



Aviation Investigation Final Report

Location:	FORT CARSON, Colorado	Incident Number:	DEN001A052
Date & Time:	February 17, 2000, 14:40 Local	Registration:	N155HC
Aircraft:	Cessna TR182	Aircraft Damage:	None
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

While on a cross country flight, a seal on the turbocharger failed and the pilot made an emergency landing at the nearest airport when the engine lost some oil pressure and smoke entered the cockpit. After inspecting the aircraft, adding 8 quarts of oil to the engine, having a mechanic cap the oil lines to the turbocharger, and wiring the turbocharger waste gate open the pilot elected to fly the aircraft to another airport for permanent repairs. While on approach, the engine failed catastrophically with a rod coming out the side of the engine casing. An emergency landing was made on a dirt road on a military reservation without further damage. According to the engine specification data, the engine had an 8-quart total oil capacity with 2 quarts minimum safe quantity in the sump. An engine examination revealed heat distress in the area where the failure occurred.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The pilot electing to fly the aircraft with known deficiencies which resulted in a catastrophic engine failure. Factors were a connecting rod failure, and low engine oil level.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: APPROACH

Findings

1. (F) ENGINE ASSEMBLY,CONNECTING ROD - FAILURE,TOTAL
2. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - INITIATED - PILOT IN COMMAND
3. (F) FLUID,OIL - LOW LEVEL

Factual Information

On February 17, 2000, at 1440 mountain standard time, a Cessna TR182, N155HC, was not damaged during a forced landing at Fort Carson Military Reservation, Colorado. The private pilot was not injured. The flight was on a VFR flight plan and operating under Title 14 CFR Part 91. Visual meteorological conditions prevailed for this business flight from Pueblo, Colorado, to Colorado Springs, Colorado. During initial descent for approach to Colorado Springs, the engine began to run rough and oil started to appear on the windscreen. At the time, the aircraft was passing over a U. S. Army military reservation and the pilot did not believe he could fly to the nearest airport located approximately 5 miles from his position. The pilot performed a forced landing on a dirt road on the military reservation.

According to the pilot, on February 16, 2000, at approximately 1800, he was flying the aircraft at 12,000 feet above mean sea level (msl) en route to Alamosa, Colorado. When he was just west of La Veta, Colorado, the aircraft engine lost partial power, oil pressure, and smoke entered the cockpit. The pilot made an emergency landing at Walsenburg, Colorado, about 15 miles east of where he lost partial power to the engine. The pilot said the engine indicated some oil pressure during this event.

Examination of the engine at Walsenburg provided information that a seal on the turbocharger had failed.

The morning of February 17, the pilot had a mechanic cap the turbocharger oil lines, wire the waste gate open, and fill the engine with 8 quarts of oil. (According to the attached engine specification data, the engine holds 8 quarts of oil and 2 quarts is the minimum safe quantity in the sump.) An engine run was performed without abnormalities appearing and the pilot made the decision to fly the aircraft to Colorado Springs for inspection and repair. Due to weather conditions in Colorado Springs, a landing was made at Pueblo, Colorado, with continuation to Colorado Springs following a delay while weather conditions improved.

After departing Pueblo, the pilot proceeded to fly the aircraft to Colorado Springs. While on approach 5 to 8 miles from landing and over Fort Carson Military Reservation, the engine began to shake and oil came from around the oil filler door on the cowl. The pilot made an emergency landing on a road on the military reservation.

Examination of the engine, following the landing, provided evidence that the number 6 cylinder connecting rod had failed. The failure had caused a hole to be punched in the engine casing. The aircraft was dismantled for transport on February 18th and moved to a repair facility at the Colorado Springs airport. An engine examination performed on March 2, 2000, revealed heat distress on the number 6 connecting rod journal and bearing.

Pilot Information

Certificate:	Private	Age:	30, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	August 30, 1997
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1182 hours (Total, all aircraft), 114 hours (Total, this make and model), 1099 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N155HC
Model/Series:	TR182 TR182	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	R18201277
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	July 15, 1999 100 hour	Certified Max Gross Wt.:	3100 lbs
Time Since Last Inspection:	78 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1892 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-540-L3C50
Registered Owner:	UNIVERSAL LOSS MANAGEMENT	Rated Power:	235 Horsepower
Operator:		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:	COS ,5930 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	14:54 Local	Direction from Accident Site:	20°
Lowest Cloud Condition:	Clear	Visibility	7 miles
Lowest Ceiling:	Overcast / 2600 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-1°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PUEBLO , CO (PUB)	Type of Flight Plan Filed:	VFR
Destination:	COLO. SPRINGS , CO (COS)	Type of Clearance:	VFR
Departure Time:	14:15 Local	Type of Airspace:	Military operation area

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

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	None
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	38.690063,-104.749176(est)

Administrative Information

Investigator In Charge (IIC): Wiemeyer, Norman

Additional Participating Persons: TONY CHARLESTON; DENVER , CO

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Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=48627>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).