



## MEMORANDUM OF RECORD/CONVERSATION

**Aaron McCarter**  
**Air Safety Investigator**  
**Eastern Region**

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**Date: December 7, 2018**  
**Person Interviewed: Alain Aquayo; Instructor Pilot**  
**NTSB Accident Number: ERA18FA120**

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### **Narrative:**

Introductions. Discussed the goal of the interview. The NTSB wants a holistic look at the ERAU Arrow operation from front line personnel. He was cooperative and eager to help with the investigation.

Mr. Alain Aquayo is an instructor pilot with his ATP. He has certificates and ratings in ASEL, MEL, S/MES, Instrument CFII. He conducts upset recovery training and has about 2,600 hours total time. He never flew (Arrow) as a student. He has over 60 hours as an instructor in the aircraft.

Asked about background of the airplane and utilization. The arrow is only used for commercial and CFI. All basic maneuvering is accomplished in the 172. The Arrow is used for takeoff and landings, short and soft fields, power off 180-degree landings. Most of the flying in the Arrow is conducted in the pattern. Typically, they fly the Arrow for about 1.5 to 1.6 hours with 1.2 of the hours in the pattern. They normally conduct about 6 or 7 takeoffs and landings. Of those, 3 or 4 are power off 180's.; he was asked to elaborate.

He described the power off 180's as landing configuration while in the pattern; the student picks a landing point on the runway while on downwind; abeam the point, the student pulls the power back to idle; airplane at 77 knots; put one notch of flaps in on base. The airplane landings are firm.

Only the Cessna is approved for grass field landings, not the Arrow. The Arrow is not approved for actual soft field landings and takeoffs. They are simulated conditions for the Arrow.

Describe the corrective action or reporting of a hard landing. If the pilot/instructor has a hard landing, they discontinue the flight, taxi back and call Eagle Data/Operations and report it and maintenance conducts their assessment and fix.

When describing emergency descents, if time allows, brief the passengers, pick a point 90 degrees left or right, lower the gear and keep 120 knots, level off 150/200 feet prior to designated altitude. Once level add power and retract the gear. The gear operational speed is 117 knots. When asked about G loading during the maneuver, he stated 1.5 G's is on the high side, they never hit 2 G's.

When asked about if they can invent or make up course objectives or maneuvers, he responded that they follow all line items and never deviate from the course materials. They don't go outside of that.

Asked about methods of reporting safety issues or irregularities; they have Aviation Safety Action Plan (ASAP) and event reports. There are also maintenance reports and a pilots brief.

Fueling procedures are after the last landing of the day the fuel needs to be filled to the tabs.

He never reported any hard landing or high G loads in ASAP and never had experienced a hard landing with damage. He has experienced firm landings and some flap overspeed's typically less than 5 knots for a couple of seconds. Flap overspeed's are reported.

There are 200-foot stabilized approach criteria with call outs; the proper speed and glidepath must be stabilized, otherwise they perform a go-around.

Unaware of any hearsay, rumors or stories of "other" pilots or instructors who deviated from operational norms or flew in a risky fashion. Examples we discussed were aerobatics or intentional disregards for safety such as hotdogging, "carrier style landings" with extreme stopping distance or landings at unapproved airports with rough conditions.

No additional questions for NTSB

End



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**Date: December 7, 2018**  
**Person Interviewed: David Sharad; Instructor Pilot**  
**NTSB Accident Number: ERA18FA120**

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### **Narrative:**

Introductions. Discussed the goal of the interview. The NTSB wants a holistic look at the ERAU Arrow operation from front line personnel. He acknowledged.

Mr. David Sharad is an instructor pilot (CFI) with AMEL, SEL, with restricted ATP. He has 3,500 hours total time but stated he had about 150 hours in the Arrow of which 110 hours are as an instructor.

Asked about background of the airplane and utilization. Only used for commercial. He described the flights as typically the first two flights were for pilot (new) familiarization such as slow and steep turns and landings progressing to more frequent take offs and landings during the next few flights. There were lots of take offs and landings including short and soft fields that are simulated (not on actual soft or unimproved strips) and power off 180-degree (emergency) landings. Most of the flights are 1.7 to 1.8 hours consisting of 8 to 10 touch and go landings. A quarter of the landings would be power off 180's to a full stop.

Walking through a 180 degree power off landing; He described the power off 180's as midfield downwind select gear down; abeam the touchdown zone, pull the power back to idle, push prop full forward and getting a rate of descent of about 500 to 600 feet per minute. Things happen fast on the Arrow. Most students, if they get behind, they get behind on the base leg when there little/no power, the airplane is descending fast and having to make lots of small adjustments. Go around if not stabilized.

Most of the time the landings are firm and there are multiple firm landings per flight. Doesn't believe he ever had a hard landing that resulted in damage. You'd know it if it was hard.

Asked to describe emergency descents; he responded that the goal is to come down faster than normal in the event of an emergency. They shoot for 124 knots with the gear down. G loading doesn't appear to be very high at all. There's nothing unusual about the maneuver.

When asked about if they can invent or make up course objectives or maneuvers; they use the line items in the training syllabus and don't deviate. Its all written down.

Asked about methods of reporting safety issues or irregularities; they have Aviation Safety Action Plan (ASAP) and event reports. No reports of any airplane exceedance he's aware of. Most of the time the ASAP reports are filled out because of an airspace incursion or if there's a chance of a regulation violation.

The most frequent airplane exceedance is the flap overspeed; most of the time, it occurs during gusty conditions and during the transition from zero (0) flaps to 10-deg and 20-deg. At most its by a couple of knots briefly.

He does not know of any “bad” pilots currently or in the past that may have flown in a risky manor. i.e. aerobatics or hotdogging. Has not heard any rumors or stories.

Asked about the hurricane plan and moving the airplanes. He was one of the pilots who flew and inspected the airplanes in Birmingham. The Arrows went to Birmingham and the Cessna’s went to Auburn. There was no damage to the Arrows. Both he and a mechanic inspected them after the storm.

End



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**Date: December 7, 2018**  
**Person Interviewed: Veenen Udayan; Instructor Pilot**  
**NTSB Accident Number: ERA18FA120**

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### **Narrative:**

Introductions. Discussed the goal of the interview. The NTSB wants a holistic look at the ERAU Arrow operation from front line personnel. He understood and stated he was happy to assist.

Mr. Veenen Udayan is a flight instructor and check airman with ATP. He did not have his total time but stated he had about 300 hours in the Arrow with about 280 hours in the Arrow as an instructor.

Asked about background of the airplane and utilization. The arrow is only used for commercial and CFI; takeoffs, landings and emergency procedures. The emergency procedures are accomplished in the practice area; they consist of emergency descents. We also do power off 180-degree landings. If we do leave the airport (DAB) due to traffic congestion, we can do our maneuvers at New Smyrna, DeLand, Flagler and OMN (Ormond Beach) The typical flight training event in the Arrow was about 1.7 to 1.8 hours. Eighty (80%) percent of the time was performing emergency descents and multiple power off 180's.

Walking through a typical flight, we would preflight, taxi and do a specific type of takeoff (performance) Would climb to 4,500 ft towards the practice area south; we would perform an emergency descent down to about 3,000 ft. then level off. Low G maneuver 1.5g. They return to the airport and conduct an emergency approach (180 deg power off landing) and would also do several short and soft take/off and landings.

They normally conduct about 5 or 8 takeoffs and landings during a typical training flight; this consists of normal, short and soft and 180 degree power off landings.; he was asked to elaborate about the power off landing- He described the power off 180's as midfield downwind select gear down; abeam the touchdown that the student picks (numbers) power back and pitch for 79 knots which is best glide speed; at 200 feet, ensure the approach is stabilized with normal airspeed, rate of descent; 72 knots and landing to a full stop. If not stabilized they perform a go-around. And there are never touch and go's after a power off 180.

The airplane (Arrow) landings are firm, but he has never experienced an actual hard landing. Airspeed overspeed's are more common, but they are always flap overspeed's in gusty conditions- typically a quick spike of 1 to 2 knots.

Describe the corrective action or reporting of any hard landing or limitation exceedance. If the pilot/instructor has an exceedance, they discontinue the flight, taxi back and log into Eagle Data and report it. Maintenance will

conduct an inspection/corrective action then sign it off and put it back into service. If it's at an outstation, the airplane will be parked until maintenance inspections it.

When asked about if they can invent or make up course objectives or maneuvers, no they follow the standard course objectives.

Asked about methods of reporting safety issues or irregularities; they have Aviation Safety Action Plan (ASAP) and event reports. ASAP and safety briefs are published. Team Safety Leaders will follow up with students and there are aviation safety newsletters that consists of safety shorts and highlights.

He mentioned the difference between the Cessna and Arrow. The Arrow is heavier than the Cessna not just in weight but in controllability. Can easily get behind it with power/control management on landing. The Arrow will sink very fast. Once you pull power, it settles fast and you must be on top of it.

Discussed the safety culture; he stated it's strong. The pilots can always report without fear of reprisal. Its non-punitive. If there is a problem or if something is broken, "we don't fly."

Asked about the hurricane that came through a couple of years ago. Most of the airplanes were flown to Auburn. The Arrows were flown to Birmingham. The hurricane struck the Cessna's in Auburn and did damage to the control rods, but the hurricane missed Birmingham and no damage was done to the Arrows.

Unaware of any hearsay, rumors or stories of "other" pilots or instructors who deviated from operational norms or flew in a risky fashion such as aerobatics or hotdogging.

End