Hendrick Motorsports
Key West, FL
October 31, 2011
ERA12FA056

NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C.

Attachment 1

Interview Summaries

(20 Pages)

Interviewee: Jay Allyn Luckwaldt, Line Pilot, Hendrick Motorsports
Interview date: March 7, 2012
Time: 1200 EST
Location: Hendrick Motorsports, Charlotte, NC
Present were: Katherine Wilson, Corky Smith – National Transportation Safety Board (NTSB); Duff Barker – Federal Aviation Administration (FAA); David Dudley – Hendrick Motorsports; Bruce Barefoot – Gulfstream
Represented by: Declined

In the interview, Mr. Luckwaldt stated the following:

He held ATP, commercial instrument, MEL, CFI, and MEL instructor ratings. He had about 13,000 hours total time and about 75 hours in the G150, about half of which was as PIC.

When flying the G150, the pilot and copilot would alternate legs as the pilot flying.

He was type rated in the G150 in May 2010. He also held type ratings for Citation, Learjet, Falcon 20, IA Jet, G1159, G5, Beech 1900, Hawker HS 125, and Challenger CL60 airplanes.

He was currently a line pilot for Hendrick Motorsports and had been with the company almost 28 years; he was hired in May 1984. Prior to working as a line pilot, he was the chief pilot/director of aviation for about 15 years from 1990-2005. Before working for Hendrick Motorsports, he flew for another corporation in Raleigh, NC.

He did not fly outside of work.

Mr. Luckwaldt was asked to walk through the events that occurred on the night of the accident starting with the flight's departure from Stuart, FL.

He said they were on the ground in Stuart for 2-3 hours when Mr. Hendrick called and said he was on his way. Mr. Luckwaldt was seated in the right seat on the flight to Stuart and for the flight to Key West so he walked around the airplane and did the preflight. They bought fuel. There was nothing unusual during the preflight. It was a normal engine start. They requested clearance, and had filed a flight plan and got the weather. They taxied out and wanted to depart from runway 34 because of the favorable winds but there were no runway lights and they were departing about dusk so they departed from runway 27. They completed all checklist items on the ground and takeoff was normal. The climbout was normal to flight level 220. There was some thunderstorm activity off the coast but it was not in their way.

They received the descent clearance from Miami Center, and were descended below 10,000 feet, and then were handed over to Key West Approach. He was able to see the airport beacon about 10-15 miles out, called airport in sight and they were cleared for the visual approach. They were asked if they could stay over the channel between the island of Key West and the military base, and Mr. Luckwaldt said they could. They completed the normal checklist items – flaps, slats, gear down, ground spoilers armed; all items were completed. The flight was cleared to land.

When turning from base leg to final, there was a small cumulous cloud on final. They lost sight of the end of the runway. Mr. Klepper added power, maintained altitude and Mr. Luckwaldt asked the tower if they could go around. Tower told them to enter a right pattern. Mr. Luckwaldt was on the right side of the airplane and was watching the runway because it was on his side. He was telling Mr. Klepper where they were. They did not change the configuration from the first approach; they were still with gear down and full flaps. When the runway was 45 degrees off of his right shoulder, he told Mr. Klepper he could make his right base leg and then continued his duties inside the airplane.

He said the airplane landed on speed somewhere near the 1000 foot marker. He called 110 knots. He did not feel that the airplane was decelerating normally and told Mr. Klepper to get on the brakes; Mr. Klepper said he did not have any. It took Mr. Luckwaldt a moment to process what was happening. Mr. Klepper stated he was going to go around. Mr. Luckwaldt made a comment that it was too late or that there was not enough room left or a similar comment, and almost simultaneously Mr. Klepper was getting on the thrust reversers and Mr. Luckwaldt was on the brakes. The airplane exited the runway, hit the gravel berm and came to a stop.

Mr. Luckwaldt unbuckled his seatbelt and went towards the cabin. Mr. Hendrick was laying on his side still in his seat. Mr. Luckwaldt recalled later thinking that it was odd that his seat was on the ground. Mr. Luckwaldt was thinking of how they would exit. He opened the main cabin door, assessed where they were and saw they were near a pond but there was dry ground outside the door. Mrs. Hendrick said she smelled jet fuel so Mr. Luckwaldt said they needed to exit the airplane. Mr. Luckwaldt exited first and then assisted the passengers. When he stepped out of the airplane, he said it felt like it was raining. He looked up and saw the left engine was still in reverse and kicking up the water, and he told Mr. Klepper that the engines were running. Mr. Luckwaldt and the passengers went to the left side of the plane as far as they could go, but the pond and perimeter fence kept them from going any further. They were about 50 feet from the airplane. Mr. Klepper had still not exited the airplane so he told the passengers to wait where they were and he went back to the airplane and told Mr. Klepper he needed to leave the airplane. Mr. Klepper said he was having trouble breathing and Mr. Luckwaldt asked him if he was ok. He said yes; Mr. Klepper had shut the engines down and was shutting down other switches. Mr. Luckwaldt went back to the gravel road and because there was no fire or smoke, he and the passengers walked on the gravel road in front of the airplane. He realized Mr. Klepper was still in the airplane. He went back a third time and said he needed to get out. The emergency lights were off and Mr. Klepper said he was coming. Mr. Luckwaldt left the airplane and Mr. Klepper met them on the road. They started walking toward the runway and about that time, the emergency vehicles started to arrive. Mr. Hendrick said his chest hurt and Mrs. Hendrick had a gash on her leg.

Mr. Klepper was the pilot flying into Key West. He said they flew a visual approach to the runway and he did not have any concerns about the approach. He thought he had flown into Key West hundreds of times.

There was a maintenance logbook on the airplane but he did not recall any unusual write-ups.

The flight originally departed from Concord, NC, before flying to Stuart, FL. The flight to Stuart was “perfectly normal.” He said there were no brake problems when landing in Stuart and the first item on the checklist was to test the nosewheel steering and brakes which they did when taxiing out from Stuart. Mr. Klepper did not mention anything was unusual. There were no CAS messages.

On landing, he was looking out the window. Mr. Klepper was pretty much on a normal glidepath and based on what he saw, Mr. Luckwaldt thought they touched down at about 1000 feet. He did not feel them float. He said Key West was a short runway so they did not want to put it down any farther than that; they actually want to land before the 1000 foot mark.

He did not recall the indicated airspeed on final, but recalled Mr. Klepper mentioned on final that he thought he was fast or he felt that they were fast. Mr. Luckwaldt said he told him they were right on speed. He thought Vref was 118 knots.

He said they completed all of the required checklists. He said the checklist used to be read and do. Over the past couple of years, the company was trying to integrate flows and some checklists, such as after landing checklist, can be done silently. Also, the pilot could see the copilot doing the checklist items. He said because he was not real experienced in the G150 so he would usually run a checklist more than once to make sure he did not forget anything.

There was a checklist item to arm the ground spoilers. He said he would sometimes announce when he armed it but because of conversations with ATC, they might not say everything they did. He could not tell if they deployed by feeling deceleration of the airplane. He thought they would receive a green CAS message if they deploy on landing but he did not remember seeing it. If the ground spoilers were not armed before landing, he did not think a CAS message would appear when they did not deploy. The first thing he looked for after landing was thrust reverser deployment and calling out the speed as they were decelerating.

He said there was normally a callout for thrust reverser deployment but he did not remember if he made it during the accident landing. He did not think he made the callout. By the time the thrust reversers deployed, he said he was concentrating on what was going on out in front of him. He did not think he looked back inside the airplane. He did not remember if the thrust reversers deployed while they were on the runway but he knew at least the left thrust reverser was in full reverse thrust when he exited the airplane. He did not recall any yawing to suggest that one thrust reverser did not deploy.

He did not recall the landing distance required for the accident flight.

He thought the anti-skid was working because if it failed a light would illuminate on the glare shield in front of him and he did not remember seeing the light.

The airplane was still on the runway when he got on the brakes. He did not recall how the brakes felt. Mr. Klepper told him his hips came off the seat. He had never experienced a brake failure on landing before.

He thought they had a quartering headwind on landing.

He said when flying into an island surrounded by water at night, he might not see a cloud. On the night of the accident he could see the whole island and military base from 10 miles out. There were some scattered clouds around but they were not in our way until this one on short final. If they were having trouble maintaining visual on the airport or clear of clouds, they would have asked for vectors to the instrument approach. On the night of the accident, he never lost sight of the island or the far end of the runway. He only lost sight of the approach end of the runway. To avoid entering the cloud, Mr. Klepper maintained heading, leveled off, and applied power. When they reacquired a visual of the runway, they were too high and Mr. Klepper asked to enter the pattern and try again.

He said there were few airports that wanted a pilot to fly a right hand pattern. It was understood that if the right seat pilot was going to be giving guidance of where you are, the left seat pilot will stay inside the airplane. They were communicating and Mr. Luckwaldt was giving him position updates. Mr. Luckwaldt was leaning back so Mr. Klepper could see the runway when in the turn. When he could see the runway, Mr. Luckwaldt went back to monitoring airspeed and altitude.

After landing in Key West, he and Mr. Klepper were going to refuel the airplane and fly back to Concord without passengers.

After Mr. Klepper said he was going around, Mr. Luckwaldt said “it’s too late” because there was not enough time by the time he would push the throttles up and the engines spool up. There was not a “second’s question” in his mind that it was too late. He thought Mr. Klepper was thinking the same thing because there was no further discussion about it. He did not see Mr. Klepper advance the throttles or hear the engines spool up. He did not hear the engines go into reverse thrust. In his mind, it was never a good idea to attempt a go around on a short runway. He did not recall receiving training from FlightSafety for a go around after touchdown in the G5 or G150. They practiced going around shortly before touchdown.

Having Mr. and Mrs. Hendrick on board did not affect the flight. He did not have any anxiety. He did some flying for Mr. Hendrick before coming to work for Hendrick Motorsports so he had known him for almost 30 years. Mr. Hendrick was relaxed, especially if going on vacation. He felt like it was his family back there and if anything he might be a little extra cautious. He felt perfectly comfortable flying them and enjoyed it.

He knew that maintenance had worked on the brakes a couple weeks before the accident but did not remember what it was.

He was not sure if there were multiple instrument approaches into Key West runway 27 because they rarely used that runway. He thought for runway 9 there was a GPS and VOR approach.

He was not screened for drugs or alcohol after the accident.

He had not flown since the accident.

After listening to the CVR, he did not recall any surprises of what he heard or did not hear. He thought it all went normal.

Regarding his activities in the 72 hours prior to the accident, he said the flight left early in the afternoon on October 31, 2011, and he thought he arrived at the airport about 1230-1300. He did not recall anything unusual about his sleep or activities in the 72 hours before the accident.

He normally awoke between 0630 and 0700 and is asleep by 2230 after watching the 10 PM weather on the news. His scheduled varied. On race days, he would normally arrive at the airport about 0700-0730 and be home between 2100-2200. For west coast races he would get home later but they usually stayed overnight there and would not arrive at the airport too early. He felt rested on the day of the trip. He said it was an easy trip, he enjoyed flying with Mr. Klepper, and the weather was good. There was no anxiety; just a normal day.

While in Stuart, he and Mr. Klepper had dinner brought in to the airport because they did not know how long they would be there. He ate a sandwich. He did not nap.

In the year preceding the accident, he had not had any changes, good or bad, to his health, financial situation or personal life.

He rated his health at the time of the accident as good. His vision was 20/15 and he wore glasses to see up close. He was wearing them the night of the accident. He did not have any issues with color vision. His hearing was good and he did not wear a hearing aid.

At the time of the accident he was taking a prescription medication once a day for cholesterol. He did not experience any side effects from the medication and he last took the medication the night before the accident. He did not take any prescription or non-prescription drugs in the 72 hours before the accident that might have affected his performance.

He sometimes drank caffeine on late night flights from the west coast but did not recall having any caffeine the night of the accident. He did not drink alcohol or use tobacco.

Regarding the workload on the night of the accident, he said he flew to south Florida all of the time, the route was familiar, it was smooth and there was no convective weather. It was very relaxed and routine. There was never any concern no his part.

He said Mr. Klepper was a likeable guy and he did not detect anything out of the ordinary the night of the accident. Mr. Klepper was alert. He had not flown often Mr. Klepper but he was a good pilot and he enjoyed flying with him. Mr. Klepper got along well with Mr. and Mrs. Hendrick.

Asked if he liked working for Hendrick Motorsports, Mr. Luckwaldt said he “wouldn’t be here if I didn’t love working here.” It was a great airplane to fly and was a pretty good schedule; good people working there. He hoped to retire with the company. He said one of the nicest things

about working for Mr. Hendrick was that the planes were maintained well. There was no pressure to continue a flight if he was not comfortable.

After the company's accident in 2004, he said they got rid of the King Air but there were not a lot of changes. For some time after that accident, they only flew one type airplane. They used to train at Simuflite and then before the accident in 2004 they trained at FlightSafety and upped their training events to every 6 months from every 12 months. He was not aware of changes since this current accident.

Mr. Luckwaldt said he only flew with one other pilot besides Mr. Klepper and he was more familiar with the other pilot; but he said Mr. Klepper was conscientious, detail oriented, thorough and a good guy to fly with. He said he would "absolutely" speak up to him if he had a concern. He thought Mr. Klepper's greatest strength as a pilot was that he was knowledgeable about systems and was smooth. He could not think of an area Mr. Klepper needed to improve on.

Mr. Luckwaldt received his training for the G150 at FlightSafety. He was not sure if they covered CRM during initial training but said they talked about it in the cockpit and it was integrated into the simulator. He thought they touched on CRM in the classroom during recurrent training. He thought the G150 training at FlightSafety was "pretty good." He said the G150 was fairly new and he had some issues with how they handled the written test. He was not sure if the written test was a FlightSafety or FAA issue. He said the simulator and ground school training were good; the instructors were fine.

He also received CRM training at Hendrick Motorsports. He said last year the pilots were divided into teams and each group was charged with doing a safety task, such as CRM, PRM approaches. He said the CRM training was fine. He said things could always improve but he thought they did more than most people.

The only training Mr. Luckwaldt could remember regarding a brake failure on landing was if there was a hydraulic loss of fluid or a hydraulic pump failure. The training focused on a problem in-flight that was known before they touched down. There were checklist items that would be completed and they would use the quick reference handbook to prepare for the event. He did not recall receiving any training for any airplane on a brake failure after touchdown.

He said he would use the emergency brakes if there was hydraulic fluid loss or a hydraulic pump failure. They would go to emergency and would be using the auxiliary system for braking. He said a pilot would know about it ahead of time and steps would be taken. For example, a pilot would not land in Key West but would go to Miami because it had a longer runway. During G5 training, he said they were trained to use the emergency brake if they lost their auxiliary but they were always prepared for it. They would brief it and aware it was coming. They would set the knob to emergency brake before landing and then would be using the auxiliary fluid to stop at that point. He said they practiced this in the G5 but did not recall if they did so in the G150. His last recurrent training was over a year ago. He knew they talked about it. He was sure they had received it in the simulator; they would set the emergency brake and discuss what the next steps would be, such as land on a long runway. After that, the scenario would be cleared from the simulator. He did not recall what they did surrounding that emergency in the G150.

When asked if the emergency brakes could be engaged after landing if they had not been previously set in flight, he said he had never done it and did not know if it would make the situation worse. He would be hesitant to try things because he would not know if it would make it worse. He assumed you could use it after touchdown but he had never tried it. Also, from the right seat in the G150, he would have to reach around to the other side of the panel to reach the black knob and determine which way to move it; as a copilot, he would never do that. Even if he was in the left seat, he was not sure if he would try it. Given that it was a short period of time, even if he had thought of it on the night of the accident, he did not know if he would have used it given that it was not trained. In the G5, he would have done it. Asked why he thought it was trained in the G5, he said it was a different system. If aux fluid was lost, the copilot would do it for the pilot if. The knob was red and white striped in the center pedestal and was easily accessible to either pilot.

There was information about sterile cockpit in the operations manual and he thought it applied below 10,000 feet.

The stabilized approach criteria was the airplane was fully configured by the final approach fix, gear down, full flaps. If on the ILS approach, for example, and got a full scale deflection, that would be a missed approach. He did not think there was a prescribed speed. He said the airplane should be at Vref "crossing the fence."

He said the G5 and G150 are completely different airplanes and he thought there were probably some challenges when switching between the two. The more he flew the G150, the more comfortable he got with it. He could not say which airplane he flew more than the other. He had flown the G150 about 75 hours. He said he might fly it about 4-5 times a month and then not fly it for a month. He flew the G5 much more.

After not flying the G150, he thought he had to refamiliarize himself with the airplane "a little bit." On the night of the accident, he felt he needed to familiarize himself with the flight management system (FMS) than manipulating the controls. He liked being in the right seat to refresh his memory. He said Mr. Klepper was good with the FMS if he forgot something he could tell him. He also had to look for some of the switch positions. In the G150, he had to think about it every time he turned a switch because up was off and down was on.

Asked if the flight was cleared about 80 miles north of Key West down to 10,000 feet, he said "correct". He thought their altitude before the descent for 10,000 feet was FL 220. And he thought they were descended straight to 10,000 feet but he did not remember.

He did not recall Mr. Klepper specifically calling for a checklist but he knew that he did them. He said he probably read through it a couple of times but he did not know if and when Mr. Klepper called for a specific checklist. He knew that calling for the checklist was in the SOPs.

He did not remember if they got ATIS but said they always did so he was sure they did.

He did not remember the weather but thought the weather sheet was at Hendrick Motorsports. Asked if at any time Mr. Klepper was concerned about being fast or high during the visual approach, he said no. He recalled when turning base to final that Mr. Klepper thought he was fast or he felt he was fast. Mr. Luckwaldt looked at the airspeed indicator and he was "right on ref."

He saw the island of Key West from quite a distance out. He thought he called the airport in sight when he saw the rotating beacon. He knew where the airport was located on the island, but he did not call the airport until he saw the beacon.

Once cleared for the visual approach, he said they did not go IMC or encounter any clouds. The only clouds encountered were when turning base to final there was small cloud that was not very thick or not very wide that was right on final. He confirmed that they did not go back into instrument flight conditions.

Mr. Luckwaldt was asked what he would have done if they encountered IMC conditions. He said Mr. Klepper was flying so he could not speak for him. But if he was flying and they went into IMC conditions, he would have told the tower they were IMC and want to be vectored for the approach. He assumed Mr. Klepper would do the same thing.

Tower cleared the flight for the visual approach and asked if they could stay over the channel. He assumed they did not want them to encroach on the military base's airspace.

He did not recall if the controller offered them a straight in approach. He thought once he called the airport in sight, they were cleared for the visual and turned over to the tower. Asked if they would have taken the straight in had it been offered, he said from the direction they were coming from, they did the most straight in they could do. When coming from the north, they would end up about on a right base for the runway. If they wanted to extend it and come in on a long straight in final, they would have had to fly over the Air Force base or fly to the northeast of the base and come in from that direction.

Asked if the crew took the surface weather observation into consideration, Mr. Luckwaldt said he could not speak for Mr. Klepper but at 10,000 feet altitude, they had the island in sight. He said it was not uncommon to have a report of weather and when you get there it not be that way. They did not see any weather during the descent and they had the island and airport in sight.

In Stuart, they had a printed form of all the weather, TAFs, and METARs for Key West. He did not recall when they looked at it. He said he did not put much faith in the weather reports for Key West because the weather changes quickly down there. He was sure they reviewed it but did not remember when. He thought there was a copy of the flight plan and the associated weather at Hendrick Motorsports.

He stated VFR weather was "1000 and 3." He agreed that weather reported at "1000 and 10" would be VFR. The approach to runway 27 and the airport diagram was pulled up on the screen of the G150. He thought it was an RNAV GPS approach to runway 27 and thought that was what they put in the FMS. He was not sure if he entered the approach in to the FMS but said they had it up on "the screen" ahead of time in case they needed it. Once they had the airport in sight, he

said he might have programmed the visual approach. He said he could select an approach or visual on the FMS. He did not remember which one he selected.

He did not recall if the SOPs said to program the FMS with the ILS or GPS approach for the visual approach being flown.

He knew the runway length into Key West was 4801 feet. He said they did not encounter any clouds on the downwind during the approach. When they lost sight of the airport, he said Mr. Klepper applied power and leveled off. He thought they were at about 1,000 feet altitude. Mr. Klepper maintained his heading and they flew through the final. He thought he had the approach in because they had an extended centerline on the screen. They flew maybe a quarter mile and then regained sight of the runway. Both agreed they were too high to make it from there. They told tower they wanted to circle around and try again. Tower told them to enter a right downwind and they were cleared to land. They flew upwind, turned right over the top of the airport, and turned a right downwind, base and final. They did not encounter any more clouds and it was a normal VFR pattern.

During the second approach, Mr. Luckwaldt had sight of the runway the entire time on the downwind but Mr. Klepper could not see it from the left seat. He said there were no problems maintaining VFR flight on downwind. He was giving Mr. Klepper position reports. He told him they were over the airport, when he thought they were far enough away from the airport he told Mr. Klepper he could turn a right downwind, he told him when abeam the approach end of runway 27 and when the runway was 45 degrees off of his right shoulder and he could turn base. He was leaning back in the turn and Mr. Klepper was leaning forward until he had the runway in sight. When Mr. Klepper had the runway in sight, Mr. Luckwaldt went back to his copilot duties of calling airspeeds and descent rates.

He did not recall if the FMS was still programmed during the second approach but he did not think they changed anything from the first approach.

Mr. Klepper was not concerned about identifying the runway. He was leaning forward when turning base and when he had the runway in sight he called it. After that, Mr. Luckwaldt did not provide any additional position reports and it was a normal right base to final.

Regarding whether Mr. Klepper was concerned about the speed and altitude during the approach, Mr. Luckwaldt recalled on final that Mr. Klepper said he thought he was fast or felt like he was fast. He looked at the airspeed and Mr. Klepper was within a knot or two of Vref. He said they were “dead on” speed.

The flap setting used during the accident flight was full.

He thought they touched down just prior to the 1000 foot mark. He said they were on Vref as they crossed the fence and after touchdown he called 110 knots. He did not recall if he called any other airspeeds after that.

He did not recall what Mr. Klepper did after the main and nose gear touched on runway. He did not feel that they were decelerating as quickly as they should. He looked out the window and told Mr. Klepper he needed to get on the brakes. Mr. Klepper responded “I don’t have any” and “I'm going around.” He told Mr. Klepper it was too later or there was not enough room. Mr. Klepper got on the reversers and Mr. Luckwaldt got on his brakes. From that point on, Mr. Klepper maintained directional control.

It was after the accident the Mr. Klepper told him that he touched the brakes and then reapplied them. Mr. Klepper also told him when he pushed on the brakes he expected them to have some give, but he felt like there was no give and thought maybe his feet were still on the rudder pedals so he moved his feet higher; there was still no give. Mr. Luckwaldt did not remember what he felt when he got on the brakes.

He was aware that section 14.4 Touchdown of the SOPs stated “Immediately after touchdown, lower the nose to the runway. Use reverse thrust, ground airbrakes, and brakes as necessary to bring the aircraft to a stop.” Asked why the crew did not use the emergency brakes when they realized the brakes were not working, he said it never really crossed him mind. It was just a matter of seconds and they were off the end of the runway. Subsequently thinking about it, he said they were never trained to do that and from his point, it would be hard to reach it from the right seat. Also seeing the end of the runway coming up, it was hard to redirect his attention away from that and reach his arm around Mr. Klepper’s arms and the throttle quadrant, grab a knob and move it one way or another. It never crossed his mind. Had he thought about it, he was not sure if he would have done it because he would not know what the result would be and if it would make the situation worse.

Mr. Klepper said he was going around but he did not recall seeing the throttles go forward or recall the engines spooling up. He never saw his arm move forward but did see his arm move backward into reverse thrust.

He was surprised to hear that 22 seconds elapsed after touchdown until the thrust reversers deployed and that the throttles were pushed forward. He reiterated that he never saw Mr. Klepper’s arm go forward because he was looking out the windshield. He did not remember hearing the engines spooling up. After they stopped and he opened the door, he knew at least the left thrust reverser was deployed and in full reverse thrust.

Mr. Luckwaldt confirmed that he was in the right seat on October 12, 2011, when the accident airplane had the right thrust reverser deploy on takeoff and it was unable to restow. This item was written up in the maintenance logbook.

He was asked to describe the brake pedals in the G150 versus the G5. He did not think there was a tremendous amount of difference. He thought the G150 may catch a little bit sooner and there was a bit more travel on the G5. He said he rarely used the brakes on the G5 until nearing the end of the runway because the thrust reversers were very effective. He said the new brakes on the G5 are not as “grabby as they used to be” and not too different from the G150. He did not notice any directional control issues between the two aircraft after touchdown and applying brakes.

If a go around is initiated after touchdown, the ground air brakes will automatically stow without pilot input.

He said the primary stopping mechanism on the G150 was the brakes.

He said because the thrust reversers were mechanical, it was a little time consuming to get them out. They were “kind of tight and kind of a struggle.” He found after flying the G5, he would use full reverse thrust and then get on the brakes. Thrust reversers were stowed on G5 at 60 knots and on the G150 at 70 knots. He said by the time the thrust reversers were deployed and a pilot got on the brakes, they were approaching 70 knots. He also said the ground rolls were a little longer. Because of this, he would get on the brakes first then he struggle with the thrust reversers. By the time they were out, they would only be out a short time because they would be approaching 70 knots and it would be time to stow them.

Asked if 22 seconds was a long time from touchdown to deploying the thrust reversers, he said “I would think that’s longer than normal.”

Interviewee: James Edward Klepper, II, Line Pilot, Hendrick Motorsports
Interview date: March 7, 2012
Time: 1405 EST
Location: Hendrick Motorsports, Charlotte, NC
Present were: Katherine Wilson, Corky Smith – National Transportation Safety Board (NTSB); Duff Barker – Federal Aviation Administration (FAA); David Dudley – Hendrick Motorsports; Bruce Barefoot – Gulfstream
Represented by: Declined

In the interview, Mr. Klepper stated the following:

He started with the airlines in the "commuter world" about 1985-1986. Most of his training was with commercial airlines. He began his career with Eastern Airlines at the age of 23. He then worked for Piedmont and US Airways and experienced a couple of furloughs there, and then worked at ATA Airlines. He next came to Hendrick Motorsports and then flew for another race team before coming back to Hendrick Motorsports a little over 3 years ago.

He held an ATP, instrument, CFI, CFII, MEI, commercial single engine land certificates. He held type ratings for the G5, G150, Saab 2000, Citation Jet, CL65, B737, B757/767, Beech 1900 single pilot, and Airbus 319/320/321. He got type rated in the G150 in fall 2008 and had about 300 hours in type, almost all as PIC. He had about 11,000 hours total time. Prior to his current position as a line pilot, he was the Chief Pilot for all aircraft for about 3 years, from October 2008 until late August 2011.

He did not fly outside of work.

Mr. Klepper was asked to discuss the events on the night of the accident beginning from the departure from Stuart, FL. He said it was a normal departure for a fairly quick flight. There was no weather involved, it had moved south and east. It was an uneventful flight to Key West. He and Mr. Luckwaldt had "normal chit chat." On the descent, the pace picked up. He said Key West likes to leave airplanes a little bit higher until the last minute. He talked with Mr. Luckwaldt about the FMS because he had not been on the airplane much. Mr. Klepper was explaining an item or two to him while they were coming in. There was enough radio traffic so their conversation got limited the rest of the way in. He called the airport in sight about 10-15 miles out. He could see some clouds but he could see the bulk of the island, the beacon and the airport. The controller asked them if they could keep the approach over the channel for a right turn to runway 27. He told Mr. Luckwaldt that he had never flown it and Mr. Luckwaldt said they could do it. They set themselves up for a right turn into runway 27. As they got closer to the airport, there were clouds moving in and around the field. As he made a right turn to final, a cloud deck moved in between them and the airport. He stopped the descent and they told the controller they did not have the airport. He elected to go beyond the airport and asked for left traffic because they were still VFR but was instructed to make right traffic. The airplane was fully configured so he did not change anything. It was not a go around, just an arrested descent. They flew over top of the runway and made right traffic. The clouds were trying to move in. Mr. Luckwaldt kept the airport in sight on the right side of the runway and Mr. Klepper was watching the clouds. They could not climb because they would go into the clouds so they were trying to be

cautious and go around them. He made a right turn into the airport. Mr. Luckwaldt was calling out their position and said he was good to bring it around. Even though Mr. Klepper could see the airport, there were still some clouds that he went around one of the clouds. On base, Mr. Klepper said he could not see the airport but Mr. Luckwaldt told him he would be able to see it when they were around the cloud and turned final. On final, Mr. Klepper saw the airport. He commented that he was fast but later realized that he felt fast because of the city lights reflecting off of the clouds. Mr. Luckwaldt told him he was on speed and Mr. Klepper looked and confirmed they were right on ref speed. When he stated on the CVR that he was "long here," Mr. Klepper was referring to the fact that the reference point he liked to have when landing at Key West was between 600-800 feet down the runway because it was a short field, but where he was going to touchdown was closer to the 1000 foot mark. He was not long in terms of landing but was long for where he wanted to touchdown. They did not float and it was a normal touchdown. It was not hard. He immediately went to the brakes. There was no give. He repositioned his feet on the rudder pedals. He was back on the brakes and Mr. Luckwaldt said he needed to get on the brakes quick. Mr. Klepper told him he had no brakes and needed to go around. Mr. Luckwaldt told him it was too late. Mr. Klepper said he did not respond to him because he was "exactly right." We pressed on the brakes as hard as we could press. He stayed on the thrust reversers and centerline as much as he could.

There were no problems with the brakes in Stuart. When taxiing for takeoff from the ramp, they had to make a 180 hairpin turn to takeoff from runway 30 and there was nothing unusual. He did not know what maintenance work had been done on the brakes the week prior to the accident.

There were no aural or visual warnings or alerts before or during the accident sequence. He said the antiskid lights were located on the glare shield but it was dark and there was nothing on the EICAS. Everything was normal.

He said Key West was a regular trip and he would fly there up to 3-4 times per month. He thought he had been in and out of Key West "4 dozen times or so" in the G150 and Saab. He had never been asked to stay over the channel and had landed on runway 27 once, maybe twice.

His normal regime when landing is to look as far down the runway as he could see. His assumption on landing was that he was long. After seeing the surveillance video, he did not think he was as long as he had thought.

He thought his indicated speed on short final was at the 120 knot bug.

All checklists were run on the approach but he said his mistake was not calling for the checklist. Mr. Luckwaldt had the checklist in his right hand and he could see him doing it while the radio chatter was going on, so he did not think he had to call for it. He was watching the items get accomplished.

The flap setting used for landing was full. That is the recommended setting

The autopilot was off. Ground spoilers were armed. There was a checklist item for this but no callout that they were armed. There should have been a green EICAS message after touchdown if the ground spoilers deployed but he did not look at it on landing.

He thought the landing distance at Key West on the night of the accident was about 2800 feet, unfactored, and factored would have been a little bit longer. They were well within their tolerances.

The pilot monitoring was to make an 80 knot callout, would call if the spoilers did not deploy, and "two green" or "not deployed" for the thrust reversers. He did not recall if these callouts were made.

Asked if 22 seconds was a long time after touchdown to deploy the thrust reversers, he said probably. Mr. Klepper also said in the G150 they did brakes first then thrust reversers because the thrust reversers were hard to activate through the throttle quadrant and not very effective. He said the thrust reversers did fully deploy while still on the runway and he knew they were still deployed after the airplane stopped. He did not know where on the runway they deployed.

Mr. Klepper was asked to explain why he was uncomfortable with the approach. He said everything just required one extra step. For example, they were expecting a visual approach but it was a visual to runway 27, when turning final a cloud deck moves in, and making sure they were staying clear of the clouds. What he did not like most was being on the left side of the airplane, he could not see the right side. Everything was fine but he would have rather made left traffic so he could see what was going on. Mr. Luckwaldt had to call out their position to him on downwind and in the turn to final. He did not feel uncomfortable or out of position to necessitate going around. He did not at any point feel "out of bounds."

After landing the brakes felt like he was pressing on concrete. There was no give and no movement. That was why he repositioned his feet higher on the rudder pedals. He said it almost felt like his feet were too low but they were not. The brake pedals had no give to them.

He did not recall there being a tailwind on landing. He remembered there being a direct crosswind.

After landing in Key West, he and Mr. Luckwaldt were going to fly back to Concord without any passengers.

He was sure he moved the thrust levers forward when he said he was going around, but did not recall how much because he was talking while he was moving. He was sure his action contributed to the distance the airplane went off the end of the runway but thought the airplane was going off regardless.

He had not received any training for going around after touchdown. He felt that if he did anything at that point he was going to be a test pilot. There was no procedure for brakes and no procedure for going around after landing. He had always been taught since being a student pilot that once on the ground, stay on the ground. He knew that and he taught that. However, on the

runway they still had flying speed and he did not feel any pressure on his shoulder straps to indicate they were slowing down at all. It was dark and a short runway and he recalled construction at the end of the runway from previous flights. He did not know what was at the end of the runway and felt for a brief moment if he could get it back in the air then he could troubleshoot the problem. He felt that CRM worked during the accident sequence. He had been doing this for 26 years and Mr. Luckwaldt for about 30 years. Mr. Klepper made a comment about going around and Mr. Luckwaldt saw something different. Mr. Klepper agreed. There was no controversy or fighting over the controls.

There was no yawing while on the runway but he wanted to stay straight. He did not want to go tumbling and thought they would eventually come to a stop. He wanted to stay on the centerline

He said Mr. and Mrs. Hendrick were two of the easiest passengers they flew. There was no pressure.

He did not run the evacuation checklist. He did not remember Mr. Luckwaldt and the Hendricks getting out of the airplane. He recalled Mr. Luckwaldt slapping the side of the airplane telling him to shut the airplane down. He saw that everyone was out of the airplane so there was no need to run the evacuation checklist. He just had to shut everything down. There was still electrical power but once he shut the engines down, the lights went out and the emergency lights came on. There was no need to have anything electrical on as there was a strong fuel smell in the cabin. He grabbed the flashlight and used that to shut down what was electrical. A firefighter came onboard and said he needed to get off the airplane. He told the firefighter he could not move and needed to catch his breath, but he was told he needed to go now. At that time, he was about three-quarters of the way done shutting down the airplane.

Regarding his injuries, he said every muscle in his back was pulled. The accident knocked the breath out of him.

He knew there was a RNAV GPS approach to runway 27 but did not know if there was another instrument approach.

The flight originally departed from Concord, NC.

He did not recall if he was screened for drugs or alcohol after the accident.

He had not flown since the accident.

After listening to the CVR, he recognized that he needed to speak more clearly because if you were not there to see what was happening, you miss the context.

Mr. Klepper was asked about his activities in the 72 hours prior to the accident. He said he usually showed up for duty about 1.5-2 hours before a flight. He got some fast food before arriving on the day of the accident. He did not recall the last time he worked prior to the accident but said he had a couple of flights on the G5 because he had just finished school on October 6,

2011. He flew 3-4 times in October and thought he might have done a familiarization flight on the G150 for night currency but was not sure.

He typically was in bed by 2300 and was awake by 0700. He would fall asleep pretty quickly after he was in bed. He did not recall any problems with his sleep in the 3 days prior to the accident and felt rested on the day of the accident flight. He did not feel tired during the flight. There was nothing unusual about his activities in the 3 days before the accident.

The layover in Stuart was about 2 hours. While there, they had sandwiches brought in and he checked the weather a couple of times because of the line of storms moving between Stuart and Key West. He watched television but did not nap.

He had not had any changes, good or bad, to his health, financial situation, or personal life in the year preceding the accident.

He rated his health at the time of the accident as “very good.”

He had to wear glasses for near vision and was wearing them the night of the accident. He did not have any problems with color vision. He did not have any hearing problems.

He was not taking any prescription medication on the night of the accident.

He sometimes drank caffeine but did not drink any on the accident flight. He did not recall if he had any in Stuart. The last time he drank alcohol was over a year prior to the accident. He did not smoke or chew tobacco.

In the 72 hours before the accident, he did not take any prescription or non-prescription drugs that might have affected his performance.

The workload on the accident flight was not stressful, just a quicker pace. They gave us a crossing restriction and it required quick action. Air traffic control brought us down from our cruising altitude to 10,000 feet quickly and as soon as they were there it was down to 1600 feet.

He was in a good mood the night of the accident. It was casual and laid back. On the flight to Stuart, he and Mr. Luckwaldt were talking about their golf swings. Mr. Luckwaldt’s mood seemed fine and he was alert.

He had flown with Mr. Luckwaldt before and did not have any concerns about flying with him. He was very comfortable with him. Mr. Luckwaldt got along with the passengers.

Mr. Klepper loved working for Hendrick Motorsports. His reason for leaving Hendrick Motorsports was that there had been some cutbacks throughout the company. He had been the last pilot hired so an opportunity was arranged so he could start a new flight department for a sister race team. He flew with them for almost 3 years and then an opportunity opened up to come back to Hendrick Motorsports as chief pilot. He was first hired by Hendrick Motorsports in

January 2005, went to the other race team in December 2005, and then back to Hendrick Motorsports after a little over 2.5 years.

There were no pressures from Hendrick Motorsports to continue a flight or land on time.

He said there were some discussions of changes since the accident to see what could be done better.

He did not have any concerns about working for the company.

Asked to compare Mr. Luckwaldt to other pilots he had flown with, he said Mr. Luckwaldt was very comfortable to work with and very confident as a pilot. There was no pressure from him and he had no issues with him. He thought Mr. Luckwaldt's greatest strength as a pilot was his experience level with corporate flying and working with the Hendricks. He could not think of an area where Mr. Luckwaldt could improve.

He received training on the G150 at FlightSafety in Dallas, Texas. Training covered human factors topics including CRM, Volant models and reviewing human error videos. He said the training he received for the G150 was excellent and they were a knowledgeable group. It was challenging at times but he enjoyed the training and the instructors. He could not think of areas where he would have liked more emphasis. He attended training at FlightSafety every six months for one airplane or another.

He received different modules on safety training and also e-learning courses during the course of the year from Hendrick Motorsports. He thought Hendrick Motorsports offered more training than what other operators offered. The training was good. This year's training was different because pilots were paired up and taught modules. This required them to dig deeper into an issue to be able to teach the class and he liked that it was being taught by another pilot. He thought it was very productive. Issues ranged from CRM to runway excursions to flight planning to weather; couple that with e-learning, it was good.

Asked if FlightSafety provided training on brake failures on landing in the G150, he said they talked about brake failures in the QRH and it was always associated with a hydraulic failure or hydraulic problem in flight. In the simulator, they would follow the procedure in the QRH and would put the emergency brake on while in flight. In the G150, there was not a lot of emphasis placed on it. He did not recall if it was in initial or recurrent training. He did not recall training for an unexpected brake failure after landing.

He did not know if was possible to use the emergency brake on the ground if it had not been set in flight. He said using the emergency brake during the accident landing crossed his mind because he would have to use the toe brakes for the emergency brakes. He had split second thinking that if the brakes were not working and he could not press them, then he did not want to waste his time with the emergency brakes so he skipped that and moved on.

The handle to engage the emergency brakes is located next to his right knee when sitting in the left seat.

Their sterile cockpit procedure was in effect below 10,000 feet.

The stabilized approach criteria were to be on ref speed and have a stable approach. It was the same as if on an ILS glideslope down to 50 feet above the runway.

He just recently finished training on the G5 so he could not say whether there were challenges when switching between the two airplanes. He said he felt comfortable flying the G150 on the day of the accident given that he had not flown it much the month of October, especially because he had just flown to Stuart. He also felt comfortable when he got in the airplane at Concord.

He agreed that they were cleared about 80 miles from Key West. He did not recall their altitude before receiving the clearance to 10,000 feet. He was certain they were above FL180.

He said that they were to call for the checklist in most cases. Even though the SOPs and FOM stated that the pilot flying was to complete the flow and then call for the checklist, in the G150, there were four or five flows – he recalled before takeoff, after takeoff, and after landing – he said even though the SOPs says the checklist was not a read and do, it basically came down to a read and do to accomplish it. He acknowledged that what he did not do on the night of the accident was ask for the checklist. He saw the checklist in Mr. Luckwaldt's right hand and saw him completing the items. Mr. Luckwaldt did not read all of the checklist items aloud on the flight to Key West because of a time issue, but he did going in to Stuart.

Mr. Luckwaldt received the ATIS for Key West. Asked if he remembered what the sequence report was when he checked the weather in Stuart for Key West for their arrive, he recalled that they had a north wind, clouds were broken at the time and rain showers had moved off not long before that. He did not remember anything out of the ordinary or anything of concern. The sequence weather report was read to Mr. Klepper.

Mr. Luckwaldt identified the airport first via the beacon and then Mr. Klepper saw it between the clouds. He said that the weather report might have indicated the clouds were broken but there was more space than that.

They did not go IMC or encounter any clouds after being cleared for the visual approach; they stayed VFR. It was when turning to final that he arrested his descent to keep from going into the clouds.

He thought the controller cleared them for the visual to runway 27 and told them to stay over the channel. He did not think Key West had a channel visual approach but said they were asked if they could stay over the channel. He did not know if the controller offered them a straight in to runway 27.

He did not do an airport familiarize a second time because he had been to Key West before. He did check the weather in Stuart multiple times and had his printouts. He wanted to make sure a line of weather would not affect them.

When flying the visual approach, he said you could program the ILS or GPS approach into the FMS or set up the visual approach in the FMS, which was what they did and that was how they got the 5 mile centerline extension. The GPS approach would have brought him in to the left side of the runway but they were making right traffic and it would not have matched up. He felt a better choice was to set up the extended centerline to keep his reference to the airport as turning base to final.

He did not consider asking for IFR handling for the second approach. The way the clouds were moving, but they were small. It did not hide the airport but their ability to maintain the descent path. When they got over the airport, everything was clear again. We were able to descend and enter right traffic below the clouds. He did not remember the altitude of the base of the clouds when he entered the downwind. He knew he wanted to stay below them but not get too low.

When flying the second approach on downwind, Mr. Klepper could not see the runway. He could see the island and down below him. Mr. Luckwaldt was calling the airport for him.

There was not a before landing flow. The checklists had already been accomplished because they were fully configured; they were not run again during the second approach. He elected not to change the configuration because they did not do a go around, just an arrested descent.

He did not have any problems maintaining VFR flight on the right downwind. He just had to make sure not to get in the clouds. He was not scud running but wanted to make sure he did not creep up into the clouds. Mr. Luckwaldt kept calling the airport. There was one small cloud that he went around when turning to the runway. When he leveled the wings on base to see the airport there was a cloud. Mr. Luckwaldt could see the airport and told him that he would see the airport as soon as he got around the cloud. He said Mr. Luckwaldt was right. When he rolled out on final the cloud was well clear of them. He clarified that they were not in the clouds but from his seat he could not see the airport with that cloud in the way.

He did not know if Mr. Luckwaldt resequenced the FMS for the second approach. He knew they still had the extended centerline.

He did not have any concerns about identifying the airport when maneuvering to final. He did not encounter IMC conditions when maneuvering to final. Mr. Luckwaldt never lost sight of the airport.

The flap setting for the approach was full.

He thought the mains touched down just short of the 1,000 foot marker and nose wheel was just past the 1000 feet marker.

He said the touchdown speed was still within the bug range of 120 knots.

When the gear was down, he took normal action. He pressed on the brakes and positioned his hand for the thrust reversers. When he realized he did not have any brakes, he did not touch the

thrust reversers but just froze his hand where it was setting. He repositioned his feet higher on the rudder pedals and that was when things changed from normal to not normal.

He was aware of the FOM paragraph 14.4 that said “Immediately after touchdown, lower the nose to the runway. Use reverse thrust, ground airbrakes, and brakes as necessary to bring the aircraft to a stop.” He said for the G150, it does not reference the thrust reversers just the brakes. He said the thrust reversers were very ineffective on the G150 and he focused on the brakes. Given the circumstances, he felt there needed to be an adjustment on that runway.

Mr. Klepper was asked why he did not use thrust reversers and emergency brakes when he realized the brakes were not working. He said if he went to thrust reversers, he could not move his hand and go to the emergency brake. He also said there was no procedure for initiating the emergency brake. He did not know what it would do, good or bad. At that point, he would be a test pilot. He had not been trained and there was no procedure so he felt his best course of action was to not touch the emergency brake. The emergency brake handle was left of the thrust reverser levers. The handle needs to be lifted up and forward for the parking brake or up and back for the emergency brake.

He did advance the throttles for a brief moment for a go around. It did not feel like 22 seconds passed from touchdown to thrust reverser deployment.

He felt that the airplane was going off the runway regardless. He was certain that what he did regarding a go around increased the distance off the runway but he thought it was still going off the runway. If he had to do it again, he would not use the emergency brakes because he did not know what it would do. He had not tested it and was not trained for it. He thought CRM worked. He said 22 seconds was a long time but there was a lot going on but there was not a “fight or wrestling match” between him and Mr. Luckwaldt. He said what happened was on the job training and it happened quick.

He was using the FlightSafety cockpit card, revision 13. The abbreviated card in the cockpit was the Jimmy Johnson checklist and G150 flows for other pilots that fly the airplane.

When a go around was initiated, the air brakes would come back down and the EICAS messages should go away.

He clarified that the reference to the G150 and use of brakes on landing but not thrust reversers was in the AFM, not the SOP or FOM. He thought 9 of 10 pilots would go to the brakes as they were going to the thrust reversers. When the brakes were not working, his attention went away from the thrust reversers.