UNITED STATES AIR FORCE
AIRCRAFT ACCIDENT INVESTIGATION
BOARD REPORT

T-38C, T/N 65-0466

49TH FIGHTER TRAINING SQUADRON
14TH FLYING TRAINING WING
COLUMBUS AFB, MISSISSIPPI

LOCATION: COLUMBUS AIR FORCE BASE, MISSISSIPPI

DATE OF ACCIDENT: 7 NOVEMBER 2022

BOARD PRESIDENT: COLONEL MICHAEL P. DRISCOLL

Conducted IAW Air Force Instruction 51-307

EXECUTIVE SUMMARY
UNITED STATES AIR FORCE
AIRCRAFT ACCIDENT INVESTIGATION

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
7 NOVEMBER 2022

On 7 November 2022 at 1247 Local (L), the mishap aircraft (MA), a T-38C aircraft tail number (T/N) 65-0466, crashed 22 miles south of Columbus Air Force Base (AFB), Mississippi (MS). The MA was operated out of Columbus AFB, MS, by the 49th Fighter Training Squadron, 14th Operations Group, assigned to the 14th Flying Training Wing. The mishap pilot (MP) ejected safely but sustained non-life threatening injuries. The MA, valued at $8,500,000, was completely destroyed.

The mishap flight was scheduled as an instructor continuation training (CT) sortie and had no students participating in the training flight. The mishap flight was planned and identified risks to the mission consistent with local policies. The greatest risk identified was a possible bird strike. The local bird condition was moderate, which means there is an increased presence of birds and therefore an increased risk of bird strikes during flight. Both members of the mishap flight were instructor pilots; they were both current and qualified to fly the T-38C and the planned mission.

The MA departed Columbus AFB at 1241L for a routine mission as part of a two-ship surface attack CT sortie to Restricted Area F-4404A/B/C, also known as the SeaRay Target Range, 42 miles south of Columbus AFB. At 1245L, approximately 4 minutes after takeoff and 15 miles south of Columbus AFB, the MA, while flying in the number two position and maneuvering to line abreast formation, was struck by a bird. The bird hit the cockpit canopy shattering it upon impact. Pieces of the shattered canopy were ingested into both engines. The left engine immediately failed, and shortly after stopped spinning or working altogether. The right engine continued to turn, it could generate some power and thrust, but not enough to enable the jet to fly. The MP could not maintain level flight and ejected from the MA. The MP ejected safely, sustained non-life threatening injuries from the ejection, and was recovered by local county emergency services.

The Board President found by a preponderance of the evidence, that the cause of the mishap was a bird strike that shattered the front cockpit canopy, the middle section of the canopy. The MP could not avoid the bird. Both engines ingested pieces of the shattered canopy which caused catastrophic damage and the engines to fail. The MA was unable to maintain level flight. As a result, the MP ejected from the aircraft and it shortly after crashed. The Board President found no other contributing factors.

SUMMARY OF FACTS AND STATEMENT OF OPINION
T-38C, T/N 65-0466
COLUMBUS AIR FORCE BASE, MISSISSIPPI
7 NOVEMBER 2022

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ACRONYMS AND ABBREVIATIONS

A/A	Air to Air
AB	Afterburner
ABU	Automatic Back-up Unit
ACBT	Air Combat Basic Training
ACC	Accessory
ACFT	Aircraft
ACM	Air Combat Maneuvering
ACMI	Aircraft Combat Maneuvering Instrumentation
ACP	Avionics Control Panel
ACT	Air Combat Training
ADC	Air Data Computer
ADO	Assistant Director of Operations
ADU	Automatic Deployment Unit
ADV	Advisory
AETC	Air Education & Training Command
AF	Air Force
AFB	Air Force Base
AFE	Aircrew Flight Equipment
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFRL	Air Force Research Laboratory
AFSAS	Air Force Safety Automated System
AFSEC	Air Force Safety Center
AFTO	Air Force Technical Order
A/G	Air To Ground
AGB	Accessory Gear Box
AGL	Above Ground Level
AGR	Active Guard Reserve
AHAS	Avian Hazard Advisory System
AHC	Aircraft Handling Characteristics
AIB	Accident Investigation Board
AIU	Audio Interface Unit
Alt	Altitude
AMOPS	Airfield Management Operations
AMSL	Airfield Management Supervisor Lead
AO	Approving Official
AOA	Angle of Attack
APH	Awaiting Phase
APP	Approach
ATA	Actual Time of Arrival
ATC	Air Traffic Control
ATD	Actual Time of Departure
AWM	Awaiting Maintenance
WP	Awaiting Parts
BaroPress	Barometric Pressure
BASH	Bird Aircraft Strike Hazard
BFM	Basic Fighter Maneuvers
BKN	Broken
BP	British Petroleum
BPO	Basic Postflight Inspection
BTRU	Barostatic Time Release Unit
B/U	Backup
BWC	Bird Watch Condition
CAD	Cartridge Activating Device
CAFB	Columbus Air Force Base
CAO	Current As Of
Capt	Captain
CB	Circuit Braker
CBT	Combat
CC	Commander
CD	Compact Disc
CDI	Commander Directed Investigation
CEF	Fire Fighting Flight
CES	Civil Engineering Squadron
CF	Carried Forward
Chmb	Chamber
CIV	Civilian
COL	Colonel
Comb	Combined
Comm	Commercial
CK	Check
CRM	Crew Resource Management
Crs	Course
CSI	Continuations SERE Indoctrination
CT	Continuation Training
CTR	Contractor
CUI	Controlled Unclassified Information
Curr	Currency
CV	Vice Commander
CW	Complied With
DAFI	Dept of the Air Force Instruction
DASFC	Desired Air Force Specialty Code
DCT	Direct
DDU	Drogue Deployment Unit

Disc	Discovered
DME	Distance Measuring Equipment
DoD	Department of Defense
DOT	Department of Training
DS	Direct Support
DSC	Differential Scanning Calorimetry
DSN	Defense Switch Network
DT	Double Turn
DTC	Data Transfer Cartridge
EA	Each
ECS	Environmental Control System
EDS	Energy Dispersive Spectrometer
EED	Electronic Engine Display
E/F/I	Egress Final Inspection
EGI	Embedded Global Positioning Inertial Navigation System
EGT	Exhaust Gas Temperature
Emer	Emergency
Emerg	Emergency
ENG	Engine
EO	Emergency Oxygen
EOD	Explosive Ordinance Disposal
EP	Evaluator Pilot
EP	Emergency Procedures
ER	Exceptional Release
ESN	Engine Serial Number
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
EVAL	Evaluation
Exp	Experienced
EXT	Extension
Fam	Familiarization
FC	Front Cockpit
FCP	Front Cockpit
FDP	Flight Duty Period
FF	Fuel Flow
FG	Fighter Group
FHR	Flight Hours Recorded
FO	Foreign Objects
FOD	Foreign Object Debris
FOIA	Freedom of Information Act
Form	Formation
FPL	Flight Plan
FS	Fuselage Station
ft	feet
FTS	Fighter Training Squadron
FTW	Flying Training Wing
FWD	Forward
GE	General Electric
G/D	Gear Door
GG	General Grade
GPS	Global Positioning System
GS	General Schedule
GT	Ground Training
GTR	Golden Triangle Regional
HBDU	Headbox Deployment Unit
HDU	Headbox Deployment Unit
HFACS	Human Factors Analysis and Classification System
HPO	Hourly Post Flight
HR	Hour
HQ	Headquarters
HUD	Heads-Up Display
ICT	Integrate Combat Turn
Id	Identification
ID	Instructor Development
IFF	Introduction to Fighter Fundamentals
IFR	Instrument Flight Rules
IGV	Inlet Guide Vanes
ILS	Instrument Landing System
IMDS	Integrated Maintenance Data System
In-Hg	Inches of Mercury
Inc.	Incorporated
INS	Inertial Navigation System
Inst	Instructor
Instm	Instrument
IO	Investigating Officer
IP	Instructor Pilot
IRC	Instrument Refresher Course
ISB	Interim Safety Board
ISOF	Instructor Supervisor of Flying
ISS	Inter-seat Sequencing System
IW	Instructor Weapons System Operator
IWOR	Instructor Weapons System Officer of Record
JA	Judge Advocate
JCN	Job Control Number
JFS	Jet Fuel Starter
JOAP	Joint Oil Analysis Program
JST	Job Standard
L	Local
LASDT	Low Alt Step Down Training

LCL	Local
LH	Left Hand
LOX	Liquid Oxygen
LRU	Line Replaceable Units
LSEL	Life Support Equipment Laboratory
Lt	Lieutenant
Lt Col	Lieutenant Colonel
LMSI	Limited Military Simulator Instructor
MA	Mishap Aircraft
MAJ	Major
MARSA	Military Assumes Responsibility for Separation of Aircraft
mB	Millibars
MDP	Mission Data Processor
MDS	Mission Design Series
MEF	Mission Execution Forecast
METAR	Meteorological Aerodrome Report
MF	Mishap Flight
MFC	Main Fuel Control
MFD	Multi-Functional Display
MFF	Mishap Fire Fighter
MFG	Manufacturing
MFL	Mishap Flight Lead
MIST	Mishap Investigation Support Team
MLG	Main Landing Gear
MM	Maintenance Member
MOR	Manual Override
MP	Mishap Pilot
MPA	Military Personnel Appropriation
MPI	Multipurpose Initiator
MSgt	Master Sergeant
MSL	Mean Sea Level
Msn	Mission
Msn Sym	Mission Symbol
MVA	Minimum Vectoring Altitude
MWP	Mission Weather Product
N/C/W	Not Complied With
NDA	Non-Disclosure Agreement
NDI	Non Destructive Inspection
NHA	Next Higher Assembly
NO	Number
NOTAM	Notices to Airmen
NozlPos	Nozzle Position
O2	Oxygen
OAT	Outside Air Temperature
O/B	Outboard
OG	Operations Group
OGV	Operations Group Standardization and Evaluation
OilPres	Oil Pressure
OMSA	Organizational Maintenance
OPS SUP	Operations Supervisor
ORM	Operational Risk Management
OSS&E	Operational Safety, Suitability, and Effectiveness
OWC	Owning Work Center
OXY	Oxygen
PAD	Propellant Activating Device
Para	Parachute
Patt	Pattern
PDM	Program Depot Maintenance
PE	Periodic Engine
P.E.	Periodic
PGM	Program
PIRD	Power Inertial Reel Device
PH	Phase
PLB	Personnel Locator Beacon
PLI	Post Landing Inspection
PM	Program Manager
PMMA	Acrylic
P&S	Plans and Scheduling
PN	Part Number
POB	Persons on Board
POC	Point of Contact
PR	Preflight Inspection
Pri	Primary
PROC	Procedure
PSI	Pounds per Square Inch
PTO	Power Takeoff
PUB	Published
PWC	Pilot Weather Category
QT	Quick Turn
Qty	Quantity
Qual	Qualification
RALT	Radar Altimeter
RAPCON	Radar Approach Control
RCP	Rear Cockpit
Ref	Reference
RH	Right Hand
RL	Recovery Lead
Rmk	Remark
RPA	Remotely Piloted Aircraft

RPM	Revolutions Per Minute
RSU	Runway Supervisory Units
RT	Right
RTB	Return to Base
Rwy	Runway
RXNS	Accelerated Materials and Processes Solutions Branch
SA	Situational Awareness
SAR	Search and Rescue
SAS	Stability Augmenter System
SAT	Surface Attack Tactics
SCT	Scattered
SE	Safety
SE	Single Engine
Sec	Secondary
SEC CLR	Security Clearance
SEG	Ground Safety
SEM	Scanning Electronic Microscope
SER	Service
SERE	Survival, Evasion Resistance and Escape
Sgt	Sergeant
SI	Seat Initiators
SIB	Safety Investigation Board
SIM	Simulator
SIO	Safety Investigation Office
SM	Statute Mile
SN	Serial Number
SOAP	Spetrimetrical Oil Analysis Program
SOF	Supervisor of Flying
SOV	Shutoff Valve
SQ	Squadron
SSK	Seat Survival Kit
Stud	Student
Sup	Supplement
Surv	Survival
TBA	Training Business Area
TCAS	Traffic Collision Avoidance System
TCTO	Time Compliance Technical Orders
TDU	Time Delay Unit
Tempo	Temporary
Tg	Glass Transition Temperature
TGA	Thermogravimetric Analysis
TH	Thru-Flight Inspection
T/N	Tail Number
TNG	Training
TO	Technical Order
TOD	Time Of Day
TotPress	Total Pressure
TR	Traditional Reserve
TRNG	Training
TRU	Transformer Rectifier Unit
TSgt	Technical Sergeant
Twr	Tower
UCMJ	Uniform Code of Military Justice
UFCP	Up Front Control Panel
UHF	Ultra High Frequency
UI	Instructor Upgrade
UJC	Unit Job Code
UNK	Unknown
UP	Upgrade Pilot
USAF	United States Air Force
USDA	United States Department of Agriculture
USRM	Under Seat Rocket Motor
UW	Upgrade Weapons System Operator
UWARS	Universal Water Activated Release System
VAC	Vacuum
VEN	Variable Exhaust Nozzles
VFR	Visual Flight Rules
VHF	Very High Frequency
VIS	Visibility
VORTAC	Very High Frequency Omnidirectional Range Tactical Air Navigation System
VPU	VEN Power Unit
WAAR	West Approach Arrival
WAI	Walk Around Inspection
WCA	Caution Light Panel
WCI	Weather Condition Index
WPNS	Weapons
WSO	Weapons System Operator
WUC	Work Unit Code
W/W	Wheel Well
WX	Weather
XPDR	Transponder
XWNDS	Cross Winds
XF	Transferred Forward
z	Atomic
Z	Zulu

SUMMARY OF FACTS

1. AUTHORITY AND PURPOSE

a. Authority

On 18 November 2022, Lieutenant General Brian S. Robinson, the Commander of Air Education and Training Command (AETC), appointed Colonel Michael Driscoll to conduct an Accident Investigation Board (AIB) for a mishap that occurred on 7 November 2022, involving a T-38C aircraft, tail number (T/N) 65-0466, approximately 20 miles south of Columbus Air Force Base (AFB), Mississippi (MS) (Tabs L-12, R-9 to R-12, V-1.5 to V1.7, V-2.3 to V-2.7, V-4.1, V-5.1, and Y-3 to Y-5). The Investigation was conducted at Columbus AFB, MS, from 5 January 2023 through 23 January 2023. Additionally, the following members were appointed to support the accident investigation: A medical advisor (Major), a legal advisor (Captain), a pilot advisor (Captain), a maintenance advisor (GS-11 civilian employee), and a recorder (Technical Sergeant) (Tab Y-3 to Y-5).

b. Purpose

In accordance with AFI 51-307, *Aerospace and Ground Accident Investigations*, this Accident Investigation Board conducted a legal investigation to inquire into all the facts and circumstances surrounding this Air Force aerospace accident, prepare a publicly releasable report, and obtain and preserve all available evidence for use in litigation, claims, disciplinary action, and adverse administrative action.

2. ACCIDENT SUMMARY

On the afternoon of 7 November 2022, the Mishap Aircraft (MA), a T-38C, T/N 65-0466, operated by the 14th Flying Training Wing (FTW), Columbus AFB, MS, departed Columbus AFB at 1241 local time (L) for a routine surface attack continuation training (CT) mission to Restricted Area F-4404A/B/C, also known as the SeaRay Target Range (Tabs K-4 and V-2.6). The Mishap Flight (MF) consisted of two T-38C aircraft with the MA flying the number 2 position (Tab K-4). The Mishap Pilot (MP) is assigned to the 43rd Flying Training Squadron and flies with the 49th Fighter Training Squadron, at Columbus AFB (Tabs G-3 and V-1.1). At 1245L, while enroute to SeaRay range and while maneuvering to line abreast formation of approximately one mile separation between each aircraft, the MA experienced a bird strike that shattered the front cockpit canopy of the aircraft (Tabs S-12 and V-1.5 to V-1.6). Pieces of the canopy were ingested into both engines (Tabs N-5, N-11, S-12, V-1.5, and V-2.6). Shortly after, both engines failed (Tabs L-7, L-12, N-6, N-11 to N-12, and V-1.5). The MP was able to successfully eject before the MA impacted the ground, and the aircraft, valued at $8,500,000, was completely destroyed (Tabs N-12, P-3, R-10, V-1.6, and V-2.6 to V-2.7). The MP sustained minor injuries, and there were no other military or civilian casualties (Tabs V-1.7 and X-5). The crash site was located on privately owned land approximately 20 miles south of Columbus AFB (Tabs S-3 and V-2.9).

3. BACKGROUND

a. Air Education and Training Command (AETC)

AETC's primary mission is to recruit, train, and educate exceptional Airmen (Tab CC-3). AETC was established and activated in January 1942, making it the second oldest major command in the Air Force (Tab CC-3). AETC includes Air Force Recruiting Service, two Numbered Air Forces and the Air University (Tab CC-4). The command operates 12 major installations and supports tenant units on numerous bases across the globe (Tab CC-4). There are also 16 Active Duty and 7 Reserve wings in AETC (Tab CC-4).

b. 14th Flying Training Wing (14 FTW)

The 14 FTW is based at Columbus AFB, MS (Tab CC-11). Its mission is to train world class pilots (Tab CC-11). The wing focuses on specialized undergraduate pilot training in the T-6 Texan II, T-38C Talon, and T-1A Jayhawk aircraft (Tab CC-11). Each day the wing flies an average of 260 sorties on its three parallel runways (Tab CC-11). In addition to the flying training mission, Columbus AFB maintains more than 900 highly-trained individuals capable of deploying at a moment's notice to support worldwide taskings and contingencies (Tab CC-11).

c. 43rd Flying Training Squadron (43rd FTS)

The 43rd Flying Training Squadron is part of the 14th Operations Group (Tab CC-13). Its mission is to build the World's Best Warriors, Leaders and Professional Military Pilots (Tab CC-13). It administers and executes the AETC and Air Force Reserve Command Associate Instructor Pilot (IP) Program and provides Active Guard Reserve (AGR) and Traditional Reserve (TR) Ips to augment the cadre of active-duty pilots conducting pilot training (Tab CC-13). During wartime, or in the event of hostilities, the unit is mobilized to offset anticipated losses of experienced active duty pilot contributions to the instructor pilot training programs (Tab CC-13). As reservists, the MP and Mishap Flight Lead (MFL) are assigned to the 43rd FTS (Tab V-1.2 and V-2.2).

d. 49th Fighter Training Squadron (49th FTS)

The 49th FTS' mission is to develop Fighter Wingmen (Tab CC-14). The unit conducts Introduction to Fighter Fundamentals flying training for over 75 U.S. Air Force and international pilots and Weapon System Officers annually (Tab CC-14). The unit executes an annual flying hour program of 2,430 sorties and 2,250 hours valued at more than $4.9 million (Tab CC-14). It develops the ability, proficiency, confidence, discipline, judgment, situational awareness and airmanship of future fighter wingmen (Tab CC-14). In addition, unit members deploy to support fighter syllabus and operational training requirements for Close Air Support and Dissimilar Air Combat (Tab CC-14). MP and MFL fly with the 49th FTS (Tabs G-3 and Tab G-5).

e. T-38C - Talon

The T-38C Talon is a twin-engine, high-altitude, supersonic jet trainer used in a variety of roles because of its design, economy of operations, ease of maintenance, and high performance (Tab CC-15). The T-38C has swept wings, a streamlined fuselage and tricycle landing gear with a steerable nose wheel (Tab CC-15). Two independent hydraulic systems power the ailerons, rudder and other flight control surfaces (Tab CC-15). The T-38C incorporates a "glass cockpit" with integrated avionics displays, head-up display and an electronic "no drop bomb" scoring system (Tab CC-15). AETC is the primary user of the T-38C for joint specialized undergraduate pilot training (Tab CC-15). The instructor and student sit in tandem on rocket-powered ejection seats in a pressurized, air-conditioned cockpit (Tab CC-15).

f. T-38C – Acrylics, or Canopy

The T-38C canopy is made of three sections:

Section I is the front windscreen and does not open. It is fixed to the aircraft, much like the front windshield to a car. Section II is the front cockpit canopy and opens up to allow access to the front seat as shown in the picture above. Section III is the rear cockpit canopy and opens up to allow access to the rear seat.

g. Military and Zulu Time

Military time is based on a 24-hour clock beginning at midnight (0000 hours) and ending at 2359 hours. Military time eliminates AM and PM designations as regular time uses 1-12 to identify hours in a day. In military time, 12 AM midnight is 0000 or 2400. Zulu time is used in military operations as a standardized time across the globe. On the day of the accident, the local times at Columbus AFB, MS and the site of the mishap events were six hours behind Zulu time.

4. SEQUENCE OF EVENTS

a. Mission

On Monday, 7 November 2022, the 49th FTS Mishap Operations Supervisor (MOS) authorized the MF's mission as a two-ship formation conducting a surface attack CT sortie to R-4404 (Tabs K-3 to K-4 and V-3.2). The sortie was flown for the instructor development and currency of two instructors with no student syllabus or upgrade training planned (Tabs K-3 to K-4, R-29, V-1.4, V-2.4, and V-3.4).

b. Planning

The MF had planned, accomplished, and debriefed a CT sortie earlier on 7 November 2022, and there was nothing significant to report (Tabs K-3 and V-1.4). The MP and MFL met approximately 60 minutes prior to takeoff which is normal for CT sorties and no squadron supervisory personnel attended the flight briefing (Tab V-1.4). It is typical for squadron supervisory personnel to not attend flight briefings. The MFL used the briefing guide from the backup briefing binder and discussed all the normal subjects including: the bird status and weather of the airfield and R-4404, as well as checking the notices to airmen (NOTAM) (Tabs V-2.4 to V-2.5). The bird watch condition was moderate for both the base and R-4404 when they were preparing for their mission and predicted to remain that way for the duration of their flight (Tabs AA-3, AA-5, and V-2.4 to 2.5). Columbus AFB, MS, is generally at bird watch condition moderate (Tab V-2.5). The MF completed the Operational Risk Management (ORM) form which identified increased risk (Tab K-5). The increased risk was because: this was the pilots' second flight that day, the type of mission being lower to the ground, and that the bird condition was moderate (Tab K-5. The "highest threat" identified for the flight was that the bird condition being moderate, and the bird moderate mitigation techniques were discussed in the MF's brief and the brief with the MOS (Tabs K-5, V-2.5 and V-3.3). The MFL signed the ORM sheet as the decision authority, which was the appropriate based on the ORM total being in the "low" category (Tab K-5).

c. Preflight

The MF consisted of two pilots, who were scheduled to fly solo in each of their respective aircrafts (Tab K-4). There were no NOTAMs that interfered with the MF's mission that day (Tab AA-4). Both aircraft were modified to -33 wings, which were required for surface attack sorties (Tab V-3.3). The MOS reviewed the airfield status, to include bird watch condition, and the pilots were safe and qualified to fly (Tab V-3.3). The MP and MFL walked to the aircraft at approximately 1220L (Tab V-2.6). There was nothing significant during the preflight and engine start of the MF (Tab V-2.6).

d. Summary of Accident

At 1241L, which was 18:41:00Z, the MF departed Columbus AFB on a ten second rolling takeoff on the standard departure for the runway 13C to SeaRay (Tabs N-4 and V-2.6). The MP's takeoff was uneventful and the MP rejoined to approximately 100 feet (ft) on the right of MFL (Tab V-1.5). The MFL requested to level off at 3,000 ft mean sea level (MSL) due to clouds at approximately 4,000 ft MSL, as briefed in mission planning (Tabs N-5 and V-2.6). It is standard

for this type of mission to request to fly below unsafe weather when that weather is at 4,000 ft MSL. Air Traffic Control (ATC) approved the request and subsequently gave the formation a heading of 180 degrees (Tab N-5). At 18:44Z, ATC cleared the MF direct to R-4404 (Tab N-5). At 18:45:15Z, the MF rolled out of their turn direct to R-4404 and the MFL directed the MP to reposition to 1 mile line abreast formation (Tab V-2.6). The MP checked approximately 15 degrees away from the MFL and visually confirmed his formation position which is standard when maneuvering to line abreast formation (Tabs V-1.5 and AA-6). Simultaneously at 18:45:29Z, the MA was struck by a large bird on the front cockpit canopy, shattering the canopy upon impact (Tabs N-5, S-12, V-1.5).

At 18:45:33Z, Heads Up Display (HUD) and Multi-functional Display (MFD) flashed warning signs indicating AVIONICS and then ENGINE, with associated audio warnings; then the CAUTION warning illuminated approximately 4 seconds later (Tabs L-12, L-37, and N-11). Typically, the ENGINE warning generally means there are parameters of the engine indicating abnormal function of one or both of the engines; and the AVIONICS warning generally means there are abnormalities detected with the avionics onboard. These indicators inform the pilot to check the status of these systems, similar to a check engine light in a car, but they do not tell the pilot exactly what is wrong. The flight data recorder shows that during this time, the left and right engines began experiencing a loss in Revolutions per Minute (RPM) and a rise in exhaust gas temperature (EGT) (Tabs L-12 and L-21). The left engine's RPMs continued to wind down to 0, consistent with a seizure, while the right engine continued to operate at RPMs less than 86% and high EGT, consistent with a compressor stall (Tabs L-21 and L-29). A compressor stall is when the engine does not have a proper distribution of airflow; the engine is still turning but will have a loss of thrust and therefore is not as effective as needed to sustain flight. The MP transmitted a radio call to cease tactical maneuvering and indicated that there was a problem with the MA (Tab N-11). The MP then stated a bird hit the canopy, and that the MF needed to land (Tab N-11). The MP stated that the left engine was seized, that the MP had sustained minor injuries, and needed to land at Golden Triangle Regional (GTR) Airport (Tab N-11). MFL coordinated with ATC for a vector to GTR (Tab N-11).

At approximately 18:46:54Z, the right engine began to exceed temperature limits and was still not able to produce enough thrust to maintain level flight (Tabs L-29, V-1.5 and V-1.6). The MP stated that the MA had lost the other engine (Tab N-12). From there, the MP assessed the condition of his right engine and pushed the engine start buttons per the checklist procedures for a compressor stall (Tabs V-1.5 and AA-6). Over the next 24 seconds, the MP attempted to recover and assess the right engine (Tabs N-12 and V-1.6). Finally, the MP informed the MFL at 18:47:24Z that he was ejecting (Tab N-12). The MFL maneuvered away from the MA while the MP successfully completed the ejection actions at 680 ft above ground level (AGL) (Tabs V-2.7 and Z-3). The MFL observed a successful ejection from the MA and began the initial actions of on-scene command (Tab V-2.8).

e. Impact

The MA impacted the ground at 18:47:37Z in an open field approximately 20 miles south of Columbus AFB (Tabs V-2.9 and Z-4). The aircraft was in oriented approximately 12 degrees nose low with 50 degrees of left bank at impact (Tab Z-4). The landing gear and flaps were retracted at impact (Tab V-1.7).

f. Egress and Aircrew Flight Equipment (AFE)

At 18:42:26Z, the MP ejected at 180 knots and 920 ft MSL, which was approximately 680 ft AGL (Tab Z-3). The ejection sequence was started within the performance envelope of the Martin Baker MK US16T seat (Tab J-52 to J-55). The last ejection seat 36 & 120-month inspections were accomplished in June of 2020 (Tab U-25). A records review of AFE items showed that all items were properly documented, configured, inspected, and packed by personnel with the proper qualification (Tabs J-69 and U-25).

g. Search and Rescue (SAR)

The MFL immediately began orbiting over the location of the MA's impact and MP's ejection location; and contacted ATC at Columbus AFB to begin search and rescue operations (Tab V-2.9). Shortly after the MA's impact, Lowndes County fire and medical response assets responded (Tabs V-4.1 and V-5.1). Military emergency responders were notified when the inflight emergency was declared via crash phone (Tabs V-4.1 and V-5.1). The MP safely ejected and sustained minor injuries from the ejection (Tab V-1.7). The MP landed in nearby trees but was able to cut himself down safely and without further injury (Tab V-1.7). The MP was able to flag down responding county fire department personnel for rescue and medical treatment (Tab V.-1.8). At approximately 1320L, 14 Civil Engineering Squadron fire response responded to the call including five vehicles and 11 personnel (Tabs V-4.1 and V-5.1). Military emergency responders arrived at the crash site at 1341L and there were no active fires (Tabs V-4.1 and V-5.1). Lowndes County, MS, volunteer fire crews had already responded and controlled the initial fire (Tab V-4.1). Additionally, Lowndes County Sherriff was securing the area (Tab V-5.1). There were no significant delays to the emergency response (Tabs V-4.1 and V-5.1). The MP contacted Columbus AFB, and confirmed he was in stable and okay condition (Tab V-1.7). Shortly after, the MP was transported to a local hospital (Tab V-1.8). The MP sustained minor-injuries from the ejection, was medically cleared for duty within 24 hours, and expected to recover without further medical assistance (Tab X-5). On 8 November 2022, Air Force Explosive Ordnance Disposal were on scene, and with the landowner's approval, dug an approximate four-foot and six feet deep hole, and detonated a part of an ejection seat on site (Tab V-6.1). Shortly after, EOD removed the remaining pieces of the ejection seat from the hole (Tab V-6.1).

h. Recovery of Remains

Not applicable.

5. MAINTENANCE

a. Forms Documentation

Upon review of the aircraft Air Force Technical Order (AFTO) Form 781 maintenance forms and Integrated Maintenance Data System (IMDS), no overdue inspections or open Time Compliance Technical Orders (TCTO) were noted that would have prohibited the MA from flight operations (Tabs D-3 to D-13, and U-3 to U-25). The MA's 90-day maintenance records and IMDS data were reviewed; and no relevant record deficiency were identified (Tabs U-3 to U-10 and U-25). The

MA had no repeat or recurring maintenance issues and all required maintenance actions were completed (Tab U-25).

b. Inspections

All the scheduled inspections (aircraft, engines, and ejection seats) required for the MA were satisfactorily completed and documented properly in accordance with applicable technical orders (Tab U-25). All AFE inspections were satisfactorily completed and documented (Tab J-55).

c. Maintenance Procedures

Upon review of maintenance policies and procedures, it was determined that local practices relevant to the MA were in accordance with governing maintenance directives (DAFI 21-101, *Aircraft and Equipment Maintenance Management*) and applicable TOs (Tab U-25).

d. Maintenance Personnel and Supervision

The MA was maintained primarily by contractor personnel at Columbus AFB. Training records contained within IMDS and Training Business Area did not reveal any outdated or incomplete training items (Tab U-25). No evidence indicates that maintenance personnel, supervision of those individuals, or oversight of the contract contributed to the mishap.

e. Fuel, Hydraulic, Oil, and Oxygen Inspection Analyses

The last routine pre-mishap oil analysis of both engines was accomplished on 24 August 2022, right engine oil analysis was also accomplished 1.7 flight hours prior to mishap and revealed no abnormalities (Tabs U-13 and U-16). Sections of the MA were on fire shortly after impact which made it impossible to collect fuel and oxygen samples (Tabs J-4 and S-8). While oil and hydraulic samples were taken, they were not tested due to the nature of the accident.

f. Unscheduled Maintenance

Review of the local maintenance in the AFTO 781A forms and IMDS revealed unscheduled maintenance on the afterburner control system of the right engine (Tab U-14). This required the removal, repair, and reinstallation of the engine (Tab U-12). Previously, the MA had a Stability Augmenter System (SAS) discrepancy that required the replacement of the SAS actuator (Tab U-25). This also required removal and reinstallation of the left engine (Tab U-25). This maintenance was completed at Columbus AFB by local contract personnel with sufficient experience, training, and oversight between 19 to 21 October 2022 (Tab U-25).

6. AIRFRAME, MISSILE, OR SPACE VEHICLE SYSTEMS

a. Structures and Systems

(1) Aircraft Condition

Inspection and testing of all aircraft systems and structure of the MA indicate the aircraft was functioning properly and in an airworthy state prior to the mishap (Tab J-82). The aircraft was destroyed when it impacted the ground (Tab S-4 to S-5). The recovery team retrieved mainly fragmented portions of the MA's airframe and systems (Tab S-5 to S-6).

(2) Canopy

The front windshield was received in one piece, but it had marks "from impacts with hard objects … along with scratches, scuff marks and cracks." (Tab J-97). The front cockpit canopy, the middle section of the canopy, was recovered with significant damage:

Figure 1
Front cockpit canopy (Tab S-6)

Virtually all the acrylic of the front cockpit canopy was missing and bird remains were found on the metal frame (Tab J-97). The rear canopy was found in multiple pieces and the acrylic had broken into several large pieces (Tab J-98). "Impact marks on the acrylic indicate hard object collision. The aft bow of the rear canopy had a small amount of bird remains present." (Tab J-98).

Figure 2
Rear cockpit canopy (Tab S-7)

The MFL observed significant damage to the MA's cockpit canopy immediately after the bird strike and stated "the front canopy was basically open. To me it looked like it was just, most of it was gone." (Tab V-2.8). The MP stated that the front cockpit canopy was shattered by the bird strike (Tab V-1.6 to V-1.7).

(3) Left Engine

The T-38C's engines are manufactured by General Electric (GE). Prior to take off, left engine J-85-GE-5R, Serial Number (SN) # 23-2182 had 14307.0 flight hours recorded, and the last periodic engine inspection was 52.1 flying hours prior to the mishap (Tab J-6). The engine had no open TCTOs (Tab J-6). The last time the engine was removed and re-installed to facilitate other maintenance was on 20 October 2022 (Tab J-6). The engine had 10.1 flying hours since installation prior to the mishap without incident (Tab J-6).

(4) Right Engine

The T-38C's engines are manufactured by GE. Prior to take off, right engine J-85-GE-5R, SN# 23-2808, had 11780.2 flight hours recorded, and the last periodic engine inspection was 52.1 flight hours prior to the mishap (Tab J-6). The engine had no open TCTOs. The right engine was removed on 30 October 2022 for an afterburner repair and re-installed on 2 November 2022 (Tab J-6). No issues were discovered (Tab J-6). The engine performed 1.7 flying hours prior to the mishap without incident (Tab J-6).

b. Evaluation and Analysis

(1) Aircraft condition

The aircraft was destroyed upon impact with the ground which made additional testing of systems more difficult (Tab J-87 to J-99). Where possible, additional testing of aircraft systems and structure confirmed they were functioning appropriately (Tab J-100).

(2) Canopy

The front windshield was substantially intact upon recovery, but contained scratches, scuff marks, and cracks consistent with impact with hard objects (Tab J-97 to J-98). Recovered pieces of both the front and rear cockpit canopy contained bird remains (Tab J-97 to J-98). Samples of the canopy were taken for comparison with foreign objects (FO) found in the engines (Tab J-31).

(3) Left Engine

The left engine had damage consistent with a tumbling crash (Tab J-7). The upper half of the engine was removed in order to evaluate the internal state of the engine (Tab J-12). This revealed damage to the inlet guide vanes, multiple stage 2 compressor blades, small pieces of the stage 2 shroud ring, and multiple stator vanes from various stages to include stages 2 through 7 (Tab J-13).

Figure 3
Left engine compressor (Tab J-13)

Once the compressor rotor was exposed, the damage found was consistent with rigid FO ingested during flight at a high RPM (Tab J-13). This level of damage is indicative of either a large piece of rigid FO or multiple pieces of medium sized rigid FO (Tab J-13). The stage 1 blades were found intact, but all of the stage 2 blades were sheared at the root and found lodged further in the engine (Tab J-13). It was determined this is consistent with rigid FO that is small enough to pass into the engine and miss the stage 1 blades, but cause massive and thorough damage to the stage 2 blades which are further inside the engine than the stage 1 blades (Tab J-13).

Figure 4
Left engine compressor section (Tab J-15)

The engine blades found further inside the engine, at stages 3 to 8, were bent over in the opposite direction of engine rotation (Tab J-15). Most of these engine blades were intact (Tab J-15). This damage is consistent with FO ingestion (Tab J-15).

Figure 5
Left engine compressor section (Tab J-15)

Samples taken from the left engine's turbine stages were a white and granular material (Tab J-20). Analyses did not find pieces of bird or other elements consistent with a bird being ingested into

the left engine (Tab J-27). Analyses of the white material is consistent with the acrylic of the canopy (Tab J-31). There was a significant amount of the white and granular material within the stage 1 turbine cooling holes sections of the engine, consistent with pieces of canopy being ingested by the engine (Tab J-20). The damage to the engine, specifically the scoring on the shaft circumference is consistent with the engine not rotating at the time of impact (Tab J-22).

Figure 6
Left engine turbine section with white granular material (Tab J-19)

(4) Right Engine

The right engine was found separated from the aircraft.

Figure 7
Right engine at crash site (Tab S-10)

Prior to tear down of the right engine, it was evident that there was significant damage to the forward portion of the compressor (Tab J-24).

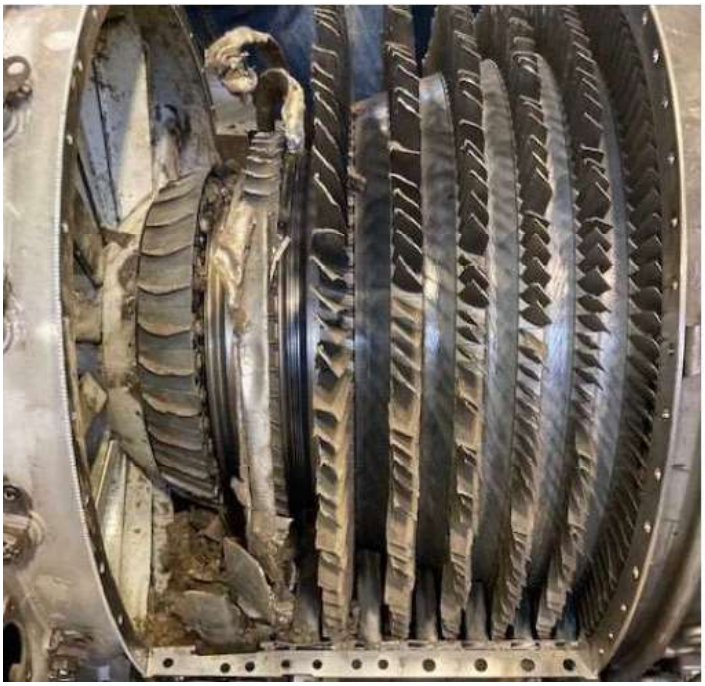

Figure 8
Right engine compressor section (Tab J-25)

The upper half of the engine was removed in order to evaluate the internal state of the engine (Tab J-24 to J-25). This revealed damage to the stage 1 and stage 2 compressor blades; all the blades from stage 1 and stage 2 were sheared from the compressor rotor and accumulated between the compressor rotor and the compressor case (Tab J-24). Since the damage was not observed further in the engine, it was concluded that the engine was still rotating at the time of impact (Tab J-26).

Compared to the left engine, there was no canopy FO material found within the right engine. However, the compressor blades had leading and trailing edge damage which suggested that FO was processed through all 8 stages of the compressor (Tab J-26). There was no evidence of canopy like FO in the engine, likely due to a small fragment(s) of canopy that would have been processed completely through as the engine continued to rotate all the way until ground impact. (Tab J-28). It is suspected, by engineering, that there was a minor FO ingestion of aircraft canopy immediately following the initial bird strike to the aircraft that led to a compressor stall. This would have resulted in a degraded engine that would be operating at a diminished capacity insufficient to sustain operable flight to make a controlled landing (Tab J-28).

7. WEATHER

a. Forecast Weather

The 14th Operational Support Squadron weather forecasters provided the mission execution forecast for the local flights to the surrounding training areas and ranges (Tab F-3). On the day of

the mishap, the forecasted weather for takeoff was a scattered layer of clouds at 4,000 ft AGL with a ceiling of a broken layer at 12,000 ft AGL, winds were forecasted to be from the east at 6 knots, and forecasted to be at least seven miles of visibility (Tab F-3). The forecast weather for R-4404 was a broken to overcast layer at 2,000 ft AGL with a few layer between 3,000 ft AGL and 8,000 ft AGL (Tab F-5). No precipitation was forecasted (Tab F-5).

b. Observed Weather

The observed weather at Columbus AFB at the time of the time of the mishap was a scattered layer of clouds at 4,000 ft, AGL with winds calm, and visibility greater than seven miles (Tab W-3). The observed weather at GTR Airport, which was closer to the mishap location, was a scattered layer of clouds at 4,000 ft AGL, with winds calm, and greater than seven miles of visibility (Tab W-4). The MFL passed an inflight report matching the weather that was observed at GTR (Tab N-5). There were no significant changes to weather post-mishap.

c. Space Environment

Not applicable.

d. Operations

No evidence suggests the MF was operating outside prescribed operational limits with respect to weather conditions.

8. CREW QUALIFICATIONS

a. Mishap Pilot

The MP was a current, qualified, and experienced instructor pilot in the T-38C at the time of the mishap (Tabs G-4 and T-3 to T-5). The MP had 748.3 total hours and 527.7 instructor hours in the T-38C (Tab T-7). The MP obtained his initial instructor qualification on the T-38C on 8 September 2014 (Tab T-6). The MP maintains a current Form 8 instrument qualification dated 10 June 2022 and a mission qualification dated 14 September 2022 (Tabs T-3 and T-6). The MP had no training deficiencies (Tab T-3 to T-5).

The MP's recent military T-38C flight time prior to 7 November 2022 (Tab T-8):

	Hours	Days Flown
30 days	1.4	1
60 days	7.5	5
90 days	12.8	8

b. No additional mishap crew members.

9. MEDICAL

a. Qualifications

The MP held a current Department of Defense Form 2992, *Medical Recommendation for Flying or Special Operational Duty*, at the time of the mishap (Tab X-3). He completed his most recent Periodic Health Assessment (PHA) and Annual Flight Physical Examination on 11 January 2022 and did not require any aeromedical waivers (Tab X-5). The MP was medically qualified for flying duties without restrictions at the time of the mishap (Tab X-5).

b. Health

A review of the MP's medical and dental records preceding the accident did not reveal any medical condition relevant to the mishap (Tab X-5). A review of the MP's post-accident medical record revealed injuries consistent with a normal ejection sequence (Tab X-5). All injuries were minor and can be reasonably attributed to the events of the mishap (Tab X-5).

c. Pathology

The Armed Forces Medical Examiner System's Forensic Toxicology Laboratory performed toxicology tests for alcohol, common drugs of abuse, and carbon monoxide on samples obtained from MP and MFL, as well as urine samples from six maintenance personnel (Tab X-6). All test results were negative (Tab X-6).

d. Lifestyle

There is no evidence to suggest lifestyle factors were a cause or substantially contributing factor in the mishap. (Tabs K-5, V-1.2 to V-1.3, V-2.2 to V-2.3, and X-5).

e. Crew Rest and Crew Duty Time

The AETC Supplement to AFMAN 11-202, Volume 3, *General Flight Rules*, states crew rest is compulsory for aircrew members and is a minimum of 12 non-duty hours before the flight duty period (Tab BB-4). The MP was afforded and confirmed he had adequate crew rest prior to the mishap (Tab V-1.2).

The manual also addresses maximum flying times, including simulator time. For the T-38, these maximums are 6.5 hours during one flight duty period, 30 hours in 7 consecutive days, and 75 hours in 30 consecutive days (Tab BB-6 to BB-7). Maximum flying time in any aircraft is 56 flight hours per 7 consecutive days, 125 flight hours per 30 consecutive days, and 330 flight hours per 90 consecutive days (Tab BB-5). The MP flying hour totals did not approach the maximums for the T-38 nor total max flying times (Tabs T-8, V-1.2 to V-1.3, and BB-5 to BB-7).

	Flying Hours in Flight Duty Period	Flying Hours in 7 Consecutive Days *(+non-T-38 hours)*	Flying Hours in 30 Consecutive Days *(+non-T-38 hours)*
Max Limits	6.5	30*(56)*	75*(125)*
MP	0.7	0.7(*15.7)*	2.1(*~60)*

10. OPERATIONS AND SUPERVISION

a. Operations

The 49th FTS operations tempo was normal on 7 November 2022 (Tab V-3.3). It is not uncommon for an instructor to fly twice in one day (Tab V-3.3). No evidence indicates that operations tempo or other operational factors impacted the mishap.

b. Supervision

On 7 November 2022 the mission was authorized by the 49th FTS MOS, and a review of flight training records showed the MP was current and safe to participate in the scheduled sortie (Tabs G-3 to G-5, K-3, and V-3.3). The MOS confirmed the MP was qualified to fly the mission (Tab V-3.3). Columbus AFB maintains a current Bird Aircraft Strike Hazard (BASH) plan that outlines bird watch risk conditions and instructions for pilots on limitations during higher risk conditions. The MP and MFL's mission plan and actions were consistent with the BASH plan. The supervision of the MF was also consistent with the BASH plan. There is no evidence that the supervisory practices or supervision contributed to the mishap.

11. HUMAN FACTORS ANALYSIS

The Department of Defense Human Factors Analysis and Classification System 7.0 (DoD HFACS 7.0) lists potential human factors that can play a role in aircraft mishaps and identifies potential areas of assessment during an accident investigation. No human factors were identified as relevant to the mishap.

12. GOVERNING DIRECTIVES AND PUBLICATIONS

a. Publicly Available Directives and Publications Relevant to the Mishap

(1) AFMAN 11-202V3_AETCSUP, *Flight Operations*, 30 November 2020
(2) *Department of Defense Human Factors Analysis and Classification System*, Version 7.0

NOTICE: All directives and publications listed above are available digitally on the Air Force Departmental Publishing Office website at: https://www.e-publishing.af.mil or the Safety Center website at https://www.safety.af.mil.

b. Other Directives and Publications Relevant to the Mishap

(1) T.O. 1T-38C-1, *USAF Series T-38C Aircraft Flight Manual*, 1 February 2020, through Change 2, 1 February 2022 (CUI)
(2) T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 26 September 2022 (CUI)
(3) T.O. 00-20-2, *Maintenance Data Documentation*, 22 July 2021 (CUI)
(4) Columbus AFB Plan 91-212, *Bird Aircraft Strike Hazard* (BASH) Plan 91-212, dated 31 March 2022 (CUI)

c. Known or Suspected Deviations from Directives or Publications

There were no identified deviations relevant to the mishap.

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14 April 2023

MICHAEL P. DRISCOLL, Colonel, USAF
President, Accident Investigation Board

STATEMENT OF OPINION

T-38C, T/N 65-0466
COLUMBUS AIR FORCE BASE, MISSISSIPPI
7 NOVEMBER 2022

Under 10 U.S.C. § 2254(d) the opinion of the accident investigator as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report, if any, may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.

1. OPINION SUMMARY

On 7 November 2022 at 1247 Local (L), the mishap aircraft (MA), a T-38C aircraft tail number (T/N) 65-0466 crashed 22 miles south of Columbus Air Force Base (AFB), Mississippi (MS). The MA was operated out of Columbus AFB, MS, by the 49th Fighter Training Squadron, 14th Operations Group, assigned to the 14th Flying Training Wing. The mishap pilot (MP) ejected safely but sustained non-life threatening injuries. The MA, valued at $8,500,000, was completely destroyed.

The mishap flight was scheduled as an instructor continuation training (CT) sortie and had no students participating in the training flight. The mishap flight was appropriately planned and appropriately identified risks to the mission. All members of the mishap flight were instructor pilots and were current and qualified to fly the T-38C and the planned mission.

The MA departed Columbus AFB at 1241L for a routine mission as part of a two-ship surface attack continuation training (CT) sortie to the Restricted Area F-4404A/B/C, also known as the SeaRay Target Range, 42 miles south of Columbus AFB. At 1245L, approximately 4 minutes after takeoff and 15 miles south of Columbus AFB, the MP, while flying in the number two position and maneuvering to line abreast formation, was struck by a bird. The bird hit the front cockpit canopy shattering it upon impact. Pieces of the shattered canopy were ingested into both engines. The left engine immediately failed, and shortly after stopped spinning or working altogether. The right engine continued to turn, it could generate some power and thrust, but not enough to enable the jet to fly. The MP could not maintain level flight and ejected from the MA. The MP ejected safely, sustained non-life threatening injuries from the ejection, and was recovered by local county emergency services.

2. CAUSE

I find, by a preponderance of the evidence, that the mishap was caused by an unavoidable bird strike that shattered the front cockpit canopy resulting in pieces of the canopy being ingested into both the left and right engines. The MP was confirming his formation position and could not have avoided the bird. Because of the bird strike, the left engine seized and the right engine had a compressor stall four seconds after the bird impact. The significant loss of thrust resulted in the

MP's inability to sustain level fight and recover the aircraft. The MP's actions were consistent with an experienced pilot in this emergency.

Post-mishap engine analysis confirmed that the left engine experienced extensive damage consistent with rigid debris ingested during flight at a high Revolutions per Minute (RPM). All of the stage 2 blades were sheared at the blade root and found lodged between the compressor rotor and the compressor case/stators. The amount of shrapnel, composed of compressor hardware, was the cause for the left engine seizure during flight. The level of damage was indicative of either a large or medium piece of rigid debris. The Air Force Research Lab at Wright-Patterson AFB confirmed the white granular debris found in the turbine rotor matched the acrylic materials from the canopy.

Based on engine data analysis captured by the flight data recorder at the time of the bird strike, the right engine had fluctuating RPM and Exhaust Gas Temperature indicative of a compressor stall. The engine responded to throttle input but was never able to climb above 86% of max RPMs, which would not provide adequate thrust for sustained flight with a single engine. No white granular material was found in the right engine consistent with large or medium pieces of the canopy as found in the left engine. This is consistent with the right engine ingesting smaller pieces of the canopy that were destroyed through continued engine operation. The left engine immediately seized after the bird impact and had no RPMs, where the right engine continued to function but did not create enough thrust for flight. The right engine had damage to the stage 1 and stage 2 compressor blades; all the blades from stage 1 and stage 2 were sheared from the compressor rotor and accumulated between the compressor rotor and the compressor case. This damage is consistent with the engine still rotating. Therefore, I conclude that smaller pieces of the canopy and/or pieces of the bird entered the right engine and damaged the engine which caused the compressor stall.

3. SUBSTANTIALLY CONTRIBUTING FACTOR

After a thorough review of all possible contributing factors, I did not find any additional factors that contributed to this mishap. Specifically, I found the Columbus AFB Bird Aircraft Strike Hazard program and its execution by the tower, operations supervision, and pilots were satisfactory on the day of the mishap.

4. CONCLUSION

I find by a preponderance of the evidence, that the cause of the mishap was a bird strike that shattered the front cockpit canopy. Pieces of the shattered canopy entered both engines which caused the left engine to immediately seize and a compressor stall in the right engine. This resulted in insufficient thrust required to maintain level flight. As a result, the MP ejected from the aircraft and it shortly after crashed.

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14 April 2023

MICHAEL P. DRISCOLL, Colonel, USAF
President, Accident Investigation Board

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