Aviation Investigation Final Report

Location:	CANON CITY, Colorado	**Accident Number:**	DEN87LA204
Date & Time:	July 30, 1987, 12:45 Local	**Registration:**	N73265
Aircraft:	BELL 47J-2	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	5 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

THE ATP PLT WAS FLYING SIGHTSEEING RIDES. THERE WERE TWO ADULTS AND TWO CHILDREN IN THE FOUR PASSENGER HELICOPTER. DENSITY ALTITUDE WAS 10000 FEET. THE ACFT LOST PWR AND THE PLT ABORTED TAKEOFF AND LANDED. AFTER AN ENG RUNUP THE PLT TOOK OFF AGAIN AND THE HELICOPTER WAS BROUGHT TO A HOVER TO RETURN TO THE LOADING AREA. WHILE TURNING, THE TAIL ROTOR STRUCK A FENCE AND WAS SEVERED. THE HELICOPTER MADE AN UNCOMMANDED RIGHT TURN AND THE PLT EXECUTED A HOVERING AUTOROTATION. A POST ACCIDENT INSPECTION REVEALED EVIDENCE THAT A PLUG WAS MISSING FROM THE INTAKE MANIFOLD.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAXI - AERIAL

Findings
1. (F) OBJECT - FENCE
2. (C) CLIMB - INADEQUATE - PILOT IN COMMAND
3. WEATHER CONDITION - HIGH DENSITY ALTITUDE
4. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

5. (F) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - CONTINUED - PILOT IN COMMAND
6. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
7. AUTOROTATION - PERFORMED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	52,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 1, 1986
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	10149 hours (Total, all aircraft), 28 hours (Total, this make and model), 9941 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	**Registration:**	N73265
Model/Series:	47J-2 47J-2	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1869
Landing Gear Type:	Skid	**Seats:**	4
Date/Type of Last Inspection:	December 11, 1986 Annual	**Certified Max Gross Wt.:**	2950 lbs
Time Since Last Inspection:	25 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4321 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Not installed	**Engine Model/Series:**	VO-540
Registered Owner:	BUD MICHAELSON	**Rated Power:**	260 Horsepower
Operator:	OZARK MOUNTAIN HELICOPTERS	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 3000 ft AGL	**Visibility**	15 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	36°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	12:45 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing;Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	4 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	5 None	**Latitude, Longitude:**	38.440166,-105.230033(est)

Administrative Information

Investigator In Charge (IIC):	Collins, Robert
Additional Participating Persons:	GEORGE PECHAR; AURORA , CO
Original Publish Date:	October 7, 1988
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=17288