

NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF MARINE SAFETY
WASHINGTON, D.C.

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EXPRESS SHUTTLE II :
NTSB #DCA05MM002 :
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INTERVIEW OF :
PAUL SNYDER :
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An interview in the above entitled matter was held
on Thursday, November 4, 2004, commencing at 1:30 p.m., via
teleconference before:

- BOB FORD, NTSB
- BRIAN CURTIS, NTSB
- NANCY MCATEE, NTSB
- LT. HEATH HARTLEY, USCG
- CHRIS CONNER, SUN CRUZ

1 MR. SNYDER: Almost 18 years.

2 MR. CURTIS: A full review of the training you've
3 had for your job description?

4 MR. SNYDER: Starboard certification, and a marine
5 (1:42) certification, and dual analysis of fuel diagnostics
6 certification (1:52), and electronic engine and (1:58)
7 certifications.

8 MR. CURTIS: If you don't mind, we'd like to get a
9 copy of those at some point, your certificates.

10 MR. SNYDER: Okay, I've got others, but I may just
11 in pertaining to this.

12 MR. CURTIS: I understand, 18 years, I'm sure
13 there's a lot of courses you've taken. Regarding the
14 Express Shuttle II, I understand you worked on it the week
15 previous to the accident, which days do you recall that you
16 worked on the vessel?

17 MR. SNYDER: You're breaking up. Okay, back. It
18 was Wednesday of October B- I'll have to look at a calendar
19 at hand, but I believe it was B- wasn't it October the 13th
20 or October the 13th, Wednesday, 1:00 p.m.

21 MR. CURTIS: If you could just take us through the
22 participation and the work that you had on the vessel, and
23 what you did?

24 MR. SNYDER: The first part of the leg was to go
25 to Tarpon branch store, and wait on a (3:15) so we might

1 better analyze the failure with the engine, and waited for
2 the Tampa branch to bring that up, and upon receiving that
3 tool, I met with the other technician, Paul Hyder, III, and
4 we proceeded to the New Port Richey area, and at the
5 Pithlachascotee River, on 19, approached the vessel, and at
6 that point, we were diagnosing a loss of power, and a bad
7 miss on one of the cylinders.

8 We had taken out the injectors on the left bank of
9 the engine that would be the odd numbers, 1, 3, 5, and 7,
10 and proceeded to use that (4:08) to view, optically, the
11 internal parts of the combustion chamber. At that point, I
12 noted that number 1 had 25 percent of the (4:23)
13 deteriorated, and the partial part of the reason why a miss
14 was B- not a full miss, but a little bit of a lower
15 compression on that number 1 cylinder.

16 Then, on further inspection on the others, I found
17 a, I believe it was a number 5. It should be in the report
18 that there was a stress crack in the head casting, and
19 reported that to Captain Chris so that we could, you know,
20 basically, let him also look at it, and being that it needed
21 to be necessary to remove the head, and to repair the
22 problem.

23 At that point, he authorized us to go ahead, and
24 then he had a head in stock in their warehouse, and at that
25 point, we decided to go ahead and remove the head on

1 customer authorization. We removed that left bank head, me
2 and Paul Hyder, III. They brought another head down, and at
3 that point, we started looking at differences between the
4 two, and found that - that head did not have the -- or had a
5 dowel less bridge is what we needed, but what they had in it
6 was dowels.

7 Chris wasn't there at that point, but we had been
8 in contact with him the whole time, through a cell phone,
9 and keeping him informed of status, because of his
10 commercial needs to be back up and running as soon as
11 possible, and we took the head and brought it B- or I took
12 the head, and had to bring it back to the Ring Power machine
13 shop branch to have those dowels removed, but in order to do
14 it, as we explained to him, the head would have to be
15 totally disassembled. They did that.

16 At approximately 6:30 a.m. the next morning, I
17 checked on it at the machine shop. They verified that it
18 was completed and that the dowels were taken out that needed
19 to be removed, but the head went back up to New Port Richey
20 with that head, and contacted Paul Hyder, III.

21 We both got there to start reassembling the
22 engine. One of the deck hands helped install the head, or
23 helped us to get it on the boat, and we took the head, and
24 started to set it, and we curled or bent one of the fire
25 rings on number 5, and they had a spare head gasket, so we

1 took it back off, reset it, because you don't have a (7:19)
2 or a crane, so you're doing it, basically, manually, and
3 sometimes things slip, but anyway, took the head gasket, put
4 it on place, on the deck plate, in the large (7:33) put the
5 head on.

6 At that point, I got down below the deck to start
7 the assembly process below, and I wanted Paul Hyder III to
8 work up top. I started torquing the head, went through the
9 torque sequence, and the torque procedure for torquing head,
10 installed the exhaust manifold turbo riser things, and
11 instrumentation gage panel on the side the side of the
12 engine, and while I was doing that he was working on the top
13 level, putting back in the rockers and the injectors, and
14 the rocker boxes, and adjusting the valves. When he was
15 ready, actually, I turned the engine from the bottom so that
16 he could adjust the valves.

17 We got done with that part of it. That leg of it.
18 We allowed their technician to come in, because they do a
19 lot of the filling it with oil, and draining it with oil or
20 water, and they come in and put the water and the oil back
21 in the engine. After that we started the engine up, checked
22 it for leaks, took it out for a sea trial. Got out by the
23 last buoy marker, and noticed that the engine wasn't still
24 quite performing right.

25 At that point, we told Captain Chris to bring the

1 (8:53) and bring it back to the slip. We got back to the
2 slip, and we decided to just go back through the valve
3 adjustment. At that point, we found one of the valves was
4 off on the adjustment on the intake valve, and we went ahead
5 and readjusted it. Took it back out for another sea trial,
6 completed it, found no leaks, had the performance of the
7 engine back up, and at that point, we cleaned up the area,
8 loaded up our tools, and got our service trucks.

9 Well, filled out a service report, gave that to
10 Chris, and then, left and returned back to the shop, and
11 that was it, and that was -- I think that was Thursday,
12 October the 14th at either 5:00 or 6:00 p.m. I'm not
13 really, totally sure about exacts on the time, on that but
14 somewhere close to that.

15 MR. CURTIS: You were dispatched that job by?

16 MR. SNYDER: I was dispatched by Dave McGinnis,
17 from our Power Systems division.

18 MR. CURTIS: Do you recall the deck hand who
19 assisted you with that? His name?

20 MR. SNYDER: No, they change people in that and I
21 use to know some of them by name, no.

22 MR. CURTIS: Okay.

23 MR. SNYDER: Sorry.

24 MR. CURTIS: I'm just reading through my notes
25 here. When you did the head work, you unbolted the fuel

1 lines, I understand, from the injector only or both ends?

2 MR. SNYDER: Only at the through head adapter
3 that's normally the way we've always done them when we've
4 done heads. (10:43).

5 MR. CURTIS: Do you have to remove the clamps that
6 brace the fuel lines together to do that or were they in
7 place?

8 MR. SNYDER: Did not.

9 MR. CURTIS: So, you left them as they were?

10 MR. SNYDER: Correct.

11 MR. CURTIS: When you put it back together, did
12 you notice that all the line clamps were or were not in
13 place?

14 MR. SNYDER: I noticed that they were not in
15 place.

16 MR. CURTIS: Did you put them on, or who would've
17 put them on?

18 MR. SNYDER: We did not put those on. Generally,
19 if they have them, and they ask us to, then we will more
20 than oblige them, but we didn't put any on.

21 MR. CURTIS: When you're replacing these fuel
22 lines, the procedure for properly replacing them? Just go
23 through a quick explanation of how would you exchange a fuel
24 line if one were broken?

25 MR. SNYDER: Number one, you should remove the

1 clams necessary to take the fuel line off, whichever one it
2 is, indicative from whatever pump to whatever injector, and
3 usually, it's good to either have a parts (12:12) list
4 there, to view it for reassembly, or to make mental note, if
5 your memory is real good. Mine is, generally, looking at a
6 book, but I have a lot of familiarity with that engine, so I
7 know where approximately, most of them go, the stantions
8 (phonetic sp.) and the brackets, but if you're a lay person,
9 then you would commonly want parts (12:35) breakdown to
10 reassemble.

11 MR. CURTIS: The fuel lines, they torque down, or
12 just hand tighten with a wrench, procedurally, what's the
13 correct way?

14 MR. SNYDER: There's a torque value on each one of
15 those bonnets and adapters, and they should be torqued in,
16 you know, the specification.

17 MR. CURTIS: Did anyone from Sun Cruz Casinos ever
18 identify to you that they may be failing an abnormally high
19 number of fuel lines in that engine, and that they're having
20 a problem? Did anyone ever identify that to you?

21 MR. SNYDER: I had heard that. I was conveyed
22 that by -- our technician had told me that. I was also
23 conveyed that by one of our people at our parts place, and
24 yes, I'd heard that before.

25 MR. CURTIS: Who would the other technician be, do

1 you recall?

2 MR. SNYDER: Paul Hyder, III, told me that.

3 MR. CURTIS: And the parts place, you mentioned
4 they identified that do you know why that would be? Did
5 they recognize a number of parts going out? Did they say
6 why they brought the topic up?

7 MR. SNYDER: Well, the person in question would've
8 been Maria at the parts, and yes, a lot of parts constantly
9 being replaced, you know, raises red flags, and makes you
10 question. Because we try to actually help our customers,
11 and you know, did point them in the right direction so that
12 they don't keep making the same mistakes, but that's
13 correct.

14 MR. CURTIS: Do you recall which parts they were
15 ordering a higher number of? Did she say?

16 MR. SNYDER: No, I didn't even look at the parts
17 numbers that she had, but that was all I was told, you know,
18 in those two people on both ends of the spectrum.

19 MR. CURTIS: But they did mention the fuel lines,
20 specifically?

21 MR. SNYDER: Right, that's correct.

22 MR. CURTIS: From your experience, what would
23 cause these fuel lines to break if they were to fail? The
24 lines going from the pump assembly to the injector? What
25 normally causes those to fail?

1 MR. SNYDER: Number one reason would be no clamps
2 or misplaced clamps. In other words, not, you know, at the
3 proper place on the line. There's different types of
4 clamps. Ones are ones that join to another line. Another
5 one would be a stantion type clamp, which would support it
6 to the engine, almost.

7 In this particular case, most of those stantions
8 would be secured to the after cooler, but it would be one of
9 those three, either a multiple clamp, single clamp, or a
10 stantion based clamp. Without those in place, vibration
11 would shorten the life of it. Vibration from the engine.
12 It -- also, pulsing of the action of the pump, which is
13 pulsing fuel through the line.

14 MR. CURTIS: From your experience, a difficult
15 question to answer possibly, what would you expect a failure
16 rate on a normally well maintained engine for one of these
17 to fail? Would you expect one to fail periodically, or in X
18 given months, or what's your experience?

19 MR. SNYDER: I'll try to see if I can answer that
20 the best of my ability. I try to gather from engines that
21 are industrial and from B- I would say I can see it failing,
22 but I couldn't estimate the time interval of when it's going
23 to fail.

24 I don't know if that answered it, or if that's
25 evasive, but most of the engines that we see are B- have an

1 hour interval of when they do top in overhaul, and bottom in
2 overhaul, and in my experience, we've had very little, or
3 Caterpillar has had very little problem, with their fuel
4 lines. They, generally, are very durable. They hold up,
5 they're longevity is there. It just takes proper care and
6 attention to securing them, and torquing them down.

7 MR. CURTIS: You wouldn't say this engine has a
8 propensity, from experience, of failing these fuel lines?

9 MR. SNYDER: If not put on properly, yeah, I'd say
10 the propensity for failure is definite. It will without a
11 doubt fail. At what time interval, I couldn't really say
12 for sure.

13 MR. CURTIS: Just one last question before I pass
14 it on. Did anyone from Sun Cruz ever ask you for a proper
15 procedure for when these fuel lines breaks, how to properly
16 replace them?

17 MR. SNYDER: No, not to my knowledge at least.

18 MR. CURTIS: Thanks, Paul, I'm going to pass it
19 along to Nancy McAtee.

20 MS. MCATEE: Nancy McAtee, NTSB. I have no
21 questions, and I'm also going to have to step out at this
22 time to attend another meeting.

23 MR. CURTIS: Thank you, Nancy.

24 MS. MCATEE: See you guys later.

25 MR. CURTIS: Okay, Bob Ford?

1 MR. FORD: Okay, Bob Ford, NTSB. Paul, could you
2 tell me what the difference is between, you're a level 1,
3 and Paul Hyder was a tech. 2? What is the difference?

4 MR. SNYDER: In the company we're in, this
5 organization, what you do is, you have different levels of
6 testing, and as you complete those levels, then it changes,
7 based on education, knowledge, and abilities, and they
8 evaluate you on an annual basis. Some of it is based on
9 your certification levels, and they review everything as an
10 accumulation of information, and give you that title at that
11 point for different testing.

12 I think Paul is level 2 right now because he
13 hasn't completed B- no, he has completed his (19:11)
14 certification, but he is waiting to go to Jacksonville to
15 complete his (19:16) certification, and that should raise
16 his level of certification up to a level 1 at that point, if
17 management, you know, reviews that information correctly,
18 and timely. Does that answer your question, Bob?

19 MR. FORD: Yes, but the next one, this is strictly
20 done by Ring Power, this is not your Caterpillar
21 corporation, correct?

22 MR. SNYDER: Right, that's correct. The titles
23 and the levels that they give you are through Ring Power.

24 MR. FORD: The test, you said there is a test. Is
25 this like a practical, written, or both?

1 MR. SNYDER: On the (19:50) you have to do all of
2 the CAT fuel system settings, and you have to be able to do
3 fuel densities, and be able to do horsepower correction.
4 The B- I would say it's about 50/50. Fifty percent of it is
5 a written exam, and the other 50 of it is a hands on ability
6 to do those things while being interviewed and watched by a
7 person giving B- or administrating the test that's giving
8 the certification.

9 MR. FORD: If Paul Hyder went on scene, there may
10 be something he would see that he would say B- I'm not
11 trying to put words in your mouth, I'm just (20:28) a
12 question. There could be something he would see and say you
13 could've done the tech 2, I cannot do this. I need to call
14 back and get a level 1 in there? Is that correct?

15 MR. SNYDER: I would guess that's it possible.
16 Yeah, we generally have our own network that we feed from
17 each other in that. If we get in a situation then there's
18 always something that somebody doesn't know, or somebody has
19 a stronger aptitude or expertise in, and we rely on men in
20 that situation. If he felt uncomfortable that he wasn't
21 making a perfect B- or if he wasn't making the right choice
22 at that time, and I'm the same way, I will, generally call
23 someone on a Nextell radio, which is also our cell phone,
24 and get, you know, support in that way.

25 We also have a TC that would give us support.

1 Ronnie Stewart will give us technical communication advice,
2 things that may have been upgraded, updated, or I'm not
3 trying to draw it out, but just trying to make sure I answer
4 it thoroughly.

5 MR. FORD: That's fine. How many levels are
6 there?

7 MR. SNYDER: The next level would be a Master
8 Tech. As far as I know, there's only three on our PSD side
9 that's Master Tech, one of them is actually a train
10 instructor now, and the other one is a shop foreman, and the
11 other one is a PSD generator specialist.

12 MR. FORD: Regarding the Express Shuttle II, I'm
13 not sure if you said, I think, Paul Hyder went on scene
14 first, correct?

15 MR. SNYDER: That's correct.

16 MR. FORD: Did he call you in? Do you have any
17 knowledge that he called you in because what he saw did not
18 meet his level, or you just came in to assist him?

19 MR. SNYDER: No, Dave, our dispatcher had
20 anticipated that we had a problem whenever he fielded
21 (22:39) the call to, I guess, assess the situation, and at
22 that point, it was getting later in the day. Number one
23 primary concern, since we're, like I said before, dealing
24 with commercial, and it's imperative that they get back up
25 and run on a timely manner.

1 Second is, in that situation you just need the not
2 the abilities, but the, I guess, the mule power to get
3 the -- to get the job done. He was looking further down by
4 just the record of the engine, of how many times we had, you
5 know, had to replace heads and that and probably said B-

6 MR. FORD: Once again, I don't want to put words
7 in your mouth. You were not called in to help for technical
8 expertise, you were called in to help expedite it, is that
9 correct?

10 MR. SNYDER: Right, just to carry out the
11 decision. I think the decisions were mostly already made at
12 that point, and all I was there for was to verify, you know,
13 and just to say, you were correct, you know, and I'm ready
14 to do the job, whatever the time it takes to get the job
15 done.

16 MR. FORD: How often do you have to refer back to
17 the CAT manual on the engine?

18 MR. SNYDER: For most of the newer models, I do,
19 anytime there's B- I would say, probably one out of every
20 three engines that I go to. Mainly, the newer style. The
21 older style, I feel pretty confident with most things that
22 particular model, 8RG is an older style, been around for
23 awhile. Not much guess work there. Most of us just, you
24 know, repetitiveness of (24:20).

25 MR. FORD: Just one other question. Are you aware

1 of any safety bulletins or alerts, either in the manual, or
2 issued by Caterpillar or Ring Power, regarding this specific
3 engine?

4 MR. SNYDER: At this time, no. I mean, news
5 bulletins in service magazines, service literatures, TIB's,
6 are always coming up, but generally, if you order a part, it
7 always defers you to the newer style, and the news media,
8 whichever it is, comes with that part, but as far as up to
9 datedness, there's not any that I know of, or else they
10 would've been seen by me or my PC, or one of the other
11 technicians, and I would've been made aware of it, but no,
12 none that I know of at this point.

13 MR. FORD: I do have one more then. Where were
14 you dispatched from, again? Where are you located?

15 MR. SNYDER: At the B- it's actually referred to
16 as the Tampa Bridge, but it's Gibsonton (phonetic sp.) 9797
17 Gibsonton Drive, Florida.

18 MR. FORD: How many of you that are sent out in
19 the field?

20 MR. SNYDER: We, presently, I believe we have
21 eight PSD techs, or well, eight on the marine side. When I
22 say PSD that incorporates everybody on generator and marine
23 side, with eight on the marine side of dispatch.

24 MR. FORD: What is your territory? How far does
25 that cover?

1 MR. SNYDER: We travel as far as to Fort Myers,
2 which is about 140 miles south of the shop. As far as about
3 Crystal River, which, I believe, is about a B- I'm not sure
4 how many miles, approximately that is, but the B- well,
5 sometimes, you know, into other areas depending on the boat,
6 the customer, and if the customer's willing to pay travel
7 expenses. Sometimes it could be out in some of the islands
8 and that.

9 MR. FORD: Thanks a lot, Paul, you've been a big
10 help.

11 MR. SNYDER: Okay, Bob.

12 MR. CURTIS: Lieutenant Hartley?

13 MR. HARTLEY: Lieutenant Heath Hartley, U.S. Coast
14 Guard. Yes, Paul, just a question about the fuel lines and
15 the procedures. If you were going to repair that head, is
16 it necessary to remove all the fuel lines on the inboard
17 side? (26:56) the fuel supply and the injector, or can you
18 explain that to us?

19 MR. SNYDER: You won't have to remove them, all
20 you have to do is, if when you say remove, you mean taking a
21 line all the way off from the fuel pumps?

22 MR. HARTLEY: Yes.

23 MR. SNYDER: And to the injector across, or the
24 jumper tubes? All you have to do is disconnect B- on this
25 particular model, since it's an 8-cylinder, you'd have to

1 take all of the lines loose at the rocker box, which has
2 jumper tubes that go through to the DI nozzles, and if you
3 just take them off there, and then remove the rocker box, it
4 gives you enough accessibility to remove the head, or enough
5 clearances to not have to proceed any further, and most of
6 the time because it's a time B- it's a time saver, and
7 that's the best way to do it, you know, because you're just
8 saving time, and the less parts taken off, less parts to put
9 back on.

10 MR. HARTLEY: Okay.

11 MR. SNYDER: From mechanic to mechanic.

12 MR. HARTLEY: Was there anything unusual about
13 this repair job? Anything of particular importance? Any
14 problems arise when you and Paul Hyder were working together
15 as far as, you know, the thing's not fitting right, or B-

16 MR. FORD: Hello?

17 MR. SNYDER: Everything other than when we lowered
18 the head down to the block, you know, and we wrinkled the
19 fire ring on the number 5. Other than having to use another
20 end gasket off of (28:25) to push the valves that were
21 installed in the head that would be two incidents, and those
22 were basically, just things that we had to do in order to
23 get the engine back together, but other than maybe a
24 florescent light been falling out.

25 One of the bulbs had fallen out of the florescent

1 light and I brought that to their B- one of their tech's
2 attention, and he would take care of it. You know, well, we
3 try not to stray too far of doing a, you know, a ship
4 repair. We try to stick with engine repair. So, if I see
5 something, you know that's not on or obvious, I always bring
6 it to the deck hands or one of their technicians, so that
7 they can address the issue if it's a boat problem and not an
8 engine problem.

9 MR. HARTLEY: Do you recall, for this specific
10 engine, how many fuel line clamps are required on that fuel
11 line's system?

12 MR. SNYDER: Well, I can look it up and tell you.
13 I can give you part numbers and be concise. I'd be guessing
14 at best. Each model's different, so, I mean, I'd rather
15 give you the one right off of the part's (29:33) because I
16 don't know (29:34) part numbers in quantities.

17 MR. HARTLEY: No more questions for me, thank you.

18 MR. CURTIS: Brian Curtis again, Paul, just one
19 question. You obviously have a lot of experience with these
20 engines. In your experience, have you ever seen a situation
21 where a failed fuel line would ignite a fire on an engine
22 once it failed? On a 3408?

23 MR. SNYDER: No, not B- I haven't seen it, no.
24 I'd have to say no to that question.

25 MR. CURTIS: Okay.

1 MR. SNYDER: Hopefully that it B- I've ever seen
2 one or a reason why it would that answers it.

3 MR. CURTIS: Okay, I have no more, Bob Ford?

4 MR. FORD: I'm good, thanks.

5 MR. CURTIS: Chris Conner?

6 CAPTAIN CONNER: Nothing from me, thank you.

7 MR. CURTIS: Lieutenant Hartley?

8 MR. HARTLEY: No, thank you.

9 MR. CURTIS: Okay, Paul, this concludes the
10 interview. The time now is 2:05 p.m., we certainly
11 appreciate your coming in, and thank you much.

12 MR. SNYDER: Okay, thank you. Thanks, Bob.

13 (Whereupon, at 2:05 p.m., the interview was concluded.)

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C E R T I F I C A T E

DEPOSITION SERVICES, INC., hereby certifies that the attached pages represent an accurate transcript of the electronic sound recording of the proceedings of the National Transportation Safety Board Interview regarding the Express Shuttle II, NTSB #DCA05MM002.

INTERVIEW OF PAUL SNYDER

MARINE TECHNICIAN, RING POWER, CORP.

Eve Jemison, Transcriber