

N-140 DG
De' Bird



Engine And Aircraft Log

RECORD OF OWNERSHIP

NAME Richard R DeGraw

ADDRESS [REDACTED]

CITY Jackson STATE MI

ZIP 49201 FROM May 12, 97 TO _____

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ FROM _____ TO _____

NAME _____

ADDRESS _____

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CITY _____ STATE _____

ZIP _____ FROM _____ TO _____

AIRCRAFT INFORMATION

MAKE DeGraw, MODE De' Bird, SERIAL NO. RDK103
 DATE OF MFG. July 97, DATE PUT IN SERVICE July 10, 97, I.D. NO. N140 DG
 SPAN Rotor 26 ft, LENGTH 26 ft, HEIGHT 97 in, WING AREA 530 sq. ft.
 GROSS WT. 890 lb, EMPTY WT. 593.5, WING LOADING 1.68 (gross) lbs. per sq. ft.
 FUEL CAP. 17 gals., FUEL CONSUMPTION _____ gals. per hour,
 LOAD FACTORS + _____ - _____, TIME TO BUILD _____ hours, SET UP TIME _____ minutes, VNE 120 MPH, TOP SPEED _____, CRUISE SPEED _____, STALL N/A
 ADDITIONAL AIRCRAFT DETAILS: Prop. Dia. 64" 68" 5-3-11
Main Oleo 6 oz SAE 30 oil

DATE 19 <u>97</u>	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
7-1	.2	.2			First Start of Engine, Set Timing & Carbs
7-2	.4	.4			coolant check, Leak checks Hobbs QOIT
7-9	1.1	1.1			blade track, idle to Full Throttle Taxi Runs
7-10		1.5			First Flight. Landings, To 75 mph To Outh
7-11		.4			
7-15		.5			
8-26		.4			
10-4		.5			
10-6		1.0			
10-7		.8			
		6.8			
		0.0			
		6.8			
					THIS PAGE
					PREVIOUS TOTAL
					GRAND TOTAL

DATE	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
19 97					
10-10	7	2.7			
10-11		1.4			
10-12		1.5			
10-14		.9			
10-20		.6			
10-25		.4			
10-26		1.8			
10-28		1.0			
11-2		.8			
11-15		1.0			
		12.1			
		6.8			
		18.9			
					THIS PAGE
					PREVIOUS TOTAL
					GRAND TOTAL

DATE 19 <u>97</u>	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
10-25	19.4	Experimented with 2 blade fully articulated Rotor Head for a duration of 1 hr [REDACTED]
11-15	18.9	Experimented with gimbal 2 Blade Rotor Head for duration of 1 hr. [REDACTED]
4-24-98	25.3	Experimented with 3 blade fully articulated Rotor Head Duration 1 hr [REDACTED]

DATE	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
1997					
11-16		.7			
12-5		.5			
1998 3-27		.4			
3-30		.5			
4-4		3.5			
4-13		1.0			
4-24		2.0			
6-28		2.8			
7-20		2.8			
7-22		2.5			
		16.7			
		18.9			THIS PAGE
		35.6			PREVIOUS TOTAL
					GRAND TOTAL

DATE 19 98	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
7-22-98	33.7	ANNUAL INSPECTION I have inspected This Aircraft with The Scope & detail of part 43 Appendix D and have found it to be Airworthy Drained gascolator, changed oil (Rotor Hood - differential/engine) & filter, lubed controls, synch carb, checked B, I's, checked Nuts & Bolts for tightness, checked Air frame & components for cracks check Bleed Tractings [REDACTED]

DATE	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
1978					
7-27		.5			
8-2		.6			
8-4		1.1			
8-5		.8			
8-7		.5			
8-10		1.2			
8-12		.8			
8-15		1.0			
8-17		.7			
8-18		.8			
		8.0			
		35.6			THIS PAGE
		43.6			PREVIOUS TOTAL
					GRAND TOTAL

DATE 19 98	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
9-10-98	48.5	I certify that this Aircraft is Controllable Throughout its normal range of speeds and throughout all Maneuvers to be executed: and the Aircraft has No Hazardous Operating characteristics or design features. Pilot: [REDACTED] Builder: [REDACTED]
11-22-98	55.9	change oil & filter R.D. Brown
1-24-99	97.8	Reduction drive small sprocket Bearing loose Replaced w/ cast Iron sleeve insert [REDACTED]
1-27-98	100.2	change oil & filter R.D. Brown

DATE 2000	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
9-3	210.6	Annual Inspection checked all controls + lobs cleaned gascolator, changed oil in engine, trans, differential, Rt & gearbox, changed engine oil filter, changed New air filters, checked Timing & Compression, checked wheel Bearings & adj. Brakes. I have inspected this Aircraft with The Scope & detail of Part 43 Appendix D and have found it to be Airworthy [REDACTED]
10-2-01	261.7	Annual Inspection - checked all controls, changed all oils & filter, checked compression & timing, checked wheel Bearings & Brakes, cleaned gascolator, checked Belts, checked earbs adj. I have inspected this Aircraft within The Scope & detail of Part 43 Appendix D and found it to be Airworthy [REDACTED]

DATE 2002 19	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
11-4-02	301.2	Annual Inspection			checked All controls & Labeled cleaned Governor, adj Carbs, install New Air filters, changed all oils & filter - checked wheels, adj. Brakes checked compression & Belts adj. checked cables. I have inspected this Aircraft in scope & detail of Part 43 Appendix D and found it to be Airworthy. [REDACTED]
6-9-03	329.7	Engine oil change & filter			[REDACTED]
10-21-04	351.2	Annual Inspection			checked controls & cables, wheels, Brakes, plugs, ignition. cleaned governor, adj. Valves, New fuel Return (Hoses) Compression 1-153, 2-170, 3-150, 4-165 changed oil & filter, oil in diff. checked Trans oil, I have inspected this Aircraft in accordance with Part 43 Appendix D and found it to be Airworthy. [REDACTED] New fuel filters
GRAND TOTAL					

DATE 19 2007	TIME IN SERVICE 351.7	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
4-3-07	345.7	Annual Inspection — drained Carbs - Clean Air Filters changed oil & filter Compression check #1-150 #2-166 #3-151 #4-166 checked Timing, checked wheel Bearings & Brakes, cables & controls, d. Engine oil, Trans oil, landing gear, exhaust, coolant, general check of engine & drive Train, checked Rotor Head & Blades, Propeller installed new Batteries I have inspected This Aircraft and it to be Airworthy in accordance with Part 43 Appendix D. [REDACTED]
7-1-08	360.1	Hobbs ANNUAL INSPECTION installed Rebuilt Engine Serial # 56134, changed Cabin, changed Tail Boom, install 3 blade Rotor system, made New Messler, 143 Tail New Rotor X, added Free wheel clutch to prop, changed Main landing Gear, lubed all controls, I have Inspected This Aircraft and found it to be Airworthy in accordance to part 43B Appendix D. [REDACTED]

DATE	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
2009					
8-3-09	431.7	TT Annual	INSPECTION		checked Compressor #1-153 #2-149, #3-146, #4-147 cleared gascolator, checked Air filter changed oil & filter, checked Trans oil, checked Battery, wheel Bearings, Brakes, all controls & lube, checked Prop bolts & clutch, Rotor head & blades - install Rebuilt engine #452799. I have inspected This Aircraft in accordance with Part 43 Appendix D and found it to be Airworthy [REDACTED]
10-20-09	570.3	change oil & filter			
4-6-10	601.7	change oil & filter			install New Push rods (#3 ex Drk)
4-8-10	603.9	TT Annual	INSPECTION		Compressor #1-150, #2-150, #3-141, #4-138, checked wheel Bearings, Brakes, all Flight Controls & lube, air filter, Trans oil changed bats & clutch, Rotor head & blades [REDACTED] I have Checked This Aircraft in accordance with Part 43 Appendix D and found it to be Air- worthy & safe for operation. [REDACTED]
THIS PAGE					
PREVIOUS TOTAL					
GRAND TOTAL					

DATE 2011	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
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5-3-11	637.1 TT	ANNUAL INSPECTION check compression #1-151, #2-145, #3-148, #4-143, cleaned gasculator, checked wheels, tires, brackets & adj. checked Trans. & differ. oils, changed engine oil & filter, checked landing gear, pet filter, checked & lubed all controls, checked battery, install new prop. Sen Senich 68", I have inspected this aircraft in accordance to Part 43 appendix D and have in scope & detail & found it to be in condition for safe operation [REDACTED]
7-6-12	668.6 TT	ANNUAL INSPECTION compression #1-140, #2-140, #3-125 - #4-115, disassemble rotor trans for inspection → All OK, cleaned gasculator, changed oil & filter, changed differ. oil, checked wheels & brakes, checked & lubed all controls, checked air filter, changed battery, new Strob, bulb checked, Muffler & Radiator coolant. I have inspected this aircraft in accordance with Part 43 Appendix D in scope & detail and found it to be Airworthy [REDACTED]

DATE 2013 19	TIMES FOR TODAY			FUEL/OIL BOARDED	Description of day to day maintainance and servicing. List part nos., sizes, etc.
	TOTAL ENGINE	TOTAL AIRCRAFT	ENG. OFF FLIGHT		
8-1-13	701.4TT	ANNUAL INSPECTION			compression #1-139, #2-141, #3-132, #4-128, changed engine, diff oil, changed oil filter, cleaned gasculator checked wheels & Brakes, checked all controls & cables & lubed same, checked battery, Tracked Bleds checked air filter, coolant, checked Ma & Flox, aired Tires, I have inspected This aircraft in accordance with Part 43 appendix D and found it to be Airworthy
* 9-4-14	725.6TT	ANNUAL INSPECTION			compression #1-140, #2-140, #3-136, #4-132, changed engine oil & filter, changed diff oil, checked Trans oil, cleaned gasculator, checked wheels & brakes, checked & Lubed all controls, cleaned Air filters checked coolant, Mass shot, New Battery. I have inspected This Aircraft in accordance with Part 43 appendix D and found it to be Airworthy

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PREVIOUS TOTAL

Page 20

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DATE	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
10-3-14	735.27	ANNUAL INSPECTION checked Compression #1-145, #2-145
10-3-14	735.27	#3-144, #4-131, charged Battery, checked tires, Wheel Brakes & adj.
		checked Rotor Trans Oil, checked & Lubed all controls, tracked Rotor Blades,
		cleaned gas catalyst air filters, checked Timing, checked differential
		oil, Tapped up Coolant, cleaned & gapped spark plugs, #4 plug dark, swapped
		#4 & #2 injectors, adj Valves, Swapped #4 & #2 spark plugs, install New
		Rotor Blades #5 K152213H, #1, 2, 3 — I have inspected this Aircraft in accordance
		with Part 43 appendix D & have found it Airworthy
9-16-16	779.6	change oil & filter
5-20-17	784.3	ANNUAL INSPECTION checked Rotor Trans Oil, R/C pin
		gas catalyst

DATE	TIME IN SERVICE	RECORD OF MAJOR REPAIRS, ALTERATIONS, ADDITIONS AND REMOVALS OR EXCHANGES. LIST MAKE, MODEL & SER. NO.
48 2021		
5-31-21	TT840.1	ANNUAL INSPECTION Compression #1-135, #2-130, #3-125, #4-130, change engine oil & filter, change Rotor Trans & differential oil, checked & lubed all controls, cleaned plugs, charged Battery, checked Air Cleaner, Replaced Rubber Cap on Water Pump, inspect fuel system, inspect wheels & brakes, Rivet Water Reservoir, cleaned aircraft, checked electrical system, Clean gas catalyst, I have inspected this Aircraft in accordance with Part 43 Appendix D and found it to be airworthy X [REDACTED]

7-14-22	TT866.6	ANNUAL INSPECTION change Trans oil & Engine oil & filter, Compression #1-143, #2-130, #3-132, #4-137, cleaned gas catalyst, checked differential oil, checked Air Cleaner, checked spark plugs, inspect fuel system, checked & lubed all controls, checked wheels & brakes, charged Battery, Replaced Lower Wind shield Plastic, Remove inoperative fuel gauge (electric), I have inspected this Aircraft in accordance To Part 43 Appendix D & inspect detail and found Page 23 IT To Be Airworthy [REDACTED]
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NIHODG WT. + Balance

7-7-97

Empty 593.5, Gross 890 ^{1/2}

Balance: Heavy Test, Limits Rot/Pitch +0°-5°

Min WT Pilot/Fuel = 132 lb. = 0°
Max WT Pilot/Fuel/Baggage = 296 lb. = 4.5°

OBSERVING UNIT/BLT VISUAL
EXPERIMENT

REGISTRATION NOT TRANSFERABLE

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
CERTIFICATE OF AIRCRAFT REGISTRATION

This certificate
must be in the air-
craft when operated.

NATIONALITY AND
REGISTRATION MARKS **N 140DG**

AIRCRAFT SERIAL NO.
RDK103

MANUFACTURER AND MANUFACTURER'S DESIGNATION OF AIRCRAFT
DEGRAW RICHARD R DE BIRD

ICAO Aircraft Address Code: **50121402**

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**DEGRAW RICHARD R TRUSTEE
DEGRAW KAROL K TRUSTEE**

This certificate is
issued for
registration purposes
only and is not a
certificate of title.
The Federal Aviation
Administration does
not determine rights
of ownership as
between private
persons.

Co-owner

It is certified that the above described aircraft has been entered on the register of the Federal Aviation Administration, United States of America, in accordance with the Convention on International Civil Aviation dated December 7, 1944, and with Title 49, United States Code, and regulations issued thereunder.

DATE OF ISSUE **September 19, 2007**
EXPIRATION DATE **April 30, 2028**

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U.S. Department
of Transportation
**Federal Aviation
Administration**

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION EXPERIMENTAL	
	PURPOSE OPERATING AMATEUR-BUILT AIRCRAFT	
B	MANU-FACTURER	NAME N/A
		ADDRESS N/A
C	FLIGHT	FROM N/A
		TO N/A
D	N-140DG	SERIAL NO RDK103
	BUILDER Richard R. DeGraw	MODEL DeBird
E	DATE OF ISSUANCE 07/10/97	
	EXPIRY UNLIMITED	
	OPERATING LIMITATIONS DATED 07/10/97	
	ARE A PART OF THIS CERTIFICATE	
E	SI [REDACTED]	DESIGNATION OR OFFICE NO.
	David A. McCray	DET-MISQ-CE-53

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.