



**NTSB** National Transportation Safety Board

*Office of Aviation Safety*

## Oversight Zoë Keliher

Carson Helicopters S-61N  
Operated by U.S. Forest Service  
Weaverville, CA  
August 5, 2008



Carson Helicopters

# Operation

- Owned by CHI and leased to CHSI



- USFS was operating helicopter as a public aircraft



- USFS contract required Part 135 certification



# Helicopter History

- Acquired: July 2007
- Airworthiness Inspection: August 2007
- Bid submitted to USFS: April 2008
- Added to Part 135 Certificate: June 2008
- USFS Carding Inspection: June 2008
- Assigned to Trinity Helibase: July 2008



# USFS Inspections

- Contracting
  - Contracts awarded based on performance capability of helicopters
- Altered performance charts
  - Submitted in bid solicitation
  - Policy change
- Altered weight
  - Submitted in bid solicitation
  - Carding inspection

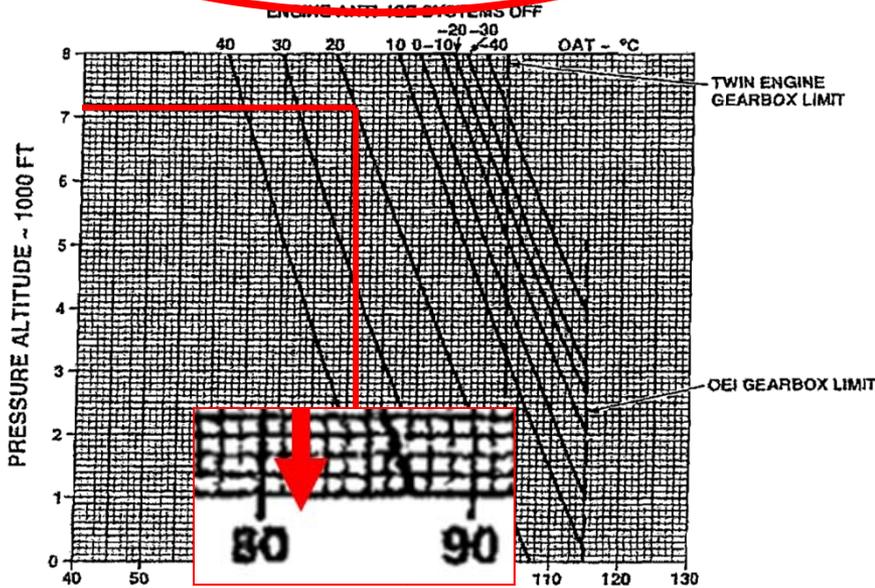
# Performance Charts

## FAA

CARSON HELICOPTERS, INC.  
PERKASIE, PA 18944  
RFMS #8  
S61LN

**POWER AVAILABLE  
TAKEOFF POWER (5 MIN TWIN, 30 MIN OEI)**

CT58-140-1, -2 ENGINE(S)  
103% NR  
SPECIFICATION POWER



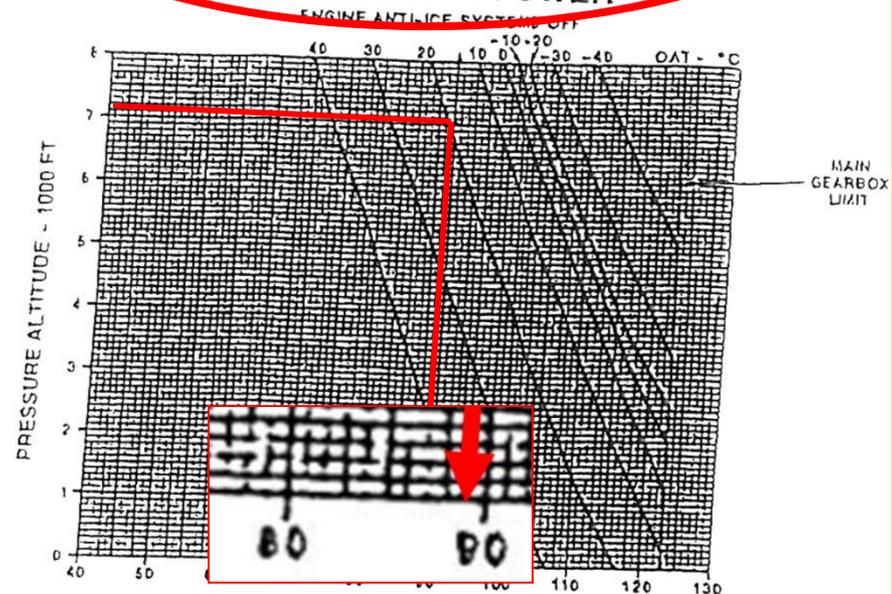
## &

## Carson

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# USFS Inspections

- Carding
  - Weight Documents
  - Example:



AIRCRAFT MODEL S-61N SERIAL NO. 61397 ENTER DATE **1-4-08**

ITEMS AND LOCATION GROUPED BY COMPARTMENT	WEIGHT	ARM	MOMENT/100	DELIVERY EQUIPMENT									
				IN	CHART C	ENTRY	IN	CHART C	ENTRY	IN	CHART C	ENTRY	
<b>TAIL CONE &amp; PYLON (493-705)</b>													
1 BLOWER, FRESH AIR (M4941A)	1	497	34.8										
2 BLOWER, FRESH AIR (M5962X)	12	497	59.6										
3 FLUX VALVE & COMPENSATOR - C4A	2	543	10.9										
4 CATWALK	4	543	21.7										
5 OIL, INTERMED, & TAIL GEAR BOXES	5	687	34.4										
6 RECEIVER (R-836/ARC-21A)	7	517	36.2										
7 DYNAMOTOR (DY-150/ARC-21A)	5	524	26.2										
<b>Aerial liquid tank</b>													
		135	156.4	211									

Installed Fire King Billy TANK as per  
 STC # [redacted] See 337 Form  
 dated **3/25/08**

# USFS Inspections

- Inspector pilot
  - Pilot-in-command's use of above min spec torque in load calculations not identified
  - Helicopter's marginal performance on first 2 takeoffs from H-44 not addressed

# FAA Inspections

- Flight Standards District Office (FSDO)
  - 43 entries were made, only 1 visit required
- 14 CFR Part 135 Certificate
  - Helicopter conformity
  - Weight documents
  - Maintenance records
  - Performance charts
- Prior to the accident flown Part 91

# Oversight

- FAA Oversight
  - No procedure for continuous oversight
- USFS Oversight
  - Over-reliant on FAA oversight



**NTSB**