

ENSTROM HELICOPTER LOG

Owner AAA Helicopters

Model Number _____

Registration Number 51769

Serial Number 443

Date

N51769 F28C S/N: 443

5/27/2015 A/C Hobbs: 1672.6 A/C TT: 1672.6

Completed an annual inspection as per Enstrom form. Performed functional test of ELT as per FAR 91.207(d). Battery due replacement. Owner notified. Defueled and removed left fuel tank. Drained m/r transmission, inspected gears through filler port, and serviced with Mobil 1 gear oil. Drained tail rotor gearbox and serviced with Mobil 1 gear oil. Replaced several fuel tank nutplates. Reinstalled left fuel tank. Lubed aircraft as per Enstrom lube schedule. Adjusted belt alignment during ground run. C/W AD 82-24-01, 88-11-06, 90-17-02, and 2011-26-04. AD's 94-17-15 and AD82-16-09 c/w during 200 hour inspection. AD's checked thru 2015-10. I certify that this aircraft was inspected in accordance with an annual/100 hour inspection and was determined to be in an airworthy condition.

Ray Chapin 3179397AP,IA

Ray Ch

7/2/2015	A/C TT: 1680.7	Removed 10 cer pulley, replaced idler bearing with new (S/N: 13087-226-23)	
		Reinstalled 10 cer pulley and checked belt alignment during ground run. — <i>Ray Ch</i> 3179397AP,IA	
7/2/2015	A/C TT: 1680.7	Replaced fit. Battery & ops checked. next due 4/2017. <i>Ray Ch</i> 3179397AP,IA	
Total flight time			

Form No. F-157, 10/03

Boshart Enterprises Inc. East Saile Drive, Batavia, N.Y. 14020 Repair Station No. B2ER144J

Aircraft N 51769 W/O No. A57828

Transponder Model GT-330 S/N 8413186
Has been tested IAW Part 91.413 para. a, b, c and found to comply with Part 43 Appendix F.

Encoder Model A20 S/N 93393

Altimeter Model _____ S/N _____
Has been tested IAW Part 91.411 para a and found to comply with Part 43 Appendix E.

Aircraft Static System has been tested IAW Part 91.411 and found to comply with Part 23.1325 para 21

Signed *Ray Ch* #8161918 Date 7/2/15

Aircraft Tach/Hobbs Time _____ Item BOSHIF 10

ENSTROM HELICOPTER LOG

Owner _____ Model Number 28C
 Registration Number N51769 Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours		
			100 hour inspection due	hours	Periodic inspection due	hours		
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number		
		Hours						
	N51769 F28C S/N: 443 5/30/2014 A/C Hobbs: 1658.2 A/C TT: 1658.2		Completed an annual inspection as per Enstrom form. Performed functional test of ELT as per FAR 91.207(d). Defueled and removed left fuel tank. Drained m/r transmission, inspected gears through filler port, and serviced with Mobil 1 gear oil. Drained tail rotor gearbox and serviced with Mobil 1 gear oil. 1 T/R strike tab was found broken off and on the floor while aircraft was parked in a hangar. Looked over assembly and found no damage. Acquired new strike tabs from Enstrom and installed. Lubed aircraft as per Enstrom lube schedule. Greased Main Rotor grips with Aeroshell 22. C/W AD 82-16-09, 82-24-01, 88-11-06, 90-17-02, and 2011-26-04. See rear of log for chronological listing of AD's. AD's checked thru 2014-10. I certify that this aircraft was inspected in accordance with an annual/100 hour inspection and was determined to be in an airworthy condition.					
			Ray Chapin 3179397AP,IA					
Total flight time								

Ray C

over

Form No. F-157, 10/03

N51769 Model: 28C S/N: 443
 05/13/2015 A/C Hobbs: 1671.3 A/C TT: 1671.3
 Removed main rotor blades, main grips, dampers, and M/R spindles. M/R Spindles were sent to Niagara Testing for Magnetic Particle Inspection (work order 15B-1065). See component cards for details. Reinstalled spindles, grips, and lamiflex bearings as removed. Shimmed lamiflex bearings and installed main rotor blades in original positions. Aircraft flight check required before return to service.

Ray C

Ray Chapin A&P 3179397 IA

5/13/2015 A/C TT: 1671.6
 Performed flight check of aircraft after main rotor work. Smooth flight, no adjustments necessary.

Ray C 3179397 AP,IA

5/13/2015 A/C TT: 1671.6 Replaced battery w/new R6 35AXC Concorde

Ray C 3179397 AP,IA

5/12/2015 A/C TT: 1671.6 The ABOVE WORK completes a 200 hour inspection as per Enstrom form. *Ray C* 3179397 AP,IA AD 2015-08-51 w/by this inspection. See upper log entry & component card. *Ray C* 3179397 AP,IA

ENSTROM HELICOPTER LOG

Owner _____

Model Number F280C

Registration Number 51769

Serial Number 443

	Flight #	Date	Hours	Description	Signature	Remarks	
	N51769 F280C S/N: 443	5/09/2013	A/C Hobbs: 1621.6 A/C TT: 1621.6	Completed an annual inspection as per Enstrom form. Performed functional test of ELT as per FAR 91.207(d). Removed main rotor blades. Defueled and removed left fuel tank. Drained m/r transmission, inspected gears through filler port, and serviced with Mobil 1 gear oil. Drained tail rotor gearbox and serviced with Mobil 1 gear oil. Lubed aircraft as per Enstrom lube schedule. Jacked aircraft, serviced oleos with 5606 and nitrogen. Replaced missing or worn pivot washers as necessary and torqued all landing gear pivot points. Checked M/R mast nut torque. No movement noted. Removed grips for replacement of O-ring seals. Cleaned out old grease and reinstalled grips with new 2-29 O-rings. Replaced Lamiflex bearings due to swelling of old bearings. S/N's 9258, 9259, and 9260 installed. Greased Main Rotor grips with Aeroshell 22. Removed dampers and bled. Adjusted flapping hinge drag torque. Tightened pilot cyclic for/aft pivot bolt. Adjusted right pedal stop. Cleaned area under battery and neutralized. Replaced missing pilot door upper latch cable and replaced passenger door upper cable. C/W AD 82-16-09, 82-24-01, 88-11-06, 90-17-02, 94-17-15, and 2011-26-04. See rear of log for chronological listing of AD's. AD2012-11-05 not applicable by part number of trim assemblies. AD's checked thru 2013-09. Painted tailboom as requested by owner. I certify that this aircraft was inspected in accordance with an annual/100 hour inspection and was determined to be in an airworthy condition.	<i>Ray Ch</i>	3179397 APTA	ours ours and mber
	N51769 F280C S/N: 443	05/10/2013	A/C Hobbs: 1623.2	Performed track and balance of Main Rotor. Tracked to below .2 ips hover and cruise.	<i>Ray Ch</i>	3179397 APTA	
Total flight time							

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner _____

Model Number _____

Registration Number _____

Serial Number _____

Flight time brought forward		Hours	25			hours
			100			hours
Date	Nature of flight	Time in flight				nature and e number
		Hours				
Total flight time						

DUNKIRK AVIONICS
 3163 Airport Drive, Box11
 Jamestown, NY 14701

Phone: 716-664-7700
 Fax: 716-664-7714
 CRS# DKZR372X

Work Order#4511 Date: July 19,2012 Aircraft Reg. Number: N51769
 TACH: 1613.12
 Description: Replaced memory battery on Garmin GNS430 serial number
 97124721 IAW Garmin Maintenance manual part number 190-00140-05
 Rev. F section 4.6
 The above work is Approved for return service. Further details are on file
 under the work order.

Mark Kezman
 Name: Mark Kezman

Certificate # DKZR372X

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number N 51769

Serial Number 443

	br	Enstrom F28C	S/N 443	hours
Date	4-10-12	Hobbs 1582.5	Total time 1433	hours
	W.O. 5305 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms.			ature and
	Drained oil in T/R, M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Aeroshell 560 turbine oil. Inspected and tested ELT according to FAR 91-207(d). Replaced ELT battery. Battery due again for replacement 4-2014. Replaced induction air filter.			se number
	Inspected and cleaned airframe fuel filter. Checked torque on tail boom mounting bolts. Checked torque on M/R gear box mount bolts. AD 2012-03-06 dated 2-24-12 NA Fuel servo part not replaced in time frame. AD 2011-26-10 dated 1-23-12 NA 12volt system, by trim relay P/N. C/W AD 94-17-5 dated 9-15-94 M/R lamiflex bearings. C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.			
			<i>Mark Roth</i> Mark Roth AP 3510994 IA	

o. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
1/12/12		1582.3	Remove blades for storage as per Enstrom maintenance Manual			
			Randy Frasch			
			Randy Frasch AP			3303889
		Total flight time				

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ENSTROM HELICOPTER LOG

Owner Randy Frasch

Registration Number N51769

Model Number F28C

Serial Number 443

2-15-11 Hobbs 1532.3 Total time 1433 W.O. 5199 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms. Drained oil in T/R, M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Aeroshell 560 turbine oil. Inspected and tested ELT according to FAR 91-207(d). ELT battery due for replacement Oct 2011. Replaced worn L/H forward eng adell clamp. Checked torque on tail boom mounting bolts. C/W AD 94-17-5 dated 9-15-94 M/R lamiflex bearings. C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.

Mark Roth

Mark Roth AP 3510994 IA

hours
hours
and
number

Total flight time					

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number _____

Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	
					hours	
Date	Nature of flight	Time in flight Hours	Inspection and maintenance data			Signature and license number
			12-07-10 Hobbs 1482.5 Completed. 50 hr. inspection according to Enstrom maintenance manual inspection & lubrication forms. Checked oil in freewheeling clutch. Ground ran, leak and ops checked normal.			
Total flight time						

Randy Frasch
Randy Frasch, AP 3303889

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch Model Number F28C
 Registration Number N51769 Serial Number 443

F broi	Date	hours e and umber
	9-22-2010 Tach 1433 Total time 1433 W.O. 5157 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms. Replaced induction air filter. Drained oil in T/R, M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Mobile Jet II turbine oil. Inspected and tested ELT according to FAR 91-207(d). ELT battery due for replacement Oct 2011. Checked torque on tail boom mounting bolts. Installed new Tachometer Drive O-rings P/N NAS1611-333. Removed R/H aft eng cooling shroud due to cracked. Repaired and installed. C/W AD 94-17-5 dated 9-15-94 M/R lamiflex bearings. C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.	
	<i>Mark Roth</i> Mark Roth AP 3510994 IA	
Total flight time		

Form No. F-157, 10/03

I certify that the Transponder test and inspection required by FAR 91.413 has been performed and found to comply with Part 43, Appendix F.
 Unit: GTX330 s/n: 8413186
 A/C Time: 1448.0 Reg.#: N51769
 Signature: [Signature] dated: 10/21/10
 Aerotronics of Missoula Inc. CRS NH2D031L

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
3/5/10	Installed new lamiflex bearings, Ser #'s 8550, 8551, 8552. Due for retirement on 3/5/2015. Track and balanced blades. All work performed in accordance with current Enstrom maintenance manuals.					
		Total flight time				

Randy Frasch Randy Frasch, AP 3303889

ENSTROM HELICOPTER LOG

Owner Randy Frisch
 Registration Number _____

Model Number F28C
 Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
I certify that the Transponder test and inspection required by FAR 91.413 has been performed and found to comply with Part 43, Appendix F. Unit: <u>GT330</u> s/n: <u>8413186</u> A/C Time: <u>1448.0</u> Reg.#: <u>N51769</u> Signature: <u>[Signature]</u> dated: <u>10/7/10</u> Aerotronics of Missoula Inc. CRS NH2D031L						
			10-1-2010 Hobbs 1440 Removed oil temp indicator P/N 169E-910-116 S/N39969 and Man/Fuel pressure indicator P/N 6312 S/N 108031. Sent to Centennial Instruments, Centennial CO. for repair. Installed after repair. Ops check normal. ----- <div style="display: flex; justify-content: space-between; align-items: center;"> ----- <u>Mark Roth</u> ----- Mark Roth AP 3510994 IA </div>			
		Total flight time				

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours		25 hour inspection due	hours	50 hour inspection due	hours
				100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data				Signature and license number
		Hours					
	11-1-2008 Hobbs 1307.3 Installed serviceable Eastern Rotorcraft corp. cargo hook P/N SR-4232-41 S/N 2459 , support and mechanical release according to Enstrom installation drawing no. 28-22000. Ops check normal. Adjusted weight and balance.-----						
	<i>Mark Roth</i> Mark Roth AP 518808681 IA						
	9/28/2009: Hobbs 1330.6. Serviced, charged & installed new Gill G-35 battery.						
	<i>Mark Roth</i> Mark Roth AP518808681 IA						

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ENSTROM HELICOPTER LOG

Owner Randy Frasch
 Registration Number N51769

Model Number F28C
 Serial Number 443

Flight time brought forward	Hours	25 hour inspection due <u>1382.1</u> hours	50 hour inspection due <u>1382.1</u> hours
		100 hour inspection due <u>1433.1</u> hours	Periodic inspection due _____ hours
Date	Nature of flight	Time in flight Hobbs Hours	Inspection and maintenance data
<u>7/7/10</u>		<u>1358.1</u>	

7/7/10

In accordance with Enstrom maintenance manuals did 25 hour lube to tail rotor teeter bearings.
 Hobbs 1358.1

Randy Frasch Randy Frasch 3303889 AP

8-12-10 Hobbs 1383.1 W.O. 5139 Completed 50hr inspection according to Enstrom maint manual, inspection and lubrication forms. Checked oil in freewheeling clutch. Removed cargo hook, mounts and manual release. Ground ran, leak and ops check normal. ----- Mark Roth Mark Roth AP 3510994 IA

A/C Num

12-16-2009 Tach 1333.1 Total time 1333.1 W.O. 5875 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms. Replaced induction air filter. Drained oil in T/R, M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Mobile Jet II turbine oil. Inspected and tested ELT according to FAR 91-207(d) Replaced L/H fuel tank vent line. Replaced static line from R/H forward eng mount to tail boom. Retorqued M/R gearbox bolts in accordance with SIL no. 0166. Checked torque on tail boom mounting bolts. Replaced belt tensioner idle pulley shaft P/N 28-13232-1 and both bushings P/N 28-13292-4. Adjusted belt tracking. C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer. Striped primer from spar. Inspected and reprimed. Installed nut plates to secure battery cover. Replaced tinerman nut plates as needed. C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.

Mark Roth

Mark Roth AP 518808681 IA

IME
Retire
Notes

INSTALLED REPLACEMENT UNIT IN THIS AIRCRAFT:
 N# 51769 hobbs: 1330.1 Date: 2/15/10
 MFG HID BMT P/N 3300-11 S/N A10-1043
 DESCRIPTION: ELECTRIC D.G. Tech: JH
 This aircraft has been tested & returned to service this date:
AEROTRONICS of Missoula CRS NH2D031L
 Missoula, MT. 59808 PH. (406) 728-7830

NOTE: This record must accompany component as a permanent history record.

F-163A Rev/04-03

ENSTROM HELICOPTER LOG

Owner _____

Model Number _____

Registration Number _____

Serial Number _____

Flight time brought forward	Hours	25 hour inspection due	hours	50 hour inspection due	hours
		100 hour inspection due	hours	Periodic inspection due	hours

Date	Description	Signature and number
11-1-2008	Tach 1307.3 Total time 1307.3 W.O. 5779 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms. Replaced induction air filter. Drained oil in T/R, M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Mobile Jet II turbine oil. Installed o-ring seals P/N NA51523-4E on M/R gear box lower inner ring due to leaking. Removed tail rotor blades and hub and sent to Enstrom for repair. See yellow tag for work performed. Installed tail rotor after repair. Checked torqued on tail boom. Inspected and tested ELT according to FAR 91-207(d) C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer. C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. Tracked and balanced M/R system. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.-----	
	<i>Mark Roth</i>	Mark Roth AP 518808681 IA

ELT battery due replacement 10-2011.

Form No. F-157, 10/03

AEROTRONICS OF MISSOULA
 5225 HIGHWAY 10 WEST
 MISSOULA, MT 59808
 CRS. NH2DO31L (406) 728-7830

Date: 09-24-2009 Pilot: _____ Cert.#: _____
 8OCT741 Montana Aero 1978 Enstrom F28C N51769 s/n 443
 Hobbs 1305.2/1320.3

Replaced Hobbs hour meter with a Hobbs p/n 085012-13 hour meter with the corrected aircraft time of 1320.3. Final ramp check found hour meter working correctly.

Jon Paul De Luca
 Jon Paul De Luca

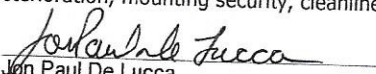
ENSTROM HELICOPTER LOG

Owner RANDY FRASCH

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours		
		1	AEROTRONICS OF MISSOULA	hours
			5225 HIGHWAY 10 WEST	hours
			MISSOULA, MT 59808	
			CRS. NH2DO31L (406) 728-7830	
Date	Nature of flight	Time in flight	Date: 10-15-2008	nature and
		Hours	8OCT727 Montana Aero 1978 Enstrom 14vdc F28C N51769 s/n 443 Hobbs: 1307.5	use number
			Installed wiring provisions to operate the cargo hook solenoid from the existing Pilot and Copilot cyclic switches. Built harness with supplied 2-pin plug and labeled aircraft wiring with labels numbered per supplied print. Wired to both crew cyclic cargo hook switches, "Cargo Hook Arm" lighted panel switch and protected with an inline 10-amp fuse. This work has been accomplished per the pertinent parts of AC43:13 parts 1B and 2A "Acceptable Methods, Techniques and Practices".	
			The aircraft weight and balance has been amended for the complete hook installation. Final ramp inspection of the added wiring and hook function test found good.	
			Annually this installation should be inspected for proper wire routing, wire deterioration, mounting security, cleanliness, and generally visual condition.	
			 John Paul De Lucca	
Total flight time				

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch
 Registration Number N51769

Model Number F28C
 Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
8/29/08		1302.8	AEROTRONICS OF MISSOULA 5225 HIGHWAY 10 WEST MISSOULA, MT 59808 CRS. NH2DO31L (406) 728-7830			<i>[Signature]</i> 03939
			Date: 08-29-2008			
			Montana Aero 1978 Enstrom 14vdc F28C N51769 s/n443 Hobbs: 1302.8			
			Inspected and tested ELT in accordance with FAR 91-207(d).			
			Emergency Beacon Corp EBC-502 s/n 208431			
			Battery replacement due by January 2009			
			<i>[Signature]</i> Joe Paul De Lucca			
		Total flight time				

ENSTROM HELICOPTER LOG

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Model Number F28C
 Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight Hours	Inspection and maintenance data			Signature and license number
9-15-08		1303.4	Installed co-pilots Cyclic, Collective and Pedals according to Enstrom Maint. Manual			Mark Roth AP518808661A
9-17-08		1305.2	C/W AD 2008-14-07 Dated 8-14-08 Inspected fuel inj. line clamping.			Mark Roth AP518808661A
Total flight time						

Form No. F-157, 10/03

AEROTRONICS OF MISSOULA
 5225 HIGHWAY 10 WEST
 MISSOULA, MT 59808
 CRS. NH2DO31L (406) 728-7830

Date: **08-27-2008**

Montana Aero 1978 Enstrom 140c. F28C N51769 s/n#43 Hobbs: 1302.5 8APRS94 Installation of replacement instrument panel to support additional flight instruments

Removed this date: Enstrom factory non-structural .060 aluminum shock mounted instrument panel. Garmin G100A CDI indicator, United Inst. 5934-1 20k altimeter and United Inst. 8000 Airspeed indicator. Installed this date: Aerotronics custom non-structural shock mounted instrument panel with improved layout consisting the following additional and replacement instruments:

- 1.) 3-1/8" Mid Cont. 3300-11 lighted Directional Gyro
- 2.) 3-1/8" Mid Cont. 4300-311 lighted Artificial Horizon
- 3.) 2 1/4" Aeronic 15035-0102 lighted Altimeter
- 4.) 2 1/4" Aeronic 35260-1170 0-6k lighted VSI
- 5.) 2 1/4" Mid Cont. MD22-406 lighted VOR/ILS-CDI
- 6.) 2 1/4" Mid Cont. MD22-406 lighted VOR/ILS-CDI
- 7.) 2 1/4" M800-14V-BAT Dayton Clock
- 8.) 2 1/4" M800-14V-BAT Dayton Clock
- 9.) two 3-1/8" 14V Nullee LW3014 PMA. (RPM & Manifold Press) instrument light wedges
- 10.) two Nullee LB4014 4" sub switch panel light bar

This panel has been constructed of 2024-T3 Alclad .080 aluminum with a powder coat finish. This panel has been installed and constructed per the pertinent parts of AC43: 13 parts 1B and 2A. This panel reuses the existing panel shock mounting provisions. This panel does not affect the primary structure of the aircraft and has been relabeled with white on clear contrasted replacement placarding.

The Nullee light wedges added to the factor Fuel Flow indicator, RPM indicator and Sub Panel 4" Light bars are feed from the replacement Klixon 7270-2-5 "Panel Light" breaker switch.

Replaced the existing Garmin GTX327 mode "C" transponder with the GTX330 mode "S" transponder. Added additional wiring to the GNS430 color moving map GPS/NAV/ILS/COM and GMA340 audio controller. I certify that the Transponder test and inspection required by FAR 91.413 has been performed and found to comply with Part 43, Appendix F. I certify that the altimeter, automatic pressure altitude reporting, Pitot and static system tests and inspections required by FAR Part 91.411 and FAR 91.217 have been performed and comply with Appendix E of Part 43. These systems have been tested to 15,000 feet.

Replace Enstrom switch and circuit breaker subpanel with rocker styled switches with a new subpanel with Klixon 7270-1-XX circuit breaker toggle style switches and Eaton MLL-5-3950 8504 Battery Master & 8503 Alternator locking toggle style switches.

Installed this date: Klixon 7270-2-XX style circuit breaker switches: -35amp Avionics Master, -7.5amp New Light, -20amp Landing Light, -5amp Instrument Panel Light, -15amp Anti-Collision, -15amp Belly Light, -5amp Boost Pump, -7.5amp Trim, Instrument and -7.5amp Ignition, -3amp Horizon and -3amp Directional Gyro circuit breaker switches in accordance with the pertinent parts of AC43: 13 parts 1B and 2A. The sub panel has been relabeled with white on clear contrasted replacement placarding with two Nullee 4" light bars across the top.

The Aircraft Weight and Balance paperwork and Equipment List has been amended and corrected, see Aerotronics of Missoula supplements. Annually this installation should be inspected for proper wire routing, wire deterioration, mounting security, cleanliness and general visual condition.

John Paul De Lucca
 John Paul De Lucca

ENSTROM HELICOPTER LOG

Owner RAWBY FRASCH
 Registration Number N51769

Flight time brought forward	
Date	Nature flight

ENSTROM HELICOPTER LOG

Owner RANDY FRASCH

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
5/15/08		1286.6	INSTALLED SERVICEABLE NAMIFLEX BEARINGS, SERIAL NUMBERS 7194, 7195, 7196. T.T. 94.4 HRS. DUE FOR REPLACEMENT NEXT 12/09. ALL WORK PERFORMED I.A.W. CURRENT MANUFACTURERS MANUALS.			
			<i>Mahesh Kumar</i>			516065048AEP
		Total flight time				

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch
Registration Number N51769

Model Number F28C
Serial Number 443

9/4/07 Tach 1265.9. Total time 1265.9. W.O. # 1001 Completed 100 hr/Annual inspection in accordance with Enstrom Maintenance Manual and lubrication requirements. Drained & replaced oil (Mobil Jet II) in free-wheeling clutch. Changed oil in T.R. and M.R. gear boxes. Checked for chips on magnetic plugs; found none. Reserviced with Mobil I gear lube. Removed lower swash plate assembly P/N 28-16101-939-R SN 19-03-05-W sent to factory for overhaul. Re-installed lower swash plate, overhauled Bell crank P/N 28-16218-1, reinstalled. Cyclic & collective operational check is good. Removed Oleo strut assembly on right & left-hand aft skids P/N 28-17148-903-R. Right-hand is overhauled, left-hand is new. S/N NA. Re-torqued flapping pins retention nuts. Re-shimmed & re-torqued lamiflex bearings. Reviewed A.D. & S.B. lists for compliance, found them in order. Installed new sliding window vent, IAW Enstrom DWNG. # 28-11714 used -3 & -4 vent installation. No effect on CG. Installed 3 new drag hinge pins: P/N 28-14007-3 I.A.W. AD # 2007-SW-09-AD. Re-torqued M.R. transmission mounts & tailboom bolts. Accomplished SDB # 0103. Exhaust by-pass system P/N 28-125017-1 installed. Completed engine compression check, checks good. Accomplished inspection of push pull rods IAW AD 2005-SW-07-AD. Found no moisture, corrosion or anomalies. Parts are good. Ground run, leak & ops check good. Tracked and balanced MR system. I certify this aircraft has been inspected in accordance with annual/100 hr. inspection and is determined to be in airworthy condition.

ours
ours
and
nber

Dennis A Brevik

Dennis Brevik A&P/IA 517447472

Part Desc: OLEO STRUT ASSY, LG GEAR SWO: 12965

P/N: 28-17148-903-R S/N: N/A

Model: "F" & "FX" TT: UNK. TSOH: N/A

The item identified above was repaired and inspected I/A/W current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under the Service Work Order identified above.

Mechanic: [Signature] Inspector: W. N. Walcher

Date: 6-1-07 Date: 6-5-07

SERVICEABLE

F-529 (Rev. D, 11/04)

ENSTROM HELICOPTER CORPORATION
2209 22nd Street
Menominee, Michigan 49858 U.S.A.
EASA 145.4427
FAA Repair Station EAHR 621N

DESCRIPTION OF WORK PERFORMED:

INSPECTED & REBUILT w/NEW: SEAL HOUSING ASSY,
PISTON, VALVES, WIPER, BOOT, HDWE, ETC.

*AD, SDB, SIL Complied with N/A

*ENTER N/A IF NOT APPLICABLE.

F-529A 08/05

ENSTROM HELICOPTER LOG

Owner Randy Fransch / Montana Aero

Model Number F28C

Registration Number N51769

Serial Number 443

10-21-2005 Tach 1201.2 Total time 1201.2 W.O. 3920 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms. Drained oil in T/R and M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Mobile Jet II turbine oil. Retorqued tail boom and transmission mounting hardware. Replaced tach drive pulley and drive o-rings. Replaced belt tensioner rod end P/N 01-824-08E-011 and bell crank P/N 28-13260-1. Replaced belt tensioner support brackets P/N 28-13283-1 and arm Assembly's P/N 28-13318-7. C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD88-11-06 dated 5-31-88 Horizontal Stabilizer. C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. Inspected and tested ELT according to FAR 91-207(d) Ground ran, leak and ops check normal. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.-----

----- *Mark Roth*

Mark Roth AP 518808681 IA

hours

hours

Signature and
License number

Total flight time

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number N51769

Serial Number 443

		hours
Date	12-14-2006 Tach 1237.4 Total time 1237.4 W.O. 4014 Completed 100hr/Annual inspection according to Enstrom maint manual, inspection and lubrication forms. Drained oil in T/R, M/R gear box. Inspected for metal. None found. Serviced with Mobile one gear lube. Drained oil in freewheeling clutch. Serviced with Mobile Jet II turbine oil. Checked torqued on tail boom. Repaired broken wire to over boost indicator light and replaced lamp. Repositioned fuel strainer according to Enstrom drawing no. 28-01029. Installed fuel flow transducer according to Enstrom drawing no. 28-01050. Replaced main rotor belt drive tensioner bushing P/N 07-DU-07 and adapter P/N 28-13263-1. Replaced ELT battery. Due again for replacement 1-2009. Inspected and tested ELT according to FAR 91-207(d) Replaced bolts AN5-16, spacers P/N 28-14259-3, washers and nuts P/N MS17825-5 from pitch link to pitch horn. C/W AD 82-24-01 dated 11-30-82 Drive belt clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer. C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. Tracked and balanced M/R system. I certify this aircraft has been inspected in accordance with an annual inspection and 43-13 ap D and was determined to be in airworthy condition.	hours
	----- <i>Mark Roth</i>	
	Mark Roth AP 518808681 IA	

Form No. F-157, 10/03


ENSTROM HELICOPTER LOG

Owner RANDY FRASCH % MONTANA AERO

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours	hours
			hours
		AEROTRONICS OF MISSOULA 5225 HIGHWAY 10 WEST MISSOULA, MT 59808 CRS. NH2DO31L (406) 728-7830	
Date	Nature of flight	Time in flight	Signature and cense number
		Hours	
		Date: 08-11-2005 Pilot: _____ Cert #: _____ Montana Aero Enstrom Helicopter Corp. F28C N51769 s/n 443 hobbs 1176.2 w/o 4D239. Installed this date: GARMIN GMA340 audio controler, GNS430 #1 NAV/COM colormap GPS with GA56 GPS antenna, GTX327 transponder, GI106A CDI/VOR-ILS indicator. ACK A-30.4 altitude encoder. David/Clark H10-13XP ANR headset module. Comant CI122 bottom mt Com; CI-205-3 Towelbar Nav; CI105 Transponder and CI102 Marker antenna sytems with CI507 Nav ant. splitter. Rewire B/K KY196A Com and replace CI291 Com antenna. This equipment has been installed as per Manufactures installation instructions and pertinent parts of AC43:13 1b and 2a ("Acceptable Methods, techiques and Practices"). and in accordance with AC 20.138 ("Airworthiness approval of GPS navigational equipment for use as VFR and IFR supplemental Navigation system"). The Garmin GTX327 transponder s/n 83716987, United Inst. 5934-1 altimeter s/n L7239 and ACK A-30.4 altitude encoder s/n 93393 have been tested and inspected and found to comply with FAR91.217 and FAR91.411. The aircraft equipment list, weight and balance papers have been amended and corrected, and 337's describing the installation have been added to the aircraft papers, see AEROTRONICS of Missoula supplements this date. Anually this installation should be checked for mounting security, proper wire routing, wire deterioration, cleanliness and general visual condition of all components.	
			
		Total flight time	

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Randy Frasch

Model Number F28C

Registration Number N51769

Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
	4-6-2005 Hobbs 1146.3 W.O. 3846 Completed 50hr inspection. Lubricated and inspected aircraft.		<i>Michael Witt License #16065048AJP</i>			
Total flight time						

ENSTROM HELICOPTER LOG

Owner Randy Frasci
 Registration Number N 51769

Model Number F28C
 Serial Number 443

		hours
b	12-17-2004 Hobbs 1105.2 Total time 1105.2 W.O. 3822 Completed 100hr/ Annual inspection according to Enstrom maint manual, inspection and lubrication forms.	hours
Date	Replaced induction air filter. Installed new T/R pitch links. Drained oil in T/R and M/R gear box. Inspected for metal. None found. Serviced with Mobile 1 oil. Checked freewheeling clutch oil level. Removed L/H rear gear strut. Installed after resealing and servicing. Cycled and serviced M/R dampners. Replaced M/R gear box thermocouple. Retorqued tail boom and transmission mounting hardware. C/W AD 82-24-01 dated 11-30-82 Drivebelt Clutch. C/W AD 88-11-06 dated 5-31-88 Horizontal Stabilizer. C/W AD 90-01-06 dated 2-1-90 Tail rotor gear box. C/W AD 96-06-03 dated 4-23-96 clutch assembly. Ground ran, leak and ops check normal. I certify this aircraft has been inspected in accordance with an Annual inspection and was determined to be in airworthy condition.-----	ature and se number
	<i>Mark Roth</i> Mark Roth AP 518808681 IA	
	1-26-2005 Hobbs 1115.9 Total time 1115.9 W.O. 3825 Serviced tail rotor gear box. Lubricated aircraft. Removed main rotor dampers. Installed dampers P/N 28-14375-7-R S/N 96309-22, S/N 96309-28, S/N 96309-19 Ground ran and test flight. Leak and ops checked.-----	
	<i>Mark Roth</i> Mark Roth AP 518808681 IA	

F-157, 10/03

Part Desc: DAMPER ASSY, M.R. SWO: 12330

P/N: 28-14375-7-R S/N: 96309-22

Model: ALL "PISTON" SHIPS TT: UNK. TSOH: N/A

The item identified above was repaired and inspected I/A/W current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under the Service Work Order identified above.

Mechanic: R. Miron Inspector: W. H. Walcher

Date: 1-24-05 Date: JAN 24 2005

SERVICEABLE

F-529 (Rev. D, 11/04)

ENSTROM HELICOPTER CORPORATION

2209 22nd Street
Menominee, Michigan 49858 U.S.A.
EASA, 145.4427
FAA Repair Station EAHR 621N

3 15 5/8

Part Desc: DAMPER ASSY, M.R. SWO: 12330

P/N: 28-14375-7-R S/N: 96309-19

Model: ALL "PISTON" SHIPS TT: UNK. TSOH: N/A

The item identified above was repaired and inspected I/A/W current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under the Service Work Order identified above.

Mechanic: R. Miron Inspector: W. N. Walcher

Date: 1-24-05 Date: JAN 24 2005

SERVICEABLE

F-529 (Rev. D, 11/04)

ENSTROM HELICOPTER CORPORATION
2209 22nd Street
Menominee, Michigan 49858 U.S.A.
EASA: 145.4427
FAA Repair Station: EHR 621N

3 15 5/0

Part Desc: DAMPER ASSY, M.R. SWO: 12330

P/N: 28-14375-7-R S/N: 96309-28

Model: ALL "PISTON" SHIPS TT: UNK. TSOH: N/A

The item identified above was repaired and inspected I/A/W current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under the Service Work Order identified above.

Mechanic: R. Miron Inspector: W.H. Walcher

Date: 1-24-05 Date: JAN 24 2005

SERVICEABLE

F-529 (Rev. D, 11/04)

ENSTROM HELICOPTER CORPORATION

2209 22nd Street

Menominee, Michigan 49858 U.S.A.

EASA: 145.4427

FAA Repair Station EAHR 621N

3.15 1/2

ENSTROM HELICOPTER LOG

Owner Randy Treasch
 Registration Number N51769

Model Number F28C
 Serial Number 443

Flight time brought forward		Hours	25 hour inspection due	hours	50 hour inspection due	hours
			100 hour inspection due	hours	Periodic inspection due	hours
Date	Nature of flight	Time in flight	Inspection and maintenance data			Signature and license number
		Hours				
12/8/04		1104.3	DYNAMIC BALANCES W/A BLADES TO LESS THAN .2 "IPS". ALL WORK COMPLETED INW ENSTROM F-28C MAINTENANCE MANUAL & CHOWICK OPS MANUAL W.O. # 04-14076			↑ ↑ <i>[Signature]</i> MW4496
Total flight time						

Form No. F-157, 10/03

ENSTROM HELICOPTER LOG

Owner Brandy Fensch

Model Number F28

Registration Number N51769

Flight time brought forward		Hours
Date	Nature of flight	Hours
10/4/04		1098.0

Model: **A&I Aircraft Maintenance**
 1268 Tower Street
 Abbotsford, BC V2T 6H5

AIRFRAME
 LOGBOOK ENTRE

Date: _____
 Tach: _____

Assemble main rotor head and install on main rotor transmission
 In accordance with Enstrom M/M sec. 9-4 (A thru I).
 Swashplate assembled in accordance with Enstrom M/M sec.
 12-59 (J thru L) and (G). New push pull tubes installed per
 service bulletin 0096 .
 The maintenance described above has been performed in accordance
 With the applicable standards of airworthiness.

Art E. Comeault AMO 93-99

Nothing follows 