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Transcribing Conventions:
Use of square brackets [ ] indicates a note from the transcriber.
Use of parentheses ( ) indicates a conversational aside.
Use of dash - indicates an interruption of thought or conversation.
Use of ellipses … indicates a discontinued thought.
Use of quotations " " indicates reported speech.
Use of *italics* indicates emphasis.
Use of <u>underline</u> indicates movie, magazine, newspaper, or book titles.
Names of interviewee and interviewer are abbreviated by first and last initial letters.
Time is recorded in time elapsed by the convention [hours:minutes:seconds].

[00:00:00]

EK 0:00

Just we're talking to Jim Hirsch at Air Tractor in Olney, Texas on June 15. And we are excited. Time 10:47. You got, you and Jack were just talking about, like the technical thing. So you came at this from being an engineer is that…?

JH: Yeah, so my dad taught Civil Engineering at Texas A&M. So I'm the son of an engineer, and as I got out of high school and worked and did some other things in Oldfield, I got interested in flying and started flying. Always was mechanically inclined, had to know more about what made this airplane work. And in the mid- to late-'80s, got back into school, and finished an aerospace

engineering degree at Texas A&M. And in early 1992, after I just graduated, came here. By that time I had owned, started in and owned and sold the business to go back to school, and was a pilot flying tailwheel airplanes and also had a aircraft mechanics license and a brand new engineering degree to go with it.

EK: So did you grow up around here?

JH: No, actually, I'm I was born and raised in Bryan College Station at the university. I lived within a mile of Caulfield, the first 32 years of my life. So from College Station.

EK: So how did you get here?

JH: So it's, that's an interesting flying story, actually. I'm about to graduate. I'm working on finishing an instrument rating. And my flight instructor was also a civil engineering professor. I had known the man since I was a young guy. He worked with my father and said, Doc, ya' know, after we'd been flying one day, what am I gonna do? I'm back to graduate with this engineering degree. I've interviewed with Bell, I've got an opportunity to go to Seattle and go to Boeing. I'm not sure either one of those really fit what I want to do. I've sent resumes to all these little airplane companies, like Piper, or Cessna, or Mall or some of them. And he said, Jim, there's a fella that your father and I graduated with and his name is Leland Snow, and he's in Texas, buildin' airplane somewhere, go find him and I bet you'd be a perfect fit. So I went to my dad's office, got the directory of former students and looked him up. And sure enough, there's Leland Snow, Rockwell commander, all knew Texas. So I fired a cover letter and a resume up here, and in a week or 10 days, was able to talk to him on the phone. And he invited me up for an interview. So I climbed in a, oh at the time I was I helped put myself through school doing maintenance on the Aggie flying club airplane fleet. So I crawled into a 172 and flew up here. And before the day was over, he offered me a job. And that's how I got to Olney, Texas.

EK: What year was that?

JH: That was February of 1992. I started early March of '92 here. As a as a quote, Project Engineer doing whatever Mr. Snow needed me to do from analysis to, and he wanted me to start flying these airplanes quickly. And did, did that. So I've been very fortunate, got to do a lot of different things here. from engineering work, analysis drawings, to test flyin' airplanes to doing production test flight on a handful of airplanes a long time ago. And just a whole interworking, we were a little smaller back then, than we are now. Yeah, at that time, there was only three full-time engineers on staff and a draftsman. And, and I, one of those engineers was the founder and the president Mr. Snow, you know, he led the engineering department at that time as well. So…

EK: How many are there now?

[0:05:15]

JH: Fourteen. And three draftsman. So yep, we, we keep growing. Yep. And building more airplanes. You talked earlier about the passion. It, I didn't know much about ag aviation. College Station is a place where it happens, right? There's a lot of cotton in that Brazos River Valley, down there. And I knew some people just through the flying community that were associated with ag aviation, and some, in some way or another, but I really knew nothing about the industry. Till I came here already had that man machine passion, and that it evolved to the ultimate machine, the airplane. And then, you know, working with Leland and his passion for the industry instilled it into me and I became active pretty quickly in NAAA. Learned immensely Leland blessed that idea of getting in a little airplane and going on field trips to see ag operators and understand how it worked. So got opportunities to do a lot of that. I'm not an ag pilot. I sprayed just a little bit one summer with USDA in research. It was not hard work spraying and like what our customers actually do. It was make a couple of passes while the ground crew collects engineering data on spray patterns and drift studies and things of that nature. So but, but it was just enough to, to understand that, yeah, you're low, you're going pretty fast across the field, and things come up out of the ground pretty quickly. Goin, going across…

JK: Not a lot of time for problem solving at that altitude.

JH: Right. Yep. So anyway, that's kind of the quick version of the story how I got here. And here we are still 29 and a half years later.

EK: It goes fast doesn't it?

JH: It does go fast, it goes way too fast. Still have a passion. You know, Leland's passion was just brought out every day. But I realized after he was gone, and, and I took over that we really didn't have a clearly defined mission here. Everybody inherently knew what he was. But I took some time and started thinking about that, and went and wrote it down. We're here to do our part, through airplanes and services, to help feed and protect the world. That's why we come to work every day, do our little part to help feed and protect the world.

EK: It's much bigger, I think, than anyone knows, don't you?

JH: Could, could well be, you know, we get, we get pretty tied up and focused just on what we're doing here to get the airplanes built and serve our industry. And sometimes we don't see that bigger picture as clearly as maybe we should, but we keep doing it.

JK: However, someone looking at the news, watch the news about wildfires, they see a SEAT [Single Engine Air Tanker]. And that SEAT came from here.

JH: And that, and that makes us all around here really proud to see that right, on, on the evening news to see some guys in airplanes that we built right here, putting out some fires or helping some people.

JK: A little known, I don't think many people know about the, you know, the drug interdiction work.

JH: Right.

JK: I don't, I don't think hardly anybody. I mean, even crop dusters don't know you have a militarized version of the 802, you know, that they use down in South America.

JH: Right. So that that was an interesting program is that evolved. It actually dates back to the '80s. In…

EK: Oh, the Reagan era. Wouldn't that be Ronald Reagan?

JH: Yeah, yes, I suspect I suspect you're right. The State Department wanted to get that work underway, and actually put out a request for proposal. And Leland told me that he responded to it, his Air Tractor, and he knew the competitor, the Thrush guys, responded to it well, Leyland actually thought that, that Air Tractor would win that. And he actually developed a new airplane just for it. Which was the 503 in the mid- to late-'80s. And it turned out in the end, the Thrush guys won. So there weren't very many of those airplanes built. And, it all went quiet for a while and they sold some airplanes and provided some support. And the US government took them to Columbia and sprayed narcotic crops and they also modified some old OB-19 Broncos to do spray work down there as well. Time passes and attrition and various other factors and come around 2000, late '90s or 2000, they approached us, the State Department guys approached us again says you guys got this new big 802 airplane, we're really interested in it, we need to upgrade our fleet in Columbia. So there was another request for proposals and we submitted and, and once again went on a program to modify and customize an airplane to meet their specific need. And and we won with the 802 and over the years we built them 17,18 airplanes for planned Columbia in added defensive armor to protect a pilot in the cockpit from lighter arms, small arms fire and, and the same around the engine and for the engine compartment. So yeah, that's been, that's kind of the story of how that evolved. It's been quite fascinating as we've had opportunity to get to know some of the pilots and of course, the maintenance folks that take care of those airplanes. And we keep working with those folks still today.

[00:12:13]

EK: Who are those pilots? They're not, like the pilots are they military people or…?

JH: Most of them. were formerly ag pilots that decided to take the adventure to go to Columbia and spray ag in, down there and help the Columbia National Police and US State Department fight war on drugs. The program now, the State Department has gotten the Colombians to take it over. So the Colombian National Police run it now and all the pilots are Colombian pilots now.

EK: So when you do something like that, like how do you know what modifications to make? Do you ask the pilots?

JH: Absolutely.

EK: I mean, you're an engineer, so obviously…

JH: We worked with the State Department guys, we worked with those pilots, we worked with the guys, the pilots that flew the thrushes, you got to do your homework, right, that's what it boils down to is getting in and doing the research. Understanding what they really need. And of course, the State Department did all that too, and, and sent us a specification, the list of this is what we'd really like. So you take that and, and refine it a little bit and read it based on knowledge that you gain from talking to, of course them and others to submit the proposal. And, you know, in the end, I don't remember what it was it was something on the order of 30 different changes to the airplane to help customize it specific for their mission.

EK: I asked because it, when we talk to the pilots, it seems they, they all, they all seem to have a personal relationship with Air Tractor. And, you know, the ones that that are just small business owners. And, and like when we said we were going to do this, they're like, you know, they name names and they're excited and, and which is not really that common, when it comes to you know, my guess it's just not, it's not the usual thing for there, with the customer and the manufacturer to have a relationship. You know, there's so many steps in between in the rest of the world that I was, I was amazed.

JH: So it's a small world that ag aviation lives in one. Two, we've always been very customer service focused. That's one of the huge keys to our success. And we need that feedback too from them. To understand what it is we need to do to the airplane to make it better. What it is that is there, the biggest thorn in their side every day while operating this airport, or airplane, so we can see if there's some change we can make, to make their life easier. And, and help them do their job better. Whether it's, you know, one of the things we did, when I first came here was put air conditioning in the airplane, before the '90s, these things didn't have air conditioning in them. You know that was a pretty significant one. But there are a lot of little ones too, from, where the little control for this, that or other piece of equipment is and how that operates. We're always really interested in their input. And of course, the association is a great venue to help facilitate that communication back and forth. And you know, a lot of them really enjoy coming here to pick up their new airplane. And that's a great opportunity to learn something from them, as well.

[00:16:25]

EK: So when they come to pick up their new planes, do you like, sit down and talk to them and, and get acquainted?

JH: Yeah, we try to. You know, every situation is a little different, right? Whether this, that and another they need to get in, get in and get out or, yep, we've got a little time, let's get a tour of the plant and, and have a chance to go eat lunch or and visit and learn something. You know, if we can, if we've got that opportunity, we'll take it. And it's not just me. It's a lot of folks around here that that help us with that process of listening?

EK: Yeah.

JK: I noticed, one of the first things I noticed the first time I, I worked on an Air Tractor, because I've done I've done a little radio work.

JH: Right. Okay.

JK: I'm not certified without, of course, according to the FAA, you don't need to be certified to do certain things. And I noticed that every, pretty much every component, somebody thought. About a lot of systems I've gotten into, you can tell that, you know, there was one sub team and they worked on this component group and another team worked on this component group. And then they might have I don't know, gotten drunk and decided to slam them both together. But I noticed that in an Air Tractor, every component just fits, it's really well thought-out maintenances has been considered on every aspect.

JH: We try to do that, we try to keep doing that. We're not always 100 percent successful, because there are things that are, that are a little harder than maybe they ought to be. But, but it is. It is a goal of ours to make it easy, these things easy to maintain, you know, I realize ag pilots have to have an airplane that when they get up in the morning, to provide the 911 service to the crop, they're going to protect from some insect or fungal or whatever pest. It's got to start, it's got to go and it's got to do the job. It has to be very dependable. That's one of the reasons why the turbine engine is been such a great success because it is so dependable compared to the recip radials. But yeah, we try to keep it simple, simple. And we try to design it to be maintainable as well.

JK: Yeah, I I did notice that I will say it’s the first thing I noticed when I pull panels off instead of using fancy aviation, you know, wire looms and stuff you use zip ties. Well, that makes perfect sense to me. It just seemed like, and hadn't you know, the reliability is a huge factor. I pretty much every pilot we've talked to has some story about losing a jug on Pratt and Whitney…

JH: [Laughs] Yeah, on one of the old radials.

JK: You know, Kevin was flying a Pawnee and that was before they had the AD on the carb heat on that engine and so he he lost his carb because you know, flange came off and got separated in the venturi at So, yeah, the reliability I think is probably a huge issue.

JH: Yes, huge.

[00:20:01]

EK: I was listening to you and forgot what I was thinking.

JK: It got kind of technical there for a second.

JH: Yeah. So, you know, the people part of the business though is is one of the favorite ones if, if we can figure out how to better help our customers do their job and do what they do better we're, we're, we want to be all about that. So yeah,

EK: They are simple people. We have discovered that even the ones who are well educated or who you know, are some of them have flown corporate and, and you know, they've gone as far but they always come back to…

JH: Yeah, it is interesting how diverse the backgrounds of a lot of these pilots, as you look around the community is. One of our past dealers was a integrated circuit engineer before he started flying and, and spraying.

EK: So I don't forget my questions.

JK: Well Dusty, out of Nevada, he, he was a rodeo cowboy. I mean, he was on…

JH: Right.

JK: He was on a rodeo show on CMT. And then I know there's, there's a boy flying out of Central Oklahoma, who's PBR bullfighter.

JH: Right. He's been here I remember meeting him.

JK: Yeah, we haven't gotten around to him yet. I'd like to meet him. I think he's, he's pretty good friends with Dusty. Just did that rodeo scene, you know, right. But then of course, I don't know Kevin's background. I think Kevin was probably born in a cockpit. That's all he does.

EK: Yeah. We tried to interview Matt Peed. And he's a busy, busy man. We finally got him like, nailed down and his internet was messing up and ours was and we had to abort it. But, but from what I can tell on his social media, he does a lot of training with, like the transition to turbine flying,

JH: Right. Yep, I don't know, Matt. Personally, have you…

[Undecipherable, cross talk.]

EK: He does? I'm sorry, I'm sorry I mentioned his name then. Though we do know where the Thresh began. [Laughter.]

JH: Yeah, it is. It is an industry…

JK: Most we have talked to who have flown both the Thrush and and Air Tractor. They like the Air Tractor. You know, they say the Thrush is a little quicker on the ferry. But when you're actually down spraying, they love the Air Tractor.

JH: Well, I have these memories from NAAA conventions with Leland for many years and there'd be a group of guys that kind of gathered around and you know, it was a tendency you're in front of the founder in the leader of Air Tractor, right? To maybe not be so kind to those Thrush guys, right? Maybe to offer some critical comment why you know, that Thrush doesn't blah, blah, blah, or whatever it is. And I just remember this from several instances, Leland stopping him and saying, Ah, guys, careful. Don't forget I designed Air Tractors just to thrash out all the mistakes I made. [Laughter]

JK: That is what, that is what I've said a couple times

EK: Did he say that?

JH: He actually said that. That's actually a quote.

JK: Boys don't, don't forget, I designed that thing. But an Air Tractor's just a Thrush without all the mistakes I made.

EK: It really is though, isn't it? I mean…

JH: Yeah, it's an evolution. You know, when he sold and he told me this, when he sold to Rockwell, he kind of didn't want to, but there were other pressures and other reasons why he did. It also forced him to start with a clean sheet. Which while that was very difficult, and a big job, probably advanced the design of the whole airplane further than it would have if it just kept evolving off that same frame in that same platform from before. So there's actually some merit to it like I said, I know it was hard a heck of a lot of work. But he was the guy that, boy he could just focus on things like that and, and get the task at hand done.

EK: Did he do like adversity? Something to push against?

[00:25:04]

JH: He was as driven a guy as I've ever known. He was just driven. He, he'd deal with adversity and conflict. I don't think he really enjoyed it. He enjoyed designing and building airplanes.

EK: But did it make him be a better designer did it? Like?

JH: That's, that's kind of hard to say.

EK: Maybe, maybe a better way to put it is . did he like a problem that needed to be solved?

JH: Absolutely. Now that's, that's, that's the right way to characterize that. 'Cause he was all about solving problems. Yeah. And, and just, like I said, just focused on that end goal of designing this airplane, of building this, you know, the obstacles, the challenges that he overcame throughout his career, in various stages are, are just amazing. Here's a story number a number of years ago, I

decided it was time to give back to this industry. It'd been awful good to me for almost 20 years. And I kind of stumbled on to and had talked about doing a restoration project on an old Snow airplane. And I found one one day and said, I'm gonna go get that thing we're going to and later restoration project. And then we'll figure out to do what to do with it one of these days. So I made a deal. I contacted these people that had this S-2A, serial number 25 to 25th airplane built. So you're talking about the guy that was flying the seventh B.

EK: Floyd McElwain?

JH: Yeah. So anyway, we've still got this thing. It's still a project. We're way behind. We should have finished it years ago. But it's an airplane restoration project. And we get busy doing other things and distracted. But long story short, back to the, that adversity thing that Leland came over. He comes in one day, a few weeks after I had gotten that thing here and unloaded it in the hangar and we'd had a little start to disassembly process project couple of times and he brings this old, old spiral notebook in and hands it to me and says I want that back 'fore the end of the day. He said, but that's the, that's my hand log of airworthiness certificates for all those early airplanes. And that one you bought in there. So you know, it was several pages in a spiral notebook, just one line, the serial number of the day, there were their certificate number, you know, that kind of just that basic information in airplane number one through, you know, twenty-whatever. So I took it back to him. And he asked me a question, he says, you see that airplane? That serial number 25? Yep. He says, you see all the ones next to it, 26 and 27, 28, 29. Yeah. He says, Did you notice the date they were licensed? Well, I didn't pay particular attention, no. He says we look there's all five of those airplanes were licensed on the same day. So yeah, that is kind of odd, 'cause if you look, you know, one comes out every week and a half, two weeks and, and sometimes there's two of them on the same day. Said back in those days. We had to have the FAA guy, guy that worked for the FAA come here to sign off the original airworthiness certificate for the airplane. He said things were going along pretty good. We were building airplanes, and we had our legs under us, starting to get a good foundation. He said I, to simplify the process, I designed the tail around a horizontal in an elevator that was surplus. And this guy over in Fort Worth had this whole warehouse full of them. And we'd build two three airplanes and I'd type out a PO for a couple of three or maybe four more of those horizontal tails and send it over and generally in a week or two pickup truck come around the corner it was him and you'd have three or four of those horizontal tails in it. We go some more.

[00:30:14]

He said one day as we're starting to build on that bunch of airplanes right there. He says, I had sent the PO off. And, you know, a couple of weeks went by and nobody showed up. No horizontal tails for these airplanes. And this is about overcoming obstacles. He says, so you know, it's the late '50s, or yeah, it's 1959. I pick up the phone and call over there. And nobody answers the phone, which really wasn't that unusual back in those days and day passed, and another day, and I picked up the phone. And so he said, you know it's three or four days before I finally talked to the guy and he says, Oh, no, I don't have any more of those. You bought them all. And he's got airplanes in the line, right? Waiting on these things to come from the warehouse and they're all gone. So he scurries

out. And this is the problem solving thing too, this is huge problem, right? There's airplanes in the production line and don't have horizontal tail, and there's not one coming. He has the guys pull one off an airplane that's already built, and drill all the rivets out of it. And he takes it home and spends all weekend drawing all those parts in an assembly and comes back with all those drawings early the next week, Monday or Tuesday. One of his deals on projects was to leave here on Thursday afternoon with everything he needed to show back up Monday, or maybe first thing Tuesday morning with all the drawings and reports and whatever work, engineering work done. Do something like an aileron or something like that, right, some some… anyway. So he takes it out, takes the drawings out to the shop, and they go to work. And they build a horizontal tail to match by the end of that next week. And he was very persuasive like that. Look, fellas, we got to have all these skins and the spars and all these pieces and parts and have one hammered together by Friday. That was probably Tuesday mornings. And so they did that. And they bolt it on this airplane. And Sam Cooke, the guy who actually taught me how to fly these airplanes, goes to the runway to go test fly it and comes back only a half hour later and says boss it doesn't work. What do you mean, it doesn't work? He says, you move the stick up and down going down the runway and the tail just stays there. It doesn't have any elevator power. And oh, wow. We've already lost another two weeks. So now it's been four weeks or five weeks since he's had a horizontal tail and can't deliver airplanes. And you know, it was the early days it was the first 25 airplanes, money's tight and dadadada da. What do you do? So he told me he said I thought to myself about that J-2 Cub that I rebuilt in high school. And he said a tube and fabric, round tubes fabric tail will work. So he goes home that weekend, and designs the whole tubular structure horizontal and elevator to be fabric covered. And shows back up Monday or Tuesday with all those drawings the following week. And before the end of the week, they had built that and had it covered. Of course they were doing fabric work here at that time. Already anyway, the fuselage of the Ace was all fabric. And they got one built in got it on an airplane. And lo and behold, Sam goes to fly it and it works good. But you know what, they still got challenges, because they still got to certify this thing. They got to do all the static load testing and structural work, testing work and an FAA level certification flight test program. But they managed to, in a matter of a couple of six or eight weeks solve that problem. That's the problem solving in, what you think about things like that, what a huge obstacle is placed in front of you to claw, fight, scratch and make your way through and make it happe. We've had a little of that here in the past year around here. The supply chain has not been very reliable. We have had to scratch and claw particularly this year, this year worse than last year, we operated continuously through 2020 we were a little slower, not a lot. We worked every day, we did what we had to do to get our airplanes bill and keep COVID at bay as much as we could. And it worked. And we get into 2021 and everybody's so relieved, it's a new year, we're going to put this COVID thing behind us now. In February, we get slammed with this deep freeze event that for the first time that I know of ever

[00:35:47]

something other than management shut this place down. You know so, so we battled and scratched our way through that, that actually had a great effect on the supply chain as well, the freeze did because, you know, nothing's moving no transportation. It turns out that a lot of the Gulf Coast refiners suffered a lot of damage and we're still have trouble the day with some resins for

fiberglass and epoxy. We're literally living hand to mouth for a lot of epoxies, resins and plastics-related stuff deal due to the freeze and of course COVID's had an effect too as some companies were shut down. And so you know, it may be a fuel pump, it may be a circuit breaker, it may be something. So far we have managed to stay focused on, on getting materials, there are still some issues, and there's probably still some that are going to pop up it, it feels a little more solid now. But you know, we, we keep working every day to overcome those obstacles.

JK: There's a great philosophy that I was reading, sort of, I guess the memoirs of a B-17 bomber pilot, and he wrote that his instructor always told him, read the problem, make a checklist, run the checklist. And it seems like that philosophy is alive and well. And after now, it sounds like that, it was Leland's philosophy. Like he looked at the problem, and you really say it, same as when you take a test, you read that thing. word by word, and then you read it again, and make your checklist.

JH: Um-hm. One of those things we continue to work to train around here, Jackson, is problem solving step one, identify the problem. What's the real problem here? Not just the symptom of the problem which is what you just felt, right? What's the real problem here? Let's go back and do core problem solving.

JK: And I think something like you know this, you speak about the supply chain. That system is so complex that a lot of people have a hard time dissecting it down into chunks, because you can't just look at the overall problem. Like you say the symptom, you got to break that thing down into break like manageable bits before you can start solving.

EK: So as the, the guy in charge you, it's you know, your job to maintain that, that vision and that optimism, isn't it?

JH: Yep. And that's what we do.

EK: Did you learn that from Leland Snow?

JH: A lot of those characteristics of just…, it's also about that work ethic. There's nobody I've ever known that worked as hard as Leland Snow worked.

EK: Maybe you.

JH: No, he worked a whole lot harder and a lot more hours than I did. Focus, try to, you know, maintain, you know, Leland was so focused on Air Tractor and airplanes. He really didn't do anything else. Yeah, he had a family. He played the piano. He ran, red m (undecipherable), but other than that, Saturday afternoon, Sunday afternoon, Saturday morning, Friday morning, Thursday afternoon, Thursday evening. He was doing something for Air Tractor, whether it was writing a letter, correcting a drawing. Uh…

JK: He ever take a vacation?

JH: You'll have to ask Kristin about this. [Laughter.] Yes, his wife would make him go on vacation. He didn't much want to, but yeah, he went. And did the family thing with the vacation. I'll never forget because boy, we heard about it around here. They get to Puerto Rico. This was '90s vintage, and he opens the suitcase and out comes the Smith Corona typewriter and an engineering report in the condo In Puerto Rico. I don't know that that went over real well.

EK: Can't drop the ball.

JH: You'll have to ask Kristen about that.

JK: We'll do that.

[00:40:10]

EK: So how do you, well, how do you keep…? How do you get the buy in from everybody else to maintain that attitude, because oftentimes, once that that first leader is gone, there's a slack off or, you know…

JH: Right, there's a change, and there is a change, it is a little different. It's not exactly the same. You keep working, right? That's, that's the one thing you keep working on it. You keep doing a lot of those same things, you changed some things that needed to be changed. You ask those people for their input, and you depend on them to go do the job that they do as well. And give them the range to do it. The other thing Leland did do was lay a great groundwork and a great team of people to carry forward. He wasn't just me. It's all these other people around here that have been around here for a long time too that that have helped keep that moving forward in a positive way. So it's a team you work in to build the team. you communicate. I don't spend as much time as I should on the floor. But still try to make sure I'm out there talking to people every week, if not every day. It's, it's a, it's a constant… It's just a constant effort.

EK: Yeah. Your pilots loves their planes. They love them.

JH: Oh, yes, they do. And you know, this other thing. When 802 production started, and Leland viewed all these airplanes as his children. For the first 20 airplanes, when they were new, I knew a lot about each one of those airplanes, and I knew the people who had them and the people who bought them, and maintained some relationships. So yeah, we love each, each and every one of them and treat them with tender lovin' care as we put them together and try to keep continuing to convey that message and pass that along as the transitions occur when people leave and new people step up to take on bigger roles and responsibilities. You know, try to continue to teach and convey that same philosophy and ethic for work and passion for the product. And, you know, try to get those customers when they do come here to get out there and talk to those guys. And gals.

JK: Each plane has its own personality, it seems like.

JH: It, it's kind of does. Yeah, it kind of does.

JK: I've noticed that about playing more so than cars. I mean, I've I've been guilty of anthropomorphizing…

JH: Remember, airplanes are still all handbuilt, each and every one of them. Everything, everything on there is hand fit. It's not stamped out and glued together and snapped together. You know, so each from that perspective, each one of them is unique.

JK: Handles a little different, acts a little different.

JH: You know, we've, we've had that discussion a lot. Every one of them is exactly the same. But no two of them are identical. They're all exactly the same. But no two of them are identical ‘cause they're handbuilt.

EK: They have their little, like Dusty has his little, I think a little fuzzy things along the top. Yeah, their little his little safety thing, right? You know, people have they, the pilots had their little things in there.

JH: Yeah. And so that's the other thing we know, when they leave here. They customize them, they change this, they tweak this because they're every one of them, that well, that's why we call them custom applicators, right? They customize that equipment to do the applications that they need to do be it fertilizer or, or bug spray. They tweak those airplanes and modify them for whether it's spraying bugs on soybeans are putting fertilizer on rice. And they all have their own little ways of doing that. And so that's one of the things also that, that makes the pilots and owners and operators of these airplanes so unique and special.

[00:45:20]

EK: So they do that, do you? Do you design different planes, obviously for different uses, but for different topography, like in northern Missouri, there arealong the river, they're like these massive fields, you know, in the Dakotas, they're like, huge in, in northern Missouri, and then in northern Missouri, around the Missouri River, they have these little tobacco patches, that are like these, you know, like little 10 acres.

JH: Right.

EK: Do you, do you consider that when you change designs? Or do you, is it just a single design? Or do you get what I'm going at?

JH: Yeah. So we're we approach that from a little higher level than what I was talking about the individual operators customizing how many spray nozzles and where the spray nozzles are to do, what, that's why we have all the different models, that's why we have a 402, a 502, a 602, or an 802. Because the guy in the area that has thousands and thousands of acres, as far as he needs an 802. He needs to be able to cover a lot of ground. Whereas a guy that that may have some tobacco patches to do, or some smaller 30-acre fields to do, may be better off at a 402. So we try to give, get

them a basic platform that fits their need from that geography, geography or topography standpoint, the best and, and give all the operators that, that choice. You know, we developed the 602, kind of based on that. For some fertilizer operators, this, the 502 didn't hold quite enough. They they thought the 802 was a little big. And then you go look at the the circles out in West Texas with the cotton. If they're doing five gallons an acre on 120-acre circle, all sudden that 602 is one load to a circle. Instead of with a 502 you get out there you get it three quarters done, you got to go back, get another load to finish that one, and then maybe start on the next one and then one, and boy that that was a niche little thing. So that's an example of what we do from a higher order. And then engines, and power plants, same thing. A dash 34 and a 502-B may be just fine for most operators. In South Texas, it's, there it's 300 feet or 200 feet above sea level. It's warm, but not…. But the guy in Kansas it 3,500 feet in 98 degrees in a real high density altitude, bigger engine makes a whole lot more sense. He can keep going all the way to the guy that's spraying potatoes in Idaho at 7,000 feet above sea level. He needs the horsepower because as you go up, as you know, the engine's not able to make as much power as it does on sea level. So those, those are, that's where we focus. We don't spend a lot of time with that detail of which nozzles go in which hole kind of for example.

EK: Yeah.

JH: Yep, give them the right big tool, and they can customize it and put the teeth on the shovel in the manner that makes sense for exactly what they're gonna do.

JK: It's readily apparent that you guys are used to that I needed a blueprint for Kevin's plane, because I think you'd change something.

JH: Yep.

JK: And I just emailed customer service and they emailed me a blueprint. Which I thought was kind of cool because they didn't say who are you? What are you doing on this airplane?

JH: Yep. We, that, that's back to that customer service thing. We, I still think that's very important. That's a message we promote because we facilitate the guys being able to do that. That just helps us in the long run.

JK: Saves him time. He doesn't have to take it to, you know, Memphis or somewhere to have it worked on. Or Arkansas. He can just say hey, I'll trade your flying lessons for some radio work. [Laughter.]

JH: Good deals that are made every day. Right?

JK: It is a good deal.

[00:50:09]

EK: Well, I'm sure we could keep talking to you, because you're really interesting.

JH: Well thank you. [Laughs.]

EK: You are, I'm fascinated. But we're going to cut off the formal interview. Because I know you're a busy man. And I think I, that the part about maintaining the vision that that was something that like, just kept I kept thinking about because and are there people, are you, are there people who believe in this to the point where they're going to maintain it for the next episode?

JH: Absolutely. Yeah. I'll tell you the other thing that we've got that the Snows did is the employee ownership. That's been really powerful in helping us maintain the passion in division. Because they really, everybody here has a longer term vested interest in the success of this place. They get it now too after 11, almost 12 years of EESOP. We're, we're tuned in more to it's not just a job and a paycheck on Thursday afternoon, there's a future, a future for me and my family, beyond Air Tractor that if I give it all I've got, and really engage, and help the cause of the company to succeed, me and my family will be better off for it in the end. And that's just great. And it's been a great benefit and, and a great, you know, just from morale, and develop and drive and passion. It's definitely helped that.

EK: Yeah, it sounds like Leland Snow made a really wise decision in choosing you. So, you know, many years ago, as well. It's not easy to find people who share a passion and a vision.

JH: Right. Well, thank you for that.

EK: Yeah. Yeah. Thank you for your time.

JH: Well, you're welcome. Enjoyed doing it. This will be interesting to see the...

EK: It'll be archived in the Library of Congress and available for anyone who wants to listen to it. Did you cut us off? Go ahead, cut us off.