



# Aviation Investigation Final Report

<b>Location:</b>	Wilmington, North Carolina	<b>Accident Number:</b>	ERA22LA277
<b>Date &amp; Time:</b>	June 20, 2022, 15:50 Local	<b>Registration:</b>	N337AX
<b>Aircraft:</b>	Hawker Hunter	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Powerplant sys/comp malf/fail	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Public aircraft		

## Analysis

The vintage military jet was being operated under an experimental certificate. The airplane experienced a partial loss of engine power over an ocean at flight level 240. Specifically, the engine rpm reduced and stabilized to about 5,000. The pilot knew that 6,800 to 7,200 rpm would be required to maintain altitude and return to an airport. After two unsuccessful attempts to restore engine power, the pilot ejected at 3,000 ft mean sea level.

The fuel system was examined at a maintenance facility after the wreckage was recovered from the ocean. The examination revealed that a bearing failed in the high-pressure fuel pump governor, which prevented pump output pressure from increasing above 850 pounds per square inch (psi); the operating range limit was between 1,900 to 2,200 psi.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A bearing failure in the high-pressure fuel pump, which resulted in a partial loss of engine power.

## Findings

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Aircraft

Fuel pumps - Failure

## Factual Information

### History of Flight

<b>Enroute-cruise</b>	Powerplant sys/comp malf/fail (Defining event)
<b>Enroute-cruise</b>	Loss of engine power (partial)
<b>Emergency descent</b>	Miscellaneous/other

On June 20, 2022, about 1550 eastern daylight time, an experimental Hawker Hunter MK.58, N337AX, was substantially damaged when it impacted the Atlantic Ocean about 40 miles southeast of Wilmington, North Carolina. The commercial pilot was seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 public use flight.

According to the operator, while performing an exercise with the US Navy, the airplane experienced a partial loss of engine power at flight level 240. Specifically, the rpm reduced and stabilized to about 5,000. The pilot knew that 6,800 to 7,200 rpm would be required to maintain altitude and return to an airport. After two unsuccessful attempts to restore engine power, the pilot ejected from the airplane at 3,000 ft mean sea level. The pilot was subsequently rescued by a nearby fishing vessel; however, he suffered a serious back injury during the ejection.

The fuel system was examined at a maintenance facility after the wreckage was recovered from the ocean. The examination revealed that a bearing failed in the high-pressure fuel pump governor, which prevented pump output pressure from increasing above 850 psi; the operating range limit was between 1900 to 2200 psi.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	54, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	5-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	January 6, 2022
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	October 19, 2021
<b>Flight Time:</b>	4865 hours (Total, all aircraft), 486 hours (Total, this make and model), 4620 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Hawker	<b>Registration:</b>	N337AX
<b>Model/Series:</b>	Hunter Mk.58	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1959	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental light sport (Special)	<b>Serial Number:</b>	41H-697456
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	January 13, 2022 AAIP	<b>Certified Max Gross Wt.:</b>	25000 lbs
<b>Time Since Last Inspection:</b>	19 Hrs	<b>Engines:</b>	1 Turbo jet
<b>Airframe Total Time:</b>	5165 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Avon
<b>ELT:</b>	C126 installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	203/7
<b>Registered Owner:</b>	Hunter Aviation International	<b>Rated Power:</b>	10150 Lbs thrust
<b>Operator:</b>	Airborne Tactical Advantage Company	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KILM,31 ft msl	<b>Distance from Accident Site:</b>	41 Nautical Miles
<b>Observation Time:</b>	15:53 Local	<b>Direction from Accident Site:</b>	324°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots / None	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.19 inches Hg	<b>Temperature/Dew Point:</b>	31°C / 8°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Newport News, VA (PHF)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Cherry Point, NC (NKT)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	14:26 Local	<b>Type of Airspace:</b>	Warning area

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious	<b>Latitude, Longitude:</b>	33.769722,-77.488889

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gretz, Robert
<b>Additional Participating Persons:</b>	David Laylock; FAA/FSDO; Greensboro, NC
<b>Original Publish Date:</b>	November 8, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=105301">https://data.ntsb.gov/Docket?ProjectID=105301</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).