

This is a record of interview with Gordon Richey, Airframe and Power plant mechanic and Director of Maintenance at Tennessee Valley Authority (TVA) on 3 Aug 2016 at 1:09 pm at TVA Aviation facility (530 airport rd. Muscle Shoals AL 35662). The interview was conducted by Federal Aviation Administration, Aviation Safety Inspector Karlton R. White II, at the request of National Transportation and Safety Board Investigator Ralph Hicks. The interview was conducted in regard to the accident involving helicopter N427TV, a Bell 407 sn.54106 that occurred on 11 July 2016 at 1123 CDT, at Hickory KY (NTSB # ERA16FA248). The helicopter was operated by the TVA under public use but maintained to CFR part 91 standards. Bell Helicopter Illustrated parts breakdown (BHT-407-IPB) 67-99-00 p.77 figure 67-19 Rev.8 dated 30 Jan 2015 was used for reference during the interview, and was provided to Mr. Richey.

- 1) Was the pivot sleeve removed?

Item 42 (67-99-00 p.77)

Mr. Richey stated, "The sleeve was not removed from the support."

- 2) Does anyone remember removing the pivot pin on the collective lever assembly?
(item 38, 67-99-00 p.77)

Mr. Richey stated, "It was not part of the required maintenance performed, and as far as I knows, was not removed, un torqued or safety wire removed."

- 3) Is there any reason why anyone would have removed Collective lever pivot pin?
(item 38, 67-99-00 p.77)

Mr. Richey stated, "I could see why it could have been done. The 24 month flight control bolt inspection was being performed, why not pull them and look at them too. I've done it before"

- 4) Were there any issues or problems with performing:

- a) 24 month flight control bolt inspection- Mr. Richey stated, "no issues"
- b) Swashplate tilt friction check- Mr. Richey stated, "no issues"
- c) Anti drive link removal/reinstallation- Mr. Richey stated, "no issues, other than replacement of spacer, Item 67 (67-99-00 p.77).

- 5) How many times have you performed Main rotor flight control bolt/Swashplate maintenance?

Mr. Richey stated, "Once a year since 1998, on Bell 407."

Mr. Richey stated he is Bell school trained and further stated "they covered the swashplate top to bottom".

6) Are you trained /qualified on this (Main rotor flight control) system?

Mr. Richey stated "Yes, factory (Bell) trained in roughly 1998."

7) What was your state of being during the maintenance performed on Work order 1302 (6/20/16)? (Human factors, Well rested/tired, Stress at home/ work, distracted)

Mr. Richey stated "Nothing out of normal."

8) How long had you been on shift when this work was performed?

Mr. Richey did not recall, but stated he had not worked overtime, and typically works an 8 hour shift.

9) How many days elapsed over the course of this inspection? (main rotor maintenance)

Mr. Richey estimated 3-4 days, maybe .

10) Describe the quality assurance process of the work performed. (main rotor maintenance)

Mr. Richey stated "Mechanic who performed the work would be "back checked" by another mechanic."

11) In your own words, now that you've had time to mentally review the event, what do you believe happened that lead up to the crash?

Synopsis of two scenarios presented my Mr. Richey;

A) First scenario, removed all cotter pins and cut wire on pins (pivot, item 38, 67-99-00 p.77) and forgot to install wire on pins after completing 24 month inspection.

B) Second, removed bolts and cotter pins for 24 month inspection and removed pins (pivot, item 38, 67-99-00 p.77) to look at them, and "Just run them in by hand", but forgot to torque/safety since it's not part of that inspection.

After completing these questions Mr. Richey reviewed the questions and answers. He made no changes or revisions. He initialed them individually and signed the front page under his name.

3 Aug 2016 1:09

Gordon Richey

3 Aug 2016

- 1) Was the pivot sleeve removed?

Item 42 (67-29-00 p. 22)
Sleeve was Not removed from support. [redacted]

- 2) Does anyone remember removing the pivot pin on the collective lever assembly?

was not part of ^{required} maintenance performed, and as far as he knows, was not removed, untorqued or safety wire removed. [redacted]

- 3) Is there any reason why anyone could have removed Collective lever pivot pin?

He could see why it ~~was~~ could have been done. 24 month F.C. Belt insp was being performed, "why not pull them & look at them to". "I've done it before". [redacted]

- 4) Were there any issues or problems with performing:

- a) 24 month flight control bolt inspection no issue
- b) Swashplate tilt friction check no issue
- c) Anti drive link removal/reinstallation no issue other than replacement of

Item 67 67-29-00 p. 22 (Spacer) [redacted]

- 5) How many times have you performed Main rotor flight control bolt/Swashplate maintenance?

once a year since 1998. on Bell 407.
Mr. Richey was Bell School trained & said they covered Swash plate "top to bottom". [redacted]

- 6) Are you trained /qualified on this (Main rotor flight control) system?

yes. Factory (Bell) trained Roughty in 1998. [redacted]

- 7) What was your state of being during the maintenance performed on Work order 1302 (6/20/16)? (Human factors, Well rested/tired, Stress at home/ work, distracted)

Nothing out of Normal

- 8) How long had you been on shift when this work was performed?

Does not recall, but had not worked overtime. Typically works 8 hour shift.

- 9) How many days elapsed over the course of this inspection? (M.R. MX)

3-4 days maybe (guess)

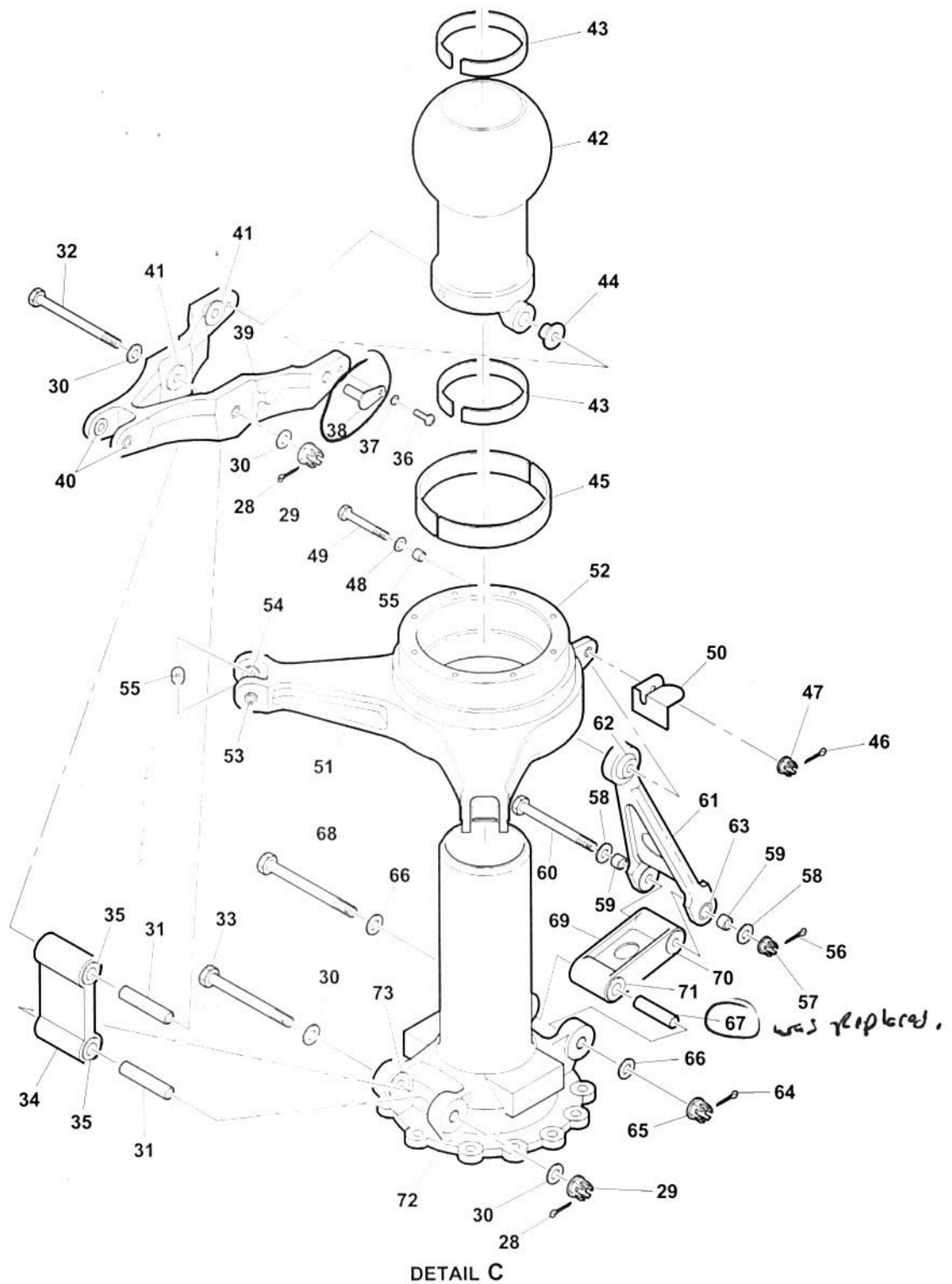
- 10) Describe the quality assurance process of the work performed. (M.R. MX)

Mechanic who performed work would be "Back checked" by another mechanic.

- 11) In your own words, now that you've had time to mentally review the event, what do you believe happened that lead up to the crash?

① First scenario, removed all ~~for~~ control pins & cat wire on pins and forgot to in still wire on pins after completing 24 month insp.

② removed bolts & cat wire for 24 month insp and removed pins to look at them, and "Just run them in by hand," But forgot to Torque Safety since its not part of that insp.



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Figure 67-19. Swashplate and Support Assembly (S/N 53000 Thru 54299, 54300 and Subsequent)
(Sheet 2 of 2)

To whom it my concern,

This statement is in reference to the work performed on N427TV under TVA Work Order # 1302 with regards to subject area of investigation.

A 24 month inspection of the flight control bolts/nut was carried out which includes the bolts of the collective lever assembly by TVA mechanic David Ingersoll. I followed up the completion of 24 month inspection by inspecting the bolt and cotter key installation of all bolts pertaining to the inspection.

There was a spacer of the anti-drive lever adjacent to the collective lever assembly that was found by TVA mechanic David Ingersoll at which time I placed an order for a new replacement part. The new part was installed by TVA mechanic Jose Arriola and I inspected the bolts and cotter keys associated with anti-drive lever as they are part of the 24 month inspection as well.

TVA mechanic David Ingersoll complied with the inspection of the swashplate assembly. I did not specifically inspect for the safety wire installation on the collective lever pivot pins as they were not required to be removed for the inspection nor were they noted as being removed for maintenance.

A black rectangular redaction box covering the signature of Robert G. Richey.

Robert G. Richey
TVA Helicopter Services Maintenance Foreman