

		NTSB ID: LAX98LA304		Aircraft Registration Number: N685F	
		Occurrence Date: 09/24/1998		Most Critical Injury: None	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place MESA		State AZ	Zip Code 85205	Local Time 1540	Time Zone MST
Airport Proximity: On Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 369E /369E		Type of Aircraft Helicopter	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>*** Note: NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report. ***</p> <p>On September 24, 1998, at 1540 hours mountain standard time, a Boeing 369E helicopter, N685F, collided with the ground during a practice 180-degree autorotation at the Falcon Field Airport, Mesa, Arizona. The aircraft, operated by Boeing Helicopters, sustained substantial damage. The instructor pilot and dual student were not injured. The local area instructional flight conducted under 14 CFR Part 91 departed the Boeing Helicopter ramp to perform the recurrency training at 1500. Visual meteorological conditions prevailed at the time of the accident.</p> <p>The instructor pilot stated that he and the student flew for about 1 hour demonstrating various landing procedures to include about 15 straight-in autorotations to Falcon Field's north turf area, which was damp and soft. The instructor pilot demonstrated a 180-degree autorotation, which he stated "appeared to finish with a normal deceleration flare and touchdown." He stated that right after the touchdown, a loud rattling sound was heard coming from the tailboom. The aircraft then had a short slide to a stop with a slight right curve.</p> <p>Ground personnel indicated to the flight crew that the aircraft should not lift off because they could see the tail rotor was slowing to a stop. The instructor pilot said he opened his door and saw the tail rotor was not turning, and he proceeded to shut the aircraft down.</p> <p>Prior to moving the aircraft, it was discovered that the aircraft's tail rotor blades had hit the ground causing damage to the tail rotor blades, tailboom, and severing the tail rotor drive shaft.</p> <p>Witnesses stated they thought the aircraft hit harder than usual and bounced slightly with a short slide.</p>					
FACTUAL REPORT - AVIATION					

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: LAX98LA304			
		Occurrence Date: 09/24/1998			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name FALCON FIELD	Airport ID: FFZ	Airport Elevation 1370 Ft. MSL	Runway Used 0	Runway Length 300	Runway Width 75
Runway Surface Type: Grass/turf					
Runway Surface Condition: Wet					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: Simulated Forced Landing					
Aircraft Information					
Aircraft Manufacturer Boeing		Model/Series 369E /369E		Serial Number 0512E	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Skid					
Amateur Built Acft? No	Number of Seats: 4	Certified Max Gross Wt. 3000 LBS	Number of Engines: 1		
Engine Type: Turbo Shaft	Engine Manufacturer: Allison	Model/Series: 250-C20B	Rated Power: 420 HP		
- Aircraft Inspection Information					
Type of Last Inspection Annual	Date of Last Inspection 06/1998	Time Since Last Inspection 74 Hours	Airframe Total Time 3245 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner BOEING HELICOPTERS		Street Address 5000 E. MCDOWELL ROAD			
		City MESA	State AZ	Zip Code 85215	
Operator of Aircraft BOEING HELICOPTERS		Street Address 5000 E. MCDOWELL ROAD			
		City MESA	State AZ	Zip Code 85215	
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Instructional					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: LAX98LA304
	Occurrence Date: 09/24/1998
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 46
-----------------	-----------------	------------------	--------------------------	-----------

Sex: M	Seat Occupied: Right	Occupational Pilot? <input type="checkbox"/> Civilian Pilot <input type="checkbox"/>	Certificate Number: On File
--------	----------------------	--	-----------------------------

Certificate(s): Flight Instructor; Commercial

Airplane Rating(s): None

Rotorcraft/Glider/LTA: Helicopter

Instrument Rating(s): None

Instructor Rating(s): Helicopter

Current Biennial Flight Review?

Medical Cert.: Class 2	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 03/1998
------------------------	--	------------------------------------

- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	2082	167	6		119		3	2077		
Pilot In Command(PIC)	2049	167						2049		
Instructor	1480	132						1480		
Instruction Received										
Last 90 Days	97	97						97		
Last 30 Days	37	37						37		
Last 24 Hours	5	5						5		

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
--------------------	----------------------------	--------------------------	-------------------

Flight Plan/Itinerary

Type of Flight Plan Filed: None

Departure Point FALCON FIELD	State AZ	Airport Identifier FFZ	Departure Time 1500	Time Zone MST
---------------------------------	-------------	---------------------------	------------------------	------------------

Destination Local Flight	State	Airport Identifier	
-----------------------------	-------	--------------------	--


Type of Clearance: VFR

Type of Airspace: Class D

Weather Information

UAT/CA Source of Wx Information:

No record of briefing

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: LAX98LA304
	Occurrence Date: 09/24/1998
	Occurrence Type: Accident

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
FFZ	1548	MST	1370 Ft. MSL	0 NM	220 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None		0 Ft. AGL	Visibility: 50 SM	Altimeter: 29.00 "Hg	
Temperature: 33 °C	Dew Point: °C	Weather Conditions at Accident Site: Visual Conditions			
Wind Direction: 290		Wind Speed: 5	Wind Gusts:		
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM				
Precip and/or Obscuration:					

Accident Information		
Aircraft Damage: Substantial	Aircraft Fire: None	Aircraft Explosion: None

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot					
Student Pilot				1	1
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -				2	2
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	2	2

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: LAX98LA304

Occurrence Date: 09/24/1998

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

DEBORAH L. CHILDRESS

Additional Persons Participating in This Accident/Incident Investigation:

JOHN ELLER
SCOTTSDALE, AZ