NATIONAL TRANSPORTATION SAFETY BOARD NTSB Form 6120.1 PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

Email the pilot/operator aircraft accident/incident report to the investigator-in-charge of your accident/incident. If email is not available, mail the report per the instructions below.

If your accident/incident occurred in Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, the District of Columbia, Puerto Rico, or the US Virgin Islands, send the form to: NTSB, ERA, 45065 Riverside Parkway, Ashburn, VA 20147.

If your accident/incident occurred in Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, Arkansas, Louisiana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Colorado, or New Mexico, send the form to: NTSB, CEN, 4760 Oakland Street, Suite 500, Denver, CO 80239.

If your accident/incident occurred in Montana, Wyoming, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, or the territories of Guam or American Samoa, send the form to: NTSB, WPR, 505 South 336th Street, Suite 540, Federal Way, WA 98003.

If your accident/incident occurred in Alaska, send the form to: NTSB, ANC, 222 West 7th Avenue, Room 216, Box 11, Anchorage, AK 99513.

Rules pertaining to notification of aircraft accidents and incidents, as well as overdue aircraft are found in 49 *Code of Federal Regulations* (CFR) Part 830 http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/ Title49/49cfr830_main_02.tpl. These rules state the authority of the NTSB, define accidents, incidents, injuries, and other terms, and provide procedures for initial and immediate notification of accidents and incidents by aircraft pilots/operators.

A. APPLICABILITY

The pilot/operator of an aircraft shall send a report to the office listed above, based on accident/incident location; immediate notification is required by 49 CFR 830.5(a). The report shall be filed within 10 days after an accident for which notification is required by Section 830.5, or after 7 days if an overdue aircraft is still missing.

An aircraft accident, as defined in 49 CFR 830.2, is determined as an occurrence that involves a fatality or serious injury, or substantial damage to the aircraft. For occurrences that do not involve a fatality, the determination that the occurrence is an accident can be appealed by writing to the Director, Office of Aviation Safety, NTSB, 490 L'Enfant Plaza, S.W., Washington, D.C. 20594.

The NTSB uses this form for aircraft accident prevention activities and for statistical purposes. NTSB regulations (49 CFR Part 830) require that **ALL** questions be answered completely and accurately. Completion of this form will take approximately 60 minutes. The NTSB does not guarantee the privacy of any information provided in this form. You need not complete this form unless it displays a valid OMB control number, in accordance with 5 C.F.R. § 1320.5(b), which applies to this collection of information.

B. DEFINITIONS

- 1. "Aircraft Accident" means an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death, or serious injury, or in which the aircraft receives substantial damage. For purposes of this form, the definition of "aircraft accident" includes "unmanned aircraft accident," as defined at 49 CFR 830.2.
- 2. "Substantial Damage" means damage or failure that adversely affects the structural strength, performance or flight characteristics of the aircraft, and that would normally require major repair or replacement of the affected component. NOTE: Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairing or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered "substantial damage" for purposes of this report.
- 3. "Operator" means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.
- 4. "Fatal Injury" means any injury that results in death within thirty (30) days of the accident.
- 5. "Serious Injury" means any injury that (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fracture of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

INSTRUCTIONS TO PILOTS/OPERATORS FOR COMPLETING THIS FORM

It is necessary that ALL questions on this report be answered completely and accurately.

If more space is needed, continue on a blank sheet of paper.

Nearest City/Place: Use the name of the nearest community in the state where the accident/incident occurred.

Date Time: Indicate the date and local time of the event. Be sure to indicate the time zone.

Phase of Operation: Indicate the phase of operation during which the accident/incident occurred.

Aircraft Information: Enter aircraft make and model information as indicated on the aircraft registration certificate, including series. If the involved aircraft is certified as "amateur-built," include the name of the producer of the kit or plans, unless an NTSB employee instructs otherwise

Maximum Gross Weight: Enter the certificated maximum gross weight for the aircraft involved in the occurrence. This should be the same as the maximum gross weight indicated on the aircraft weight and balance documents.

Engine: Enter engine make and model information as indicated on the engine data plate.

Type of Fire Extinguishing System: If a fire extinguishing system was used to fight an aircraft fire, specify the type(s) of extinguishing system(s) used. Examples include handheld extinguisher, engine fire bottle, cargo/baggage compartment fire suppression system, or airport emergency ground equipment.

Owner/Operator Information: Enter the owner information as shown on the registration certificate. Commercial operators, enter the operator information, including "doing business as" when applicable, as shown on the operator certificate.

Revenue Sightseeing Flight: Indicate whether the accident aircraft was conducting **revenue** sightseeing operations under 14 CFR Part 91 at the time of the accident

Air Medical Flight: Indicate whether the accident flight was being conducted for the purpose of carrying medical personnel, patient(s), or organs.

Public Aircraft: Federal, state or local government flight operations such as official travel, law-enforcement, low-level observation, aerial application, firefighting, search and rescue, biological or geological resource management, or aeronautical research. Indicate whether the flight was conducted by the armed forces, federal, state, or local government.

Purpose of Flight: 14 CFR Parts 91, 103, 133, 136, and 137: Indicate the type of operation that was being conducted at the time of the occurrence using the following definitions:

AERIAL APPLICATION--Operations using an aircraft to perform aerial application or dispersion of any substance. Examples include agricultural, health, forestry, cloud seeding, firefighting, insect control, etc.

AERIAL OBSERVATION.—These flights include aerial mapping/photography, patrol, search and rescue, hunting, highway traffic advisory, ranching, surveillance, oil and mineral exploration, criminal pursuit, fish spotting, etc.

AIR DROP-Aerial operations, other than aerial application, that are intended to release items in flight.

AIR RACE/SHOW.-Includes any flight operations conducted as part of an organized air race or public demonstration.

BUSINESS--includes all personal flying without a paid professional crew for reasons associated with furthering a business, including transportation to and from business meetings or work. This does not include corporate/executive operations, air taxi, or commuter operations.

EXECUTIVE/CORPORATE—Company flying with a paid professional crew.

FERRY-Non-revenue flight under a special flight or "ferry" permit. Refer to 14 CFR 21.197 for details of special flight permit issuance.

FLIGHT TEST.-Flight for the purpose of investigating the flight characteristics of an aircraft/aircraft component or evaluating an applicant for a pilot certificate or rating.

INSTRUCTIONAL.-Flying while under the supervision of a flight instructor or receiving air carrier training. Personal proficiency flight operations and personal flight reviews, as required by federal air regulations, are excluded.

OTHER WORK USE.—Miscellaneous flight operations conducted for compensation or hire such as construction work (not 14 CFR Part 135 operation), parachuting, aerial advertising, towing gliders, etc.

PERSONAL--Flying for personal reasons (excludes business transportation) including pleasure or personal transportation. This also includes practice or proficiency flights performed under flight instructor supervision and not part of an approved flight training program.

POSITIONING—Non-revenue flight conducted for the primary purpose of relocating the aircraft. Examples include moving the aircraft to a maintenance facility or to load passengers or cargo etc.

UNKNOWN--Use only if the primary purpose of flight is not known.

Other Aircraft—Collision: For all accidents involving a collision with another aircraft, including parked aircraft, check "Collision with other aircraft" under Basic Information and complete this section indicating details about the OTHER aircraft involved in the collision.

Airport Information: Complete this section if the accident/incident occurred on approach, landing, takeoff, departure, or within 3 statute miles of an airport. Please refer to the FAA Airport/Facility Directory or other official source for airport information.

Airport Identifi : Provide the official 3 or 4 character airport identifier number.

Runway: Indicate the number of the runway used, including L, R, or C if applicable.

Runway/Landing Surface: Indicate the type of intended runway/landing surface (do not indicate surface conditions). If the surface type was mixed, check all that apply.

Condition of Runway/Landing Surface: Indicate the condition of the intended runway/landing surface. If multiple conditions existed at the time of the accident, check all that apply.

Weather Information at the Accident/Incident Site: Indicate the weather conditions reported at the accident/incident site at the time of occurrence. If no weather reporting was available for the accident/incident site, indicate the reported conditions at the nearest reporting site. Specify the weather reporting site identifier, the observation time, and distance from the accident/incident.

Sky/Lowest Cloud Condition: Indicate the height above ground level of the lowest cloud condition present at the time of the accident/incident and whether coverage was reported as few, scattered, broken or overcast. Also indicate the height above ground level and coverage of the lowest cloud ceiling present at the time of the accident/incident (reported as broken or overcast).

NOTAMS (*D* and *FDC*), *AIRMETs*, *SIGMETs*, *PIREPs*: Describe all NOTAMS (distant (D) or Flight Data Center (FDC), if known), AIRMETs, SIGMETs, and PIREPs in effect near the accident/incident.

Flight Crewmember Information: Indicate the category that best describes the capacity served by this flight crewmember at the time of the accident. The designators "Flight Crewmember 1" and "Flight Crewmember 2" do not refer to a specific pilot position or responsibility. If more than one pilot is aboard, they may be entered in any order and their capacity entered as appropriate.

Degree of Injury: See Definitions on the top half of Page 1 of the instructions. Minor injury is not defined. If an injury does not meet the criteria for another injury category, select Minor.

Date of Last Flight Review or Equivalent: Enter the date of the most recent flight review, or equivalent, completed by this pilot. Refer to 14 CFR 61.56 for accepted equivalents.

Type Ratings: List all type ratings on the pilot certificate. If the pilot holds no type ratings indicate "none." If the pilot holds a pilot certificate other than student and was flying an aircraft requiring an endorsement, enter the type and date of any logbook endorsement(s) for that aircraft. See 14 CFR 61 for examples of required endorsements.

Student Endorsements: If the pilot holds a student pilot certificate, enter all solo endorsements and dates on the student pilot certificate.

Flight Time: Complete the flight time matrix. Solo flight time should be included as "Pilot-in-Command (PIC)" and all dual flight instruction given should be included as "Time as Instructor."

Additional Flight Crewmembers: Complete this section if there were more than two required flight crewmembers on the aircraft. This also includes a check airman performing official duties but does not include cabin crew. State the capacity served by each included crewmember at the time of the accident.

Passenger(s)/Other Personnel: Enter identification and injury severity information for all passengers, cabin crew, and other personnel involved in the accident. See Page 1 of the instructions for the official definition of injury levels.

Several questions throughout the form allow for multiple responses; when appropriate, choose all responses that apply.

These instructions only pertain to major issue areas covered by NTSB Form 6120.1 *Pilot/Operator Aircraft Accident/Incident Report*. For additional definitions of questions and responses, please refer to www.ntsb.gov.

NATIONAL TRANSPORTATION SAFETY BOARD PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

This form to be used for reporting civil and public aircraft accidents and incidents

BASIC INFORMA	NOITA										
Accident/Incident Loc	ation		Accident/Inciden			lent Date/T	ent Date/Time				
Nearest City/Place: Fulled ZIP: 92833	erton			_State: _	Da Da	ate:08	242016	Lo	cal Time:	6:00pm	
ZIP: 92833	Country: Uni	ted States				mm/de	d/yyyy	T:	me Zone:	PDT	
Latitude:		Longitude:						11	me Zone		
(Enter in decima	il degrees or a	legrees minutes sec	conds)		Ce	ollision with	Other Air	eraft: () Midair	⊚ On-groun	d ONone
AIRCRAFT INFO	RMATIO	N									
Registration Number:	N16FD					✓ IFR-Equip	-				
Manufacturer: SIAI	Marchetti					☐ Commerci		ght			
Model: SF260					N		oss Weigh	t: 2430		lbs	
Serial Number: 305					v	Veight at Tin	ne of Accid	ent/Inci	dent: ²³⁰	07	lbs
Year of Manufacture:	1977				N	umber of Se	ats: 2		Flight Cre	ew Seats: 1	
Amateur-Built: OYes	If Yes	Kit/Plans Mal	ke:		C	abin Crew Sea	ts:		Passenger	Seats: 1	
⊚ No	(Original Design			N	umber of E	ngines: 1				
Category of Aircraft		irworthiness Ce	rtificate		Landing Gear			Engine	e Type (Se		
Airplane Balloon	(Check all t				(Check all that a	<i>pply)</i> tractable			procating o Shaft	OLiqui OSolid	d Rocket
OBlimp/Dirigible	Norma	l Restric			✓ Tricycle		ailwheel	O Turb		_	d Rocket
OGlider OGyroplane	Aerob Balloo					_		O Turb O Turb		O None O Unkn	
OHelicopter	Comm	uter Special	l Flight		☐ Amphibian ☐ Emergency F	cy Float □Skid ○Elec				Conki	OWII
O Powered Lift O Rocket	Transp				☐Float ☐Hull	□s □s	ki ki/Wheel				
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OUnknown		of Authorization		(COA)	Other Launch			Caro	ureioi	O Fuel-	шјестеа
<u> </u>	None	<u>L</u>	Unknown		None	Date	Inknown Rated Pow		Total	Time	C:
		Engine			acturer's	of Mfg.	Horsep	ower or	Time	Inspection	Overhaul
Engine Engine Manufa Eng 1 Lycom ng	cturer	Model/Series O-540-D4A5		Serial I	Number	mm/dd/yyyy	O 1bs of 7	Chrust	(hours)	(hours)	(hours)
Eng 2		0 0 10 0 11 10									
Eng 3											
Eng 4											
Last Inspection Type			Propello	er 1	○Fixed Pitch ○Controllab	Tropener 2			Ditab		
	tinuous Airwo				ŌC1 A :	14.5					
OAAIP OCon OAnnual OUnk	ditional Inspec	ction	Manufac	turer:	Hartzell		Manu	facturer:			
Date Last Inspection:	05/00	16	Model: _				Mode	1:			
Date Last Inspection.	mm/dd/yy	yy .	ELT Ins	stalled:	● Yes ○ No	•		_	ipment <i>(</i>	Check all that	apply)
Airframe Total Time:		hrs	If Yes				ZAD: □Airf	S-B rame Para	chute		
hours measured at (S OLast Inspection		ccident/Incident			er: .:				ck Indicato	r	
			TSO No.:		(121.5 MHz) O C9	91a (121.5 MH	z) Auto	opilot a Recorde	r		
Type of Maintenance Program (Select one) • Annual				-	6 (406 MHz)		T-1			Handheld De	vice
O Conditional (Amateur-built only)			l		unted in aircraft? mected to antenna		TI Elea		ıltifunction mary Fligh		
O Manufacturer's Inspection Program O Other Approved Inspection Program (AAIP)					? © Yes O No		□Han	dheld GP	S		
O Continuous Airworthiness			If activa				Onb	ds Up Dis oard Wea			
		<u> </u>	ł		ocating Aircraft:	OYes ONo	Sate	llite Tracl	king Device	e	
	tinguishing	System			Impact Damas	Te.			System ing Device		
O Specify:					Fire Damage					1 530; HSI	
					■ Battery Expire Unknown	ed/Damaged					
O Other, specify: Description of Fire Ex O None		System	_	Aid in L	Fire Damage Battery Expire	ge	Sate Stall	llite Tracl l Warning eo Record	king Device System ing Device		

OWNER/OPERATOR INFORMA	ATION							
Registered Aircraft Owner		City: Wilmington						
Name: N16FD, Inc. & Air Combat USA,	Inc.	State: Delaware ZIP: 19808						
Fractional Ownership Aircraft: O Yes	No	Country:						
Operator of Aircraft	gistered Owner	Same Address as Registered Owner						
Name: Air Combat USA, Inc.								
Doing Business As: Air Combat USA		State: CA ZIP: 92833						
Air Carrier/Operator Designator (4 Charact	er Code):	Country: United States						
Operating Certificates Held (Check all that apply)	Regulation Flight Conducted Un	der Revenue Operation for FAR 121, 125, 129, 135 (Select one for each group)						
None □ Flag Carrier Operating Certificate (FAR 121) □ Supplemental □ Air Cargo □ Foreign Air Carriers (FAR 129) □ Rotorcraft External Load (FAR 133) □ Commuter Air Carrier (FAR 135)	OFAR 121 OFAR 135 OFAR 0 OFAR 125 OFAR 137 OFAR 0 OFAR 91 Special Flight ONon-US, Commercial	431 Non-Scheduled or Air Taxi OInternational						
On-Demand Air Taxi (FAR 135) Commercial Air Tour (FAR 136) Agricultural Aircraft (FAR 137) Pilot School (FAR 141) Certificate of Authorization or Waiver (COA) Commercial Space Transportation Experimental Permit Commercial Space Transportation License Other Operator of Large Aircraft	ONon-US, Non-commercial OPublic Aircraft (Select one) O Armed Forces O Federal O State O Local OUnknown	Purpose of Flight for FAR 91, 103, 133, 137 (Select one) O Aerial Application O Aerial Observation O Air Drop O Air Race/Show O Instructional O Banner Tow O Business O Executive/Corporate Positioning O Unknown O U						
Revenue Sightseeing Flight	Air Medical Flight	O External Load O Skydiving O Ferry						
OYes ⊚ No	O Yes ● No							
AIRPORT INFORMATION (Fill in	if accident/incident occurred on app	proach, landing, takeoff, departure, or within 3 miles of an airport)						
Airport Name: Fullerton Airport		Distance From Airport Center:sm						
Airport Identifier: KFUL		Direction From Airport: degrees true						
Proximity to Airport: O Off Airport/Airstri	p On Airport/Airstrip ON/A	Airport Elevation: 96 ft. msl						
Runway Information Runway ID: 24 (L/R/C) Length: 3121 ft Width: 75 ft Runway/Landing Surface (Check all that apply) Asphalt Grass/Turf Macadam Water Concrete Gravel Metal/Wood Dirt Ice Snow Unknown Condition of Runway/Landing Surface (Check all that apply) Dry Snow-Compacted Water-Calm Holes Snow-Crusted Water-Choppy Runway/Landing Surface (Check all that apply) Runway/Landing Surface (Check all that apply)								
OTaxi OVFR Departure	© Takeoff OIFR Departure Procedure/Clearance OLanding OBase OGo Around							
IFR Approach (Check all that apply) ☑None		VFR Approach (Check all that apply) ☑None						
ADF/NDB PAR SDF Sidestep VOR/TVOR ILS VOR/DME Localizer Only TACAN LOC-back course RNAV	□MLS □Practice □LDA □GPS □ASR □Visual □Contact □Circling □Unknown	Traffic Pattern Stop and Go Straight-In Touch and Go Valley/Terrain Following Simulated Forced Landing Go Around Forced Landing Full Stop Precautionary Landing Unknown						

"FLIGHT CREWMEMBER 1" INFORMATION										
"Flight Crewmember 1" Res	sponsibilities at th	ne Time of A		ident Check Pil	lot OFlig	ht Engineer	Other I	Flight Crew		
"Flight Crewmember 1" was	•	_		CHECK FII	ioi 🔾 i ng	nt Engineer	Oulei	riight Crew		
"Flight Crewmember 1" Ide	ntification									
First Name: Jared					City of R	esidence: E	scondido			
Middle Initial: K					State: C/	4		ZIP:		
Last Name: Swan					Country:	United St	ates			
Age at time of	Age at time of Accident/Incident: 35 Date of Birth: 1980 mm/dd/yyyy									
			rtificate Num			1				
Degree of Injury	Seat Occupied				Restraint T	vpe			Inflatable F	Restraints
None O Fatal	O Left	O Front	O Unknov		Availabl		Used			
O Minor O Unknown O Serious		O Rear			O None	_	ONone		Not Inst	
		O Single			O Lap o		OLap only	y	☐ Installed ☐ Not Dep	i Noved
Pilot Certificate(s) (Check all			- TTG 3.6		○ 3-poi ○ 4-poi		3-point 4-point		Deploye	
None		mmercial rline Transpor	✓ US Mi rt Foreign	_	O 5-poi	nt	O 5-point		Unknov	
Student Sport		ght Engineer			O Unkn	iown	OUnknov	vn		
Principal Occupation M	Iedical Certificate	re			Medical Ce	rtificate Va	lidity	1	Date of Las	t Medical
		Class 3			Without lin		•	nknown	Dave of Lan	
			se (Sport Pilot	only)	OWith limit	ations/waiver				
<u> </u>	<u> </u>	Jnknown			O Special Iss	uance			mm/dd/yy	יעע
Medical Certificate Limitati	ons									
Medical Certificate Special 1	ssuance									
Special Services Special S										
Date of Last Flight Review		Flight	Review Airc	naft						
or Equivalent, Including	0514 0040									
FAR 121/135 Checks:	25May2016	_								
	mm/dd/yyyy	Model:				I				
Airplane Rating(s) (Check all that apply)	Other Aircraft R	0()	(Check all			(Check all	r Rating(s)			
None	None	<i>''y)</i>	`		y)	□ None	іпаі арріу)	-	Instrument	Aimlane
Single-Engine Land	■ Airship		None Airpla	ne		Airplan	e Single-Eng	ine	i	
Single-Engine Sea	Balloon		Helico	pter		✓ Airplan	e Multi-Engir		Helicopter	
✓ Multiengine Land Multiengine Sea	☐ Glider ☐ Gyroplane		Power	ed Lift		Gyropla Powere	ane Allife			
	Helicopter					Liowere	o Liit	_	Sport	
T D-4	■ Powered Lift					C4 1 1 T	21.	4- 6 : :	1	
Type Ratings None.						Student E	Endorsemei	its (Include d	dates)	
Flight Time (Enter appropriate	A.11	This 35-1	Airplane	42. 1		Inst	rument			T2-ba
number of hours in each box)		This Make & Model	Single Engine	Airplar Multieng		Actual	Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time	1,777	7.5	<u> </u>							
Pilot in Command (PIC)										
Time as Instructor										
This Make/Model										
Last 90 Days										
Last 30 Days										
Last 24 Hours	<u> </u>									

"FLIGHT CREWMEMBER 2" INFORMATION										
"Flight Crewmember 2" R OPilot OCo-Pilot			Accident/Inc	ident Check Pilot	OFlig	ht Engineer	OOther F	Flight Crew		
"Flight Crewmember 2" w	as pilot flying	Yes 1	No							
"Flight Crewmember 2" Id	lentification									
First Name:				c	ity of Re	sidence:				
Middle Initial:										
Last Name:										
	Accident/Incident:						/dd/yyyy			
1-9-11-11-11			ificate Numb							
Degree of Injury	Seat Occupie		illeane I valie		straint T	vne		Tı	nflatable R	estraints
O None O Fatal	OLeft	OFront	OUnknow	im .	Availabl		Used		minuable iv	esti aints
O Minor O Unknown O Serious	ORight OCenter	ORear			O None		O None		Not Inst	alled
		OSingle			O Lap		O Lap only	y	Installed	
Pilot Certificate(s) (Check of None ☐ Flight			THE ME		O 3-poi O 4-poi		O 3-point O 4-point		■ Not Dep ■ Deploye	
Private Recre		ommercial irline Transpor	US Mi t □ Foreign		O 5-poi	nt	O 5-point		Unknow	
☐ Student ☐ Sport		light Engineer	_		O Unkr	nown	O Unknow	vn		
Principal Occupation	Medical Certificat	to		Me	dical Ca	rtificate Val	lidity	1	Date of Las	t Medical
O Pilot		Class 3				mitations/waiv	•	nknown	Date of Las	· meorem
O Other			se (Sport Pilot	only) O	With limit	ations/waivers				
O Unknown	O Class 2	Unknown		0	Special Iss	uance			mm/dd/yy	עע
Medical Certificate Limita	tions									
Medical Certificate Specia	l Issuance									
Medical Certificate Specia	1 135цацсе									
Data of Last Flight Davison		EU-L41	D	C4						
Date of Last Flight Review or Equivalent, Including			Review Airc							
FAR 121/135 Checks:										
	mm/dd/yyyy	Model:								
Airplane Rating(s) (Check all that apply)	Other Aircraft	017		ent Rating(s)	Instructor				
None	(Check all that app ■ None	piy)	(Check all	that apply)		(Check all the None	at apply)		Instrument A	i-ulana
■ Single-Engine Land	Airship		Airpla	ne		☐ Airplane	Single-Engin		Instrument H	
Single-Engine Sea	Balloon		Helico	pter		Airplane	Multi-Engine	e 🗖	Helicopter	-
■ Multiengine Land ■ Multiengine Sea	☐ Glider ☐ Gyroplane		Power	ed Lift		☐ Gyroplan ☐ Powered			Glider Sport	
	Helicopter					Foweled	LIIt		Sport	
T. D.C.	■ Powered Lift					0, 1 :=	•			
Type Ratings						Student Er	idorsement	ts (Include d	ates)	
Flight Time (Enter approprie	ata An	This 35-1	Airplane	A !1	Τ	Insti	rument			T/-L
number of hours in each box)	All Aircraft	This Make & Model	Single Engine	Airplane Multiengine	Night	Actual	Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time										
Pilot in Command (PIC)										
Time as Instructor										
This Make/Model										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information)								
Crew Name and Addı	ress					Seat Occupie	ed	Injury
Middle Initial:	_	State:	ence:	ZIP:		O Left O Center O Right	OFront ORear OSingle OUnknown	O None O Minor O Serious O Fatal O Unknown
Pilot Certificate(s) (Check all that apply) None							pe: Used O None O Lap Only O 3-point O 4-point O 5-point O Unknown	Inflatable Restraints □ Not Installed □ Installed □ Not Deployed □ Deployed □ Unknown
Crew Name and Addı	ess					Seat Occupie	Injury	
First Name: City of Residence: OLeft OF ront OC enter ORear ORight OSingle OUnknown								O None O Minor O Serious O Fatal O Unknown
Pilot Certificate(s) (Check all that apply) None						Restraint Tyl Available O None O Lap Only O 3-point O 4-point O 5-point O Unknown	Used O None	Inflatable Restraints Not Installed Installed Not Deployed Deployed Unknown
PASSENGER(S) /	OTHER PERSON	NEL (Include	cabin crew; c	ontinue on s	eparate shee	t if necessary)		
Name and Address			Seat	Injury	Restraint T	уре	Inflatable Restraints	Age
First Name: Er k Middle Initial: K Last Name: Fu kerson OCrew	State: CA ZI	p: 91745	●Left ○Center ○Right ○Unknown Row:	None OMinor OSerious OFatal OUnknown	Available ONone OLap Only O3-point O4-point O5-point OUnknown	3-point 4-point 5-point	Not Installed Installed Not Deployed Deployed Unknown	Under 5 years If Under 5, O Child Restraint O Lap-Held O Unknown
First Name: Middle Initial: Last Name: OCrew	State: ZI	P:	OLeft OCenter ORight OUnknown Row:	O None O Minor O Serious O Fatal O Unknown	Available ONone OLap Only O3-point O4-point O5-point OUnknown	O 3-point O 4-point O 5-point	Not Installed Installed Not Deployed Deployed Unknown	Under 5 years If Under 5, O Child Restraint O Lap-Held O Unknown
First Name: Middle Initial: Last Name: OCrew	State: ZI	P:	OLeft OCenter ORight OUnknown Row:	O None O Minor O Serious O Fatal O Unknown	Available O None O Lap Only O 3-point O 4-point O 5-point O Unknown	O 3-point O 4-point O 5-point	Not Installed Installed Not Deployed Deployed Unknown	☐Under 5 years If Under 5, ○ Child Restraint ○ Lap-Held ○ Unknown
First Name: Middle Initial: Last Name: OCrew	State: ZI	P:	OLeft OCenter ORight OUnknown Row:	ONone OMinor OSerious OFatal OUnknown	Available ONone OLap Only O3-point O4-point O5-point OUnknown	O 3-point O 4-point O 5-point	Not Installed Installed Not Deployed Deployed Unknown	☐ Under 5 years

FLIGHT ITINERARY INFORMATION								
Last Departure Point	Т	ime of Departure				Type Fligl	ht Plan Filed	
Airport ID: KFUL	-	me: ≈6:00pm	Airport ID:			None None	O VFR/IFR	
City: Fullerton			City: Fulle	erton		O Compan O Military	y VFR O IFR VFR O Unknown	
State: CA	Ti	me Zone: PDT	State: CA			O VFR	VFK CIRRIOWII	
Country: United States			Country:	United States		Activated?	OYes ONo OUnknown	
Type of ATC Clearance/S	Service (Check all th	at apply)	<u> </u>					
✓ None ✓ VFR	Special VFR IFR		cial IFR R On Top		☐ VFR Flight Foll ☐ Traffic Advisory		☐ Cruise ☐ Unknown / NA	
Airspace where the accid	ent/incident occur Class G Demo Area Warning Area	☐ Mil ☐ Air	<i>apply)</i> itary Operations port Advisory A Training Area	s Area (MOA) rea	Special Air Traffic Cont	rol Area	Altitude of In-Flight Occurrence:	
☑ Class D ☐ Class E	Prohibited Area Restricted Area	☐ TRS	SA R 93		_			
WEATHER INFORM				IT SITE				
Source of Pilot Weather		IL AGGIDEN	IMICIDEN	T T	servation Facility	,		
(Check all that apply)	_				•			
National Weather Service		ompany		1	ime:			
☐ Flight Service Station ☐ TV/Radio		lilitary iternet						
Automated Report	■N	one		_	Accident Site:			
☐ Commercial Weather Serv ☐ On-Board Weather	ice (DUATS) U	nknown			Accident Site:			
_		Light Conditi		Direction from	Accident Site.		degrees true	
Basic Conditions OVMC		Light Conditi	ODusk	ODeri	k Night OUr	ıknown		
OIMC		©Dawn	ONight ONight	_	tht Night	ikilowii		
OUnknown		O 2,	Ortight	U	,			
Sky/Lowest Cloud Condi	tion	Ceiling			Temperature:		(C) or(F)	
© Clear	O Thin Broken	None (Clear)	0	Obscured				
O Few	OThin Overcast	O Broken	_	Indefinite	Dew Point: _	((C) or(F)	
O Partial Obscuration O Scattered	OUnknown	O Overcast	0	Unknown	Altimeter Sett	ing:	in. Hg	
Lowest Cloud Condition	Height	Ceiling Heigh	•			or		
	ft agl		•	ft agl				
Wind Direction	Wind Speed		Wind Gusts		Visibility	10+		
■ Variable	□ Calm		✓ Not Gustin					
	Light and V	ariable	1100 01011			-		
Direction: 260 degrees tr	ue Speed:	kts	-or- Speed:	kts	RVV Density Altitu		miles ft	
Intensity of Precipitation		oitation (Check all t			-		Check all that apply)	
OLight	None	Drizzle	Freezin	a Dain	None None	•	Fog	
O Moderate	Rain	Ice Pellets	Snow S		Blowing Du		Ground Fog	
OHeavy	Snow	Snow Pellet		ets Shower	☐ Blowing Sa		Haze	
●N/A	Hail	Snow Grain		ng Drizzle	☐ Blowing Sn ☐ Blowing Sp		Ice Fog Smoke	
OUnknown	■ Rain Showers	Ice Crystals			Dust		Unknown	
Icing Forecast		Icing Actual			Turbulence			
Amount Type		Amount	Туре		Type (Check a	ll that apply)	Severity	
● None O N/A		None	ON/A		None	11 07	Light	
O Trace O Rim		O Trace	O Rime		Clear Air Terrain-Ind		■ Moderate ■ Severe	
O Light O Clea O Moderate O Mixe		O Light O Moderate	O Clear O Mixe		Convective		Extreme	
O Severe O Unk		OSevere	O Unkı					
OUnknown		OUnknown						
NOTAMs (D and FDC	, AIRMETs. SIG	GMETs. PIREPS	s in effect at	the time of t	he accident/inci	dent:		
None applicable.	,,			James OI L	modern mer			
I								

DAMAGE	TO AIRCRAFT AI	ND OTHER PRO	PERTY		
Aircraft Dam		Aircraft Fire		Aircraft Explosion	
O None O Minor	O Substantial Destroyed Unknown	O None O In-Flight O On-Ground	O Both Ground and In-Flight O Fire at Unknown Time O Unknown	None In-Flight On-Ground	O Both Ground and In-Flight O Explosion at Unknown Time O Unknown
Description o	f Damage to Aircraft a	nd Other Property (Use additional sheet if necessary)		
Minor damag	e to other ground airci	raft and hangar door	г.		
Accident airc	raft total loss.				
NARRATIVI	E HISTORY OF FLI	GHT (Please type or	print in ink)		
wreckage dist		ent. Attach extra sheet	g circumstances leading to and nat ts if needed. State departure time and		
See attached	l Evidentiary Statemer	nts from Pilot (PIC) a	and Passenger.		

RECOMMENDATION (How	v could this a	accident/incident ha	ve been pre	vented?)				
Operator/Owner Safety Recomm Possible/probable inadequate managment no longer employ	or deficient	prior maintenance	practices b	y a 3rd p	arty company	responsible under	previous op	erator
Additional possibility of sabota	age.							
MECHANICAL MALFU			e space is n	eeded, co	ntinue on sepa	rate sheet)		
Was there Mechanical Malfun (If yes, list the name of the part, man			cribe the failu	re.)			Total Tim On Part	e/Cycles
See attached evidentiary stat Supervision at scene.	tement by F	AA Certified IA/A&F	P (AMT) me	chanic or	n-scene under	FAA Investigator		Hours
Also Evidentiary Statements	hv Owner F	Pilot in Command	and Passen	ger				Cycles
71130 Evidentially oldfornerits	by Owner, r	not in Command, t	and r dooon	goi.			Time Sinc	e This Part
								Overhauled/
								Hours
FUEL & SERVICES INF	ORMATI	NC						
Fuel on Board at Last Takeoff (Convert from pounds, as necessary)		Fuel Type O 80/87	O 115/145		O I-AD	0.04		
(Convertition pounds, as necessary)	Gallons	O 100 Low Lead	O 115/145 O Jet A		O Jet B O JP8	Other, specify _		
Other Services, if Any, Prior to		O 100/130	O Jet A-1		O Automotive			
Other Services, if Any, Prior to	<i>D</i> eparture							
EVACUATION OF AIRC	PAET							
EVACUATION OF AIRC			_	_				
Was an emergency evacuation				No				
Method of Exit – Describe how Both Pilot and Passenger sel	f extricated	themselves with the	e Pilot provi	iding assi	stance to Pass	senger to both unb	uckle from s	seat belt,
remove parachute inside coc narrow gap between canopy	kpit since it	was blocking passe	engers egre	ess, and a	assisted passer	nger by lifting him	up and out t	hrough a
helped passenger to the grou								. THE PHOL
OTHER AIRCRAFT C		M (16 - 1				ti 8 shi	-EU\	
OTHER AIRCRAFT – C		Cecena				Des	mage to Oth	er Aircraft
Aircraft Registration Number		irer:					Destroyed	Minor
Registered Owner of Other Air					Other Aircraft		Substantial	None
Name: Aviation Facilities, Inc.								
City: State: ZIP:				City:				
State: ZIP: Country:				State:		_ZIP:		
•)				

ADDITIONAL INF	ORMATIC	ON (Please type or print in ink)		
Use this space if addi	tional space	is needed for any answers.		
Please see attached	l Evidentia	ry Statements.		
			ETE AND ACCURATE TO THE BEST OF I	
Date of this Report	Name of	Pilot/Operator: All Combat OSA, Inc.		
mm/dd/yyyy		Check here to electronically sign this of		
If a Person Other tha		erator is Filing Report		
	_		Title:	
Signature:				
or C	heck here to	electronically sign this document		
NITOD A 23 AT 1	lant N	FOR NTSB I		Data Barrant B
NTSB Accident/Incid WPR16LA167		Reviewed by NTSB Regional Office WPR-AS	Name of Investigator Chris Shaver	Date Report Received 10/19/2016

Evidentiary Statement to the FAA

Inspection Authorized (IA) Aviation Maintenance Technician (AMT)

KFUL N16FD Plane Accident on 24 August 2016

- I, David Hillberg, an active A&P for 33 years with Inspection authorization authority of 30 years, am the current Inspection Authorized Airframe & Powerplant (A&P) certificated aviation mechanic for Air Combat USA, Inc., Certificate Number #
- 2. Relevant experience: From 1976 to 1978 Fire Technology; '78 to '81 Army Aviation (67 V , N , J) last soldier to earn by merit the aircraft crew member badge, (97.7% grade), NCO-PLC graduate, soldier of the month honors, depot authorization for OH 58 helicopter repairs; '81 to '83 Orange Coast College Aviation Technology (Deans list); Various factory schools Embreair, Robinson, Sikorsky, Enstrom, Aerospatelle; Crash investigation experience Hiser Helicopters (in house accidents and customer aircraft recoveries); Eastman Aircraft (Contractor Ontario PD accident); Los Angeles Sheriff's Dept. (LASD in house incidents and accidents), Sheriffs commendation 1990.
- 3. I am a current Private Pilot rating in helicopter and land plane. (Total time of 2500 hours mixed.) Owner of an airplane and helicopters. Past DME test passed in 1988. Past DAR applicant.

Immediate Observations upon arriving on scene 6 minutes post crash.

- 4. My first thoughts were relief that the crew were away from the aircraft and uninjured. I was appalled to find the Fire Department was negligent in their training with aircraft accident and crash rescue techniques. I observed action with no purpose or no action required to render safe the crash scene, (Master switch on, boost pump on, fuel valve on, with a high volume fuel flow from the firewall entering onto the hangar floor). Another damaged aircraft was in need of defueling to reduce the spillage above and beyond the pig mat absorbent snakes and a five gallon over flowing plastic bucket. The crashed aircraft came to rest perpendicular under the hangar door with the crew seats directly below the lower door beam structure. The engine was inverted in the opposite direction of flight on the right wing. The left wing was Zed with the vertical hangar "I-beam" less than one meter from the fuselage.
- While at the scene and looking at the crashed aircraft I visually noted the left elevator was missing and the rudder was in full left deflection.
- This would be opposite of normal and expected take off right rudder control inputs. Later, both the Pilot and passenger stated to me they were pressing full right rudder to the stops with all the force they could, yet the tail rudder is clearly left.
- 7. Looking at the nose wheel that was sitting on the ramp, and that had departed the plane upon ramp impact, along with its impact points, I noted the nose wheel fork distortion was 90° to the impact path, indicating there was right rudder pedal control input.

Viewing of the AFI security video capturing the accident

8. Upon viewing the AFI security video with the FAA investigation



Evidentiary Statement to the FAA

Inspection Authorized (IA) Aviation Maintenance Technician (AMT)

KFUL N16FD Plane Accident on 24 August 2016

team, we all could see where N16FD's tail impact with the Cessna 172 caused N16FD's Elevator to contact the flap well on the taxiing Cessna.



At this precise moment the Pilot and Passenger are both pressing full Right Rudder Pedal with full force. The nose wheel is RIGHT but the Tail Rudder is LEFT!



9. This is combined then with the simultaneously PIC and passenger (a former pilot) constantly inputting full stop right rudder inputs. The Rudder at the tail should have been full right. But it was left both in the air and post crash on the ground.

Evidentiary Statement to the FAA Inspection Authorized (IA) Aviation Maintenance Technician (AMT)

KFUL N16FD Plane Accident on 24 August 2016

More Detailed Observations with FAA Investigation Team at Accident Scene

- 10. The scene was taped off and under 24 hour Police control and supervision. I was accompanied and Escorted by FAA Investigators, and was able to closely and in detail conduct preliminary observations and initial examination of N16FD. Specifically to look inside the tail or empanage section relevant to my noted observation when we all viewed the video.
- 11. The FAA investigators requested I remove the tail cone and left side access panel for their inspection I noted the horizontal stabilizer spar was displaced from the fuselage bulkhead (later to be found at the first point of aircraft to aircraft contact).
- 12. The stabilizer spar exhibited a very heavy contact mark from the left rudder horn cable attachment point; indicating full left deflection when the spar was displaced when the elevator left the aircraft on its impact with the Cessna on the ground.
- 13. Inspection of the opposite side showed there were no marks on the right side, only the left, further confirming the tail rudder was indeed at full deflection left at *first* impact.
- 14. I noted that the nose wheel that departed the aircraft was deformed to indicate a right yaw at time of it's structural failure at time of impact.
- 15. This is critical for the marks show clear and convincingly, beyond any reasonable doubt, the impact from N16FD while still airborne, separated the tail internally and proves the tail was in fact left, not right as it should have been if responding to right rudder commands by the Pilot. As the nose wheel also proves was in fact the case. And as both the Pilot and Passenger have attested personally to me was the case.
- 16. I pointed out the marks to Mr. Rick Hutton, the lead FAA Investigator, and observed him thereupon taking photos of the marks.
- 17. He also took photos of the cables in the aft tail boom however in my expert opinion the cables would always show control continuity in that visible area but will not show rigging, tension, or control position at time of impact, only continuity.
- 18. Those photos I presume are part of the investigation case record and I do not have copies nor access to them to present here.
- 19. While at the scene with the FAA, I also noted the engine was laying on top of the right wing (180° turn around due to the front of the plane's impact with the hangar door during the crash); this precludes adequate inspection of the cable control routing system to the rudder pedals.
- 20. The rudder cable control routing system is adjacent with the engine mixture control cable system and as discussed below, is a possible causal factor to consider.

Relevant post crash observations on remaining Marchetti aircraft in fleet

Evidentiary Statement to the FAA

Inspection Authorized (IA) Aviation Maintenance Technician (AMT)

- 21. In follow up maintenance actions to two other fleet SF260 Marchetti aircraft has resulted in several findings that may be examples of possible contributing causes of the accident aircraft. These potential contributory factors have yet to be investigated further.
- 22. I am currently inspecting an identical Marchetti (N272C) in the Air Combat fleet undergoing its annual inspection and have noted several discrepancies associated with loss of control items.
- 23. One of particular critical note to this accident is the mixture control cable to engine mount bracket was loose, where it's lateral and vertical movement will cause contact with the rudder tiller bar.
- 24. In one instance freezing all pedal inputs from the crew (similar effect therefore like a gust lock).
- 25. In other instances this could be restricting rudder movement to either extreme of control inputs.
- 26. A video was taken of this rudder pedal nose wheel tiller bar control and throttle control interface and submitted directly to Mr. Chris Shaver of the NTSB, who now has this footage.
- 27. This is yet again indicative the prior third party maintenance company under the direction of the prior management of Air Combat, was not performing adequate routine, 100hr, or annual maintenance inspections.
- 28. I noted before the accident flight (I was part of the crew in aircraft number One for the training flight. Aircraft number Two was the crashed aircraft), and commented that on the gun sight point of reference between the two aircraft, ours (number One) was targeting a ramp sitting Cessna wing level, and the accident ship was targeting the top of the trees 7 meters above the hangar roofs. This nose strut extension shows another part of rigging issues. This may have been a contributory factor to the accident aircraft because the nose strut was too high and somehow the rudder failed during the takeoff roll which was aggravated even more by the higher nose wheel strut extension. It is also another indicator of poor maintenance by the prior maintenance company, as used by Air Combat under prior management at the time.
- 29. Two (2) inspections thus far have found on two (2) sister aircraft with pilot side rudder interconnect cables in imminent failure mode (over 50% strand separation); all other cockpit cables were found to be unserviceable.
- 30. One (1) sister aircraft previously had it's cables inspected as witnessed in the previous inspection sign off (a 200 hour prior) and this suspect cable was said in that sign-off to have been inspected and found "OK." This pilot interconnect cable was actually in a dual location failure mode.
- 31. Photos of these cables have been sent to Mr. Chris Shaver of the NTSB by Michael Blackstone.
- 32. Upon these findings of inspections to the sister aircraft, it is my recommendation to current company management that a further investigation of the rudder flight control system for failure, improper maintenance or servicing, rigging, and interference by other aircraft related systems, be conducted.

David Hillberg (IA A&P) Evidentiary Statement to the FAA Inspection Authorized (IA) Aviation Maintenance Technician (AMT)

33.	I want to make mention here that the design of the rudder control system is unique to this aircraft where
	all tension for rudder control travels through the pedals of both crew, the nose wheel steering, and
	traveling on opposite sides of the aircraft before crossing in the tail cone. This design has several
	points where a failure of one will cause loss of control of the aircraft. (The manufacturers illustrations and
	drawings will show this).

Respectively submitted,	
/s/	Date: October 19, 2016
David Hillberg, IA/AMT	
Air Combat USA, Inc.	

KFUL N16FD Plane Accident on 24 August 2016

1. I, Maj. Jared K. Swan USMC, was the Pilot in Command of accident aircraft, and SIAI Marchetti SF260 model, tail number N16FD.

Relevant background and Aviator qualifications:

- 2. I am first and foremost a decorated Officer in the United States Marine Corps. I am fortunate enough to have gone through the most rigorous and demanding flight school to earn my wings of gold as a Naval Aviator.
- 3. As of the date of the accident, I had total hours of one thousand seven hundred and seventy seven (1,777) hours, with one thousand five hundred and thirty seven (1537) in military flight time. During my ten (10) years of military flying, I have had the honor to fly a multitude of aircraft. My primary aircraft is the F/A-18 Hornet.
- 4. I have flown dynamic and complex combat missions in support of Marines and Coalition ground forces, in which I routinely make safe decisions airborne in a timely manner, which affect the lives of many individuals.
- 5. I am a carrier aviator with over two hundred seventy (270) successful landings on an aircraft carrier, both day and night. Throughout my career, I have two thousand seven hundred thirty-six (2,736) take offs and landings. Some of my military credentials include the following:
 - 4 Plane Flight Leader
 - Aviation Safety Officer
 - Crew Resource Management Instructor
 - NATOPS Evaluator
 - F/A- 18A-D Post Maintenance Functional Check Flight Stan Evaluator;
 - T-34C Post Maintenance Check Pilot;
 - F/A-18A- D Instructor Pilot; and
 - T- 34C Instructor Pilot.
- 6. In addition to my above military experience, I also have over two hundred thirty-seven (237) hours of civilian/general aviation flying experience.
- 7. I hold the following civilian certifications:
 - Airline Transport Pilot (ATP)
 - Airplane Multi Engine Land rating
 - Airplane Single Engine Land with commercial privileges rating
 - Tailwheel Endorsement
 - Certified Flight Instructor Airplane (CFI)
 - Certified Flight Instructor Instrument (CFII)

KFUL N16FD Plane Accident on 24 August 2016

8.	I am currently assigned to MARINE FIGHTER ATTACK TRAINING SQUADRON	. The
	largest flight squadron in the Marine Corps.	•

- 9. Additionally, I serve as an F/A-18A-D Hornet Instructor Pilot (IP); a T-34C Turbo Mentor Instructor Pilot; and also serve as the Squadron Flight Safety Officer.
- 10. In addition to the above listed jobs, I am also a Landing Signal Officer, which means I stand on the side of the landing area on an aircraft carrier and ensure pilots are making a safe approach to the ship.
- 11. I have worked extremely hard in my life to get where I am. I do not take anything for granted, and always place safety as my first priority in aviation.

Aircraft in-type experience:

12. At the time of the incident I had 7.6 hours in the SF260 Marchetti with 36 take offs and landings.

Statement as to my rememberance of the accident:

- 13. The purpose of the flight was to do a customer training flight simulation. The passenger who flew with me, Mr. Erik Fulkerson, is an employee of Air Combat USA, and has prior flight experience as he stated to me, of sixty (60) flight hours with two (2) solo flights, and he said he is not a certified pilot.
- 14. The purpose of the training simulation was to better simulate what a customer flight would feel like, with a passenger sitting next to me, and the additional weight load in the aircraft.
- 15. There are only two (2) seats in the Marchetti aircraft. Tandem arrangement. The seat on the left is where a customer or passenger would sit.
- 16. On the date of the incident, the flight lead (Mike Blackstone, President of Air Combat USA, Inc.) and I spent a considerable amount of time briefing the flight discussing everything from takeoff to landing in great detail.
- 17. I had flown the exact same flight the day prior almost at the exact same time under similar conditions.
- 18. The passenger and I suited up with flight suits and parachutes and walked to the N16FD and climbed into the aircraft in our respective seats.
- 19. As I was helping the passenger strap in, I noticed the takeoff trim was not set for takeoff, so I paused and set the takeoff trim to the appropriate setting.
- 20. I then went methodically through the checklist item by item because I am a firm believer that if you go through a checklist, you can only do things correctly. By going through the checklist, I would read off the step, physically touch the item, note where it was and then read out the action per the checklist to ensure the item is correct.

- 21. The only abnormality to the checklist on this preflight check was the transponder circuit breaker. When we were flying the day prior, with this same aircraft, air traffic control (ATC) was complaining that our transponders were stepping on each other. I could not get the transponder to squawk standby, so I elected to turn off the transponder via pulling the circuit breaker. Everything else on the checklist was set properly.
- 22. We taxied as a flight to the engine run up area and performed the engine run up checklist.
- 23. 9 The only abnormality here was the magneto check. They initially did not check correctly, so I leaned the mixture, reset the mixture to rich, and the magnetos checked good.
- 24. Once we were done with the run up and waiting for the flight lead, I performed the takeoff checklist, which included a wipe out of the flight controls. I elected to hold off on the rudder pedals until we were taxing due to the fact that this aircraft has nose wheel steering. I did not want the nose wheel to grind on the pavement. I also held off the lights, mixture to rich, and the fuel boost pump until we were taking the runway. Once we started to taxi, I moved the rudder pedals left and right and everything felt as if it was normal. There are no mirrors in this aircraft and I did not physically turn my head to see if the rudder was giving me the appropriate response because I was concerned with the safe taxi of the aircraft.
- 25. Approaching the hold short, I asked the passenger if he was ready to go, to which he replied "Yes". The flight switched to tower frequency, I heard the takeoff call, the clearance for takeoff. The flight lead took the runway centerline and I held roughly on a heading of 330 degrees waiting for him to start his takeoff roll. Once the flight lead started his takeoff roll, I taxied to runway heading, 240 degrees and held until the flight lead broke the runway surface and took off.
- 26. I then slowly pushed the throttle to max and noted a right to left cross wind (very light) and mentioned it to the passenger and applied a little more right rudder and right aileron. Once the airspeed came alive, I commented "airspeeds alive, engine instruments are in the green."
- 27. Approaching rotation speed, I gently lifted the nose wheel off the runway and held that attitude waiting for the aircraft to become airborne.
- 28. My normal habit patterns for this aircraft during takeoff are as follows:
 - Note airspeed alive
 - check the engine instruments
 - come back up and cross reference airspeed.
 - I gently pull the nose wheel off the runway and maintain directional control with rudder.
 - I hold that nose attitude until the aircraft flies off the runway, note the positive rate of climb, bring the
 gear up, give slight forward stick pressure, a little nose down trim, and accelerate to 90 MPH and
 bring the remaining flaps up.
- 29. This rotation was different. Once I lifted the nose wheel off the ground, I noted a slight drift to the left, which was nothing substantial. But 2-3 seconds later the main wheels coming off the runway, the

KFUL N16FD Plane Accident on 24 August 2016

airplane was airborne and the aircraft started a very gentle roll to the left and a yaw to the left that I could not correct. I knew immediately at this instance that this was not a normal take off. I made a deliberate decision to leave the landing gear in the down position because I thought that we may touch down and I did not want to touch down on the belly of the aircraft.

- 30. I understand how P Factor and lift works. I teach F/A-18 pilots in the sim that justz because you are in a jet aircraft does not mean that you can just pull the nose back. Sometimes, you need to push forward on the stick to get lift back on the wings to get the airplane to fly.
- 31. In this case, I could not control the aircraft.

Respectively submitted

- 32. I vividly remember pushing all my force on the right rudder so much so that the parachute was digging in the bottom right of my back as I was pushing as hard as could on the right rudder.
- 33. I also noted a slow roll to the left and tried to correct with right aileron. I could no longer see the runway from the left side of the aircraft as I was sitting on the right. I asked the passenger to help me with the stick as I thought my stick may not be responsive. I wanted to put the airplane down within the confines of the airfield.
- 34. Shortly after thinking this, I felt what I thought was the left wing tip tank hit, followed immediately by hitting the ground and feeling the aircraft slide towards a closed hangar.
- 35. I cannot account for the drift left post becoming airborne. The aircraft was unresponsive to any of my control inputs.
- 36. I flew that aircraft like I had flown it each time before and how I was trained. I fought with the aircraft for control all the way to impacting the ground.

respectively submitted,	
/s/	Date: October 14, 2016
Maj. Jared Swan, USMC IP, ATP, CFII Air Combat USA, Inc.	·

Mr. Erik "Rik" Fulkerson Evidentiary Statement to the NTSB and FAA Passenger in accident aircraft

- 1. I was the passenger in the aircraft that had an accident on August 24th, 2016. I was uninjured in the accident and most grateful too that I did not sustain any injury.
- 2. I am a part-time executive employee at Air Combat USA, Inc. supporting my dear friend Michael J. Blackstone in company operations. As an employee passenger in the accident aircraft my role was to act as a "customer" in that training flight for the Pilot. That was also my first time flying in a Marchetti.
- 3. I am also currently the CEO for a lifestyle management firm as well as the CEO for an advanced clean energy R&D company. Previously I was the COO for an advanced clean energy start-up corporation with 24 principle research scientists and engineers reporting to me; CFO at a marketing strategy firm; General Partner in a Capital Management firm; VP for a flight simulator aerospace company; Director of Contracts, Proposal Mgr, Sr. Contract Negotiator, Program Manager, and Supply Chain Manager at the Aerospace companies of Raytheon and Boeing. I also have been a Firefighter/EMT for both Orange County Fire and CalFire. Additionally for ten (10) years I was in the USAF Auxiliary—Civil Air Patrol doing search and rescue, aerospace education, supporting their cadet program, and for half of that time I was the Public Affairs Director covering Orange and San Diego Counties with ten (10) squadron's public Information officers reporting directly to me. I remain active in the general aviation community. I was a student pilot at AFI at Fullerton Airport many years ago having logged sixty (60) hours with two (2) solos.
- 4. My initial impressions of the Pilot in Command (PIC), Maj. Jared Swan, from us getting ready for the flight, his briefing me, getting into the plane, getting seat belted, was what an outstanding role model he was, plus his preflight, run-up, and taxiing to the runway was the most professional and exemplary I had ever seen from any CFI (Certified Instructor Pilot).
- 5. I noted he had what I consider to be the exemplary practice of adherence to the checklist, reading each item out loud, touching the item, and confirming it's correctness out loud. He did the same on our take-off roll too calling out the phases. I was very impressed.
- 6. I was thinking he is the kind of CFI I want to have instruct me, and I still strongly feel the same now.
- 7. He demonstrated a safety first, by the book, positive fun attitude with a noteworthy demeanor and professionalism. I was highly impressed with him and remain so to this day.
- 8. My experience of that flight was that as soon as the nose wheel left the tarmac (runway) at rotation, there was an immediate slight yaw to the left, instantaneously followed by another second very pronounced yaw to the left around the time the main wheels had left the runway.
- 9. Having been a flight student before, and having practiced numerous stalls as part of primary flight training, it was obvious to me this was *not* a stall by any stretch, but extremely anomalous behavior of the plane.
- 10. I remember saying to myself "woa, this is wrong, something isn't right."

Mr. Erik "Rik" Fulkerson Evidentiary Statement to the NTSB and FAA Passenger in accident aircraft

- 11. As it was clear to me something was very wrong with the plane's behavior and its lack of any expected response to control inputs, I kept quite so as to not distract unnecessarily the pilot who was clearly aware something was wrong.
- 12. After that second pronounced yaw (not a left wing dip which would be more characteristic of a stall) I instantly looked down at both the rudder and stick to see what their positions were. For they should be in a right rudder with slight right stick control inputs as normal for take off; I noted then two critical observations, 1) the pilot was inputting more right rudder and more right aileron (stick) control inputs to correct the planes extreme misbehavior and the plane was absolutely non-responsive to his inputs, and 2) I observed him to go to full right rudder clearly attempting to save the take-off yet the plane remained completely unresponsive and not gaining altitude even though we were also at full power.
- 13. Within a second it seemed the plane had the left wing dip, as if only then entering a stall.
- 14. I had not touched any controls at all since entering the plane on the Passenger side, not during the taxi or take off. It was after rotation later and just before our crash when the PIC asked me too help, at which time I placed my right foot on the right rudder pedal and grabbed the stick.
- 15. As I said above, the pedal was already full stop pressed right and so was the stick to the right and had already moved back now in a last ditch effort to do something to avoid hitting planes and hangars looming before us. There really wasn't anything for me to do. It had already been done.
- 16. We thereupon hit the top of some other planes before hitting the ramp and sliding into a hangar at the AFI facilities on the field.
- 17. All of this occurred within seconds at a very high airspeed from rotation through the crash impact.
- 18. After the plane came to rest, the PIC made an exit path for us through the canopy on his side. He then heroically assisted me in getting extricated from the plane, including lifting me up through the gap, while fire was present next to him coming from the engine. He deserves a medal for his actions, presence of mind, and personal risk he took to assure my safety.
- 19. I also should make mention of the quick reaction and presence of the AFI fuel attendant who immediately after the crash, inquired as to our status, and when the PIC mentioned the fire, he yelled "Fire! Fire!" and he went and got a fire extinguisher and quickly used it successfully to put out the fire. His quick actions in getting and correctly using a fire extinguisher were heroic and stopped things from becoming worse.
- 20. After the PIC and I both made it out of the hangar, I turned around to survey the crash site. I personally observed and noted that the rudder was in a left position upon impact.
- 21. Given that I had been involved in numerous aircraft search and rescue operations with the Civil Air Patrol, aircraft accident investigations related thereto, aerospace safety education modules, a participant over the years in numerous FAA Wings Safety seminars, I felt I had a strong grasp of what had occurred and without any shred of doubt to me, this was clearly a mechanical malfunction.

Mr. Erik "Rik" Fulkerson Evidentiary Statement to the NTSB and FAA Passenger in accident aircraft

- 22. To me this was hard physical and factual evidence that supports beyond reasonable doubt in my mind a mechanical issue with that plane had occurred.
- 23. This made sense to me too because I myself witnessed full right rudder pedal depressed to the stops just after leaving the runway and had placed my own foot on the rudder pedal at the request of the pilot through impact, and never did the plane show any expected response to that type of control input.
- 24. I also have more than enough knowledge and experience to know that a "stuck" rudder in a left position unresponsive to any control inputs would likely lead to an unrecoverable stall or crash no matter how experienced the pilot flying the plane was.

Respectively submitted,	
	Date: October 15, 2016
Erik Fulkerson Air Combat USA, Inc.	

Mr. Erik "Rik" Fulkerson Evidentiary Statement to the NTSB and FAA

Passenger in accident aircraft KFUL N16FD Plane Accident on 24 August 2016

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	Date: October 15, 2016
Erik Fulkerson	
Air Combat USA, Inc.	

KFUL N16FD Plane Accident on 24 August 2016

- 1. I, Michael J. Blackstone, am the current Chief Pilot and President of Air Combat USA, Inc., and the accident aircraft was a SF260C Siai Marchetti, tail number N16FD, and is a company asset last placed back in service following a complete restoration overhaul in 2009.
- 2. This same aircraft on 20 June 2016 had been abandon in place at KISP by a contracted pilot who had quit that same day.
- 3. Additionally, while in place at KISP, the log book for N16FD shows that a 100 hour inspection was completed on 05 July 2016, by A&P Aircraft Maintenance, Inc., Ronkonkoma, NY.
- 4. On 20 July 2016 I flew to Islip, NY (KISP) and started a cross-country ferry trip of 16FD from KISP back to KFUL.
- 5. On my third leg of that same day ferry at KBRY upon take off I noted a slight uncommanded immediate left drift upon rotation. It was slight, unusual yes, but the plane responded right away to added corrective inputs and normal flight ensued for the remainder of the ferry.
- 6. Additionally, the right side Rudder Pedal had slight barely perceptible squeaking during all flights in the cross country ferry back to KFUL. The cause for the squeak was unknown.

Total Training I conducted at Air Combat for the Pilot in Command

- Beginning 20 July 2016 through 23 August 2016 at KFUL, I conducted and supervised use of 16FD for employee training. It was one of several other aircraft in our company fleet and also in the fleet of our strategic alliance partner Sky Thrills, LLC.
- 8. For the PIC of 16FD, he received during this time frame total training hours of 12.5, and a total of 87 take-offs and landings.
- 9. Until the accident flight there wasn't any reported, nor did I myself note, left drift upon rotation when that plane was used during these training flights.
- 10. Of the above total flights, N16FD comprised the following with the PIC: August 23rd, 4 dual takeoffs and landings; August 23rd, 4 solo takeoffs and landings; August 23rd, 4 combat simulation dogfights with an employee passenger; 1 take off and landing; and on the following day of August 24th, 1 takeoff and crash landing on take-off with physical evidence of mechanical malfunction.
- 11. On August 23rd, the day before the accident, as noted above, the PIC performed our company's standard fantasy flight air combat maneuvers within the established parameters, well within its published performance limits and below maximum performance allowed for the plane.
- 12. The previous intermittent mechanical issue of left drift at rotation noted during the cross country ferry, but absent during the prior training flights, takeoffs, and landings, may have been exacerbated by this combat maneuver training flight. The very next time that plane flew it crashed on take off due to uncommanded severe left drift immediately after the nose wheel left the ground, and opposite of control right rudder inputs. It must be noted that the rudder pedals also give directional control of the nose

KFUL N16FD Plane Accident on 24 August 2016

wheel when its on the ground. Once the nose wheel leaves the ground (or tarmac) the only control by the pedals is for the Rudder at the tail.

My Assessment of Mechanical Malfunction

- 13. My personal review of video of the crash (security cam footage from the accident location) and the physical evidence I witnessed of the aircraft immediately after the crash, where the tail was in a left position, all indicates in my opinion, compelling evidence of a mechanical malfunction or intentional tampering.
- 14. Visual observation post crash by all parties, myself included, indicates the Rudder was in an a left position. Noteworthy for that would be the opposite of the expected position and it was oppossite of the testimonly of the two occupants as to the rudder pedal inputs they both were giving.
- 15. Additionally, it was apparent from viewing of the crash footage, that the first tail impact separating the rudder from the fuselage, showed the tail rudder in a left position instead of the proper right position it should have been in. This is combined then with the simultaneously PIC and passenger (a former pilot) constantly inputting full stop right rudder inputs. The Rudder at the tail should have been full right. But it was left both in the air and post crash on the ground.
- 16. The previous day's 4 aerial dogfights in that plane, combined with a full left rudder nose wheel turn to make 180 turn onto the runway after having been cleared by the Tower during taxi, could've have been the combination of ingredients to finally cause the rudder to stick left.
- 17. No pilot regardless of skill can recover from a left rudder stuck at take off, when the rudder pedal also controls the nose wheel, which is common in many aircraft types, and such is the case in the Marchetti aircraft.
- 18. The other alternative is sabotage.

Spector of Sabotage is a verified legitimate concern

- 19. Because of physical evidence at the scene noted by Police, coupled with the history of court disputes involving control of the company, they treated the accident site as a crime scene. Nobody was allowed at the plane without supervision by the FAA Investigators.
- 20. A Police Officer was assigned to protect the crime scene for the next 24 hours until the NTSB removed the plane 1 day later. The plane was transported under chain of custody to a secure NTSB hangar for further forensic investigation.
- 21. The night prior to the accident date, 23 August 2016, N16FD for the first time was left out of the company's secure hangar and exposed overnight on the ramp with easy access under no observation. The security video system is motion sensor activated, however the sensors do not work at the distance of where the tie downs for that plane were located.

- 22. Why this could be more than coincidental is because the accident occurred the very next day, following a pivotal Court ruling re-affirming (for the third time) that I as the Trustee, was in fact in full control of the business.
- 23. The management team in place prior to that ruling, and since the passing of the prior owner which was my Father a year ago, had been refusing to comply with any of my directions as the new owner, including maintenance safety concerns highlighted for the Court. Immediately after that court ruling, the management team in place committed employee theft of an estimated \$800K of company property, which is still an open criminal investigation as of this writing by the local police department.
- 24. This collection of disgruntled employees lied to by the prior management, includes two A&P mechanics that were part of the employee theft ring. Given the state of the animosity it hasn't been ruled out that tampering or sabotage on that plane could have occurred overnight. The first time for it to be out on the ramp and the very next day after the 3rd court ruling against them.
- 25. I performed a simulated tampering test on 12 September 2016 on an identical Marchetti SF260C (N751M): During this test, I myself removed the rear tail cone below the rudder exposing the entire linkage and cable assembly area for the rudder control.
- 26. Rear cone removal and access took less than 90 seconds. Replacement took longer but not over 2 minutes. Easily enough time to place a foreign object or to perform any other as yet undetermined tampering method to cause a rudder malfunction so that it cannot go to the right, or to limit its travel. (See photo.)
- 27. I conducted another simulated tampering test on 12 September 2016 with the side fuselage access panel. Again this took less than 20 seconds to remove and fully exposed the left rudder pulley and cable. Replacement of the panel was again less than 1 minute. (See photos.)
- 28. One immediate scenario that I think, in my expert experience, could explain a condition where the nose wheel (a push/pull rod linkage) would perform normally, yet the rudder would not ever go to full deflection in either direction by using the rudder pedals, is when a rear rudder cable had its tension purposely reduced or relaxed well below factory specifications, or simply poor or inadequate maintenance.
- 29. This above scenerio would pass a visual preflight inspection, as well as "free and correct" cockpit rudder and stick check of the flight controls.
- 30. There is no possible way for the pilot to verify during the pre-flight or run-up that the rudder deflection was within performance mandates, i.e. that the rudder actually achieves factory specified deflection limits of 30 degrees. This is a maintenance function and a critical demonstration of the fact that all pilots must trust their mechanics to complete all FAA required checks during scheduled maintenance.



KFUL N16FD Plane Accident on 24 August 2016

- 31. Low cable tension would cause a very low deflection of the rudder, or no deflection at all and would not be recoverable especially during take off, if little or no rudder deflection to the right was not achievable, as commanded by full right rudder pedal input. Such was the actual case for this take off where eye witness statements both stated the plane was completely unresponsive to right rudder pedal inputs once the nose wheel left the ground and further worsened after main wheel lift off.
- 32. During take off, if lift-off occurred at a slower speed than normal, i.e. in ground effect, the rudder deflection might not have been sufficient (or working at all) to counter the torque being developed during a maximum power takeoff with little or low tension in the independent rudder cable system. Regardless, if from purposed sabotage or negligent maintenance by the A&P/IA mechanics, this could also explain my own experience of left drift upon rotation during the ferry from New York to LA.
- 33. If a pilot were to be at or above flying speed before lift off, keeping the wheels down until sufficient speed was achieved, in this scenario a tampered with or otherwise reduced rudder cable tension, would also reduce the maximum deflection angle of the rudder itself, and that would be a critical and potentially fatal malfunction. Not otherwise detectable during normal flight operations.
- 34. One final possibility, is that the main gear struts were improperly inflated, (much lower than the other Marchetti aircraft in our fleet), or the nose gear strut was possibly over inflated making the aircraft taxi and take off with an exaggerated nose up attitude. This abnormally high sitting angle might have been a contributing factor in the accident. In addition, the passenger on the accident flight weighed 90 lbs more than the previous passenger occupant that had flown with the PIC during prior training flights, this affecting as well the angle of attack.

My Relevant Bio and Subject Expertise

35. Born into a flying family, I have been flying aerobatics since age 8 starting in my father's Pitts S-2A. I have flown over 3,000 fantasy combat missions all over the United States for Air Combat USA in the last 27 years in our SF-260s. I did my first solo in N16FD, the accident plane. Additionally, I am currently a Captain for major airline. I have flown over 19,000 hours during my 30 years of flying in everything from the Pitts S-2A/C, Extra 300L, Waco YMF-5C, Marchetti SF-260 B/C/D, to commercial jets including the Boeing 737-800, 757-200ER, 767-200/300ERs all over the world. I have a Bachelor of Science Degree from USC in Business/Finance/Entrepreneurship.

Respectively submitted,	
	Date: September 30, 2016
Michael J. Blackstone	•
President/Trustee	
Air Combat USA, Inc.	

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