Aviation Investigation Final Report

Location:	GIDDINGS, Texas	**Accident Number:**	FTW97LA028
Date & Time:	October 24, 1996, 16:07 Local	**Registration:**	N185XX
Aircraft:	Cessna A185E	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious, 2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The engine lost power after the pilot reported to ATC that the engine oil pressure was dropping, subsequently reporting an overheating engine. The pilot requested vectors to the nearest airport; however, radio and radar contact were lost during the airplane's descend when 10 miles east of the airport. The aircraft touched down on a westerly heading in a field about 5 miles east of the airport. The pilot stated that the engine oil was changed by maintenance personnel at his hangar on the previous day and this was the first flight after completion of maintenance. An engine run up was not performed due to inclement weather on the day of the oil change. Examination of the engine revealed that an 'O' ring seal (P/N CI48100-8) installed on the cap of the oil filter was pinched during installation thus allowing the engine oil to leak during operation to the engine. According to the engine records, the engine was modified on December 5, 1995 with the installation of an 'Ultimate Engine Oil Filter' (Part number SA8922SW21) manufactured by Capehart Industries Inc., of Mena, Arkansas, under an FAA Supplemental Type Certificate dated July 21, 1994. The pilot purchased the airplane in April 1995.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power as result of an oil leak due to a pinched 'O' ring in the oil filter. Factors were the improper installation of the oil filter, and the lack of suitable terrain for the forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE - NORMAL

Findings
1. (C) LUBRICATING SYSTEM,OIL SEAL - TWISTED
2. (C) LUBRICATING SYSTEM,OIL FILTER/SCREEN - LEAK
3. (F) MAINTENANCE - IMPROPER - COMPANY MAINTENANCE PERSONNEL

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
4. TERRAIN CONDITION - ROUGH/UNEVEN
5. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On October 24, 1996, at 1607 central daylight time, a Cessna A185E airplane, N185XX, was substantially damaged during a forced landing near Giddings, Texas. The airplane was registered to and operated by a private owner under Tittle 14 CFR Part 91. The private pilot/owner of the airplane and one of his passenger sustained minor injuries, while a pilot rated passenger was seriously injured. Instrument meteorological conditions prevailed for the personal flight for which an instrument flight rules flight plan was filed. The flight originated from the Houston Southwest Airport, at approximately 1510, with the Robert Mueller Municipal Airport in Austin, Texas, as its intended destination.

While in VMC cruise flight at 8,000 feet MSL, the pilot reported to ATC that the engine oil pressure was dropping and subsequently reported an overheating engine. The pilot requested vectors to the nearest airport. ATC controllers provided vectors and airport information for the Giddings-Lee County Airport; however, radio and radar contact was lost during the airplane's descend when 10 miles east of Giddings.

Law enforcement personnel reported that the aircraft touched down on a westerly heading in an open field approximately 5 miles east of the airport, coming to rest approximately 1,500 feet from the initial point of ground impact.

Examination of the wreckage by the FAA inspector confirmed that the right main gear collapsed and the right wing and fuselage sustained structural damage. The inspector added that the "underside of the fuselage was found heavily coated with fresh engine oil."

In a telephone interview conducted by the investigator-in-charge, the pilot stated that the engine oil was changed by maintenance personnel at his hangar on the previous day. This was the first flight after completion of maintenance. The pilot added that an engine run up was not performed upon completion of the maintenance due to inclement weather on the day of the oil change. The pilot added that during the preflight inspection of the airplane, he did not find any evidence of an oil leak, either on the engine or the hangar floor.

The engine was examined under the supervision to the FAA inspector. Examination of the engine revealed that an "O" ring seal (Part number CI48100-8) installed on the oil filter top, was pinched during installation thus allowing the engine oil to leak during operation to the engine.

According to the engine records, on December 5, 1995, the engine was modified by the installation of an "Ultimate Engine Oil Filter" (Part number SA8922SW21) manufactured by Capehart Industries Inc., of Mena, Arkansas, under an FAA Supplemental Type Certificate dated July 21, 1994. The pilot purchased the airplane in April 1995.

Pilot Information

Certificate:	Private	**Age:**	44,Male
Airplane Rating(s):	Single-engine land	**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 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	November 30, 1995
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	800 hours (Total, all aircraft), 300 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N185XX
Model/Series:	A185E A185E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1851261
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	October 23, 1996 100 hour	**Certified Max Gross Wt.:**	3350 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2100 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed	**Engine Model/Series:**	IO-520-D2
Registered Owner:	FREDERICK F. HOELKE	**Rated Power:**	285 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	AUS ,622 ft msl	**Distance from Accident Site:**	47 Nautical Miles
Observation Time:	15:53 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Unknown	**Visibility**	2.5 miles
Lowest Ceiling:	Overcast / 500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	80°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	16°C / 16°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	HOUSTON , TX (AXH)	**Type of Flight Plan Filed:**	IFR
Destination:	AUSTIN , TX (AUS)	**Type of Clearance:**	IFR
Departure Time:	15:10 Local	**Type of Airspace:**	Class E

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 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious, 1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 2 Minor	**Latitude, Longitude:**	30.179798,-96.920967(est)

Administrative Information

Investigator In Charge (IIC):	Casanova, Hector
Additional Participating Persons:	ROBERT J IOZIA; HOUSTON , TX JOHN T KENT; MOBILE , AL
Original Publish Date:	August 25, 1997
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=20104