
Re: NTSB Investigation - N406Z

From Robert Paisley <[REDACTED]>

Date Tue 7/9/2024 1

To Stephen Stein <[REDACTED]>

 2 attachments (81 KB)

System32 Operating Procedures, 12 20.docx; System32 Initial Tuning Constant Speed Prop rev 6 20.pdf;

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Hi Stephen,

Please take a look at the attached System32 Operating Procedures.

In short:

ECU label GREEN indicates the ECU is operating and talking to the rest of the system.

ECU label BLUE indicates this ECU currently has control of the fuel injectors and is talking to the rest of the system.

ECU label RED indicates that the ignition function (P_Lead switch) is in the OFF position and the ECU is talking to the rest of the system.

ECU label GREY indicates, the ECU is not talking to the rest of the system (ECU could have lost power or comm cable could be disconnected)

The Fuel Trim knob provides a pilot controlled fuel delivery modification.

The pilot can shift the mapped fuel delivery through a range of -50% to +50%.

The Fuel Trim knob is primarily used for initial tuning or as a safety feature.

The goal of using the system is to adjust the mapping so that the Fuel Trim knob can stay at 0% during normal operations.

(see attached tuning guide)

Jeff Shapiro indicated that he had turned the Fuel Trim to +40% (that's a lot!) during his flight to aid cooling during engine break-in.

Bruce Reed suspects that the airplane must have been VERY low on fuel during landing considering the fuel quantity that was loaded, flight time, and fuel burn.

The EGT data from the engine monitor (if available) would show if the engine was running extremely rich, due to the Fuel Trim setting, or if the engine was leaning due to lack of fuel.

Let me know if you have any additional questions.

Thank you,
Robert Paisley
EFII

On Tue, Jul 9, 2024 at 7:39 AM Stephen Stein <[REDACTED]> wrote:

Good morning Robert,

My name is Stephen Stein and I am the NTSB investigator in charge of the accident involving N406Z; I believe Sean Payne from our recorder's division had reached out to you to help us with data retrieval from the EFII.

I'm trying to understand System 32 is a little better, particularly the ECU and fuel trim functions. Do you have any manuals that may be able to help? Also looking to understand what each of the ECU colors represent (including grey).

Your help is greatly appreciated.

Thanks,

Stephen

Stephen Stein

Senior Aviation Accident Investigator

National Transportation Safety Board

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