

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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ENGINE FAILURE ON BOARD OFFSHORE
SUPPLY VESSEL OCEAN GUARDIAN
IN SHILSHOLE BAY NEAR SEATTLE,
WASHINGTON, ON MAY 27, 2022

Accident No.: DCA22FM021

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Interview of: ART KERCHER, JAY HENDERSON, KERRI LEE,
WAYNE VALENTA & AARON FRENCH,
NC Power Systems

and

LARRY BRONSON & BRAD WESTERLUND,
Stabbert Maritime

via Microsoft Teams

Thursday,
October 27, 2022

APPEARANCES:

BRIAN YOUNG, Investigator
National Transportation Safety Board

LT. [REDACTED] Investigator
United States Coast Guard

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I N T E R V I E W

1
2 LT. [REDACTED] -- do a final discussion here, give myself
3 and Brian a chance to ask some final conclusion questions as we
4 work to finish up this investigation and get everything wrapped
5 up. So, we still have a few loose ends to tie up and everything,
6 so that was kind of the purpose of getting everybody on here. And
7 that being said, because it's still part of the investigation, I
8 think Brian is going to record the interview unless anybody has
9 any issues with that. Anybody have any issues with the recorded
10 interview?

11 UNIDENTIFIED SPEAKER: No.

12 UNIDENTIFIED SPEAKER: No.

13 UNIDENTIFIED SPEAKER: No.

14 LT. [REDACTED]: All right, sounds good. Well, does anybody
15 have --

16 MR. YOUNG: If you don't mind, before we start the interview,
17 could we just --

18 LT. [REDACTED] Yes.

19 MR. YOUNG: -- announce folks for the recording and the
20 transcription who is present. This is Brian Young with the NTSB.
21 From the Coast Guard?

22 LT. [REDACTED] This is Lt. [REDACTED].

23 MR. YOUNG: Thanks. And from NC CAT?

24 MR. KERCHER: Art Kercher, Jay Henderson, Kerri Lee, Wayne
25 Valenta and Aaron --

1 MR. FRENCH: French.

2 (Crosstalk)

3 MR. YOUNG: Okay, great, thanks. And from Stabbert Marine?

4 MR. BRONSON: Larry --

5 (Crosstalk)

6 MR. WESTLUND: And Brad Westlund.

7 MR. YOUNG: Brad and Larry, okay, thanks. Thanks.

8 LT. [REDACTED] Brian, do you just want to kick it off with
9 questions? I can follow-up on the backside with anything
10 outstanding.

11 MR. YOUNG: Okay, yes.

12 INTERVIEW OF NC POWER AND STABBERT MARITIME

13 BY MR. YOUNG:

14 Q. Thank you, Art, and for your team for providing the -- your
15 analysis of the engine work that was done. And we also had
16 received the third-party investigation results, too, and it does
17 seem that both results are leaning towards an undercut or
18 undersized journal bearing surface that may have started the whole
19 breakdown of the engine. Could you just talk, Art, and your team
20 on your experience on how many of these 3516's on marine engines
21 have you ever seen that have had this type of cutting or grinding
22 down on bearing seating surfaces?

23 A. I guess I'd have to ask Mr. Valenta because he's the man
24 that's been in the field, like, probably the longest here out of
25 all of us.

1 A. The standard practice throughout the industry in the salvage
2 a crankshaft to make it reusable by machining the surface to an
3 undersized and standard, and capsular (ph.) bills -- bearings to
4 accommodate that undersized crankshaft.

5 Q. Okay. So you've seen this before? Would that be fair to say
6 then?

7 A. Yes.

8 Q. Okay. And typically, in order for this to be accomplished,
9 is the crankshaft removed from the engine and it's taken out to a
10 shop on -- and put in some sort of a lathe or machine that does it
11 or is it done in place?

12 A. Correct. No, it needs to be removed and taken to a machine
13 shop.

14 Q. Okay. And it sounds like from some of the previous
15 discussions, it sounds like this particular crankshaft in this
16 engine, it was talked about that it may have been done in Africa.
17 Does anybody have any evidence or documentation to show that that
18 could have been the case? Because I don't really know where that
19 came from, but I've heard it a few times.

20 A. We here at NC do not have any documentation or evidence of
21 that at all.

22 Q. Okay. And is that something, either Larry or Brad, that you
23 guys have either heard or seen any documentation on it, just so we
24 can include it in our report that this is the possibility of where
25 it may have been done?

1 A. So the engines were taken out while it was in shipyard in
2 South Africa (indiscernible) and I believe they were sent to Spain
3 and the work was done there. I have to go back to the report, but
4 I don't remember seeing that it was undercut at that time. It
5 could have been undercut at a (indiscernible) time.

6 Q. Okay. And from Caterpillar's side, is that something based
7 on the serial number of the engine that that maintenance or that
8 work could have been tracked or recorded?

9 A. That was -- that's not something that -- unless our
10 dealership does it that it's a trackable thing.

11 A. Or a CAT dealer.

12 A. Or a CAT dealer. I mean, anybody can do anything that they
13 want with these engines whether or not in the possession of
14 Stabbert or us. You know, I mean so I don't know where these
15 engines were, where they came from necessarily.

16 A. And those -- most CAT dealers do not have a full machine shop
17 in-house.

18 A. Right.

19 Q. So it would be maybe assumed that it was done other than
20 Caterpillar or a Caterpillar facility?

21 A. It could be assumed that that would be the case, yes.

22 Q. Okay. And typically what would be the reason to have a
23 crankshaft, say, undercut? Is it typically due to damage or is it
24 just from wear or what have you guys seen from Caterpillar as a
25 reason for why this type of work would be done?

1 A. It could be excessive wear over hours and hours and hours of
2 use. Most of the time if we remove the crankshaft it's because
3 there has been coolant or some fluids introduced into the
4 lubrication system that will etch the surface of the journals.
5 And Caterpillar has reusability guidelines that direct us on how
6 to move forward from there.

7 Q. And when it is cut down, are there specific measurements that
8 it's to be cut down to or is it random and somebody doing this can
9 cut down to just remove a certain amount of wear?

10 A. Caterpillar's advice specifics -- specific measurements.

11 Q. Okay, okay. And then when maintenance is being conducted and
12 say bearings are being replaced, is it standard that each of the
13 journals are measured during the overhaul process?

14 A. No, there's -- without removing the crankshaft, there -- you
15 cannot measure the main line. There is a plastic gauge, but
16 that's not necessarily that accurate all the time. Journals can
17 be measured with a micrometer that were connecting rod journals.

18 Q. Rod journals, but not the main bearing journals, because
19 they're sitting on their pedestals. Right?

20 A. Correct, half of them is into the block.

21 Q. Okay. Is there any other -- other than number 6 that we
22 think may have been undercut on this engine or do you know if
23 that's the only one?

24 A. I'm not aware.

25 A. I would say all the mains were cut and not the rods. Is that

1 correct?

2 A. Yes, that was my understanding.

3 A. Yes, all the main journals on the crankshaft were cut
4 undersize and the rod journals were still standard.

5 Q. And how would anyone know that without removing the
6 crankshaft?

7 A. You would look at the bearings that came out.

8 Q. Oh, is -- are they -- the part number or something would
9 indicate that they are something different than standard? Would
10 that be correct that the part number on the side of the bearing
11 shell would indicate that they're not standard?

12 A. Yes, sir.

13 Q. Okay. And was that the case here with this engine that all
14 the ones that came out were, let's say, not standard bearing
15 shells?

16 A. We only removed one main break out.

17 Q. Okay, okay.

18 A. As far as I remember.

19 A. Yes.

20 Q. And it was this one that was affected?

21 A. Correct.

22 Q. Okay. And then with the oil path through the crankshaft,
23 does the oil enter the crankshaft through the bearing -- main
24 bearings and then go throughout journaled passages to get up to
25 the conrod journals?

1 A. Correct.

2 Q. Okay and then --

3 (Crosstalk)

4 A. It's number 6 main (indiscernible), number 9 and the 10 rod.

5 Q. So if there's excessive clearance, you lose the pressure and
6 it kind of starves the next in line and then you start losing oil
7 pressure up there?

8 A. Correct. Potentially.

9 Q. Does anyone recall the other engines on this specific vessel
10 when they were open for inspection that they also had non-standard
11 bearing shells?

12 A. I'm not aware of that.

13 A. Not aware of it, no, not aware.

14 Q. Okay.

15 A. When we did the number 1 engines, the -- I'll double-check --
16 the conrods were undercut and I don't remember if the mains were
17 undercut. I'd have to go back to the records. Number 2 is
18 standard, number 3 was standard, number 4 was standard also.

19 Q. Okay. That doesn't seem like it was a standard -- a uniform
20 cut. Every bearing shell on every engine -- or bearing surface on
21 every engine seemed to be somewhat random based on where?

22 A. Yes, but all of the main bearings and all the rod bearings --
23 when we encountered one, they were all undercut. I'm not aware of
24 CAT -- I've seen it on supposed to be diesels where you will
25 undercut one bearing, but I don't believe that most of the small

1 engine manufacturers -- that when they cut one, they cut them all.

2 Q. Okay. So just, for general --

3 (Crosstalk)

4 A. -- verify that, too.

5 Q. I'm sorry, Larry?

6 A. It's -- you can verify that, too.

7 A. That's correct, and it will be not on all engines, just that
8 specific engine.

9 Q. Okay. So once you pull a crankshaft out, you're going to do
10 the work, you're going to typically undercut all of the surfaces
11 on the main bearings?

12 A. The (indiscernible) are not cranked together (indiscernible),
13 rods and mains.

14 UNIDENTIFIED SPEAKER: Okay. Do you want to say that out
15 loud so that everybody can hear?

16 BY MR. YOUNG:

17 A. What we saw was the main bearings were machined undersized,
18 but the connecting rod journals were still at standard size.

19 Q. Okay.

20 A. Normally, when we remove a crankshaft from machining, both
21 the rods and the main bearings are all turned to the same size.
22 It was never a question of, you know, standard, undersized. And
23 you can also go de-machine twice, where you'd actually have --
24 there's three different standards you could have used bearing
25 size.

1 Q. And after that, that would be the end of the possibility of
2 machining it and then it would be time for a replacement?

3 A. Yes, that's the end of the life for that crankshaft.

4 Q. Okay. When the crankshafts are turned down, are they ever
5 built up or they just, like brake pads, turned down a bit and then
6 that's the end of it for -- until the next time?

7 A. I've heard of people trying that, but that's not a
8 Caterpillar inclination and NC does not do that.

9 Q. Okay, okay. Does NC have the ability to cut down crankshafts
10 of this size or would you send it to another place, just --

11 A. Not in-house. We have a machine shop that we deal with.

12 Q. And could the machine shop handle a crankshaft the size of
13 like a 3516?

14 A. Yes.

15 Q. Okay. And then just to confirm, just because this is
16 different than something I've dealt with, the only way of knowing
17 on a main bearing that had been undercut or undersized is actually
18 looking at the bearing shells that are coming out and looking at
19 the part number from previously installed. Right?

20 A. Correct, provided that they were the correct ones put in.

21 Q. Right, but if they weren't, you would most likely -- that
22 would -- we would most likely have another issue, wouldn't you
23 think?

24 A. Not necessarily.

25 Q. Oh, no?

1 A. I know of an instance where that's -- on the side -- but I
2 know of an engine that was built with incorrect bearings put into
3 it and then actually lasted the life of the overhaul.

4 Q. Oh, wow, wow.

5 A. It was a different model, yes, but --

6 Q. Okay. And what is the time interval between main bearing
7 inspections for a 3516 in marine service?

8 A. Normally, the only time they get looked at is during overhaul
9 and the rule of thumb is about 20,000 hours --

10 Q. Okay.

11 A. -- between (indiscernible) and the door of your main bearings
12 would be attached.

13 A. That's 20,000 to 23,000.

14 Q. About 23,000 hours?

15 A. Yes.

16 Q. Okay. So, based on what you're saying with the number of
17 times you can cut down a crankshaft, would it be fair to say that
18 Caterpillar has three different choices of bearing shells based on
19 the diameters of the cut down crankshafts?

20 A. Correct.

21 Q. Okay. And if you were to do it, say your company, NC Cat,
22 had ground or cut down a crankshaft, would that information be
23 recorded in the engine history for the next or subsequent overhaul
24 that they could look up the records and it would be included?

25 A. In our system, yes. And any CAT dealer, no, not necessarily.

1 They might have to call us to get (indiscernible). There is a
2 system that CAT has that will let you know work orders and a rough
3 terminology of what was done. If an engine overhaul was done,
4 it's just going to say overhaul. If there's a warranty thing
5 done, pop a warranty code on it, but they would have to call our
6 dealership to find out what was completed on that work order.

7 Q. Okay. And information such as undercutting some of their
8 journals, would that be included in that history?

9 A. They would have to call us to get it. It wouldn't be on the
10 CAT site as readily available, because we're different entities
11 and different companies. That stuff is CAT's --

12 A. NC would have that information, but nobody else would.

13 Q. Okay, okay. But let's just say that, you know, a
14 hypothetical case the -- a ship leaves the States and goes across
15 and has a Caterpillar need for service and has someone in the U.K.
16 working on the engine, would they be able to contact you to find
17 out the history if they had to do some sort of an emergency
18 overhaul and get that information?

19 A. Yes, either they can directly call us or they can deal with
20 their local CAT reps and get to us --

21 Q. Okay.

22 A. -- (indiscernible).

23 Q. So that information would be available to other Caterpillar
24 service technicians?

25 A. It just -- it takes reaching out. It's not a push or a pull

1 function. You have to actually call someone to get it.

2 Q. Okay, okay. I've completed my listed of questions. I'll
3 move on to Dylan but thank you for your time today. I appreciate
4 it.

5 LT. [REDACTED] All right. Thanks, Brian.

6 BY LT. [REDACTED]

7 Q. I have a few kind of follow-up questions. I just kind of
8 want to go through from the work side how it ended up that this
9 wrong size bearing was put in there. So from NC Power side, can
10 you kind of walk us through how it -- you know, I understand you
11 guys were doing the work and then how it ended up to be that the
12 wrong size bearing was put in.

13 A. That's a tough question to answer. We were asked to do
14 bearing inspections, which included one of the main bearings. And
15 we dropped down, and I don't remember whether it was bad. You
16 know, the rods and bearings were found to be bad and were
17 replaced. I think one main bearing was dropped and it was --

18 A. Marginal.

19 A. -- it showed normal wear for the hours on the engine. It's
20 been a practice of NC that if we take a main bearing down and
21 replace it with a new just because you lose the possibility of a
22 crush factor of that bearing by dropping the cap down and reusing
23 the old bearing, because it's going to be torqued a little bit
24 different, so the potential chance of changing that, how that
25 bearing sits on that journal.

1 So, we removed the main bearings and placed an order for a
2 replacement bearing -- and I could be -- Caterpillar did not have
3 any main bearings available at the time. And the customer
4 purchased after-market bearings and then we had another technician
5 that went down and installed the bearing. And I don't believe the
6 original bearing that was removed from the engine was onsite for
7 the second technician to look at when he installed the new
8 bearing. That was --

9 A. We even had a (indiscernible) that went down. Some thought
10 we were the technicians.

11 A. So, a little bit of miscommunication that I think is really
12 kind of where we're -- what we're looking at as far as the what
13 came out and what we put back in.

14 Q. Okay. So the bearing that you guys had ordered from CAT,
15 that was -- ended up not being available, was that in -- the
16 correct undersized bearing -- was that initial order placed for
17 the correct bearing?

18 A. The -- they couldn't get where the standards -- we could get
19 the undersized --

20 (Crosstalk)

21 A. We had undersized in stock.

22 A. But it's the standard that we could not get and that's what
23 was ordered.

24 Q. So, the -- you guys were trying to order a standard bearing.
25 The undersized bearing, which from what I understand, would have

1 been the correct bearing for this case, was in stock?

2 A. Yes, and we did order a (indiscernible) on the work order for
3 it -- this job. Or what I can -- for which engine (indiscernible)
4 the one that we were only out, we did have the undersized bearings
5 ordered.

6 Q. Okay. So undersized bearings were in stock and you had
7 ordered some other ones for the job and you had also ordered
8 standard ones for the job as well. Is that -- am I understanding
9 that correctly?

10 A. We intended to order the standard ones and they were not
11 available, and they could -- the timeframe, we understand that and
12 they couldn't wait for the delivery of these bearings. So they
13 went with after-market, I think, the bearings.

14 Q. And what -- for what purpose were you ordering standard
15 bearings? Was that for the other engines as well or was it just
16 the technicians who pulled the initial bearing did not realize
17 that it was supposed to be an undersized bearing?

18 A. No, it was for the other engines.

19 Q. Okay.

20 A. And originally we ordered enough for all of the main van rods
21 and then they just wanted to do one of each, so -- for all of the
22 rods that we --

23 Q. So was it noted somewhere when the original bearing came off,
24 was it originally noted by the CAT technicians that it was an
25 undersized -- like that the crank was cut and that it was an

1 undersized bearing or was that never notated?

2 A. It was not notated.

3 Q. Okay.

4 A. I think what happened was that we're going to change all the
5 rod bearings and the technician checked the rod bearings and found
6 that they were standard. And that goes along with the standard
7 practice that when you cut a crank, you cut it both the same. So,
8 we -- he assumed that the crank was standard rods, standard mains.

9 Q. Okay. And then from the Stabbert side, I am assuming -- were
10 you guys ever made aware that you were supposed to be ordering
11 undersized bearings or is that something that you guys would have
12 normally done yourself? Were you advised by CAT to purchase a
13 certain size bearing or can you walk me through that from your
14 side?

15 A. Sure, when they first started doing the tear downs on the
16 number 1 engine, they noticed that the main bearings and the rod
17 bearings were undersized bearings -- or for an undersized crank,
18 non-standard. And they did have those in stock. They brought
19 those in and they installed those. But at the time, they did not
20 have the standard size bearings, so we had ordered those after-
21 market. I believe the standard bearings -- you guys could correct
22 if I'm wrong -- were two to three months out, if I remember.

23 A. They were even -- yes, they were longer than that. They were
24 90-plus days out, so --

25 A. Wow, okay. It was longer than that. Okay, yes, so we

1 purchased after-market bearings and supplied those for whenever
2 they said they didn't use standard bearing and we put them all in
3 -- or well, Caterpillar put them in.

4 Q. So from Stabbert side, did you guys do any work on the
5 engines or was all of the work done by CAT? You just simply
6 supplied the physical bearings?

7 A. Yes, for this particular work, yes, we supplied the bearings,
8 they did the work.

9 Q. Okay. And then from NC Power side, is that common practice
10 or is that something you guys regularly do, have a customer
11 purchase after-market bearings and then you guys install them, or
12 is this a pretty rare type of thing?

13 A. That's an extremely rare occasion, almost never.

14 A. Not our preferred method.

15 Q. But it is something that is allowed within your processes?

16 A. It usually has better documentation of what's going on than
17 this one. It does happen depending on the emergency. It's
18 something we try to avoid at all costs. To -- these things --
19 because if things like these happen and it's not a CAT part, we
20 have to know CAT backing on helping fix the situation. It ends --
21 our responsibility as the dealer.

22 Q. All right. And then I know we had previously -- it had been
23 mentioned, but I just want to kind of get it cleared up -- so the
24 technician who went out to install the bearing was not a
25 technician who had been on the job at all previously. He was kind

1 of brought in last-minute from what I understand?

2 A. The original technician was stuck on another job by the time
3 the after-market bearings came in from the customer, so we got a
4 different tech on the job to finish it, yes.

5 Q. And what kind of notes -- I know you said it wasn't notated
6 in there, but so the -- in your processes when you got, you know,
7 a new technician to come out to a job who's never been there
8 before, does he get some sort of cost down? Is there some sort of
9 work log that he can look at, you know, to see what's been done up
10 to that point or is it simply hey, I need you to go out and
11 install this bearing and then he goes out there and installs that
12 bearing?

13 A. He should read the service report from the prior technician
14 and also be in communication with the prior technician to find out
15 where the job was left off.

16 Q. Okay. But in this case, so he would normally review the
17 service reports from the previous technicians, but since it was
18 never notated that it was supposed to be an undersized bearing,
19 that new technician, when he went out there, there would have been
20 no way for him to know looking at, you know, that he was supposed
21 to go out there and install an undersized bearing?

22 A. Correct.

23 Q. I think that kind of cleared things up for me a little bit.

24 LT. [REDACTED] Brian, did that spark any follow-on questions
25 for you?

1 BY MR. YOUNG:

2 Q. Just out of curiosity, has this engine been rebuilt and
3 repaired?

4 A. It's unrepairable in current state and we're working with the
5 customer to come to a solution.

6 Q. And why is it unrepairable? Because of the condition of the
7 crankshaft or other --

8 A. There's a hole on the side of the (indiscernible). You can't
9 repair that to any CAT standard, so it's going to have a block
10 replaced, plus the components that failed during the breakage.

11 Q. Okay.

12 A. I believe the customer has -- they got 8 engine from their
13 inventory somewhere and got the vessel going. If I'm correct,
14 Larry?

15 A. Yes, we purchased a -- we purchased four engines out of one
16 of the sister ships that was being scrapped and we had that
17 rebuilt.

18 Q. Okay, okay. And I think we had -- I had spoken with -- this
19 is a question for Larry -- but speaking with [REDACTED] at the Coast
20 Guard, when the vessel was purchased, there were no maintenance
21 records included whatsoever. Is that correct?

22 A. We had maintenance records from the South Africa shipyard and
23 we had some -- not a lot of them, but we had some major updates on
24 when they had major overhauls, what was (indiscernible) and stuff
25 like that. So I remember I had, I think, the number 1 or the

1 number 2 engine that had actually been swapped out with a long
2 block. Whether it was sent back to Spain, I don't know, why it
3 was swapped out but they had put a different engine in.

4 Q. Okay. And were there any maintenance records that you have
5 come across yet from the previous owner regarding this engine and
6 specifically with the crankshaft modifications?

7 A. So I'm actually looking at the overhaul report that was done.
8 If you want, I can share it on the screen.

9 Q. Sure.

10 A. Let me see if I can, right. It's -- there we go. Is that
11 it? Okay.

12 (Crosstalk)

13 A. And if it's easier we can also share it with you after the
14 fact for everybody.

15 Q. Okay.

16 A. But, yes, this was the 260 -- that's a crankshaft. This was
17 done by Pon CAT (ph.). If you look at the scope of work, they
18 didn't really list anything on the crankshafts. Let me know if
19 you need me to scroll up or down.

20 Q. So this was done at 47,000 hours. So this would have been
21 the last time prior to the failure, right, about 20,000 hours or
22 so?

23 A. That's correct.

24 Q. Because I think it was about 64,000 hours on the engine.

25 BY LT. [REDACTED]

1 Q. And I don't see -- is there anywhere in there that it
2 mentions the crank being cut down or is that -- I don't see it
3 anywhere in there, but am I missing it?

4 A. No, I looked through it and I didn't see it anywhere else. I
5 can scroll down a little bit more.

6 A. You might look at the parts list to see if the bearing number
7 is on there -- the part number for the bearing.

8 A. These were the part numbers that were listed. There is no
9 main bearings on here.

10 A. Okay. So then they probably wouldn't have even touched it?

11 A. Yes.

12 BY MR. YOUNG:

13 Q. So would that kind of maybe lead towards the previous time
14 that it may have been adjusted or affected on the crankshaft as
15 opposed to this service visit?

16 A. Yes, I don't know and, you know, that's something that --
17 where you get your engine serviced, if they're not a partner group
18 or somebody else with your records, you have to go directly to
19 them.

20 Q. Right.

21 A. At the time when we purchased the boat, we had to wait until
22 we were the owners before any records can get released to us for
23 maintenance.

24 BY LT. [REDACTED]:

25 Q. And do you have the records that -- from the previous

1 overhaul done or --

2 (Crosstalk)

3 Q. -- done?

4 A. Other than this overhaul report, I don't have any maintenance
5 records on the cab doors --

6 Q. Okay.

7 A. -- before this.

8 Q. And do you have any way to get the previous records? I know
9 the previous owner was Tidewater (ph.) and then it went to a bank.
10 Is there any contact you have that you may be able to get access
11 to them or no?

12 A. Without knowing who did the work, I'd have to contact just
13 about every CAT dealer. LA CAT (ph.), Quality Diesel (ph.), you
14 know. If somebody did -- like we hired NC Machinery and brought
15 them down to Louisiana, so without knowing the dealership that did
16 the work, I can't really know who to go for records.

17 Q. Okay.

18 A. At Tidewater, they just kind of washed everything off and put
19 everything in the bank, and the bank -- this is what the bank gave
20 us.

21 A. Yes, us going to Tidewater, we're not going to get anywhere
22 there.

23 Q. All right, thank you.

24 BY MR. YOUNG:

25 Q. Thank you for showing us that, Larry. I appreciate it.

1 A. No problem.

2 Q. Just as a follow-up for both parties here, have there been
3 any, say, improvements or any enhancements or any modifications as
4 a result of this incident, say from the Stabbert side or NC side,
5 to prevent this type of thing happening again? Are there new
6 procedures, new policies, new training? Is there anything that we
7 can include in our report that would show some sort, say,
8 proactive efforts to prevent this from happening again?

9 A. We had a conversation with our technicians in a group about
10 documentation. We went to a new service system where they can
11 utilize their cell phones better to upload pictures and reports.
12 So whenever we're taking something apart and it's how many days
13 down the road when something's going to show up like a variant
14 that could be catastrophic issues, documenting it better, being in
15 better communication with the service supervisors, and getting
16 everything on the work order that could potentially help someone
17 else barring someone's not going to be on it for mental issues
18 that they can't be at work.

19 Q. Understood, thank you. That's great.

20 A. And on the Stabbert side, we actually took the notes that NC
21 had given us regarding all of the standard and non-standard
22 bearings and we labeled that on the engines so that somebody going
23 up to the crankshaft door will see whether or not that has an
24 undercut bearing or a standard.

25 Q. Well, that's great. If you could --

1 A. Particularly all the -- supposed to be diesels that when they
2 do that, because they will do one, they actually put a metal plate
3 on there that tells you how much they've undercut the bearing.

4 Q. Okay. If you get a chance maybe, Larry, maybe someone from
5 the vessel could just shoot us a picture so we could kind of see
6 and maybe even include that in our report. That would be helpful.

7 A. Sure, I'll --

8 (Crosstalk)

9 A. Yes, Larry's actually over there on the other part of the
10 world on the (indiscernible) so he could take pictures and send it
11 to me and I can forward it on. I don't know if Larry's got your
12 guys' direct emails, but happy to pass that along. And then on
13 our end, from the HSB side, we, you know, we jumped on it with all
14 hands, conversations and talking points with our crews on all our
15 vessels, specifically the ones that (indiscernible). And we're
16 really aggressive in getting out in front of it and having open
17 dialogues with all our mariners. So happy to share that
18 information as well.

19 Q. And would that type of documentation be included on engines
20 throughout the fleet with regard to the undercut components, not
21 just the Ocean Guardian?

22 A. So all of our engines right now, we're kind of fortunate --
23 with the exception of our tugboat -- everything is a CAT3500
24 series engine. So as the guys at CAT pointed out, when you pull
25 the bearing out, it has a part number on and it will tell you

1 whether it's a standard or non-standard. All of the engines -- or
2 all of our ships have access to the -- my CAT part store so they
3 can actually look it up. And Kerri has -- I think if you look it
4 up by part number, it actually tells you if it's an undercut
5 bearing or not. You guys can correct me if I'm wrong.

6 A. Yes, it's in the description.

7 A. Yes.

8 Q. Okay, great. That's good, thank you. And thank you all for
9 spending the time explaining a lot of this. It's something I
10 haven't seen before and I appreciate the extra explanations with
11 this cutting down on the journals.

12 BY LT. [REDACTED]

13 Q. I have a few follow-ups, two quick for the changes made and
14 stuff. This is just more of a Coast Guard side thing. But Brad
15 and Larry, have you guys changed anything in your system about --
16 or processes about marine casualty reporting, updated your
17 procedures, anything like that?

18 A. Absolutely, yes. We had all-hands conversations with all
19 mariners, specifically licensed mariners, and going back over the
20 2692 requirements. And, you know, everyone's really comfortable
21 on that, but then taking it that step further and really driving
22 home the immediate notification as it relates to the region that
23 they're operating in, and it is imprinted on everyone's brain. I
24 can promise you that. And then we're in the process of updating
25 our event information system as a company so that we've got a more

1 systematic approach to an event occurring on a vessel in any
2 region and the process for notification, both shore side,
3 immediate and then long-term.

4 Q. Okay. And then last question I have here. I understand that
5 a lot of the work on board, you know, changing the wires, all that
6 stuff, was done by your personnel. But have you guys done a final
7 tally on the cost associated with it to get kind of a final damage
8 value, including the work done by your shipyard workers, all the
9 parts, all work done by CAT, all of that kind of stuff?

10 A. I don't have it off the top of my head, but we can get that
11 to you no problem. You know, this was happening simultaneously
12 with a major retrofit on the vessel, right. So we need to break
13 those costs out and I think that can be done in short order
14 between Larry and myself and our ownership to get you that figure.

15 Q. Okay. Yes, that would be great. And it doesn't, you know,
16 doesn't have to be perfect. But, you know, as close as you can
17 get it, you know, including work hours and, you know, associated
18 costs with the -- your shipyard personnel. I know technically you
19 guys don't pay that out-of-pocket, but for these casualties, you
20 know, all of the work hours and the associated, you know, salary
21 costs with what your employees make would be included in the
22 damage amount. So if you could get those kind of work hours and
23 associated costs included as well, that would be appreciated.

24 A. Yes, you got it. And I'll let Larry start chewing on that.
25 And then, Larry, I'll set up a side meeting for you and I and

1 accounting to work that out.

2 A. Yes, how about letting me get back from Vietnam first so that
3 we're all on the same hours.

4 A. I wasn't going to say it like that, but that's exactly the
5 point. Yes, I appreciate you being up right now at midnight or
6 whatever time it is.

7 Q. Yes, I have to be up at 1:00 for another call and then 6:00
8 for another, so not liking this side of the world other than the
9 really good food.

10 LT. [REDACTED]: All right, Brian, do you have anything else?
11 I think I don't have anything else.

12 MR. YOUNG: No. Thank you, all, for your time today. I do
13 appreciate it. We'll start putting all the facts together and as
14 both Stabbert and CAT are parties to my investigation, once the
15 factual section is done I'll send it to you both and the Coast
16 Guard for your technical review to make sure my factual evidence
17 is accurate. And then I don't think -- I have two other accidents
18 before this, but it'll be coming your way and I'll give you plenty
19 of notice before it comes out, but thank you again.

20 UNIDENTIFIED SPEAKER: Thanks, Brian.

21 MR. YOUNG: Sure, thank you, Art and your team.

22 UNIDENTIFIED SPEAKER: Thanks, Brian.

23 MR. YOUNG: I'm going to secure the recording.

24 (Whereupon, the interview was concluded.)

25

CERTIFICATE

This is to certify that the attached proceeding before the
NATIONAL TRANSPORTATION SAFETY BOARD

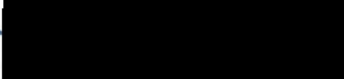
IN THE MATTER OF: ENGINE FAILURE ON BOARD OFFSHORE
 SUPPLY VESSEL OCEAN GUARDIAN IN
 SHILSHOLE BAY NEAR SEATTLE, WASHINGTON
 ON MAY 27, 2022
 Interview of Art Kercher, Jay Henderson,
 Kerri Lee, Wayne Valenta, Aaron French,
 Larry Bronson & Brad Westerlund

ACCIDENT NO.: DCA22FM021

PLACE: via Microsoft Teams

DATE: October 27, 2022

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.



Maria Socorro R. Abellar
Transcriber