

7. OPERATOR NAME

BLACK SHEEP AVIATION LLC

16. POWER PLANT MAKE/MODEL/SERIES

CONT MOTOR IO-360 KB 356100

17. PROPELLER MAKE/MODEL/SERIES

MCAULY 2A36C23 768824

33. NARRATIVE

ON SEPTEMBER 3, 2015, AT 1635 EDT A CESSNA R172K, S/N R1723011 REGISTERED TO BLACK SHEEP AVIATION LLC SUFFERED A TOTAL ENGINE FAILURE WHILE IN CRUISE DURING A COAST GUARD CONTRACTED PATROL FLIGHT. THE WEATHER WAS VISUAL METEOROLOGICAL CONDITIONS AND NO FLIGHT PLAN HAD BEEN FILED. THE AIRCRAFT WAS EXTENSIVELY DAMAGED UPON IMPACTING THE GROUND AND BOTH PERSONS ON BOARD SUFFERED SERIOUS INJURIES. THE PILOT HOLDS A PRIVATE PILOT CERTIFICATE.

N785DK DEPARTED LINCOLN PARK AIRPORT, NJ (N07) AT APPROXIMATELY 1430 EDT AND PROCEEDED TO FARMINGDALE, NY (FRG). AFTER AN UNEVENTFUL LANDING AT FRG THE PILOT PICKED UP AN OBSERVER PASSENGER. THEY THEN PROCEEDED TO FLY ALONG THE HUDSON RIVER AT 2000 FEET AGL FOR APPROXIMATELY 2.5 HOURS MAKING TOTAL FLIGHT TIME APPROXIMATELY 3.5 HOURS.

ACCORDING TO THE PILOT, AT APPROXIMATELY 16:35 EDT THE ENGINE BEGAN TO MAKE A GRUMBLING SOUND AND THEN COMPLETELY SHUT DOWN WITH THE PROPELLER IN A FIXED POSITION. AFTER SEVERAL RESTART ATTEMPTS WHICH WERE UNSUCCESSFUL. THE OBSERVER RADIOED AN EMERGENCY CALL AT WHICH TIME THE AIRCRAFT WAS IN A STEEP DESCENT AND PROCEEDED TO IMPACT A SOCCER FIELD IN CRESSKILL, NJ.

AFTER AIRCRAFT RECOVERY OPERATIONS WERE COMPLETED THE ENGINE WAS REMOVED AND SHIPPED TO THE CONTINENTAL CORPORATION, THE ENGINE MANUFACTURE, IN MOBILE, ALABAMA. DURING THE TEAR DOWN INSPECTION IT WAS REVEALED THAT THE #2 AND #3 CYLINDERS THROUGH BOLTS NUT TORQUES WERE BELOW FACTORY SPECIFICATIONS, ALLOWING FOR A LOSS OF BEARING PINCH OF THE #2 MAIN BEARINGS, THE #2 MAIN BEARING SHIFTED FORWARD INTO THE CRANKSHAFT, BREAKING THE CRANKSHAFT THROUGH THE #4 THROW.

REVIEW OF ENGINE MAINTENANCE RECORDS REVEALED THE #3 & #4 CYLINDERS HAD BEEN REMOVED AND REINSTALLED FOR MAINTENANCE ON MAY 11, 2012, APPROXIMATELY 231.5 HOURS OF OPERATION PRIOR TO FAILURE OF THIS ENGINE. THE LAST ANNUAL INSPECTION WAS COMPLETED ON JULY 17, 2015 AT TOTAL TACHOMETER HOURS OF 2094.0.

IF ANY ADDITIONAL INFORMATION COMES AVAILABLE THIS REPORT WILL BE AMENDED AS NECESSARY.

43. BRIEF EXPLANATION OF ISSUES INVOLVED

AIRWORTHINESS- FAILURE TO FOLLOW THE ENGINE MANUFACTURES MAINTENANCE MANUAL PROCEDURES WHEN TORQUEING THE CYLINDER CRANKSHAFT THRU STUDS THE AIRCRAFT SHOULD NOT HAVE BEEN RETURNED TO SERVICE UNDER CFR14 PART 43.

§43.13 PERFORMANCE RULES (GENERAL).

(A) EACH PERSON PERFORMING MAINTENANCE, ALTERATION, OR PREVENTIVE MAINTENANCE ON AN AIRCRAFT, ENGINE, PROPELLER, OR APPLIANCE SHALL USE THE METHODS, TECHNIQUES, AND PRACTICES PRESCRIBED IN THE CURRENT MANUFACTURER'S MAINTENANCE MANUAL.. HE SHALL USE THE TOOLS, EQUIPMENT, AND TEST APPARATUS NECESSARY TO ASSURE COMPLETION OF THE WORK IN ACCORDANCE WITH ACCEPTED INDUSTRY PRACTICES.

[REDACTED]