

Attachment 23. Inspector Initial Transcript

DCA12MA020 Maintenance Factual Report

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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SUNDANCE HELICOPTER ACCIDENT
NEAR LAS VEGAS, NEVADA

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Docket No.: DCA-12-MA-020

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Interview of: GAYLAN WATERFALLEN

Sundance Helicopters
5596 Haven Street
Las Vegas, Nevada

Saturday,
December 10, 2011

The above-captioned matter convened, pursuant to notice.

BEFORE: KRISTI DUNKS
Senior Air Safety Investigator

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I N T E R V I E W

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2

MS. DUNKS: There we go. Okay. We had talked about this yesterday when I came down to the hangar, but this interview will be recorded. And do you want to have a representative here today?

6

MR. WATERFALLEN: No.

7

MS. DUNKS: Okay. So you're fine without a representative. And so you're aware, the information that is recorded does become part of a public record, so --

10

MR. WATERFALLEN: It should.

11

MS. DUNKS: And the purpose of us being here is to gather facts for the accident. We talked a little bit about this yesterday. We're looking at, you know, the maintenance actions that were performed the day prior to the accident, so I'd like to spend some time talking about that.

16

So, first off, we'll go around and introduce everybody. Again, I'm Kristi Dunks. I'm the Maintenance Group Chairman, so my work here is to document all the maintenance that was performed, examine maintenance records and your maintenance program here at Sundance.

21

MR. BUTTNER: I'm Seth Buttner with American Eurocopter.

22

MR. WATERFALLEN: Okay.

23

MR. BUTTNER: And I'm working with the NTSB to help them with any type of information that I have.

25

MR. CAMPBELL: Gary Campbell with the FAA here in Las

1 Vegas.

2 MR. WATERFALLEN: Okay.

3 MS. ALLAHYAR: Maryam Allahyar, with the NTSB.

4 MR. BRENNER: Malcom Brenner with NTSB. I'm Human
5 Performance. I'm supporting Kristi.

6 MR. WATERFALLEN: Okay.

7 MS. DUNKS: And you know him?

8 MR. WATERFALLEN: Yes.

9 MS. DUNKS: Okay. Before we get started, do you have
10 any questions?

11 MR. WATERFALLEN: No, ma'am.

12 MS. DUNKS: Okay. Great. If you do have any questions
13 as we're going through here, please feel free to ask and if you
14 need a break, just let us know.

15 MR. WATERFALLEN: Okay.

16 MS. DUNKS: We'll try not to keep you too long.

17 INTERVIEW OF GAYLAN WATERFALLEN

18 BY MS. DUNKS:

19 Q. So first off, if we could just get your name, if you
20 could spell your full name for us?

21 A. Gaylan Waterfallen. It's G-a-y-l-a-n. Waterfallen, W-
22 a-t-e-r-f-a-l-l-e-n.

23

24 Q. Thank you. And what FAA certificates do you hold?

25 A. I hold an A&P.

1 Q. Okay. Thank you. And could you talk a little bit about
2 your aviation background, kind of when you got started in aviation
3 and your employment history?

4 A. I started in 1992 in the Army working on Black Ops.
5 I've been doing this for 19 years now. I spent 8 years in the
6 Army. Got out. Got my license. Started with Papillon in 2000,
7 worked 135 helicopters and EMS helicopters. Left and went and
8 worked commercial airplanes for 4 years. Then I recently came
9 back to helicopters.

10 Q. And do you remember the approximate year? So you were
11 with Papillon in 2000 and how long were you there?

12 A. 2001 through 2003. Then I went to Iraq. Came back and
13 I was with them from 2004 to 2005.

14 Q. And then?

15 A. Then I worked for Mercy Air from 2005 until 2008.

16 Q. Okay. Okay. And then?

17 A. '8 to '9 -- or '8 to '10, I worked for Allegiant Air
18 here in town.

19 Q. Okay. Was Mercy -- Mercy Air, what type of aircraft
20 were you working on?

21 A. Bell 222s.

22 Q. Okay. And then when did you return to Sundance or come
23 to Sundance, I should say?

24 A. Actually, November of last year.

25 Q. Okay. November 2010?

1 A. Yes.

2 Q. Okay.

3 A. And prior to that, I worked for TriState CareFlight out
4 of Bullhead.

5 MR. BUTTNER: How long?

6 MR. WATERFALLEN: I worked for them for almost a year.

7 MR. BUTTNER: That was 2009?

8 MR. WATERFALLEN: 2009 to 2010. Yeah.

9 MR. BUTTNER: You were at Bullhead City?

10 MR. WATERFALLEN: Actually, I was down in Yuma,
11 unfortunately.

12 MR. BUTTNER: Do you know Adam (indiscernible)?

13 MR. WATERFALLEN: Yes. I know Adam very well.

14 BY MS. DUNKS:

15 Q. Okay. And with this -- I'm not familiar with the
16 different types of aircraft the operators fly. So can you talk
17 what type of aircraft you were working on at the different places?

18 A. Papillon was BAs that we converted to Ds, B2s and
19 EC130s. When I went to Mercy Air, it was 412s and 222s and Bells.
20 The Army was all Black Ops, Apaches, Chinooks, 58s. Allegiant Air
21 was MD80s -- well, the MD80 series. TriState was Agusta 119s,
22 109s and Hawker Beechcraft 200 series and C90s.

23 Q. Okay. And have you -- so when you came to Sundance in
24 2010, what sort of training did you receive?

25 A. I did my initial indoc training with Jack and then the

1 line training for doing dailies and stuff like that. Just the
2 normal in-house maintenance training.

3 Q. Okay. And do you know approximately how long those
4 took?

5 A. About 2 weeks.

6 Q. Okay. For the indoc and the line training, or --

7 A. Yeah.

8 Q. Okay. So coming here you had some experience with the
9 Eurocopter products?

10 A. Yes.

11 Q. And have you ever received any factory training on
12 either Eurocopter or Turbomeca?

13 A. Yes. Eurocopter was the AS350 and EC130. Turbomeca was
14 1D1 and the 2B1.

15 Q. Did you attend factory training at their facilities in
16 Grand Prairie or was that --

17 A. No.

18 Q. -- local?

19 A. They were all here in Las Vegas.

20 Q. Okay. And where was that?

21 A. The Astar and 1D1 was taught down at Signature
22 classroom. The EC130 and 2B1 was taught at Papillon's facility.
23 They had a facility at the (indiscernible).

24 Q. Okay. And so all of this training was when you were
25 with Papillon?

1 A. Yes.

2 Q. Okay. And what is your function and title within
3 Sundance?

4 A. I am one of the three lead mechanics for Sundance.

5 Q. What does that mean?

6 A. I run the second night shift. I direct -- since -- when
7 the management's not here, I direct the maintenance that is being
8 performed in the hangar.

9 Q. Okay. And so you came here like 2010. When did you
10 receive this position?

11 A. Six months ago.

12 Q. Okay.

13 A. I would say, yeah, about 6 months ago.

14 Q. Any other requirements as a part of that position or --
15 that are unique for a mechanic?

16 A. I did do the initial in-house inspector training and I
17 am an inspector for Sundance, not a federal.

18 Q. Okay. Any plans to get your IA, or --

19 A. I'm working on it right now.

20 Q. Okay. So, just so I'm clear, so you developed the in-
21 house training for the inspectors, or --

22 A. No, no, no. I attended the in-house --

23 Q. Okay.

24 A. -- inspector training.

25 Q. Okay. Got it. And is that given by Jack's group or --

1 A. Yes.

2 Q. Okay. And what's included with that?

3 A. Just review of the FARs, what is required to be
4 inspected, building of packets, the inspection packets and what
5 has to be done and signed off and all that.

6 Q. Okay. And of those, I know you have a general
7 maintenance manual that you're operating under here. What are the
8 specific items that need two sets of eyes?

9 A. Anything that requires a safety or a cotter pin, all
10 pipes and lines. Basically anything that, whoever the mechanic
11 is, deems he wants somebody to look at it again.

12 Q. Okay. Anything else?

13 A. Not that I can think of. I'm sure there's another one.

14 Q. In your general work schedule, do you work with the same
15 group of mechanics all the time?

16 A. Yes.

17 Q. Okay.

18 A. I have the exact same people just about since I took
19 this position.

20 Q. Okay. And does that arrangement work out pretty well
21 or --

22 A. Yes.

23 Q. Okay. Can you describe your typical work schedule?

24 A. When we work our 3-day shift, it's 12 hours. When we
25 work our 4-day shift, it's 11 hours.

1 Q. Okay. So your 12-hour shift is 12 to midnight -- noon
2 to midnight?

3 A. Yes, ma'am,

4 Q. And then your four-day shift is?

5 A. Noon to 11.

6 Q. Okay. And as far as your workload, do you find yourself
7 putting in for a lot of overtime or do you --

8 A. Not typically. I mean, there is overtime, but I don't
9 see it as overwhelming.

10 Q. Okay. And when you do have to work overtime or when
11 you're required to do that, what is the average amount of time
12 that you would be putting in?

13 A. Maybe 2 hours.

14 Q. Okay. In the days leading up to the accident, which was
15 December 7th --

16 A. Um-hum.

17 Q. -- Wednesday, can you talk about your schedule and what
18 were you doing? Were you working a few days before or --

19 A. Actually, I had been -- the Saturday before was my last
20 day on. I had Sunday and Monday off prior to coming in on that
21 Tuesday to do the inspection -- or run the inspection for the
22 crashed aircraft.

23 Q. Okay.

24 A. As far as what I did? Really, nothing. We hung
25 Christmas lights and played with my kids.

1 Q. Okay. Good day-off activities, right?

2 A. Yeah.

3 Q. So came in Tuesday morning after having a couple of days
4 off --

5 A. Um-hum.

6 Q. -- and this 100-hour inspection was required?

7 A. Um-hum.

8 Q. So when you see that, what are your actions at that
9 point coming into work?

10 A. Once I get in, I print off a status run to review it to
11 see if there's anything that's coming due besides the required
12 inspections, any items that need to be replaced or anything like
13 that. And then, once I've reviewed that and decided what we're
14 going to replace and what's due that we need to do, I'll build the
15 inspection packet.

16 Q. Okay. And the inspection packet is what the mechanics
17 will follow --

18 A. Yes.

19 Q. -- to do the inspection?

20 A. Yes.

21 Q. Okay. And in this case, what did you find? Were there
22 other items due or what needed to be done?

23 A. The things that I already knew about were the two servos
24 that needed to be replaced and an engine replacement.

25 Q. Okay. And do you recall why they needed replacement?

1 A. The servos were due for overhaul and the engine had some
2 internal parts that were life-limited.

3 Q. And so, in addition to these items, what's typically
4 included in a 100-hour inspection?

5 A. As far as replacement parts or --

6 Q. Yeah. Just kind of a general overview. I mean, is it a
7 very extensive disassembly of the helicopter and checking of
8 systems or what are you doing, what are --

9 A. It's not -- as far as disassembly of the aircraft, it's
10 not too intense, but we check all the systems. The main rotor,
11 tail rotor, main gearboxes, that's all inspected. The fuselage
12 from nose to tail is inspected and cleaned and in compliance with
13 all the ADs that are required.

14 Q. Do you do that check or --

15 A. The ADs are actually done by the mechanics on the floor.

16 Q. Um-hum.

17 A. I just sign off the sheets, the AD tracking sheets.

18 Q. Okay. And do you verify the work?

19 A. Yes.

20 Q. Okay. So they do the work, then you verify?

21 A. Yes. There's actually, on the discrepancy sheets that
22 we have, there's every single AD that's required during the 100-
23 hour inspection, there's a block for them to sign on that.

24 Q. Okay.

25 A. So -- and those are all stamped by me.

1 Q. Okay. So they sign; you stamp?

2 A. Yes, ma'am.

3 Q. Okay. So we had these three items in addition to the
4 100-hour --

5 A. Yes.

6 Q. -- the engine swap, the servo changes. So I would kind
7 of like to go through each one of those tasks --

8 A. Um-hum.

9 Q. -- and if you can just tell me what you recall about who
10 was doing what. And so, again, start with the engine
11 installation.

12 A. The engine was completed -- or well, removed and
13 reinstalled by Randy Manaba.

14 Q. And when you're removing and reinstalling an engine, do
15 you replace lines or anything like that or what --

16 A. Not typically. If there's some vent lines that are
17 flexible oil lines, sometimes those need to be replaced, but not
18 typically. There's not a lot. There's some seals and stuff.
19 When you take off the airframe items from the engine, there's a
20 couple seals and stuff that have to be replaced, and it depends on
21 what comes on the new engine --

22 Q. Okay.

23 A. -- as far as O rings and stuff like that, that might
24 need to be replaced.

25 Q. Okay. And would anyone else have been assisting Randy

1 in --

2 A. Robert Kahui (ph.) did help. Once the engine was
3 removed, he did help transfer all of the airframe items to the new
4 engine.

5 Q. And when an engine is removed and reinstalled, does that
6 require an inspection?

7 A. Yes.

8 Q. Okay. And who completed the inspection?

9 A. The initial inspection, as far as the work that was
10 performed in the shop off of the aircraft was completed by Robert
11 Kahui. Once the aircraft -- the airframe items were installed on
12 the engine and the engine was installed, I completed the
13 installation inspections.

14 Q. For the engine?

15 A. Yes.

16 Q. Okay. So again, going back to the paperwork, we would
17 have Robert signing off the initial installation and then you
18 stamping that it's been inspected?

19 A. No.

20 Q. Okay.

21 A. Randall or Randy Manaba signed off the installation of
22 the engine and I stamped off that.

23 Q. Okay. I thought I misunderstood you. So what did
24 Robert do?

25 A. Robert helped Randy transfer the airframe items from the

1 removed engine to the new engine.

2 Q. Okay. And then Randy signed off --

3 A. Installed. He --

4 Q. -- the --

5 A. Yeah. Then the engine was installed and he signed off
6 the installation.

7 Q. Okay. Thanks for clarifying that. Do you know if they
8 encountered any problems during the engine installation?

9 A. No. It was a basic removal, transfer and reinstall.

10 Q. Okay.

11 A. There was really -- I don't think Randy ran into a
12 single problem.

13 Q. Okay. Do you know, how long does that usually take?

14 A. Depending on the person or how many people you have, it
15 can take anywhere up to 6 to 8 hours.

16 Q. Okay. And when you verify the installation, what do you
17 do?

18 A. We check the installation of the engine, all the clamps,
19 attachments, all the lines that were installed, all the airframe
20 items that are transferred to the new engine and the security of
21 the engine to the airframe. Then we have to do -- there's a
22 recheck for the N1 and the N2 on the fuel control. That's about
23 it.

24 Q. Okay. All right. And then one of the other tasks was
25 the fore/aft servo installation?

1 A. Yes.

2 Q. And who performed that work?

3 A. That was completed by Clinton Campbell.

4 Q. And what does that work consist of?

5 A. Removing the old servo; transferring over the
6 accumulator; and the rod ends, depending on their wear, we'll
7 either transform them or replace them; and they replace the O
8 rings and put it back on the airframe.

9 Q. And do you remember, in this case, if any of the O rings
10 were replaced?

11 A. All the O rings were replaced on both servos.

12 Q. And what was the condition of the rod ends?

13 A. One -- the rod end on the tail rotor was fine. One rod
14 end on the fore/aft servo, I believe, was replaced.

15 Q. Okay. So old servos removed, rod ends are checked, and
16 so Clinton Campbell reinstalls the new servos.

17 A. He reassembles it, puts it back on the rotor.

18 Q. Okay. The new servo?

19 A. Yes.

20 Q. Okay. And about how long does all that take?

21 A. Clinton's actually pretty good. He can do it in
22 probably about an hour and a half.

23 Q. Okay. And is this an item that also needs a second set
24 of eyes?

25 A. Yes.

1 Q. Okay. And so back to the paperwork, Clinton would sign
2 it off?

3 A. Yes.

4 Q. That it's been completed?

5 A. He would sign off the installation and then I would
6 stamp over it --

7 Q. Okay.

8 A. -- and then I also go up on the airframe and actually
9 look at the installation.

10 Q. And what do you do when you look at it?

11 A. I look for the two safeties on both the rod ends, the
12 two cotter pins on the mount hardware, and the safety holding the
13 two bolts that hold the accumulator assembly to the servo.

14 Q. Okay. And did you find any problems during your
15 inspection?

16 A. No.

17 Q. Okay. All right. And then who did the tail rotor
18 servo?

19 A. That would have been completed by Randall Hamilton.

20 Q. Okay. And what would he have done to complete that
21 work?

22 A. Remove the old servo, remove the one rod end, re-attach
23 it if it was fine; if not, put new O rings on and put it back in
24 the tail.

25 Q. And about how long does that take usually?

1 A. That one takes a little bit longer, about 2 hours.

2 Q. Okay. All right. And then he signs off his work. Then
3 you go and what do you do when you're inspecting it?

4 A. Check the forward attachment, the safety on it, the
5 safety on the rod end. And actually, the safety on the rod end is
6 checked before he puts it back in because it's -- the access to it
7 is not the greatest. And then I check just the basic installation
8 and the safety on the two bolts.

9 Q. Okay. All right. And the 100-hour, it started that
10 day, correct?

11 A. Yes.

12 Q. Okay.

13 A. Started that morning.

14 Q. Okay. And about what time did you complete it?

15 A. Everything completed, signed off, ground ran and all
16 that, about 6:00.

17 Q. Okay. And what do you do with your ground run? How
18 does that work?

19 A. Since we changed the engine, there's -- it's on the
20 discrepancy sheet, all the required checks that we're required to
21 do, besides the normal 100-hour stuff that's required for the
22 engine and -- the engine itself, just for the 100-hour inspection
23 on it. We balance the tail rotor. We balance the short shaft,
24 but we check the balance on both of them. Leak check of anything
25 that was replaced. Both servos were leak checked. Function check

1 of the hydraulic cutoffs. I typically -- once we've got all
2 ground runs done, we're down to our last one, I do move the stick
3 around, check the movement of the servos and have them watch --

4 Q. Okay.

5 A. -- for any leaks or anything, so --

6 Q. Did you find any problems during the ground run --

7 A. No. Actually, it was --

8 Q. -- leaks or --

9 A. -- really nice. It was quick.

10 Q. Okay. And about how long was the ground run?

11 A. I'd say it took us probably about 40, 45 minutes to do.

12 Q. Okay. Did you have any other aircraft in the facility
13 at the time that you were working on?

14 A. No.

15 Q. Okay. There might have been one sitting in there,
16 but --

17 A. I think there was one in there, but we weren't working
18 on it.

19 Q. Okay. Was there anything else you were working on that
20 day?

21 A. No.

22 Q. Okay.

23 A. That's the only thing we worked on.

24 Q. And it sounds like the engine install and the servo
25 install went pretty smoothly. Did you encounter any problems with

1 any of the other 100-hour inspection requirements?

2 A. We did find a few discrepancies, things that needed to
3 be repaired and replaced, but that's typical on just about any
4 inspection --

5 Q. Um-hum.

6 A. -- you're going to find something.

7 Q. Okay. And what type of guidance material do you use?

8 A. We have the paper manuals that are on the floor and then
9 quite a few of us have the electronic manuals --

10 Q. Okay.

11 A. -- on our laptops.

12 Q. And so they're your personal laptops --

13 A. Yes.

14 Q. -- loaded with the company maintenance manuals?

15 A. With the maintenance manuals that Eurocopter and
16 Turbomeca provide.

17 Q. Okay. And how do you update those?

18 A. Actually, when Jack will get an update, he'll let us
19 know that he's got a new, updated disc and we'll just update
20 them --

21 Q. Okay.

22 A. -- on our laptops.

23 Q. Okay. And do you find yourself, when you're working on
24 the helicopter, using your electronic guidance or your paper
25 guidance?

1 A. Actually, I go back and forth between the two because
2 the electronics, some things are easier to find in that --

3 Q. Um-hum.

4 A. -- some things are easier to find in the paper manual,
5 and things get missed when they're transferred from paper to
6 electronic, so --

7 Q. Okay. So at the end of the day or around 6:00, you do
8 your checks on the helicopter and everything checks out
9 satisfactory. And then what type of paperwork do you complete at
10 that point? I know the flight check didn't happen until the
11 following morning.

12 A. Um-hum.

13 Q. So, kind of, what's your procedure for documenting what
14 happened or what was done and then to notify the ops in the
15 morning that a flight check needs to be completed?

16 A. We finished the inspection packet, make sure
17 everything's signed off and stamped off. We finish the
18 discrepancy sheets. We have our own little in-house checklist
19 that we go through that has everything that we need to review and
20 make sure it's done before we initial it or check it off. Make
21 sure the entries are in the engine manual and the airframe little
22 blue book, that those are signed off and that the packet's
23 complete with all the required sign-offs and all the part sign-out
24 sheets and all that, and then we turn that in to QA. I update the
25 logbook, put in the ops check flight, and on that one we put the

1 log can in the aircraft and then the other crew took it down here.

2 Q. The following day's crew or --

3 A. No. Actually, the crew that was on that day --

4 Q. Um-hum.

5 A. -- Mike Ramett's (ph.) crew. They towed the aircraft
6 down from the hangar down there to down here.

7 Q. Okay. The day you did the inspection?

8 A. Yes. That night.

9 Q. Okay. So there's another shift that comes on after --

10 MR. REYNOLDS: These guys were on their scheduled day
11 off and they came in on overtime to perform just this inspection
12 while the normal crew was on their routine schedule working on
13 other items.

14 BY MS. DUNKS:

15 Q. Okay. So you were in on your day off?

16 A. Yes.

17 Q. Okay. I didn't realize that. Okay. So just so I'm
18 clear because I get easily confused, we had your group in working
19 on your day off just for the 100-hour inspection. So that's --

20 A. Yes.

21 Q. -- all you came in to do?

22 A. Yes.

23 Q. Okay. And then we had the normal crew that came in from
24 12 to midnight that day and they pulled the helicopter over?
25 Okay. And then the pilot the following morning knows that it

1 needs a flight check because -- how's that notification?

2 MR. REYNOLDS: It's coordinated through the production
3 manager --

4 MS. DUNKS: Okay.

5 MR. REYNOLDS: -- that the inspection has been completed
6 and he notifies operations and operations schedules it for a
7 check.

8 BY MS. DUNKS:

9 Q. Okay. And were you at the facility when the test flight
10 was performed?

11 A. No.

12 Q. Okay.

13 A. I still had another day off.

14 Q. Okay. And is it a requirement that you exclusively work
15 with your crew, or how --

16 A. No.

17 Q. Okay.

18 A. No.

19 Q. Okay. How often would you say you would work with other
20 crews?

21 A. Every once in a while, I'll come in and work with the
22 other crew.

23 Q. Like once a month or once every few months or --

24 A. It just depends on how much maintenance we have going
25 on.

1 Q. Um-hum.

2 A. It could be once a month. It could be three or four
3 times a month.

4 Q. Okay.

5 A. It just depends.

6 Q. Probably dependent upon the season and --

7 A. Yeah.

8 Q. Okay. One of the items that was found, which you're
9 probably aware, was the -- during the check before the check
10 flight, they found the hydraulic belt was loose.

11 A. Um-hum.

12 Q. And do you happen to know or recall who did the
13 adjusting the tension on that belt, or --

14 A. I believe it was CJ that did the hydraulic belt. I know
15 we had our mechanic's helper in and he was helping work on the
16 airframe, but I believe CJ was the one that put it on and
17 tightened it down.

18 Q. And CJ is Clint?

19 A. Clinton.

20 Q. Clinton.

21 A. Sorry.

22 Q. Okay. Just making sure there wasn't another person that
23 I -- okay. And is that something that would be inspected as well?

24 A. Yes. It was actually disassembled and greased and
25 inspected and put back together and put back on.

1 Q. Okay. And once the mechanic -- let's say Clinton did
2 this work and signed it off. Would that require an inspection
3 stamp?

4 A. Yes, it does because it was disassembled.

5 Q. Okay. And did you sign that off as well?

6 A. Yeah.

7 Q. Okay.

8 A. I stamped off on that. Once my guys have completed the
9 entire inspection, I go back over the entire airframe and look at
10 everything that I know has been taken off or pulled apart.

11 Q. Okay. And do you recall checking the tension on --

12 A. Yes.

13 Q. -- the belt? And how --

14 A. It was just fine.

15 Q. How do you do that?

16 A. By pressing on it.

17 Q. Okay. And what --

18 A. Just from my experience and how long I've been doing it,
19 I can tell whether the tension's loose or not.

20 Q. Okay. And are there any sort of parameters? Talking a
21 little bit about pressure, but any movement distances that you're
22 looking for or --

23 A. In the maintenance manual, it does call out for using a
24 spring scale to check how much -- I don't remember what the exact
25 weight is.

1 Q. Um-hum.

2 A. Or the amount of deflection in the belt.

3 Q. Okay.

4 A. But when we did our ground runs, we didn't see anything
5 wrong with it then either.

6 Q. Okay. So the -- is the spring scale required to check
7 the tension, or --

8 A. Per the maintenance manual, I believe it is.

9 Q. Okay. And was that used to check the tension, or --

10 A. I'm pretty sure it was. I didn't specifically see him
11 use it.

12 Q. Okay. So he -- so Clinton would have used it after the
13 installation?

14 A. Yeah. Once he put it on and he was assembling it all
15 back together.

16 Q. Okay. And then when you inspect that, you're checking
17 the pressure --

18 A. Yeah.

19 Q. -- just by pushing on it?

20 A. Yeah.

21 Q. Okay. But not actually using the --

22 A. No.

23 Q. -- tooling to -- okay. Okay. I may have some follow-up
24 questions, but I'll pass it over to Malcom right now. I know he
25 has some questions.

1 BY MR. BRENNER:

2 Q. A little different tack, but when you're not working
3 when do you like to go to bed, when do you like to get up?

4 A. I usually try to get to bed about 10:00 or 11:00
5 normally and I'm usually up by 7:30, 8:00 every day.

6 Q. And when -- you just had a couple days off before this?

7 A. Yes.

8 Q. Let's say on Sunday, do you remember when you went to
9 bed?

10 A. Sunday night? That would have been 12:00. 12:00,
11 12:30, somewhere around there.

12 Q. That's a little later than usual?

13 A. Yeah. Because there --

14 Q. Christmas decorations?

15 A. Christmas decorations and there's some shows on that me
16 and my wife like to watch.

17 Q. Oh, okay. What time did you get up Monday?

18 A. Monday morning was 8:00.

19 Q. What did you do Monday?

20 A. Christmas decorations.

21 Q. Wow. What time to bed Monday night?

22 A. Monday night, I actually got to bed about 9:00 since I
23 was having to come in so early Tuesday morning.

24 Q. When did you find out that you would be working Tuesday?

25 A. Monday afternoon, I would say like 4:00, 4:30.

1 Q. How often does that happen?

2 A. It just depends on the work load. Lately, it hasn't
3 happened hardly at all.

4 Q. Okay. When did you get up on Tuesday?

5 A. 4:00 a.m.

6 Q. Okay. What time did you get in here?

7 A. I was here, I believe, 5:30.

8 Q. How was your sleep?

9 A. Actually, I sleep very, very well.

10 Q. Okay. Then, you -- what time did you guys work on this
11 job, start until the sign-off?

12 A. My guys actually started turning wrenches, I think,
13 about 6:30.

14 Q. And what time was your sign-off? I think you
15 (indiscernible).

16 A. It was about 6:00. 6:00 in the evening.

17 Q. Okay. And were you done at that time?

18 A. As far as the aircraft was done, as far as the
19 inspection, I was done. I had a couple e-mails and stuff that I
20 needed to send out before I left.

21 Q. Did you feel rested?

22 A. Yeah.

23 Q. How is pay here?

24 A. Actually, really good.

25 Q. How's morale?

1 A. A lot better.

2 Q. What happened?

3 A. No that anything specifically happened. It's just that
4 it's the off season, so there's not a huge --

5 Q. Oh, I see.

6 A. Yeah, there's not a lot -- well, there's really not a
7 lot of pressure anyways, but the off season, you don't have
8 aircraft flying 7, 8 hours a day, so -- and trying to keep up with
9 that.

10 Q. What's the on season? Summertime? I don't remember
11 specifically. Or generally.

12 A. March, I would say, until -- March to October.

13 Q. It's hotter than hell here, isn't it?

14 A. No.

15 Q. Oh, okay. Just -- okay.

16 A. It's a myth.

17 Q. That wasn't a question. Disregard. How is training?

18 A. Actually, training's really, really well. It's really
19 good.

20 Q. How's workload?

21 A. I've seen a lot worse, but as far as the workload here,
22 it's really not that bad.

23 Q. How was the workload on Tuesday?

24 A. Actually, the workload on Tuesday was really nice.

25 Q. What's special about the company?

1 A. Its people. The people that work here.

2 Q. How are the working conditions?

3 A. Really good. It's nice having a hangar.

4 Q. Do you have space?

5 A. Yeah.

6 Q. How are the tools?

7 A. As far as the special tools?

8 Q. Yeah.

9 A. Yeah. It's really good.

10 Q. How's the temperature?

11 A. Nice.

12 Q. Lighting?

13 A. Very good.

14 Q. Ventilation?

15 A. Very, very good.

16 Q. How are the parts?

17 A. Parts can be an issue sometimes just because of demand

18 and availability.

19 Q. Have you ever had trouble with quality of parts?

20 A. No.

21 Q. How are the Eurocopter products to work on?

22 A. They have their ups and downs.

23 Q. What are some of the downs?

24 A. One, having to buy an entire different set of tools, all

25 metric.

1 Q. Sure.

2 A. But some of -- the way that the aircraft are engineered,
3 some of the items are hard to get to sometimes, but that comes
4 along with just about any aircraft.

5 Q. On this job on Tuesday, what were the items that were
6 hard to get to?

7 A. Actually, none of them and nothing that we did on
8 Tuesday was hard to get to. The hardest one, I would say, out of
9 all is the forward mount bolt on the tail servo just because of
10 the access to it.

11 Q. What are some of the ups of Eurocopter?

12 A. They're simple.

13 Q. The next morning, the hydraulic belt was written up as
14 being loose.

15 A. Um-hum.

16 Q. How did that happen?

17 A. I do not know, because when we did all of our ground
18 runs we didn't have any issues with loss of hydraulic pressure or
19 anything.

20 Q. Okay.

21 MS. DUNKS: Okay. Your turn.

22 BY MR. BUTTNER:

23 Q. Just one. On ground run, who does the actual ground
24 run?

25 A. I do.

1 Q. You do?

2 A. Yes.

3 Q. You have ground run training and (indiscernible) by the
4 company?

5 A. Yes, sir.

6 MS. DUNKS: Any other -- okay?

7 MR. BUTTNER: Yeah. That's it. I'm just looking here.
8 No, no, no. It will be afterwards.

9 MS. DUNKS: No. You can go.

10 MR. BUTTNER: No. It's just I want to follow up on
11 something and I can just look at the maintenance manual --

12 MS. DUNKS: Okay.

13 MR. BUTTNER: -- see it and I'll (indiscernible).

14 BY MR. CAMPBELL:

15 Q. On the ground run, maybe I missed it, but how long did
16 that last for you?

17 A. About 45 minutes.

18 Q. And I guess I was curious, and I forgot this too, but
19 you didn't feel rushed to get this job done --

20 A. No.

21 Q. -- coming in?

22 A. Not at all.

23 Q. Was it overtime because the engine was -- I mean, why
24 overtime, I guess, is --

25 A. Just because of the amount of -- having another aircraft

1 coming in, the other crew and the day crew were not going to be
2 able to get to do any inspection, so that's why I got called and
3 the other guys got called.

4 Q. When, I guess, CJ or Clinton; is that right --

5 A. Um-hum.

6 Q. -- replaced the servos, he did -- I'm sorry, he did the
7 forward, he didn't do the --

8 A. No. He did not do the tail. He did the fore/aft.

9 Q. Okay. And were any of those accumulators replaced or
10 you said --

11 A. No. The accumulators are just -- the accumulator
12 assembly is removed from the old servo and put on a new one.

13 Q. For both, I mean?

14 A. Yes.

15 Q. Okay. And hooking back up for the fuel lines or the
16 fuel control --

17 A. Um-hum.

18 Q. -- is that varied when you do redo the -- or when you
19 install the engine, that rigging, is that complicated at all or --

20 A. No. It's not complicated at all. Normally, we really
21 don't have to adjust anything.

22 Q. Okay. I think that's it. It seemed like there was
23 something else, but --

24 MS. DUNKS: Okay. Did you have any questions, Kyle?

25 MR. REYNOLDS: No.

1 BY MS. DUNKS:

2 Q. Okay. I just had a couple clarifications, of course.

3 So just to confirm, your typical schedule on this 3-/4-day --

4 A. Um-hum.

5 Q. -- thing is from noon to midnight?

6 A. On the 3-day shift.

7 Q. On the 3-day. And then --

8 A. Yes.

9 Q. -- noon to 11:00 --

10 A. Yeah.

11 Q. -- on your 4 days.

12 A. On the 4-day shift. Yes.

13 Q. Okay. And then when you were called in for overtime --

14 A. Um-hum.

15 Q. -- you were asked to come in at 5:30 --

16 A. Um-hum.

17 Q. -- your group, and essentially work until it's complete,

18 or --

19 A. Work until it's complete or if people started getting

20 tired, let them go home.

21 Q. Okay. And is that -- is there a limit on the number of

22 hours you can work or -- because sometimes it can be hard to tell

23 if you're tired.

24 A. True. I would say, typically, with the company, they

25 don't want you working over 13, 14 hours.

1 Q. Okay.

2 A. I, myself, just from EMS, have worked 16-, 18-hour days.
3 So working overtime or past 12 hours is nothing for me. So --

4 Q. And you feel comfortable working over 12 hours?

5 A. Oh, yeah.

6 Q. Okay.

7 A. Just because my body is now so conditioned for that,
8 so --

9 Q. Okay. All right. In this specific helicopter, do you
10 recall -- we talked a lot about the 100-hour because that was done
11 right before the accident, but any other major maintenance
12 performed on the helicopter? Or you know how some aircraft have
13 problems that always pop up or, you know, little things?

14 A. No, not that I can think of.

15 Q. Okay.

16 A. I know when they flew it down to the hangar, they didn't
17 write anything up when they brought it down there, so --

18 Q. Okay. And any reports of vibrations that couldn't be
19 tracked down or anything like that that you're aware of? Okay.

20 A. Not that I'm aware of.

21 MS. DUNKS: Okay. All right. Anybody else have any
22 other questions or -- okay, Gaylan, well, we really appreciate it,
23 so --

24 MR. WATERFALLEN: Not a problem.

25 MS. DUNKS: You have our contact information?

1 MR. WATERFALLEN: Yes.

2 MS. DUNKS: If something comes up that you remember that
3 you'd like to share with us -- I didn't ask you. Is there
4 anything else you would like to talk about that we didn't ask?

5 MR. WATERFALLEN: No.

6 MS. DUNKS: Okay. All right.

7 MR. WATERFALLEN: It was pretty thorough.

8 MS. DUNKS: Okay.

9 MR. WATERFALLEN: It's not my first time, so --

10 MS. DUNKS: Sure. Okay. Well, thank you very much.

11 MR. WATERFALLEN: Thanks. Thank you.

12 MS. DUNKS: All right.

13 (Whereupon, the interview was concluded.)

14

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: SUNDANCE HELICOPTER ACCIDENT
 NEAR LAS VEGAS, NEVADA
 Interview of Gaylan Waterfallen

DOCKET NUMBER: DCA12MA020

PLACE: Las Vegas, Nevada

DATE: December 10, 2011

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been compared to
the recording.

Tiffany Meeker
Transcriber