

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 INFORMATION

Accident/Incident Location

Nearest City/Place: MAARANA State: AZ
 ZIP: 85653 Country: USA
 Latitude: 32.43 N Longitude: 111.39 W
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 10/06/2019 Local Time: 1300
mm/dd/yyyy
 Time Zone: Mtn Staud.

Collision with Other Aircraft: ☐ Midair ☐ On-ground ☒ None

AIRCRAFT INFORMATION

Registration Number: N600TT

Manufacturer: ELAN FLIGHT

Model: D4-500 ELAN TRAINER

Serial Number: 5E119 T50

Year of Manufacture: 1994

Amateur-Built: ☒ Yes ☐ No If Yes: ☐ Kit/Plans ☐ Make: ☐ Original Design

- ☐ IFR-Equipped and Certified
☐ Commercial Space Flight
☐ Unmanned Aircraft

Maximum Gross Weight: 1356.0 lbs

Weight at Time of Accident/Incident: 1281.0 lbs

Number of Seats: 2 Flight Crew Seats: 2

Cabin Crew Seats: 0 Passenger Seats: 0

Number of Engines: 2

Category of Aircraft

- ☐ Airplane
☐ Balloon
☐ Blimp/Dirigible
☒ Glider
☐ Gyroplane
☐ Helicopter
☐ Powered Lift
☐ Rocket
☐ Ultralight
☐ Unknown

Type of Airworthiness Certificate

(Check all that apply)

- Standard**
☐ Normal
☐ Aerobatic
☐ Balloon
☐ Commuter
☐ Transport
☐ Utility
☐ Certificate of Authorization or Waiver (COA)
☐ None
- Special**
☐ Restricted
☐ Limited
☐ Provisional
☐ Special Flight
☒ Experimental
☐ Special Light-Sport
☐ Experimental Light-Sport
☐ Unknown

Landing Gear

(Check all that apply)

- ☒ Retractable
☐ Tricycle
☐ Tailwheel
☐ Amphibian
☐ Emergency Float
☐ Float
☐ Hull
☐ High Skid
☐ Skid
☐ Ski/Wheel
☐ Other Launch/Recovery System
☐ None
☐ Unknown

Engine Type *(Select one)*

- ☐ Reciprocating
☐ Turbo Shaft
☐ Turbo Prop
☐ Turbo Jet
☐ Turbo Fan
☐ Electric
☐ Liquid Rocket
☐ Solid Rocket
☐ Hybrid Rocket
☒ None
☐ Unknown

Fuel System Type *(Reciprocating)*

- ☐ Carburetor ☐ Fuel-Injected

Engine	Engine Manufacturer	Engine Model/Serial	Manufacturer's Serial Number	Date of Mfg. <i>mm/dd/yyyy</i>	Rated Power ☐ Horsepower or ☐ lbs of Thrust	Total Time <i>(hours)</i>	Time Since: Inspection <i>(hours)</i>	Overhaul <i>(hours)</i>
Eng. 1	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>			
Eng. 2							<u>N/A</u>	
Eng. 3								
Eng. 4								

Last Inspection Type

- ☐ 100-Hour ☐ Continuous Airworthiness
☐ AAIP ☒ Conditional Inspection
☐ Annual ☐ Unknown

Date Last Inspection: 05/11/19
mm/dd/yyyy

Airframe Total Time: 1944 hrs
 hours measured at *(Select one)*

☐ Last Inspection ☒ Time of Accident/Incident

Type of Maintenance Program *(Select one)*

- ☐ Annual
☒ Conditional (Amateur-built only)
☐ Manufacturer's Inspection Program
☐ Other Approved Inspection Program (AAIP)
☐ Continuous Airworthiness
☐ Other, specify: _____

Description of Fire Extinguishing System

- ☒ None
☐ Specify: _____

Propeller 1

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: N/A

Model: _____

Propeller 2

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: N/A

Model: _____

ELT Installed: ☐ Yes ☒ No

If Yes:

ELT Manufacturer: N/A

Model or Part No.: _____

TSO No.: ☐ C91 (121.5 MHz) ☐ C91a (121.5 MHz)
☐ C126 (406 MHz)

Was ELT still mounted in aircraft? ☐ Yes ☐ No

Was ELT still connected to antenna? ☐ Yes ☐ No

Did ELT Activate? ☐ Yes ☐ No

If activated:

Did ELT Aid in Locating Aircraft? ☐ Yes ☐ No

If not activated:

- Indicate Reason: ☐ Impact Damage
☐ Fire Damage
☐ Battery Expired/Damaged
☐ Unknown

Additional Equipment *(Check all that apply)*

- ☒ ADS-B
☐ Airframe Parachute
☐ Angle of Attack Indicator
☐ Autopilot
☐ Data Recorder
☐ Electronic Flight Bag or Handheld Device
☒ Electronic Multifunction Display
☐ Electronic Primary Flight Display
☐ Handheld GPS
☐ Heads Up Display
☐ Onboard Weather
☐ Satellite Tracking Device
☐ Stall Warning System
☐ Video Recording Device
☐ Other, Specify: _____

OWNER/OPERATOR INFORMATION

Registered Aircraft Owner

Name: TUCSON SOARING CLUB INC.

City: TUCSON

State: AZ

ZIP: 85741

Fractional Ownership Aircraft: ☐ Yes ☒ No

Country: USA

Operator of Aircraft

☐ Same As Registered Owner

☐ Same Address as Registered Owner

Name: DAHIEL D. STOGSDILL

City: SAHUARITA

Doing Business As: N/A

State: AZ

ZIP: 85629

Air Carrier/Operator Designator (4 Character Code): N/A

Country: USA

Operating Certificates Held

(Check all that apply)

- ☒ 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)
☐ 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

Regulation Flight Conducted Under

- ☒ FAR 91 ☐ FAR 129 ☐ FAR 415
☐ FAR 103 ☐ FAR 133 ☐ FAR 431
☐ FAR 121 ☐ FAR 135 ☐ FAR 435
☐ FAR 125 ☐ FAR 137 ☐ FAR 437
☐ FAR 91 Special Flight
☐ Non-US, Commercial
☐ Non-US, Non-commercial

Public Aircraft (Select one)

- ☐ Armed Forces
☐ Federal
☐ State
☐ Local
☐ Unknown

Revenue Operation for FAR 121, 125, 129, 135

(Select one for each group)

- ☐ Scheduled or Commuter ☐ Domestic
☐ Non-Scheduled or Air Taxi ☐ International
☐ Passenger
☐ Cargo
☐ Mail Contract Only

Purpose of Flight for FAR 91, 103, 133, 137

(Select one)

- ☐ Aerial Application ☐ Firefighting ☐ Unknown
☐ Aerial Observation ☐ Flight Test
☐ Air Drop ☐ Glider Tow
☐ Air Race/Show ☐ Instructional
☐ Banner Tow ☐ Other Work Use
☐ Business ☒ Personal
☐ Executive/Corporate ☐ Positioning
☐ External Load ☐ Skydiving
☐ Ferry

Revenue Sightseeing Flight

☐ Yes ☒ No

Air Medical Flight

☐ Yes ☒ No

AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)

Airport Name: EL TIRO GLIDER PORT

Distance From Airport Center: 1 MILE sm

Airport Identifier: AZ67

Direction From Airport: 170° degrees true

Proximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/A

Airport Elevation: 2100 ft. msl

Runway Information

Runway ID: 35L (L/R/C) Length: 3500 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
☐ Ice Covered ☐ Snow-Dry ☐ Water-Glassy
☐ Rough ☐ Snow-Wet ☐ Wet
☐ Rubber Deposits ☐ Soft
☐ Slush-Covered ☐ Vegetation ☐ Unknown

Approach/Departure Segment (Select one)

- ☐ Taxi ☐ VFR Departure ☒ On Instrument Approach ☐ Downwind ☐ Low Approach
☐ Takeoff ☐ IFR Departure Procedure/Clearance ☒ Landing ☐ Base ☐ Go Around
☐ Initial Climb ☐ Final ☐ Crosswind ☐ Aborted Landing (after touchdown)
☐ Unknown

IFR Approach (Check all that apply)

- ☐ None
☐ ADF/NDB ☐ PAR ☐ MLS ☐ Practice
☐ SDF ☐ Sidestep ☐ LDA ☐ GPS
☐ VOR/TVOR ☐ ILS ☐ ASR
☐ VOR/DME ☐ Localizer Only ☐ Visual
☐ TACAN ☐ LOC-back course ☐ Contact
☐ RNAV ☐ Circling ☐ Unknown

VFR Approach (Check all that apply)

- ☐ None
☐ 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" Responsibilities at the Time of Accident/Incident**

☒ Pilot ☐ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew

"Flight Crewmember 1" was pilot flying ☐ Yes ☐ No

"Flight Crewmember 1" Identification

First Name: DANIEL D. [Signature]

City of Residence: SAHUARITA

Middle Initial: D

State: ARIZONA ZIP: 85629

Last Name: STOASDILL

Country: USA

Age at time of Accident/Incident: 60 Date of Birth: [Redacted] mm/dd/yyyy

Certificate Number: [Redacted]

Degree of Injury

☐ None ☐ Fatal
☒ Minor ☐ Unknown
☐ Serious

Seat Occupied

☐ Left ☐ Front ☐ Unknown
☐ Right ☐ Rear
☐ Center ☒ Single

Restraint Type**Available**

☐ None
☐ Lap only
☐ 3-point
☒ 4-point
☐ 5-point
☐ Unknown

Used

☐ None
☐ Lap only
☐ 3-point
☒ 4-point
☐ 5-point
☐ Unknown

Inflatable Restraints

☒ Not Installed
☐ Installed
☐ Not Deployed
☐ Deployed
☐ Unknown

Pilot Certificate(s) (Check all that apply)

☐ None ☐ Flight Instructor ☒ Commercial ☐ US Military
☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign
☐ Student ☐ Sport ☐ Flight Engineer

Principal Occupation

☐ Pilot
☒ Other
☐ Unknown

Medical Certificate

☐ None ☒ Class 3
☐ Class 1 ☐ Driver's License (Sport Pilot only)
☐ Class 2 ☐ Unknown

Medical Certificate Validity

☐ Without limitations/waivers ☐ Unknown
☒ With limitations/waivers ☐ N/A
☐ Special Issuance

Date of Last Medical

11/01/18
mm/dd/yyyy

Medical Certificate Limitations

MUST FLY WITH NEAR VISION GLASSES.

Medical Certificate Special Issuance

N/A

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:

09/17/19
mm/dd/yyyy

Flight Review Aircraft

Make: Cessna
Model: C172M

Airplane Rating(s) (Check all that apply)

☐ None
☒ Single-Engine Land
☒ Single-Engine Sea
☐ Multiengine Land
☐ Multiengine Sea

Other Aircraft Rating(s) (Check all that apply)

☐ None
☐ Airship
☐ Balloon
☒ Glider
☐ Gyroplane
☐ Helicopter
☐ Powered Lift

Instrument Rating(s) (Check all that apply)

☐ None
☐ Airplane
☐ Helicopter
☐ Powered Lift

Instructor Rating(s) (Check all that apply)

☐ None ☐ Instrument Airplane
☐ Airplane Single-Engine ☐ Instrument Helicopter
☐ Airplane Multi-Engine ☐ Helicopter
☐ Gyroplane ☐ Glider
☐ Powered Lift ☐ Sport

GROUND, ADVANCED INSTRUMENT.

Type Ratings

NONE

Student Endorsements (Include dates)

NONE

Flight Time (Enter appropriate number of hours in each box)

	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	2248.9	8.2	1819		21		44		422	
Pilot in Command (PIC)	2200									
Time as Instructor										
This Make/Model										
Last 90 Days	11.4									
Last 30 Days	5.5									
Last 24 Hours	5									

"FLIGHT CREWMEMBER 2" INFORMATION**"Flight Crewmember 2" Responsibilities at the Time of Accident/Incident**

☐ Pilot ☒ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew

"Flight Crewmember 2" was pilot flying ☐ Yes ☐ No

"Flight Crewmember 2" Identification

First Name: ROMAN MORATIKAR

City of Residence: _____

Middle Initial: _____

State: _____ ZIP: _____

Last Name: _____

Country: _____

Age at time of Accident/Incident: _____ Date of Birth: _____ mm/dd/yyyy

Certificate Number: _____

Degree of Injury

☐ None ☐ Fatal
☐ Minor ☐ Unknown
☐ Serious

Seat Occupied

☐ Left ☐ Front ☐ Unknown
☐ Right ☐ Rear
☐ Center ☐ Single

Restraint Type**Available**

☐ None
☐ Lap only
☐ 3-point
☐ 4-point
☐ 5-point
☐ Unknown

Used

☐ None
☐ Lap only
☐ 3-point
☐ 4-point
☐ 5-point
☐ Unknown

Inflatable Restraints

☐ Not Installed
☐ Installed
☐ Not Deployed
☐ Deployed
☐ Unknown

Pilot Certificate(s) (Check all that apply)

☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military
☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign
☐ Student ☐ Sport ☐ Flight Engineer

Principal Occupation

☐ Pilot
☐ Other
☐ Unknown

Medical Certificate

☐ None ☐ Class 3
☐ Class 1 ☐ Driver's License (Sport Pilot only)
☐ Class 2 ☐ Unknown

Medical Certificate Validity

☐ Without limitations/waivers ☐ Unknown
☐ With limitations/waivers ☐ N/A
☐ Special Issuance

Date of Last Medical

____ mm/dd/yyyy

Medical Certificate Limitations**Medical Certificate Special Issuance****Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:**

____ mm/dd/yyyy

Flight Review Aircraft

Make: _____

Model: _____

Airplane Rating(s)
(Check all that apply)

☐ None
☐ Single-Engine Land
☐ Single-Engine Sea
☐ Multiengine Land
☐ Multiengine Sea

Other Aircraft Rating(s)
(Check all that apply)

☐ None
☐ Airship
☐ Balloon
☐ Glider
☐ Gyroplane
☐ Helicopter
☐ Powered Lift

Instrument Rating(s)
(Check all that apply)

☐ None
☐ Airplane
☐ Helicopter
☐ Powered Lift

Instructor Rating(s)
(Check all that apply)

☐ None
☐ Airplane Single-Engine
☐ Airplane Multi-Engine
☐ Gyroplane
☐ Powered Lift

☐ Instrument Airplane
☐ Instrument Helicopter
☐ Helicopter
☐ Glider
☐ Sport

Type Ratings**Student Endorsements** (Include dates)**Flight Time** (Enter appropriate number of hours in each box)

	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
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 Address <u>N/A</u>		Seat Occupied		Injury
First Name: _____	City of Residence: _____	☐ Left	☐ Front	☐ None
Middle Initial: _____	State: _____ ZIP: _____	☐ Center	☐ Rear	☐ Minor
Last Name: _____	Country: _____	☐ Right	☐ Single	☐ Serious
			☐ Unknown	☐ Fatal
				☐ Unknown
Pilot Certificate(s) (Check all that apply)		Restraint Type:		Inflatable Restraints
☐ None	☐ Flight Instructor	☐ Commercial	☐ US Military	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown
☐ Private	☐ Recreational	☐ Airline Transport	☐ Foreign	
☐ Student	☐ Sport	☐ Flight Engineer		
		Available	Used	
		☐ None	☐ None	
		☐ Lap Only	☐ Lap Only	
		☐ 3-point	☐ 3-point	
		☐ 4-point	☐ 4-point	
		☐ 5-point	☐ 5-point	
		☐ Unknown	☐ Unknown	
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No		Total Flight Time at the Time of this Accident/Incident: _____ hrs		

Crew Name and Address		Seat Occupied		Injury
First Name: _____	City of Residence: _____	☐ Left	☐ Front	☐ None
Middle Initial: _____	State: _____ ZIP: _____	☐ Center	☐ Rear	☐ Minor
Last Name: _____	Country: _____	☐ Right	☐ Single	☐ Serious
			☐ Unknown	☐ Fatal
				☐ Unknown
Pilot Certificate(s) (Check all that apply)		Restraint Type:		Inflatable Restraints
☐ None	☐ Flight Instructor	☐ Commercial	☐ US Military	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown
☐ Private	☐ Recreational	☐ Airline Transport	☐ Foreign	
☐ Student	☐ Sport	☐ Flight Engineer		
		Available	Used	
		☐ None	☐ None	
		☐ Lap Only	☐ Lap Only	
		☐ 3-point	☐ 3-point	
		☐ 4-point	☐ 4-point	
		☐ 5-point	☐ 5-point	
		☐ Unknown	☐ Unknown	
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No		Total Flight Time at the Time of this Accident/Incident: _____ hrs		

PASSENGER(S) / OTHER PERSONNEL (Include cabin crew; continue on separate sheet if necessary)

Name and Address <u>N/A</u>	Seat	Injury	Restraint Type		Inflatable Restraints	Age
First Name: _____ City: _____	☐ Left	☐ None	Available	Used	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
Middle Initial: _____ State: _____ ZIP: _____	☐ Center	☐ Minor	☐ Lap Only	☐ Lap Only		
Last Name: _____ Country: _____	☐ Right	☐ Serious	☐ 3-point	☐ 3-point		
☐ Crew ☐ Passenger ☐ Other	☐ Unknown	☐ Fatal	☐ 4-point	☐ 4-point		
	Row: _____	☐ Unknown	☐ 5-point	☐ 5-point		
			☐ Unknown	☐ Unknown		
First Name: _____ City: _____	☐ Left	☐ None	Available	Used	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
Middle Initial: _____ State: _____ ZIP: _____	☐ Center	☐ Minor	☐ Lap Only	☐ Lap Only		
Last Name: _____ Country: _____	☐ Right	☐ Serious	☐ 3-point	☐ 3-point		
☐ Crew ☐ Passenger ☐ Other	☐ Unknown	☐ Fatal	☐ 4-point	☐ 4-point		
	Row: _____	☐ Unknown	☐ 5-point	☐ 5-point		
			☐ Unknown	☐ Unknown		
First Name: _____ City: _____	☐ Left	☐ None	Available	Used	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
Middle Initial: _____ State: _____ ZIP: _____	☐ Center	☐ Minor	☐ Lap Only	☐ Lap Only		
Last Name: _____ Country: _____	☐ Right	☐ Serious	☐ 3-point	☐ 3-point		
☐ Crew ☐ Passenger ☐ Other	☐ Unknown	☐ Fatal	☐ 4-point	☐ 4-point		
	Row: _____	☐ Unknown	☐ 5-point	☐ 5-point		
			☐ Unknown	☐ Unknown		
First Name: _____ City: _____	☐ Left	☐ None	Available	Used	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
Middle Initial: _____ State: _____ ZIP: _____	☐ Center	☐ Minor	☐ Lap Only	☐ Lap Only		
Last Name: _____ Country: _____	☐ Right	☐ Serious	☐ 3-point	☐ 3-point		
☐ Crew ☐ Passenger ☐ Other	☐ Unknown	☐ Fatal	☐ 4-point	☐ 4-point		
	Row: _____	☐ Unknown	☐ 5-point	☐ 5-point		
			☐ Unknown	☐ Unknown		

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>AZ 67</u> City: <u>MAZANA</u> State: <u>ARIZONA</u> Country: <u>USA</u>	Time of Departure Time: <u>12:30</u> Time Zone: <u>MTN STAND.</u>	Destination Airport ID: <u>N/A</u> City: _____ State: _____ Country: _____	Type Flight Plan Filed ☒ None ☐ Company VFR ☐ Military VFR ☐ VFR ☐ VFR/IFR ☐ IFR ☐ Unknown Activated? ☐ Yes ☐ No ☐ Unknown
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Type of ATC Clearance/Service (Check all that apply) ☒ None ☐ Special VFR ☐ Special IFR ☐ VFR Flight Following ☐ Cruise ☐ VFR ☐ IFR ☐ VFR On Top ☐ Traffic Advisory ☐ Unknown / NA			
Airspace where the accident/incident occurred (Check all that apply) ☐ Class A ☒ Class G ☐ Military Operations Area (MOA) ☐ Class B ☐ Demo Area ☐ Airport Advisory Area ☐ Class C ☐ Warning Area ☐ Jet Training Area ☐ Class D ☐ Prohibited Area ☐ TRSA ☒ Class E ☐ Restricted Area ☐ FAR 93			Altitude of In-Flight Occurrence: <u>5000</u> ft msl

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information (Check all that apply) ☐ National Weather Service ☐ Flight Service Station ☐ TV/Radio ☐ Automated Report ☐ Commercial Weather Service (DUATS) ☐ On-Board Weather ☐ Company ☐ Military ☒ Internet ☐ None ☐ Unknown	Weather Observation Facility Facility ID: <u>N/A</u> Observation Time: _____ Time Zone: _____ Distance from Accident Site: _____ nm Direction from Accident Site: _____ degrees true
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Basic Conditions ☒ VMC ☐ IMC ☐ Unknown	Light Condition ☐ Dawn ☐ Dusk ☐ Dark Night ☐ Unknown ☒ Day ☐ Night ☐ Bright Night
Sky/Lowest Cloud Condition ☒ Clear ☐ Thin Broken ☐ Few ☐ Thin Overcast ☐ Partial Obscuration ☐ Unknown ☐ Scattered	Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown
Lowest Cloud Condition Height _____ ft agl	Ceiling Height _____ ft agl
Temperature: _____ (C) or <u>85</u> (F) Dew Point: _____ (C) or <u>60K</u> (F) Altimeter Setting: <u>29.92</u> in. Hg or _____ MB	

Wind Direction ☒ Variable -or- Direction: _____ degrees true	Wind Speed ☐ Calm ☒ Light and Variable -or- Speed: _____ kts	Wind Gusts ☒ Not Gusting -or- Speed: _____ kts	Visibility <u>50+</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: <u>3500</u> ft
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Intensity of Precipitation ☐ Light ☐ Moderate ☐ Heavy ☐ N/A ☐ Unknown	Type of Precipitation (Check all that apply) ☒ None ☐ Drizzle ☐ Freezing Rain ☐ Rain ☐ Ice Pellets ☐ Snow Shower ☐ Snow ☐ Snow Pellets ☐ Ice Pellets Shower ☐ Hail ☐ Snow Grains ☐ Freezing Drizzle ☐ Rain Showers ☐ Ice Crystals	Restriction to Visibility (Check all that apply) ☒ None ☐ Fog ☐ Blowing Dust ☐ Ground Fog ☐ Blowing Sand ☐ Haze ☐ Blowing Snow ☐ Ice Fog ☐ Blowing Spray ☐ Smoke ☐ Dust ☐ Unknown
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Icing Forecast Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☐ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	Icing Actual Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☐ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	Turbulence Type (Check all that apply) ☒ None ☐ Clear Air ☐ Terrain-Induced ☐ Convective Turbulence Severity ☐ Light ☐ Moderate ☐ Severe ☐ Extreme
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NOTAMS (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:

NONE IN OUR AREA

DAMAGE TO AIRCRAFT AND OTHER PROPERTY**Aircraft Damage**

- ☐ None
☐ Minor
☒ Substantial
☐ Destroyed
☐ Unknown

Aircraft Fire

- ☒ None
☐ In-Flight
☐ On-Ground
☐ Both Ground and In-Flight
☐ Fire at Unknown Time
☐ Unknown

Aircraft Explosion

- ☒ None
☐ In-Flight
☐ On-Ground
☐ Both Ground and In-Flight
☐ Explosion at Unknown Time
☐ Unknown

Description of Damage to Aircraft and Other Property (Use additional sheet if necessary)

- EMPENNAGE BROKE OFF ON TOUCH DOWN
- UNKNOWN DAMAGE TO ELEVATOR CONTROLS
- UNKNOWN DAMAGE TO RIGHT SPOILER CONTROL

NARRATIVE HISTORY OF FLIGHT (Please type or print in ink)

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State departure time and and location, services obtained, and intended destination. Provide as much detail as possible.

SEE ATTACHED SHEETS (2) DATED OCTOBER 13, 2019
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ADDITIONAL INFORMATION (Please type or print in ink)

Use this space if additional space is needed for any answers.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Date of this Report

10/13/2019

mm/dd/yyyy

Name of Pilot/Operator:

DANIEL STOGSDILL

Signature:

- or -

☐ Check here to electronically sign this document**If a Person Other than Pilot/Operator is Filing Report**

Name:

N/A

Title:

Signature:

- or -

☐ Check here to electronically sign this document**FOR NTSB USE ONLY**

NTSB Accident/Incident No.

WPR20LA004

Reviewed by NTSB Regional Office

WPR

Name of Investigator

Zoë Keliher

Date Report Received

10/16/19

October 13, 2019

Pilot Report For DG 500, N600TT Incident on 10/06/2019

By: Daniel (Pete) Stogsdill

The Aircraft N600TT a DG 500 Elan Trainer was purchased for Cross country and Acro Training By the Tucson Soaring Club. Being Certified in the Experimental Category, it came to us operating on the Phase II, Conditions and Limitations of the original owners. They had not preformed or logged any Acro flights so we could not begin Acro training until we received a new set of operating Condition and Limitations issued so we could step back into Phase I and add Acro Maneuvers to the records for continued use in Phase II operations.

The incident occurred during a Phase I test flight from the ElTiro Gliderport at approximately 8.2 hours into the 25hr. program. The Flight was being conducted to evaluate acrobatic maneuvers performed with a cockpit weight of 175 lbs. in the forward seat and 200 lbs. in the rear giving the aircraft a loaded CG of +10.17 at 1280 lbs. Pilot Pete Stogsdill in the aft. seat and Pilot Rohan Morajkar in the fwd. seat. Additionally, I, Pete Stogsdill was evaluating Rohan Morajkar's Acro skills during the planned maneuvers to make a determination of his proficiency for inclusion to the test Phase program for solo operations. The maneuvers planned during this flight were the to be the Sportsman Glider sequence. The maneuvers began 3 miles north of the El Tiro Glider Port at 7000' AGL. We had completed the Reverse Half Cuban, Lay Down Humpty, Loop, 90 Degree Turn and ¼ clover. The next maneuver was to be the Sharks Tooth. At an altitude of approximately 5000' AGL. a pitch up to the 30 degree up line was initiated and then the roll to inverted. The nose dropped to approximately 20 above the horizon but I elected to continue the maneuver thinking this

would be a common mistake and was intending to evaluate whether this was to be allowed. The aircraft slowed and stalled in the inverted position. I verified that the stick was full forward and removed my hand from the control stick. I called the pull to the vertical down line. Rohan stopped about 5 to 10 degrees short. I repeated pull to vertical and nudged the control stick aft to get to the Vertical and called for recovery. Rohan responded with too easy of a pull on the stick and I eased the stick back to establish a 4 g recovery. At this stage the airspeed shot from around 90 kts. right up to the VNE in what seemed almost instantaneously. The recovery up to that point seemed to be normal but as we approached the level attitude the ASI continued to increase in speed. I saw the needle swing past 155 Kts. and then around this time we experienced a high frequency elevator flutter with the nose still below the horizon. We were now climbing out of the dive but still accelerating. I felt Rohan smoothly add additional back pressure at that point moving the g-loads towards the upper limits in an attempt to slow down quicker. Soon after the increased back pressure the right spoiler suddenly slammed to full deployment causing a jerk to the right. The spoiler control was still in the locked position.

The aircraft was still below but was now approaching the horizon attitude and yawing to the right but when the spoiler deployed the elevator flutter decreased in frequency but increased in amplitude causing large forward and aft movements of the control stick. At that time, I called for Rohan to lighten up his hold on the stick to reduce the resistance on the elevator control circuit. I had hoped to just dampen the elevators movement verses just increasing the resistance on the joints. I have no idea if this was helpful or not. I was using my knowledge of the lightly constructed control circuits trying to reduce the pressures on the attach points and pivots. We slowly rotated to a nose high attitude. The last time I looked at the ASI we were at 160+ kts. Indicated.

The flutter stopped as the aircraft slowed and stabilized as in a

nose up climbing right turn and then stabilized into a normal pitch flight attitude but still banking right.

Just shortly before the elevator vibration stopped, I felt what seemed like something just let go in the control circuit. I released my joystick as it seemed that Rohan was moving the stick in a fashion that matched the aircrafts movements.

Since things were momentarily in a relatively stable condition, I took a few seconds to inventory the harnesses and parachute straps incase the aircraft started to go uncontrollable. Afterwards I asked Rohan if he felt he had control of the aircraft and he responded, he had. After watching the control movements vs. what the aircraft was doing, I announced that I had the controls and found that the elevator felt disconnected.

We were over 4500' so I took inventory of our flight controls. With the right spoiler still full open I had hopped, that the opening the left would reattach it and make that problem go away, but the left side worked normally with no change to the right. Ailerons and Rudder, were operable.

It was easy to maintain wings level but without elevator I started to look around for a safe bail out place. I decided to drive on towards the glider port hoping to get well south and at a good bail out height. As long as we could control a heading and enough pitch control, We were not going to let the glider potentially fly on without us and crash into someone on the ground. On the way past the glider port we became proficient in controlling the glider with the remaining controls we had operable. We were approaching 1000 AGL. now and were in a good area to let go of the aircraft should we bail out. We felt more comfortable with landing than using the parachutes.

Committed to landing we "S" turned and circled to loose altitude with intensions for landing on runway 35L.

On the way to the runway and having a lower angle view of the horizon, I was able to see the decent rate was higher than I wanted with the right spoiler open and flying in a crab. Upon seeing the tree line along the wash and thinking how hard the

runways were and how vulnerable our backs were to a hard landing or multiple PIO's especially in the back seat. We decided to land in a flat area of desert just south of the runway and use the trees and bushes for cushioning and braking. The approach to the selected landing area went well at 20' I raised the nose for a level attitude and slowed but the slight wind was reduced at about the height of the small trees and we settled sooner than I had planned and the main wheel touched down on a berm at the base of a small bush and it was that jolt that broke off the empennage. We skidded to a stop then exited the aircraft. The bounce we took off the berm also jolted my back and it was pretty sore. Everyone there insisted that go to the hospital to get checked out. After a few hours they gave me Tylenol and sent me home.

I believe the damage to the glider in flight was because we oversped. This started with 1. the nose high angle being less than optimum. I theorize that even though we stalled (it was not an Accelerated) we did not have the normal speed reduction for a properly executed Sharks tooth. 2. The pause at the negative down angle gave additional time to accelerate. Adding the pause time, I made waiting to see Rohan's response reaction. 3. Rohan had made a lighter than required move to pull up the nose no doubt because of my insistence on smooth firm control uses for recoveries. His pull up was too slow for this unusual recovery. The air noise and ASI indications were close to normal so I released the stick so Rohan could get a feel of the actual forces of the aircraft without my influence.

I paused for an instant to observe the how well he would recover from the dive. This added additional time for acceleration. What happened next was not the aircrafts fault. It was not designed for operations beyond 146 Kts.

I found that this aircraft was easily controlled thru out all of the planned maneuvers when executed properly. I should have initiated at the recovery at the on set of the low angle up line. I should have taken the controls right after the vertical line was

not met. The Shark tooth is one of the easiest maneuvers to do even with it's down line requirement. I have done it at least 6 times in this aircraft with different cockpit and CG loads and none came anywhere close to what we experienced. So, I will add complacency to the list of my failures. My only excuse is that I needed to identify as many potential mistakes as I could before turning our very eager pilots loose in this ship.

We were regaining control of the attitude and speed until the spoiler deployed and sent an additional pressure wave back across the tail plane. When I performed the initial Conditional Inspection prior to our use I had thought that the control systems looked to be of a rather light weight construction. I also was not pleased that it was very hard to conduct a thorough preflight of the control circuits without disassembling the aircraft.

End
