



June 4, 2020

Dear Mr. Scott,

After reviewing the NTSB docket recently released on the accident involving the Beech 60 Duke registered as N60RK, I write to supplement Legacy Air, Inc.'s timeline of events (which was provided to Keith Claus as part of the FAA investigation and is also part of the NTSB's docket) to include more details about the phone call between Rick Marcellus, the owner of Legacy, and Tom Lawson, the now-deceased pilot, which details were verbally discussed with Mr. Claus during his visit to Legacy but were not included in Legacy's timeline and are not currently part of the written, formal investigation record.

Legacy was subcontracted by Freedom Air Avionics to install the engine components of CGR-30P engine monitoring equipment in the left and right engines of N60RK. Legacy's timeline states that Mr. Marcellus contacted Mr. Lawson and informed him that the CRG-30P installation instructions may require replacement of the fuel lines on either side of the fuel flow transducer. Mr. Lawson elected to 'replace the lines in house to save money once the aircraft returns home.'" As previously discussed with Mr. Claus, during the phone call between Mr. Marcellus and Mr. Lawson, Mr. Marcellus informed Mr. Lawson that due to the small size of the fuel flow transducer that came with the CGR-30P package which Legacy mounted to the same mounting location as the larger, previously installed transducer that it replaced, the fuel line from the engine driven fuel pump outlet to the transducer was too short to reach the new transducer inlet. Mr. Marcellus advised Mr. Lawson that Legacy had confirmed that replacing the fuel line with a longer line required removing the right engine air conditioning unit.

Legacy intended to replace the previously installed fuel line with a longer line, but removal of the line required disassembly of the right engine air conditioning unit to disconnect the line at the engine driven fuel pump outlet, as it was physically impossible to fully remove the b-nut connecting the fuel line to the fuel pump outlet without removal of the air conditioner. Legacy had attempted to remove the b-nut but was unable to loosen it more than 1/16th of a turn and was unable to remove its wrench from the

nut without re-tightening the nut, due to the position of the air conditioner. Before removing its wrench, Legacy confirmed that the b-nut securing the fuel line to the engine driven fuel pump outlet was fully re-tightened. Mr. Marcellus informed Mr. Lawson that the disassembly of the air conditioning unit necessary to remove the fuel line would take multiple hours and requested approval to incur the additional cost to remove the air conditioner and replace the fuel line. Mr. Marcellus also recommended to Mr. Lawson that Legacy be permitted to replace the fuel lines connected on both sides to the new fuel flow transducers in both engines, as Mr. Marcellus believed at the time that the CGR-30P installation instructions recommended replacement of those lines, and some of the aircraft fuel lines Legacy observed during its installation appeared to be older and replacement was advisable.

In response, Mr. Lawson informed Mr. Marcellus that the aircraft's flammable lines, including the fuel line between the engine driven fuel pump and the fuel transducer, would be replaced by The New Firewall Forward as part of the aircraft's annual inspection and instructed Legacy not to replace those lines as part of its installation of the CGR-30P package. Mr. Lawson further instructed Legacy to extend the original fuel line between the engine driven fuel pump and the fuel flow transducer, rather than incurring the labor cost to remove the air conditioning unit and replace the line.

In compliance with Mr. Lawson's instructions, Legacy ordered approximately 6-inches of custom-made fuel line from Aviall to extend the original fuel line from the engine driven fuel pump to the transducer, which extension Legacy secured to the original line using a union. Legacy understood that the extension was a temporary fix, as The New Firewall Forward planned to replace the fuel line during the annual inspection. A copy of the invoice for the Aviall fuel line is attached to this letter for your file.

After Freedom Air Avionics (the avionics shop that subcontracted Legacy to install the engine components of the CGR-30P equipment) connected the CGR-30P wiring to the panel instruments, Legacy leak checked its work on April 15, 2019. Four Legacy employees participated in the leak checks. Prior to pulling the aircraft out of the hangar, Legacy checked the left and right fuel systems for leaks using the electric boost pumps. Then it pulled the aircraft on to the ramp for its initial low RPM engine run and leak check. Legacy observed one oil leak in the left engine oil pressure transducer following the first leak check, which it resolved by retorquing the oil line to the transducer. Legacy performed a second low RPM run up to verify all gauges and temperature indicators were functioning, then shut

down the aircraft to inspect for leaks. It confirmed there were no leaks. Legacy then performed a third and final leak check running the aircraft at full power to confirm that all gauges and sensors were working and engine instrumentation limits were configured correctly. Then the aircraft was shut down, the cowlings removed, and it was inspected for leaks. Legacy, again, confirmed no leaks.

During each leak check, Legacy thoroughly inspected its work, including carefully inspecting all fuel and oil lines in both engines for leaks. With the exception of the left engine oil leak resolved following the first leak check, Legacy confirmed there were no leaks in any fuel or oil lines in either engine. Legacy paid specific attention to the fuel line between the engine driven fuel pump outlet and the fuel transducer inlet in the right engine, due to Legacy's extension of that line and to ensure that there were no leaks at the b-nut securing that line to the fuel pump outlet. Legacy specifically recalls that it observed no leaks in that fuel line nor any of its fittings during each of the leak checks, as it carefully inspected that line and b-nut at the engine driven fuel pump outlet with each leak check, along with every other fuel and oil line and fitting in both engines.

Legacy completed re-installing the cowlings on the aircraft on April 17, 2019 and had no further involvement with N60RK after that date. Legacy did not certify the aircraft as airworthy nor safe for the intended flight from BJC to FNL and was not authorized to perform those nor any other inspections of the aircraft, other than inspecting its installation of the CGR-30P for airworthiness. Legacy reported its findings and recommendations regarding the aircraft fuel lines directly to Tom Lawson, as the aircraft pilot and agent of the aircraft owner, who made the final decisions regarding what work would be performed by Legacy on the aircraft and about whether the aircraft was safe for its intended flight from BJC to FNL. Legacy requests that this letter be made part of the FAA's formal investigation record and included with the NTSB docket.

Please feel free to contact me if you have any questions about this letter



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Legacy Air, Inc.
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