Aviation Investigation Final Report

Location:	KOBUK, Alaska	**Accident Number:**	ANC03LA083
Date & Time:	July 20, 2003, 12:45 Local	**Registration:**	N40344
Aircraft:	Maule M-4	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Prior to departure on the accident flight, the private certificated pilot fueled the airplane with 14 gallons of fuel from a 55 gallon drum that he stored at his cabin. He conducted a preflight of the airplane, which included draining the airplane's fuel sumps, and found no water in the sumps. After liftoff, the engine power began to decrease slowly. The pilot said the engine did not have any roughness or unusual sounds, but the rpm decreased to about 2,200 and the airplane began to lose altitude. About 200 feet above the ground, the pilot began to turn to the north in an effort to return to the runway, but the airspeed was decreasing. The airplane collided with numerous trees and sustained damage to the wings, lift struts, elevator, and the right main landing gear. Following the accident, the pilot examined the fuel from the airplane. He said he discovered that the fuel he placed in the airplane before departure was diesel fuel. He reported that his storage drum was mislabeled.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadvertent use of diesel fuel in a gasoline engine which resulted in a partial loss of engine power, and subsequent collision with trees during a forced landing after takeoff. A factor contributing to the accident was the pilot's inadequate preflight inspection of the airplane that failed to detect the presence of diesel fuel in the fuel supply.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (C) FLUID,FUEL - CONTAMINATION,OTHER THAN WATER
2. (C) FUEL SUPPLY - INADVERTENT USE - PILOT IN COMMAND
3. (F) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings
4. OBJECT - TREE(S)

Factual Information

On July 20, 2003, about 1245 Alaska daylight time, a tundra tire-equipped Maule M-4 airplane, N40344, sustained substantial damage when it collided with trees during a forced landing following takeoff from the Dahl Creek Airport, about 1.5 miles northwest of Kobuk, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country personal flight under Title 14, CFR Part 91, when the accident occurred. The airplane was operated by the pilot. The private certificated pilot, the sole occupant, received minor injuries. Visual meteorological conditions prevailed. The planned destination was Fairbanks, Alaska. No flight plan was filed, nor was one required.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on July 22, the pilot reported that after liftoff from runway 26 at Dahl Creek, the engine power began to decrease slowly. He said the engine did not have any roughness or unusual sounds, but the rpm decreased to about 2,200 and the airplane began to lose altitude. About 200 feet above the ground, the pilot said he began to turn to the north in an effort to return to the runway, but the airspeed was decreasing. The airplane collided with numerous trees and sustained damage to the wings, lift struts, elevator, and the right main landing gear.

Runway 26 at Dahl Creek has a gravel surface that is 4,780 feet long and 75 feet wide. The pilot said the sky condition was clear, the wind was from the southwest about 10 knots, and the temperature was about 70 degrees F.

In the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1) submitted by the pilot, the pilot indicated that prior to the accident flight, he fueled the airplane with 14 gallons of fuel from a 55 gallon drum that he has stored at his cabin. He conducted a preflight of the airplane, which included draining the airplane's fuel sumps, and found no water in the sumps.

On October 9, in a telephone conversation with the NTSB IIC, the pilot reported that following the accident, he examined the fuel from the airplane. He said he discovered that the fuel he placed in the airplane before departure was diesel fuel. He reported that his storage drum was mislabeled.

Pilot Information

Certificate:	Private	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	June 5, 2002
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	August 5, 2001
Flight Time:	1063 hours (Total, all aircraft), 586 hours (Total, this make and model), 1063 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Maule	**Registration:**	N40344
Model/Series:	M-4	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2120C
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	March 3, 2003 Annual	**Certified Max Gross Wt.:**	2300 lbs
Time Since Last Inspection:	17 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1742 Hrs as of last inspection	**Engine Manufacturer:**	FRANKLIN
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	GA-350-C1
Registered Owner:	MAX C. LYON JR.	**Rated Power:**	220 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

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:	Clear	**Visibility**	30 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	225°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	KOBUK, AK (DCK)	**Type of Flight Plan Filed:**	None
Destination:	FAIRBANKS, AK (PAFA)	**Type of Clearance:**	None
Departure Time:	12:45 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	DAHL CREEK DCK	**Runway Surface Type:**	Gravel
Airport Elevation:	260 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	26	**IFR Approach:**	None
Runway Length/Width:	4780 ft / 75 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	66.943336,-156.904724

Administrative Information

Investigator In Charge (IIC):	Erickson, Scott
Additional Participating Persons:	DAVID LACE; FAA-AL-FAI FSDO 01; FAIRBANKS, AK
Original Publish Date:	February 5, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=57545