502 OSS) transient aircraft maintenance contractor tows or moves aircraft within capabilities of their qualifications, resources and scope of the contract performance work statement (PWS). When appropriate or necessary, the 502 ISG/CC requests assistance from tenant agencies or subject matter experts (SME).

1.2.3. The appointed Incident Commander (IC) will ensure consultation with and inclusion of owning agency (home station) leadership or the appropriate private or civil entity during the recovery phase. When crashed aircraft cannot be removed through organic JBSA Lackland capability, the IC will task the owning entity to assist in the removal. Consultation with home station units and 502 ISG management personnel will be critical to ensure appropriate technical procedures and precautions relative to the specific aircraft recovery. It is assumed the owning military or civil entity will provide technical expertise, personnel, and when appropriate, equipment to facilitate the recovery in those situations where organic JBSA Lackland capability does not exist.

1.2.4. When feasible, utilize contracted sources to remove aircraft.

**1.3. Responsibilities.** The following general responsibilities apply:

1.3.1. 502d Operations Support Squadron Commander (502 OSS/CC) will develop and

coordinate the specific CDDAR responsibilities and procedures throughout this instruction.

1.3.1.1. The 149 FW Exercise Evaluation Team and 433 AW Exercise Evaluation Team will internally train within their respective units unless 502 ABW/IG support is requested by means of a scheduled installation Major Accident Response Exercise (MARE).

1.3.1.2. 502d Air Base Wing Safety (502 ABW/SE) will provide oversight and leads the mishap investigation process pending formal investigation.

1.3.1.3. As per DAFI 91-204 AETCSUP, paragraph 7.2.5.1, ISB president or ISO will accept custody of the wreckage and/or evidence from the IC, as applicable, and transfer custody to the SIB. Remaining transfers/disposition will be IAW DAFI 91-204.

1.3.1.4. 502d Logistics Squadron (502 LRS) and 502d Civil Engineering Squadron (502 CES) Commanders will provide personnel and equipment, as necessary, to assist with recovery operations.

1.3.1.5. 802d Security Forces Squadron (802 SFS) will provide site and aircraft security as appropriate for on/off-installation recovery operations.

1.3.2. The 149th and 433d Maintenance Groups (MXGs) will provide recovery and removal for their assigned crashed, damaged or disabled aircraft. The respective MXG CCs will:

1.3.2.1. Ensure sufficient qualified personnel, equipment, tools, vehicles and supplies are available or can be sourced to accommodate recovery operations IAW DAFI 21-101 AETCSUP.

1.3.2.2. Develop instructions that outline 149 MXG and 433 MXG CDDAR responsibilities and procedures IAW DAFI 21-101.

1.3.2.3. Provide assistance as requested and within capabilities for crashed, damaged or disabled aircraft not assigned to the 149 FW or 433 AW.

1.3.3. Port of Authority San Antonio (PASA) will provide recovery and removal of crashed, damaged, or disabled aircraft falling under their purview, includes PASA tenant entities.

## **2. Personnel and Training.**

**2.1. CDDAR Team Chief.** The designated IC is the crash recovery team chief for 502 ISG operations. The IC may delegate specific duties to individual functional representatives. For minor disabled aircraft incidents which do not require extraordinary

resource support and for which aircraft can be removed in a short amount of time through routine means such as towing or wheel dollies. Tenant flying units will provide CDDAR Team Chiefs that meet the requirements of DAFI 21-101AETCSUP and TO 00-80C-1.

2.2. Training for JBSA Lackland recovery operations is provided through ancillary training requirement and local exercise scenarios. Documentation for training, such as Emergency Response Operations will be in the Air Force Advanced Distance Learning System. Specific functions for aircraft removal will be documented in individual training records (towing, jacking, etc.). Personnel qualification for equipment operation is accomplished through work center qualification processes and documented in appropriate training records.

2.3. The 502 OSS Transient Alert (TA) Contract Manager will ensure TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services)*, familiarization training for assigned personnel. The intent of this familiarization is to ensure personnel recognize potential environmental hazards during aircraft recovery operations.

### 3. Equipment, Tools, Vehicle, and Supplies.

3.1. All precautionary measures when dealing with any wreckage should be followed utilizing Technical Order (TO) 00-80C-1. This TO also lists in depth the use of equipment for aircraft recovery efforts and their inspection criteria. Personal Protective Equipment (PPE). CCs of personnel involved in or committed to CDDAR operations must ensure required PPE is used. Consultation with the Base Bioenvironmental Engineering office is key, along with adherence to tech data and Air Force Occupational Safety and Health standards. Trained personnel are responsible for knowing and using the appropriate PPE required for operations.

**3.2. Table A3.1.** Potential Resources JBSA Lackland, identifies equipment, tools, vehicle, and supplies available to the IC and recovery teams to aid in the recovery of a crashed, damaged or disabled aircraft. Types of equipment and points of contact are included for reference of availability on JBSA Lackland. The listing is a snapshot in time intended for reference and potential sourcing. There is no guarantee the equipment or operators will be available. **Note:** It is assumed operators will be drawn from other sources where no operators are identified as available.

### 4. 502 ABW Transient Aircraft Recovery Process (see [Attachment 2](#) for macro flow chart).

**4.1. Transient Aircraft Crash.** After the aircraft has been cleared by Explosive Ordnance Disposal (EOD), Fire, Medical, Environmental, Security and Safety authorities:

4.1.1. The 502 ABW/CC activates the Crisis Action Team (CAT) and Emergency Operations Center (EOC).

4.1.2. The 502 ABW/CC, or delegate, appoints an IC who is most qualified on the aircraft or equipment affected, regardless of rank/grade.

4.1.3. The 502 ABW Command Post ensures aircraft home station command post is contacted.

4.1.4. If the aircraft can be removed using organic resources, the IC will utilize the resource listing at Attachment 3 to facilitate removal.

4.1.5. If the aircraft cannot be removed using organic resources, close communication will be required with home station for consideration of contracted sources or deployment of home station resources to JBSA Lackland.

#### **4.2. Disabled Transient Aircraft.**

4.2.1. If the aircraft is suitable for towing, the TA contractor shall tow aircraft off the active runway or taxiway to the closest available area, cordon off the affected area when required, and provide other assistance as requested.

4.3. Aircraft impoundment is considered in all situations.

4.3.1. If the aircraft has crashed, the wreckage will be impounded once removed and remain impounded until released by the SIB/SIO or legal board president.

4.3.2. (502 OSS only) Impoundment of disabled transient aircraft is determined based upon the disabling discrepancy. The impoundment procedures in DAFI 21-101 AETCSUPs, will be reviewed to determine if impoundment is required. The Impoundment Authority is the 502 OSS Commander, Director of Operations or designated representative and the Impoundment Release Authority is the transient aircraft assigned home station Maintenance Group Commander or designated delegate. Normally, home station maintenance authorities dispatch personnel to assess and ensure aircraft flight worthiness.

RANDY P. OAKLAND  
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Commander

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

AFPD 21-1, *Maintenance of Military Materiel*, 21 February 2024

DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 16 January 2020

DAFI 21-101, AETC Supplement, *Aircraft and Equipment Maintenance Management*, 8 October 2024

DAFI 91-204, *Safety Investigations and Reports*, 10 March 2021

DAFI 91-204, AETC Supplement, *Safety Investigations and Reports*, 11 August 2022

TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, 24 April 2014

TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services)*, 1 February 2006

***Prescribed Forms***

None

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

***Abbreviations and Acronyms***

**BPA** – Blanket Purchase Agreement

**CAT** – Crisis Action Team

**CDDAR** – Crashed, Damaged, or Disabled Aircraft Recovery

**EOC** – Emergency Operations Center

**IC** – Incident Commander

**ISB** – Interim Safety Board

**JBSA Lackland** – Joint Base San Antonio Lackland

**PASA** – Port Authority of San Antonio

**PPE** – Personal Protective Equipment

**PSA** – Port San Antonio

**SIB** – Safety Investigation Board

**SIO** – Single Investigation Officer

**TA** – Transient Alert

***Office Symbols***

**502 ABW/IG** - 502d Air Base Wing Inspector General

**502 ABW/SE** - 502d Air Base Wing Safety

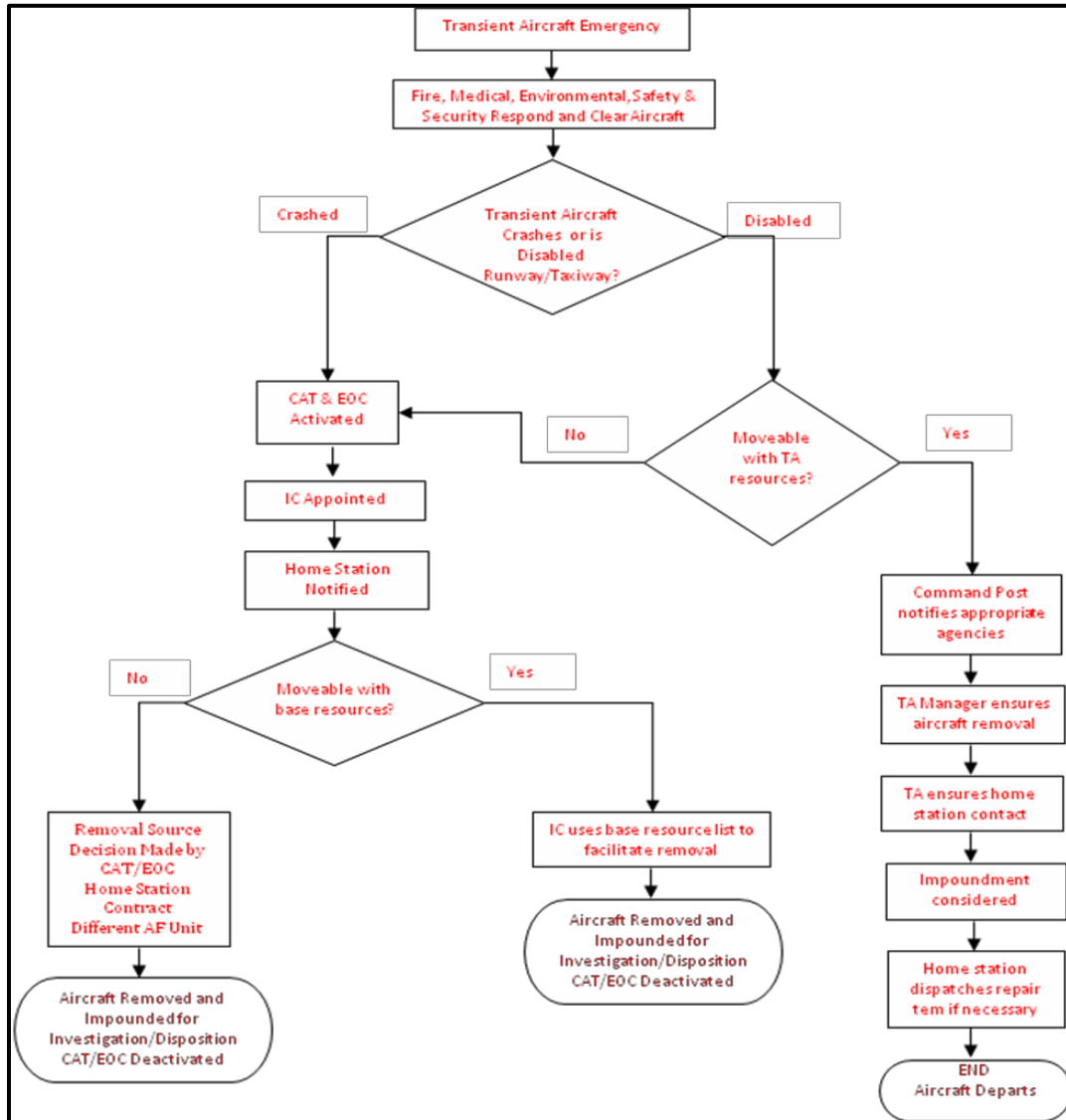
**502 ISG/CC** - 502d Installation Support Group Commander

**502 OSS/CC** - 502d Operations Support Squadron Commander

Attachment 2

502 ABW TRANSIENT AIRCRAFT RECOVERY PROCESS OVERVIEW

Figure A2.1. 502 ABW Transient Aircraft Recovery Process.



Attachment 3

POTENTIAL RESOURCES JBSA LACKLAND

Table A3.1. Potential Resources JBSA Lackland.

POTENTIAL RESOURCES JBSA LACKLAND (INCLUDES 149 AW AND 433 FW)					
Equipment Identified	Org	Type/Size/Capacity	Quantity	Availability	Remarks
<b>RADIO EQUIPPED TRUCKS</b>					
	502 OSS	1/4 Ton	2	Yes	Available
		1/2 Ton	1	Yes	Available
		3/4 Ton	1	Yes	Available
		1 Ton	1	Yes	Available
	149 FW	4x2 6-Pack	4	Yes	Available
<b>ALL TERRAIN FORKLIFTS</b>					
	502 LRS	10K (502 LRS Vehicle Ops)	2	Yes	Available
	433 MSG	10K (26 APS)	1	Yes	Available
	149 FW	10K/6K/4K (Non-All Terrain)	1/3/2	Yes	Available
<b>BULLDOZERS</b>					
<b>TOW VEHICLES</b>					
	502 OSS	Light Aircraft Tug	1	Yes	Available
		Heavy Aircraft Tug	1	Yes	Available
	433 AW	U-30 Airplane Towing Tractor	2	Yes	Available
	149 FW	MB4 Tug/Bobtail Tractor	3/8	Yes	Available
<b>CRANES</b>					
	502 CES	30 Ton	1	Yes	Available
	433 AW	30 Ton	1	Yes	Available
<b>40 FOOT FLATBED TRAILERS</b>					
	502 LRS	20 Ton (Vehicle Operations)	4	Yes	Available
	502 OSS	68K, 20' Trailer	1	Yes	Available
	502 CES	25 Ton	2	Yes	Available
	149 FW	40' Trailer/16' Trailer/30' Box	1/2/1	Yes	Available
<b>LIGHT CARTS</b>					
	502 OSS	FL1D	7	Yes	Available
	502 LRS	NF2D	5	Yes	Available
	502 CES	Light Units (4K Watts)	4	Yes	Available
	433 AW	Light Carts	12	Yes	Available
	149 FW	FL1D	9	Yes	Available
<b>TOW BARS</b>					
	502 OSS	C-12	1	Yes	Available
		T-38	1	Yes	Available
		Universal	3	Yes	Available

		KC-135	1	Yes	Available
	149 FW	MD-1 (F-16)	4	Yes	Available
	433 AW	C-5 Tow Bar	2	Yeas	Available
<b>AIR BAGS</b>					
	433 AW	Control Console, Air Bag	8	Yes	Available
		Modular Air Bag, 26 Ton (Each set includes 5 modular cells and 15 hoses)	8 Sets	Yes	Available
		Hose, Modular Air Bag	120	Yes	Available
	149 FW	Modular Air Bag, 26 Ton (Each set includes 5 modular bags and 15 hoses)	4 sets	Yes	Available
		Control Console, Modular Air Bag	4		
		Hose, Modular Air Bag	60		
	149 FW	Modular Air Bag, 26 Ton (Each set includes 5 modular bags and 15 hoses)	4 sets	Yes	Available
	149 FW	F-16 Specific:			
		Left Wing	1	Yes	On-Hand
<b>SLINGS, BELLY BANDS, SNATCH CABLES, CHAINS, ETC</b>					
		Nose Jacking Adapters	1	Yes	On-Hand
		Anchor Shackles	2	Yes	On-Hand
		Non-F-16 Specific:			
		Block & Tackle w/1" Rope Assembly	4	Yes	On-Hand
		Vertical Fin Sling (55" L x 4" W, 10 lbs & 450 lbs Capacity)	1	Yes	On-Hand
		Wing Sling (25"L x 18" W x 7" W, 29 lbs & 963 lbs Capacity)	1	Yes	On-Hand
		Nylon Web Sling, 12" Wide	2	Yes	On-Hand
		Aircraft Sling (40" L x 25" H x 20" W, 150 lbs & 24K lb Capacity, synthetic type)	1	Yes	On-Hand
		Emergency Tow Line Assembly (synthetic type)	1	Yes	On-Hand
		Console Controls (9601), 17.5" x 19.25" (65 lbs)	2	Yes	On-Hand
		Pneumatic Hoses	6	Yes	On-Hand
		1/2" Fiber Rope, 50'	2	Yes	On-Hand
		Pads, Vinyl Covered & Stitched Cloth	5	Yes	On-Hand
		Pneumatic Hoses	6	Yes	On-Hand
<b>AIRCRAFT JACKS</b>					
	502 OSS	5- Ton Jack	3	Yes	Available
		20-Ton Jack	3	Yes	Available
		5-Ton Axle Jack	1	Yes	Available
		10-Ton Jack	1	Yes	Available
	433 AW	70-Ton Axle Jack	2	Yes	Available
		60-Ton Jack	8	Yes	Available

		35-Ton Axle Jack	2	Yes	Available
		30-Ton Jack	10	Yes	Available
		10-Ton Floor Jack	2	Yes	Available
	149 FW	B-6 10-Ton Jack	15	Yes	Available