



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

May 5, 2020

### **Attachment 2 – Company Personnel Interviews and Transcripts**

# **OPERATIONAL FACTORS**

**ERA20MA001**

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of: \*

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COLLINGS FOUNDATION BOEING B-17G \*

CRASH AT BRADLEY INTERNATIONAL \*

Accident No.: ERA20MA001

AIRPORT, WINDSOR LOCKS, CONNECTICUT, \*

OCTOBER 2, 2019 \*

\*

\* \* \* \* \*

Interview of: ROBERT PINKSTEN

Chief Pilot

Wednesday,  
January 15, 2020

## APPEARANCES:

WARREN ABRAMS, Air Safety Investigator  
National Transportation Safety Board

TODD GENTRY, Accident Investigator  
AVP-100  
Federal Aviation Administration

SABRINA WOODS, Accident Investigator  
AVP-100  
Federal Aviation Administration

DENNY SHUPE, Attorney  
Schnader Harrison Segal & Lewis  
(On behalf of Mr. Pinksten)

I N D E X

<u>ITEM</u>	<u>PAGE</u>
Interview of Robert Pinksten:	
By Mr. Abrams	6
By Mr. Gentry	21
By Ms. Woods	28
By Mr. Gentry	33
By Ms. Woods	33
By Mr. Abrams	34

I N T E R V I E W

(9:50 a.m.)

1  
2  
3 MR. ABRAMS: Good morning. I'm Warren Abrams, the -- from  
4 the NTSB. I'm the group chairman of the Operations Group from the  
5 National Transportation Safety Board investigating the B-17  
6 accident that occurred on October 2, in Hartford, Connecticut.

7 My role here is to learn what happened about the accident so  
8 we can assist the investigation along and, hopefully, prevent this  
9 from happening again. We all know this is just a tragedy beyond  
10 all tragedies and I think everyone has a vested interest in  
11 keeping this from happening again.

12 As a part of our process, we do invite parties to join the  
13 investigation, and with me I have the FAA on board. They are  
14 required to be on board by regulation. And I will let them state  
15 their name in just a second, and their disclaimer for what their  
16 role is in the investigation.

17 Rob, for you, the same people are on the line today that we  
18 interviewed with you in person there, at the FBO.

19 So, Todd, if you'll introduce yourself and all the things  
20 that go along with your introduction, please.

21 MR. GENTRY: Sure. My name is Todd Gentry. I'm a senior  
22 accident investigator for the FAA. My role is basically to make  
23 sure that the FAA itself has covered its nine areas of  
24 responsibility to make sure that nothing that the FAA has  
25 oversight or responsibility for created a problem in creating this

1 accident. So that's part of my job, mostly.

2 Rob, I think I told you before when you talked to me, my  
3 investigation goes with Warren and the NTSB. We don't go outside  
4 of that. If somebody else is going to do something, they have to  
5 do that on their own, in the FAA. So that's not me, that would be  
6 some other group in the FAA that has to do those things. So we're  
7 just trying to find out what happened, just like everybody else,  
8 and make sure that the FAA didn't contribute in any way. That's  
9 the big role for me.

10 MR. ABRAMS: Thank you, Todd. Sabrina, if you'll introduce  
11 yourself, please?

12 MS. WOODS: Hello, Rob. My name is Sabrina Woods. I work in  
13 conjunction with Todd, also for the FAA, in ADP-100. My focus and  
14 role here is from the human factors and the human performance  
15 perspective. So what I'm doing is looking at any of the decision-  
16 making processes that go along with what might have contributed to  
17 this accident, as well as the ability to perform within the realm  
18 of human performance all the external components inside and  
19 outside the aircraft that might have contributed, and the  
20 survivability piece, as well.

21 MR. ABRAMS: Rob, you're allowed to have representation,  
22 general counsel represent you. Do you have representation today?

23 MR. PINKSTEN: I do. I have Denny Shupe on the phone.

24 MR. ABRAMS: All right. Denny, if you'll introduce yourself,  
25 please?

1 MR. SHUPE: Good morning, everyone. Denny Shupe, Schnader  
2 Harrison Segal & Lewis, resident in our Philadelphia office.

3 MR. ABRAMS: Thank you.

4 As I mentioned earlier, I've got the recordings going. This  
5 is a re-interview of Rob because my first recordings didn't take,  
6 and I was dismayed and horrified that they did not record. And we  
7 do send these recordings out to be -- to have them transcribed.  
8 The transcription will be added to the docket, but the recording  
9 itself is not part of the docket. So, Rob, you have any questions  
10 before we crank it up?

11 MR. PINKSTEN: I do not.

12 INTERVIEW OF ROBERT PINKSTEN

13 BY MR. ABRAMS:

14 Q. Okay. Rob, if you will, please state your full legal name  
15 and spell your last name, please.

16 A. My name is Robert Wilson Pinksten, P-i-n-k-s-t-e-n.

17 Q. And, Rob, how old are you?

18 A. I'm 23.

19 Q. And what is your job title?

20 A. I'm a chief pilot on the Winds of Freedom Tour at the  
21 Collings Foundation.

22 Q. And when did you get hired with the Collings Foundation?

23 A. I started in 2015.

24 Q. And in what capacity in 2015 did you start? Were you the  
25 chief pilot in 2015, when you started?

1 A. Nope. I started as a volunteer pilot and general helper, and  
2 I would say I was hired on as chief pilot in mid 2016.

3 Q. All right. What do you do as the chief pilot? Tell me some  
4 of your roles and responsibilities.

5 A. Scheduling, training pilots, open and arrange tour stops,  
6 managing pilots, hiring new pilots.

7 Q. All right. I'm going to come back to some of that stuff in  
8 just a minute. When you got -- when you started volunteering with  
9 the Foundation in 2015, and that was just a volunteer role? Did  
10 you receive any compensation for your work at that time?

11 A. I did not.

12 Q. Okay, that was strictly volunteer; is that correct?

13 A. Correct.

14 Q. And what airplane did you check out in as a copilot? Or I'm  
15 assuming you started as a copilot. What plane did you check out  
16 first in?

17 A. A B-24.

18 Q. And am I correct, that was in the right seat as the copilot?

19 A. Correct. Yes.

20 Q. All right. Tell me the progression. How did you progress  
21 and move up the ranks? Fill me in, please.

22 A. I basically just stayed out almost as a full-time volunteer,  
23 built a bunch of time in the airplanes and became proficient  
24 enough to upgrade my type to B-25, first, then the B-24. I  
25 checked out in a Mustang and then got typed in the B-17.



1 Q. Are you a designated examiner in all three of those  
2 airplanes, or four of those airplanes?

3 A. I am a designated pilot proficiency examiner.

4 Q. All right. In what airplanes?

5 A. The B-24, B-25 and B-17.

6 Q. Okay. How much total time would you estimate that you have?

7 A. I would say 5,500 hours.

8 Q. Okay. And let's try to break it down a little bit. You had  
9 mentioned the B-25 first. Approximately how much flight time do  
10 you have in the left seat of the B-25?

11 A. Left seat of the B-25, PIC time in general, I would say 600  
12 hours?

13 Q. Okay. It's your answer, it's not mine. I have no idea. And  
14 how about the B-24, how much time in the left seat would you  
15 estimate on the B-24?

16 A. A thousand hours.

17 Q. And on the B-17, the same question: How much flight time  
18 would you estimate you have on the B-17?

19 A. Total, I would say 250 hours.

20 Q. All right. As the proficiency examiner, what are your roles  
21 as that? What do you do as the proficiency examiner on these  
22 airplanes?

23 A. Basically, I give 6158 check rides.

24 Q. And be more specific. Your FAR Part 6158, what does that  
25 include?

1 A. That includes -- any multi-crew airplane requires a yearly  
2 check ride, where each specific type requires an every-other-year  
3 check ride in order to carry passengers. Per that regulation, you  
4 have to do, basically, the check ride that you originally did for  
5 your type rating at least once a year in any airplane, and then  
6 once every other year in each specific airplane.

7 Q. All right. How many -- go ahead. I'm sorry to interrupt.  
8 Go ahead.

9 A. We have to do a PP, a pilot proficiency examination.

10 Q. Okay. How many pilot proficiency examiners do you have?

11 A. We have two.

12 Q. Yourself and who else?

13 A. And Mark Henley.

14 Q. You mentioned part of your roles and responsibilities as  
15 chief pilot is to do scheduling and training. As far as the  
16 training aspect of it, how does somebody get trained as a -- well,  
17 I guess the entry-level position is B-25, but I'll just jump in  
18 and say B-17. Somebody comes to you and says I want to be a B-17  
19 pilot, tell me what that process would be like. It's a volunteer  
20 role but they don't have a type rating in the airplane or a  
21 second-in-command rating. Talk me through that process. How do  
22 you get hired, and then what kind of training do they go through?

23 A. Like you said, we generally don't hire straight into the  
24 B-17.

25 Q. Okay.

1 A. They would show up, and once we've decided we're going to  
2 hire them, they do ground training, complete all the required  
3 ground training. And then generally, what we would do is have  
4 them show up on a relocation day, with no passengers, and complete  
5 their training on a relocation flight for their initial training,  
6 and then check for operating --

7 Q. Am I correct, your entry-level position is the B-25?

8 A. Yes.

9 Q. All right.

10 A. Generally.

11 Q. Does a pilot make a financial donation to the Foundation to  
12 become a volunteer pilot?

13 A. They do not.

14 Q. They do not. Okay. I was familiar with the, it used to be  
15 the Confederate Air Force, now I think it's Commemorative Air  
16 Force now. And I had a friend that flew the F4U Corsair and he  
17 had to make a sizeable donation to the Commemorative Air Force in  
18 order to be able to do that. So anyway, how long is the training,  
19 approximately how long is the training process? I realize you  
20 can't go from, you know, say -- they're volunteers and you don't  
21 fly every day in relocation flights and things like that. So  
22 approximately how long would it take for someone to check out as a  
23 second in command on the B-25?

24 A. That's a widely varying deal because we're in a hundred  
25 different cities and a number of pilots, but I would say, you

1 know, say it was a slow week, they could fill up on a Monday, do  
2 ground, do the Monday relo flight, and then do the Wednesday relo  
3 flight and that would be completed for rides on that Wednesday  
4 afternoon. But, I mean, if we specifically spent the entire day  
5 training, we could easily do it in a day.

6 Q. All right.

7 A. But generally, including our ground school, which we do  
8 annually for initial and recurrent for everybody, where we do  
9 probably 8 to 16 hours of ground training.

10 Q. Can you issue type ratings on a B-25?

11 A. I cannot.

12 Q. Who does the type rating rides on the B-25, B-24 and B-17?

13 A. Mark Henley.

14 Q. He is, so he is --

15 A. And we have --

16 Q. I'm sorry, I interrupted you. Can you repeat that? The  
17 question was who does the type rating rides on the B-25, B-24 and  
18 B-17. And I believe you said Mark Henley; is that correct? And  
19 then I interrupted you.

20 A. Yes, Mark Henley. And then we've had a gentleman named  
21 Charlie Tillman do a few of our other check rides, as well.

22 Q. Is Charlie Tillman still flying for the Foundation?

23 A. He is not.

24 Q. Okay. And how many volunteer pilots do you have flying for  
25 the Foundation, approximately?

1 A. Approximately 50 to 55.

2 Q. And when you -- as part of the chief pilot, you said some of  
3 your duties and responsibilities are scheduling. How do you go  
4 about scheduling these people? Do they just -- well, you tell me.  
5 I don't want to put words in your mouth. Tell me how you schedule  
6 these people.

7 A. Basically, I keep track of tour stops and I call people, and  
8 they call me with their dates available. And if I don't have  
9 people calling me that want to come out, I call people to try to  
10 fill holes. I try to keep every airplane scheduled throughout the  
11 year.

12 Q. Do you ever have a difficult time filling holes in the  
13 schedule as far as getting pilots to be on scene to fly?

14 A. I do. And in that case, generally what I will do is just fly  
15 multiple airplanes myself, or just don't fly the airplane.

16 Q. Okay.

17 A. It's certainly not an issue at one location, but sometimes I  
18 have to fly an airplane to the next stop and then come back on an  
19 airliner to get another airplane.

20 Q. Are you current on the -- as of October 2, were you current  
21 on the B-17?

22 A. Yes.

23 Q. Who gave you your last pilot proficiency exam?

24 A. Mark Henley.

25 Q. Did Mark Henley also give you your last pilot proficiency

1 exam on the B-24 and B-25?

2 A. The B-25, yes. The B-24, we have had interpretations from  
3 the FAA stating that we don't actually need to do them because  
4 it's an experimental airplane and technically single pilot.

5 Q. The B-24 is a single-pilot airplane; is that what you're  
6 saying?

7 A. Because it doesn't have a GPS, yeah. We've had  
8 interpretations for the last couple years that it does not require  
9 PPEs.

10 Q. Okay. All right. So you did not take a 2019 PPE ride in the  
11 B-24; is that correct?

12 A. That's correct.

13 Q. Okay. Rob, how'd you first get your pilots license? You  
14 have private, commercial, instrument, and multi-engine and all  
15 that stuff. How'd you start in flying? How'd you start out?

16 A. My mom is an aviation insurance agent, so I've always been  
17 around airplanes in her office, around the airport, and kind of  
18 worked my way into it. I soloed my 16th birthday, and got my  
19 helicopter and airplane on my 17th, and just kept flying.

20 Q. Okay. Excellent. Very good. When did you first -- you said  
21 in 2015. How did you hear about the Collings Foundation and their  
22 tour and things like that?

23 A. So I'm from New Hampshire, and the Foundation is based in  
24 Massachusetts, and I always went to the local reenactment events;  
25 always came out to the airport since I was very young and they

1 came through with the airplanes. I've always known about them.  
2 But as I got into the industry, I started flying some warbirds and  
3 Stearmans and T-6s and stuff and met people involved, and worked  
4 my in through volunteering.

5 Q. All right. Let's talk about a little bit of the structure of  
6 the Collings Foundation. There's not many full-time employees, is  
7 my understanding. As far as the flight operations there, you are  
8 the chief pilot, and are there other full-time employees in the  
9 flight operations division, if you will?

10 A. Yes. I mean, the executive director is involved in flight  
11 operations. We have another chief pilot for the Vietnam memorial  
12 flight, Will Dismukes (ph.), who we can kind of consider full time  
13 in flight operations. The director of operations is full time.

14 Q. Is Will Dismukes a paid employee or a volunteer employee?

15 A. He is a volunteer.

16 Q. All right. Does Mr. Dismukes do any maintenance on the  
17 airplanes?

18 A. Nope, not that I'm aware of. No.

19 Q. Is he a --

20 A. I'm sure he --

21 Q. Is he a mechanic or does he have a mechanic's license?

22 A. He has an AMP. And, you know, everyone on the road helps the  
23 mechanics with maintenance, as in handing them tools, but no, he  
24 hasn't signed off or repaired an airplane.

25 Q. All right. Is there anyone else in flight operations that's

1 a full-time employee that is a paid employee other than yourself?

2 A. No.

3 Q. Okay. The captain of the accident flight was Captain  
4 McCauley, as we call him, Mac. Is my understanding correct that  
5 he was the head of maintenance for the Foundation?

6 A. That is correct. Yeah, he was the director of maintenance.

7 Q. Was the director of maintenance a paid position or a  
8 volunteer position?

9 A. It was a full-time volunteer position. Yeah, he was an  
10 employee but a volunteer. So I mean, we offered him pay but he  
11 turned it down.

12 Q. Okay. Let's talk about, unfortunately, the day of the  
13 accident. How many pilots were you -- how many pilots did you  
14 have at the airport the day of the accident?

15 A. I believe four.

16 Q. And who were they, please?

17 A. We had the two accident pilots, Christian Reese (ph.), Joanna  
18 Davidson, and myself.

19 Q. All right. And obviously, you've got enough to crew the B-  
20 17, and then you've got enough -- what was the other flights? Was  
21 the B-24 scheduled to fly, or the B-25 scheduled to fly? Or who  
22 was -- what was the flying schedule like for that day?

23 A. That day, I don't believe there were any B-25 flights  
24 scheduled. And there was a B-24 flight scheduled, I think in the  
25 evening.



1 Q. Okay. You were at the airport. How did you first hear about  
2 the B-17 accident?

3 A. I was in the pilots lounge and I heard the wife of one of the  
4 passengers crying.

5 Q. And what did you do then?

6 A. Got in my rental car and tried to drive around the airport to  
7 get to it.

8 Q. And were you successful?

9 A. I was not. I ended up going back to the FBO and getting in a  
10 random police car that was responding, and he drove me to the  
11 accident site.

12 Q. When you got there, I believe you have indicated to us in  
13 previous discussions that you had a brief discussion with Mitch  
14 Melton; is that correct?

15 A. Yeah. Actually, when I got in the police car, which was just  
16 outside the gate, next to TAC Air, he was in the back of an  
17 ambulance next to the police car.

18 Q. Okay. And did you talk to him in the ambulance?

19 A. I saw that it was him, said, hey, are you okay? And he was  
20 like, yeah, I'm going to the hospital, and then I got in the  
21 police car.

22 Q. Okay.

23 A. That's what I recall of that conversation.

24 Q. Training, let's talk a little bit about training. What do  
25 you do in your yearly pilot proficiency examination check ride?

1 Kind of talk me through a B-17 pilot proficiency examination check  
2 ride. Tell me the hoops you jump through for that.

3 A. Are you referring to the FAR 6158 check ride or the LHFE  
4 check ride?

5 Q. No, the 6158, please.

6 A. So it's everything from the initial issuance of the type  
7 rating, basically. And you could do it -- that airplane was no  
8 longer IFR certified in some ways. We would do them VFR only at  
9 times. And it was basically an ETP check ride, but VFR only. So  
10 that was stalls, deep turns, emergency descent, go around, no-flap  
11 or partial-flap landing, engine-out landing, and engine-out missed  
12 occasionally. Actually, yeah, that was in the PTS, and then a  
13 two-engine landing.

14 Q. Would the engines be actually shut down, or would they  
15 just -- and the engine feathered, or would you just have them at  
16 idle, on the engine out work?

17 A. In landings, you would have them at idle, but you would also  
18 accomplish an in-flight engine shutdown and restart above 4,000  
19 feet.

20 Q. When you say engine shutdown, that includes the feathering of  
21 the engine?

22 A. Correct. Yeah. Yep, but you couldn't do that, you wouldn't  
23 do that with other PTS items close to the ground; that's illegal.

24 Q. All right. Let's talk about a two-engine inoperative  
25 approach. You've got two engines shut down on the right side. In

1 my example, we'll have Engines 3 and 4 shut down. And you're on a  
2 downwind leg. What would be your typical air speed? And I say  
3 typical. I mean, you probably took off at, I believe, 44,000  
4 pounds or something like that, on this flight out of Bradley. And  
5 that's an estimate on my part.

6 But what would be a typical downwind air speed with two  
7 engines inoperative? And I'm going to take you around the traffic  
8 pattern, downwind, base leg and final, and when we're going to put  
9 the gear down, and when we're going to put the flaps down, if any,  
10 and things like that. So talk me through a downwind. What air  
11 speed would we be looking for at this point in time?

12 A. I mean, whatever you could get. I would hold as much as I  
13 could up until that point. I mean, it really depends. If you  
14 start it with a low energy state, you're going to hold whatever  
15 you have, you're not going to accelerate 200 miles, but you can  
16 maintain. I mean, I would like to be 150 miles an hour --

17 Q. All right. And you can't -- if you had a low energy state,  
18 can you maintain straight and level flight with two engines  
19 inoperative?

20 A. It depends on the conditions, the weight, how slow you were  
21 to start with.

22 Q. All right.

23 A. Maybe.

24 Q. Okay.

25 A. Would be the best answer I could give you.

1 Q. Okay. When would we put our landing gear down for this  
2 fictitious approach that we're flying right now, base leg, final?  
3 Is there kind of a rote answer, or it just depends on your energy  
4 state?

5 A. I wouldn't say there's a rote answer, really, with any  
6 procedures with this airplane, in this regard. I, personally,  
7 maybe base or whenever I have the runway made for certain.

8 Q. Okay.

9 A. It does take a minute to -- so you want to account for that,  
10 but --

11 Q. Sure. What about flap settings? Would you use any flaps on  
12 this approach?

13 A. There's flip-type flaps, so you're not really adding much  
14 lift. Again, I'd probably add them if I was in a high energy  
15 state with the runway made.

16 Q. Okay.

17 A. But not before that.

18 Q. All right. Rob, had you flown much with the copilot on the  
19 flight?

20 A. I --

21 Q. Mike Foster?

22 A. -- worked with Mike Foster quite a bit in other airplanes,  
23 the 24 and the 25, including 2 days before the accident.

24 Q. Did Mike Foster have much time in the B-17?

25 A. Yeah, I would say he probably had 50, 75 hours, if I had to

1 guess.

2 Q. And how long had Mike been volunteering with the Foundation?

3 A. As long as I have, actually. He came out, probably, 2016 the  
4 first time.

5 Q. Okay. All right. You had flown with Mac. Did you do --  
6 well, was Mac already rated in the B-17 when you came on to the  
7 Foundation?

8 A. He was, yeah. He's been rated in the B-17 for 15 years.

9 Q. Have you done any of Mac's yearly training on the B-17?

10 A. I have, yeah.

11 Q. How would you describe Mac as a pilot on the B-17?

12 A. Masterful in the airplane. It was never even -- I don't  
13 know, he was one with the airplane.

14 Q. Okay.

15 A. I mean, he lived in that thing; cleaned it, worked on it,  
16 flew it. Yeah, I mean, I can't think of any negative aspect of  
17 his flying performance.

18 Q. Was he a stickler for details?

19 A. Absolutely.

20 Q. Did he use --

21 A. Yeah, every single flight.

22 Q. Did he use a checklist?

23 A. He did.

24 Q. And when I say a checklist, I'm making the assumption that  
25 you have a checklist for engine start, taxi, takeoff, approach,

1 landing. Am I correct that that checklist exists?

2 A. We do. I think I sent it to you. I don't know if that -- I  
3 did send it to you. I'm not sure if it went through or not. But  
4 yeah, we have a checklist for basically every phase of flights.

5 Q. All right. Good. All right. Rob, I'm going to turn the  
6 virtual mic over to Todd, and I'll have a second round, we'll have  
7 a second round of questions that are much less detailed and much  
8 less detail oriented. But for right now, that's all I have. And  
9 are you doing okay? Do you need to take a break or anything?

10 A. I'm good.

11 Q. Okay.

12 MR. ABRAMS: Then, Todd, I'll turn it over to you and you can  
13 run with it for the time being. The virtual mic is yours, Todd.

14 MR. GENTRY: Thank you very much, Warren.

15 BY MR. GENTRY:

16 Q. Thank you, Rob, for being here; appreciate your time. I just  
17 have about 10 questions, so we'll try to get through them quick.  
18 Has the Collings Foundation had any other airborne emergencies in  
19 the past year?

20 A. We have, yeah. We've had a couple shutdowns. We've had a  
21 hydraulic issue, a B-24. Little stuff. I mean, I think maybe two  
22 engine shutdowns in the last year.

23 Q. Do you remember what airplanes those were on, or what  
24 aircrafts?

25 A. One on the B-17 and one on the B-25.

1 Q. Okay. Great. Do you know what engine on the B-17 that would  
2 have had the shutdown?

3 A. Number 2.

4 Q. Number 2. Okay. Thank you. Was that engine replaced? Or  
5 is the engine that was on it during October, was that the same  
6 engine?

7 A. It was the same engine, yeah. It was the cylinder that had  
8 failed and was causing a shake and an oil leak. So it was elected  
9 to shut down the engine.

10 Q. Okay. Great. Thank you very much. So you've talked about  
11 training for the pilots on annual training and other stuff, too,  
12 as well. I believe you said you had ground training for the new  
13 pilots: A couple of relocation flights and then they go through a  
14 proficiency check ride; is that correct?

15 A. Yeah, combined with relocation flights on a lot of occasions.

16 Q. Is there any number of relocation flights or training flights  
17 that you require? Is there a minimum number or is it just based  
18 on proficiency?

19 A. Based on proficiency and the eligibility per our pilot  
20 qualifications and training manual.

21 Q. Okay. So -- okay, that would make sense. I understand that.  
22 So on the ground training that you provide, who teaches that? Is  
23 it -- yeah, just who teaches the ground training to the pilots?

24 A. I generally do the whole thing and teach 70 percent of it,  
25 and then it would probably be Rob Collings for the rest of it.

1 Q. Okay. And is that held any place specifically or is it, you  
2 know, where --

3 A. Yeah, so the general way it works, and every year we have a  
4 ground school that we put on. Stowe, Massachusetts, is where it's  
5 been the last 2 years. Before that, it's been in Florida. We've  
6 elected to hold it at our new museum the past couple years. Where  
7 everybody comes in and we have formal presentations from 9 to 5  
8 for 2 days and complete training records for everybody.

9 Now, if someone can't make the ground school, that doesn't  
10 necessarily disqualify them, they just have to go study the  
11 presentations on their own. And then when they come out on the  
12 tour for the first time, I go over all of the items that they went  
13 over, and go over the manual system, and then fill out the record.

14 Q. Okay.

15 A. We prefer everybody to make it to the ground school, but  
16 everybody receives the training.

17 Q. Right. Okay. So, do you remember what the agenda was for  
18 this past year's annual training?

19 A. Yeah, usually, we start out with a safety presentation and an  
20 intro. And after that, we talk about the manuals for the first  
21 half of the day, and then we go into aircraft-specific PowerPoints  
22 interlaid with different safety items.

23 Q. Okay. So --

24 A. Go ahead.

25 Q. Sorry. I'm sorry I stepped on you, Rob.



1 A. No problem. You go ahead.

2 Q. The aircraft-specific stuff, so do you go through every  
3 aircraft, or do you base your training on the type of airplane you  
4 plan on teaching these people to fly, or, you know, how does that  
5 work?

6 A. We go through every aircraft. And the people themselves  
7 cannot put in for a certain airplane if they want to, but  
8 generally, everybody comes to ground school and goes through every  
9 airplane. Even if they're not going to be flying that other  
10 airplane, it helps them to know how we operate it so they can be  
11 ground personnel or crew chiefs.

12 Even for the people who don't fly the fighters, and the  
13 fighters are not under LHFE, it's nice for them to see what we're  
14 talking about; it's nice for the fighter people who don't fly LHFE  
15 to see what we're doing with the LHFE manual so they can help, you  
16 know, protect our exemption letter.

17 Q. Okay. So you said earlier that ground training was between 8  
18 and 16 hours. Do you try to fit that in, in a week's time, or how  
19 does that work?

20 A. Two days. So, yeah, like 9 to 5 for 2 days, basically, is  
21 our ground school.

22 Q. Okay.

23 A. And then, again, if people don't make it, they go through all  
24 the presentations on their own time, take a test, and then I go  
25 over the test and the manuals and do ground training with them

1 before they fly the airplane.

2 Q. Okay. Okay, great. Thank you.

3 A. So then I think I sent, as part of the email with the  
4 checklist, I sent the B-17 presentation to Warren. Todd, do you  
5 want to touch base after this phone call sometime when I can get  
6 you all that stuff? I'm not sure if you had gotten it from Warren  
7 or not.

8 MR. ABRAMS: I have not --

9 MR. GENTRY: No, no, that's okay.

10 MR. ABRAMS: I have not gotten it, Rob.

11 So, anyway, I'm sorry to interrupt, Todd.

12 But, yeah, we'll take that offline after the interview.

13 Thank you.

14 BY MR. GENTRY:

15 Q. All right. No, that's fine. I will get everything through  
16 Warren, whatever it takes. So the other questions I have, who  
17 does the passenger safety brief before the LHFE flights?

18 A. It's up to the PIC to make sure the briefing gets done, and a  
19 lot of the times it's either the PIC or the crew chief.

20 Q. Okay. And you mentioned that on the tragic day of the  
21 accident, that you were in the pilot lounge while they were flying  
22 the B-17. How do you -- how does your operational control work?  
23 Is there a formal system for that?

24 A. Again?

25 Q. Is there a formal system that you have for that?

1 A. I mean, the operational control is the manual system and the  
2 fact that I've scheduled and trained the pilots and dispatched the  
3 flights. I don't necessarily think that means I have to be  
4 standing out there, watching each airplane fly. The operational  
5 control starts with the executive director and then goes down to  
6 the DO, myself, the safety officer, and training on the manual  
7 system. Do you have a more specific question?

8 Q. Yeah, I understand. That's fine. I understand. So is there  
9 a weight and balance form for the flights?

10 A. There is, in the airplane. We have come up with an older  
11 weight and balance for your review, I believe, recently. But the  
12 weight and balances are generally all kept in the airplanes. I'm  
13 not sure if you guys recovered one or not.

14 Q. No. And how often are they done?

15 A. Every year. At annual, they're reviewed.

16 Q. Okay. And so we know there's no, obviously, simulators for  
17 these airplanes, so how do you train for emergency procedures  
18 other than the 6158 check ride stuff that you perform? How do you  
19 train for emergency procedures?

20 A. You're saying outside of the airplane how do we train for  
21 them?

22 Q. No, no, not necessarily. I'm just trying to say, you know, I  
23 know you do the 6158 rides, but how do you train for emergency  
24 procedures other than that? Do you -- I'll give an example. Do  
25 you take training flights where you say this is not a 6158 check

1 ride but I want to go up and I want to secure an engine and then I  
2 want to do practice stalls or, you know, those kinds of things?

3 Do you have any --

4 A. Yeah, so the training you talked about earlier, when we were  
5 talking about the relocation flights, that's more what I was  
6 talking about. The 6158 flights are less frequent because most --  
7 the training we talked about earlier is that training you're  
8 referring to; it's the LHFE training. 6158, most of our people  
9 are airline pilots or corporate pilots, so they only have to do it  
10 every other year in a specific airplane. They have their yearly  
11 multi-crew check ride from the airline. So what you're referring  
12 to we do as part of the exemption letter, under limitations.

13 Q. Okay. Thank you.

14 A. Yep.

15 Q. Have you ever gone up and conducted observational flight  
16 operations when you were not the pilot or a crewmember on the  
17 aircraft?

18 A. As in giving a check ride that way or auditing just as  
19 management watching a flight?

20 Q. Yes, as an observation, not giving a check ride.

21 A. Not formally, no. I mean, I've given check rides not at a  
22 pilot station before, but no, I have not formally gone up and  
23 audited random flights. Generally, there's not a crew station to  
24 do so.

25 Q. Right. I just have one more question, Rob, and I do

1 appreciate your time. How do the crews debrief after a flight or  
2 after a day? How do they work that scenario?

3 A. Generally, you would just debrief right after you shut down  
4 and the passengers exit the airplane if any abnormal items came  
5 up. I mean, every day, at the end of the day, we would all meet  
6 as a crew and talk about the day, as well, when we got to the  
7 hotel.

8 Q. Okay. Thank you very much, Rob. I appreciate it.

9 A. Thank you, Todd.

10 MR. ABRAMS: Sabrina, you have the virtual mic.

11 MS. WOODS: Thank you, Warren.

12 BY MS. WOODS:

13 Q. And thank you once again, Rob, for being here and taking time  
14 out to do this. I would like to go back to one more aspect of  
15 training. Warren and Todd have covered a lot and they've gotten  
16 most of what I was looking for, but my additional question is:  
17 Because you have such a large volunteer force who largely come  
18 together and then they separate and they might not see each other  
19 for a while, how do you address CRM in your training?

20 A. Generally, we have a CRM presentation additional to a safety  
21 presentation every ground school where we discuss that, and  
22 there's even a CRM discussion guide in the back of our checklist.  
23 It is a topic that we try to cover as much as possible. We  
24 usually have a safety -- the safety office or a representative  
25 have an in-depth CRM discussion at ground school.

1 Q. What are some of the things that you cover in that in-depth  
2 briefing specific to CRM?

3 A. Basically, we talk about having an open door policy when it  
4 comes to management, and in the cockpit. We want everyone to feel  
5 comfortable with everything that's going on and have pilots make  
6 decisions together. Anything you do in the cockpit should be  
7 agreed upon with everybody, all three members. I can probably get  
8 you some specific CRM presentations that we've given before if  
9 you'd like.

10 Q. Okay. Thank you for that. And so you mentioned about  
11 everyone making the decisions together and everything should be  
12 agreed upon. So, when do you discuss -- if there should be an  
13 emergency, what is your expectation for who handles what, and when  
14 is that discussed?

15 A. So in training that's discussed.

16 Q. So yeah. So two parts. One, in training, do you discuss who  
17 should handle what in case of emergency? And then what is your  
18 expectation, you, as the chief pilot, on who should handle what?

19 A. Could you be more specific into -- are you talking about in  
20 the cockpit immediately, who should be doing what with what  
21 control, or --

22 Q. Correct.

23 A. Yeah. So, I mean, when we go train in the airplanes and I  
24 give emergency procedure training, whoever is receiving the  
25 training can be flying pilot, and then I'm acting as non-flying

1 pilot, and that, like training any other maneuver, is telling  
2 people how to react to who should be doing what. And in the  
3 checklist, there's command and response. So flying pilot does  
4 this, non-flying pilot does this.

5 Q. So this is largely checklist driven?

6 A. Say again?

7 Q. So this is largely checklist driven?

8 A. Yeah, checklist and experience driven. I mean, everyone,  
9 pretty much everyone with a multi-engine rating knows the memory  
10 items for engine failure and it's a pretty easy crew discussion on  
11 who's going to do what. It's just something that you train and  
12 you know how to do, and then reference the checklist.

13 Q. Okay. Thank you. So moving on, still kind of under the  
14 realm of CRM, in your experience dealing with your volunteer  
15 force, how would you say the interactions of most of the crew are  
16 considering, again, they might meet, fly for a season, and the  
17 never see each other for a while?

18 A. Oh, the crew gets along every well. I'm probably going to go  
19 back into a question that Warren asked earlier about CAF requiring  
20 a financial donation to operate their airplanes. We pick our crew  
21 from their experience, their proficiency and how well they get  
22 along with each other. We don't have people that won't  
23 participate in CRM. We are very selective in terms of our pilot  
24 group. So I think everyone gets along great. Everyone gets along  
25 great in the cockpit.

1 Q. And do you find they are very receptive to the training that  
2 you offer?

3 A. I do. Yeah, absolutely.

4 Q. Okay. Thank you. So moving to passenger handling and back  
5 to those emergency situations, what are the expectations in  
6 dealing with the passengers should an emergency situation arise?

7 A. It's briefed as the crew chief's job first. And if the crew  
8 chief is unable, then, I mean, I guess it would be the second-in-  
9 command's job. But that's the reason we carry a crew chief.

10 Q. So to confirm, it's the crew chief's job, essentially, to  
11 take care of the passengers, get them sorted where they need to  
12 be, et cetera?

13 A. Correct.

14 Q. And do you train for this?

15 A. Mm-hmm. Absolutely.

16 Q. Okay, just a couple of more questions, Rob, bear with me. As  
17 the chief pilot, how comfortable do you feel giving directions  
18 when you're giving those check rides, when you're presenting this  
19 information, when you're having your safety briefings? How  
20 comfortable do you feel giving directions to, once again, this  
21 largely volunteer workforce that you may see every once in a  
22 while?

23 A. Very comfortable. Everyone's here for a reason. They want  
24 to fly the airplanes and they want to be involved. So they're  
25 very receptive and I'm very comfortable.



1 Q. Okay. How comfortable do you feel receiving direction from  
2 other people, you personally?

3 A. Yeah, no, I'm very comfortable. I take check rides from some  
4 of my pilots occasionally, as I have to. I can't give myself a  
5 check ride. And I appreciate as much input as possible. We try  
6 to have a very open door safety policy. That goes all the way  
7 from Rob Collings all the way to every volunteer.

8 Q. So if you or one of your volunteers found something that they  
9 didn't necessarily agree with or if they had an idea for making  
10 the situation better, is that something you feel you could take up  
11 the chain and that it would be received well?

12 A. Mm-hmm. Hundred percent. And Rob Collings is a pilot who's  
13 been flying for 20 years. He understands everything that we do  
14 out there, and safety is his number one priority, as well.

15 Q. Okay. Excellent. Thanks, Rob. That's all the questions I  
16 have.

17 MS. WOODS: Thank you, Warren.

18 MR. ABRAMS: Rob, we have a second round of questions, and  
19 you'll be happy to know that I have no follow-up questions for you  
20 for the interview. After the interview is over, I do have a  
21 couple of requests, but that's not germane to the interview. But  
22 I will turn it back over to Todd. Todd, you got any follow-up  
23 questions for Rob?

24 MR. GENTRY: I just have one, if it's not -- it has to do  
25 with spark plugs.

1 BY MR. GENTRY:

2 Q. So, do you know how to clean and re-gap the plugs? Or how do  
3 you guys handle that on the road?

4 A. I do know how to do that. Generally, what we would do a lot  
5 of the time is just replace them and send them off to be cleaned  
6 and re-gapped. For the longest time, we had a sponsorship where  
7 we received -- free spark plugs. But generally, we have an extra  
8 set. We'll just change them all out and send the other set off to  
9 be cleaned and re-gapped.

10 Q. Okay. So you just don't throw them away?

11 A. I mean, we have definitely thrown them away in cases if they  
12 were bad. But no, generally not. And then I honestly don't know  
13 the numbers that we get back from being sent off.

14 Q. No, that's fine. Thank you so much. That's all I have.

15 MR. ABRAMS: Sabrina, do you have any follow up?

16 MS. WOODS: Yes, I'm sorry. One more quick question, which  
17 is:

18 BY MS. WOODS:

19 Q. Rob, can you tell me, in your interpretations, what SMS is,  
20 and is it something that Collings Foundation incorporates within  
21 their operation?

22 A. Safety Management System. It's a couple things. One, it's  
23 the culture within the Foundation to try to do everything as safe  
24 as possible. And two, it's the manual that talks about how we do  
25 that and that we implement.

1           Our biggest item, I think, that we utilize in the Safety  
2 Management System is our online anonymous reporting system. So  
3 any pilot can go through a link and fill out an anonymous report.  
4 They can put an email address on there for the safety officer to  
5 contact them, and then that would identify the folks that the --  
6 can make recommendations to management based off of reports. So I  
7 think that's the biggest portion of the SMS that we utilize the  
8 most. But like I said, it ranges from the entire culture of the  
9 Foundation to the manuals.

10 Q.   And do you find that that anonymous reporting system gets  
11 used?

12 A.   Yeah. Yep. We're just reviewing it for a local FAA audit.  
13 There's definitely a large number of reports. Not a large number,  
14 but it's definitely utilized. And then the safety --

15 Q.   And who takes part in reviewing that?

16 A.   Will Dismukes, our safety officer. Because he kind of helped  
17 come up with the system and he manages it. And Will's, I don't  
18 know if you know, Will's father is Dr. Key (ph.) Dismukes. He was  
19 the chief human factor scientist at NASA and came up with the NASA  
20 reporting form. So Will's family has a lot of background in  
21 safety. And he's also a B-25 captain with the Foundation.

22 Q.   Excellent. Thank you. I have no further questions.

23           MS. WOODS: Thanks, Warren.

24           BY MR. ABRAMS:

25 Q.   Rob, I do have one question. Are the engines on the B-17 and

1 the B-24 the same engines?

2 A. They are not. They are right 1820s on the B-17, and -- with  
3 1830s in the B-24.

4 Q. Got it. All right. It wasn't an oral exam. I was happy  
5 with no, they're not, but thanks for clarifying that for me. I  
6 have no further questions, Rob.

7 MR. ABRAMS: Todd, last chance. Sabrina?

8 MR. GENTRY: No, sir. Thank you.

9 MS. WOODS: None for me. Thank you.

10 MR. ABRAMS: Rob, I want to extend my thanks as well. I know  
11 we've had some conversations in the past. I appreciate you  
12 allowing us to talk to you again, at this time.

13 And if there are no further questions, I will stop the  
14 recordings. But I would like everyone to stay on the line because  
15 what I have to say -- it's just general questions. But no further  
16 questions. I'll stop the recording.

17 (Whereupon, at 10:48 a.m., 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:            COLLINGS FOUNDATION BOEING B-17G  
                                      CRASH AT BRADLEY INTERNATIONAL  
                                      AIRPORT, WINDSOR LOCKS, CONNECTICUT,  
                                      OCTOBER 2, 2019  
                                      Interview of Robert Pinksten

ACCIDENT NO.:                ERA20MA001

PLACE:                        Via telephone

DATE:                         January 15, 2020

was held according to the record, and that this is the original,  
complete, true and accurate transcript which has been transcribed  
to the best of my skill and ability.

[Redacted signature block]

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

\* \* \* \* \*

Investigation of: \*

\*

COLLINGS FOUNDATION BOEING B-17G \*

CRASH AT BRADLEY INTERNATIONAL \* Accident No.: ERA20MA001

AIRPORT, WINDSOR LOCKS, CONNECTICUT, \*

OCTOBER 2, 2019 \*

\*

\* \* \* \* \*

Interview of: WILL DISMUKES, SMS Safety Officer  
Collings Foundation

Wednesday,  
January 29, 2020

## APPEARANCES:

WARREN ABRAMS, Air Safety Investigator  
National Transportation Safety Board

TODD GENTRY, Accident Investigator  
AVP-100  
Federal Aviation Administration (FAA)

SABRINA WOODS, Accident Investigator  
AVP-100  
Federal Aviation Administration

DENNY SHUPE, Attorney  
Schnader Harrison Segal & Lewis  
(On behalf of Mr. Dismukes)

<u>ITEM</u>	<u>I N D E X</u>	<u>PAGE</u>
Interview of Will Dismukes:		
By Mr. Abrams		6
By Mr. Gentry		25
By Ms. Woods		30
By Mr. Abrams		36
By Mr. Gentry		42
By Ms. Woods		45



I N T E R V I E W

1  
2 MR. ABRAMS: Okay. Will, the recorders are on and we are  
3 recording at this point going forward.

4 As I said, Will, I'm Warren Abrams with the National  
5 Transportation Safety Board. I'm an air safety investigator in  
6 the Operations Division, trying to figure out what happened with  
7 the B-17 at Hartford, Connecticut, on October 2nd.

8 We do have several other parties to this investigation,  
9 namely the FAA. And I'm going to let them introduce themselves to  
10 you so you'll know who is on the line and who's talking to you,  
11 and what their role is in this investigation as far as answering  
12 questions.

13 Todd, are you at a point you can introduce yourself?

14 MR. GENTRY: Absolutely. Will, my name is Todd Gentry. I'm  
15 from AVP-100, which is basically FAA Accident Investigations. And  
16 I'm here only to see if the FAA needs to change anything for  
17 future safety reasons, not for any other investigative or  
18 enforcement actions. So, feel free to talk openly because  
19 anything you say to us cannot be used in enforcement, just to make  
20 sure everything's safe. And I think that's it, thank you.

21 MR. ABRAMS: Sabrina?

22 MS. WOODS: Hello. Thank you, Will, for joining us. My name  
23 is Sabrina Woods, and I work in conjunction with Todd, also for  
24 the Office of Accident Investigation and Prevention under AVP-100.  
25 My role here is as a human factors and human performance

1 specialist. So what I'm looking at is just some of the day-to-day  
2 decision making, some of the policies that you might have, and  
3 what you have in place, so I'll be able to (indiscernible)  
4 yourself and the pilots that you work with and aid them in their  
5 decision-making process. And then, I get that information back to  
6 Todd, and of course supporting Warren, so that we can also make  
7 better decisions for the future and how we might need to change  
8 things.

9 MR. ABRAMS: Will, that's the threesome. We're the  
10 triumvirate. We'll be asking questions today. You're also  
11 allowed, Will, to have someone represent you. Do you have a  
12 general counsel to represent you today?

13 MR. DISMUKES: Yes, I do. I have Denny Shupe.

14 MR. ABRAMS: And I believe Denny's on the line.

15 Denny, will you introduce yourself, please?

16 MR. SHUPE: Yes. This is Denny Shupe from Schnader,  
17 Harrison, Segal, and Lewis. And I'm in Philadelphia today.

18 MR. ABRAMS: Thank you, Denny.

19 Will, I have your name is Will. I presume that's short for  
20 something else, but I'm not going to presume that. If you would,  
21 if you will state your full name, full legal name, and spell your  
22 last name, please.

23 MR. DISMUKES: Absolutely. It's William Jackson Dismukes,  
24 spelled D-i-s-m-u-k-e-s.

25 MR. ABRAMS: Thank you. And can we call you Will; is that

1 okay?

2 MR. DISMUKES: Yep, I go by Will.

3 MR. ABRAMS: Okay, great.

4 INTERVIEW OF WILL DISMUKES

5 BY MR. ABRAMS:

6 Q. Will, how old are you?

7 A. I'm 51 years old.

8 Q. And do you fly for the -- do you volunteer to fly for the  
9 Collings Foundation from time to time?

10 A. Yes, I do.

11 Q. And are you listed as the safety officer for the Collings  
12 Foundation on their SMS documentation?

13 A. Yes, I am.

14 Q. Good. Excellent. Okay, we got the preliminaries out of the  
15 way. Will, how did you learn to fly? Give us a little history  
16 about your flying background.

17 A. Certainly. My father, Dr. Key Dismukes, taught me to fly  
18 when I was a teenager. I soloed in gliders when I was 14,  
19 licensed as a teenager, and I started a professional career as a  
20 mechanic and a CFI at 18 years old.

21 And so, I've been doing it ever since. Most of that time has  
22 been with the airlines. I'm currently flying at American  
23 Airlines. I'm a check airman on the Airbus 320 series fleet. And  
24 I also did 22 years in the United States Air Force, primarily as a  
25 flight engineer and a mechanic at the beginning. And I also have

1 a history in safety at the airlines. So prior to becoming a check  
2 airman in 2020, I worked in various parts of the union and the  
3 airline safety department.

4 Q. Don't leave us hanging. Fill us in on what you did safety-  
5 wise at the airline.

6 A. Oh, okay. All right. I don't want to take up too much of  
7 your time. But, yes, I started with the implementation of FAR  
8 117. The union needed volunteers in that. And I had an interest  
9 in that I had volunteered as a guinea pig for NASA human factors  
10 fatigue studies for numerous years prior to that. So I had a  
11 little interest, so I ended up just raising my hand, and I served  
12 on the union's flight time duty time during the year and a half or  
13 so it took us to implement 117. Which included a mentor of mine,  
14 the committee head who helped write the regulation. He was on the  
15 ARC committee. So I had a real good foundation there, and after  
16 that -- so that was about a year and a half. And then, after  
17 that, I switched over to ASAP and the company had me do about a  
18 year of analysis where I was a full-time ASAP analyst, as well as  
19 my pilot duties.

20 And then, when we started -- I guess it's almost 5 years ago  
21 now American Airlines decided to do a continuous LOSA program.  
22 And I was the first LOSA who ever trained up for that. And I did  
23 it all the way up until 2018. I was asked to -- myself and one  
24 other LOSA observer was asked to start a new program in American  
25 Airlines. That originally came under the title of Safety II,

1 which is -- we renamed it to the Learning Improvement Team. It's  
2 basically resilience. Academic professors and institutions have  
3 this idea of resilience in complex operations, and we're now going  
4 to try to put it in place at American Airlines. So, I did that  
5 for a solid year before I got hired as a check airman in that very  
6 interesting project. But still got a long ways to go. But if  
7 it's, in fact it's implemented, it would be very interested in how  
8 airlines deal with complex operations and learning from it and  
9 adjusting and adapting to it.

10 Q. Certainly.

11 A. (Indiscernible) got hired as a check airman, so that's my --  
12 that's end of my safety at American for a while, because I'll  
13 being doing training. We're very busy in the training department.

14 Q. Certainly. Now, you had to step down from a LOSA observer  
15 when you got to become a line check airman; is that correct?

16 A. That's correct.

17 Q. Yeah. Most places you cannot do both. You're jaded in your  
18 observations as a LOSA observer after you've been a line check  
19 airman.

20 A. That's correct.

21 Q. Human factors at NASA. So you had an in there with your  
22 father doing that. Tell me about some of those human factor  
23 studies you participated in at NASA.

24 A. The early ones were with Mark Rosekind, who worked for my  
25 dad, and it was fatigue studies. So it was stuff where I would be

1 the guinea pig in a simulator and they put temperature probes and  
2 such on me, and they would do fatigue studies. That was the  
3 earliest stuff. Later, I did some other stuff with my stepmother,  
4 Barbara Burian, who did a QRH study that I was an analyst on 73  
5 QRHs. So, and of course, there's always discussion at the dining  
6 room table that revolves around work. My parents are workaholics  
7 so there's always been some lively discussion around, which of  
8 course has brought on my interest in the area as I've proceeded  
9 through my career.

10 Q. Jumping from your airline career and your volunteer roles  
11 there to the Collings Foundation, how long have you been  
12 volunteering to fly for the Collings Foundation?

13 A. January 2016 was my first ground school, and that's when I  
14 began volunteering for Collings Foundation.

15 Q. And what airplane did you check out in first at the Collings  
16 Foundation?

17 A. It was the B-17.

18 Q. And that was the right seat on it or left seat on it?

19 A. The right seat.

20 Q. And did you ever fly -- we'll just jump right to the -- we'll  
21 cut right to the chase. Did you ever fly with Mac or Ernest  
22 McCauley?

23 A. Yes, I did. He was the first pilot I flew with at the  
24 Collings Foundation. He trained me in the B-17, the flight  
25 training. The ground training, of course, I had ground school

1 with Jim Harley, and then I had aircraft familiarization with  
2 Robert Pinksten, ground training, before my first flight. And  
3 then the first flight was with Mac.

4 Q. And how long did it take you to -- for Mac to sign you off,  
5 bless you, you're good to go, you're kind of safe for solo type  
6 thing? In other words, you can fly with anybody. How long did it  
7 take you to check out as a co-pilot on the B-17?

8 A. We did a training flight during the move, and I believe this  
9 would be, if I look at my log, February. We did a move down in  
10 Florida and he did the required training for SIC on that flight.  
11 And then, I was checked out as an SIC. And so, I continued to fly  
12 with him for another, I believe it was a 7-day stint, where we did  
13 LHFE flights and as well as new flights during that week that I  
14 was -- my first week on board.

15 Q. How many weeks a year now do you volunteer with the Collings  
16 Foundation approximately?

17 A. Yeah, so I've done 280 days for -- over the last 3 years.  
18 That gives you kind of an average. But it's sporadic when I have  
19 availability. I use my vacation nowadays, is my primary way of  
20 getting time off. And in the past, I had a little bit more  
21 flexibility as a line pilot to bid and drop trips. And so, I have  
22 a little less going forward than I had in the past, but I can't  
23 tell you what that works out to weeks per year now. That'll give  
24 a good idea. I mean, I'm a fairly active participant.

25 Q. Good. We'll stay with the airplanes. You went from the B-17

1 co-pilot to what seat in what airplane?

2 A. That spring of 2016, I got trained as a B-25 SIC. And then I  
3 remained on tour -- I had a large block of vacation that spring,  
4 so I remained on tour in the B-25 for a solid 3 or 4 months of  
5 active participation. And then, it was decided that I had enough  
6 experience to upgrade to the left seat of the B-25. And that was  
7 all in 2016. So I got my PIC and my type rating in July of 2016  
8 in the B-25.

9 Q. Have you flown the B-24 for the Collings Foundation?

10 A. Yes, I have.

11 Q. Talk me through that iteration: co-pilot, captain, whatever.

12 A. Co-pilot, SIC, my very first flight was April of 2016.

13 Because I was doing B-25 upgrade training, I didn't fly again  
14 until the next year, 2017. But I flew it for about a week in the  
15 spring of 2016 for the first time.

16 Q. And are you rated in the B-24?

17 A. SIC --

18 Q. SIC only.

19 A. -- in the B-24.

20 Q. Do you have a type rating in the B-17?

21 A. I have an SIC type rating in the B-17.

22 Q. All right. Approximately -- we'll go through the three  
23 airplanes. Approximately how much total flight time do you have  
24 in the B-17?

25 A. Twenty-five hours.



1 Q. And approximately how much total time do you have in the  
2 B-24?

3 A. Let's see. Did I even write that one down? I would have to  
4 go to my logbook to give you an exact number, but I believe I'm  
5 pushing 100 hours as SIC in the B-24.

6 Q. And last but not least, we've got the B-25. Approximately  
7 how much total time, SIC and PIC time, do you have in the B-25?

8 A. 295 hours.

9 Q. Excellent. Do you ever, as the safety officer for the  
10 Collings Foundation, do you ever volunteer your time and be on  
11 tour and not fly, or you always fly when you're on tour or when  
12 you show up? Do you always fly those weekends or weeks?

13 A. So yeah, when I'm on tour, there's of course days that we  
14 don't fly because we're not moving or we don't have rides, we  
15 don't have enough participants to have a ride. We still have a  
16 tour, so we still have plenty of ground activities that require  
17 volunteers. In fact, I would say we need more ground support than  
18 we do air support. And in addition to that -- so, yes, when I'm  
19 on tour, I'll come out for a stretch. And that includes ground  
20 volunteer duties as well as flight duties.

21 And then, in addition to that, I always help with the SMS  
22 program. So I'm not necessarily always on tour when I'm helping,  
23 because sometimes we'll have conference calls, and then there's  
24 our annual get-together where we have a ground school, as well as  
25 the chief pilot and executive director and myself always have a

1 day that we -- you know, somewhere in there around ground school  
2 that we have our get-together and talk about everything for the  
3 year.

4 Q. For 2020, have you already attended ground school?

5 A. I did not. The dates were in flux in December, and when I  
6 was -- bid on my schedule, and as a junior check airman, I just  
7 couldn't get those exact dates off. So I was not able to attend.

8 Q. So that means you are not on flight status yet until you have  
9 that ground school; is that a correct statement?

10 A. That's correct. So I have to, prior to volunteering as a  
11 flight -- as a pilot for flight duty, I need to get the training  
12 which I would receive probably from the chief pilot. He would  
13 give me the presentation, which I've seen some of them already,  
14 and then, he would do the ground training with me and do the  
15 endorsement.

16 Q. Did they run this -- did you preview this year's -- the 2020  
17 ground training prior to it going live?

18 A. I previewed the manual training presentation, the PowerPoint.  
19 That's the one that I have. I don't have the aircraft-specific  
20 ones, yet.

21 Q. Did you create any of the PowerPoint slides?

22 A. I did not.

23 Q. Do you know if the PowerPoint presentation was generated  
24 in-house or was it purchased from an outside vendor, or do you  
25 know?

1 A. I'm very certain that it's in-house. So I have not asked  
2 that specific question.

3 Q. Okay. Just curiosity. The Collings Foundation SMS Manual,  
4 Revision 1.2, dated 10 September 2017, this was the SMS program  
5 that was in effect at the time of the accident on October 2nd, so  
6 that's what I'm referring to when I ask these questions. How do  
7 you -- how many reports do you get a year of safety issues or  
8 concerns at the foundation?

9 A. The safety reporting system had been -- was implemented in  
10 2017, predates the approval of the SMS Manual. But in those 3  
11 years, we have 33 reports. And it's not consistent year to year  
12 exactly, but 33 was our total.

13 Q. Is there any specific trends that you're noticing? In other  
14 words, is it performance related? Is it operations related? Is  
15 it just safety related? Is it -- tell me where you're -- of the  
16 33, tell me where you're getting most of your reports about.

17 A. They're pretty sporadic. In terms of trends, there's nothing  
18 really stands out individually that I can see. There's some  
19 mechanical things, some bird strikes, you know, there's some of  
20 our spectators on the ground. So there's not any one year where  
21 anything was carried over to the next year with a big trend noted  
22 between any of them.

23 Q. Okay. How long have you been listed as the -- or how long  
24 have you been the safety officer for the SMS program at the  
25 Collings Foundation?

1 A. Since we got approval of the SMS program. So I guess that's  
2 2018.

3 Q. All right. Now, the manual was -- the revision of the manual  
4 is 2017, but you didn't get approval until 2018. Did I understand  
5 that correctly?

6 A. That's the way I understood it, yeah. So we started working  
7 on the manuals, and we worked on them all through 2017. And then,  
8 of course, they had to get approved when they were written.

9 Q. When you flew with Mac, when you were checking out -- you've  
10 obviously got a lot of SMS, CRM, you've got a lot of background  
11 acronyms in your career, ASAP and everything else in between,  
12 human factors and LOSA. Did you notice anything specific about  
13 Mac that caused you any concern?

14 A. Not concerns. I mean, Mac stood out to me as an  
15 enthusiastic, you know, pilot for the foundation and for the  
16 mission. I mean, he's legendary through the community for his  
17 dedication. He's a volunteer full-time for so many years. And  
18 so, going into it, I knew that here's a guy that's been flying  
19 this B-17 for a very long time. He did it full-time. So it's a  
20 little bit, you know, wow, this is going to be a great experience,  
21 and it was, because he was warm and just full of knowledge. I  
22 mean, I couldn't ask enough questions, because he had so much  
23 experience on the airplane and operating the airplane. That was  
24 his baby, so, you know, someone of that level of knowledge being  
25 my first training captain is pretty amazing to me.

1 Q. Let's fast-forward to last year, 2019. As the safety  
2 officer, did it cause you any concern that he was primarily the  
3 only left seat guy on the B-17?

4 A. It didn't give me any concern in terms of safety. In terms  
5 of the program going forward over the years, it was clear, I  
6 think, for the chief pilot and myself, that at some point Mac's  
7 going to retire. But Mac, himself, gave no indication that he was  
8 going to retire soon, but, you know, he'd been doing it for a long  
9 time so at some point he would. And so, I think the chief pilot  
10 had some candidates in mind that he wanted to start mentoring for  
11 a left seat upgrade.

12 Q. Does the Collings Foundation have mandatory retirement age  
13 for their pilots?

14 A. No.

15 Q. I noticed the EAA has a mandatory retirement age of 80, so I  
16 did not know if the Collings Foundation had one or not.

17 A. No.

18 Q. Do you do a risk analysis every year or do you -- what kind  
19 of reports do you generate every year on the safety of the  
20 Collings Foundation?

21 A. So we have a -- at the end of the year, we have a safety  
22 report index, which includes a risk assessment. And so, we look  
23 at each report and then we try to decide the -- we rank the risk  
24 associated with that report event. And so we go high, moderate,  
25 or low. And then, we, of course, add those up and, if there is a

1 high, we would that would be our highest priority and we consider  
2 that to be the highest risk of a bad outcome if it were to repeat  
3 itself. And so, we do that risk assessment and that summary of  
4 the reports. And that also is looking for a trend analysis and  
5 statistics.

6 And so, that is then used to generate the discussion of any  
7 changes that might be done. We're looking for do we need to add  
8 something to the training site? So this is -- you know, this is  
9 generally done December/January, so it's preparing for our ground  
10 school that we review last year's reports and plug in anything  
11 that we see, into any changes to the training material or the  
12 manuals.

13 Q. Did you see anything that needed to be upgraded or changed  
14 this year?

15 A. For 2020? No. We had the B-24. We had two reports of prop  
16 governor getting stuck, which is a weakness of the design of a  
17 B-24 governor system. And so, we did -- chief pilot and myself  
18 did make note to (indiscernible), this is an ongoing problem and  
19 we need to have spares and good maintenance inspections on that  
20 particular system. Because it's a known weak point, but this last  
21 year having two reports in the same year made us note that, that  
22 needs to be -- we need to get ahead of it so we don't, you know,  
23 fail to go in next year's season.

24 Q. Okay. Speaking of maintenance and things like that, the  
25 B-17, engines number 3 and 4 seem to have a history of what I've

1 been told via interviews that they didn't like to start because  
2 they had moisture in the magneto or the mag, and they would have  
3 to blow them out with nitrogen to get the spark in there to get  
4 the engines to light off. And this seemed to happen on mornings  
5 that were with high humidity and things like that. Are you aware  
6 of that procedure to blow out the mags on the B-17?

7 A. Yes. I'm aware of it. I wouldn't characterize it as a B-17-  
8 only problem or a common problem, but it is something that happens  
9 on all of our radial engines. If it's been raining, for instance,  
10 and we've been sitting for a couple of days, any of the airplanes  
11 can get a lot of moisture. The mag itself is fine, but they're  
12 not steel mags in the way that moisture can't get in. So they  
13 need to be dried out before we can fly the airplane.

14 Q. Sure.

15 A. That could be either sit and wait for a day or use nitrogen  
16 or something like that to remove the moisture before we start it  
17 and do the test run.

18 Q. It's hard to come by, but another procedure is to look --  
19 from the maintenance manual, is to remove the mag manually, take  
20 it off the airplane, then dry it out. So the blowing out of the  
21 mag is not a documented maintenance procedure that I can find  
22 anywhere. From an SMS standpoint, is that something that you  
23 would want to take a look at? I would call it a non-standard  
24 procedure that happens frequently. So is that something you would  
25 look at from an SMS standpoint?

1 A. If I had reports that it happened frequently, I would get  
2 together with director of maintenance and the chief pilot and we  
3 would talk about it. Again, I have not heard this was frequent.  
4 But infrequently, I certainly -- I've seen mechanics working on  
5 the airplanes to try to dry out a mag system on our -- after a  
6 wet, rainy non-operational period for, you know, a time, to  
7 include taking it off the engine, too, when it's really bad. But,  
8 yeah, I mean, if it did happen frequently and I have reports of  
9 that, I certainly would have wanted to coordinate with the  
10 maintenance folks to see what their procedures are and see what's  
11 going on.

12 Q. In the last -- I'm in the safety management system, your SMS  
13 documentation, 3.0, the last paragraph, talks about an effective  
14 accident prevention program. Do you have an accident prevention  
15 program, or tell me about what that sentence is referring to. Let  
16 me read it to you. I just gave you the last --

17 A. Okay, sure.

18 Q. It says: "The underpinning of an effective safety management  
19 system is an active, non-retribution reporting system utilized in  
20 concert with an effective accident prevention program." So my  
21 question is, do you have an accident prevention program?

22 A. Yeah, I would say we are taking the information we have, you  
23 know, from our reports, from audits, from our check airmen, and  
24 we're putting that back into our training to, you know, try to  
25 prevent accidents in the future. So the accident prevention



1 program is part of SMS where we're looking for trends. We're  
2 actively collecting reports, do an audit, and then try to, you  
3 know, use that information to make additional training or changes  
4 in training or changes to procedures to prevent an accident in the  
5 future. Obviously it's a small operation, operated by volunteers,  
6 so it's not going to have the robust wealth of data that an  
7 airline would or something like that.

8 Q. All right. Certainly, I understand. I understand that  
9 completely. You've got, what, 15,000 pilots -- and I don't want  
10 to cut you short there at American, so I understand.

11 A. Right.

12 Q. If somebody sees a concern, recognizes a concern and feels  
13 obligated or feels it necessary to fill out a report, it says  
14 there is a paper copy they can fill out or go online to fill it  
15 out. Do you ever get a paper copy of any forms that have been  
16 filled out expressing safety concerns?

17 A. So far, I have not been given a paper copy. The volunteers  
18 have used the online form for all the 33 reports I have. And I  
19 would say, just as common is an on-site -- you know, I'm there and  
20 they just come to me rather than fill out the form. I've also had  
21 a few phone calls when I wasn't on site from volunteers who wanted  
22 me to know about a situation.

23 Q. Do you ever do just an independent audit of their -- of the  
24 Collings Foundation?

25 A. Yeah. Well, my audits -- something I do on a regular basis

1 is start with the training at the beginning of the year where I  
2 review all the training materials and the manuals, and, you know,  
3 just going through the paperwork, the training paperwork, and  
4 making sure that's done correctly, making sure that we --  
5 everybody's going through the material. You know, part of it, I'm  
6 trying to make sure nothing gets missed.

7       And so, we do that, and then throughout the year, as I go  
8 out, there's many times when I'm volunteering where I'll be out,  
9 you know, a week or two, and I don't have, say on the B-25, any  
10 flight scheduled. And that gives me time to audit, you know, the  
11 other airplane that maybe does have a ride, or the ground  
12 operations, which again is probably the biggest piece of our tour  
13 is the ground tours and the ground operations, because they happen  
14 pretty much every day without fail.

15 Q.   Speaking of ground operations, the captain or the third crew  
16 member, the loadmaster, load planner, flight engineer, I'm not  
17 sure what you call him. But the third pilot -- not pilot, the  
18 third crew member on board is responsible, I believe, in most  
19 cases -- maybe not the B-25, but on the B-24 and the B-17, to do  
20 the passenger safety briefing. Have you ever witnessed one of  
21 those on the B-24 or B-25 that you did not do?

22 A.   I choose to do my own safety briefings when I'm PIC. So I  
23 have always done them myself. Our manuals say the PIC will ensure  
24 it's done. Some of the -- on the four-engine bombers especially,  
25 some of the PICs have trained and a very good relationship with

1 the flight mechanic, flight engineer as we call them, and trust  
2 them. They've been doing it sometimes much longer than the PIC  
3 has. And so, often, it's not unusual for the PIC to delegate the  
4 briefing duties for the passengers to the flight engineer.

5 Q. Okay. How did you find out about the B-17 crash? News? Or  
6 you tell me. How did you find out about the B-17 crash?

7 A. Actually, the accident investigator for American Airlines got  
8 a ping on it, and I was sitting right next to him in a safety  
9 meeting. So that was my first initial -- as soon as his phone  
10 started exploding, he showed it to me, and so we had, you know, of  
11 course in today's world, live news, you know, within minutes of  
12 the accident.

13 Q. When the word got out that there was a crash, is there an  
14 emergency response planning manual -- I call it a playbook, for  
15 Rob Pinksten to go through, Rob Collings to go through, yourself  
16 to go through? Is there a document that, okay, we should do -- we  
17 need to do this, this, this, and this? Is there an emergency  
18 response planning guide that the Collings Foundation has?

19 A. Not that I'm aware of.

20 Q. In the FAA approval letter to the Collings Foundation to  
21 operate under the exemption, the FAA spells out what the  
22 documentation must look like for flight training and testing. And  
23 I'll just read you a sampling of what it says: The date of each  
24 training and testing session, the amount of time spent for each  
25 training session, location where the training session was given,

1 the airplane's identification number, the name and certificate  
2 number of the instructor who provided each training session. It  
3 goes on.

4 A. Right.

5 Q. Have you reviewed any of that paperwork lately to ensure  
6 compliance with the exemption?

7 A. The last time I did this was 2019, and, yes, I did look  
8 through that as -- when I was at Stow for the ground school. For  
9 those days that I was there, I looked through those training  
10 records. And then, when I was -- and I immediately went on tour,  
11 and for that first week, all the volunteers who were there -- I  
12 was, you know, of course, getting my own training that week, and  
13 then I was helping, you know, keep track of that, those training  
14 records, if you will, the beginning of my audits for the year.  
15 For 2020, I have not. Again, I have not had any time on tour in  
16 2020.

17 Q. We have received -- the NTSB has received a copy of Mac's  
18 last annual check ride. And we've also received a copy of Mike  
19 Foster's -- the co-pilot on the B-17, Mike Foster's check ride as  
20 well. And those documents were well short of the time spent -- or  
21 they didn't comply with what the FAA was requesting: location,  
22 the aircraft identification number. Basically all it said was the  
23 maneuver -- the pilot's name, the maneuver, and an S or U. And of  
24 course everything was S. But what we received was, you know --  
25 and I don't want to be trite about this, but it was elementary

1 school type work on the form we received.

2 So this is just a suggestion. It's not a recommendation.  
3 It's just a suggestion that you look at those forms that Rob  
4 Pinksten sends out, because they are woefully out of compliance  
5 with the exemption letter of Exemption 6540 for the living history  
6 flight exemption. So that's just a suggestion.

7 A. And just to be clear, that's the flight training document  
8 that you're referring to for the individual pilots?

9 Q. Yes, for the individual pilots.

10 A. Okay. Yes, sir, I'll look at that. Thank you.

11 Q. Collings -- I'm reading from the form that was sent to me.  
12 It says, "The Collings Foundation Flight Check Record, PIC/SIC,"  
13 and they task -- you know, preflight planning, aircraft  
14 performance, then number 2, ground operations including, and then  
15 it goes through several things. We just have an S or a U, and  
16 those S's are scattered all over the page. It's not a very  
17 professional looking form, shall I say.

18 I'm not here to beat you up or anything like that. I'm just  
19 -- we're trying to ask questions to figure out what happened.

20 MR. ABRAMS: And I'm going to turn the questioning over to  
21 Todd right now, and we will have a second round of questions,  
22 Will. And that'll finish this up. Round two is much, much  
23 shorter. If we do have any questions at all, they're just  
24 basically follow-up questions. But I'm going to turn the virtual  
25 mike over to Todd and let him ask some questions.

1 So Todd, you ready?

2 MR. GENTRY: I am ready, thank you.

3 MR. ABRAMS: All right.

4 BY MR. GENTRY:

5 Q. Thanks, Will. Can you hear me okay?

6 A. Yeah, I can hear you fine, thank you.

7 Q. I'm out in California as well, so the line's going all the  
8 way back to D.C. and then back to us.

9 A. Right.

10 Q. I just want to go back and revisit one question that Warren  
11 asked, but I want to make sure I understand it. When was your  
12 last safety audit?

13 A. So let me look at my calendar real quick. The last time I  
14 was out on tour and did an audit for 2019 -- I'm looking at my  
15 calendar. And I was -- September, September 17th looks like the  
16 time I was out there.

17 Q. And what location --

18 A. I had a non-fly to --

19 Q. That was in Martha's Vineyard?

20 A. We had a no-fly where we didn't have any rides, so I went  
21 around and checked all the airplanes to make sure the manuals were  
22 on board and that the dailies, as we call them, were filled out,  
23 which is basically our logbook for the airplanes, and that we had  
24 the LHFE letters on board with the -- you know, all those  
25 documents were correctly on board. So it was a day with not too

1 many ground tours and no flights that week. Martha's Vineyard was  
2 not a busy one, and so I had some time to go around the airplanes  
3 and make sure everything was in compliance.

4 Q. Do you have a safety audit assessment that you use?

5 A. No, I do not.

6 Q. So is there any written documentation that you actually did a  
7 safety audit?

8 A. No, just my calendars. I know on the days that I'm there  
9 I -- and, you know, I keep logs of when I'm flying. And days I'm  
10 not flying, I'm looking for things to do. And there's always  
11 stuff to do, so -- and then of course if I find something, if I'm  
12 on site my goal is to resolve that issue. So I go to the chief  
13 pilot immediately and we verbally debrief it and come up with a  
14 solution.

15 Q. Have you ever gone out to visit the tour when you weren't  
16 scheduled to fly just so you could do a safety audit?

17 A. No. Normally, they're in compliance. When they're in  
18 California near me, there's a lot of days that I'll go out where I  
19 might not be scheduled because they already have plenty of pilot  
20 volunteers. And, again, if the planes are not flying, and, you  
21 know, and I'm available, then I will -- again, it's one of those,  
22 there's always something to do. So if I schedule it, then I'll  
23 show up and then I might get told to do something else. So I'm  
24 very fluid in the scheduling of it because I want the flexibility  
25 to help out as a volunteer if I'm needed. And then, if

1 everything's covered, then I can do a safety audit.

2 Q. Have you ever actually taken an observation ride where you  
3 were not part of the crew?

4 A. Yes. There's times when we do moves where I'm not scheduled  
5 to be the pilot on the move, and so I'll be a passenger observing  
6 the flight.

7 Q. And do you document those?

8 A. No. I haven't had the need to do anything.

9 Q. There's no LOSA checklist or any kind of safety observation  
10 checklist that you use for those kind of flights?

11 A. NO.

12 Q. Do you debrief the crews after you do an observation flight  
13 like that?

14 A. I debrief the chief pilot.

15 Q. Even if he's not there, you call him and tell him what you've  
16 seen?

17 A. Right. I would say the number of times the chief pilot isn't  
18 on tour are less than I could count on one hand. He's on tour all  
19 year.

20 Q. Right. Do you remember what the 2019 safety goals were for  
21 Collings Foundation?

22 A. To continue to reduce the number of high risk events, which  
23 in 2017, when we started our reporting system, we had identified  
24 some areas we wanted to improve upon. And in 2018, it looks like  
25 we were doing a good job of that. So we were hopeful going into



1 2019, that that would continue to be the trend.

2 Q. Is that your written safety goals?

3 A. Written? No, they're not written. These are discussions  
4 that the executive director and chief pilot and I had during our  
5 annual review and safety meeting.

6 Q. Okay. So are they posted anywhere, if they're not written?

7 A. No, they're not. This is -- the safety committee gets  
8 together and we talk about the previous year and then we talk  
9 about, okay, going forward, here's the things that we would like  
10 to do.

11 Q. Okay.

12 A. It's a small organization, again, so it's the three of us  
13 trying to coordinate all this. And on site on the tour, it's the  
14 chief pilot and myself pretty much most of the time.

15 Q. Have you ever seen crews debrief for CRM?

16 A. Yeah, I've seen that.

17 Q. Can you get some examples of when you saw that or what you  
18 saw?

19 A. There's several of the B-24 captains when I've been SIC, one  
20 in particular is very good, and we shut down and we finish our  
21 parking checklist, he'll say -- his very first question out of his  
22 mouth almost always is, hey, what could I have done better? Hit  
23 me up -- he's Air Force retired, like I am, and he's used to the  
24 debrief culture. So his very first thing is usually he wants  
25 feedback on what went right, what we could have done better. And

1 that's pretty much the way I do it, too, as a B-25 captain.

2 So but, yeah, and there's -- some of the guys I've flown with  
3 as SIC do that. Several of the captains are very good about, hey,  
4 how did that go; you know, and asking the question and they lead  
5 it that way so that the rest of the crew can give input.

6 Q. I'm an Air Force guy as well. So I appreciate the debrief a  
7 lot. I spent hours and hours in debriefs and I think they're  
8 extremely valuable. So most of my debriefs were over 8 hours, so  
9 I understand that. It's a valuable thing.

10 But I did want to ask, have you ever see Ernest McCauley give  
11 a debrief?

12 A. Have I witnessed his debrief? Not at the airplane. I've  
13 witnessed it at the restaurant at dinner, you know, later that  
14 night where he talked about -- you know, he would spend --  
15 speaking of hours, he would spend hours talking about the busy day  
16 and the flights and, you know, he liked to brag on his flight  
17 mechanic. He was very proud of his flight mechanic and how he  
18 helped him out during the day. You know, is it a formal debrief?

19 No. But it's a common pilot debrief, I'd say, waiting until the  
20 end of the day when you're relaxing over dinner.

21 Q. Okay.

22 MR. GENTRY: Thank you, Will. I think that's all I have for  
23 now. I appreciate your time.

24 MR. ABRAMS: Sabrina.

25 MS. WOODS: Thank you, Warren, and thank you, again, Will.

1 BY MS. WOODS:

2 Q. I think I might have missed this, but going back to getting  
3 the safety officer position, how exactly did you get it? Did  
4 they, you know, put out a call for it and you either volunteered  
5 or did you interview or did they just say, hey, you're the guy?

6 A. So I was -- in 2016, in my airline job as a senior FO, I had  
7 a lot of availability. So 2016, I volunteered quite a bit for the  
8 tour. And that coincided with the announcement that, you know,  
9 the LHFE program would require an SMS manual. And so, going into  
10 the off-season, the winter before we started the 2017 season, the  
11 chief pilot came to me and requested could you help me with the  
12 development of our SMS program. He knew that I had been working  
13 in safety and at the time I was a LOSA observer. And so, he asked  
14 for my help, and that led to, about a month later, he asked if I  
15 would be willing to serve as the safety officer. And so, I  
16 volunteered at that time.

17 Q. Excellent. That actually segues perfectly into my next  
18 question, which is, so how exactly -- who created the policy, who  
19 created, you know, your SMS manual, and who is primary  
20 responsibility over it?

21 A. The creation of it was a joint project between the chief  
22 pilot, Rob Pinksten, and myself. And, you know, the executive  
23 director ultimately has responsibility for all of our manuals.  
24 But SMS manual has been the safety committee, which is the chief  
25 pilot, myself, and the executive director. It's been our baby, so

1 we -- you know, any changes that's done by it, we have discussed  
2 in terms of, you know, like going from 1.1 to 1.2 is an example  
3 the changes where the three of us in concurrence decided, okay,  
4 this is the revision we make. And so, it's really the safety  
5 committee manual.

6 Q. Okay. And then because you have such a large volunteer pilot  
7 base, how do you ensure that the people who are volunteering and  
8 flying for the organization are aware of what the policy and the  
9 manual dictate in how they are essentially to perform and behave  
10 under your safety management system?

11 A. They are trained, and it's required training, if they want to  
12 be a pilot volunteer. So we have our annual ground school, which  
13 we encourage everyone to attend. There's, on occasion, somebody  
14 who just can't make it scheduling work. And if they, you know,  
15 are a pilot volunteer that we want to keep in the system, then we  
16 make sure they get all the presentations from the ground school.  
17 And then, on their first day of volunteering, then the chief pilot  
18 will sit down and do the training, to include reviewing the manual  
19 system.

20 Q. So you mentioned the chief pilot, Robert Pinksten, correct?

21 A. Yes.

22 Q. Okay. So you mentioned him quite a bit. So can you,  
23 essentially in your own words, can you give me an assessment of  
24 him as a chief pilot and his involvement in your SMS program?

25 A. He's very involved. He's my partner. He's the continuity,

1 first off, because he is full-time on tour. He doesn't get a day  
2 off, basically, for 10 months straight. And so, he's -- and it's  
3 a small operation, so he's very aware of pretty much everything  
4 that's going on. So he's my -- the guy who, you know, I  
5 communicate with and he communicates with me pretty regularly. We  
6 talk quite often. And he's the guy that I give information to  
7 initially for anything that I hear that I need additional  
8 information for. So if I get a call from a volunteer and I'm not  
9 there, I'm going to call him and see if he can start investigating  
10 or give me the facts or your additional information of what's  
11 happening. And so -- and he was my partner in, you know, writing  
12 the manuals. He's my partner when we developed the form, the  
13 reporting form. Just, you know, in the format, trying to find a  
14 format that works online and still be able to be printed. So he's  
15 helped me every step of the way.

16 Q. Excellent, thank you. So essentially, you talked quite a bit  
17 about the trends and analyzing your trends and doing your risk  
18 matrices and essentially your end of the year roundup. Can you  
19 give me an example of one trend or statistic that you've seen in  
20 the time that you've been there to where you can point to a  
21 specific change you've made based on that?

22 A. Let's see. We had, early on in the reports we had some  
23 reports of PICs training SICs to taxi on the B-24, and then losing  
24 directional control on the taxiways. And the B-24 is -- takes a  
25 lot of skill to taxi. It's very different from any modern

1 airplane to taxi. And so, we had several reports that it's  
2 happening, both verbally and in our report system. So there was a  
3 lot of discussion about, hey, we need to have the PICs all briefed  
4 that this is a high interest item and they need to use their  
5 discretion, but be very cautious about this.

6 So the chief pilot -- and there's only -- I mean, off the top  
7 of my head I can't think, maybe four or five PICs on the 24,  
8 anyway, and he -- the chief pilot, when I brought this to his  
9 awareness said, yeah, we need to basically -- I'm going to tell  
10 them, you know, this handful of PICs that they need my approval or  
11 they need to talk to me before any SIC taxis the B-24, because  
12 this has happened too many times in a row. And it hadn't been a  
13 problem that anyone could remember before this, so it could be  
14 that we had some new PIC upgrades that, you know, felt, oh, yeah,  
15 I'm going to let an SIC taxi without considering the risks that  
16 are involved with that.

17 So we identified that. These pilots talked to the PICs and  
18 we haven't had any more reports that I know of. For 2019, there  
19 was none submitted for taxiway deviations resulting from SICs  
20 taxiing.

21 Q. Okay, thank you. That's a great example. And actually, once  
22 again, you set up my next question perfectly for me. So from --  
23 again, in your own words, how would you define human error?

24 A. Unexpected behavior. It's something that -- a system has to  
25 develop barriers to trap what we know is going to happen. So in

1 aviation, human error is something we want to manage. And so, of  
2 course we have barriers like our SOPs. We have our checklists. I  
3 would brag on the Collings Foundation's volunteers that they are  
4 very, very compliant with checklist use. I've never once on an  
5 audit or as a volunteer seen a crew not use a checklist. And, of  
6 course, that's what it's made for is to capture human error.

7 Q. Excellent, thank you. Actually, you've already answered my  
8 next question, which would be how do you mitigate for those  
9 things, (indiscernible) state that. So, and again, I might have  
10 missed this. I apologize if we're repeating, but have you ever  
11 flown as an SIC with Mac?

12 A. Yes. In 2016, so he was my first check captain, trained  
13 captain.

14 Q. That's right. Okay.

15 A. I flew with him that -- in the spring. I flew with him, you  
16 know, 22 hours or so, several weeks, several different stops. It  
17 was an amazing experience to be introduced to the mission of the  
18 foundation under the wing, if you will, of this very experienced  
19 aviator who was so enthusiastic about bringing these historic  
20 airplanes to the public. I really enjoyed it. Because of my  
21 upgrade to the B-25 and then the need for the most experienced SIC  
22 to be on the B-24, I didn't fly with him again. So that was  
23 unfortunately the last time I flew with him.

24 Q. Understood. And again, I apologize. I do remember you  
25 saying that before. I just wasn't sure if there were any

1 subsequent missions after that first one. So because you flew  
2 with him such a short amount of time, can I presume that you've  
3 never had an emergency situation with him --

4 A. That's correct.

5 Q. -- that you both had to deal with as a crew?

6 A. That's right. We never had any problems in that first season  
7 when I was with Mac. And the B-17 was the most reliable of the  
8 airplanes, generally speaking, but especially that first season  
9 there was zero problems.

10 Q. Excellent. Okay, thank you. And just one more question from  
11 me. And I find it interesting that sometimes this question  
12 doesn't get asked sooner, but you have a wealth of history,  
13 information, and experience both with the Collings Foundation and  
14 within your daytime job, if you will, working for the airlines,  
15 what do you think happened? Have you had a chance to review any  
16 of the information that's out there via media?

17 A. I have reviewed the NTSB preliminary report, and I'm at a  
18 loss. You know, so many of these have contributing factors that  
19 are not evidence. And since I was not on tour and don't have, you  
20 know, what happened that day as a first -- as a witness to go on,  
21 I have -- I'm at a loss. I do not know. They obviously made the  
22 report that something was going on when they asked to return to  
23 the airport, but again, I don't -- beyond that, I have no idea.

24 Q. Understood. I just wanted to know if you had any sort of  
25 speculations, particularly being the safety officer and given your



1 experience and background, have you ever stopped to kind of work  
2 through this and consider it?

3 A. Yeah. You know, and I really, really -- of course, everybody  
4 wants to know right away and I always advise speculation can bias  
5 us. So I always advise the other volunteers who are probing, you  
6 know, feel the sympathy and empathy for the victims, but try not  
7 to be biased in the results, because we want to grasp for answers  
8 and it -- and then we set ourselves up for misunderstandings.

9 MS. WOODS: Absolutely. Awesome. Thank you, Will, for your  
10 time. That's all I have.

11 Thank you, Warren.

12 MR. ABRAMS: Thank you, Sabrina.

13 Will, you doing okay? You got time for a second round? Do  
14 you need to take a break or anything?

15 MR. DISMUKES: No, I'm fine. If my headset's battery dies,  
16 I'll put the handset, but for now I'm fine.

17 MR. ABRAMS: All right. I've just got a few follow-up  
18 questions.

19 BY MR. ABRAMS:

20 Q. The B-17, you got a whole loss. Tragic, tragic by every  
21 stretch of the imagination, that's a tragedy that should have  
22 never happened. Have you guys changed -- has the Collings  
23 Foundation changed anything going forward or are we just trying  
24 to -- has the Collings Foundation changed anything going forward?

25 A. I would have to defer to the chief pilot for all the changes.

1 There's some small stuff that I am aware of, like they've added  
2 additional tests in the training program. I wasn't at the ground  
3 school so I actually haven't seen these products yet. And they're  
4 on our manual system and our safety management. So we didn't have  
5 a written test for that before. We have written tests for the  
6 airplanes. So I'm aware of some changes, and I would speculate  
7 that there was other things happening as the tour progressed.  
8 Right now, the ground school is on right now.

9       So there's a lot going on for the chief pilot and the  
10 Collings Foundation, and so I've been trying to keep up with it  
11 via the phone calls and the emails, but, you know, not being there  
12 keeps me out of the loop a little bit on some of the details.

13 Q. Certainly. I understand. Speaking of checklists, and from  
14 your airline operation, I know we don't do a lot of checklists  
15 from memory so I'm not asking you to create a checklist in your  
16 mind from memory. But shutting down an engine, talk to me about  
17 the verification process of shutting down an engine.

18 A. Yeah, we trained that, of course, in the ground school, the  
19 ground training program, and we train it of course in the flight  
20 program. And the emphasis is on doing the  
21 identification/verification and the feather together. And we use  
22 that as a rhyme, and we also have in big red print, you know,  
23 checklist, use the checklist to do it; don't be in a hurry. And  
24 with, of course, the four-engine airplanes, there's usually no  
25 hurry at all, because with three-engine, at the rates we operate,

1 these airplanes can get to altitude, and there's plenty of time to  
2 identify/verify together and then feather together as a crew.

3 Q. These interviews that we're doing, yours and everybody else's  
4 that I have done, they are transcribed and they go in the docket,  
5 so I'm just giving you a peek behind the curtain a little bit  
6 early about one of the interviews and what was said. And that was  
7 the flight engineer on the flight, once he got -- he had left the  
8 cockpit and went back to the back to tell everybody they could get  
9 up and move around. And when he got back to the cockpit, Mac  
10 said, "We need to cage number 4," as in shut down number 4. And  
11 the flight engineer said, "I'm not ready yet." And the flight  
12 engineer in his conversation with us said, with that, Mac reached  
13 over and feathered the number 4 engine. Co-pilot had no input.  
14 Flight engineer had no input, no verification. And he just  
15 reached over there and shut it down.

16 Don't know if that was the bad engine or not. We're -- NTSB,  
17 we've sent engines 3 and 4 out to be torn down. We've got the  
18 props being looked at as well to see if number 3 and number 4 were  
19 feathered. We don't know, other than -- we don't know the status  
20 of engine number 3. We know that -- we've got testimony that  
21 number 4 was shut down, but no verification that it actually  
22 feathered. So the verification process, Will, we've got a written  
23 report that Mac was not good with CRM. We've got a lot of  
24 testimony that he was kind of crusty and ornery, but nobody really  
25 said he was bad with CRM, except we do have one report that says

1 that.

2 Can you -- what do you think about CRM and Mac? Do you think  
3 he -- I'm struggling here because I'm trying to get my arms around  
4 this thing. Would you think Mac would be capable of just reaching  
5 over there and shutting the engine down without verification?

6 A. I would speculate that that's unlikely. But, you know, we're  
7 all human. And Mac certainly was a human, and in the heat of the  
8 moment, people get, you know, anxious and do things that they  
9 later don't remember or realize that was a mistake. And, of  
10 course, I see that in simulators all the time when I'm training  
11 folks. I hear statements like -- from very experienced pilots who  
12 say, I've never done that in my life; I can't believe that I did  
13 that, you know. So I would -- but I would speculate it's unusual  
14 for someone with so much experience on that airplane, that he  
15 would do something outside his normal training and experience,  
16 because he -- you know, as I understand it, he's had to feather  
17 engines before for precautionary shutdowns. So it's not like he's  
18 never seen this. He's seen it before, so again -- but he's human.  
19 So I've seen when the pressure's on and there's threats being  
20 hurled at folks, I have seen error in the simulators before. So  
21 anything could happen, I guess.

22 Q. Will, we have witness videos -- you know, everybody's got a  
23 video of the B-17. Anytime a B-17's in the air, somebody's got  
24 their phone out taking a video of it. And, of course, we were  
25 inundated with witness videos of the B-17 there in Hartford -- or

1 in Bradley. And one of them clearly shows the gear down early on  
2 in the process and he flew -- we can, from ADS-B data, we can  
3 identify that he flew about another 2.7 miles with the gear down  
4 before he impacted the approach lighting system.

5 Also, the flight engineer said the plane was flying at an  
6 unusually high angle. And, of course, angled attack is what he  
7 was mentioning, but he's not a pilot. But so, I'll put -- and he  
8 just said it was a high angle. And the engineer could not explain  
9 why the plane was flying at such a high angle of attack. In your  
10 experience on the B-17 -- I realize you only got 25 hours, but on  
11 the B-24, if the gear is down and you've got two engines in-op,  
12 can you maintain straight and level at that time or is your -- are  
13 you giving up airspeed for altitude?

14 A. I don't know, to be honest. I've never done two-engine  
15 training in a B-17, you know, with the gear down, so I don't -- I  
16 can't really tell you. I don't know.

17 Q. Okay.

18 A. I would speculate that's a, you know, a max performance  
19 maneuver.

20 Q. Yeah, I would think so.

21 A. So beyond that I can't --

22 Q. Yeah. Okay.

23 MR. ABRAMS: Will, that's all the questions I have. I'm  
24 going to turn it over to Todd.

25 Todd, you got any follow-ups?

1 MR. SHUPE: Warren, excuse me.

2 MR. GENTRY: I do --

3 MR. SHUPE: Warren, excuse me. This is Denny Shupe. Before  
4 you left, I wanted to mention that you had asked us to provide  
5 witnesses who had flown with Mike Foster.

6 MR. ABRAMS: Yes.

7 MR. SHUPE: And Will has, and I don't know if you wanted to  
8 ask him questions about that, but I didn't want you to leave your  
9 round there without having the opportunity if you wanted to.

10 MR. ABRAMS: Thank you, I will jump right in.

11 Excuse me, Todd, for just a second.

12 BY MR. ABRAMS:

13 Q. In what capacity, Will, did you fly with Mike Foster?

14 A. He was my SIC and I was the PIC on the B-25. And we did 12  
15 days together on that airplane in May of 2019.

16 Q. And had Mike Foster been flying for the foundation very long  
17 when you flew with him?

18 A. For a few years. I do not know exactly when he began to  
19 volunteer, but the entire time I've been out, I've seen him  
20 volunteering.

21 Q. How would you describe his performance as an SIC on the B-25?

22 A. One of the more professional, most professional aviators I've  
23 ever flown with. He obviously was a professional aviator, very  
24 high time experienced aviator, very enthusiastic about the mission  
25 and airplanes in general. He's an av geek like me.

1 Q. Would you think he would have any reservations about speaking  
2 up in the cockpit if he saw something that he didn't agree with?

3 A. I don't think he'd have any reservations at all. I mean, he  
4 was a captain on airliners and a military aviator. I think he  
5 would speak up if he saw anything at all.

6 MR. ABRAMS: Thank you.

7 Todd, I'll turn it over to you, now.

8 MR. GENTRY: Thank you.

9 BY MR. GENTRY:

10 Q. I have two questions, really, and it might be answered with  
11 one, so we'll see what you can do. How many accidents for the  
12 Collings Foundation have you investigated?

13 A. I would have to look up the exact number of incidents because  
14 I don't have that memorized, to be honest.

15 Q. I'm not asking you to memorize anything. I just wanted to  
16 know what -- some idea.

17 A. Yeah, I really couldn't give you a number.

18 Q. Would you think a dozen?

19 A. There's -- something like that, something like a dozen. We  
20 had -- for example, we had two bird strikes in 2019. So a lot of  
21 these -- one of them, I was there for. I was on site when the  
22 plane landed, the B-24. A bird went through the front nose  
23 turret, broke the glass. So I was there for the investigation.  
24 The other one, the B-25 had a bird strike in the wing root leading  
25 edge. And so, the chief pilot investigated that and notified me

1 of what happened.

2 Q. Did they ask -- did the chief pilot or the executive director  
3 ask you to come out during the Hartford accident?

4 A. No, they did not.

5 Q. Are you familiar with operator hazard profiles?

6 A. No, I have not heard that term before.

7 Q. Okay. That's a common term for aviation SMS programs. And  
8 the operator will have a hazard profile based on their normal  
9 flight profiles, what part of the operation will be the highest  
10 risk part. And it sounds like maybe bird strikes is one of those  
11 high risk areas that you guys would have identified if you had a  
12 hazard profile listed. Does that make sense? Because each -- you  
13 do on a climb alt, cruise, you know, those kind of things.

14 A. Right. Yeah, you know, the closest thing would be like a  
15 risk assessment, you know, so that would be our morning pilot  
16 meetings. Before we go fly, the chief pilot will talk about the  
17 hazards of the day and then, you know, the group would discuss  
18 that. And most commonly the result on tour is we don't go fly,  
19 because there's no reason to go fly if all the conditions aren't  
20 pretty awesome for flying that day.

21 Q. Right. Have you observed any of the flight engineers give  
22 the safety brief?

23 A. Yeah, I've seen the flight engineers do briefings.

24 Q. And did you have any comments for them at the time or no?

25 A. No. I haven't trained any flight engineers. In particular,



1 they've already been trained. Most of them, you know, have been  
2 out there for a long time; they do it full-time. So they're very  
3 well versed at it. I've had discussions when training SICs to  
4 upgrade in the B-25, I've mentored and instructed them on ensuring  
5 they did the entire briefing. But never had the opportunity to  
6 train a flight engineer.

7 Q. Okay. Would you train SICs to do the briefing in the B-25 as  
8 a PIC? Did you provide them with a checklist or any kind of thing  
9 to use to make sure they did everything that was required under  
10 the exemption?

11 A. Yeah. I provide them with the actual exemption letter as  
12 well as the manuals. I reference where we get the requirement to  
13 do it and what's listed. So we would pull out that material  
14 during the training session and say, here's the list. You know,  
15 so here's exactly where you go to reference it; if you've been off  
16 tour and come back, can't remember, this is where you would  
17 reference it.

18 Q. Okay. So there's no card or anything that they can carry  
19 with them that you know of?

20 A. No. I think some people, as a barrier to missing something,  
21 have made their own little cheat sheets, but we don't have like a  
22 card, as you say.

23 MR. GENTRY: That's fine. Thank you. I appreciate your  
24 time, Will.

25 That's all I have, Warren, I appreciate it.

1 MR. ABRAMS: Thank you.

2 Sabrina, follow-up?

3 MS. WOODS: Yes, thank you.

4 BY MS. WOODS:

5 Q. So Will, piggybacking on what Todd was asking, so the actual  
6 initial safety briefing aside, what is it that you do train for in  
7 dealing with passengers should an emergency arise?

8 A. The egress, the exits on that particular airframe. That  
9 would be an (indiscernible) item.

10 Q. And so, that is something that you -- in your ground school,  
11 is that something that you guys go over, train for? Or is it  
12 something that's --

13 A. Yeah.

14 Q. -- just kind of noted in your plan and that's it?

15 A. No, that would be covered in the ground school for each  
16 airplane, what the -- all the exits are. And then in the ground  
17 training on the airplane, since the day I first started, it was go  
18 around and, you know, go to each exit and see how they operated,  
19 see how each hatch is operated. And so, that's hands-on training  
20 for all the volunteers.

21 Q. Who has primary responsibility for the passengers should an  
22 emergency arise?

23 A. It's always the PICs, the primary. And then, on the -- the  
24 flight engineer is the person who, while the pilot's sitting in  
25 the flight deck, goes through and ensures compliance, you know,

1 makes sure the seatbelts are fastened and everybody's seated prior  
2 to moving of the aircraft.

3 MS. WOODS: Okay, thank you.

4 That's all I have, Warren. Thanks.

5 MR. ABRAMS: Will, we've asked you a lot of questions. We've  
6 been talking about it for an hour and 20 minutes now. We're kind  
7 of out of questions. Is there anything you want to tell us? I  
8 know you've said you've looked at this and you can't come up with  
9 a reason why this thing went down. Is there anything else you  
10 want to tell us? Because we're at a loss here. We're looking for  
11 answers. We can't say we know what caused it, because we don't.  
12 So is there anything that you can fill us in on that we hadn't  
13 asked you about?

14 MR. DISMUKES: No. I want to thank you for doing this and  
15 being so vigilant in your investigation, but I have nothing to  
16 add.

17 MR. ABRAMS: Well, we thank you. You're the one we're  
18 thanking for your time and your insights. You're very informative  
19 and we appreciate you taking time out of your schedule to talk  
20 with us today. It's very helpful in our investigation, and I want  
21 to say thank you.

22 So Todd, Sabrina, follow-ups?

23 MS. WOODS: Not of me.

24 MR. GENTRY: No thank you. I appreciate it.

25 MR. ABRAMS: All right, Will, well, that's all we've got, so

1 you enjoy the rest of your day. And Todd is out there in the Los  
2 Angeles area working on the helicopter crash from Sunday, so --  
3 you know, we run all over the place out here, so -- anyway. Thank  
4 you for your time again, Will. And if you have anything you want  
5 to relay to us, you can get it through Rob Pinksten. He'll get it  
6 to us. Or Denny Shupe will get it to us as well. So anything you  
7 need to relay, feel free to relay it through those contacts as  
8 well.

9 MR. DISMUKES: Absolutely.

10 MR. ABRAMS: With that, guys, I'm going to turn the recorders  
11 off, and everyone have a wonderful day. Thank you for your time.

12 (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:            COLLINGS FOUNDATION BOEING B-17G  
   CRASH AT BRADLEY INTERNATIONAL  
   AIRPORT, WINDSOR LOCKS, CONNECTICUT,  
   OCTOBER 2, 2019  
   Interview of Will Dismukes

ACCIDENT NO.:                ERA20MA001

PLACE:

DATE:                            January 29, 2020

was held according to the record, and that this is the original,  
complete, true and accurate transcript which has been transcribed  
to the best of my skill and ability.

A large black rectangular redaction covers the signature area. Below the redaction, a horizontal line is drawn, and a handwritten signature is visible to the right of the line.

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

\* \* \* \* \*

Investigation of: \*

\*

COLLINGS FOUNDATION BOEING B-17G \*

CRASH AT BRADLEY INTERNATIONAL \*

Accident No.: ERA20MA001

AIRPORT, WINDSOR LOCKS, CONNECTICUT, \*

OCTOBER 2, 2019 \*

\*

\* \* \* \* \*

Interview of: JEFF FINK, First Officer  
Collings Foundation

Wednesday,  
January 15, 2020

## APPEARANCES:

WARREN ABRAMS, Air Safety Investigator  
National Transportation Safety Board

TODD GENTRY, Accident Investigator  
AVP-100  
Federal Aviation Administration

SABRINA WOODS, Accident Investigator  
AVP-100  
Federal Aviation Administration

DENNY SHUPE, Attorney  
Schnader Harrison Segal & Lewis  
(On behalf of Mr. Fink)

<u>ITEM</u>	<u>I N D E X</u>	<u>PAGE</u>
Interview of Jeff Fink:		
By Mr. Abrams		7
By Mr. Gentry		23
By Ms. Woods		28
By Mr. Abrams		31
By Mr. Gentry		32



I N T E R V I E W

(12:58 p.m. EST)

1  
2  
3 MR. ABRAMS: Jeff, I'm Warren Abrams. I'm an Air Safety  
4 Investigator with the NTSB, and I've started a recording of our  
5 conversation today. We'll record the conversation, have it sent  
6 off and have the recordings transcribed, and the transcription  
7 will go in the docket of the findings of the report. But before  
8 we do all that I want to give you a little overview of what's  
9 going to happen today.

10 We're going to ask questions today. I'm on the line. I've  
11 got two people from the FAA on line, and they are a party to this  
12 investigation by regulation or statute by Congress, so they have  
13 to be included, as well. But the FAA does not have any regulatory  
14 authority -- not regulatory authority -- they do not have any  
15 enforcement action in this proceeding. So anything you say with  
16 the FAA or us today is -- I don't want to say get out of jail  
17 free, but it's -- it cannot be used against, you and there's  
18 nothing -- we don't go down that road anyway. So anyway, that's  
19 good there.

20 As I said, we've got two people from the FAA on board who are  
21 a party to this investigation. We'll let them introduce  
22 themselves. Todd, if you'll introduce yourself, please?

23 MR. GENTRY: Absolutely. My name is Todd Gentry. I'm an  
24 accident investigator with the FAA Accident Investigation Office  
25 basically, and thank you, Warren. He's exactly right. Everything

1 you tell us today has nothing to do with enforcement actions. We  
2 just want to find out the truth so that if we need to change  
3 anything in the FAA, we can. That's the whole purpose of us being  
4 here, and I appreciate your time today, Jeff.

5 MR. FINK: Thank you.

6 MR. ABRAMS: Sabrina?

7 MS. WOODS: Thank you, Warren. Jeff, my name is Sabrina  
8 Woods, and I'm also in the Office of Accident Investigation and  
9 Prevention with Todd. I'm assisting him, and what I'm going to do  
10 today is, I'm a human factors analyst, so I'm here to assess human  
11 factors issues that may take place in and around the operation and  
12 within the process and also to assess human performance to make  
13 sure that we have a better idea of any issues that might arise  
14 with that so that we can also, you know, help implement fixes for  
15 the future.

16 MR. ABRAMS: And Jeff, you're allowed to have someone  
17 represent you today. Do you have any -- do you have a  
18 representative to represent you?

19 MR. FINK: Yes, sir. I have Denny Shupe representing me  
20 today. Is he on the line?

21 MR. ABRAMS: He is. Denny, would you introduce yourself,  
22 please?

23 MR. SHUPE: Yes, thank you, everyone. This is Denny Shupe  
24 from Schnader Harrison Segal & Lewis, and I'm in Philadelphia  
25 today.

1           MR. ABRAMS: Very good. Jeff, what we do is we kind of take  
2 turns asking questions. I will -- I ask my questions, then I'll  
3 turn it over to Todd and he'll ask his questions, then we'll turn  
4 it over to Sabrina and she'll ask her questions, and then we'll --  
5 we may have a second round of questions. But if you need to take  
6 a break at any time, feel free to raise your hand and we can  
7 certainly do that as well. So are you ready to get started, Jeff?

8           MR. FINK: Yes, sir.

9           MR. ABRAMS: All right. Thank you. If you will, Jeff, state  
10 your full legal name and spell your last name, please.

11          MR. FINK: Name is Jeffrey Clayton Kaholo Fink. That's  
12 spelled F-i-n-k.

13          MR. ABRAMS: You may also spell Kaholo for us as well please,  
14 if you would?

15          MR. FINK: Jeffrey should be pretty easy. That's with a J.

16          MR. ABRAMS: Yeah.

17          MR. FINK: Clayton is C-l-a-y-t-o-n. Next one is Kaholo, K-  
18 a-h-o-l-o, and Fink, F-i-n-k.

19          MR. ABRAMS: All right. Thank you very much. My apologies  
20 for asking the hard questions --

21          MR. FINK: Not at all.

22          MR. ABRAMS: -- first thing. Can we call you Jeff instead of  
23 Jeffrey?

24          MR. FINK: Please.

25          MR. ABRAMS: All right.

## 1 INTERVIEW OF JEFF FINK

2 BY MR. ABRAMS:

3 Q. Jeff, how old are you?

4 A. I'm 33 years old.

5 Q. And I assume since you're on the line with us today that you  
6 are a volunteer pilot for the Collings Foundation. Is that  
7 correct?

8 A. I am.

9 Q. And how long have you been volunteering for the Collings  
10 Foundation?11 A. I am entering my fourth season with the Collings Foundation.  
12 I started in September of 2016.13 Q. Great. How many airplanes are you rated on with the Collings  
14 Foundation?15 A. Three. I hold a PIC type rating in the B-25 and a second in  
16 command type rating in the B-24 and the B-17.17 Q. All right. Approximate -- how much total flight time do you  
18 have, all airplanes, not just the Collings Foundation, all --  
19 every airplane you've flown in your life. Approximately how much  
20 flight time do you have?

21 A. 3,600 hours.

22 Q. All right. And let's break it down a little bit in  
23 approximations. Approximately how much total time do you have in  
24 the B-25?

25 A. About 21 hours.

1 Q. And you are type rated in the B-25. Is that correct?

2 A. That's correct, sir.

3 Q. Okay. And approximately how many hours do you have in the  
4 B-24?

5 A. Ten hours.

6 Q. And approximately how many hours do you have in the B-17?

7 A. A hundred hours.

8 Q. Okay. And how many days a year would you estimate that you  
9 volunteer to fly for the Collings Foundation?

10 A. I'm usually out on tour between 6 and 8 weeks per year, so  
11 that's, you know, between 40 and 50 days a year.

12 Q. Okay. So your primary airplane, up until the type rating,  
13 has been the B-17. Would that be a fair statement?

14 A. Yes, sir.

15 Q. Okay. When did you get your last -- what was the date of  
16 your last medical? I mean month and year. I don't need the  
17 specific day of the week, but when was your last medical?

18 A. June 2019.

19 Q. All right. When was your last check ride with the Collings  
20 Foundation?

21 A. That would be my PIC type ride in September of 2019.

22 Q. All right. How did you get your job with the Collings  
23 Foundation? And I say job, I realize it's a volunteer position.  
24 But how did you go about volunteering and then working your way  
25 up? You have a type rating and all the time in these other

1 airplanes.

2 A. I met the chief pilot, Robert Pinksten, through a mutual  
3 friend and essentially social media, and we kept in contact with  
4 each other, and he invited me to come volunteer at a tour stop and  
5 was given, you know, the opportunity to learn the aircraft and  
6 work my way into it.

7 Q. Okay. And that was approximately 4 years ago, you said?

8 A. Yes, sir.

9 Q. Okay. Not just with the Collings Foundation but all told,  
10 have you ever had an unsatisfactory check ride?

11 A. Yes, sir. I failed my initial ATP check ride.

12 Q. Okay. Have you ever been involved in an accident or  
13 incident?

14 A. No, sir.

15 Q. Give us a little Cliff Note version of your flying history,  
16 if you would, Jeff. I know you've said some things that peaked my  
17 interest about other flying. You've got over 3,000 hours of  
18 flight time but not a lot of flight time at the Collings  
19 Foundation, so you must be doing some flying elsewhere. Tell  
20 us -- give us a brief 2 or 3 minute history of your flying career  
21 so far.

22 A. Yes, sir. I started flying -- I took my first flight lesson  
23 in 1999, and it was just sort of a reward for doing well in school  
24 by my parents, and ended up flying gliders, sailplanes. I soloed  
25 in sailplanes when I was 15 years old so, you know -- soloed, you

1 know, powered aircraft on my 16th birthday, and I got my first  
2 rating which was in sailplanes when I was 17.

3 I ended up going to college for economics which kind of put a  
4 lot of my flight training on hold. But following college and the  
5 economic downturn in 2009, I decided that I needed to be a little  
6 bit more serious about a career in aviation. So I went to a  
7 flight school in Florida, finished my ratings with a flight  
8 instructor and went through commercial, CFI, multi-engine and all  
9 that stuff. I was CFI for 2 years in Florida and eventually  
10 transferred to a simulator learning center in Savannah, Georgia  
11 where I received a G-5 type rating and worked as a simulator SIT  
12 for about a year and a half. That's when I was hired by my  
13 current employer. I applied for a Part 91 corporate flight  
14 department based out of New York flying Gulfstream G-550s and  
15 G-650s.

16 Q. You had a type rating in the 550/650?

17 A. Yeah, I hold two separate type ratings. One G-5 type rating  
18 and a G-6 type rating.

19 Q. Okay. Excellent. Does the name of -- the company in New  
20 York have a name?

21 A. Yes, sir. It's the Fox Corporation.

22 Q. Okay. And when you're flying in your Part 91 job is --  
23 that's a -- is that second-in-command position or is that a PIC  
24 position?

25 A. I just recently upgraded to PI -- to aircraft commander --

1 Q. Yes.

2 A. -- with them. But up until recently it was in a SIC  
3 position.

4 Q. And when you upgrade with that company, your Part 91 company,  
5 does that -- are you specific to one airplane or do you -- are you  
6 in the 550 or 650 or does it matter which one you go to as  
7 captain?

8 A. For trips I am -- I'd be assigned captain on the 550.  
9 However, I am, you know, as a type rated pilot, authorized to fly  
10 left seat in both aircraft.

11 Q. Right. Okay. The leadership structure there at the Collings  
12 Foundation -- we got Rob Collings is the executive director of the  
13 Foundation. Do you know Rob Collings?

14 A. I do.

15 Q. How do you know him or how do you interact with him?

16 A. So I've seen him, obviously, every year at ground school and  
17 at various tour stops. Also, since I live in fairly close  
18 proximity to the Foundation headquarters, I've seen him outside of  
19 the tour on a few occasions as well, for either extracurricular  
20 flying or other activities and, you know -- but generally speaking  
21 it's been a working relationship.

22 Q. All right. And how do you get along with Rob Collings?

23 A. Very well.

24 Q. Okay. Underneath him in the -- structure-wise is the chief  
25 pilot, Rob Pinksten. How is your relationship with Mr. Pinksten?



1 A. Also very good. I met him in 2016, like I said, through a  
2 mutual friend and social media. And sharing, obviously, common  
3 interest and being of a similar age group, we've become, you know,  
4 both very good working partners and also, I would say, friends.

5 Q. If you had a problem with a particular individual you flew  
6 with, if you saw a safety issue, who would you address that  
7 concern with?

8 A. I would first go to Rob Pinksten since he was the, you know,  
9 my direct superior in the organizational structure.

10 Q. Okay.

11 A. Following him I would probably talk to Will Desmuce (ph.),  
12 our safety officer, and then eventually Rob Collings if it was  
13 necessary.

14 Q. You mentioned Will Desmuce, your safety officer. Do you see  
15 him on tour from time to time?

16 A. I have, yes.

17 Q. And how frequently is that? I realize your paths and his  
18 paths may be different, but how frequently do you run into him?

19 A. You know, I try to do a few tour stops on the West Coast  
20 every year, and that's where I'll typically see him. I think the  
21 last time I saw him was April or May of last year in Carlsbad.

22 Q. Okay. If you addressed those safety concerns or just issues  
23 with those individuals, how do you think they would respond to  
24 you?

25 A. I've always felt that they respected everything I would have

1 to say or anyone else. They've always addressed safety concerns  
2 by either offering solutions to mitigate potential safety hazards,  
3 correct them, but never have I felt that I was pushed out of a --  
4 you know, having a concern and being able to bring it forward.  
5 They've always empowered me to do so.

6 Q. All right. Good. And have you done that from time to time?

7 A. I haven't really felt the -- I haven't been put in a  
8 situation where I needed to really, you know, bring up a  
9 overwhelming safety concern. I would ask for clarification of  
10 something or maybe ask for advice on, hey, how would you do this  
11 as a learning individual, and they were always able to give me a  
12 very good and well-informed answer.

13 Q. All right. I skipped over one of my questions. You said you  
14 had your CFI. Did you get a II rating as well?

15 A. Yes, sir. I have a CFI II and an I.

16 Q. And I. Is your CFI still current?

17 A. Yes, sir.

18 Q. All right. Ernest McCauley, we call him Mac, you had flown  
19 with him recently prior to the accident. Is that correct?

20 A. Yes, sir.

21 Q. How would you describe Mac's flying, in general?

22 A. He had the ability to fly the B-17 like nobody had ever seen.  
23 You know, there were times when he would just absolutely leave  
24 me -- I don't want to say leave me speechless, but just -- it was  
25 just a joy to watch him fly that airplane because of how well he

1 knew it and how in tune with it he was from every aspect of it.  
2 From just how it would react in different atmospheric conditions  
3 to its performance on a given day to, you know, any maintenance  
4 issues that needed to get addressed.

5 Q. Did you ever fly with him when they had to blow out the mag?

6 A. Yes, sir.

7 Q. Why do they have to blow out the mag from time to time?

8 A. Typically, that would be a function on the first flight of  
9 the day if it had been overnight in a high humidity environment.  
10 Moisture can find its way into the magnetos, and by blowing  
11 nitrogen into the magnetos, that would displace the moisture from  
12 there and allow you to get a -- get sufficient spark to start the  
13 engines.

14 Q. What is the normal start sequence of engines on the B-17?

15 A. Three, four then one and two.

16 Q. Okay. Any particular reason why you start the right side  
17 first?

18 A. Well, we have a generator on that -- on -- we have generators  
19 on engines two and three. It's closest to the copilot who is in  
20 charge of really starting the engines. All the starter controls  
21 are on the right side of the aircraft.

22 Q. Okay. Did Mac use a checklist or did it -- since he'd been  
23 on that airplane so long, did he just do everything from rote  
24 memory or did he use a checklist?

25 A. Every time we used a checklist.

1 Q. Okay. I'm not familiar with your checklist. Is it just a  
2 one-page checklist that has the taxi before takeoff before start?  
3 I realize I'm jumping around and -- is it just a one-sheet front  
4 and back page or is it just every checklist has a -- is a new  
5 sheet of paper?

6 A. It's a spiral book about a -- about like a 8 inch by 4 inch  
7 spiral laminated book that we would use.

8 Q. Okay.

9 A. Four inch starting checklist, for example, was on one page.  
10 I mean, if there were shorter checklists like after-engine start  
11 or a runup check that would be maybe combined on one page, but  
12 typically they all had their own pages. The first couple pages  
13 were all normal procedures and the ones after that were emergency.

14 Q. Okay. When you were flying with Mac, when you would taxi out  
15 you would do a runup, and did you always do a feather procedure  
16 after the runup?

17 A. Yes, sir.

18 Q. Describe that sequence for me, please.

19 A. So yeah, the runup procedure was, we would obviously ensure  
20 mixtures were rich. We had temperatures and pressures. RPMs  
21 would come up to around 16-, 1,700 RPM. The propellers would be  
22 cycled twice followed by a feather check on each engine, which we  
23 were looking for, obviously, the indications that the engine  
24 were -- was moving to a feather position including an electrical  
25 load and an RPM drop. And then the propellers would be cycled a

1 third time to ensure that the command had been restored from the  
2 feather pump to the propeller levers. We do a mag check after  
3 that, and then we configure the aircraft for takeoff.

4 Q. Jeff, I don't -- I'm more familiar with jet engines than  
5 radial engines, so you said you would cycle the engines or cycle  
6 the props. Fill me in with the word cycle. What do you mean by  
7 that?

8 A. I apologize. Yeah, so we -- you would move the propeller  
9 levers which would normally be in a high RPM setting full forward.

10 Q. Okay.

11 A. You would move them to their lowest setting looking for an  
12 RPM drop. What you're checking there is to make sure that the  
13 tops of the propellers are getting oil warm -- warmed up oil into  
14 the dome of the propeller hub which controlled the pitch of the  
15 prop.

16 Q. Right.

17 A. You're just ensuring that, that warm oil that you warmed up  
18 and taxied out on is, you know, cycled through all the components  
19 that are being used on the engine.

20 Q. Okay. When you runup the engine, how many inches of manifold  
21 pressure would you run it out to?

22 A. We go runup to an RPM setting.

23 Q. Yes.

24 A. So about 1,600, 1,700 RPM. Now that being said, we would  
25 also do a -- on occasion -- it wasn't required, but on occasion we

1 could do a field barometric test, which is you run it up to  
2 whatever the field barometric pressure setting was, you know,  
3 typically around anywhere from 29 to 30 inches of manifold  
4 pressure to make sure that the engines are making power.

5 Q. Okay. On the day of the accident, Mac did a intersection  
6 takeoff instead of going to the end of the runway. Was that -- do  
7 you -- did he do that with you from time to time, intersection  
8 takeoff, or is that just something that happened that day, or can  
9 you explain that? Do you have any thoughts on that?

10 A. You know, I'll be honest, I wasn't there so I -- I'm not  
11 entirely sure what, you know, which intersection or anything like  
12 that. There were occasions where he and I would take an  
13 intersection if we had sufficient runway available, but I can't  
14 speak on what happened on that day.

15 Q. Sure. Understand. Give me just a second. Had you ever  
16 flown out of the Bradley Airport before?

17 A. Not with the Collings Foundation but professionally, yes.  
18 Well, after -- following the accident, I flew the B-25 out of  
19 there.

20 Q. And where did it go? Where did you fly the B-25 to when you  
21 flew it out of Hartford or the Bradley Airport?

22 A. New Smyrna Beach, Florida.

23 Q. Okay. So you flew it down there. Does that have the legs to  
24 fly it nonstop or did you have to make a fuel stop?

25 A. We made a fuel stop in Wilmington, North Carolina.

1 Q. Okay. Is the B-25 still in New Smyrna Beach, to your  
2 knowledge?

3 A. Yes, sir.

4 Q. Okay. How many passengers did you carry on the B-25?

5 A. It can carry up to six passengers.

6 Q. And what about on the B-17?

7 A. Up to ten passengers.

8 Q. And how many seats were there?

9 A. There were ten seats for passengers and three seats for crew  
10 members.

11 Q. Where were the -- obviously, the captain and the copilot  
12 and -- we know where their seats are. Where are -- where is the  
13 third crewmember seat?

14 A. Are you familiar with the B-17 at all?

15 Q. I am.

16 A. So if you're walking from the tail forward towards the ball  
17 turret --

18 Q. Yes.

19 A. -- there's a walk around area on the left side aircraft, left  
20 of the ball turret. Right there, there's a reinforced panel that  
21 had essentially a clipping station for a third crew member to be  
22 belted.

23 Q. Okay. Was it common practice for the loadmaster/flight  
24 engineer to stand up for takeoff and landing from time to time?

25 A. In my experience, yes.

1 Q. Okay. Who is responsible for the passenger safety briefing?

2 A. The ultimate responsibility fell upon the pilot-in-command,  
3 but the crew chief would often perform that briefing.

4 Q. Did you ever perform it on the B-17?

5 A. Not me personally, no.

6 Q. Okay. Have you done it on the B-25?

7 A. Many times.

8 Q. Do you have a loadmaster on the B-25?

9 A. We do. They are seated in the tail section which is not  
10 accessible by the cockpit, and they're essentially there to  
11 monitor passengers in that rear compartment. We can carry two in  
12 the student compartment behind the pilot and then four in the  
13 tail. Because the flight crew can't get to the passengers in the  
14 rear we do -- we carry a crew chief back there which can relay  
15 information or assist with an evacuation or something like that.

16 Q. Okay. Staying with the B-17 for a minute, have you ever had  
17 an in-flight emergency on the B-17?

18 A. I have.

19 Q. And what was that emergency?

20 A. Earlier in 2019 out of Mountain View, California, we did a  
21 precautionary shutdown of the number two engine.

22 Q. And why did you make a precautionary shutdown?

23 A. We noticed that it was discharging quite a bit of oil and  
24 shaking, and made the decision, as a crew, to shut it down.

25 Q. Spitting oil and shaking. Isn't that a normal engine on a B-



1 17?

2 A. That is, well, common for a 1820, yes, but in this case it  
3 was excessive.

4 Q. All right. That was -- yes, you caught my humor. Thank you  
5 very much.

6 A. Absolutely. I did.

7 Q. Yeah, walk around that thing you get oil on you.

8 A. You do.

9 Q. Have you ever seen the loadmaster work the throttles or  
10 manipulate the throttles on the B-17?

11 A. No.

12 Q. Have you ever heard of the practice of the loadmaster working  
13 the throttles on the B-17?

14 A. Not personally. The crew chief would assist in ensuring that  
15 configuration was correct from time to time but never physically  
16 manipulating controls.

17 Q. Okay. When you shut the engine down on your -- on the B-17,  
18 the airborne emergency, talk us through that shutdown/feather  
19 procedure.

20 A. So I was the pilot flying at the time, and as a crew we were  
21 monitoring how much the engine was shaking, and Mac turned to me  
22 and asked if I thought we should cage it, meaning if we should  
23 shut it down. And the three of us together, as a crew, determined  
24 that, that would probably be the safest option for us. I  
25 continued to fly while Mac went through the immediate action items

1 of shutting the engine down. After the engine was feathered, we  
2 did a positive exchange of controls, and I pulled out the  
3 checkbook to make sure that the remaining items were completed.

4 Q. Okay. And my assumption is they were completed.

5 A. Yes, sir.

6 Q. I'm familiar with the feather buttons on the control panel.  
7 When you shut it down do you just -- tell me how you shut it down.  
8 Like I say, I'm familiar with the feather buttons, but you don't  
9 just push the feather button to shut the engine down, do you?

10 A. You -- essentially, you do. You obviously -- you reduce  
11 throttle --

12 Q. Uh-huh.

13 A. -- and you'll pull the RPMs lower, but you will push the  
14 feather button to, you know, essentially engage the feathering  
15 pump. Every multi-engine PIC and pilot has a memory for the  
16 nine-step procedure that we go through to shut down an engine,  
17 which is, you know, push and power off first, make sure it's full  
18 rich, props and power to the next highest power setting, and then  
19 we'll identify and verify the engine.

20 So in this particular case, you know, you may want to make  
21 sure your configuration is correct, you have flaps up, and in this  
22 particular case, we identified and verified which engine we were  
23 going to shut down. The power was then reduced on that engine,  
24 that reduced the load on it while we feathered it, and then the  
25 feather button is pushed. At the same time, the mixture is set to

1 idle cutoff and the actual button itself is held in by an  
2 electronic magnetic solenoid, which engages a feathering pump  
3 located in the oil reservoir sort of area, which pumps oil into  
4 that propeller dome that I talked about earlier and brings the  
5 blades to a full feather position. Once pressure starts to build  
6 up again, it'll hit an automatic cutoff switch, which then  
7 releases the button and the engine's feathered.

8 Q. Do you teach the B-17 ground school from time to time?

9 A. No, sir.

10 Q. I'll recommend you for it though.

11 A. I appreciate it.

12 Q. Yeah, nice explanation. Even though that shutdown feather  
13 procedure was not performed with Mac, how do you feel he would  
14 have -- would he have done anything any different than you guys  
15 did?

16 A. In which scenario are you speaking?

17 Q. No, I was just talking about, you successfully shut down your  
18 engine there on the West Coast, and if you were flying with Mac --  
19 were you flying with Mac at that time?

20 A. Yes, sir, I was.

21 Q. Okay. I missed that part of it. My apologies. So you were  
22 flying with Mac, and you shut it down. Okay. Great. All right.  
23 So you had a successful outcome. Engine-out landing. Anything  
24 significant about an engine-out landing -- one engine inoperative  
25 landing on the B-17?

1 A. No, sir. I mean honestly, the only difference in the way the  
2 aircraft flew was, had to push power up just a little bit on the  
3 right side, but otherwise it flew like it would on any other  
4 flight.

5 MR. ABRAMS: All right. Jeff, I've asked enough questions  
6 for the moment. We'll have a second round after we go through  
7 with Todd and Sabrina, but I'm going to turn the virtual  
8 microphone over to Todd and let him ask some questions. But I  
9 thank you for your questions and answers, and I'll be back with  
10 you. But I'm going to turn it over to Todd at this time. Todd?

11 MR. GENTRY: Thank you, Warren. Thank you for being here,  
12 Jeff. Appreciate your time. I have a few questions, and just so  
13 you know, I'm very familiar with Gulfstream and the Savannah  
14 Training Center and everything about them, so --

15 MR. FINK: Oh, very good. I wonder if we flew together at  
16 one point.

17 MR. GENTRY: Actually, your name is familiar, but who knows.  
18 So I've got some quick questions.

19 BY MR. GENTRY:

20 Q. Does every member get a copy of the GOM?

21 A. Yes, sir.

22 Q. And you have a copy of it?

23 A. I do.

24 Q. And do you guys have a requirement to conduct a crew briefing  
25 before the flight?

1 A. Absolutely.

2 Q. And does Mac do that?

3 A. He does.

4 Q. Can you describe how that was accomplished?

5 A. Yeah, it would essentially be broken up into different parts.  
6 Once we got to a new tour stop, he would brief what the route of  
7 flight that we'd be taking during that tour stop, if there was a  
8 particular direction we wanted to go to avoid airways or other  
9 airspace. So we would brief that. We'd always brief, at the  
10 beginning of the day, how much fuel we wanted to put on board or  
11 any maintenance actions that had been taken, you know, oil on  
12 board, things like that. And then, obviously, we'd go through a  
13 pre-takeoff briefing, you know, before every flight.

14 Q. So you do a crew briefing then you do a before-the-takeoff  
15 brief?

16 A. That's correct.

17 Q. Okay. So I thank you for that. I've got a question for you  
18 about ground training. I know that Collings Foundation just did  
19 their annual ground training for this year, but you started in  
20 2016, I think, and this is your first season you said. So do you  
21 remember signing an attendance sheet back in 2016 when you  
22 started?

23 A. When I started in 2016, my training was given on site, not at  
24 the annual ground school.

25 Q. Okay. Well, in 2017 did you have a different -- was it a

1 different type of training then?

2 A. No, in 2017 I attended their annual ground school in -- it  
3 was in Daytona Beach at the time.

4 Q. Okay. Awesome. When was your last SMS training?

5 A. For Collings Foundation or in general?

6 Q. Well, through the Collings Foundation.

7 A. Oh, I'm sorry. Well, we just covered the SMS training in  
8 this previous ground school, and it has been covered in every  
9 ground school I've attended.

10 Q. Okay. So can you describe the SMS program to me then for the  
11 Collings Foundation?

12 A. Yeah. So we have a reporting system -- a anonymous reporting  
13 system that each pilot has access to. If we identify a safety  
14 issue, we are able to fill out a report and submit it to our  
15 safety officer and the chief pilot in order to enable -- in order  
16 to log and record it.

17 Q. Okay. And is this through a third-party vendor?

18 A. No, this is all done in house.

19 Q. So this is an online --

20 A. Yes, sir.

21 Q. -- form that you fill out?

22 A. Yes.

23 Q. Okay. Does it just amount to a -- is it -- I'm not seeing it  
24 so I don't know how to ask the question. It's not just an email.  
25 It's a form that you fill out.

1 A. Yes. We have a external link that we can follow to pull up  
2 the form and to fill it out and submit it online, and it's  
3 disseminated to, you know, the organizational staff.

4 Q. Okay. Who does the weight and balance on the aircrafts and  
5 where are they kept?

6 A. Weight and balance is done by maintenance down in New Smyrna  
7 Beach, and those forms were all kept on the aircraft.

8 Q. Okay. Did you conduct a weight and balance before each  
9 flight?

10 A. We did not.

11 Q. Okay. Do you guys practice emergency evacuations?

12 A. While we have briefed it among ourselves, we've never -- I  
13 want to say I've never practiced one personally.

14 Q. Okay. So for emergency procedure training I know you guys go  
15 through your annual training, wherever that is, but do you guys  
16 actually do anything other than the annual training when you're  
17 practicing or training for emergency procedures?

18 A. Well, everybody is required to go through annual training,  
19 not only with the ground training but also in the aircraft during  
20 move points, and we will practice emergency procedures during  
21 those move points.

22 Q. Okay. So when you're relocating or repositioning the  
23 airplane, whatever it is. I understand.

24 A. Yes, sir.

25 Q. So you said that you had previously taken intersection

1 departures with Mac, or whoever you were flying with, when you  
2 have sufficient runway available.

3 A. Yes, sir.

4 Q. Which makes sense. How do you know that sufficient runway is  
5 available? Do you guys do a performance study for each takeoff?

6 A. Not for each takeoff but generally if we have, you know,  
7 anywhere -- if we have an 8 or 9 or 10,000 foot long runway, you  
8 know, we can reasonably determine that we have the performance to  
9 use that.

10 Q. Right. So during your checklist -- you said Mac always used  
11 the checklist.

12 A. Yes, sir.

13 Q. How would you -- and I think Warren was trying to ask -- I'm  
14 going to ask you a little bit different question, but -- is it a  
15 challenge/response checklist?

16 A. Certain checklists are challenge-and-response and some of  
17 them are read-and-do.

18 Q. How about flows? Do you guys use flows?

19 A. I -- personally I follow the checklist as a either  
20 challenge-and-response or read-and-do. They didn't have too many  
21 flows in 1944, so we typically have done read-and-do or  
22 challenge-and-response.

23 Q. Okay. Jeff, the maintenance on the road, let's talk about  
24 that. You said you were 6 to 8 weeks on the tour with them  
25 normally, and that's a fair amount of time. Have you ever seen



1 Mac do maintenance on the road?

2 A. Yes, sir.

3 Q. You have the GOM, so I would imagine you had --

4 A. We do.

5 Q. And these were -- a 1944 airplane, so we all know airplanes  
6 need maintenance, so it's not an issue. Have you ever seen him  
7 actually fill out the logbook with a documented -- or to document  
8 the maintenance that he did?

9 A. Absolutely.

10 Q. Where would those forms live, do you know?

11 A. I believe they are kept on the aircraft with the daily sheets  
12 in the nose.

13 MR. GENTRY: Okay. That's perfect. Thanks, Jeff. That's  
14 all I got. I'm just trying to get a good picture of what  
15 happened, what we can do better and, you know, if there's anything  
16 that they can do better. So I appreciate your time.

17 MR. FINK: Thank you. I appreciate the job you are doing.

18 MR. ABRAMS: Sabrina?

19 MS. WOODS: Thank you, Warren. Hi, Jeff, again.

20 BY MS. WOODS:

21 Q. Going back to the in-flight emergency that you did have with  
22 Mac at the time where you said you needed to shut down the engine.  
23 Was that an actual Living History for it or was that repositioning  
24 or what kind of flight was it?

25 A. That was a Living History flight.

1 Q. So then you did have passengers on board.

2 A. Yes, ma'am.

3 Q. Who is responsible for the passengers during these kinds of  
4 situations?

5 A. The crew chief would -- if there was a need to debrief the  
6 passengers or, you know, get them seated immediately or anything  
7 like that, he would accomplish that.

8 Q. Do you happen to remember what was necessary during this  
9 particular incident? Were they up and moving around already or  
10 were they already seated?

11 A. We were in cruise flight at the time, so passengers were up  
12 and moving around. Once we went through the shutdown procedure,  
13 and the crew chief, being part of it, was able to witness and back  
14 us up, he then -- he seated all the passengers, so we did return  
15 to the airfield.

16 Q. So was that something that he knew to do automatically or did  
17 you have to let him know, hey, it's time to get them seated?

18 A. No, he knew to do that.

19 Q. Is that something that you trained for in ground school?

20 A. We talked about different scenarios where -- and what our --  
21 all of our roles were.

22 Q. And just during ground school or do you -- are there any  
23 other times during the tour operation that you talk about these  
24 things?

25 A. Obviously, we focus on those sort of things at ground school

1 but we, you know, in the course of talking about different  
2 scenarios, when you spend so much time with people on the road,  
3 different topics come up. But we do discuss these things on the  
4 road as well.

5 Q. Thank you. One other question back to -- Todd had asked you  
6 about what is the SMS process there at Collings, and you gave one  
7 great example of the SMS process when it comes to reporting. So I  
8 have a couple of different questions surrounding that.

9 First of all, so if you were to find it necessary to report,  
10 is that something that you feel that would actually be taken  
11 seriously and it would be addressed and given consideration?

12 A. Absolutely.

13 Q. And I'm sorry, I don't remember if it was asked. Have you  
14 ever actually yourself submitted a report to Collings?

15 A. I have not.

16 Q. Okay. And then so back to the entire process, that was just  
17 one facet of it. Can you name any others that you see implemented  
18 throughout the Collings Foundation when it comes to establishing  
19 an SMS program?

20 A. Well, in addition to being able to submit the reports, we  
21 would review the reports at the ground school every year. If  
22 there were more reports we'd maybe cherry-pick a few to see, okay,  
23 this was submitted. This was the remedial action. And a lot of  
24 times out on the road you report a -- some sort of, you know,  
25 safety concern, and while it might not get officially logged, it

1 was always addressed.

2 Q. I see. Does the Collings Foundation have an official SMS  
3 policy, and if so, where is that kept and how are you made aware  
4 of it?

5 A. They do have an official SMS policy. I -- we review it every  
6 single year at ground school. We not only have hard copies  
7 available to us but we also have access to digital copies, you  
8 know, and it's emphasized every year.

9 Q. And who is the approval authority for those policies?

10 A. Can you say that question again, please?

11 Q. Who approved those policies?

12 A. Oh, they were written by the Foundation, and the FAA is the  
13 one who actually approved our SMS program.

14 Q. Okay. So then who wrote the policies?

15 A. It was written in house. It was established before I got  
16 here, so I'll be honest, I don't know the physical author.

17 Q. Okay. No worries. I just wanted to know who is responsible  
18 in the organization for submitting their SMS plans to the FAA for  
19 approval.

20 A. It would have been the chief pilot, and obviously any changes  
21 to it are done through either the safety officer or chief pilot.

22 MS. WOODS: Okay. Thank you. That's all I have. Thank you,  
23 Warren.

24 MR. FINK: Thank you.

25 BY MR. ABRAMS:

1 Q. Jeff, just one or two little dogs and cats here. You just  
2 completed your annual ground school. Is that a correct statement?

3 A. Yes, sir.

4 Q. How many people were in ground school? I mean, everybody  
5 volunteers. It's hard to get people there. So is the class run  
6 all month of January or December, or how does the class structure  
7 work for the annual recurrent ground school?

8 A. We're scheduled for 2 full days of classroom training.  
9 Approximately 55 people showed up this year to be a part of it.  
10 We start at about 9 in the morning and go until 5 in the evening  
11 covering -- we start with, you know, talk about safety, SMS, and  
12 then go into specific aircraft systems and discussions along those  
13 lines.

14 Q. Sure. Who taught the ground school this year?

15 A. Rob Collings and Rob Pinksten.

16 Q. Do they use PowerPoint slides or how do they present the  
17 material?

18 A. First it's a PowerPoint slides while they narrate and, you  
19 know, give direct instruction.

20 MR. ABRAMS: Okay. That's all I have. Todd, back to you.

21 MR. GENTRY: Just one more question and thank you for your  
22 time.

23 BY MR. GENTRY:

24 Q. So do the crew chiefs or flight engineers attend this  
25 training with the pilots so everybody's together or is it separate

1 for them?

2 A. I think it depends on the year. In the past, I've seen crew  
3 chiefs be in attendance during ground school. This year we didn't  
4 have any. However, as pilots we are also encouraged to act as  
5 crew chiefs from time to time, so we do have the training to be  
6 there for that.

7 Q. Right. Right. No, I just didn't know if they were with you  
8 during the training week, or whatever you guys have. So it's  
9 possible they could get their training at another time.

10 A. Yes. Yes. Absolutely. Always.

11 MR. GENTRY: Okay. Thank you, Jeff. Thank you, Warren.  
12 That's all I have.

13 MR. ABRAMS: Sabrina?

14 MS. WOODS: I don't have anything further. Thank you,  
15 Warren.

16 MR. ABRAMS: Jeff, is there anything that we didn't ask you  
17 that you want to tell us?

18 MR. FINK: No, sir. I'd just like to say I appreciate the  
19 job you all are doing and, you know, hope I was able to be a help  
20 for you.

21 MR. ABRAMS: Most definitely. It's all -- it's a big jigsaw  
22 puzzle, and you're an integral piece of it. And if one piece of  
23 the puzzle is missing, it's just not working right, so we  
24 appreciate your time, spending it with us today. I know you've  
25 got a hectic schedule and we do appreciate it. So with that I'm

1 going to stop the recordings unless anybody else has anything to  
2 say.

3 (Whereupon, at 1:48 p.m., 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: COLLINGS FOUNDATION BOEING B-17G  
CRASH AT BRADLEY INTERNATIONAL  
AIRPORT, WINDSOR LOCKS, CONNECTICUT,  
OCTOBER 2, 2019  
Interview of Jeff Fink

ACCIDENT NO.: ERA20MA001

PLACE:

DATE: January 15, 2020

was held according to the record, and that this is the original,  
complete, true and accurate transcript which has been transcribed  
to the best of my skill and ability.

[REDACTED]



UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

\* \* \* \* \*

Investigation of: \*

\*

COLLINGS FOUNDATION BOEING B-17G \*

CRASH AT BRADLEY INTERNATIONAL \* Accident No.: ERA20MA001

AIRPORT, WINDSOR LOCKS, CONNECTICUT, \*

OCTOBER 2, 2019 \*

\*

\* \* \* \* \*

Interview of: MARK HENLEY, First Officer  
Collings Foundation

Thursday,  
January 16, 2020

## APPEARANCES:

WARREN ABRAMS, Air Safety Investigator  
National Transportation Safety Board

TODD GENTRY, Accident Investigator  
AVP-100  
Federal Aviation Administration

SABRINA WOODS, Accident Investigator  
AVP-100  
Federal Aviation Administration

DENNY SHUPE, Attorney  
Schnader Harrison Segal & Lewis  
(On behalf of Mr. Henley)

I N D E X

<u>ITEM</u>	<u>PAGE</u>
Interview of Mark Henley:	
By Mr. Abrams	7
By Mr. Gentry	27
By Ms. Woods	30
By Mr. Abrams	35
By Mr. Gentry	38
By Mr. Abrams	42

I N T E R V I E W

1  
2  
3 MR. ABRAMS: All right. We're up and running. Well, I must  
4 kick it off, Mark, and I want to thank you again for joining us  
5 today on the call. Mark, as I said, I'm Warren Abrams with the  
6 National Transportation Safety Board. I'm the Operational Group  
7 Chairman for the accident -- the B17 accident of March -- of  
8 October 2 of last year.

9 MR. HENLEY: Right.

10 MR. ABRAMS: And we're just looking for what happened. I'll  
11 be honest with you, we -- we're kind of perplexed. We -- at this  
12 stage of the investigation, we have no idea why they couldn't land  
13 that airplane and all walk away. So we are -- we're looking for  
14 information. So -- and we don't have the answers yet. So this is  
15 what we're doing today is just looking for another piece of the  
16 puzzle.

17 And Mark, we do have parties to the investigation, and we  
18 have the FAA on board with us, and they are required to be on  
19 board. They're the accident investigation branch of the FAA, and  
20 they'll introduce themselves here in just a minute. But just a  
21 little bit of background on them. The FAA, today with the  
22 investigation, has no enforcement authority or -- to take any  
23 action on anything that is said, so they're just like me. We're  
24 looking for information. So with that I want to introduce the FAA  
25 and let you hear from them what their roles and responsibilities

1 are in this investigation. So, Todd, if you'll introduce  
2 yourself, please?

3 MR. GENTRY: Yeah, absolutely. Thank you for being with us  
4 today, Mark. My name is Todd Gentry. I'm from the Office of  
5 Accident Investigation and Prevention. My role is strictly to  
6 find out what happened, if the FAA has any responsibilities or  
7 anything they can improve on to make sure this doesn't happen  
8 again, and also to assist Warren in finding out the answers. I  
9 don't -- we don't do probable cause; that's what the NTSB does.  
10 But we definitely look at any roles that we might be able to take  
11 to improve safety for the passengers and public in general.

12 MR. HENLEY: Right.

13 MR. GENTRY: So like he said, anything you say to us today  
14 cannot be used for enforcement. That's not what I do; that's not  
15 what we do. We strictly find out what the answers are and any way  
16 that we can be an improvement. So we appreciate your time. Thank  
17 you, Mark. Please don't hesitate to tell us the truth, and that  
18 will help us all. I appreciate it.

19 MR. HENLEY: Absolutely. I want to get to the bottom of it  
20 because I'm perplexed myself. I just can't imagine, you know,  
21 that this whole thing happened. It's a tragedy, and I haven't got  
22 a clue what the heck caused it.

23 MR. ABRAMS: Yeah. Mark, we've got one other person that  
24 would like to introduce themselves to you. Sabrina, if you would,  
25 go right ahead.

1 MS. WOODS: Thank you, Warren. Good morning, Mark. My name  
2 is Sabrina Woods. I'm also with the Office of Accident  
3 Investigation and Prevention in the FAA. I'm here as a human  
4 factors and human performance analyst supporting both Todd and  
5 Warren in determining kind of the operational environment, the  
6 ability to make sound decisions and things of that sort. So all  
7 the information that I collect, again, goes into trying to figure  
8 out what we need to do to make the system and the operations  
9 better so that this sort of thing never happens again.

10 MR. ABRAMS: Okay. All right. And, Mark, you're allowed to  
11 have someone represent you. Do you have counsel to represent you  
12 today?

13 MR. HENLEY: Yeah, I think Denny Shupe should be on the line  
14 with us today.

15 MR. ABRAMS: I believe he is. Denny, are you there?

16 MR. SHUPE: I am here. Denny Shupe of Schnader Harrison  
17 Segal & Lewis. I'm calling in from New Jersey today.

18 MR. ABRAMS: Thank you. Well, Mark, that's the lineup for  
19 the day. What we're going to do, Mark, is I'll ask a lot of  
20 questions, and then when I'm through asking my questions, I'll  
21 turn it over to Todd and he'll ask his questions, and then Sabrina  
22 will ask her questions, and then we may have a second round of  
23 questions. And by all means, you fill in the gaps where we can,  
24 and we'll have a good time here talking about this.

25 So a little formality-wise here, Mark. If you would, state

1 your full name and spell your last name, please.

2 MR. HENLEY: It's Mark Louis Henley, H-e-n-l-e-y.

3 MR. ABRAMS: Thank you.

4 INTERVIEW OF MARK HENLEY

5 BY MR. ABRAMS:

6 Q. And how old are you, Mark?

7 A. Sixty-one.

8 Q. Sixty-one. And when did you start flying with the Collings  
9 Foundation?

10 A. I think 2007, I think, was my first year.

11 Q. And what did you do in 2007 when you were flying with the  
12 Collings Foundation?

13 A. Well, I went and I had had previous experience flying B-25s.  
14 I had a friend of mine that had one. I was fortunate enough to  
15 get typed in it back in early 90s and flew it for a couple years,  
16 but then kind of got involved with some other things, so I wasn't  
17 flying it anymore. And so I met one of the Collings pilots doing  
18 a pre-by (ph.) on an airplane and, you know, we just got to  
19 talking, and he said he was flying with them and matter of fact he  
20 was a B-24 guy. He doesn't fly with them anymore, but he used to.  
21 But anyway he -- I said, what do I got to do to get involved in a  
22 deal like this? It sounds like a good opportunity to get to fly  
23 some, you know, rare airplanes. And he said, well, we kind of --  
24 we're always looking for people, but it cost a lot of money to  
25 train people and, you know, we'd obviously like to have people

1 that are already rated in airplanes. I said, well, I'm already  
2 typed in the B-25. He goes, really? I said, yeah. I said, I got  
3 so much time, and I don't remember how much it was at the time,  
4 but I said, I've already -- I'm already, you know, captain on the  
5 airplane. I said, what do I need to do? And he said, well, first  
6 thing to do is call Rob Collings. And you'll have to attend the  
7 annual ground school, and then we can put you on the schedule.

8 So that's what I did. I contacted Rob and got an invitation  
9 to the ground school, and I went out and started flying the B-25.

10 Q. Very good. The B-25 and the B-17 and probably the B-24 are  
11 probably not the only airplanes you're rated in. Are you type  
12 rated in any other airplanes?

13 A. Yeah, I'm typed in the DC-3. Let's see. Convair 240, 340,  
14 440, TBM Avenger, Skyraider. Did I say DC-3? S-2-F. I got a  
15 bunch of experimental authorizations, Wildcat, Corsair, P-40,  
16 Yak-9, P-51, T-28. I think that may be it. I don't know, I'd  
17 have to look at my license to verify, but I think that's all of  
18 them.

19 Q. Good grief. That's quite an impressive list. Approximately  
20 how much total flight time do you have?

21 A. It's around 9,800 hours.

22 Q. And when did you have your last FAA medical?

23 A. It was March of last year.

24 Q. Okay. And in the approximation game we'll stick with the  
25 B-25, B-24 and B-17. Approximately how much flight time do you



1 have in the B-25?

2 A. I think it's about a little over 250, maybe 270, I think.  
3 Something like that.

4 Q. Okay. What about the B-24? How much flight time do you have  
5 in the B-24?

6 A. Not -- really, not that much. I got I think either 50 or 60.  
7 I don't know. I haven't added it up in a while, so -- but I --  
8 that's -- of the three bombers, I got the least amount of time in  
9 the B-24.

10 Q. Okay. What about the B-17? How much flight time would you  
11 approximate you have in the B-17?

12 A. I got a little over 500 hours.

13 Q. All right. That's very good. For Collings, did you fly the  
14 B-17 that much? It sounds like Mac probably got most of the stick  
15 time, and -- did you fly the B-17 that much?

16 A. Yeah, actually -- well, I mean when I came out -- when I  
17 first came out, I came out flying the 25, of course. And then --  
18 but I -- later that season I transitioned over and started flying  
19 right seat in the B-17, and then -- but what we would typically do  
20 is we would -- I don't know what the terminology is, but we  
21 basically, you know, switched legs. I mean, we'd -- he'd fly a  
22 leg and I'd fly a leg, and so even though I still -- I was just  
23 flying right seat, you know, he was -- we were splitting the  
24 flying.

25 Q. Okay.

1 A. I still logged and -- we still logged that air, because  
2 that's -- I wasn't qualified as a PIC because I wasn't typed, so I  
3 couldn't log it that way, but that didn't mean I wasn't still  
4 flying the airplane.

5 Q. Right.

6 A. And that's kind of been the case with all of them. That's  
7 sort of a general practice is that, you know, we'll try to swing a  
8 leg so that the co-pilot not only gets proficient but stays  
9 proficient.

10 Q. Right. Did you -- can you estimate how many flights or  
11 flight hours you flew with Mac? It doesn't matter if you were in  
12 the right seat or left seat. It doesn't matter. How much -- how  
13 much did you --

14 A. Yeah, but I couldn't tell you. I couldn't break it down to  
15 which seat I was sitting in, you know, especially once I got typed  
16 in the airplane. Whether I was sitting in the right or sitting in  
17 the left, if I was flying, I usually counted that as PIC because I  
18 was flying the airplane and --

19 Q. Sure.

20 A. -- you know, I was certainly qualified and rated for it. But  
21 of the 500 hours I probably got 400 of it with Mac.

22 Q. Okay. So you're very familiar with it. That's a good thing.

23 A. Oh, yeah. I've known -- I mean, I've flown with Mac a lot.

24 Q. Good. That's good. You don't just fly. You're an examiner.  
25 What is your official title as an examiner? Are you just --

1 A. I am an SAE. I'm a specialized aircraft examiner.

2 Q. Okay.

3 A. And that basically gives me the authority to do these vintage  
4 airplanes.

5 Q. Do you have an A&P license?

6 A. Yes, I do.

7 Q. Are you authorized to sign off work on the airplanes?

8 A. Well, I mean, I'm a -- if it's work that requires an A&P  
9 signoff I could do it. Not that I'd -- typically when I came I  
10 worked on -- I got seven airplanes of my own and I, you know, I'm  
11 -- have every other day, if I'm not flying I'm working on one. So  
12 when I came out there I would help, but I wasn't out there to do,  
13 you know, regular maintenance. I came out to fly the airplanes.

14 Q. Sure. And how much --

15 A. I mean, if it was like -- if we were changing tires or  
16 something which takes a bunch of manpower, I'd certainly lend a  
17 help. But if was just a matter of changing a mag or cylinder or  
18 starter or something, you know, we had full time mechanics that  
19 did that, so there wasn't any reason for me to get involved in  
20 that.

21 Q. Okay. Did you ever see Mac signoff the logbook from time to  
22 time?

23 A. I mean, I saw him fill out the dailies.

24 Q. Okay.

25 A. When you say a logbook, you know, the daily reports that we

1 had, had a section in there for discrepancies and maintenance, and  
2 I've seen him fill out dailies. I don't ever think I've ever seen  
3 him with the logbook, but I've certainly seen him fill out the  
4 dailies.

5 Q. Have you ever been with Mac when you had to blow out the mag?

6 A. Yeah, we've done that a few times.

7 Q. Apparently the day of the incident -- or the accident, they  
8 had to blow out the mag on the number three and the number four  
9 engine.

10 A. Okay.

11 Q. Tell me about blowing out the mag. I got some ideas about  
12 it, but tell me what your understanding is of, when you blow out  
13 the mag, what happens?

14 A. Well first, I've never actually done it myself.

15 Q. Okay.

16 A. I've always been -- one of the mechanics or Mac or somebody  
17 else always did it. But as I understand, we had a -- we kept a  
18 bottle of nitrogen on the airplane, and the nitrogen is a -- it's  
19 a dry, you know, not really -- it's, well, it is air I think  
20 because the air around us right now is like 78 percent nitrogen.  
21 But you got oxygen, you got water vapor, all this stuff that's in  
22 the air, but that nitrogen bottle is dry; there's no moisture in  
23 it.

24 And so they had some lines that were plumbed into the back of  
25 the magnetos, and so apparently -- now this is just conjecture

1 here because I'm assuming this is what's happening -- but they  
2 would -- you get some condensation, you know, you -- if it was  
3 real moist outside or if it rained a bunch, then from time to time  
4 you'd get some condensation. And if you blew nitrogen into that  
5 magneto, it would displace that moist air and then -- because the  
6 moisture in there would allow the spark to either go from lead to  
7 lead or to ground or whatever and it -- either make it misfire or  
8 make not run at all. And so once you blew it out and you got that  
9 moisture out, then the mag would go back to functioning properly.  
10 And I was amazed at the times I've seen it done how effectively it  
11 was.

12 Q. Mark, when you blow it out, though -- I'm not  
13 confrontational, I'm just asking questions -- isn't the moisture  
14 still in there, though? I mean, you've got all that harness, and  
15 with the leads going down to the spark plugs and everything else,  
16 is that --

17 A. We weren't blowing the harness out, we were only blowing the  
18 magneto itself out.

19 Q. Okay. So -- but isn't the moisture still in the line  
20 somewhere?

21 A. Well, I don't think that the moisture in the line or in the  
22 harness is the problem, because the wires on those magnetos are  
23 well-insulated. But once you get inside the magneto, you've  
24 got -- if you look at the distributor block, there's no -- the  
25 only insulation is the air gap between the contacts. And the only

1 reason -- the only thing that keeps it from arcing from one to the  
2 other is the distance between the two. It's -- you know, the  
3 electricity of the spark is going to go to the line of least  
4 resistance. And so when the rotor is coming around, it's going to  
5 fire the lead or the contact that's it's closest to unless you can  
6 provide it a easier route, and that's what the moisture will do  
7 from time to time. And if that rotor, for example, gets wet, then  
8 it will allow it to short straight to the body of the mag instead  
9 of firing at the individual plug lead. I don't think the leads --  
10 if the lead -- let's put it this way, if the lead is what the  
11 problem is, I mean, you got a wet lead --

12 Q. Yeah.

13 A. -- you probably also got some degradation in the insulation.  
14 And so typically, like I said, what we would end up doing is, we'd  
15 blow the mag out and that would resolve the problem. So to me  
16 that tells me that all of the ignition leads and all were still  
17 good.

18 Q. Okay.

19 A. But the back of that magneto has a vent hole in it and when,  
20 when the atmospheric pressure changes, you know, pressure goes up,  
21 pressure goes down, it allows -- and if it's moist, it allows  
22 moist air to migrate into the mag, and when it does, it'll  
23 accumulate in there. And you can have a real cold day and then  
24 have a moist night, and it's amazing how much condensation you'll  
25 get, not only in the mags but all in the airframe. I mean, you

1 climb inside the airplane and all but the controls and the sides  
2 of the airplane will all be sweating on the inside.

3 Q. Does the Collings Foundation use engine covers for their  
4 overnights?

5 A. No.

6 Q. I'm sorry I interrupted you, Mark.

7 A. No.

8 Q. Okay. You said no. All right.

9 A. No, they do not.

10 Q. Okay. Professionally, not for the Collings Foundation, but  
11 how many times have you rebuilt a magneto in your life?

12 A. I've never rebuilt one. I've worked on a few, but I've never  
13 rebuilt one. The thing you -- you know, to rebuild one you're  
14 supposed to be a certified repair station, and I'm not a repair  
15 station. So about the only thing I've ever done to a mag is  
16 change the points out.

17 Q. Okay. You're very knowledgeable, that's why I was asking the  
18 question. So I'll give you a little check beside you --

19 A. I used to do -- I worked on magnetos in my automotive career.

20 Q. All right. Let's talk about ACE and a rating ride scenario.  
21 You're authorized to give a pilot a type rating on the B-17.

22 A. Okay.

23 Q. The -- you probably have a scenario that you go through  
24 pretty much around the pattern, and you set up a engine-out  
25 approach, or you have an engine out at some point in time. During

1 the rating ride you actually shut an engine down and go through a  
2 feather procedure in flight.

3 A. That's correct. Yeah, we have to go up -- now, we usually  
4 don't do it less than 3,000 feet AGL. We go up and we actually  
5 shut one down, and then -- so they can demonstrate that they know  
6 how to properly shut it down and restart it.

7 Q. Okay. And when you say shut it down and restart it,  
8 you're -- I'm assuming you're talking about also the feather  
9 procedure as well.

10 A. Well, yeah. You're starting it with the propeller. You're  
11 not using the starter motor. You know, you feather the engine and  
12 pull a mixture, and when you do, the engine stops turning.

13 Q. Right.

14 A. You know, the blades turn into the wind, and so you've taken  
15 the fuel away, the engine quits running. Then to restart it you  
16 unfeather the propeller and, of course, once it starts turning,  
17 now the blade angle starts to go to low pitch. Then at some point  
18 it'll start to spin, and then you -- and this particular -- this  
19 type of feathering system on these three airplanes, you actually  
20 push and hold the button until you get to 800 RPM, and then you  
21 pop it out. And then it'll -- the prop will continue to go to a  
22 flatter pitch to allow the engine, you know, to run up to whatever  
23 you want. If you want 18, 19, 2,000 -- whatever RPM you want to  
24 set it at.

25 Q. Right.



1 A. And, you know, the prop -- the governor takes over after you  
2 pop the button out.

3 Q. Uh-huh. Do you have a two-engine inoperative scenario on a  
4 type rating ride?

5 A. Yes.

6 Q. Tell me about that, please.

7 A. Well, basically what we'll do is, we'll do a single engine --  
8 now we always do this as a VFR maneuver. We never do this under  
9 the hood.

10 Q. Okay. Good.

11 A. And so what we'll do -- we'll enter the pattern at a normal  
12 pattern altitude with one engine, a simulated power setting. On  
13 the 17 we typically use 15 inches of manifold pressure and about  
14 1,500 RPM, and then when we get equivalent to a downwind, then we  
15 pull the other engine on that side. And typically it was always  
16 one and two because those are the most critical, you know, because  
17 of they're all right-handed rotated engines, so the left side's  
18 the more critical than the right. And so we pull number one back  
19 first, and then we pull number two back, and then we'd fly a  
20 pattern -- the remaining part of the pattern with those two  
21 engines at equivalently zero thrust.

22 Q. Okay. Do you shoot an approach?

23 A. Not an approach. We just do a VFR landing with two engines  
24 out.

25 Q. All right. In a two-engine simulated inoperative landing, is

1 there any particular commit point where you would put the landing  
2 gear down, or is it just all variable on the traffic pattern,  
3 or -- tell me about the landing gear and when you would normally  
4 put that down?

5 A. Well, obviously, that's an objective decision you have to  
6 make as PIC. That's part of what our testing is, is to make sure  
7 that they make, you know, the correct decision on when to put it  
8 down. Because you certainly don't want to put down too early  
9 because, you know, the airplane won't barely make -- hold altitude  
10 with two engines. I mean, in order for it to maintain altitude,  
11 it's not going to do it at high altitude -- or a high density  
12 altitude day. It's not going to do it if it's got a big load of  
13 fuel on it.

14 There's a lot of variables there but, you know, if it was  
15 a -- you can -- it will -- it won't climb. It might hold altitude  
16 if you're in the right conditions, but on a hot day, you know, all  
17 you are is a power glider. You got to -- if -- it's a good  
18 glider, because it'll go quite a ways on two engines, but you're  
19 eventually going to trade altitude off for energy. And so what  
20 you want to do is make sure you can convert that altitude into  
21 enough energy to get to the airport.

22 Q. Certainly. Never heard it described as a powered glider  
23 before. Interesting. So there is no real commit point? I mean,  
24 putting that landing gear down -- I mean, it's not a one-mile  
25 final. You --

1 A. What I always -- what I look for in somebody -- you know, the  
2 more you fly the more I can conject. Maybe it's not the right  
3 word, but I can tell if the airplane is putting energy in the back  
4 or if you're -- you watch the airport, and if it's rising in your  
5 line of sight, then you're using up energy, you're not putting it  
6 in the bank.

7 Q. Okay.

8 A. And so as long as the airport environment is going down in  
9 the windshield, then you can tell that you're -- you've got  
10 something in the bank. And so I would not put the gear down until  
11 I knew that I had enough energy so that I knew I could make the  
12 airport.

13 Q. Okay.

14 A. And that's -- it's a judgment call. I don't know that  
15 there's any specific -- there's not a specific number or a  
16 distance or anything. It's just you have to be able to look,  
17 because you don't know what the relative winds are. You know, you  
18 could have a case where, let's say that you're doing a visual  
19 approach and you're doing it into a 20 mile an hour wind, the  
20 airport is really a lot farther away from you than what you think  
21 it looks like.

22 Q. Right.

23 A. You know, consequently the other way around, if you happen to  
24 be going to the airport and the airport -- you're doing it in a  
25 tailwind, then you're going to have to reverse so that you'll be,

1 you know, thinking that you're low but you're actually closer in  
2 relative to how much air you have to pass through before you get  
3 to the airport.

4 Q. Uh-huh. What kind of flap settings do you use with a  
5 simulated two-engine inoperative landing?

6 A. Normally you won't use any until you get in close. I mean,  
7 not until you got -- you want to keep the airplane just clean as  
8 possible until you basically got the airport made. Now, once I  
9 got the airport made, you know, I'd probably want to put at least  
10 two notches, if not all of them, just to help decelerate the  
11 airplane. Once you get in the flair and get the mains on, the  
12 darn thing is so hard to stop. You need to have some drag on it,  
13 otherwise you're going to have an extremely long road. And so  
14 usually what we'll do like -- and in the B-25, for example, of  
15 course, that's a -- you know, you only got -- they'd like to do a  
16 single-engine go-around, but the rule is you never go more than  
17 flaps two on it unless you got -- until you got the airport made  
18 just in case you need to do a go-around. You don't want to do a  
19 single go-around and have the flaps at flaps four.

20 Q. Understood.

21 A. Just -- it's not -- it takes so long to get the flaps up that  
22 you're going to kill a whole lot of energy while you're doing  
23 that.

24 Q. Right. Taking off -- you push power up to takeoff, all four  
25 engines are turning. About what airspeed does the tail come off

1 the ground? When's the tail come up? Do you have any idea?

2 A. Well, I mean, there again it depends on what the conditions  
3 are. If it's cool and you got a little relative wind that comes  
4 up really quick, if I had to say, I'd say probably between 40 and  
5 50 miles an hour.

6 Q. Okay.

7 A. I mean, the tail flies really fast on a B-17, and I've  
8 actually -- and same thing conversely, when you land, if you got a  
9 little bit of wind, I've actually -- we've been looking at the  
10 darn GPS, and I've actually set the tail down, and it finally  
11 took -- I was only showing 28 knots on the GPS. But it flies  
12 really -- it flies a long time.

13 Q. It does, doesn't it? The reason I asked the question, Mark,  
14 is that some of these witness -- eye witness videos that we've  
15 received shows the tail up just prior to impact with the fuel --  
16 not fuel farm, the glycol farm. And I was just wondering, you  
17 know, approximately how -- what kind of speed it was to have the  
18 tail up and still flying. So that was the reason for the  
19 question.

20 A. Yeah, the tail comes down at a very slow speed. When you  
21 land that airplane, if you're not at a stall then you'd need -- in  
22 order to keep the airplane on the ground you've got to go forward  
23 with the stick, and that keeps the tail in the air, which keeps  
24 the mains on the ground.

25 Q. Okay.

1 A. I mean, we would typically -- we typically do wheel landings  
2 in that airplane.

3 Q. When you say wheel landings, tail wheel landings?

4 A. No. A wheel landing is where you land on the main with the  
5 tail in the air.

6 Q. Right. Okay. All right.

7 A. Yeah, I -- yeah.

8 Q. Yeah. Did you attend the ground school earlier this year for  
9 the Collings Foundation?

10 A. Well, it was yesterday.

11 Q. Okay.

12 A. I just got home last night about midnight. It was yesterday  
13 and the day before.

14 Q. All right. Approximately how many --

15 A. Yes, I did go to that one.

16 Q. Okay. Approximately how many people were there?

17 A. I don't know, 40, maybe 50. I don't know, but a pretty good  
18 group.

19 Q. Okay. Good.

20 A. I didn't get -- I don't -- I didn't get a count, so I  
21 wouldn't --

22 Q. Sure.

23 A. But there was a large group of people.

24 Q. All right. Good. And approximately how many captains fly  
25 the B-17? Since Mac is not with us now, approximately how many

1 pilots are you going to have flying the B-17 these days?

2 A. I think we've only got six or seven. I think. I don't know.  
3 He flew the airplanes almost full-time, and so we just never -- we  
4 got lots of co-pilots but just don't have a whole lot of captains.  
5 Just, you know, he loved that airplane. I mean, he would come  
6 out -- out of the 10 months he would probably fly it 9½ out of the  
7 10 months. He would be in the airplane as captain. And so we  
8 just have not, up until now, had the need to, you know, spend a  
9 lot of time and effort training new captains because all they  
10 would do is still be just flying co-pilot.

11 Q. Uh-huh. Mark, I believe your name/signature is on Mac's last  
12 yearly check ride from January of 2019.

13 A. Right.

14 Q. You recall it -- you recall that?

15 A. Yes.

16 Q. Do you recall anything significant about his yearly check  
17 ride?

18 A. It was very routine. You know, Mac was a master in that  
19 airplane. I mean, he just -- if he -- if something happened or  
20 if, you know -- he just knew right off the bat what the heck to  
21 do. That's what was perplexing me about this whole deal. It  
22 just -- I can't imagine. If there was anybody else flying it I'd  
23 say, well, okay, I could see where something happened. But with  
24 Mac flying it -- I mean, he didn't fly, he wore that airplane.  
25 I've never seen anybody that could fly and be as smooth and

1 knowledgeable about an airplane as he could. I mean, I've seen  
2 him fly not only in normal conditions but crosswinds and  
3 turbulence and not -- but the thing is, is our ride that, you  
4 know, the airplane -- he just was so far ahead of it.

5 I mean, for example, I remember we took off one time down at  
6 Florida, and I didn't think the wind was blowing that hard, you  
7 know, and he goes -- he said, when I come up with the power, give  
8 me about 5 inches on three and four because we got such and such  
9 crosswind. And I thought -- and I was thinking, you know, but he  
10 just knew that, that was what the split needed to be to keep the  
11 airplane straight. And it was amazing how competent he was in  
12 that airplane.

13 Q. So there was nothing significant about his annual check ride  
14 one way or the other? It was just routine and --

15 A. It was -- I've only actually done just a few of his, I mean,  
16 because I've only been an examiner for a few years. Previously we  
17 had another guy named Steve Rand (ph.) that did most of the rides,  
18 and so I've only done just the last few, and -- but they were --  
19 and I wouldn't say there was anything different with any of them.  
20 He was -- it was, I mean, he just -- he could fly the damn  
21 airplane.

22 Q. Okay. Did you ever see the loadmaster when you were flying  
23 with Mac -- have the loadmaster work the throttles one way or the  
24 other?

25 A. No. I mean, typically -- well, I don't know what happened



1 when anybody else was in there, but when Mac and I were flying the  
2 airplane then we didn't need help. I mean, we took care of  
3 everything. Typically, if you're the flying pilot and -- what  
4 you'll do is you'll, you know -- we go out and we, of course, we  
5 totally rely on the checklist. I mean, we -- that -- we use the  
6 checklist religiously. We do a pre-takeoff briefing every single  
7 time, and then -- because every time you take off it's different  
8 conditions. Kind of like what I just said a minute ago.

9       During the preflight briefing he said, all right, now look, I  
10 need you -- when we come up to 40 inches, give me 35 on three and  
11 four because of the crosswind. You know, we brief that stuff all  
12 the time. And so when we came -- when you come up with the power  
13 on it and -- what happens is the flying pilot will leave the  
14 throttles up, but then the copilot's the one that trims the power.  
15 And then once the -- then once you get it to takeoff power,  
16 there's a lock knob on the left-hand side of the throttle plugger,  
17 we call it -- we say, lock it down. And what that does, it just  
18 firms it up so they don't creep on you. If you had to take your  
19 hand off to grab the trim wheel you didn't want the throttles to  
20 move. But there wasn't any reason to have the flight engineer do  
21 that unless, you know -- let's put it this way, when I was flying  
22 we never did that. We did it all ourselves.

23 Q. All right. Have you ever done the safety briefing for the  
24 passengers?

25 A. Not on the B-17. Only time I've ever done it was on the

1 B-25.

2 Q. When you do it -- or when you did it on the B-25, did you  
3 just do it from memory? Did you have a piece of paper in front of  
4 you? Is there a card? Is there a pamphlet? What -- how did  
5 you --

6 A. I mean, well, it's broken out in the operation manual, but  
7 most of the time we were just doing it from memory. I mean, I --  
8 you know, you listen to that thing over and over and over each  
9 time. There are just certain -- there are not that many major  
10 points. Once you get started you just, you talk about the, you  
11 know, the use of the seatbelts and how you get in and out of it  
12 and where the -- especially in the, like, in the 24 not -- when on  
13 the catwalk, not to get off the catwalk, where the fire  
14 extinguishers are, where the sit sacks are, where the first aid  
15 kit is, you know, those -- and like I said, it's not that long a  
16 list. It doesn't -- you know, there's not -- it doesn't take that  
17 much to -- I mean, it's not like you got a 20-point briefing that  
18 you got to go down.

19 MR. ABRAMS: Sure. Sure. Mark, I'm going to stop right now  
20 for my questions. I'm going to turn it over to Todd. I may have  
21 some follow-up questions on the second round, but thank you very  
22 much, and I'm going to turn it over to Todd. Todd, are you ready  
23 to jump in?

24 MR. GENTRY: I'm ready. Thank you, Warren, and thank you,  
25 Mark, for being with us today. I just have a couple quick

1 questions before we continue.

2 BY MR. GENTRY:

3 Q. On your last check ride that you gave Mac, I'll call him Mac,  
4 on the 29th of January, '19, did you have any debrief items  
5 scored?

6 A. No, not really. I mean, like I said, his PPE ride was  
7 virtually flawless. I mean, he just could fly that airplane. It  
8 just -- now, he knew exactly -- as soon we'd do something, he  
9 immediately knew what the -- now, for example, you pull -- if you  
10 pull -- excuse my -- the other phone's ringing.

11 But if you pull that number one back then -- immediately then  
12 we'd make a power change on number two and number three, and he  
13 knew exactly what that power change was. And, you know, he --  
14 like I said, I don't know how much total time he had, but I think  
15 it was, I don't know 5, 6, 7,000 hours. Something like that. And  
16 he -- it was -- you know, he'd done this so many times. I don't  
17 know how many engine failures he'd had over the years, but they  
18 were all routine.

19 Q. Okay. So if you had to -- have you ever had -- let me ask  
20 you that. Have you ever had to correct him on a maneuver or on  
21 anything that he did in the air?

22 A. No.

23 Q. You never had to correct him?

24 A. No.

25 Q. Okay. Well, I've been around a long time too, Mark, and I've

1 never seen a guy do a perfect ride, ever. There's always  
2 something that may not need a debrief, but it might need some kind  
3 of touching up. Always.

4 A. Yeah.

5 Q. So you're telling me that --

6 A. Well, I mean --

7 Q. -- that was not --

8 A. -- when you say a perfect ride. I mean, you said perfect.  
9 Like you said, there could be a flaw in everything. Especially if  
10 you're shooting approach, you know, you can be a little high, a  
11 little low, a little left or right. But as long as you stay in  
12 the doughnut then -- you know, I've never seen anybody shoot an  
13 approach and go all the way from the final approach fix to the  
14 decision height and not have the needle move a little.

15 Q. Sure.

16 A. You know, so you're right. There's never a perfect flight.

17 Q. Right.

18 A. But the thing is, as long as he meets the standards, to me  
19 that's a -- you know, if he meets the standards then he's met the  
20 criteria, and I'm going to pass him.

21 Q. Oh, sure. No, I'm -- absolutely. The standard is the  
22 standard. Absolutely. I agree 100 percent.

23 A. That's what we base this whole thing on is the standard.  
24 We're not looking it to be perfect because there's nobody that's  
25 perfect. But as long as he meets the standard then he passes.

1 Q. Yep. I agree 100 percent.

2 A. You know, that -- I mean, when you say has he done anything  
3 -- he met the standard. He did everything according to the ACS.  
4 I think it was PTS then though. I don't think it came out until  
5 this last year. I don't know. I can't remember. I don't know  
6 what the date on that was.

7 Q. That's all right. So when you guys are flying, how would you  
8 verify an engine failure?

9 A. Well, normally -- most of the time in engine failures I have  
10 never -- I've only had two engine failures in that airplane, and  
11 both of them they were still running, but we had to -- we shut  
12 them -- well actually, one we didn't shut down because we were  
13 still in the pattern, and we left it running. It wasn't  
14 immediate -- it wasn't immediately trying -- it didn't quit. It  
15 was just, you know, it was an oil pressure -- oil temp deal and we  
16 started -- it started blowing smoke out of the crankcase vent.  
17 But the other one it actually -- we had to shut it down. But if  
18 we shut it down -- and because -- but we knew which one it was  
19 based on because the -- of oil pressure and oil temp. I've never  
20 had one just flat quit.

21 Q. Right. So how would you verify that, that's the engine  
22 you're going to shut down in the cockpit?

23 A. Okay. Well, if the engine -- like I said, if we had one that  
24 had oil pressure -- I mean, you're looking at the gauges and then  
25 they're numbered. It's really -- you'd have to be an idiot to not

1 do the right one. If we're looking at the gauges, they're paired  
2 up. They had -- you had one and two on one gauge and three and  
3 four on the other and the needles -- or the -- everything is  
4 marked, and so it's real simple just to, you know, if you got oil  
5 pressure falling off, it's got number three on the needle. If the  
6 oil temp's going up, it's got three on the gauge.

7 And so it's real simple to determine which one's which, and  
8 so -- but what we always did -- we still verify. And, you know,  
9 the flying pilot will say, all right, we got to shut down number  
10 three. And then the copilot concurs, we're shutting down number  
11 three. And you put your hand up next to the feather button and  
12 say, this is number three. You push the button and pull the  
13 number three mixture and the engine shuts down. That's -- I mean,  
14 that's how we did it. I've only had to do that one time, but it  
15 was -- I mean, very deliberate.

16 You know, the one thing you don't do is, don't ever get in a  
17 hurry, because if you get in a hurry, you're going to make a  
18 mistake. But as long as you, you know, you identify and verify,  
19 both the flying and non-flying pilot, you're going to -- you  
20 should do it right.

21 MR. GENTRY: Right. Thank you, Mark. That's all I have.

22 MR. ABRAMS: Sabrina?

23 MS. WOODS: Thanks, Warren. Good morning, Mark. Again,  
24 thank you for your time.

25 BY MS. WOODS:

1 Q. I'm going to follow up with Todd, following a question just  
2 in your involvement in -- with Mac and his check ride. If you did  
3 see that there was something that needed attention and you wanted  
4 to address it with him in debrief, do you feel that he was the  
5 type of person that would be very receptive to what you had to  
6 say?

7 A. Well, let's put it this way. He was a -- if I told him  
8 something, he would be very receptive to it. Now, I'm not going  
9 to say I don't have any experience with his, you know, taking  
10 constructive criticism from anybody else. I never was around when  
11 they -- it was either attempted or whether it was actually done.  
12 But Mac and I had built up enough rapport that if I told him  
13 something that we needed to do, he took it to heart.

14 Q. Okay. Thank you for that. So you've been with the  
15 Foundation it looks like about 13 years.

16 A. That sounds about right.

17 Q. So in general, how would you describe the culture there  
18 overall and along the same lines of people sharing information,  
19 giving and receiving information, sharing what their issues are?

20 A. Well, one thing I -- let me think of how I can put this. The  
21 Collings Foundation, you know, they're -- obviously, their main  
22 objective is to take these airplanes on tour and share them with  
23 the public. And obviously the ride program is the -- is where the  
24 revenue comes for it to be able to afford to do this. So there's,  
25 there's -- that's one of our focuses is -- when we get to an event

1 is to make sure that we're available, not only to have the  
2 adequate crew, but also have the airplanes in shape in order to do  
3 those rides.

4       And if we ever had -- if we did have a maintenance issue,  
5 then it was all hands on deck to try to get the airplane repaired  
6 in order to fulfill our flying schedule. I mean, we just -- they  
7 took it very serious that, you know, to make sure that the  
8 airplanes were adequately worked on and maintained. And so in  
9 that regard, we -- there was always -- I mean, I'm not saying  
10 always, but there could be, in some cases, an urgency. But they  
11 never compromise urgency for safety. I mean, if the airplane  
12 wasn't safe -- hell, I'm not going to fly the damn thing unless  
13 it's safe. I mean, if I -- if we found out we had a particular  
14 problem, we would not operate that airplane until that issue was  
15 resolved.

16       You know, the thing is, over the years it's amazing -- that  
17 was one thing that fascinated me was that we carried enough tools  
18 and parts, I mean, we were pretty much self-sufficient. If we had  
19 a starter go bad, we had a starter. If we had a cylinder go bad,  
20 we had cylinders. If we had a generator go bad, we had  
21 generators. If we had a flat tire, we had tires, tubes, jacks,  
22 disassemble tools to break the bead down. There was very little  
23 stuff that we had -- we were almost always self-sufficient.

24       But that's not to say that -- I mean, when we worked on  
25 stuff, we didn't put that airplane back up until everything was



1 accomplished and the airplane was safe to fly again. It wasn't  
2 like, well, we don't have a -- you know, we don't have this  
3 widget, whatever it might be, so we'll just, we'll furlough that  
4 until the -- you know, until someone says -- that wasn't the case.  
5 We had everything on that airplane in order to fix that -- almost,  
6 without exception, everything.

7 Now, the one thing that -- what we didn't have -- if there  
8 was something we didn't have -- for example, we might not have had  
9 gauges, for example, but if we had, say, a oil pressure or an oil  
10 temp gauge or something like that go bad, American Aero back in  
11 Florida had spares, and they were 24 hours away. I mean, all we  
12 had to do was call and they'd FedEx it and we'd get it the next  
13 day. And so we had, you know, we kept those airplanes flying day  
14 to day, and we had very little downtime. But they were always  
15 flown -- they were always repaired 100 percent back safe before we  
16 ever flew them. The crew was -- I guarantee you Mac would not fly  
17 that airplane. He loved that airplane so bad, he would not fly  
18 that airplane if he knew there was some known deficiency that  
19 could possibly jeopardize the airplane.

20 Q. Understood. These are your show pieces. I understand. Not  
21 only are they the revenue makers, they're part of history and they  
22 are show pieces and you -- of course, you want them to be taken  
23 care of. But in my background there are two key pieces to this  
24 component -- to this operation. Yes, you have the machine and its  
25 welfare and it being taken care of, but you also have the human

1 element. So it's obvious that you're very passionate about how  
2 well that the aircraft was maintained. Let's talk about the  
3 people a little bit more and how they get along with one another  
4 and how well you believe -- or you perceive the organization keeps  
5 up on things like addressing safety issues amongst the people,  
6 amongst the pilots, amongst the mechanics -- things like CRM. Can  
7 you talk a little bit about that?

8 A. Well, let's talk about how the whole group recruits their  
9 crew. You know, this is not the CAF, the Commemorative Air Force.  
10 Most of their flying positions, in order for somebody to qualify,  
11 the first thing they have to do is ante up a bunch of money, and  
12 so they're more concerned -- seem to be more concerned with people  
13 that have money than people that have talent.

14 And so this group, the Collings Foundation, doesn't charge  
15 one penny to anybody that comes out and flies the airplane. They  
16 are looking solely for flying talent. And the thing is, not only  
17 do you have to be able to fly the airplane, but -- because, you  
18 know, you have double occupancy in the hotel rooms at night, and  
19 we spend all day long at the airport, so it's kind of one of those  
20 deals; if you're an asshole or you're a hot dog, and you think  
21 that you're, you know, the Red Baron and you're the best pilot out  
22 there, most of the time those people, after a couple of times,  
23 they don't get invited back. They would just, you know, just  
24 elect not to use you.

25 And because that -- you know, like I said, they're not --

1 they don't need the money. All they need is they need good flying  
2 talent and people that get along with each other. And as long as  
3 you keep your staff filled with people like that, then that's  
4 where they get their longevity. This thing's been going on for 30  
5 years, and so -- and that's been the culture. I mean, if you're  
6 an asshole, you're not going to last very long. And so -- and  
7 when you find that everybody gets along, you'll also get along in  
8 the cockpit. And the CRM is going to typically be better because  
9 you've got likeminded people up there instead of some guy sitting  
10 next to some guy that he can't stand, or some guy that thinks  
11 that, you know, the next guy sitting to him is a hot dog.

12 We just didn't have that culture. I'm not going to say it  
13 wouldn't maybe happen from time to time, because those people had  
14 to come in and either prove themselves or disprove themselves, but  
15 for the most part, those people that flew out on a regular basis  
16 got along well, and they worked well in the cockpit as well.

17 MS. WOODS: Got it. Thank you. I think that's all I have.  
18 Warren, I'm going to go back to you.

19 MR. ABRAMS: All right. Thank you, Sabrina. Mark, just a  
20 question or two to follow up with me.

21 BY MR. ABRAMS:

22 Q. Did they -- did the Collings Foundation give you any idea of  
23 how many rating rides you might anticipate in the 2020 season?

24 A. No. I mean, I just -- all I -- you know, I coordinated 90  
25 percent of that with Robert Pinksten, and he'd just -- he'll call

1 me. He does -- he's a PPE himself, and so he does most of them.  
2 Most of the time I usually end up doing, as far as currency rides,  
3 I just do -- I do his. And like I said, I did Mac. But most of  
4 the time, most of the other stuff, you know, once this -- like,  
5 for this last year. And I would supposedly do it for 2020, but  
6 Rob would probably do quite a few of them. He's out there  
7 basically every day.

8 Q. Okay. Just curious. So like I say, since Mac did the  
9 majority of the flying, it looked like there was probably going  
10 to -- be a need to get more --

11 A. Well, we don't have a B-17 -- we're not going to have a B-17  
12 out this year, so the only airplanes that are going to be out are  
13 going to be -- the bombers going to be the 24 and the 25. And, as  
14 I understand, the 24 doesn't require PPE, and so the only airplane  
15 to do is the 25. And so, you know, he can handle those PPE rides  
16 real easy. I mean, I'm sure I'll have to do him because, you  
17 know, he has to take one as well, but --

18 Q. Certainly.

19 A. -- I don't anticipate having to do a whole lot of PPE rides  
20 for Collings this year.

21 Q. Okay. Mark, where are you from? Where'd you grow up?

22 A. I'm from LA. Lower Alabama.

23 Q. Lower Alabama, absolutely. I'm from Georgia, so I --

24 A. Actually, it's more central. I lived in Birmingham most of  
25 my life, and I just moved to Tuscaloosa a couple years ago.

1 Q. Okay. Well, I spent my summers in Irondale so, yes, I'm very  
2 familiar with Birmingham.

3 A. Yeah, when we were kids we used to go out and cruise the  
4 Eastwood Mall out there.

5 Q. Oh, that was big, wasn't it? Yeah, that was the first mall  
6 around, yeah.

7 A. Yeah, exactly.

8 MR. ABRAMS: All right. We digress. That's all I have. I'm  
9 going to turn it back over to Todd. Todd, do you have any  
10 follow-up questions?

11 MR. GENTRY: I just have one, but I do want to say, Mark,  
12 it's a pleasure to talk to you. Your knowledge is evident, and I  
13 appreciate you being candid with us.

14 MR. HENLEY: Yes, sir.

15 MR. GENTRY: My last question is --

16 MR. HENLEY: Hey, look. I'm here to get to the bottom of  
17 this as well, because when the accident happened, you know, I was  
18 sitting there trying to run this whole scenario through my head,  
19 and I'm thinking, what in -- what could have happened? I mean, I  
20 just -- you know, that was one thing that, when I was out with the  
21 Collings Foundation -- because I fly just about all the airplanes  
22 that they put on tour, the Mustang, the P-40, the Skyraider, the  
23 24, the 25, the 17. I've flown them all. And the B-17 was the  
24 one airplane that I felt the most safe. I mean, I flew that  
25 airplane -- I actually felt like unless there was some, you know,

1 fire or something -- hell, as far as operation and stuff like  
2 that, that was the safest airplane I could be in. And then for it  
3 to then all of a sudden have this accident. I mean, I just was --  
4 I just didn't see how it could even possibly happen.

5 MR. GENTRY: Yeah, well, that maybe changes my mind. Maybe I  
6 have two questions for you then. So --

7 MR. HENLEY: Okay.

8 MR. GENTRY: And you'll be able to answer this question.

9 BY MR. GENTRY:

10 Q. How long is the process to restart an engine? How long does  
11 that take?

12 A. If you shut one down, you can restart it in about 10 seconds.

13 Q. From feather position to restart in 10 seconds.

14 A. Yes, sir. You take it -- all you do is you push that button  
15 in, and then the propeller, after about 2 to 3 seconds, it'll  
16 start turning, and it'll go from dead still to 800 RPM in about 2  
17 to 3 seconds. And then, when it hits 800 RPM, you let go of the  
18 button, push the mixture up and it's running.

19 Q. Okay. That's a good answer. Is it possible --

20 A. I mean, we do shutdown and restart, and the whole deal is, is  
21 you want to try to, you know, for training purposes you want to do  
22 that before you allow the cylinder temp to get too low --

23 Q. Yeah.

24 A. -- because otherwise if you let the -- you know, because the  
25 way an engine works, the cylinder, the piston, the rings and the

1 cylinder all grow as a unit as they heat up when you're warming  
2 the engine up. Well, you shut it down, now you're super cooling  
3 the cylinders. And what happens is that cylinder begins to  
4 shrink, and the piston and the rings in there are still extremely  
5 warm. And what'll happen, you let it cool off too long and then,  
6 unless you let it cool all the way off, if you let it just cool  
7 down and the cylinder temp gets low -- too low then you could  
8 actually damage the rings. Because the rings will -- the ends of  
9 the rings will hit, you know, because they're still hot and  
10 swollen but the cylinder's cold.

11 Q. Right.

12 A. So you want to try to get that restart done before you get  
13 below 100 C on the cylinder temp. And so when we shut it down,  
14 you know, we secure the engine and immediately execute the  
15 restart, and it does not take long to restart it.

16 Q. So I'm getting some feedback on my end. I apologize. How --  
17 and I'm just guessing here. I don't want an exact number because  
18 I don't think anybody knows. How long would it take to cool the  
19 cylinders down?

20 A. If you let --

21 Q. Not the whole engine. Just the cylinders.

22 A. Yeah, the cylinders. I mean, as soon as you shut it down  
23 within about -- I'd say within 2 to 3 minutes you'll have the  
24 cylinder temps down below 100 C.

25 Q. Right. So if that happened in 2 or 3 minutes, and you try to

1 unfeather and restart that motor, will the prop be able to turn it  
2 or just not get --

3 A. Oh, yeah. Oh, it'll run. I'm just saying that, you know, if  
4 you did it over and over and over you'd basically damage the  
5 engine.

6 Q. Right, right.

7 A. Yeah, it'll crank and run. You know, if -- and it would have  
8 to be a fairly new engine for that to really be an issue, but --

9 Q. Right, it'd have to be --

10 A. -- it's kind of like if you go to crank an engine up, you  
11 know, they won't -- our rule of thumb was to let it stay at 1,000  
12 RPM until you got to 40 degrees Celsius. Well, the deal was, was  
13 that allowed -- not only were you waiting for the oil to warm up,  
14 but that allowed the cylinder temps and the pistons and the rings  
15 all to grow together over a longer period of time. But if you go  
16 and you start putting a whole bunch of power on it, then what  
17 happens is the combustion heats the piston rings up and -- the top  
18 of the pistons faster than it does the cylinder and you can  
19 actually end up with some end gap issues on your -- on the rings.  
20 And you can actually break some rings because you heated it up too  
21 quick.

22 Q. Right. Absolutely. So my next question is probably the last  
23 one. Is it possible to do a two-engine go-around in this  
24 aircraft?

25 A. No.



1 Q. Right. That's awesome. That's exactly what I thought it  
2 was, so --

3 A. Yeah, it won't do it. And not only that, the darn -- then  
4 the -- not only is there an issue, you can't -- it's not going to  
5 go, but then you stand an issue -- that thing has a -- the bronze  
6 or brass or whatever the heck it's made out of gear nuts on the  
7 landing gear unit, if you don't allow it to have ample cool down  
8 time, what'll usually happen is, you might put the gear back up on  
9 a go-around, but then when it goes up it'll actually seize. And  
10 then you're going to end up landing it the next time with the gear  
11 up because it won't go down.

12 Q. Right.

13 A. You know there was a 5 minute cool down on those -- the gear  
14 nuts if you want to call it -- I don't know what the proper term  
15 is. But you can't just put the gear down and turn right around  
16 and put them right back up without taking a chance on getting the  
17 gear either stuck up or stuck somewhere, whatever. That gear nut  
18 or whatever, it'll seize onto that long jack screw.

19 Q. Yeah, on the screw. So how long does it take to get the gear  
20 down? Just estimate for me.

21 A. Oh, I'd say probably 20 seconds.

22 Q. Okay.

23 A. It takes a while, but it's not, I mean, it's not like 2  
24 minutes or anything. It'll go down -- it goes down deliberate.  
25 It's pretty predictable every time you put it down.

1 Q. Yeah, it's a noticeable increase in drag?

2 A. Oh, yeah. Yeah, when you put the gear down, you notice it  
3 right away. As soon as those wheels start coming out of the well  
4 you got increased drag.

5 Q. So you said -- earlier I think you said that it won't climb  
6 with the gear down on two engines.

7 A. Yeah, you -- as soon as put the gear down you -- you're --  
8 now you're trading altitude -- it's not going to maintain altitude  
9 with the -- with two engines out and the gear down, it's not going  
10 to maintain altitude.

11 Q. Yeah, it's going to trade energy for altitude.

12 A. That's right.

13 MR. GENTRY: Okay. I can't thank you enough, Mark. You're a  
14 wealth of knowledge, and I do appreciate you talking to me. I  
15 don't have any other questions, Warren.

16 MR. ABRAMS: Sabrina, do you have a second round of questions  
17 for Mark?

18 MS. WOODS: No, I don't. Thank you, Mark, and thank you,  
19 Warren.

20 MR. HENLEY: No problem.

21 BY MR. ABRAMS:

22 Q. Mark, do you have anything for us? We're -- we've been doing  
23 all the talking. And I say all the talking, we've been asking you  
24 the questions and you've been providing great answers. And do you  
25 have anything for us? We're at the end --

1 A. Not that I can think of. I think we've, we've kind of  
2 covered it all.

3 Q. We've run it up and down the flagpole sure enough. Mark,  
4 what we're dealing with -- and we don't know the status of the  
5 engines. We've sent them off to be torn down, and being the  
6 federal government, there's been delays of getting crates big  
7 enough to put those engines in and sending them out to be torn  
8 down, and our process has finally gotten started. But we're  
9 looking at the props on three and four and the engines on three  
10 and four, tearing those down. It looks like we've got a lot of --  
11 the engines were developing a lot of power at impact on one and  
12 two.

13 But we've also got witness videos that are in our possession.  
14 I mean, where they came -- the public, people just taking videos  
15 of the airplane. You know, anytime the B-17 is in the air  
16 everybody's got their camera out taking video or a picture of it.  
17 But anyway --

18 A. Right.

19 Q. -- we've determined that a fairly -- I don't want to say low  
20 altitude, but probably less than 1,000 feet above the ground, the  
21 gear was already down, and they still had 2.7 miles to go before  
22 they made it to the runway. So we don't know if there were two  
23 engines inoperative. We don't know if there was one engine  
24 inoperative. We don't know if all four were turning just  
25 properly. What we do know from these witness videos -- and we've

1 determined their location and then distance to fly to the ground  
2 and then ADSB points and a lot of other GPS stuff -- that the  
3 track of the flight was about 2.7 miles with the gear down until  
4 he impacted the approach light. So we're just trying to figure  
5 out -- that looked like the gear was down early to us, so that's  
6 why -- the reason for the question. So --

7 A. Well, I mean, the only thing I -- you know, like you said,  
8 what you got to determine is, if you did have two engines out, was  
9 when you lost the third one. If you made the decision to put the  
10 gear down and then all of a sudden you lost a second engine, you  
11 know, now you're kind of committed.

12 Q. Oh, yeah.

13 A. Because, like I said, you can't put the damn thing right back  
14 up, not without taking a chance on, you know, locking the  
15 mechanism up.

16 Q. Yeah.

17 A. And so I don't know -- and typically what we did, you know,  
18 under normal circumstances, we typically would put the gear down  
19 about -- if we were doing a straight in, we do about 5 miles out.

20 Q. Okay.

21 A. And so that was just normal operating procedure, and then --  
22 but if you're doing a downwind approach, then you obviously can do  
23 it a lot -- it's more 5 mile flight path type deal, and you just  
24 have to make a guesstimate. A lot of times I'd put it down just  
25 about the time I was coming up, you know, beam the airport, maybe

1 a little bit before that under normal flight conditions.

2 Q. Sure.

3 A. And so if you only had one engine out, there wasn't really  
4 any reason not -- I mean, you could put the gear down and it would  
5 still hold altitude with three engines. So if I was flying in, I  
6 would -- I might maybe keep it up a little bit longer, but not too  
7 much because you still got to get them down and get everything to  
8 slow down until you start getting, you know, getting the flaps out  
9 and --

10 But like I said, you know, just the biggest question is going  
11 to be -- in my mind, is when did -- if they -- if it was -- you  
12 know, if they did lose two engines, which I think that's fair to  
13 say, when did they lose the third, you know, number three?  
14 Because apparently I think they had already radio -- I listened to  
15 the tower tapes right after the accident, and I think if I recall  
16 I got from that was that they had already shut down number four,  
17 and so -- and then the question comes, when did they lose number  
18 three?

19 Q. Yeah. We don't have that answer. There's no -- there's  
20 nothing like a cockpit voice recorder or a, you know, flight data  
21 recorder on a modern airplane to tell us that information. So we  
22 just -- it's working kind of bare bones to try to figure this  
23 puzzle out. So anyway, Mark --

24 A. Well, like I said, all of your evidence are all -- it's all  
25 a, you know, it's a moment in time at the time it hit the ground.

1 Q. Yeah.

2 A. So even if the -- even if number three -- let's just say  
3 that, you know, it quit 5 miles out or quit a half mile out, you  
4 don't know. And all you know is what it was doing when it hit the  
5 ground.

6 Q. Correct.

7 A. So that's why y'all's job isn't that easy.

8 MR. ABRAMS: That's why we're talking to you today. So  
9 anyway, Mark, if you have anything else you can think of, please  
10 get in touch with Rob Pinksten, and he'll get in touch with us.  
11 Or even through Denny Shupe. So any of that is fine. If you  
12 think of something that needs to get back to us, feel free to go  
13 through your chain of command or your normal contacts to relay  
14 some information.

15 But I want to speak for all of us when I say thank you for  
16 your time today. You've been very helpful and very beneficial,  
17 and we do appreciate it.

18 MR. HENLEY: Yes, sir. No problem.

19 MR. ABRAMS: All right. Thanks everyone. That's all I have.

20 MR. HENLEY: All right.

21 MR. ABRAMS: Right.

22 MR. GENTRY: Take care. Thank you.

23 MR. ABRAMS: All right. Thank you.

24 MS. WOODS: Bye.

25 MR. HENLEY: Yes, sir.

1 MR. ABRAMS: Bye-bye.

2 MR. HENLEY: All right. Bye-bye.

3 (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: COLLINGS FOUNDATION BOEING B-17G  
CRASH AT BRADLEY INTERNATIONAL  
AIRPORT, WINDSOR LOCKS, CONNECTICUT,  
OCTOBER 2, 2019  
Interview of Mark Henley

ACCIDENT NO.: ERA20MA001

PLACE:

DATE: January 16, 2020

was held according to the record, and that this is the original,  
complete, true and accurate transcript which has been transcribed  
to the best of my skill and ability.

[REDACTED]



UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

\* \* \* \* \*

Investigation of: \*

\*

COLLINGS FOUNDATION BOEING B-17G \*

CRASH AT BRADLEY INTERNATIONAL \*

Accident No.: ERA20MA001

AIRPORT, WINDSOR LOCKS, CONNECTICUT, \*

OCTOBER 2, 2019 \*

\*

\* \* \* \* \*

Interview of: MICHAEL MAINIERO

First Officer

Wednesday,  
January 15, 2020

## APPEARANCES:

WARREN ABRAMS, Air Safety Investigator  
National Transportation Safety Board

TODD GENTRY, Accident Investigator  
AVP-100  
Federal Aviation Administration

SABRINA WOODS, Accident Investigator  
AVP-100  
Federal Aviation Administration

DENNY SHUPE, Attorney  
Schnader Harrison Segal & Lewis  
(On behalf of Mr. Mainiero)

<u>ITEM</u>	<u>I N D E X</u>	<u>PAGE</u>
Interview of Michael Mainiero:		
By Mr. Abrams		4
By Mr. Gentry		17
By Ms. Woods		21
By Mr. Abrams		22
By Mr. Gentry		23

I N T E R V I E W

(11:03 a.m. EST)

1  
2  
3 MR. ABRAMS: Mike, I'm Warren Abrams. I'm an air safety  
4 investigator with the National Transportation Safety Board. And  
5 our goal today is to try to help determine what happened up there  
6 at Bradley on March -- on October the 2nd, and prevent it from  
7 happening again. So I appreciate you calling in today and letting  
8 us talk to you about the events, and pick your brain a little bit  
9 on what happened or what you know and the people you know that  
10 you've flown with up there and things like that.

11 So we're all about trying to get to the bottom of it and  
12 prevent it from happening again. It was a tragic accident, a  
13 tragedy beyond tragedies. And we just want to try to make sure it  
14 doesn't happen again.

15 We have parties to the investigation, Mike. And I'm calling  
16 you Mike. Is that all right? I see your name is Michael. Is  
17 that all right to call you Mike?

18 MR. MAINIERO: Yes.

19 MR. ABRAMS: All right, thank you. So we have parties to the  
20 investigation, and I have two people from the FAA on line with me,  
21 and I want to let them introduce themselves here in just a second  
22 and tell you what their role is in this process as well. But just  
23 know that the FAA is a party to the investigation by statute or  
24 regulation. And they don't have any enforcement action in this  
25 proceeding at all. That's somebody else's division. The FAA on

1 the line today is strictly accident investigation.

2 So we're going to start off with Todd Gentry. Todd, if  
3 you'll introduce yourself, please, to Michael.

4 MR. GENTRY: Absolutely. Thank you, Michael, for taking the  
5 time today to talk to us. My name is Todd Gentry. I'm from  
6 Accident Investigations for the FAA. My role is to make sure that  
7 the FAA has done everything possible to eliminate accidents like  
8 this in the future. My secondary role is to assist Warren and the  
9 NTSB to help them get as much information as they need to  
10 determine a probable cause for the accident as well. Like Warren  
11 said, I have no enforcement involvement or activity. I don't want  
12 to do that. I can't do that. My involvement is only for to make  
13 sure the FAA has done the right things or will correct what's not  
14 been done correct, and then assist Warren in his investigation.  
15 So I appreciate your time today, thank you.

16 MR. ABRAMS: Sabrina, would you introduce yourself, please?

17 MS. WOODS: Thank you, Warren. Hello, Mike. My name is  
18 Sabrina Woods. I am also from the Office of Accident  
19 Investigation for the FAA. I'm here assisting Todd as the FAA's  
20 representative on this accident. My background is in human  
21 factors, and so my role is predominantly assessing all the human  
22 factors components and human performance that went into  
23 essentially creating this accident. My job is to make sure  
24 that -- to account for decision-making and to ensure that the  
25 pilot and the crew had what they need at the time to make the best

1 decisions and ensure the best outcome. And if that is not the  
2 case, my job is then to help to inform Todd and Warren as to what  
3 we can do better to ensure that, once again, the accident doesn't  
4 happen again.

5 MR. MAINIERO: Of course.

6 MR. ABRAMS: Mike, you're allowed to have representation.  
7 General Counsel represents you today. Do you have someone that  
8 you would like to represent you?

9 MR. MAINIERO: Yes, I have Denny Shupe on the phone  
10 representing me.

11 MR. ABRAMS: Excellent. Denny, will you introduce yourself,  
12 please?

13 MR. SHUPE: Yes, good morning, everyone. Denny Shupe from  
14 Schnader, Harrison, Segal & Lewis, resident in our Philadelphia  
15 office today.

16 MR. ABRAMS: Thank you, Denny, for joining us on the call  
17 today. Mike, what we do is we record these -- I'll record this  
18 interview and send the recordings off to have them transcribed.  
19 And once the transcription comes back, the transcripts will be  
20 placed in the docket of the investigation. The recording itself  
21 will not be in the docket, but the transcription will be. So  
22 there is a record of our conversation today.

23 INTERVIEW OF MICHAEL MAINIERO

24 BY MR. ABRAMS:

25 Q. Mike, if you will, if you will state your full legal name and

1 spell your last name, please.

2 A. Michael Anthony Mainiero II, and my last name is  
3 M-a-i-n-i-e-r-o.

4 Q. Thank you. And as we said, we're going to call you Mike.  
5 And, Mike, how old are you?

6 A. Twenty-two years old.

7 Q. And what is your job title with the Collings Foundation?

8 A. I'm a LHFE pilot. And I'm PIC rated in B-25 and I've flown  
9 right seat in the B-17 and the B-24.

10 Q. When did you get your type rating in the B-25?

11 A. August of this year. Or, sorry, August of 2019.

12 Q. Yeah, 2019, okay. Approximately how much flight time do you  
13 have in the B-25?

14 A. About 75 hours.

15 Q. And approximately how much flight time do you have in the  
16 B-24?

17 A. About 30 or 35 hours.

18 Q. And we'll keep rolling. How much flight time, approximately,  
19 do you have in the B-17?

20 A. Sixty.

21 Q. How often do you volunteer your services with the Collings  
22 Foundation? In other words, how many days a year, on average,  
23 will you make yourself available to fly?

24 A. Due to my work availability in 2019, I spent 90 days on the  
25 road with the tour this year. Normally, it would not be that

1 many, but it's still -- I try to shoot for at least four to seven  
2 days per month when I can.

3 Q. When you're not flying these 90 days for the Foundation, what  
4 is your other full-time line of work or what is your other line of  
5 work?

6 A. I'm currently a 767 First Officer for a part 121 DCMI cargo  
7 carrier. And I'm shortly transitioning to the Triple 7.

8 Q. With the same carrier?

9 A. Yes.

10 Q. Does that carrier have a name?

11 A. Yes, it's at Kalitta Air.

12 Q. All right. What model Triple 7?

13 A. The Triple 7 Freighter.

14 Q. Okay. How long have you worked with Kalitta?

15 A. I was hired April 22 of 2019.

16 Q. So not quite a year yet.

17 A. Yes.

18 Q. Do you hold a type rating on the 767?

19 A. Yes.

20 Q. What other type ratings other than the 767, -57, and B-25 do  
21 you have?

22 A. I have an experimental authorization in the L-39 Albatros.  
23 As we said, the 757, 767. I have single-pilot-type rating in the  
24 Citation 525, the Citation 750 or Citation 10, the Sabreliner, and  
25 then also SIC in the B-17, CV-LB 30, which I is a B-24, and he



1 Learjet, and the G-1159, which is a Gulfstream 1 -- or sorry,  
2 Gulfstream 2 and 3.

3 Q. You have affliction to regular work. You just get training  
4 all the time and get type ratings, don't you? I'm saying that  
5 jokingly.

6 A. A lot of time in training and in the manuals, because I do  
7 have the fortune and the privilege to be able to fly many  
8 different types of aircraft.

9 Q. You certainly do. Approximately how much total time, all  
10 airplanes, throw it all in there together, approximately how much  
11 flight time do you have?

12 A. About 3,750 hours.

13 Q. Approximately how much left seat time do you have, PIC time?

14 A. PIC time, I have 2,425 hours.

15 Q. When was -- when did you get your last medical exam?

16 A. March of 2019.

17 Q. Have you ever failed a check ride before?

18 A. I had a discontinuance on my commercial check ride.

19 Q. And why was it discontinued?

20 A. It was a mix of factors. I had -- it was a good learning  
21 lesson for me, too. I had come in just not quite prepared, in  
22 part due to some -- just some outside of flying personal  
23 commitments or related things. I just didn't quite come in  
24 prepared, and then, on top of that, there was some weather delays  
25 and then there was maintenance issues with the aircraft that just

1 started building, and so we decided to stop the check ride, and I  
2 continued a month later.

3 Q. Okay, thank you. Collings Foundation, kind of the structure  
4 there. We've got Rob Collings. He's the head of the foundation.  
5 You've got Rob Pinksten who's the chief pilot. And then we've got  
6 the captains of the airplanes. How do you feel about that  
7 structure or management structure?

8 A. I think it's a great structure. We really push here at  
9 Collings Foundation a safety culture. And fortunately, you know,  
10 Rob Collings as our executive director, he's been flying all of  
11 these aircraft for many years. So he is a -- from a management  
12 perspective, has excellent understanding and overview, which does  
13 help relieve any sort of pressures as you might see in an airline  
14 or other environment. Because we can talk to him and say, hey,  
15 this specific thing is not functioning or, hey, we need, you know,  
16 there's a weather concern and he will 100 percent understand.

17 Q. Do you see him at most of the tour stops?

18 A. I do not.

19 Q. When would you have occasion to talk with the executive  
20 director, Rob Collings?

21 A. Through various tour stops throughout the year. I typically  
22 also see him at AirVenture Oshkosh, and then as well during our  
23 annual ground school.

24 Q. All right. You mentioned your annual ground school. Talk to  
25 me about your annual ground school. What do you cover in your

1 annual ground school?

2 A. So we -- it's about two full days. We usually start about  
3 eight, nine o'clock in the morning, and go until about 5:00 p.m.  
4 And we start out reviewing a general review of operating manuals,  
5 the LHFE program, different requirements that we -- talk about CRM  
6 and different lessons and notes we've learned throughout the  
7 years, just as observation, you know, on that, the tribal  
8 knowledge that's picked up through over time. And then, we go in  
9 depth about each of the aircraft we're operating.

10 Q. CRM, you mentioned. How do you -- tell me what you think of  
11 CRM there at the Collings Foundation.

12 A. We're very, as I mentioned, safety conscious. We discuss how  
13 to operate safely as a crew. For example, on the connection  
14 failures and other emergencies, the process we step through to  
15 safely secure engines and handle an emergency, you know, who's  
16 going to fly the airplane, who's going to work through the  
17 checklist. We have checklists for all the airplanes, which we go  
18 through the call and response, just like an airline environment,  
19 because a good majority of the pilots here flying do have a  
20 commercial flying background.

21 Q. Am I correct that you have -- prior to -- you recently flew  
22 with Mac prior to the accident, is that correct?

23 A. Yes.

24 Q. How did -- how would you consider his CRM?

25 A. He was very procedural and was very thorough. He had an

1 excellent understanding of the airplane. As you may have heard  
2 from others, he's been with the Foundation for many, many years.  
3 And so, he's picked up a vast amount of knowledge and experience  
4 in the B-17. He works on the aircraft as he was the director of  
5 maintenance for the Collings Foundation. And so, he had a great  
6 understanding and you could work with him and if there's any  
7 question or any concern, you could bring it up and he could  
8 explain how, you know, a system might work, especially, you know,  
9 because we do have different people rotating through with  
10 different backgrounds.

11 Q. Did you consider his demeanor gruff or pleasant or how would  
12 you describe his demeanor?

13 A. He was definitely direct at times. He had very high  
14 expectations. The B-17 was his baby, and he had a connection with  
15 the airplane and wanted to make sure it was taken care of well.  
16 With that said, in my experience flying with Mac last year, he was  
17 fine to fly with. I did not have issues that way.

18 Q. If you had concerns about flying with Mac, if, this is a  
19 hypothetical. If you had concerns about flying with Mac, and they  
20 were not addressed one on one with him, could you take -- who  
21 could you or who would you take it to, to help get a resolution?

22 A. So I would begin by taking it to Chief Pilot Rob Pinksten.  
23 And because he is on board almost the entire time throughout the  
24 year, so I would start in that level. And we, you know, we try to  
25 take care of it ourselves. We'd sit down and discuss things. If

1 there was a case, which I never had a concern or any issue where I  
2 had to take things further. I could call Rob Collings directly as  
3 the executive director and have a -- have more involvement in the  
4 situation. We also have our SMS program and it could also go to  
5 our director of safety, Will.

6 Q. If you -- you mentioned your SMS program. If you had a  
7 concern, what would you do with your SMS program? I mean, how  
8 would you address it through SMS?

9 A. So I would -- we would file an SMS report, and then it would  
10 go to Will Dismukes (ph.) who would contact us directly with the  
11 report to get further information. And then, to do the  
12 identification, he would then continue through the proper channels  
13 and discuss the situation with the other parties involved to  
14 mitigate any sort of risk or threat that might be presented.

15 Q. Have you ever filled out an SMS report?

16 A. I have not. Not with the Collings Foundation, at least.

17 Q. All right, so you bring up the question, then, at what  
18 airline or what flying capacity were you in when you had to fill  
19 out an SMS report?

20 A. There's multiple other organizations I work with. Prior to  
21 my part 121 airline job currently, I was working at a part 135  
22 charter company as a captain, both captain, first officer, and a  
23 check airman in the King Air. And we had an SMS program there.  
24 And then, also, I work with an organization on the West Coast  
25 called the Patriots Jet Team, which is an air show team flying the

1 L-39 Albatros and the Sabreliner 60s, and we have an SMS program  
2 as well on a voluntary basis.

3 Q. Okay. I was wondering about that Albatros, so you've  
4 answered that question. So I didn't have to answer it. You fly  
5 that little demonstration team. Very good.

6 On the B-25, how do you dispatch yourself? In other words,  
7 who determines the fuel load?

8 A. The PIC determines the fuel load. We have operational  
9 guidelines that we use based on the number of flights we might be  
10 doing throughout the day and from our planning standpoint.

11 Q. Is that for all airplanes? In other words, that would be the  
12 same for the B-17 and the B-24?

13 A. Yes.

14 Q. Were you in line to upgrade to the left seat on the B-17?

15 A. I do not believe so.

16 Q. How would that transition go? In other words, you're SIC  
17 qualified on the B-17 and the B-24. You're type rated in the left  
18 seat of the B-25. What is -- what would be your progression of  
19 moving up the line as far as left seat goes?

20 A. It was based on, you know, a decision through the management  
21 of the organization, based on a policy if there is a need, and  
22 then based on the experience level of those involved and the  
23 amount of time that one might be able to dedicate. In my case, I  
24 was able to dedicate a lot of time, fortunately, this past year.  
25 And so, you would start, depending on your prior experience level,

1 if you had already come in with experience in an aircraft, that  
2 would change the progression, of course. But if you came in with  
3 limited experience, you'd begin first as a second in command. And  
4 once, if it was determined that you were eligible for an upgrade,  
5 then you would progress into training to become a PIC in whatever  
6 selected aircraft.

7 Q. And how long would that training take? I realize there's  
8 variables involved with your availability and things like that.  
9 But typically, how long would that training take to move to, say,  
10 the left seat of the B-24?

11 A. You know, it would depend, because each airplane has their  
12 different -- you know, their different requirements. Some are  
13 more complicated than others, might take a different skill set.  
14 For example, your amount of tail wheel experience or other heavy  
15 aircraft or radial engine time. It could be that it could be  
16 conducted in a day, which was my case. It could be conducted over  
17 multiple weeks or months. You know, the specific day training,  
18 based on the proficiency and experience of a pilot. And it has to  
19 do with your time and type as well.

20 Q. On the B-17, when you were flying that, did you ever do the  
21 passenger briefing?

22 A. I did, but not frequently.

23 Q. If you wouldn't -- if you did not do it, who would do it?

24 A. The crew chief of the aircraft or the PIC.

25 Q. How many seats did you have on the B-17?

1 A. We had, I believe it was 13 seats. Yeah, the heavy bombers  
2 both had 13 seats. I had to think about that for a second. I've  
3 been in the B-25 mostly.

4 Q. How many seats did the B-25 have?

5 A. Six.

6 Q. On the B-17, what was the seating configuration? So you  
7 board the airplane. How many seats were in that waist gun area or  
8 the back of the airplane as I'll call it?

9 A. Say again?

10 Q. I want to talk about the seating configuration on the B-17.  
11 How many seats were in the back of the airplane?

12 A. There were five seats.

13 Q. How many seats were in the radio room?

14 A. Three.

15 Q. And behind the captain and copilot, there was a seat. So  
16 there are two seats there. I'm missing one seat. I mean, we got  
17 the captain's seat, the copilot's seat, then we got passengers'  
18 seats right behind the captain and right behind the copilot.  
19 Where is that 13th seat I'm missing?

20 A. That ball turret.

21 Q. I'm familiar with the B-17. Describe the ball turret seating  
22 location. I'm not following you on that one.

23 A. Beside the ball turret, as a station location with the ball  
24 turret.

25 Q. Okay. All right. Was it only VFR the conditions that you



1 flew in or does -- were you IFR rated as well on these airplanes?

2 A. VFR only.

3 Q. How long would -- duration-wise was a typical flight?

4 A. We would typically target from wheels up to wheels down about  
5 22 minutes.

6 MR. ABRAMS: Mike, I'm going to stop there for the moment.

7 I'm going to turn it over to Todd Gentry. We'll come back with a  
8 second round of questions after we cycle through. But thank you  
9 for this first round for me. And, Todd, I'll turn it over to you.

10 MR. GENTRY: Thank you, Warren.

11 BY MR. GENTRY:

12 Q. And thank you, Mike, for coming to join us today. Do you  
13 have a copy of the Collings Foundation GOM?

14 A. Yes.

15 Q. Do you -- as a PIC, is there anything written in there to  
16 conduct a crew briefing before each flight?

17 A. Yes.

18 Q. How do you handle that requirement?

19 A. I would brief ahead of time, before, you know, even getting  
20 to the airplane. From the hotel or in the van a breakfast brief  
21 with whoever I was flying with. We discussed about the number of  
22 flights we had, at least on the schedule at that point, the  
23 weather, the conditions of the airport, just give a general  
24 overview briefing. And then, once we got in the aircraft, we  
25 would conduct a before-takeoff briefing, which would cover, you

1 know, more specific requirements for the flight, you know, runway  
2 conditions, engine failure procedures, et cetera.

3 Q. Okay, thank you. When you flew with Mac, how many times do  
4 you think that you flew, do you remember, with Mac?

5 A. Honestly, I don't have an exact number, because I did many  
6 countless ride flights with Mac as well as -- flights. I could  
7 potentially go back and look at some point.

8 Q. I just thought -- I just was asking generally. That's all.  
9 I don't need you to go back and look for sure.

10 A. It was twice at least.

11 Q. In the B-17?

12 A. Yes, specifically in the B-17.

13 Q. Now, did you notice he ever do a before-takeoff brief?

14 A. Yes.

15 Q. Did he do a crew briefing?

16 A. Yes.

17 Q. When was your last SMS training?

18 A. We actually have just conducted that yesterday and today.  
19 And then, also last year. Yeah, for last year was our last ground  
20 school -- or our ground school a year ago, January 2019, and then  
21 we are concluding our annual ground school currently for 2020.

22 Q. Okay. So you -- I'm going to call him a flight engineer,  
23 because I don't know the exact term that you call him, but when  
24 you have a crew chief or a flight engineer on the B-17, where does  
25 he sit?

1 A. He's in the ball turret position -- beside the ball turret  
2 position.

3 Q. In the ball turret.

4 A. No, beside the ball turret. Against the bulkhead beside the  
5 ball turret.

6 Q. And he is in that position for the whole flight?

7 A. Taxi, takeoff, and landing.

8 Q. When does he get up and move around? Is there some kind of  
9 signal that you guys give or, you know, like turn off the seatbelt  
10 sign --

11 A. When -- would -- if he was not required for any ground  
12 operations related to the flight, he'd be seated. But then, once  
13 we were in the air, the gear was up, he would start working his  
14 duties with the passengers as well as any other flight operations  
15 related.

16 Q. Have you ever seen the flight engineer or crew chief stand up  
17 for takeoff?

18 A. Yes.

19 Q. Tell me about how you train for emergency procedures. And  
20 it's not airplane-specific. It's just, you know, how do you  
21 handle those trainings?

22 A. It's out of our annual ground school. We discuss various  
23 engine and other related emergency procedures, hydraulic,  
24 electric, smoke, fire. And then, throughout, you know, the year,  
25 we have regular discussions based on just various discussion

1 topics we have, any event that may have happened, both with our  
2 organization or with other operators, as well as then, you know,  
3 before each flight, we were discussing, you know, like in our  
4 pre-takeoff briefing.

5 Q. Who are your safety representatives, do you know?

6 A. Will Dismukes is our director of safety.

7 Q. Right. Is there anybody else, just Will?

8 A. Robert Pinksten.

9 Q. So the chief pilot?

10 A. Yes.

11 Q. After you fly, do you guys have a debrief?

12 A. Yes, we do.

13 Q. And who conducts that?

14 A. Any personnel involved with flight operations throughout the  
15 day and any crew members.

16 Q. Have you ever seen anyone conduct a debrief other than Mac  
17 when Mac was flying?

18 A. In what regard?

19 Q. Did anybody bring up any issues or any something that wanted  
20 to be debriefed after a flight?

21 A. Yes. You know, we may have had a ATC requirement or other  
22 in-flight operation that, you know, we just discussed after a  
23 flight.

24 MR. GENTRY: Okay, thank you, Mike. I appreciate your time.  
25 I don't have anything else.

1 MR. ABRAMS: Thank you, Todd. Sabrina, you have the virtual  
2 mike.

3 MS. WOODS: Thanks, Warren.

4 BY MS. WOODS:

5 Q. Mike, in all the time that you've flown with Mac, have you  
6 ever had an emergency situation that you guys had to deal with as  
7 a crew?

8 A. No.

9 Q. Okay, so that particular situation has never arose.

10 A. Correct.

11 Q. Okay, then, and so moving back, you already answered a lot  
12 about your training and your SMS process. And I thank you for  
13 that. But if you felt that you personally had a problem to  
14 address, do you feel comfortable addressing that issue that you  
15 would have with your chief pilot or your safety officer?

16 A. Absolutely.

17 Q. And do you feel that they would be responsive to your input?

18 A. Yes.

19 Q. So then, more specifically, crewing the B-17 with Mac, if you  
20 had an issue that arose in the cockpit, do you feel comfortable --  
21 would you have felt comfortable expressing your concerns to him?

22 A. Yes.

23 Q. And do you think he would have been receptive to those  
24 concerns?

25 A. Yes.

1 MS. WOODS: Okay, thank you. That's all I have. Very short  
2 and sweet for me, thanks, guys.

3 MR. MAINIERO: All right, thank you.

4 MR. ABRAMS: Mike, I just have a couple follow-up questions.

5 BY MR. ABRAMS:

6 Q. When flying with Mac, did the loadmaster, flight engineer,  
7 whatever you want to call him, did he ever manipulate the  
8 throttles?

9 A. No.

10 Q. Did you ever see any loadmaster/flight engineer work the  
11 throttles with any captain you flew with?

12 A. No.

13 Q. How often did you see Will Dismukes at the fly-ins or in the  
14 venues?

15 A. We tended to not overlap during our tour periods just, of  
16 course, schedule-wise. During ground school, we would often see  
17 him and then, you know, of course, throughout the year, if you  
18 were at a stop with him.

19 Q. Okay.

20 A. And he was a B-25 PIC as well.

21 MR. ABRAMS: Mike, that's all the questions I have, but I do  
22 want to ask, is there anything that you can think of that we're  
23 missing in this investigation? Is there any kinks in the armor?  
24 This is a tragedy, and it never should have happened. Can you  
25 think of anything that we're missing here? Is there anything you

1 want to tell us?

2 MR. MAINIERO: Not that I'm aware of, nothing I can think of.

3 MR. ABRAMS: Then, Mike, I want to personally thank you for  
4 calling in today. You've been very helpful. I appreciate you  
5 taking the time, and we look forward to working with the  
6 Foundation and getting -- I say working with them, the  
7 Foundation -- I look forward to getting resolved to what happened  
8 here. And your input is vital to keeping us on the straight and  
9 narrow and not letting this happen again. So we thank you very  
10 much.

11 MR. MAINIERO: Absolutely. Thank you very much.

12 MR. ABRAMS: Todd, Sabrina, closing thoughts?

13 MR. GENTRY: I have one more thing, if I can.

14 MR. ABRAMS: Okay.

15 MR. GENTRY: Warren, can I ask one more question?

16 MR. ABRAMS: Sure.

17 BY MR. GENTRY:

18 Q. So, Mike, as a follow-up, if you're flying as a PIC, how --  
19 two questions, actually, part A and B. How do you get released to  
20 go fly?

21 A. So when we're on the road, Rob Pinksten has operational  
22 control. And so, if a flight is to be dispatched, the -- whomever  
23 is in charge of booking flights will say, hey, we have a flight.  
24 And then, based on the conditions, Rob Pinksten will approve the  
25 flight, and then, operational control resides with him, of course,

1 until the aircraft is charted, where then the PIC has operational  
2 control.

3 Q. Okay, so once you're airborne, let's say you're taking off  
4 from a town that has a single runway, and something happens on  
5 that runway and they close the runway and you have to divert. How  
6 does Rob Pinksten -- or the PIC, you said, has operational  
7 control. How do you relay that information? Let me just ask  
8 that.

9 A. We have a company frequency that we communicate with in the  
10 event of any type of in-flight emergency or any type of runway  
11 closures, weather, etc. So we can communicate through various  
12 personnel in the Foundation. To do that, we can only -- you know,  
13 if there's an emergency, to other experienced personnel who are  
14 not present, to make a divert decision. Of course, time  
15 permitting. We may have to -- you know, if we're somewhere and  
16 have to put the aircraft on the ground, then we'll do what we have  
17 to do, and then advise whenever we have the opportunity.

18 Q. So someone on the ground has a VHF receiver?

19 A. Yes.

20 MR. GENTRY: Okay, thank you. That's all I have, Warren.  
21 Appreciate the help.

22 MR. ABRAMS: Thank you. Sabrina?

23 MS. WOODS: I have nothing further, thank you.

24 MR. ABRAMS: Closing thoughts, Sabrina?

25 MS. WOODS: I don't have anything further, thank you.



1 MR. ABRAMS: Todd, anything?

2 MR. GENTRY: No, sir, thank you very much.

3 MR. ABRAMS: Mike, as I said earlier, thank you very much for  
4 your time. You're very helpful to helping this investigation  
5 along, and we do appreciate it. Thank you very much.

6 MR. MAINIERO: Of course, thank you, everyone.

7 MR. ABRAMS: Thank you. The recordings have now stopped.

8 (Whereupon, at 11:45 p.m., 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: COLLINGS FOUNDATION BOEING B-17G  
CRASH AT BRADLEY INTERNATIONAL  
AIRPORT, WINDSOR LOCKS, CONNECTICUT,  
OCTOBER 2, 2019  
Interview of Michael Mainiero

ACCIDENT NO.: ERA20MA001

PLACE:

DATE: January 15, 2020

was held according to the record, and that this is the original,  
complete, true and accurate transcript which has been transcribed  
to the best of my skill and ability.

A large black rectangular redaction covers the signature area. A small, faint mark resembling a 'u' or a hook is visible at the bottom right corner of the redacted area.