

FAA IIC
INSPECTORS REPORT
Wichita FSDO

EVENT OVERVIEW	
TYPE:	Emergency Landing / Substantial damage / Aircraft accident / No injuries
POINTS:	04/17/2017 / 11:45 LOCAL / South West of Palmer KS / Part 137 / Monday / VFR / Agriculture Operations.
INITIAL REPORT:	During aerial application engine failed and made forced landing in pasture.
OUTCOME:	Landed on the downward slope of a field, traversed over 5 terraces, the engine departed and aircraft spun 180° to face landing path. No injuries. Significant aircraft damage.

CONTACTS	
PILOT:	Hunninghake, Brent L. [REDACTED]
PASSANGERS:	None
L. E.	None
A/C OPERATOR	Hunninghake Aerial Spraying LLC (6HAG) [REDACTED]
NTSB IIC:	
FAA IIC:	Smith, Jeffrey L. [REDACTED]
REF:	NTSB: CEN17LA163 / [REDACTED]

SYNOPSIS
During agriculture spray operations the aircraft was southbound over the application area when the pilot reported that the engine lost power, a “pop” was heard, the engine regained power, a louder “pop” was heard and then the engine lost power permanently without the engine seizing. The pilot continued in south bound direction approximately 1/3 of a mile before being forced to land. The aircraft was turned left to avoid a pasture fence and landed traveling in a southeast direction. Initial touchdown was at the top of a hill with the landing path extending down the south slope. During the landing cycle the aircraft passed over 5 terraces. Aircraft skid marks and numerous blade ground strikes where noted at each terrace location. At the channel of the last terrace, ground scaring indicated the propeller/engine stuck the ground and subsequently separated from the aircraft. The aircraft spun 180° coming to rest facing the landing path. The pilot reported he sustained no injuries. Weather was not a factor with VMC and light wind

conditions prevailing. Landing area appeared to be a summer followed wheat field with volunteer wheat sparsely growing with plant blades approximately 6 to 8 inches long.

Significant damage (accident classification) was noted to the RH lower wing at the forward inboard spar and the engine firewall was severely wrinkled. Other damage also was sustained primarily on the lower wing, upper wing support struts, spray dispensing system, landing gear, and the propeller / engine assembly. During the landing sequence the hopper tank dump valve was opened and the herbicide chemical escaped. The pilot closed all engine controls but failed to turn the fuel selector valve off subsequently allowing the aircraft fuel to drain from the detached engine fuel supply hose.

Damage (cylinder head crack) was found on the cylinder which is located at the 3 o'clock position of the engine. According to log book entries, AD 99-00-02 visual inspection for cylinder cracks, was completed at the last annual inspection conducted on 11/28/2016, 37.1 hours prior to the accident. The Airworthiness Directive states: "To prevent cylinder head cracking, **which can result in engine power loss, forced landing, and damage to the aircraft,** accomplish the following:"

CONCLUSION:

All indications noted during the investigation point to a mechanical failure of an engine cylinder, resulting in engine power loss, leading directly to a forced landing and aircraft accident.

SUMMARY

Date signed: 04/24/2017

Jeffrey L. Smith
Aviation Safety Inspector, Airworthiness
ACE-FSDO-07