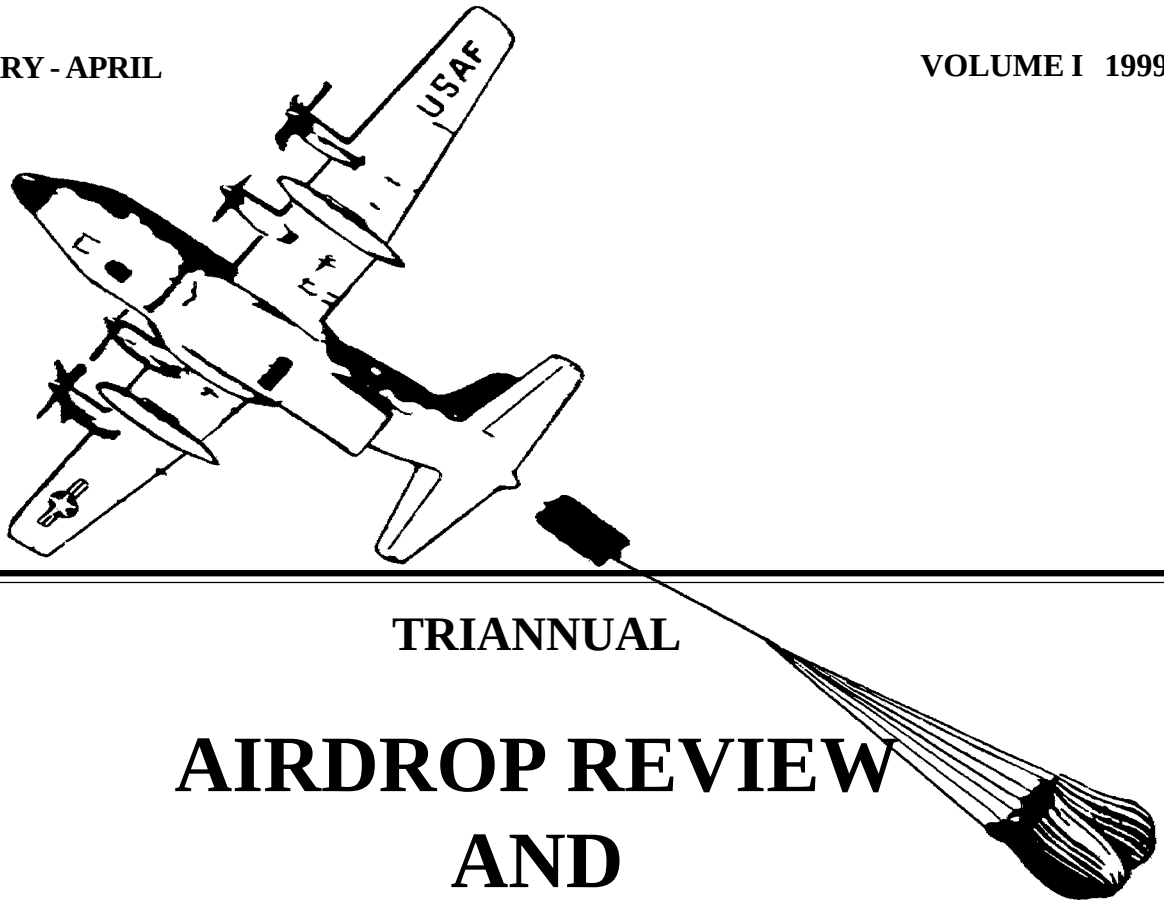
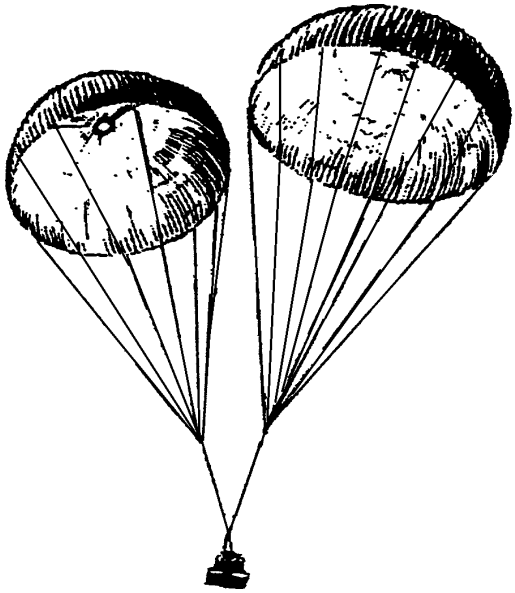
JANUARY - APRIL

VOLUME I 1999



TRIANNUAL

AIRDROP REVIEW AND MALFUNCTION/SAFETY ANALYSIS



PREPARED BY
THE US ARMY QUARTERMASTER SCHOOL
FORT LEE, VIRGINIA 23801-1502

AIRBORNE CREED

I am an Airborne trooper! A paratrooper!

I jump by parachute from any plane in flight. I volunteered to do it, knowing well the hazards of my choice.

I serve in a mighty Airborne Force—famed for deeds in war—renowned for readiness in peace. It is my pledge to uphold its honor and prestige in all I am—in all I do.

I am an elite trooper—a sky trooper—a shock trooper—a spearhead trooper. I blaze the way to far-flung goals—behind, before, above the foe's front line.

I know that I may have to fight without support for days on end. Therefore, I keep mind and body always fit to do my part in any airborne task. I am self-reliant and unafraid. I shoot true, and march fast and far. I fight hard and excel in every art and artifice of war.

I never fail a fellow trooper. I cherish as a sacred trust the lives of men with whom I serve. Leaders have my fullest loyalty, and those I lead never find me lacking.

I have pride in the Airborne! I never let it down!

In peace, I do not shirk the dullest duty nor protest the toughest training. My weapons and equipment are always combat ready. I am neat of dress—military in courtesy—proper in conduct and behavior.

In battle, I fear no foe's ability, nor underestimate his prowess, power and guile. I fight him with all my might and skill—ever alert to evade capture or escape a trap. I never surrender, though I be the last.

My goal in peace or war is to succeed in any mission of the day—or die, if needs be, in the try.

I belong to a proud and glorious team—the Airborne, the Army, my Country. I am its chosen pride to fight where others may not go—to serve them well until the final victory.

I am a trooper of the sky! I am my Nation's best! In peace and war I never fail. Anywhere, anytime, in anything—I am AIRBORNE!

IN THIS ISSUE

VOLUME I - 1999

PREFACE

The airdrop review and malfunction/safety analysis is published by the US Army Quartermaster School in hopes that by "passing the word" the malfunction rate within the Armed Forces may be minimized. The review and analysis in this issue covers the period 1 January 1999 - 30 April 1999.

POC AND MAILING ADDRESS

The POC for Airdrop Malfunction Reports, Monthly Airdrop Summary Reports, and any other information concerning the Airdrop Review and Malfunction/Safety Analysis is Mr. Roger Hale. All correspondence for the above reports and analysis should be addressed to:

AERIAL DELIVERY AND FIELD SERVICES DEPARTMENT
ATTN MR ROGER HALE
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REPORTS AND ANALYSES

The Malfunction Review Board met at Fort Lee, Virginia on 23 - 24 June 1999. A breakdown of the areas in which malfunctions occurred from 1 January through 30 April 1999 follows:

CATEGORY	QUANTITY
Containers/CRRC	12
Platforms	
LVAD	23
Personnel	11
Aircraft	20

All DD Forms 1748-2 (Airdrop Malfunction Report (Personnel-Cargo)) are reviewed, and any identifying information is removed. Block 24 is annotated to include both Army and Air Force references if only one is given. No grammatical editing is done to the reports.

AIRCRAFT MALFUNCTION REPORTS AND ANALYSES

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
1528	130	N/A	N/A	N/A

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
		NO. PLATFORMS	NO. CONTAINERS	Premature retrieval winch activation
Not Given	Not Given			
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Not Given	Not Given	Not Given		Not Given

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

1st pass, 1. Confusion on the one-minute advisory. **2.** Jumpmaster hesitated on green light. **3.** Safety tried to get leverage between the anchor cable and cable support (A-frame). Not realizing it he grabbed the TPRS and broke the ticket 5 restraint tie. This caused the retrieval winch cable to fall below the level of the anchor cable and interfer with the jumpers as they were exiting the aircraft. The loadmaster stopped remaining jumpers and closed the paratroop doors. **4**. Loadmaster let crew know the alibi count 19 on right side of aircraft. **5.** The loadmaster informed the safety that he had mistakenly grabbed the TPRS which caused the TPRS to release from its restraint tie and cable clip on the wall. **6.** Loadmaster checked the airdrop system **a.** CDS switch **b.** Anchor cable **c.** Static line retriever **7.** The airdrop system check was good. **2nd pass re-attack, 1.** Green light was called -- static line retriever right side activated and pulled the TPRS prematurely. **2.** Two jumpers exited the aircraft. **3**. Loadmaster stopped remaining jumpers and closed the paratroop doors. **4.** There were 17 alibi's on right side. **5.** The loadmaster checked the system and discovered that the Gaurded CDS switch located at the forward bulkhead was activated in the up position. **6.** Loadmaster believes that one of the jumpers inadvertantly flipped the switch up with his gear when standing to prepare to jump. Perhaps the gear caught the switch.

CONTINUED ON NEXT PAGE

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

This incident was investigated and the system was inspected on the ground. The retrieval system worked as it should when the switch in the personnel configuration. Someone, somehow had flipped the switch to the CDS mode at some point in the flight. Still waiting on the follow-up statements from the Army and jumpmaster who was operating at the right troop door for the jump. As soon as the statements are received they will be forwarded for your review.

ANALYSIS: 47

WHAT WAS THE MALFUNCTION?

1. Towed parachutist retrieval system (TPRS) restraint tie broke.
2. Static line retriever activated on green light.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Jumpmaster tried to use the TPRS for support during flight and broke the security ties.
2. The static line retriever arming switch and guard was inadvertantly armed by paratroopers gear when he stood up for the jump.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Emphasize the TPRS cannot be used for support. It is secured with only 5 cord and needs to be hand broke when needed.
2. Ensure guard is correctly safety wired. Emphasize to safety personnel the trooper equipment does not contact switch when standing.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
1160	130 Knots	360	Calm	Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
		NO. PLATFORMS	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

After tailgating 8 jumpers on the right anchor cable load clear was called and retrieval of the D bags were initiated. While retrieving, the static lines became entangled on the last vertical support tube at approximately flight station 930. While still trying to retrieve the lines with the static line retriever the phenolic block in the retriever spool gave way under the pull stress and the spool damaged the anchor cable making it unserviceable. The crew landed with the door open and then removed the static lines.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Loadmasters were retrieving the static lines while in a right turn which in turn normally causes the D bags to move toward the side of the aircraft. After entanglement the failure to stop retrieving immediately caused the damage to the spool and anchor cable. A pull test was accomplished on the retriever. Results indicated it was not a factor in this incident.

CONTINUED ON NEXT PAGE

ANALYSIS: 48

WHAT WAS THE MALFUNCTION?

The phenolic block is the clamp and shackle attachment on the anchor line cable failed causing significant damage to the anchor line cable.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Personnel static lines were caught on the aircraft structural member causing excessive force on the system.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure loadmasters follow proper retrieval procedures and have situational awareness. Put a note in manuals to not retrieve D-bags during a turn.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
2700 MSL	130	1425	2 Knots	10 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
Personnel tailgate drop	TO 1C-130A-9	NO. PLATFORMS	NO. CONTAINERS	Personnel
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Drop was from the left side of the ramp. During retrieval of personnel parachute D-bags the static line retriever cable broke between the clamp and shackle attachment and the quick disconnect terminal. The cable flew forward in the aircraft and the 54 inch extension also separated and remained wrapped around the aft anchor cable support. The aircraft landed with the cargo door open and D-bags trailing behind the aircraft. No injuries were sustained.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The 1 inch (length) of static line retriever cable connecting the clamp and shackle attachment to the quick disconnect terminal failed.

CONTINUED ON NEXT PAGE

ANALYSIS: 49

WHAT WAS THE MALFUNCTION?

The failure of static line retriever cable just above shackle attachment.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Equipment failure and improper preflight.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Emphasize preflight procedures when inspecting cables for retriever and anchor cables, to include the portion between the clamp and shackle and swage ball for quick disconnect.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
800	150 KIAS	1424 MSL	6 Knots	7 + Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS	Static line retriever cable broken
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
T10-C				

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

After the drop of 23 static-line jumpers from the right paratroop door, the loadmaster hooked-up the choker to retrieve the static lines and folded in the jump position. He began retrieval and after a few seconds, the retrieval cable broke allowing the D-bags to slip back into the slip-stream pulling the cable out of the aircraft. The loadmaster observed the G-13 clevis with the 80 pound tie and the 120-inch 1/2-inch tubular nylon still attached, exit the aircraft (80 pound safety tie unbroken). The cable was still attached to the choker so the crew was able to manually retrieve the cable and the D-bags. The aircraft landed uneventfuly and filed a dropped object report.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

During the investigation, we examined the right side Western Gear retriever serial #333 and the remaining cable. There were no apparent bends or kinks in the cable nor was there any evidence of rust or corrosion in the break area. We concentrated our investigation on the life support equipment rack. The aft edge of the rack showed evidence of the cable rugging. It also

CONTINUED ON NEXT PAGE

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

appears that perhaps the cable might have become fouled where the rack's gate closes and latches to the end "L" brackets. The lower bracket is at the same level as the retriever path and only 3 1/2-inches outboard of the cable. It is our opinion that the cable had metal to metal contact with the rack that caused it to break. We also concluded that the the reason the G-13 was lost was because the crew failed to properly secure the end of the 120-inch 1/2-inch tubular nylon to the seat back. Maintenance replaced the retriever so no pull test was conducted to determine if the slip clutch was properly adjusted. Stan-Eval has decided to have the crews place a length of cloth-backed tape over the aft portion of the equipment rack to prevent the cable from beoming entangled with the rack. We are also recommending a NOTE stating: "Prior to retrieval, ensure that the static line retriever cable patch is clear of obstructions."

ANALYSIS: 50

WHAT WAS THE MALFUNCTION?

The static line retriever cable broke during retrieval of personnel deployment bags.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The cable rubbing on the aircraft overhead equpment rack during retrieval and the FS 627 tie was incorrectly tied.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Proper tension on retrieval cable.
2. Ensure clearance for cable from aircraft equipment prior to retrieval.
3. Place cloth back tape to reduce friction.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-17	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 2000 MSL	10. ACFT SPEED (Knots) 145	11. DZ ELEVATION (Feet) 1532	12. SURFACE WINDS (Knots) 160 @ 5	13. VISIBILITY (Feet/Miles) Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT Mass Training Load 3160 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512 TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED DUAL RAIL / CDS RELEASE GATE / OTHER (Explain) NO. PLATFORMS: 2 NO. CONTAINERS:		
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15 Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT 1 of 2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Ramp edge cover was discovered damaged afater normal extraction of heavy equipment sequential platforms. The aft right corner of the roller cut out section was bent up 90 degrees from original position.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The ramp end cover was not laying flat on the cargo floor even though it was installed correctly. At the release light, the drogue parachute deployed normally but the drogue line caught on the right aft corner of the roller cutout and bent it up 90 degrees. The drogue line was damaged 24 inches from the TRM with the middle of 1 ply separating for 5 inches about 3/4-inch from the edge of the line.

CONTINUED ON NEXT PAGE

ANALYSIS: 51

WHAT WAS THE MALFUNCTION?

The ramp end cover was damaged.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The 60-foot drogue line was wedged under the ramp end cover.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Aircrews need to follow flight crew information file guidance about taping ramp end covers and implement all changes from SPO inputs.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
400	130	340	Calm	10 + Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Barrel CDS 1250 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Skidboard 48 inches X 48 inches	G-12E (1)	Pilot Parachute		FS 417

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Portable CDS airdrop over DZ. The right static line retriever engaged for 1 second. The limit switch activated. The 80 pound safety tie and the type 26 nylon release gate did not cut. The load failed to exit the plane. Emergency procedures were initiated. There was no damage to the aircraft or CDS.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Maintenance representative on the malfunction board performed an inspection of the western gear system. Maintenance found that the rewind limit switch was out of adjustment. The adjustment on the limit switch was tight. The tolerance was too close. Possiblity of the cable bouncing causing the limit switch to activate. Maintenance is performing a one time inspection of all winches to ensure that this situation does not exist elsewhere. The inspection also includes western retrieval winches coming staight from the producer.

CONTINUED ON NEXT PAGE

ANALYSIS: 52

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Static line retriever cut off prior to cutting the gate due to limit switch being out of ajdustment.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure winch is properly adjusted and calibrated.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
800 AGL	130 Knots	473 Feet	Calm	Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 800 LBS	FM 10-500-3/ TO 13C7-1-11 Chapter 9	NO. PLATFORMS	NO. CONTAINERS 1	High Velocity

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26-Foot HV (1)			FS 710

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

This was a single CDS bundle mission using the left static line retriever (western gear). At green light, the static line retriever rewound for approximately 1 second and stopped, failing to break the 80 pound. Gate failed to cut. The aircrew completed the malfunction checklist. No damage occurred.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

During preflight inspection, the static line retrievers were inspected and operated correctly. Investigation revealed the micro switch was improperly set. Maintenance personnel were notified and adjusted the micro switch IAW specified regulations.

CONTINUED ON NEXT PAGE

ANALYSIS: 53

WHAT WAS THE MALFUNCTION?

The CDS gate failed to cut at green light.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The static line retriever stopped prior to cutting the gate due to the limit switch being out of tolerance.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Clarify procedures on setting of limit switch on western gear retrievers and set periodic maintenance inspection criteria.

I. GENERAL

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1500	140 Knots	810 Feet	Calm	Clear

III. CARGO

23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 1010 Lbs	FM 10-500-3/ TO 13C7-1-11 Chapter 8	NO. PLATFORMS	NO. CONTAINERS 1	High Velocity

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26-Foot Ring Slot (1)			FS 697

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light, retriever actuated but cut-off prematurely. Failed to cut guillotine knife safety tie. Load failed to exit.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Fault western gear retrieval (limit switches) again. Retrievers are only repairable through depot so new retriever was ordered.

CONTINUED ON NEXT PAGE

ANALYSIS: 54

WHAT WAS THE MALFUNCTION?

The CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Suspected cause - Limit switch being out of adjustment.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper adjustment of western gear static line retrievers.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
700 AGL	140	1437	12 Knots	3 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
CDS 1100 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	High Velocity
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22 Container	26 Foot HV (1)			FS 700

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Once again, the micro-switch on the western gear retriever is suspected as the cause of this malfunction.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

At "green light" the western gear static line retriever rewound for approximately 2 seconds before shutting off. The 80-pound tie was not cut, gate did not cut, load failed to exit.

CONTINUED ON NEXT PAGE

ANALYSIS: 55

WHAT WAS THE MALFUNCTION?

The static line retriever failed to cut the CDS gate.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The limit switch was out of adjustment.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper adjustment of western gear static line retrievers.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT MC-130P	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (*Feet*) 650 AGL	10. ACFT SPEED (*Knots*) 140 KIAS	11. DZ ELEVATION (*Feet*) 123 MSL	12. SURFACE WINDS (*Knots*) 220/10	13. VISIBILITY (*Feet/Miles*) 7+ Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS A-22 Container 700 Lbs	24. RIGGED IAW (*TM/TO/NAVAIR No.*) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED DUAL RAIL / CDS RELEASE GATE / OTHER (*Explain*) NO. PLATFORMS / NO. CONTAINERS 1		OTHER (*Explain*) High Velocity
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26-Foot Ring Slot (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 700

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The malfunction occurred while using the right hand western gear line retriever (serial #4757) with the pulley rigged at FS 737 and the type XXVI gate just forward of the pulley. The guillotine knife was safetied in the proper manner. Upon hearing and seeing "green light" the loadmaster attempted to perform a manual cut. (The MC-130P does not have a CDS/LAPES switch). When he activated the winch the cable drew taut and the winch stopped working. The winch not only failed to cut the gate but it also failed to break the 80 pound (1/4 inch cotton webbing) safety tie on the guillotine knife.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Upon arrival at the aircraft, I inspected all rigging as well as the static line retriever. I found all rigging to be correct. When I inspected the winch with the cable in the same configuration as when it had failed I found the compression spring still seated and not compressed at all. I found that when I applied pressure to the base of the compression spring that it took almost no pressure to activate the cut off switch. I found the beaded chains to be the same length approximately 5 inches. After I inspected the winch we attempted to cut the gate on the ground. The

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32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

winch operated as advertised. It cut the gate. I directed maintenance to complete a full inspection of the winch including pull test and wiring. I also asked them to pull the winch so we could inspect it more closely. The winch checked good. When I inspected it the next day at the maintenance shop I noticed that there was almost no gap between the set screw that is in the base of the compression spring and the cutoff switch. One other winch in the shop was rigged that way. However two other winches in the shop were rigged with approximately 1/16th to 1/8 inch gap between the setscrew and the microswitch. I also found that one beaded chain was 4 and 15/16 inches and the other was 5 inches. I do not think this had any affect on the failure because as I said the compression spring was not compressed. I believe the cause of teh failure was a combination of aircraft vibration and the lack of any gap between the set screw and the microswitch that cuts power to the retriever. When the winch was activated in flight because of the position of the pulley the angle on the cable was right at the point of activating the cut off switch. Aircraft vibration or flex provided the extra catalyst to activate the cut off switch. Quality assurance inquired about any specific gap between the setscrew and the microswitch and found that there is no specified gap required by the TO. A potential fix for the problem is to specify a specific gap between the setscrew and the microswitch.

ANALYSIS: 56

WHAT WAS THE MALFUNCTION?

The CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper adjustment of limit switch.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Clarify and set specific limit switch criteria for maintenance of the western gear static line retriever.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			MC-130H	
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
630 MSL	130 KIAS	123 MSL	Unknown	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 980 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	High Velocity
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26-Foot Ring Slot (1)			FS 577

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Crew experienced a CDS "Gate Fails to Release" malfunction. Upon hearing and seeing "Green Light" the loadmaster activated the static line retriever for the required three seconds. During the rewind process, the loadmasters noticed the lights flicker and the retriever cable draw tight then slacken then draw tight again. The static line retriever not only failed to cut the gate but it failed to break the 80 pound cotton webbing safety tie on the retriever knife. The crew executed all emergency procedures without any errors.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Upon inspection of the load we found no rigging errors. We did find the western gear static line retriever cable bound up in the winch drum. We asked the loadmasters about their preflight procedures. They stated they had accomplished the preflight IAW TO 1C-130(M)H-1 and TO 1C-130-A-9 and it operated normally. Unit was unable to perform any further inspection on the winch because the cable was bound up. Winch was removed and replaced. There are two possible causes for this malfunction. The first possible cause is incorrect procedures used during the airdrop. Specifically, activating the unwind switch and then the rewind switch immediately after causing the winch cable to bind up. I asked the loadmaster who was at the winch controls about this specifically. He told me that he had operated the winch correctly. Based on our discussion and his experience level, I have ruled out this possiblity. The only other possible cause of the malfunction is a failure of the western gear static line retriever. Based on conversations with the crew loadmasters this is what I believe occurred.

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ANALYSIS: 57

WHAT WAS THE MALFUNCTION?

The CDS gate failed to cut on green light.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Cable guide failure causing cable binding due to the limit switch being incorrectly adjusted.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Investigate procedures to clarify maintenance and operation of western gear static line retrievers.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
650 AGL	130	372	6 Knots	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
CDS 1023 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26 Ft/HV (1)			FS 550

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light the static line retriever activated and the cable became taut. It paused momentarily and then the gate cut. All other phases of the drop were normal. The loadmasters indicated when the knife cut the gate, it was propelled into the ceiling of the aircraft. The knife and quick disconnect separated from the retriever cable and landed on the floor. The retriever cable wrapped around the pulley assembly located @ FS 550.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Investigation revealed the knife and cable came under significant force. The swedge ball on the retriever cable was bent 90 degrees. The knife cable was bent and the cable was frayed. The quick disconnect was serviceable. Knife was sharp. Type XXVI was cut clean. This is the second incident.

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ANALYSIS: 58

WHAT WAS THE MALFUNCTION?

The knife connected to the static line retriever cable separated after cutting the CDS gate.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The knife or quick disconnect terminal could have come into contact with the bundle, webbing or part of the aircraft.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

A continuing investigation to find the cause or contributing factors.

I. GENERAL

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
800 Feet	150 Knots	750	Calm	Not Given

III. CARGO

23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED			
			DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS Training Load 780 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS		
			1		

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
CDS Training Load	G-14 (2)			FS 600

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

On a local tactical training mission to drop a single CDS water barrel training load the gate failed to cut at green light. The malfunction check list was accomplished and the aircraft returned to base. Verbal report by the loadmasters stated that the preflight checks of the static line retriever and the CDS system were accomplished without incident. The preparation for airdrop, loading and rigging checklists were performed IAW appropriate technical orders. The pre-slowdown and slowdown checklists were also accomplished without incident. At green light the loadmaster positioned at FS 245 reported that the retriever winch ran momentarily but cut off as soon as the slack was drawn out of the cable. The malfunction was reported to the pilot and the malfunction checklist and the completion of drop checklist were run IAW MCR 55-130. The leftside winch Set#4103 was the rigged retriever. Pulley station FS 617 was used for this non-CVR drop with the release gate rigged as FS 600.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Post flight inspection revealed that the 80 pound cotton webbing safety tie on the guillotine knife was intact. During rewind of the static line retriever cable there were several instances of the retriever winch shutting off. The winch would shut off with manual tension applied to the cable. Both beaded chains were remeasured and were found to be 4 7/8 inches, the spring was fully seated in the cup and there was no major wear on the assembly. A “stronger that normal” odor was noticed during the rewind operation. A pull test was performed on the winch. During the test, the winch cut off a few times but ultimately a 1500 pound pull was achieved which is within normal parameters.

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ANALYSIS: 59

WHAT WAS THE MALFUNCTION?

The CDS gate failed to cut after activation of the static line retriever system.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Suspected out of adjustment limit switch.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper adjustment of limit switch on western gear static line retrievers.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
550 AGL	140 Knots	538 MSL	11 Knots	Clear

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 650 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	CDS
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
CDS 48 x 48 Inch Skidboard	G-12E (1)			CG at FS 700

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The crew was scheduled to drop a training CDS bundle followed on the next pass by personnel. The personnel were loaded before rigging the CDS bundle which was already loaded. After the personnel were loaded, the crew rigged the CDS and the CDS was JAIed.. During the pre-slowdown checklist the crew did not notice anything out of the ordinary. Upon green light the retriever winch operated normally and the release gate was cut. At that time the CDS bundle failed to roll aft in the aircraft. The aircrew called a malfunction and performed the malfunction procedures without incident.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The hook of the chain bridle caught on one of the skidboard ties on the forward side of the CDS resulting in the load failing to exit the aircraft. The chains excess was taped but not the hook itself. The local procedure is to tape the hook of the chain so that the hook will not catch on any webbing or ties on the CDS (MCR 55-130 Vol 1, Chapter 10, 317 AG Sup 1 Paragraph 10.88.5). The loadmaster failed to follow local procedures by not taping the chain hook which caused the malfunction.

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ANALYSIS: 60

WHAT WAS THE MALFUNCTION?

The A-22 container failed to exit the aircraft.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The hook end of the 10K chain used as a forward tension devise was caught on a skidboard tie preventing the container from rolling out.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow procedures and use situational awareness.
2. Ensure the hook end of the chain is not near the actual bundle or tape it to prevent interaction.

I. GENERAL

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
850 AGL	130 Knots	590 Feet MSL	260/10	Unlimited

III. CARGO

23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED			
		DUAL RAIL	X	CDS RELEASE GATE	OTHER (Explain)
CDS 730 LBS	FM 10-500-3/ TO 13C7-1-11 Chapter 9	NO. PLATFORMS		NO. CONTAINERS: 1	High Velocity

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22 Container	26-Foot HV (1)			FS 617

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

This incident occurred with a single CDS non-CVR The retriever used was the Western Gear. At green light the static line retriever system activated normally allowing teh 80-pound to break and the guillotine knife to cut the type XXVI nylon release gate. At the gate was cut, the guillotine knife recoiled away from the bundle and back quickly into the top portion of the container webbing. A malfunction was called by loadmaster and the ramp and door begain closing. The bundle rolled approximately 3 feet before stopping as the aircraft leveled out it flight. The bundle was secured and the completion of the drop checklist was completed.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Investigation revealed that there was too much excess contaienr webbing surrounding the drums. The top portion of the container webbing revealed traces of fiber from which the guillotine knife had entangled itself. To correct future attempts to airdrop drum type loads, recommend to securely tape all excess webbing.

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ANALYSIS: 61

WHAT WAS THE MALFUNCTION?

The load failed to exit.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The release gate knife entangled in container webbing.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper rigging and inspection procedures are followed.
2. Secure excess webbing.
3. Enure proper aircrew procedures are followed by making sure knife is out of the way.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
600 AGL	140	496	060/8	7

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 20,000 LBS	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 14	CVR
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-12E (1)			

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Aircraft was rigged with 14 bundles of CDS using the CVR. At green light, the gate cut normally and both sticks began to exit the aicraft. After one bundle exited on the left side the remaining six stopped moving. After the right side had exited the aircraft, the loadmaster dearmed the CDS switch and notified the pilot they had a malfunction. They accomplished all checklists without further incident. There was no damage to the aircraft or injury to personnel.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

During the investigation, it was discovered that the left hand locks had been pinned out by the loadmasters. The mishap loadmasters stated they had pinned out the locks in accordance with the CDS checklist. They also stated that the number 10 lock was hard to pin out and that they could not get the pin in all the way. The loadmasters obviously were not aware of the amplified procedures that states that the right hand locks are pinned out adjacent to and aft of the preplanned load position, and the left hand locks are sequentially unlocked. With that said the real cause of the malfunction was the fact that they had not correctly installed the pin in teh number 10 left hand lock and it extended to the locked position during the drop. Had they installed the pin in the lock all the way we would never have known

CONTINUED ON NEXT PAGE

ANALYSIS: 62

WHAT WAS THE MALFUNCTION?

Left stick of bundles failed to exit.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

#10 left hand lock was not retracted.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure aircrew follows proper checklist procedures.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1000 Feet AGL	130	985' M	NA	NA

III. CARGO					
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED			
			DUAL RAIL	X CDS RELEASE GATE	OTHER (Explain)
CDS 1280 LBS	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1		

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26 HV Ring Slot (1)			Gate 720

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light the static line retriever winch activated for less than one second and stopped. Gate failed to cut and malfunction handled IAW applicable guidance. Mission aborted

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The cup on the spring of the western gear static line retriever was not seated in the slot when inspected after the flight. Loadmasters reported having checked proper seating at the one minute advisory. Flight was very turbulent, possibly resulting in reseating of this, and this in turn could have resulted in early deactivation of the static line retriever. After reseating, review team actuated system and the gate cut normally.

CONTINUED ON NEXT PAGE

ANALYSIS: 63

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The western gear static line retriever was not seated.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper aircrew checklist procedures are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
400 AGL	130	360		6 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 1240 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	Non-CVR
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-12E (1)			FS 517

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Left static line retriever started rewind at green light but shut down when the cable became taut. CDS release gate and 80 pound cotton tie were still intact. Pulley was at FS 550.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The spring was in the cup but the cup was out of the hinge plate. The bottom beaded chain was at the minimum of 4 3/4 inches and the upper chain was 1/8 inch too short. The nut and screw that contacted the microswitch were not safety wired as required and were free to move in both directions. The screw was very close to the microswtich (almost no clearance at all). The spring retainer cup had some wear on it that also may have contributed to it sliding up out of the hinge plate. I believe that the cup slipped out of the hinge plate when the angle on the cable increased from tension in an upward direction because of the height of the pulley and, along with the other problems especially the screw and nut not being safetied. This allowed the screw to contact the microswitch much sooner than otherwise possible.
RECOMMENDATIONS: Maintenance should establish an inspection perhaps a time compliance to reveal these types of problems.The best fix as we all know is to replace all western gear retrievers with a different winch to eliminate the 99.9 percent of our CDS malfunctions.

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ANALYSIS: 64

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The western gear static line retriever winch limit switch screw was not safety tied. The spring was bent and the gap was too close.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper installation, inspection and maintenance procedures of the western gear static line retriever are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
400 AGL	130 Knots	4000 Feet	7 Knots	20 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 780 LBS	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-13 (2)			FS 700

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light, the aircrafts R/H western gear (with slip clutch) static line retriever activated for approximately 2 seconds pulling the retriever cable tight and then cutting off before release gate was cut. Loadmasters performed emergency procedures with no incidents or damage to personnel or aircraft noted.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Upon landing, JAI inspected the container finding no rigging erros. Maintenance performed numerous tests on the retriever and could not duplicate. The beaded chains were of proper length, and the cup was seated. In closing, the western gear retrievers are old and out of date.

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ANALYSIS: 65

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Western gear static line retriver limit switch was not adjusted correctly.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper installation, inspection and maintenance of western gear winch are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
544 Feet AGL	145 Kts	289 Feet	330/005	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
A-22 900 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-12E (1)			

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The CDS bundle failed to exit the aircraft after the gate released.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The deck angle at the time of the airdrop was only 4 degrees. This was caused by the power-setting and airspeed required to maintain the aircraft's formation position. The bundle had no momentum and allowed the release gate to fall aft of the skidboard. Eventually the bundle began to move aft and rolled over the release gate, stopping the bundle.

CONTINUED ON NEXT PAGE

ANALYSIS: 66

WHAT WAS THE MALFUNCTION?

A-22 bundle failed to exit.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper deck angle of aircraft.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Pilot awareness of deck angle or mission computer settings.

CARGO MALFUNCTION REPORTS AND ANALYSES

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
550 Ft AGL	125 KIAS	0-7 MSL	4-9 Knots	Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS	
Not Given	Not Given			

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Not Given	Not Given	Not Given		Not Given

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The malfunction occurred during a daytime para-op. The load extracted from the aircraft properly. After the extraction, the EFTC did not release the 3-point link and the two G-12E parachutes failed to deploy. The load impacted and was destroyed. The drop zone rigger took several photos and the parachute safety officer will forward if required.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

From eyewitness accounts, it is clear that the EFTC malfunctioned and did not release the 3-point link from the load. It is suspected that the 3-point link was tightened too tight which apparently did not allow the cam to release from the extraction latch assembly.

CONTINUED ON NEXT PAGE

ANALYSIS: 12

WHAT WAS THE MALFUNCTION?

The EFTC failed to release the 3-point link causing the G12Es not to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Overtightening of the EFTC.
2. Improper inspection of the EFTC.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure procedures for EFTC in MAM are followed.
2. Ensure all messages are maintained by all using units.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
640A/940M	140 KIAS	200	340@9	10+ Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
AF Training Load, Railroad Ties 3500 LBS	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 2	NO. CONTAINERS	LVAD
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
8 Foot Type V	G-12E/2	15 FT R/S		1 of 2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Good extraction parachute, right hand locks to emergency, load failed to exit. Crew accomplished EPs and cut the parachute away. No damage to aircraft, load, or local terrain.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Adjustment and set screws on #9 lock not installed (see TO 16L1-10-2-3, figure 2-1 and page 2-4, part numbers 49 and 50). This allowed the detent boss to engage nearly 50 percent of the CAMROL (part #14), preventing the extraction force from being applied against the lock setting. Solution: Ensure the adjustment and set screw are installed.

CONTINUED ON NEXT PAGE

ANALYSIS: 13

WHAT WAS THE MALFUNCTION?

The load failed to exit.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The lock had a set screw missing.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. TCTO issue one time check and steps incorporated into loadmaster preflight.
2. Time compliance technical order issued by Warner-Robins to check locks and additional check in loadmaster procedure.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-141	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)* 1100 AGL	10. ACFT SPEED *(Knots)* 150	11. DZ ELEVATION *(Feet)* 400 Feet	12. SURFACE WINDS *(Knots)* Calm	13. VISIBILITY *(Feet/Miles)* 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT Howitzer 9320 LBS	24. RIGGED IAW *(TM/TO/NAVAIR No.)* FM 10-519/ TO 13C7-10-31	25. AERIAL DELIVERY SYSTEM USED DUAL RAIL / CDS RELEASE GATE / OTHER *(Explain)* NO. PLATFORMS: 1 of 3 NO. CONTAINERS		
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-11B (2)	28. SIZE EXTRACTION/RE-LEASE PARACHUTE 22 Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT 1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

As the platform was exiting, the 5 1/2 inch link impacted locks #23 and #24 bending the left local control mechanism handle over on lock 24. The link bounced up in the air and missed #25 and #26 and impacted #27, bending #27 handles all the way over pointing aft. Platform exited without any more damage to the aircraft. The platform rigging deployed normally and landed with no damage to the platform or Howitzer.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

5 1/2 inch connector tied with 550 cord came loose allowing it to hang down and impact the locks. This link is on the forward left side of the platform.

CONTINUED ON NEXT PAGE

ANALYSIS: 14

WHAT WAS THE MALFUNCTION?

The 5 1/2-inch link impacted with multiple locks during the extraction phase.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Not enough information to form an analysis.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Not enough information to form an analysis.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
800 AGL	145	1535 MSL	Unknown	Unknown

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS	NO. CONTAINERS	
Training Load	Chapter 11	1		
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
8 Foot Type V	G-12E (2)	15 Foot Ring Slot		1 of 1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

During post drop parachute inspection and repacking of extraction parachutes, one of our riggers noticed the top 2 bag closing loops were broken (torn open). The two 1/2-inch tubular nylon link break ties were still intact and found on the 2-point link. The link break ties are only through the top bag closing loops. On deployment when the loops broke and the line extended the bag closing ties were cut by the knife and the load deployed normally from that point.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Possible excessive wear on the bag closing loops caused the failure.

CONTINUED ON NEXT PAGE

ANALYSIS: 15

WHAT WAS THE MALFUNCTION?

15-foot extraction parachute deployment bag closing loops were broken..

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Material failure.
2. Exceeding the design specifications of the material. It is not designed for 1/2-inch tubular nylon which is routed throught the top two layers.
3. Possible pre-existing wear and tear from previous airdrops.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Inspect the bag closing loops prior to repack for excessive wear and tear.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-141	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (*Feet*)	10. ACFT SPEED (*Knots*)	11. DZ ELEVATION (*Feet*)	12. SURFACE WINDS (*Knots*)	13. VISIBILITY (*Feet/Miles*)
510 AGL	150 Knots	100	3 Knots	Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (*TM/TO/NAVAIR No.*)	25. AERIAL DELIVERY SYSTEM USED		
Bulk Supply Training Load 2890 Lbs	FM 10-500-2 TO 13C7-1-5 FM 10-512 TO 13C7-1-8	DUAL RAIL / CDS RELEASE GATE / OTHER (*Explain*) NO. PLATFORMS: 1 NO. CONTAINERS:		
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15 Foot		2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

A mid-air release of the recovery parachutes occurred after the recovery parachutes deployed and elongated. The separation occurred at the release assembly, causing the heavy equipment load to free fall. The type V platform and load was destroyed.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Initial findings identified that the parachute release connectors were attached to the riser extensions and that the M-1 release appeared intact and performed properly. After recovery of all items, a further investigation of the M-1 release was conducted to test its functionality. It was discovered that the M-1 timer delay was not functioning properly. Upon inspection of the actual timer, it was discovered that there was a sprocket not seated properly. It is believed that the sprocket caused the premature release of the timer delay, directly resulting in a mid-air release.

CONTINUED ON NEXT PAGE

ANALYSIS: 16

WHAT WAS THE MALFUNCTION?

G-12 parachute separated from M1 parachute release upon deployment..

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

M1 release timer not functional.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper inspection procedures are followed.
2. Increase frequency of inspections for M1 timers that are used extensively.
3. Ensure proper maintenance and rigging procedures are followed.

I. GENERAL

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
929	140	400	Calm	7

III. CARGO

23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Training Load 3650 Lbs	FM 10-500-2/ TO 13C7-1-5	NO. PLATFORMS: 1	NO. CONTAINERS:	EFTC

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

After takeoff, the loadmasters found the number 6 right hand lock which was set at 2.5 had released from the platform. The loadmasters pushed the platform forward and the lock was showing a locked indication again. After flying the route and dropping a CDS bundle, they began the second route. During the pre-slowdown for the heavy, they found the lock had released again from the platform. They discussed with the crew and decided to return to the base without attempting to drop. Before the incident could be investigated, maintenance had unfortunately serviced the lock hindering my investigation. Dash 21 reported that while the right hand crossover was in normal, all the locks forward of the platform were locked but the number six lock indicated that it was in emergency. When I inspected the lock later after tension was reset to zero and the lock was in normal, I could easily kick the lock in.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Dash 21 has removed the lock and is conducting further tests but it is believed to be a malfunctioning lock and not crew error.

CONTINUED ON NEXT PAGE

ANALYSIS: 17

WHAT WAS THE MALFUNCTION?

The number six right hand lock would not lock in the platform.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The lock was a malfunctioning unit.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper maintenance and preflight inspection procedures are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-141	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
600 AGL	150	265	Calm	7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Training HE Platform 3300 LBS	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot		FS 900

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Loose platform caused by release of right hand lock #14.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Slide lock tab came loose on sudden gain of aircraft altitude. Right hand locks visually checked okay on all checklists. A DR is being filed for failure of right hand locks.

CONTINUED ON NEXT PAGE

ANALYSIS: 18

WHAT WAS THE MALFUNCTION?

Loose platform. The right hand lock released prior to green light resulting in a loose platform.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

#14 lock failed..

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Inherent to 141 older locks.
2. Emphasize proper maintenance and aircrew preflight inspection procedures.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
500 AGL	145	1531	240/3	10 MILES

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Low Velocity Type V 3520/3365	FM 10-512/ TO 13C7-1-8 Chapter 11	NO. PLATFORMS 2	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
TYPE V	G-12E(2)	15-Foot Ring Slot		1 and 2 of 2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Ramp end cover right forward corner (roller guard) was bent up and approximately 1/4-inch sheared off by first platform to exit. Minor groove on platform.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Drogue or extraction line pulled up the corner of end cover.

CONTINUED ON NEXT PAGE

ANALYSIS: 19

WHAT WAS THE MALFUNCTION?

Ramp end cover damaged.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Drogue line contacting ramp end cover.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Follow flight crew information file guidance about taping ramp end covers and implementing SPO recommedations.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
650	140	372	Calm	7+

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		X DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
HE Mass 2680 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		Lock 9

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The right hand crossover was pulled to emergency during the extraction phase of the airdrop. All other phases of the drop were normal.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Lock was tested 4 times by -21 at 62 ft lbs (limits 48-64 ft lbs, set at 2.0) Cause unknown.

CONTINUED ON NEXT PAGE

ANALYSIS: 20

WHAT WAS THE MALFUNCTION?

Right hand lock release handle pulled to emergency after platform failed to extract.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Unknown

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Document for trend data.
2. Emphasize proper maintenance and preflight procedures.
3. Give time for the extraction system to work properly.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1268	140	300	Calm	7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
13 Wheel Roller 6640 Lbs	FM 10-528/ TO 13C7-26-71	NO. PLATFORMS: 2	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-11B(2)	15-Foot		2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The two loadmasters were running the pre-slowdown checklist. Everything went smoothly up until the left hand locks were removed. As I directed the other loadmaster to remove the left hand locks everything was fine until the last left hand lock was removed. At this point the forward load in the airplane began to roll toward the back of the airplane. At this point I initiated the appropriate emergency procedures. I called out the loose platform, and then we applied the emergency aft restraint. We then relocked and secured the platform, called malfunction checks completed and performed completion of drop checks. At this point, I notified the pilot we were done and needed to return to base to initiate a malfunction report.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The rail lock in question was examined by the -21 rail shop mainetnance. A function check was performed to include a pressure test of the lock. All the pressure tests were positive and within tolerances providing that the lock specifically the finger between the roller was seated completely. It appears the lock finger that is required to be between the rollers may not have been seated totally. This gave the appearance that the lock was engaged properly by just glancing down at the lock. The rail shop in fact when the bench test was accomplished had to push the finger completely in to make it seat entirely between the rollers.

CONTINUED ON NEXT PAGE

ANALYSIS: 21

WHAT WAS THE MALFUNCTION?

Loose platform prior to drop.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Lock was not properly locked.
2. Suspected #3 lock finger was not seated.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper checklist procedures are followed IAW TO 130A-9.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
650	140	372	5	7+

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		X DUAL RAIL	. CDS RELEASE GATE	OTHER (Explain)
HE Mass 2740 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E(2)	15-Foot Ring Slot		Lock 9

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The right hand crossover was pulled to emergency during the extraction phase of the airdrop. All other phases of the drop were normal.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Lock tested bad and was removed and replaced.

CONTINUED ON NEXT PAGE

ANALYSIS: 22

WHAT WAS THE MALFUNCTION?

Right hand lock handle pulled to emergency to release platform.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Number nine lock failed.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Remove and replace lock.
2. Track for trend.
3. Emphasize proper preflight inspection.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
550	145	1531	Unknown	Unknown

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Low Velocity Type V 3025/2945 Lbs	FM 10-512/ TO 13C7-1-8 Chapter 11	NO. PLATFORMS 2	NO. CONTAINERS	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		1 and 2 of 2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

On second pass ramp did not open.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Failure of ramp actuator to release.

CONTINUED ON NEXT PAGE

ANALYSIS: 23

WHAT WAS THE MALFUNCTION?

Cargo ramp failed to open.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Ramp actuator out of rig.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Aircraft actuator hand built first airplane deliverted.
2. No fix.
3. Try not to schedule for airdrop.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
875	140	361	290/06	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Heavy Equipment 3250 Lbs	FM 10-500-2/ TO 13C7-1-5	NO. PLATFORMS	NO. CONTAINERS	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light the extraction parachute failed to release electrically. The loadmaster manually activated the release without further incident. Copilot confirmed he pushed the ADS button.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Maintenance could not duplicate the malfunction.

CONTINUED ON NEXT PAGE

ANALYSIS: 24

WHAT WAS THE MALFUNCTION?

Extraction parachute failed to release from bomb rack electically.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Unknown.
2. Electrical short.
3. Aerial delivery button might not have been fully depressed.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow established procedures.
2. Track for documentation.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
700 AGL	140	770 Feet MSL	300/7G10	7 +

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		X DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
Training Load 3100 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 1	NO. CONTAINERS: 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
8-Foot Type V	G-12E (2)	15-Foot		1 of 1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Training load exited aircraft normally. Aircraft on altitude and air speed. Both main parachutes deployed normally. A loud crack was heard by ground team. Team observed one parachute separate from load. Remaining parachute delivered load to ground. Upon ground contact, remaining parachute failed to be released. No damage to load platform or surrounding terrain.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

On site inspection showed a broken connector link for parachute that separated. Both link fingers were still installed in M1 release. The upper portion of link was missing. The remaining portion of the connector showed a bending movement was applied to the connector during the development phase.

CONTINUED ON NEXT PAGE

ANALYSIS: 25

WHAT WAS THE MALFUNCTION?

One G12 separated from the load after deployment.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

M1 parachute release connector broke in two.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Metal abnormality or fatigue.
2. Manufactured incorrectly.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1500	130 Knots	0	200 @ 8G12	+7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CRRC 2240 LBS	FM 10-542/ TO 13C7-51-21	NO. PLATFORMS: 1	NO. CONTAINERS: N/A	CVR
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
	G-12 (1)	15-Foot		Center Aircraft

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

CRRC appeared to exit the aircraft properly. After the CRRC cleared the aircraft it appeared to tumble backwards twice. Upon partial parachute inflation the CRRC then came apart in a violent action. The CRRC came apart in mi-air and was scattered upon hitting the water. Because of the personnel jumpers the safety boat was unable to recover the boat and parachute prior to sinking.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Not Given

CONTINUED ON NEXT PAGE

ANALYSIS: 26

WHAT WAS THE MALFUNCTION?

The load tumbled backward after extraction. Upon deployment of the main parachutes the CRRC came apart, scattering the load over the water.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Suspect the load was too heavy on one end of the platform (rear) or that the accompanying load was unevenly distributed.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper rigging procedures are followed.
2. If possible, use a 4 inch round pipe to get the center of balance instead of a 4 x 4.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
841 Feet	140	479	060/10	7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Training Load 3100 LBS	FM 10-500-2/ TO 13C7-1-5	NO. PLATFORMS: 1	NO. CONTAINERS: N/A	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light the extraction parachute released normally. When the extraction line elongated, the loadmasters saw that the parachute was cigar rolled and called a malfunction. They performed the emergency procedures, cutting the parachute away. There were no other problems and the crew returned to the base.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The parachute was never located. Suspected suspension lines may have been broken.

CONTINUED ON NEXT PAGE

ANALYSIS: 27

WHAT WAS THE MALFUNCTION?

Failure of the 15-foot extraction parachute to deploy properly.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper inspection and packing procedures are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
550 AGL	140 Knots	3680	190 @ 5	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Unilateral Training Load 3360 LBS	FM 10-500-2/ TO 13C7-1-5	NO. PLATFORMS: 1	NO. CONTAINERS	Heavy
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
8-Foot Type V	G12E (2)	1 Loop 60-Foot		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Upon rerig inspection of the M1, it was determined that the retainer clamp had been sheared off on one side (clamp stamped 2648). It also created an indent on the metal grove of both the top and bottom face plates of the M1. No malfunction occurred during the delivery or landing of the load and no suspicious occurrances were observed when the G12E parachutes released. The damage was not found until the load had been returned to the shop for rerig.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Unknown cause.

CONTINUED ON NEXT PAGE

ANALYSIS: 28

WHAT WAS THE MALFUNCTION?

M-1 parachute release retainer clamp pin broke off.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Deficiency noted in 1995 and manufacturing process changed to reflect stronger steel.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Perform thorough inspection of retainer clamp between drops..
2. Replace with M-1 retainer clamp modification kit.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1250 AGL	Unknown	Unknown	7 Knots	Clear/10 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
M198/155 Howitzer 23,000 Lbs	FM 10-527/ TO 13C7-10-191	NO. PLATFORMS	NO. CONTAINERS	LVAD/EFTC
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
24-Foot Type V	G-11C (5)	28-Foot Ext Parachute		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Aircraft made what appeared to be a normal approach. First run was hot. Extraction parachute opened over HEPI. Parachute appeared to deploy normally. Aircraft stayed on heading with extraction parachute being towed behind plane for what appeared to be 7-8 seconds. Extraction parachute and line then broke away from the load. 4 seconds later the load then gravity fed from the aircraft.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Extraction line and parachute broke away from load during extraction phase. Deployment sequence of main parachutes did not take place causing load to free-fall to earth.

CONTINUED ON NEXT PAGE

ANALYSIS: 29

WHAT WAS THE MALFUNCTION?

Extraction line broke during extraction never transferring to deployment of main parachutes.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Suspect extraction line was misrouted under the three point link causing friction which resulted in failure of the extraction line during extraction phase..

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow proper rigging procedures and proper JAI procedures.
2. Ensure extraction line is straight from link to extraction line bag.
3. Ensure all air items are serviceable and in good condition IAW TM 1670-296-23&P.

I. GENERAL

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-5	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1000 AGL	150 IAS	16	4 g 9	Clear

III. CARGO

23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED			
		X DUAL RAIL	. CDS RELEASE GATE	OTHER (Explain)	
Training Platform 3050 LBS	Not Given	NO. PLATFORMS: 3	NO. CONTAINERS:		

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		#2

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Mission was scheduled to drop three single platforms. First platform dropped normally. The extraction parachute for the second platform released. electrically and deployed correctly, but failed to overcome left hand locks #28 and #29. LM #3 observed a good extraction parachute and called for LM #2 to release the left hand locks. LM #2 released the locks and the platform was extracted. The EFTC recovery parachutes and release all functioned normally. There was no damage to the platform or aircraft.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Unknown. The left hand locks were properly preflighted and set to the required settings. JAI loadmaster and maintenance personnel did not find anything during the post flight inspection. Locks #28 and #29 were tested at home station at two different settings and were within tolerance.

CONTINUED ON NEXT PAGE

ANALYSIS: 30

WHAT WAS THE MALFUNCTION?

Load failed to extract until manually released.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

LH locks failed to release.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Unknown.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
650	140	472	7	7

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
HE Mass Supply 2655 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		550

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Extraction phase normal. During cargo parachute deployment, one parachute deployed fully, one elongated but did not inflate. Malfunctioning parachute was found with first suspension line 3 cord tie under canopy not broken, and 80 pound L-bar connector tie not broken.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

When first G-12E deployed, it air starved the second parachute

CONTINUED ON NEXT PAGE

ANALYSIS: 31

WHAT WAS THE MALFUNCTION?

G-12E failed to open properly after elongation.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Suspected air starvation and improper packing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper packing procedures are followed.
2. Check for good air channel.
3. Keep an eye on centerline length upon each repack.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-5	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
750 AGL	140 Knots	Not Given	6 Kts	Clear

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
13-Wheel Roller 6600 LBS	FM 10-528/ TO 13C7-26-71 Chapter 6	NO. PLATFORMS: 2	NO. CONTAINERS	Low-Velocity
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-11 (2)	15-Foot		#1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Extraction parachute released normallly and pulled the 160 foot extraction line out just to the right of the aircraft centerline. The extraction parachute inflated and jerked the extraction line back to centerline. The extraction line went under the extraction line guard instead of over it and removed the line guard from the aircraft. The extraction, deployment, recovery and release phases proceeded normally with no damage to the aircraft, platform or load. The line guard was recovered by ground personnel after crew had returned to home station.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Extraction line guard checked good during the preflight. No problems with installation during slowdown checklist. Examination of the line guard is still pending. Suspect that the extraction line was pulled down tight against the ramp during initial extraction parachute opening and peeled/pryed the extraction line guard off as it swung to aircraft centerline.

CONTINUED ON NEXT PAGE

ANALYSIS: 32

WHAT WAS THE MALFUNCTION?

Extraction line guard ripped from aircraft.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Extraction line went under guard.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

No fix at this time. Will track for further data.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
900 MSL	145	289	Calm	+5 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Training Heavy 3500 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 1	NO. CONTAINERS	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15 Foot		FS 810

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At 5 seconds from release point, drogue parachute failed. Loadmaster reported that he heard a popping noise and parachute collapsed. Drogue was jettisoned at 2 seconds out. No aircraft damage occurred.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Suspected material failure. Upon inspection, DZ personnel reported that the apex was blown out of the parachute.

CONTINUED ON NEXT PAGE

ANALYSIS: 33

WHAT WAS THE MALFUNCTION?

The 15-foot extraction parachute used as a drogue collapsed 5 seconds from release point.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Exceeding design specifications on the 15-foot extraction parachute.
2. The apex was blown out due to material failure.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Development of new drogue/extraction parachute.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
650	140	372	Calm	7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
HE/Mass 2610 Lbs	FM 10-512/ TO 13C7-1-8	NO. PLATFORMS: 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Type V	G-12E (2)	15-Foot Ring Slot		Lock #10

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Right hand cross over pulled. Extraction parachute good. Fully inflated.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Right hand lock pressure checked. Fail checked and R&R.

CONTINUED ON NEXT PAGE

ANALYSIS: 34

WHAT WAS THE MALFUNCTION?

Load failed to extract until manually released.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Lock failed latch test.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Follow proper maintenance and preflight procedures.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-141	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
900 MSL	150 kts	289	Calm	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
A-22 CDS 920 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-12E (1)			

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The CDS bundle failed to exit after the release gate was cut.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

A cargo strap placed forward of the bundle interfered with the exit of the load. Extra aircraft equipment was tied down using a 5,000 pound cargo strap immediately forward of the bundle. The hook end of the strap was in contact with the bottom of the skidboard. The hook was facing up and eventually clipped onto the skidboard vertical restraint ties exposed on the bottom side of the skidboard preventing the exit of the load.

CONTINUED ON NEXT PAGE

ANALYSIS: 35

WHAT WAS THE MALFUNCTION?

A-22 container failed to exit after the release gate was cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

A tiedown strap was hooked on a skidboard tie under the skidboard.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Secure loose equipment forward of the load.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			MC-130P	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
650 AGL	140 KIAS	123 MSL	8	7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS 720 LBS	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26-Foot Ring (1)			FS 650

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The parachute opened slower than normal causing a higher rate of fall resulting in damage to some 55 gallon drums.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Found no rigging errors. No obvious indications to this malfunction. Suspect the unusually very high humidity and extraordinary rainfall combined with where the bundles are stored to be a contributing factor.

CONTINUED ON NEXT PAGE

ANALYSIS: 36

WHAT WAS THE MALFUNCTION?

Slow opening of 26-foot high velocity parachute.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper storage of equipment and airdrop materials.
2. Rigged containers were stored outside exposed to the elements.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper storage of airdrop equipment is followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C 130H	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1285 Feet	140 K	682	230/7	+ 10

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	X CDS RELEASE GATE	OTHER (Explain)
8 Bundles CDS 8000 Lbs	FM 10-500-3/ TO 13C-7-11	NO. PLATFORMS	NO. CONTAINERS 8	CVR
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Container	G-12E	68-Inch Pilot Parachute		FS 630

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Last bundle of left stick (pilot side) slowed during extraction and stopped on ramp. No damage.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

One 68-inch pilot parachute failed and separated. Main parachute failed.

CONTINUED ON NEXT PAGE

ANALYSIS: 37

WHAT WAS THE MALFUNCTION?

1. Bundle slowed during extraction, stopped on ramp.
2. Main parachute failed on 1 of 7 bundles which extracted.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Skidboard size 48 inches plus 1/4 inch to 1/2 inch over and possible deck angle. (No CVR on ramp area.)
2. L-bar was not connected to the G-12 parachute.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper maintenance of skidboard is performed.
2. Have pilot maintain proper deck angle until load clears.
3. Ensure proper rigging and JAI procedures are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			CH-47	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
500 Feet	90 knots	1300 ASL	15 Knots	585 Feet

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
A-21 Door Bundle 260 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS	A-21 Door Bundle
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-21 Container	G-14			Aircraft Ramp

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Nondeployed canopy resulting in impact with ground. Damage to G-14 container and torn A21 container. No damage to hardware or canopy noted upon inspection.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Container was configured for breakaway of static line using the standard gutted 550 cord. Upon inspection of the parachute and static line, it was noted that the gutted 550 was undamaged. Clevis and it's components were undamaged. The conclusion was that the gutted 550 cord was not properly placed within the clevis or misrouted clevis.

CONTINUED ON NEXT PAGE

ANALYSIS: 38

WHAT WAS THE MALFUNCTION?

G-14 main parachute failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper routing of static line and/or gutted 550 cord.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure greater attention to detail of rigging and proper maintenance procedures are performed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
550 AGL	145	1505	240/4	10 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
CDS A-22 1075 Lbs	FM 10-500-3/ TO 13C7-1-11 Chapter 9	NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-12E (1)	68-Inch Pilot		1 of 1 FS 1060

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Container exited the aircraft normally. The 68-inch pilot parachute deployed but did not inflate. The load impacted the ground with the cargo parachute separating from the container.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Air starvation of the 68-inch pilot parachute.

CONTINUED ON NEXT PAGE

ANALYSIS: 39

WHAT WAS THE MALFUNCTION?

1. 68-inch pilot parachute failed to deploy.
2. The G-12E which had the correct bag closing ties unbroken.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Air starvation.
2. Improper packing of 68-inch pilot parachute.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper packing and inspection procedures are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130E	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1522	130 K	771 Feet MSL	Calm	8 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL:	X CDS RELEASE GATE	OTHER (Explain)
CDS A-22 1072 LBS	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	26-Foot High Velocity			737

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

When CDS exited aircraft, it tumbled to inverted position. Parachute failed to deploy and load was destroyed.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Inspection of load found static line caught on skid board causing line to break at attachment point. (Several burns and splinters in line.)

CONTINUED ON NEXT PAGE

ANALYSIS: 40

WHAT WAS THE MALFUNCTION?

68-inch pilot parachute failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Aircraft buffeting/turbulence.
2. Dropped with breakaway at 1500 feet.
3. Improper rigging.
4. Retainer bands holding static line in place could have been worn/old.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Drop nonbreakaway below 10,000 feet.
2. Ensure proper deck angle.
3. Ensure rigging is accomplished IAW proper FM/TO.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			Twin Otter	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
500 Feet AGL	90	150	3	1500 Meters

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
A-21 500 Lbs	Not Given	NO. PLATFORMS	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
Not Given	G-14 (1)			

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The A-21 bundle was pushed from the twin otter. The bundle flipped upon exit. The main parachute never deployed. Upon inspecting the load, it was noted that the static line clevis was missing. The force of the bundle hitting the ground caused the parachute to deploy from its container. The parachute was still in the long fold configuration. The static line breakcord tie was still attached to the bridle. The load was destroyed.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Possible cause of malfunction is depicted below:

1. Load improperly hooked up.
2. Bad clevis.
3. Bad safety pin on clevis.

CONTINUED ON NEXT PAGE

ANALYSIS: 41

WHAT WAS THE MALFUNCTION?

G-14 parachute never deployed.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Static line not hooked onto G-13 clevis correctly.
2. G-13 clevis cotter pin not installed.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper rigging procedures are followed.

I. GENERAL

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130H	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1620 MSL/500 AGL	130 IAS/125 GS	1130 MSL	330/6	10 + Miles

III. CARGO

23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED			
		DUAL RAIL	X	CDS RELEASE GATE	OTHER (Explain)
CDS (Mass) 1500 LBS	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS		NO. CONTAINERS 6	CVR Buffer Stop

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
NA	G-12E (1)	N/A	N/A	FS 617

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

On a south to north run into the drop zone, the incident aircraft dropped 6 bundles of actual CDS. Left side appeared to exit normally. Right side observed to slow considerably as it exited the aircraft. 5 of 6 bundles impacted within the boundary of the military reservation. The final bundle impacted approximately 100 yards beyond the northern border of the reservation in an open field. No damage or injuries.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The right stick of bundles appeared to bind momentarily as they exited the aircraft. This slowed their exit from the aircraft. Ground tests revealed that the aircraft rollers "aimed" these bundles towards the center of the aircraft, causing them to rub against the CVR and slowing their exit from the aircraft.

CONTINUED ON NEXT PAGE

ANALYSIS: 42

WHAT WAS THE MALFUNCTION?

Slow exit of right side bundles.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Possible warped roller trays.
2. Improper installation of rollers.
3. Skidboard size wrong.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Proper preflight of aircraft.
2. Ensure rigging is accomplished IAW proper FM/TM.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
1000 Feet A	130	985 Feet M	NA	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	X CDS RELEASE GATE	OTHER (Explain)
CDS 940 Lbs	Not Given	NO. PLATFORMS	NO. CONTAINERS 1	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	1 Ring Slot High Velocity			Gate FS 510

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light, static line retriever winch activated for 3 seconds, safety tie broke, gate rolled, was pulled up, and failed to cut prior to static line retriever deactivation.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

CDS gate was partially cut on one side only (apparently after or as the gate rolled in the knife). Gate was tightened as much as possible when rigged, but during the 2 hours of flight prior to the drop, had encountered moderate turbulence for most of the flight, and may have stretched. Loadmasters did not retension gate in flight which may have prevented this malfunction. Knife was sharp, all rigging was IAW.

CONTINUED ON NEXT PAGE

ANALYSIS: 43

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Gate could have been too loose.
2. Slack in static line retrieval cable.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Perform proper inspection of gate and static line retriever winch cable during preslowdown checklist.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
500 AGL	140 Knots	190 Feet	040 8 Knots	Clear

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	X CDS RELEASE GATE	OTHER (Explain)
CDS 1000 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 1	

26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-14 (2)			Load #1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

CDS load appeared to exit aircraft normally. Both parachutes elongated, one inflated. During descent, the malfunctioning parachute appeared to be restricted by the suspension lines of the inflated parachute.The load fell rapidly to the ground but suffered no damage. Upon inspection of the load and parachutes, it was clear that the malfunctioning parachute had wrapped around the inflated parachutes suspension lines once. It was also clear that somehow, the entire canopy and most of the length of the suspension lines of the malfunctioning parachute had passed through one group of the inflated parachutes suspension lines, therefore preventing the parachute from opening. While inspecting the parachute that functioned properly damaged suspension lines were found, one of which was actually broken. Both of the damaged suspension lines showed signs of friction (they were frayed) but there was no indication of a friction burn.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

No apparent causes have been found at this time.

CONTINUED ON NEXT PAGE

ANALYSIS: 44

WHAT WAS THE MALFUNCTION?

Parachute entanglement. One main parachute failed to inflate.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Parachute entanglement.
2. Possible staggered deployment of G-14s.
3. Possible rigging error.
4. Parachutes forward and aft instead of side by side.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper packing and rigging procedures are performed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE *(Feet)*	10. ACFT SPEED *(Knots)*	11. DZ ELEVATION *(Feet)*	12. SURFACE WINDS *(Knots)*	13. VISIBILITY *(Feet/Miles)*
1000 AGL	130 Knots	370 ASL	5-10 Knots	Clear 10 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW *(TM/TO/NAVAIR No.)*	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER *(Explain)*
81 mm Mortar 200 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS 2	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-21 Container	T-10 Cargo (2)			1 of 1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

The door bundles were pushed over the ramp at green light. During deployment, the static line broke away from the anchor line cable prior to full deployment of the recovery parachute. The loads impacted the ground causing damage to the A-21 containers and the equipment. Inspection of the cargo parachutes revealed the deployment sequence stopped while the suspension lines were 1/3 to 1/2 deployed from the deployment bag. No damage to the static line or deployment bag was noted.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The parachutes were issued to the using unit in the configuration in FM 10-500-3. At the departure airfield the parachutes were secured to the load and the loads placed on the aircraft. The primary jumpmaster had the configuration of the cargo parachutes changed to "breakaway" by putting gutted Type III nylon cord between the snall clevis and the static line. FM 10-500-3 states that "loads to be followed immediately by parachutists, must be rigged, unless specified, with parachutes having breakaway static lines. There are no procedures to convert the T-10 cargo parachute to breakaway, nor does the FM state that this parachute is safe for troops to follow. Using esimates for the weight and size of the bundles (no load data tags were used) the minimum allowable weight for these containers (24 inches X 48 inches X 24 inches) is 224 pounds. These load did not have a skid board attached as required by FM 10-500-3. This malfunction is believed to have been caused by improper rigging of the cargo parachute.

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ANALYSIS: 45

WHAT WAS THE MALFUNCTION?

Parachutes failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper rigging.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Change FM to reflect upgraded static line procedures for troops following bundles - T10 nonbreakaway, G-14 with drogue nonbreakaway.
2. Ensure proper rigging, weighing, and inspection procedures are followed.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-17	
6. OPERATION/EXERCISE	7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
800 AGL	Not Given	1532	180/5	Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT	24. RIGGED IAW (TM/TO/NAVAIR No.)	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
Plywood Filler 1550 Lbs	FM 10-500-3/ TO 13C7-1-11	NO. PLATFORMS	NO. CONTAINERS	CVR
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER	28. SIZE EXTRACTION/RE-LEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
A-22	G-12E (1)			

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

CDS came out of aircraft as designed but after opening shock, the plywood departed the container webbing. There were 5 of the 8 straps of the container webbing that were cut. Approximately 85 percent of the container stitching gave way due to the weight of the plywood being redistributed after two of the container webbings gave way.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Suspected cause of this malfunction is the use of small D-rings on the container webbing instead of large D-rings. The small D-rings in this malfunction had a mold seam that had a definite edge and when the parachute had opening shock, it put a signifcant amount of pressure on the seam and thereby cutting the nylon. The smaller D-ring creates more PSI on the bottom part of the ring as opposed to the larger D-ring. The small D-ring is directly responsible for this malfunction.

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ANALYSIS: 46

WHAT WAS THE MALFUNCTION?

A-22 CDS container slings came apart on deployment.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Possible size of D-rings (smaller).
2. Rough edges on D-ring could have cut container webbing.
3. Both of these causes are manufacturing defects.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Check metal for sharp edges during final rigger and JAI inspections.

PERSONNEL MALFUNCTION REPORTS AND ANALYSES

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE *(Feet)* 10,000	10. ACFT SPEED *(Knots)* 130 KIA	11. DZ ELEVATION *(Feet)* IP 99 FT M	12. SURFACE WINDS *(Knots)* 12 Knots	13. VISIBILITY *(Feet/Miles)* 7 Miles

II. PERSONNEL		
14. NAME *(Last, First, MI)*, GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER None	16. JUMPER'S POSITION IN ACFT 6th Stick

17. TYPE PARACHUTE *(Specify)*	18. TYPE MALFUNCTION						19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL	OTHER *(SPECIFY)*	
MC-4		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE	Floating Rip Cord	60

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY *(If "No" explain in item 31)*	22. RESULTING INJURY
MC-4	☐ YES ☐ NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Floating rip cord.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Inadvertant contact on ramp exit.

CONTINUED ON NEXT PAGE

ANALYSIS: **1**

WHAT WAS THE MALFUNCTION?

Floating rip cord.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Inadvertant contact on ramp exit.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper separation from other jumpers on exit.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT Casa 212	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 12,000 Feet	10. ACFT SPEED (Knots) 110 Knots	11. DZ ELEVATION (Feet) 419 Feet	12. SURFACE WINDS (Knots) 5 Knots	13. VISIBILITY (Feet/Miles) Unlimited

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER 02 Equipment, M-16, Ruck-sack, MC-4 Parachute System	16. JUMPER'S POSITION IN ACFT 1st Pass/4th Jumper

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION						19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL	OTHER (SPECIFY)	
MC-4		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPEN-SION LINE	Line Over	27

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
MC-4	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper pulled his main ripcord at 4,000 feet AGL. Upon opening, jumper started to spin under his canopy. Jumper attempted to fix the malfunction by pulling on his rear risers but unsuccessful. Jumper proceeded to cutaway his main canopy and he landed safe on designated drop zone without further incident.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After recovery and inspection of the main canopy, it was found that the cause of the malfunction was due to a line over the canopy. A contributing factor to this malfunction could be improper packing of the main canopy.

CONTINUED ON NEXT PAGE

ANALYSIS: **2**

WHAT WAS THE MALFUNCTION?

Line over canopy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper packing procedures are followed IAW manual.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 1,250 AGL	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 742	12. SURFACE WINDS (Knots) 4-5	13. VISIBILITY (Feet/Miles) 9000/1 mile

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER Hollywood	16. JUMPER'S POSITION IN ACFT 5th/1st Pass

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION										19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL		OTHER (SPECIFY)			
MC1-1C		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE					7

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
T-10	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

When jumper checked canopy, he noticed the modification in the front. The jumper stated he was able to control his canopy and landed without incident. No one observed the malfunction. The jumper turned his canopy into the turn-in point then reported to the malfunction NCO on the DZ. The parachute was not identified during shake-out and could not be located and was never inspected.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Without inspecting the parachute, which could not be identified, we were unable to determine if there was a malfunction or what was the cause. With no one observing the malfunction, we had to rely on the jumper's statement. If the jumper had a complete inversion, the cause would have been a potential packing error. Due to the jumpers inexperience and that no one observed it, with only ten parachutes in the air, it is more probable that the jumper was confused and there was no complete inversion.

CONTINUED ON NEXT PAGE

ANALYSIS: **3**

WHAT WAS THE MALFUNCTION?

Inverted canopy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper packing procedures are followed IAW manual.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT MC-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 12,500	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 216	12. SURFACE WINDS (Knots) 7 Knots	13. VISIBILITY (Feet/Miles) 7+ Miles

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER Fanny Pack	16. JUMPER'S POSITION IN ACFT 2/1

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION						19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL	OTHER (SPECIFY)	
MC-4		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE	Floating Rip Cord	Not Available

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
MC-4R	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Floating rip cord upon exit.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Floating ripcord was noticed immediately upon exit by following team member, most likely the result of contact with adjacent jumper to his right. At 5,000 feet AGL, jumper noticed the floating ripcord, located the cable and pulled at the prescribed altitude of 3,500 feet. The main canopy activated with no further incident. Subsequent inspection by the unit rigger revealed no discrepancies with the harness. Tactical grouping was planned but not accomplished. Body position on exit and opening was stable as observed by another jumper.

CONTINUED ON NEXT PAGE

ANALYSIS: **4**

WHAT WAS THE MALFUNCTION?

Floating ripcord.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Inadvertant contact on ramp exit.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper separation from other jumpers on exit.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			C-130	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
12,500 Feet	110 Knots	419 Feet	0 Knots	Unlimited

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER	16. JUMPER'S POSITION IN ACFT
	MC-4 RAPS	2 Pass/1st Out

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION				19. NO. JUMPS
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Knotted Lines	
MC-4					2

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
MC-4	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper pulled his main ripcord at 4,000 feet AGL. Upon opening, jumper performed a canopy check and noticed that he had closed end cells and knotted with suspension lines. Jumper attempted to fix the malfunction by pulling his control toggles to his groin for six seconds. After the unsuccessful attempt to fix the malfunction, jumper performed cutaway procedures at 2800 feet AGL. Jumper landed safe.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After recovery and inspection of the main canopy, no abnormalities or damage was found in the main canopy. According to the jumper's statment, he had some of the lines knotted around the canopy tail. When jumper cutaway, the tension of the knot was loosened and released the end cells that were knotted. A contributing factor to this malfunction could be improper packing of the main canopy.

CONTINUED ON NEXT PAGE

ANALYSIS: **5**

WHAT WAS THE MALFUNCTION?

Knotted suspension lines/closed end cells.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper packing procedures are followed IAW manual.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-141	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 1100 AGL	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 128 ASL	12. SURFACE WINDS (Knots) 6-8 Knots	13. VISIBILITY (Feet/Miles) Unlimited

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER Kevlar	16. JUMPER'S POSITION IN ACFT 26

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION						19. NO. JUMPS
	☐ SEMI-INVERSION	☐ INVERSION	☐ CIGARETTE ROLL	OTHER (SPECIFY)			
T-10C	☐ PILOT CHUTE	☐ BLOWN SECTION	☐ BROKEN SUSPENSION LINE	Entanglement	Not stated		

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
MIRPS	☐ YES ☐ NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Both jumpers exited the aircraft properly. Jumper #2 had twisted suspension lines. While he was trying to correct that situation, he drifted into jumper #1 parachute collapsed as jumper #2 passed below him. Jumper #1 became entangled with jumper #2 anti-inversion net. Jumper #2 canopy reinflated only to collapse again. After his canopy reinflated for the second time, jumper #1 canopy collapsed. This happened again. Around 200 feet AGL, jumper #1 deployed his reserve. The pilot parachute deployed from the packtray, but the reserve canopy fell into the lower jumper and wrapped around his rucksack. There was too much lift for the reserve to inflate at the time of deployment. Jumper #2 could not deploy his reserve because jumper #1 reserve canopy. Both canopies collapsed alternately until impact with the ground.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After examination of the landing area, I found that the anti-inversion net between lines 18 and 19 were wrapped around the left rear riser connector link. There was no way for either jumper to clear this entanglement.

CONTINUED ON NEXT PAGE

ANALYSIS: **6**

WHAT WAS THE MALFUNCTION?

Midair collision resulting in an entanglement.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Jumper#1 unable to recover from twisted suspension line.
2. Jumper #2 lack of air awareness.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Air awareness.
2. Ensure proper body position.
3. Ensure proper separation of jumpers.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE *(Feet)* 1250	10. ACFT SPEED *(Knots)* 134 Knots	11. DZ ELEVATION *(Feet)* 5250	12. SURFACE WINDS *(Knots)* 16 Knots	13. VISIBILITY *(Feet/Miles)* Clear 50 Miles

II. PERSONNEL		
14. NAME *(Last, First, MI)*, GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER Rucksack	16. JUMPER'S POSITION IN ACFT 5

17. TYPE PARACHUTE *(Specify)*	18. TYPE MALFUNCTION										19. NO. JUMPS
	X	SEMI-INVERSION		INVERSION		CIGARETTE ROLL		OTHER *(SPECIFY)*			
Not Given		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE					

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY *(If "No" explain in item 31)*	22. RESULTING INJURY
24-Ft Chest	☐ YES ☐ NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Malfunction appeared to be an inversion of about a third of the canopy through a portion of the modification. However, there were no marks or damage to the canopy. Jumper recovered the canopy and it could not be determined where the inversion took place. Jumper and witness statements state that jumper had a good body position on exit. Jumper did not pull his reserve. His rate of descent was not more than other jumpers.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Unknown.

CONTINUED ON NEXT PAGE

ANALYSIS: **7**

WHAT WAS THE MALFUNCTION?

Partial inversion.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper packing procedures are followed IAW manual.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE *(Feet)* 1,000 AGL	10. ACFT SPEED *(Knots)* 130 Knots	11. DZ ELEVATION *(Feet)* 168	12. SURFACE WINDS *(Knots)* 120 @ 11	13. VISIBILITY *(Feet/Miles)* 7 +

II. PERSONNEL		
14. NAME *(Last, First, MI)*, GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER BDUs	16. JUMPER'S POSITION IN ACFT 2nd/6th

17. TYPE PARACHUTE *(Specify)*	18. TYPE MALFUNCTION						19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL	OTHER *(SPECIFY)*	
MC1-1C		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE	Large Ripped Hole	22

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY *(If "No" explain in item 31)*	22. RESULTING INJURY
T-10 Chest Mount	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

3 by 4 hole with slack in 3 suspension lines and left toggle line.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Unknown

CONTINUED ON NEXT PAGE

ANALYSIS: **8**

WHAT WAS THE MALFUNCTION?

Torn in canopy with slack in 3 suspension lines and toggle line.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Control line too long.
2. Repair to suspension lines not IAW manual.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Ensure proper inspection is conducted after maintenance of parachute.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT	5. ACFT SER NO.
			Casa 212	

6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME

9. ACFT ALTITUDE (Feet)	10. ACFT SPEED (Knots)	11. DZ ELEVATION (Feet)	12. SURFACE WINDS (Knots)	13. VISIBILITY (Feet/Miles)
12,500 Ft AGL	90 Knots	480 Feet	2 Knots	Unlimited

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER	16. JUMPER'S POSITION IN ACFT
	Rucksack, Weapon	2nd Jumper/1st Pass

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION										19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL		OTHER (SPECIFY)			
MC-4		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE					9

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
MC-4	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

After exiting the aircraft at 12,500 feet AGL, jumper initiated his main pull sequence at 3,900 feet AGL. He then observed his pilot parachute bouncing on his back in the burble. Jumper attempted to clear by arching harder two more times with no success. He then executed emergency procedures for a total malfunction. Jumper had a fully deployed reserve at 2,800 feet AGL and landed on the drop zone with no further incident.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The main canopy was recovered in a fully deployed state. A 100% TRI as performed on the main canopy and pilot parachute, no abornalities were found. Jumper failed to properly clear the "burble" by arching harder and not checking vigorously over his right shoulder. When he initiated emergency procedures, it allowed the pilot parachute to catch air and deploy the main parachute simultaneously as he cut it away.

CONTINUED ON NEXT PAGE

ANALYSIS: **9**

WHAT WAS THE MALFUNCTION?

Burble.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Jumper used improper burble clearing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Continued training and proper briefings.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE *(Feet)* 800 Feet	10. ACFT SPEED *(Knots)* 130 Knots	11. DZ ELEVATION *(Feet)* 730 Feet	12. SURFACE WINDS *(Knots)* 220/10 G 12	13. VISIBILITY *(Feet/Miles)* 6+ Miles

II. PERSONNEL		
14. NAME *(Last, First, MI)*, GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER Gentex Helmet, Goggles	16. JUMPER'S POSITION IN ACFT 1st, 1st

17. TYPE PARACHUTE *(Specify)*	18. TYPE MALFUNCTION								19. NO. JUMPS
	☐	SEMI-INVERSION	☐	INVERSION	☐	CIGARETTE ROLL	OTHER *(SPECIFY)*		
MC-1C Static Line Parachute	☐	PILOT CHUTE	☐	BLOWN SECTION	☐	BROKEN SUSPENSION LINE	Slightly Feet Up		27

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY *(If "No" explain in item 31)*	22. RESULTING INJURY
T-10	☐ YES ☐ NO	Torn Mcl

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Exited properly and feet flipped and lower body vertical, parachute deployed left leg was caught in deploying risers.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper executed all proper safety requirements, proper equipment lowering and performed PLF.

CONTINUED ON NEXT PAGE

ANALYSIS: **10**

WHAT WAS THE MALFUNCTION?

Jumpers feet flipped through risers.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper body position on exit.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Prejump brief.
2. Sustained mock airborne training.

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE	7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 12900	10. ACFT SPEED (Knots) 130 KTS	11. DZ ELEVATION (Feet) 6 Ft	12. SURFACE WINDS (Knots) 4-8	13. VISIBILITY (Feet/Miles) Unlimited

II. PERSONNEL		
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT	15. EQUIPMENT WORN BY JUMPER MC4 Parachute System	16. JUMPER'S POSITION IN ACFT 4th

17. TYPE PARACHUTE (Specify)	18. TYPE MALFUNCTION						19. NO. JUMPS
		SEMI-INVERSION		INVERSION		CIGARETTE ROLL	OTHER (SPECIFY)	
MC4		PILOT CHUTE		BLOWN SECTION		BROKEN SUSPENSION LINE	Twist	100

20. TYPE OF RESERVE	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31)	22. RESULTING INJURY
MC4	[X] YES [ ] NO	None

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Exited the aircraft at approximately 12,900 feet AGL. At 4000 feet AGL, jumper clears his air space, waves off and deploys his main canopy at 3500 feet AGL. During deployment phase, jumper saw that the suspension lines were twisted and attempted to free the lines by bicycling. Jumper then deployed his reserve canopy and landed on the intended drop zone safely.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After inspecting the canopy, no abnormalities were found. Jumper was unstable during deployment of canopy.

CONTINUED ON NEXT PAGE

ANALYSIS: **11**

WHAT WAS THE MALFUNCTION?

Line twists.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Unstable at deployment phase resulting in line twists.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Follow stable body position training IAW FM 31-19.

SUMMARY OF SUPPLY AND EQUIPMENT DROPS

1ST TRIANNUAL CY 1999

	PLATFORM LOAD		SINGLE CONTAINER		CDS		TOTAL	
Number of Drops	1479		136		1351		2966	
Number of Malfunctions	23		2		24		49	
Percentage of Malfunctions	0.136		0.147		0.177		0.165	
Malfunction Phases:	IP	EF	IP	EF	IP	EF	IP	EF
Extraction	6	14	3	8	6	5	15	27
Deployment-Recovery	2	0	0	0	2	1	4	1
Release	2	0	0	0	0	0	2	0

IP-Incorrect Procedures **EF-Equipment Failure**

SUMMARY OF PERSONNEL PARACHUTE JUMPS

1ST TRIANNUAL CY 1999

		C-17	C-130	C-141	OTHER	TOTAL
Nonmaneuverable	Number of Deployments	0	29,915	17,504	1,262	48,681
	Number of Malfunctions	0	2	1	0	3
	Percentage of Malfunctions	0.00	0.668	0.571	0.000	0.616
Maneuverable	Number of Deployments	0	5,241	2,272	8,679	16,192
	Number of Malfunctions	0	2	0	1	3
	Percentage of Malfunctions	0.00	0.381	0.00	0.115	0.185
Free-Fall	Number of Deployments	66	712	942	3,467	5,187
	Number of Malfunctions	0	4	0	2	6
	Percentage of Malfunctions	0.00	0.561	0.00	0.576	0.115
Total	Number of Deployments	66	35,868	20,718	13,408	70,060
	Number of Malfunctions	0	8	1	3	12
	Percentage of Malfunctions	0.00	0.022	0.482	0.223	0.169

SUMMARY OF
PERSONNEL PARACHUTE MALFUNCTIONS

1ST TRIANNUAL CY 1999

	NON-MANEUVERABLE	MANEUVERABLE	FREE-FALL	RESERVE
Number of Deployments	48,681	16,192	5,187	4
Number of Malfunctions	2	4	6	0
Towed Jumper	0	0	0	0
Broken Static Line	0	0	0	0
Entanglement	1	0	0	0
Failed to Inflate	0	0	0	0
Inversion	0	2	0	0
Pilot Chute	0	0	0	0
Semi-inversion	0	0	0	0
Suspension Lines	0	1	2	0
Other	1*	0	4	4
Percentage of Malfunctions	0.082	0.043	0.023	1
Fatalities	0	1	0	0

*Injuries

INJURIES OCCURRING ON PARACHUTE OPERATIONS
AS REPORTED ON DA FORM 285

1 OCTOBER - 31 DECEMBER 1998

	C-17	C-130	C-141	UNKNOWN	TOTAL
PLF-Related Injuries	0	6	6	37	49
Main Malfunction	0	0	0	0	0
Misrouting of Static Line	0	0	0	0	0
Entanglements	0	0	0	2	2
Tree Landings	0	0	0	0	0
In Aircraft	0	0	0	4	4
Hazards on Drop Zone	0	0	0	1	1
Other	0	0	0	2	2
Insufficient Information	1	0	0	3	4

AIRCRAFT MALFUNCTIONS

These malfunction reports are not included in the statistical data nor reflected in the percentage of malfunctions. All aircraft systems malfunctions which may have led to an abort or no-drop are constantly reviewed and analyzed for repeat or recurring trends and solutions. Corrective actions are recommended through Air Force maintenance systems.

PERSONNEL DROPS	
Improperly operating doors or ramps	0
Static line retriever	4
SUPPLY AND EQUIPMENT DROPS	
Rail locks	7
Improperly operating ADS	1
Improperly operating doors or ramps	4
Release mechanism	1
Electrical system	1
CONTAINER DROPS	
Rollers	1
Type XXVI gate	0
Static line retriever	13
Center Line Vertical Restraint (CVR)	0
TOTAL	32

HOT POOP

MAM-SBCCOM (N)-99-01,
CLARIFICATION OF PACKING INSTRUCTIONS FOR THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS), NSN 1670-01-420-4256, PART NUMBER 11-1-4012-1, LIN N68199

NEW EXTRACTION PARACHUTE WEIGHT RANGES AND EXTRACTION LINE REQUIREMENTS

MALFUNCTION AND SAFETY REVIEW BOARD SLIDE PRESENTATION