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**Date:** 03/20/2024

**Subject:** ERA24LA099 – UAS Examination

**Contact:** Jeffrey Mays and Scott Marshall – FAA Inspectors

Below is an excerpt from the UAS Examination that was performed at the operator's facility under the supervision of the FAA:

| Airframe Examination (FAA oversight of operator) |                                                                                                                                                                      |                                                                                                                                              |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | Task                                                                                                                                                                 | Notes                                                                                                                                        |
| 1.                                               | Remove cover fairings and take detailed photographs of the engine bay, batteries, ECU, fuel system, and other drivetrain components                                  | No abnormalities observed. All components seemed to be in proper working order without excessive wear or damage.                             |
| 2.                                               | Drain fuel tank and inspect for signs of debris                                                                                                                      | Fuel samples were collected immediately after accident and the following day. Fuel did not show signs of debris or contamination.            |
| 3.                                               | Inspect fuel line from main fuel tank to the hopper tank for kinks or leaks                                                                                          | Fuel lines were intact and not kinked. No wear or leaks observed. All lines were installed in the correct orientation.                       |
| 4.                                               | Inspect hopper tank and fuel filter for contamination/debris                                                                                                         | No contamination or debris was observed in the hopper tank or fuel filter. No damage observed on hopper tank or fuel filter.                 |
| 5.                                               | Inspect fuel line from hopper tank to the fuel pump for kinks/leaks                                                                                                  | Fuel lines were intact and not kinked. No wear or leaks observed. All lines were installed in the correct orientation.                       |
| 6.                                               | Inspect fuel line from fuel pump to turbine engine fuel nozzle for kinks/leaks                                                                                       | Fuel lines were intact and not kinked. No wear or leaks observed. All lines were installed in the correct orientation.                       |
| 7.                                               | Inspect fuel pump wiring for security or defects                                                                                                                     | Wiring connections secure. No signs of damage to the wiring itself.                                                                          |
| 8.                                               | Inspect rotor RPM sensor for proper installation and security of wires                                                                                               | Sensor appears to be properly installed. All sensor wiring was secured and did not show signs of damage.                                     |
| 9.                                               | Inspect clutch for signs of mechanical defects                                                                                                                       | No defects noted in clutch. No damaged clutch material present during inspection.                                                            |
| 10.                                              | Inspect the left and right drivetrains for mechanical defects                                                                                                        | No defects noted.                                                                                                                            |
| Turbine Examination (FAA oversight of operator)  |                                                                                                                                                                      |                                                                                                                                              |
|                                                  | Task                                                                                                                                                                 | Notes                                                                                                                                        |
| 1.                                               | Perform visual examination of compressor blades and turbine blades for signs of defects (only perform if no engine components need to be removed or use a borescope) | No damage noted to compressor and turbine blades. Engine rotated smoothly with no binding.                                                   |
| 2.                                               | Inspect engine control unit (ECU) connectors to ensure all connections are secure                                                                                    | Wiring connections secure. No signs of damage to the wiring itself.                                                                          |
| 3.                                               | Check EGT sensor and wiring for security and defects                                                                                                                 | Wiring connections secure. No signs of damage to the wiring itself.                                                                          |
| 4.                                               | Manually rotate turbine to check for indications of binding                                                                                                          | Engine rotated smoothly with no binding.                                                                                                     |
| Fuel Pump Examination                            |                                                                                                                                                                      |                                                                                                                                              |
|                                                  | Task                                                                                                                                                                 | Notes                                                                                                                                        |
| 1.                                               | Remove the fuel pump and examine the fuel pump inlet and outlet for anomalies.                                                                                       | Fuel pump inlet and outlet appeared to be clear and obstruction free.                                                                        |
| 2.                                               | Send fuel pump to fuel pump manufacturer for testing and possible teardown examination – (Swiss Safety Board oversight)                                              | Fuel pump was removed from the aircraft to be sent to the manufacturer. Packaging for transport was not accomplished in front of inspectors. |
| Engine Removal                                   |                                                                                                                                                                      |                                                                                                                                              |
|                                                  | Task                                                                                                                                                                 | Notes                                                                                                                                        |
| 1.                                               | Remove the engine and prepare for shipping                                                                                                                           | Engine was removed and prepared for shipping.                                                                                                |
| 2.                                               | The engine test run will be performed at the Manufacturer's facility                                                                                                 | Not observable                                                                                                                               |

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