



MEMORANDUM FOR RECORD

Michael Hicks

Air Safety Investigator

(GAID) General Aviation Accident Investigation Division February 23rd 2017

NTSB Accident Number: WPR18FA077

Aircraft Registration & Make/Model: N7530R, Robinson Helicopter, R44 Clipper

Accident Location: Newport Beach, CA

Accident Date: 30JAN2018 @1345 PST

Subject: Memorandum for Record

In support of the National Transportation Safety Board (NTSB) Air Safety Accident Investigation involving accident helicopter, N7530R, an examination of the helicopter's right Magneto and Governor Control Unit were examined at the Robinson Helicopter Factory in Torrance, CA under the Federal oversight of NTSB Air Safety Investigator (ASI) Michael Hicks. The following is a synopsis of the examination procedures and results.

Right Magneto Examination

Manufacturer: Continental Motors Inc.

Type: S6LSC-204T

Part No. 10-6000646-201/66B21783

Serial No. E15GA204

Change: V

-Upon examination, the right magneto was undamaged and without external blemish. The magneto was connected to an oscilloscope and a power source was connected to the leads of the magneto. The amplitude was controlled by the power source and was increased, to ensure that the dwell (sequence and spacing pertaining to the amount of time the circuit is open) is consistent and equal. 150 is the lowest RPM setting that will allow the magneto to spark and register on the oscilloscope.

-In the field, checking for spark is the only test that can be accomplished. If you have an ohmmeter, it's possible to test the dwell.

*A small amount of oil was found inside compartment containing the points. A rubber scraper seal prevents oil from entering the compartment containing the points. The scraper seal is located in the housing and exists along the shaft.

Governor Control Unit

Part No. D278-1

Revision: E

Serial No. 0218

-The Governor Control Unit (GCU) was undamaged and the sealed case remained intact.

-Examination was conducted to ensure that the manufacturer's specifications remained within tolerance of the defined ranges (range tolerances attached). There are different manufacturer specifications for GCU's that have been in service.

-The test consisted of connecting a 10-pin connector to the proprietary equipment and allowing it to warm up for 10 minutes. A battery of test was enacted on the internal components/systems inside of the GCU.

-Robinson Helicopter Co. has provided excerpts of RPS-69 which details the testing and acceptance standards for Robinson governor control units (see attachments). The RPS specifies in Section 3 that sealed units are to be tested per Section 7. Section 7 reuses most of the test procedures given in Section 6 for unsealed units but changes the acceptance criteria to those listed in Table 1. Since our unit was one that had been returned from the field, it is required to meet the "service" tolerance limits of Table 1.

*The range for each internal system was met, and the manufacturer's tolerance for a GCU that had been in service was found to be acceptable.

*Robinson Helicopter Co. will provide a summary report of the testing of both the governor control unit and the magneto.

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