



National Transportation Safety Board Aviation Incident Data Summary

Location:	Matinicus Islnd, ME	Incident Number:	NYC06IA226
Date & Time:	09/01/2006, 1230 EDT	Registration:	N8411Q
Aircraft:	Cessna 206F	Injuries:	3 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

After engine start, the pilot heard "an abnormal engine mechanical noise." He shut down the engine and requested a mechanic. During a subsequent engine start, the mechanic confirmed the mechanical engine noise, and the engine was again shut down. Hand propping revealed that the engine would sometimes "mechanically jam," and further examination revealed the fracture of two crankshaft gear teeth. Both gear teeth exhibited signatures consistent with overload. Corresponding starter adapter gear teeth, that would have meshed with the crankshaft gear teeth during the startup, were cracked on the loaded side. All evaluated metallurgical requirements were met, including core hardness, surface hardness and case depth. Although a single "kick back" while cranking could cause the failure of components of the cranking system, there was no evidence as to why a kick back may have occurred.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this incident to be:
An engine kick back of undetermined origin during engine start.

Findings

Occurrence #1: MISCELLANEOUS/OTHER
Phase of Operation: STANDING - STARTING ENGINE(S)

Findings

1. (C) MISCELLANEOUS,ENGINE - FRACTURED
2. REASON FOR OCCURRENCE UNDETERMINED

Pilot Information

Certificate:	Airline Transport	Age:	64
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine
Flight Time:	9000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 8500 hours (Pilot In Command, all aircraft), 184 hours (Last 90 days, all aircraft), 71 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8411Q
Model/Series:	206F	Engines:	1 Reciprocating
Operator:	Waters Aero-Marine	Engine Manufacturer:	Teledyne Continental
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	IO-520-F
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Weather Information Source:	Unknown
Lowest Ceiling:		Wind Speed/Gusts, Direction:	Calm / ,
Temperature:	18° C	Visibility	20 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Maticus Island, ME (45ME)	Destination:	Owls Head, ME (RKD)

Airport Information

Airport:	Maticus Island Airport (35ME)	Runway Surface Type:	
Runway Used:	NA	Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	43.873333, -68.894722		

Administrative Information

Investigator In Charge (IIC):	Paul R Cox	Adopted Date:	02/28/2008
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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