Attachment 21. Main Rotor Area Mechanic Initial Transcript

DCA12MA020 Maintenance Factual Report

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

Interview of: CLINTON CAMPBELL

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

APPEARANCES:

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1	INTERVIEW	
2	MS. DUNKS: Okay. So as I mentioned yesterday, we are	
3	going to record this and so there will be a record and a	
4	transcript created afterwards. And just remember during the	
5	interview, you know, anything you say does become public. And the	
6	reason we're here is, you know, to gather factual information	
7	regarding the accident, try to prevent future accidents from	
8	occurring and see if there are any safety issues that we can	
9	identify.	
10	Would you like to have a representative here today with	
11	you, or	
12	MR. CAMPBELL: No.	
13	MS. DUNKS: Okay. So you're good. And why don't we go	
14	around and introduce everybody? So you know I'm with the NTSB,	
15	5 Kristi Dunks, in charge of the Maintenance Group.	
16	MR. BUTTNER: I'm Seth Buttner and I'm with American	
17	Eurocopter, and I'm here to assist the NTSB if they have any	
18	technical questions from our end.	
19	MR. CAMPBELL: I'm Gary Campbell. I'm from the local	
20	Flight Service, FSDO, here, the FAA.	
21	MS. ALLAHYAR: I'm Maryam Allahyar. I'm with the NTSB	
22	(indiscernible).	
23	MR. BRENNER: Malcolm Brenner with the NTSB, Human	
24	Performance and (indiscernible) support.	
25	MS. DUNKS: So, before we get started do you have any	

1 questions for us?

2 MR. CAMPBELL: No. 3 MS. DUNKS: Okay. All right. If you have any questions as we're going through here, just feel free to ask. And if you 4 5 want to take a break, we can do that at any time too. 6 UNIDENTIFIED SPEAKER: Fifteen minutes every 2 hours. 7 MS. DUNKS: Yes, we prefer that. And if we can extend it, that's even better. 8 9 UNIDENTIFIED SPEAKER: Let's just keep the building --10 MS. DUNKS: Yeah, thanks. Okay. We're going to start 11 off with an easy one. 12 INTERVIEW OF CLINTON CAMPBELL BY MS. DUNKS: 13 14 If you could say and spell your full name and spell it Ο. 15 for us, please? 16 Clinton Joseph Campbell, C-L-I-N-T-O-N, J-O-S-E-P-H, Α. 17 C-A-M-P-B-E-L-L. 18 0. Okay. And what FAA certificates do you hold? 19 An A&P. Α. BY MS. DUNKS: 20 21 Q. And if you could briefly discuss you aviation background: when you got you're A&P, where you got it, and any 22 23 other previous work experience prior to Sundance? 24 Α. I received my certificate in December 2008 from WyoTech Then I got a small mom and pop shop job in Chino, 25 up in Oakland.

California working from little home-builts up to turbo commanders.
I worked that for about a year and then I moved up to the -- back
to the San Francisco Bay area and was contracted out to NetJets
working on their fleet of aircraft, which consisted of Citation
Encore, Excels, Citation 10s, Sovereigns, Falcon 2000s, Gulfstream
G200s, G4s, G450s, G5s, 550s, and I worked that for about a year
and then moved here and started with Sundance.

8 Q. Okay. So when did you start with Sundance?

9 A. Near the end of June.

10 Q. Okay. June of 2011?

11 A. Yeah.

Q. Okay. And with these other places that you worked, didyou have any -- did you do any helicopter maintenance?

14 A. It was all fixed wings at all the other places.

15 Q. Okay. And so what is your job function here within 16 Sundance?

A. A&P mechanic. Lately, I've been working mainly on therotor head and transmission.

19 Q. Okay. And why is that? Is that an area that you like 20 working on or just something that you keep getting assigned, or --

A. We do tech station and then we'll get trained on another station and switch over. So that way we're not all stuck in one station forever, so --

Q. Okay. To kind of mix it up a little bit?

25 A. Yeah, just where I'm at right now.

Q. Okay. So when you came to Sundance in June, did they
 have any sort of initial training for you?

A. I went through a few training programs through our4 Quality Control and the rest of the company.

5 Q. And what was included in those?

6 A. How to keep proper records, maintenance procedures, how 7 to read the Eurocopter books properly.

8 Q. Okay. And then did you have any line training with9 other mechanics?

A. Every now and then if I don't know something you go to one of the more experienced mechanics and talk to them and have them translate the book for you if you don't understand it. So, yeah.

14 Q. Okay. And you feel that you have ample resources --15 A. Yes.

Q. -- if you do have a question? Okay. So since coming to Sundance, have you had any training on Eurocopter or Turbomeca products?

A. I just had training from here, not specifically from
Eurocopter or Turbomeca, just from the more experienced mechanics.

21 Q. Okay. Was that kind of a formal training, or you're 22 kind of on-the-job training, just working?

A. It's mostly on the job, but we take a little bit of time out to, if I didn't understand it totally, to go through a little bit more in detail.

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Okay. What's your normal work schedule? 1 Q. 2 It's a 4-day on/4-day off; 3-day on/3-day off schedule. Α. 3 I work Thursday, Friday, Saturday and every other Wednesday noon 4 to midnight, roughly. 5 Okay. Do you get called on to work a lot of overtime? Ο. 6 Α. They make it available and if I'm around in town, I'll 7 take up -- take it up. 8 Okay. So the day of the 100-hour inspection, that would Ο. 9 have been Tuesday --10 Um-hum. Α. 11 -- the 6th, can you talk about the days leading up to Ο. 12 that? Were you -- sounds like you might have been off, right? Yeah. 13 Α. We were off. 14 So if you start on Saturday, let's say, and work up to Ο. 15 Tuesday, kind of what you were doing? 16 Α. All right. Saturday we showed up at noon to -- there 17 wasn't any major inspection that day because we had a Christmas 18 party that night, so we did shop maintenance, a little line 19 maintenance, depending on what -- if the pilots wrote anything up. Then we dated all the aircraft, took off -- clocked out, went 20 21 home. We went to the Christmas party. Left. Then for the next 2 days, I pretty much stayed home, didn't do anything. 22 Okay. And was this Tuesday shift a normal schedule for 23 Ο. 24 you, or --25 Α. No.

1 Okay. And when were you called in on that? Q. 2 I was called Monday afternoon seeing if I was available Α. to come in, which I was. 3 And did they say what it would be? 4 Ο. No, just a 100-hour since the normal -- the day quys had 5 Α. б to be in the Canyon for the day. 7 They were doing maintenance work down there? Q. Okay. Yeah.

9 Q. Okay. Did you feel like there was any pressure to get 10 the 100-hour completed?

11 No. Α.

8

12 Q. Okay.

Α.

13 Worked slow, steady. Α.

14 And can you describe a 100-hour inspection? Ο. Okay. 15 What's normally completed during a 100-hour inspection?

16 Α. A 100-hour inspection, mainly we're looking for anything 17 out of the ordinary, taking -- for the main rotor head, I take both cinder (ph.) links off. I take the fish (ph.) links off. 18 19 Just inspect play in the ball end, see if there's any -- clean 20 everything, re-lube everything, put it all back together, torque 21 it back down. Then pretty much throughout the aircraft, but --22

Q. Okay.

-- mainly it's the rotor head. 23 Α.

All right. And so when you came in, what time did you 24 Q. 25 come into work that day?

- 1 A. Just prior to 6 in the morning.
- 2 Q. Okay. And the lead that day was Gaylan?
- 3 A. Yes.
- 4 Q. And what task did he assign you to do?
- 5 A. My normal, the rotor head and main gearbox area.
- 6 Q. Okay. Did you do any work on the engine installation?
- 7 A. No. Did not touch the engine.
- 8 Q. Okay. And did you do any work on the tail rotor servo?9 A. Installation.
- 10 Q. Okay. And we also had a fore/aft servo installation 11 that day. Did you do any work on that, or --
- 12 A. Yeah. I did all the work on it.
- 13 Q. Okay. And can you describe that for us?
- 14 Gaylan told me there was a forward/aft servo Um-hum. Α. 15 change. He already had the servo pulled and the O-rings pulled 16 My job was to take it off the aircraft, disassemble it, for it. 17 clean it, inspect it, and change out the old servo for the new 18 servo, put the new O-rings in the accumulator attachment, put it 19 back together, torque everything back down, re-safety it, re-put 20 it on the aircraft. Connected the hydraulic lines, re-torqued all 21 the rod ends back to the flight controls.
- 22 Q. And did you have any assistance doing that?
- 23 A. No. It was all me.
- Q. Okay. And how many times have you performed that?
 A. Numerous times. I'd say at least six times since I've

1 been here.

2 Okay. Six? Six since June? Ο. 3 Α. At least. 4 Q. Okay. So it's a pretty common --5 Α. Yeah. б Q. Did you have any difficulties during the installation? 7 No, everything went smooth. Α. Okay. So after that's installed, then you do a sign-8 Ο. 9 off? 10 Α. Yes. 11 And then is that work required to be inspected? Q. Okay. 12 Α. Yes. 13 Okay. And then Gaylan --Q. 14 I called Gaylan over. He inspects the installation and Α. 15 all the safety and you get his mark of approval on it. 16 Okay. And do you recall if he found any problems? Q. 17 Α. No. 18 Okay. Now, with this work on the system, did you do the Q. 19 -- did you adjust the tension on the hydraulic belt? I did the work. I set the tension for it. 20 Α. 21 Q. Okay. And how do you do that? A dynamic test, just push on it and see how much play it 22 Α. 23 has in it. 24 Q. Okay. Is it a pressure or distance thing, or what are 25 you looking at?

A. It's more of like a distance traveled when you put
 outside pressure to it.

Q. Okay. And do you know what that distance is offhand,
4 or --

5 A. No.

6 Q. -- you'd refer to the --

7 A. The maintenance manual.

Q. Okay. And can you -- so you check the tension. And how 9 do you adjust the tension? Did you have to do -- did you 10 re-install the belt, or --

A. During the 100-hour inspection, the -- it's easiest to take off, to disassemble -- we have to re-grease and clean the bearings of the hydraulic pump --

14 Q. Okay.

A. -- so it's easier to disconnect it and pull it apart and clean it, re-grease it, and then put everything back together and re-tighten it to the aircraft.

18 Q. Okay. And how do you re-tighten it?

A. There's two bolts: one at the bottom, which is more of a pivot point, and then the one at the -- a bolt at the top, which give you your tension.

22 Q. Okay. And any problems with adjusting the tension on 23 that, or --

24 A. No.

25 Q. Okay.

- 1 A. It was all routine.
- 2 Q. And have you done that before?
- 3 A. Yeah.
- 4 Q. Okay. And is that also a required inspection?
- 5 A. It's on the 100-hour, yes.
- Q. Okay. And is it required to have an inspector sign off?A. I believe it is.
- 8 Q. Okay.
- 9 A. Gaylan looks at them.

10 Q. Okay. And do you recall if he found any problems with 11 the installation?

12 A. No.

13 Q. Okay. Were there any other aircraft in the facility at 14 the time that you all were working on?

15 A. I believe later in the day there was another helicopter 16 pulled into the hangar that the other Net crew was handling --

- 17 Q. Um-hum.
- 18 A. -- but nothing else.

19 Q. Okay. So you were just focused on this helicopter?

20 A. Yes. That was my job.

Q. Okay. So you came in a little before 6. When did you finish your work?

23 A. I know I clocked out around 6:30.

Q. Okay. And I know I've asked you this a couple of times, but with your -- all the work that you performed that day, did you

1 encounter any problems or difficulties where you needed
2 assistance, or --

3 A. No, everything went smooth.

4 Q. Okay.

5 A. Nothing out of the ordinary.

Q. And what type of guidance material did you use to7 perform the inspections?

8 A. The AS350 Maintenance Manuals.

9 Q. Okay. And do you use electronic or paper?

10 A. Paper.

11 Q. And were you involved in the final checks for the 12 helicopter?

13 A. Yes.

14 Q. Okay. What did you do?

A. I performed all the exterior run of checks, making sure the tail rotor was in balance, the shore shaft was in balance, checking all the fluids, making sure they were good levels while not running and running. While Gaylan was running it up, I checked to make sure the servos were good and nothing was binding. Q. Okay. And did you find anything that needed to be

- 21 corrected?
- 22 A. No.
- 23 Q. Okay.

A. Everything was in order.

25 Q. Okay. And were you involved at all in the check flight

1 the following morning?

2 Α. No. 3 Ο. Okay. And one of the things that came up during the check flight, which you are probably aware of, was the hydraulic 4 belt, the tension was found to be a little loose. 5 The pilot had б identified that and -- do you know why that would happen? 7 No, not really. It was tight once I checked everything Α. when we left. 8 9 Q. Okav. And during the ground checks and everything? 10 Α. Yeah. 11 Have you ever experienced a belt coming loose after the 0. 12 tension was adjusted? 13 Α. I've seen them, but it's not very common. 14 Okay. Do you recall what color the belt was? Ο. 15 Α. Black. 16 Q. Okay. 17 MS. DUNKS: Okay, Malcolm, that's --18 MR. BRENNER: Oh, okay. 19 BY MR. BRENNER: A little different line of questioning. When you don't 20 Ο. 21 have work, when you're off-duty, when do you like to go to bed? 22 I normally stick to the same schedule. I'm -- since I'm Α. off at midnight, by 2:00 I'm normally in bed. 23 24 Q. And when do you like to get up when you're not working? 25 Α. On my days off?

1 Q. Yeah.

2 A. Anywhere between 10 and noon.

3 Q. Okay. Las Vegas guy.

4 A. Yeah.

5 Q. Okay. Now, what about -- no, let's see, Saturday you 6 were working. What time do you get up when you're working?

7 A. When I get up and I'm --

8 Q. On Saturday, yeah.

9 A. I'm supposed to be here at noon, so I get up at 10:30.
10 Q. Okay. And then, let's see, you had a Christmas party
11 that night. When did you gt to bed?

A. I don't know, 3, 4 in the morning. I was up a littlebit later.

14 Q. And then what time did you get up Sunday? That's your 15 day off.

16 A. Sunday? Probably between noon and 2.

Q. And you don't know what time you got to bed, but I guess routine stuff at all you were saying --

19 A. Yeah.

20 Q. -- when do you get to bed?

21 A. Around 2 to -- midnight to 2.

Q. Okay. Now Monday, another day off. What time did you get up?

A. 10:00, somewhere in there.

25 Q. What time did you go to bed?

Since I knew I had to come into work, I went to bed at 1 Α. 2 10, fell asleep before midnight. 3 0. What did you do between 10 and midnight? 4 Α. I slept. 5 So -- I'm sorry, no. You went to bed at 10, but you got Ο. б to sleep at midnight. So you were kind of --7 Just tossing and turning, getting --Α. Yeah, sure. 8 Ο. 9 Α. Trying to get my body to go to sleep earlier than I'm 10 used to. 11 I see. How was the quality of the sleep? Q. 12 Α. Good. 13 Do you ever have trouble with insomnia or any sort of Q. 14 sleep stuff? 15 Α. No. 16 Okay. Okay, what time did you get up on Tuesday? Q. 17 Α. On Tuesday, I got up around 5 to be in by 6. 18 0. Okay. How did you feel? 19 Felt good. Α. Is it hard to shift like that? To get up earlier? 20 Ο. 21 Α. No, not really. Just a matter of setting my alarm. 22 What kind of breaks do you get during the day? Q. Fifteen minute breaks every 2 hours and a half-hour 23 Α. 24 lunch. 25 Did you get the breaks that day? Q.

1 A. Yeah.

2 Q. How was the workload that day? How would you 3 characterize it?

A. Normal. It was more of a laid-back case that day too since it wasn't our day to work so we worked more thorough -- I mean, not thorough, but just slow, at a slower pace.

- Q. Oh, I see. How is the pay here? How would you8 characterize it?
- 9 A. It's good.
- 10 Q. Morale?

11 A. It's very upbeat here. Good place to work.

- 12 Q. Why is that?
- 13 A. Hum?

14 Q. Why?

15 A. The quality of people that are here makes it fun to come 16 in and do work.

17 Q. How are the guys you work with?

18 A. They're great. We have fun.

19 Q. How is the equipment?

20 A. Everything is in its place. Everything we need is here.

- 21 Q. How often do you see the FAA?
- 22 A. Not very often.
- 23 Q. How often is that?
- A. I mean, since I've been here, maybe twice. I mean --
- 25 Q. Did they tell you they were coming? They just show up?

1 Α. I don't recall seeing them here. 2 How is the workload? How would you characterize that? 0. 3 Α. Nice and steady. I mean, nothing too much. How is the amount of workload? Oh, I'm getting --4 0. excuse me. How is the amount of overtime? 5 б Α. It's here if you want it. I mean, I take it if I need 7 it, but --8 How do you like working on rotorcraft compared to fixed Ο. 9 wing? 10 I enjoy it a little bit more than fixed wing. Α. 11 Why is that? Ο. 12 Α. I'm fascinated with helicopters. That's the reason I got into aviation. 13 14 Really? Ο. 15 Α. Yeah. 16 Why is that? Q. 17 Α. I really don't know. I went on a helicopter flight when I was little and I was hooked. 18 19 Do you ever fly with the company? Q. I have. A good (indiscernible) flying. 20 Α. 21 Q. Do you know Al Landers (ph.)? 22 We've met a couple times, said a few heys and what's Α. 23 ups, but nothing too personal. 24 Q. Ever fly with him? 25 Α. No.

1 Q. How hard is it to read the Eurocopter books? 2 It's not, it's not hard. It's just they're not set up Α. 3 like an American aircraft book where everything's laid out step by 4 step, dummy proof. Eurocopter you may have to jump a little bit, but they're getting better at it. It's easy to read. 5 It's just б you may have to jump around a little bit. 7 How about the instructions for the servo change? Q. They're pretty self-explanatory, simple steps. 8 Α. 9 Q. How are the working conditions? 10 They're great. Α. 11 How are they great? Ο. 12 Α. I mean, everything's clean in its place, nice hangar. 13 They seem pretty good. 14 How are the tools? Ο. 15 Α. Everything's good, good condition. 16 How about the parts? Q. 17 Α. The parts? 18 0. Yeah. 19 They're all -- they come out of parts okay and I inspect Α. 20 them before I put them on. Everything's in its place. 21 Ο. Any quality issues? 22 Α. No. Do you have -- on these jobs, for example, how is it 23 Ο. 24 having room to work? Are you cramped in there, are you, you know, 25 not or --

A. No, plenty of room. We have tables to work on,
 toolboxes to work on, anything we need.

3 Q. And on the aircraft as well, can you get in around 4 there, any tight -- tighten things up?

5 A. No. Nothing jammed.

6 MS. DUNKS: Okay.

7 BY MR. BUTTNER:

Q. Just one or two here. Did you on the servo, did you9 have to replace anything on there? I'm not sure I caught that.

10 A. I did replace the upper rod end.

11 Q. Okay.

A. The ears on both sides of the rod end had wear in them so I changed them out so that way between now and the next 100hour it didn't wear into the bridge anymore.

15 Q. And that's an assessment you made or was that calibrated 16 against the chart --

17 A. It was an assessment I made.

18 Q. How much extra time did that take in maintenance? 19 Residual (indiscernible)?

A. Five extra minutes to make sure everything was set backto where it was.

22 Q. And the mounting end that it goes to was okay?

23 A. Yes, everything it attached to was okay.

24 Q. And the accumulators?

25 A. Um-hum.

Q. Just remove and replace? How did you -- on the servos,
 did you have to work on those at all, or --

A. On every 100-hour I recharge them, just to make sure they have a good pressure in them. So -- but everything else was routine on it.

Q. And then hydraulic lines, I guess, was that -- do you
replace those? Is that part of your assessment at all? Or do you
know --

9 A. The hydraulic, it's part of the inspection. I look at 10 them. They were in good condition. I cleaned any excess dirt off 11 of them and reattached them to the servo.

12 Q. You get a lot of dirt? Do you see a lot of that?
13 A. The servos are -- collect a lot of little fine dust that
14 collects on it so I clean them off, make sure they're good.

Q. Do you think that's more out here in the desert than -A. I think it's a little bit more because they fly into the
Canyon where it's really dusty in the cape up there.

18 MR. BUTTNER: Nothing else.

19 MS. DUNKS: Okay.

20 BY MR. BRENNER:

21 Q. Have you ever received discipline for your work?

A. Not here. I've been -- everything's pretty easy here.

23 I mean, I've never had to be yelled at for anything.

24 Q. How about commendations?

25 A. Whenever -- when you do a good job you get time, you get

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1 attaboy.

2 Q. Have you ever been involved in any accidents besides 3 this?

4 A. Besides this? No.

5 MS. DUNKS: I just have one more question. With this 6 particular helicopter, do you know it, based on your experience, 7 to have any kind of common issues or something that kept getting 8 reported? Or, you know how certain aircraft kind of have 9 idiosyncrasies or something? Do you recall if this helicopter had 10 anything like that, or --

11

12

MR. CAMPBELL: No.

MS. DUNKS: Okay. Anybody else have any?

UNIDENTIFIED SPEAKER: Well, I had just made a note that 13 14 you -- all of your previous experience was all fixed wing and you 15 came here for the first time for helicopters, and you've indicated 16 your interest in them and why. There is a focused instruction or 17 OJT in the given areas that he's given responsibility for so 18 that's -- you know, A&P -- I understand he's an A&P and he's got 19 the abilities to work on aircraft, but can you use a manual 20 instruct? Do you feel like you're getting the focused instruction 21 in OJT on those areas that you need?

22 MR. CAMPBELL: Oh, yeah. If I have any questions 23 because I'm not understanding it, there's plenty of people to ask 24 that have been working on it, understand men -- how the 25 Eurocopters work, so I do --

UNIDENTIFIED SPEAKER: There is considerably more
 spinning parts on a helicopter than there are on the fixed wings.

3 MR. CAMPBELL: Yeah.

4 UNIDENTIFIED SPEAKER: Thanks.

5 MS. DUNKS: Okay. Well, thank you very much. And you 6 have my contact information.

7 MR. CAMPBELL: Um-hum.

8 MS. DUNKS: Before we let you go, was there anything 9 that you wanted to share with us additional that we didn't ask, or 10 that you wanted to discuss today?

11 MR. CAMPBELL: No.

MS. DUNKS: Okay. All right. Well, if you think of anything, just give me a call or send an e-mail. Sometimes things come up later, so -- thank you again. We really appreciate it.

15 MR. CAMPBELL: All right.

16 (Whereupon, the interview was concluded.)

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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 Clinton Campbell

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.

> Vanita Tildon Transcriber