DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

H1CE **Revision 22 ENSTROM** F-28 F-28A 280 F-28C F-28C-2 F-28C-2R 280C F-28F F-28F-R 280F 280FX TH-28 480 480B May 21, 2001

TYPE CERTIFICATE DATA SHEET NO. H1CE

This data sheet which is part of type certificate No. H1CE prescribes conditions and limitations under which the product meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder:	The Enstrom Helicopter Corporation
	Menominee, Michigan

I - Model F-28 Helicopter, 3 PCLH, Approved April 15, 1965

Engine	Lycoming HIO360-C1A or HIO360-C1B
Fuel	100/130 min. or 100LL min. grade aviation gasoline.
Engine limits	For all operations: 2700 rpm (195 hp.)
RPM limits	Engine (Power On) 2700 maximum, 2500 minimum Rotor (Power Off) 385 maximum, 315 minimum
Airspeed limits (IAS)	Never Exceed Speeds - Miles Per Hour

	INCVE	I EXCEC	eu spee	us - Ivi	nes re	noui			
Press.		Outside Air Temperature, °F.							
Alt.	-20	0	20	40	60	80	100		
SL	100	100	100	100	100	96	91		
2000	100	100	100	97	91	86	81		
4000	100	99	92	86	81	77	73		
6000	93	87	82	77	73	69	66		
8000	83	78	73	69	66	63	60		
10000	74	70	66	63	60				

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	Altitude limits	Avoid operational areas as shown in Approved Rotorcraft Flight Manual.								
	C.G. Limits Maximum weight	Longitud 1950 lbs	dinal (- 5.	+92.0)	to (+98	3.0)				
	No. of seats	3 (+62.0)								
	Maximum baggage	60 lb. (+135.0)								
	Fuel capacity	30 gal. (+98). See NOTE 1 for data on unusable fuel.								
	Oil capacity	2 gal. (+96.0) See NOTE 1 for data on undrainable oil.								
	Rotor blade and	Essuitas	: : c						1	
	Stabilizer setting	For rigging information, refer to Maintenance Manual.								
	Serial Nos eligible	3 thru 14	4 (See	NOTE	29)					
	Seriar 1003. engible	5 unu 1			<i>_</i>))					
<u>II -</u>	Model F-28A Helicopter, 3 PC	CLH, App	roved	May 28	8, 1968					
	Engine	Lycomir	ng H1C)-360-(C1A or	HIO-3	60-C1	В		
	Fuel	100/130 min. or 100LL min. grade aviation gasoline.								
	Engine limits	For all operations: 2900 rpm (205 hp.)								
	RPM limits	Engine (Power On) 2900 maximum, 2750 minimum Rotor (Power Off) 385 maximum, 313 minimum								
	Airspeed limits (IAS)		Neve	r Excee	ed Spee	eds – M	liles Pe	r Hour		
		Press.		Outsi	de Air	Tempe	rature,	°F.		
		Alt.	-20	0	20	40	60	80	100	
		SL	112	112	112	112	112	104	98	
		2000	112	112	112	105	98	92	87	
		4000	112	106	99	92	87	83	80	
		6000	100	93	88	83	79	75	72	
		8000	89	84 75	79	75	71 (5	68		
		12000	80 72	75 68	/1 65	08 62	05			
		12000	12	00	05	02				J
	Altitude limits	Maximu	m oper	rating:	10.000) feet d	ensitv a	altitude		
		Maximu	m for t	takeoff	and la	nding:	7,000 1	feet den	sity alti	itude
		Refer to	Flight	Manua	al for h	eight-v	elocity	diagran	1.	
	C.G. limits	Longitue	dinal (-	+92.0)	to (+98	3.0)				
	Maximum weight	2150 lb.								
	No. of seats	3(+62.0)	1) 125 (1)							
	Fuel capacity	00 ID. (+	-135.0) +08) S) td • 42	col ()	067)	Dat Sa		E 1 for	data on unusable fuel
	Oil capacity	2 gal (+		See NO	gai. (+)TE 1 f	or data	on und	lrainabl	e oil	data on unusable ruer.
	Rotor blade and	2 gui (†	20.07			or adda	on une	inuniuoi	c on.	
	control movements	For rigg	ing info	ormatio	on, refe	r to Ma	aintena	nce Ma	nual.	
	Stabilizer setting	Fixed, 4	° TE u	p relati	ve to V	VL.				
	Serial Nos. eligible	15 and s	ubsequ	ent (Se	ee NOT	FE 29)				

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III - Model 280 Helicopter, 3 PCLH, Approved September 13, 1974

	Engine	Lycomi	Lycoming HIO360-C1A or HIO-36O-C1B							
	Fuel	100/130	min. o	or 100L	L min.	grade a	aviatio	n gasol	ine.	
	Engine limits	For all c	peratio	ons: 29	00 rpn	n (205 ł	ıp.)			
	RPM limits	Engine (Power On) 2900 maximum, 2750 minimum Rotor (Power Off) 385 maximum, 313 minimum								
	Airspeed limits (IAS)		Neve	r Excee	ed Spee	eds – M	iles Pe	r Hour		1
		Press.		Outsi	de Air	Temper	rature,	°F.		
		Alt.	-20	0	20	40	60	80	100	
		SL	112	112	112	112	112	104	98	
		2000	112	112	112	105	98	92	87	
		4000	112	106	99	92	87	83	80	
		6000	100	93	88	83	79	75	72	
		8000	89	84	79	75	71	68		
		10000	80	75	71	68	65			
		12000	72	68	65	62				
	Altitude limits C.G. limits Maximum weight No. of seats Maximum baggage Fuel capacity Oil capacity Rotor blade and control movements	 Maximum operating: 10,000 feet density altitude Maximum for takeoff and landing: 7,000 feet density altitude Refer to Flight Manual for height-velocity diagram. Longitudinal: (+92.0) to (+98.0) Lateral: 1250 in-lbs. left or right 2150 lb. 3 (+62.0) 60 lb. (+135.0) 42 gal. (+96.7), 40 gal. usable. See NOTE 1. 2 gal. (+96.0) See NOTE 1 for data on undrainable oil. 								
	Stabilizer setting	Fixed, 6	° TE uj	p relati	ve to V	VL.				
	Serial Nos. eligible	1002 an	d subse	equent	(See N	OTE 29))			
IV	- Model F-28C Helicopter, 3 PC	CLH, App	roved]	Decem	ber 8, 1	<u>.975</u> (S	ee NO'	TE 4)		
	Engine	Lycoming HIO360-E1AD or HIO360-E1BD with Rajay Model 301E10-2 or Rotormaser Model 3BT5EE10J2 turbocharger per STC SE100GL and Bendix RSA-5AB1, Parts List 2524712-1, -2, -3, -5, -6, -7, -8, -9, or -10 fuel injector. (See NOTE 13 regarding -E1BD Engine.)								
	Fuel	100/130	min. o	or 100L	L min.	grade a	aviatio	n gasol	ine.	
	Engine limits	For all c	peratio	ons: 29	00 rpn	n, 36.5 i	in. Hg	manifo	ld pres	sure (205 hp.)
	RPM limits	Engine (Rotor (P	Power Power (On) 29 Off) 38	900 ma 5 maxi	ximum, mum; 3	, 2750 32 min	minimu nimum	um	

Airspeed limits (IAS)		Neve	r Excee	ed Spee	eds – M	liles Pe	r Hour		
-	Press.		Outsi	de Air	Tempe	rature,	°F.		
	Alt.	-20	0	20	40	60	80	100	
	SL	112	112	112	112	112	104	98	
	2000	112	112	112	104	99	92	87	
	4000	112	106	99	92	88	83	80	
	6000	100	95	88	83	79	75	72	
	8000	89	84	79	75	72	69	65	
	10000	81	76	72	69	65	62		
	12000	73	69	66	63	58			
Altitude limits	Maximu	m oper	rating 1	2,000	ft. dens	ity alti	ude.		
	Refer to	Flight	Manua	al for h	eight-ve	elocity	diagrar	n.	
C.G. limits	Longitue	dinal:	(+92)	to (+94	4.7) for	weight	s betwe	een 200	00 and 2200 lbs.
			(+92)	to (+98	3.0) for	weight	s below	v 2000	lbs.
	Lateral:		Maxir	num ap	proved	l asymr	netric n	noment	t +3700 to -1700 in-lbs.
			at 220	00 lbs. (See ap	proved	Flight	Manua	l for schedule with
			weigh	t.)					
Maximum weight	2200 lb.								
No. of seats	3 (+62.0)) (10 <i>-</i> /							
Maximum baggage	108 lb. (+135.0))		~	NOTE			
Fuel capacity	42 gal. (+96.7)	, 40 ga	I. usabl	e. See	NOTE	1		
Oil capacity	10 qts. (+96.0) See NOTE 1 for data on undrainable oil.								
(engine sump)		ו••			1				
Control System Rigging	Refer to		enance	Manua	u.				
Stabilizer Setting	F1xed, 4	° IE u	p relati	ve to V	VL.	$\mathbf{E}(20)$			
Serial Nos. eligible	304, 33	and s	ubsequ	ent (Se	e NOT	E 29)			
V Model 280C Helicopter 3 PC		ovod F	Jacomb	or 8 1	075 (\$c		Έ <i>1</i>)		
Fingine	LII, Appi Lycomi	ng HIO)360_1	$F1\Delta D$	or HIO	360-F	11 H)	with Ra	iav Model 301E10-2 or
Light	Rotorm	ig 1110 ister M	[odel 3]	BT5FF	1012 fi	rboch	rger ne	r STC	SE100GL and Bendix
	RSA-5A	B1 P	arts Lis	t 2524	712-1 -	2 -3 -	5 -6 -	7 -8 -9	θ or -10 fuel injector
	(See NC)TE 13	regard	ling -E	BD en	gine.)	., ., .	, , , ,	, or to fact injector.
	(~~~~~~~~~					8)			
Fuel	100/130	min. c	or 100L	L min.	grade a	aviatio	ı gasoli	ne.	
					e		U		
Engine limits	For all o	peratio	ons: 29	900 rpn	n, 36.5	in. Hg	manifol	ld press	sure (205 hp.)
-		-		-		-		•	
RPM limits	Engine (Power	On) 29	900 ma	ximum	, 2750	minimu	ım	
	Rotor (P	Power (Off) 38	5 maxi	mum; 3	32 min	imum		
Airspeed limits (IAS)		Neve	r Excee	ed Spee	eds – M	liles Pe	r Hour		1
	Press.		Outsi	de Air	Tempe	rature,	°F.		
	Alt.	-20	0	20	40	60	80	100	
	SL	117	117	117	117	117	109	102	
	2000	117	117	117	109	103	97	92	
	4000	117	111	103	97	93	88	85	
	6000	105	100	93	88	84	80	77	
	8000	94	89	84	80	77	74	70	
	10000	86	81	77	74	70	67		
	12000	78	74	71	68	63			

Altitude limits	Maximum ope Refer to Flight	Maximum operating 12,000 ft. density altitude. Refer to Flight Manual for height-velocity diagram.						
C.G. limits	Longitudinal:	(+92) to (+94.7) for weights between 2000 and 2200 lbs. (+92) to (+98.0) for weights below 2000 lbs.						
	Lateral:	Maximum approved asymmetric moment +3700 to -1700 in-lbs. at 2200 lbs. (See approved Flight Manual for schedule with weight.)						
Maximum weight	2200 lb.							
No. of seats	3 (+62.0)							
Maximum baggage	108 lb. (+135.	0)						
Fuel capacity	42 gal. (+96.7)), 40 gal. usable. See NOTE 1						
Oil capacity (engine sump)	10 qts. (+96.0)	See NOTE 1 for data on undrainable oil.						
Control System Rigging	Refer to Maint	enance Manual.						
Stabilizer Setting	Fixed, 6° TE u	p relative to WL.						
Serial Nos. eligible	1020, 1023 an	1020, 1023 and subsequent (See NOTE 29)						

VI - Model 280C Helicopter, 3 PCLH, Modified per Note 5, Approved September 23, 1977

(This version of the Model 280C differs from the basic Model 280C in that the installation of items listed on Enstrom Specification Drawing Number 28-100005 permits operation at a gross weight of 2350 lbs.)

Engine	Lycoming HIO360-E1AD or HIO360-E1BD with Rajay Model 301E10-2 or Rotormaster Model 3BT5EE10J2 turbocharger per STC SE100GL and Bendix RSA-5AB1, Parts List 2524712-1, -2, -3, -5, -6, -7, -8, -9, or -10 fuel injector. (See NOTE 13 regarding -E1BD engine).					
Fuel	100/130 min. or 100LL min. grade aviation gasoline.					
Engine limits	For all operations: 2900 rpm, 36.5 in. Hg manifold pressure (205 hp.)					
RPM limits	Engine (Power On) 2900 maximum; 2750 minimum Rotor (Power Off) 385 maximum; 332 minimum					
Airspeed limits (IAS)	Never Exceed Speeds – Miles Per HourPress.Outside Air Temperature, °F.					

Press.	Outside Air Temperature, °F.								
Alt.	-20	0	20	40	60	80	100		
SL	117	117	117	117	117	117	117		
2000	117	117	117	117	117	114	109		
4000	117	117	117	115	110	105	96		
6000	117	116	111	105	96	87	78		
8000	112	107	96	87	78	69	60		
10000	99	88	78	69	59				
12000	81	70	60						

Altitude limits

Maximum operating 12,000 ft. density altitude. Refer to Flight Manual for height-velocity diagram.

C.G. limits	Longitudinal:	(+92.0) to (+94.6) at 2350 lbs.
	-	(+92.0) to (+96.7) at 2200 lbs.
		(+92.0) to (+100.0) at 2000 lbs. & below
		See Flight Manual for schedule with weight.
	Lateral:	Maximum approved asymmetric moment +3700 to -3250 in.
		-lbs. at 2350 lbs. See Flight Manual for schedule with weight.
Maximum weight	2350 lbs.	
No. of seats	3 (+62.0)	
Maximum baggage	108 lb. (+135.	0)
Fuel capacity	42 gal. (+96.7)), 40 gal. usable. See NOTE 1
Oil capacity	10 qts. (+96.0)) See NOTE 1 for data on undrainable oil.
(engine sump)		
Control System Rigging	Refer to Maint	tenance Manual.
Stabilizer Setting	Fixed, 6° TE u	p relative to WL.
Serial Nos. eligible	All approved	280C Models (See NOTE 29)

<u>VII - Model F-28C Helicopter</u>, 3 PCLH, Modified as per Note 5, Approved April 21, 1978 (See NOTES 12 & 14) (This version of the Model F-28C differs from the basic Model F-28C in that installation of items listed on Enstrom Specification Drawing Number 28-100005 permits operation at a gross weight of 2350 lbs.)

Engine	Lycoming HIO360-E1AD or HIO360-E1BD with Rajay Model 301E10-2 or Rotormaster Model 3BT5EE10J2 turbocharger per STC SE100GL and Bendix RSA-5AB1, Parts List 2524712-1, -2, -3, -5, -6, -7, -8, -9, or -10 fuel injector. (See NOTE 13 regarding -E1BD Engine.)
Fuel	100/130 min. or 100LL min. grade aviation gasoline.
Engine limits	For all operations: 2900 rpm, 36.5 in. Hg manifold pressure (205 hp.)
RPM limits	Engine (Power On) 2900 maximum, 2570 minimum Rotor (Power Off) 385 maximum; 332 minimum

Airs	need	limits	(IAS)	١
rus	puu	minus	(IAD)	,

Never Exceed Speeds – Miles Per Hour

Press.	Outside Air Temperature, °F.								
Alt.	-20	0	20	40	60	80	100		
SL	112	112	112	112	112	112	112		
2000	112	112	112	112	112	109	104		
4000	112	112	112	110	105	100	91		
6000	112	111	106	101	91	82	73		
8000	107	102	91	82	73	64	55		
10000	94	83	73	64	54				
12000	76	65	55						

Maximum operating 12,000 ft. density altitude. Refer to Flight Manual for height-velocity diagram.

Altitude limits

C.G. limits

Longitudinal: (+92.0) to (+94.6) at 2350 lbs. (+92.0) to (+96.7) at 2200 lbs. (+92.0) to (+100.0) at 2000 lbs. & below See Flight Manual for schedule with weight.
Lateral: Maximum approved asymmetric moment +3700 to -3250 in. -lbs. at 2350 lbs. See Flight Manual for schedule with weight.

Maximum weight	2350 lbs.
No. of seats	3 (+62.0)
Maximum baggage	108 lb. (+135.0)
Fuel capacity	42 gal. (+96.7), 40 gal. usable. See NOTE 1
Oil capacity	10 qts. (+96.0) See NOTE 1 for data on undrainable oil.
(engine sump)	
Control System Rigging	Refer to Maintenance Manual.
Stabilizer Setting	Fixed, 4° TE up relative to WL.
Serial Nos. eligible	All approved F-28C Models (See NOTE 29)

VIII - Model F-28C/280C Helicopter, 3 PCLH (Restricted Category) Modified per Note 6, Approved May 5, 1978, or NOTE 8, Approved July 28, 1982 (See NOTES 12 & 14)

(This version is for agricultural operation or external load operation up to 2600 lbs. GW.)

Engine	Lycoming HIO360-E1AD or HIO360-E1BD with Rajay Model 301E10-2 or Rotormaster Model 3BT5EE10J2 turbocharger per STC SE100GL and Bendix RSA-5AB1, Parts List 2524712-1, -2, -3, -5, -6, -7, -8, -9, or -10 fuel injector. (See NOTE 13 regarding -E1BD Engine.)										
Fuel	100/130 min. or 100LL min. grade aviation gasoline.										
Engine limits	For all operations: 2900 rpm, 36.5 in. Hg manifold pressure (205 hp.)										
RPM limits	Engine (Rotor (F	Engine (Power On) 2900 maximum, 2750 minimum Rotor (Power Off) 385 maximum; 332 minimum									
Airspeed limits (IAS)		Neve	r Excee	d Spee	ds – N	liles Pe	er Hou	r			
	Press.		Outsic	le Air	Tempe	rature,	°F.]		
	Alt.	-20	0	20	40	60	80	100			
	SL	85	85	85	85	85	85	85			
	1000	85	85	85	85	85	83	82			
	2000	85	85	85	84	83	82	81			
	3000	85	85	84	83	82	81	80			
	4000	85	84	83	82	81	80				
	5000	84	83	82	81	80					
	6000	83	82	81	80]		
Altitude limits	6000 ft.	density	y altitud	le							
C.G. limits	Longitu	Longitudinal: (+96.5) to (+98.0) at 2600 lbs. (+92.9) to (+99.0) at 2000 lbs. (Straight line variation between data points.)									
	Lateral:		-3180 to -1855 inlbs. above 2350 lbs.								
Maximum weight	2600 lbs	5.									
Maximum weight per											
dispersal tank	350 lbs.										
Maximum baggage	108 lbs.	(+135	.0)								
Fuel	42 gal. (+96.7)	, 40 gal	. usabl	e. See	NOTI	E 1				
Oil capacity	10 qts. (+96.0)	See NO	OTE 1	for dat	a on u	ndraina	able oil	l.		
(engine sump)											

Control System Rigging	Refer to	Refer to Maintenance Manual.								
Stabilizer Setting	F-28C:	F-28C: Fixed, 4° TE up relative to WL.								
	280C:	280C: Fixed, 6° TE up relative to WL.								
Serial Nos. eligible	All approved F-28C & 280C Models (See NOTE 29)									
IX - Model F-28C/280C Helicor	oter, 3 PCLH	I Modi	fied pe	r Note	7, App	roved J	une 20	, 1978	(See NOTES 12 & 14)	
(This version is for operation wi	vith inflatable floats.)									
Engine	Lycomi	ng HIC)360-]	E1AD	or HIO	360-H	E1BD v	with Ra	ijay Model 301E10-2 or	
	Rotorma	aster M	[odel 3]	BT5EE	E10J2 ti	ırbocha	arger p	er STC	SE100GL and Bendix	
	RSA-5A	AB1, Pa	arts Lis	t 25247	712-1, -	-2, -3, -	5, -6, -	7, -8, -9	9, or -10 fuel injector.	
	(See NC	DTE 13	regard	ling -El	IBD Ei	ngine.)				
Fuel	100/130	100/130 min. or 100LL min. grade aviation gasoline.								
Engine limits	For all o	For all operations: 2900 rpm, 36.5 in. Hg manifold pressure (205 hp.)								
RPM limits	Engine	(Power	On) 29	900 ma	ximum	, 2570	minim	ım		
	Rotor (F	Power (Off) 38	5 maxi	mum; 3	332 mir	imum			
Airspeed limits (IAS)		Neve	r Excee	ed Spee	eds – M	liles Pe	r Hour			
L	Press.		Outsi	de Air	Tempe	rature,	°F.			
	Alt.	-20	0	20	40	60	80	100		
	SL	100	100	100	100	100	100	100		
	2000	100	100	100	100	100	97	93		
	4000	100	100	100	97	93	88	82		
	6000	100	98	94	88	82	75	68		
	8000	95	90	82	75	68	62	55		
	10000	84	77	69	62	55				
	12000	70	63	55						
Altitude limits	12,000 f	ft. dens	ity altit	tude.						
C.G. limits	Longitu	dinal:	(+92.0	0) to (+	94.6) a	t 2350	lbs.			
			(+92.0)) to (+	98.5) a	t 2070	lbs.			
			See F	light M	anual f	or sche	dule w	ith wei	ght.	
	Lateral:		Maxir -lbs. a	num ap it 2350	proved lbs. Se	l asymr ee Fligł	netric 1 nt Man	nomen ual for	t +3700 to -3250 in. schedule with weight.	
Maximum weight	2350 lbs	5.								
No. of seats	3 (+62.0))								
Maximum baggage	108 lb. ((+135.0))							
Fuel capacity	42 gal. ((+96.7)	, 40 ga	1. usabl	le. See	NOTE	. 1			
(engine sump)	10 qts. (+96.0)	See N	OTE 1	for dat	a on un	Idraina	ble oil.		
Control System Rigging	Refer to	Maint	enance	Manua	al.					
Stabilizer Setting	F-28C:	Fixed	, 6° TE	up rela	ative to	WL, p	er Dwg	gs 28-1	7326 and 28-2000.	
-	280C: 28-2000	Fixed	, 6° TE	up rela	ative to	WL, T	rim tal	o per D	wgs 28-17326 and	
Serial Nos. eligible	All appr	oved F	-28C &	& 280C	Mode	ls (See	NOTE	29)		
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X - Model F-28F/280F Helicopter, 3 PCLH, Approved December 31, 1980 (See NOTE 14)

(Mo	odels F-28F/280F are similar to	F-28C/280C except for increased horsepower engine, improved turbocharger and
uie	Engine	Lucoming LHO 260 E1 AD with Doiou Model 225E10.2 or Detemoster Model
	Engine	3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1, Parts Number 2524858-A, -1, -2, -3, or -4 fuel injector.
	Fuel	100/130 min. or 100LL min. grade aviation gasoline.
	Engine limits	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)

RPM limits	Engine (Power On) 3050 maximum; 2900 minimum
	Rotor (Power Off) 385 maximum; 332 minimum

F28F Airspeed limits (IAS)

Never Exceed Speeds - Miles Per Hour

Press.	Outside Air Temperature, °F.									
Alt.	-20	0	20	40	60	80	100			
SL	112	112	112	112	112	112	112			
2000	112	112	112	112	112	109	105			
4000	112	112	112	110	105	100	91			
6000	112	111	106	100	90	81	73			
8000	107	102	92	82	73	64	55			
10000	94	84	74	65	55					
12000	76	65	56							

280F Airspeed limits (IAS)

Never Exceed Speeds - Miles Per Hour

Press.	Outside Air Temperature, °F.								
Alt.	-20	0	20	40	60	80	100		
SL	117	117	117	117	117	117	117		
2000	117	117	117	117	117	114	109		
4000	117	117	117	115	110	105	96		
6000	117	116	111	105	96	87	78		
8000	112	107	96	87	78	69	60		
10000	99	88	78	69	59				
12000	81	70	60						

Altitude limits	12,000 ft. dens	sity altitude.
C.G. limits	Longitudinal:	(+92.0) to (+94.6) at 2350 lbs.
		(+92.0) to (+100.0) at 2000 lbs.
		See Flight Manual for schedule with weight.
	Lateral:	Maximum approved asymmetric moment +3700 to -3250 in.
		-lbs. at 2350 lbs. See Flight Manual for schedule with weight.
Maximum weight	2350 lbs.	
No. of seats	3 (+62.0)	
Maximum baggage	108 lb. (+135.	0)
Fuel capacity	42 gal. (+96.7)), 40 gal. usable. See NOTE 1
Oil capacity (engine sump)	10 qts. (+96.0)	See NOTE 1 for data on undrainable oil.
Control System Rigging	Refer to Maint	enance Manual.
Stabilizer Setting	Fixed, 6° TE u	p relative to WL.
Serial Nos. eligible	F-28F Models	506, 507, and 509 thru 743 (See NOTE 29)
-	280F Models:	1212, 1500 and subsequent (See NOTE 29)

XI - Model F-28F/280F Helicopter, 3 PCLH (Restricted Category), Modified per NOTE 6, Approved December 31, 1980, or NOTE 8, Approved December 31, 1980 (See NOTE 14)

(This version is for agricultural operation or external load operation up to 2600 lbs. GW.)

Engine	Lycomir 3BT5EE Number	Lycoming HIO-360-F1AD with Rajay Model 325E10-2 or Rotomaster Model 3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1, Part Number 2524858-A or -1, -2, -3, or -4 fuel injector.									
Fuel	100/130	100/130 min. or 100LL min. grade aviation gasoline.									
Engine limits	For all o	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)									
RPM limits	Engine (Rotor (P	Engine (Power On) 3050 maximum, 2900 minimum Rotor (Power Off) 385 maximum; 332 minimum									
Airspeed limits (IAS)		Neve	r Excee	d Spee	ds - M	iles Pe	r Hour				
I man (m)	Press.		Outsid	de Air	Tempe	rature.	°F.]		
	Alt.	-20	0	20	40	60	80	100			
	SL	85	85	85	85	85	85	85			
	1000	85	85	85	85	85	83	82			
	2000	85	85	85	84	83	82	81			
	3000	85	85	84	83	82	81	80			
	4000	85	84	83	82	81	80	69			
	5000	84	83	82	81	80	68	57			
	6000	83	82	81	80	68	60				
	7000	82	81	79	68	60					
	8000	81	80	69	61						
	9000	80	72	59							
Altitude limits	9,000 ft.	densit	y altitu	de.							
C.G. limits	Longitud Lateral:	Longitudinal: (+96.5) to (+98.0) at 2600 lbs. (+92.0) to (+98.3) at 2350 lbs. (+92.0) to (+98.6) at 2000 lbs. (Straight line variation between data points.)									
Maximum weight	2600 lbs										
Maximum weight per dispersal tank	350 lbs.										
Maximum baggage	108 lb. (+135.0))								
Fuel	42 gal. (+96.7)	. 40 gal	. usabl	e. See	NOTE	E 1				
Oil capacity (engine sump)	10 qts. (+96.0)	See NO	OTE 1	for dat	a on ui	ndraina	ble oil.			
Control System Rigging	Refer to	Mainte	enance	Manua	1.						
Stabilizer Setting	Fixed. 6	° TE u	o relativ	ve to W	/L.						
Serial Nos. eligible	All appr	oved F	All approved F-28F & 280F Models (See NOTE 29)								

XII - Model F-28F/280F Helicop	pter, 3 PCLH Moc	lified per Note 7, Approved December 31, 1980 (See NOTE 14)						
(This version is for operation with	th inflatable floats	.)						
Engine	Lycoming HIC 3BT5EE10J2 Number 25248	Lycoming HIO-360-F1AD with Rajay Model 325E10-2 or Rotomaster Model 3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1 Part Number 2524858-A or -1, -2, -3, or -4 fuel injector.						
Fuel	100/130 min.	100/130 min. or 100LL min. grade aviation gasoline.						
Engine limits	For all operati	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)						
RPM limits	Engine (Power Rotor (Power	Engine (Power On) 3050 maximum, 2900 minimum Rotor (Power Off) 385 maximum; 332 minimum						
Airspeed limits	Never exceed lbs. gross weig Supplement N for Restricted	Never exceed 100 mph IAS for standard sea level day at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for V_{NE} reductions with altitude and gross weight and for Restricted Category operations between 2350 lbs. and 2600 lbs.						
Altitude limits	12,000 ft. den FAA-approved reductions wit between 2350	sity altitude at or below 2350 lbs. gross weight. See d Rotorcraft Flight Manual Supplement No. 2 for altitude h gross weight and for Restricted Category operations lbs. and 2600 lbs.						
C.G. limits	Longitudinal:	Maximum Fwd. C.G. is +92.0 in. at all G.W. up to 2350 lbs. Maximum Aft C.G. is +98.5 in.at G.W. up to 2070 lbs. and decreasing linearly to +94.6 in. at 2350 lbs. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for schedule with gross weight and for Restricted Category operations between 2350 lbs. and 2600 lbs.						
	Lateral:	Maximum approved asymmetric moment +3700 to -3250 in. -lbs. above 2025 lbs. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for schedule with gross weight and for Restricted Category operations between 2350 lbs. and 2600 lbs.						
Maximum weight	2350 lbs No	rmal Category, 2600 lbs Restricted Category						
No. of seats	3 (+62.0)							
Maximum baggage	108 lb. (+135.	0)						
Fuel capacity	42 gal. (+96.7), 40 gal. usable. See NOTE 1						
Oil capacity	10 qts. (+96.0)) See NOTE 1 for data on undrainable oil.						
(engine sump)	-							
Control System Rigging	Refer to Main	tenance Manual.						
Stabilizer Setting	F-28F: Fixed,	6° TE up relative to WL.						
E C	280F: Fixed.	6° TE up relative to WL, Trim tab per Dwg 28-17326.						
Serial Nos. eligible	All approved F-28F & 280F Models (See NOTE 29)							

XIII - Model F-28F/280F Helicopter, 3PCLH, Originally Manufactured in Compliance with or Modified Per Note 16, Approved July 1, 1984 (See NOTE 14)

(This version of the model F-28F/280F differs from the basic model F-28F/280F in that the installation of the items described in Enstrom Specification Drawing 28-100015 permits Normal Category operation at gross weights up to 2600 lbs. There are four gross weight/center of gravity envelopes for this version, each of which corresponds to a different V_{NE} altitude envelope.)

Engine	Lycoming HIO360-F1AD with Rajay 325E10-2 or Rotomaster Model 3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1, Parts Number 2524858-A, -1, -2, -3, or -4 fuel injector.							
Fuel	100/130 min.	100/130 min. or 100LL min. grade aviation gasoline.						
Engine limits	For all operat	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)						
RPM limits	Engine (Powe Rotor (Power	Engine (Power On) 3050 maximum; 2900 minimum Rotor (Power Off) 385 maximum; 332 minimum						
F-28F Airspeed limits	Never exceed lbs. gross wei reductions wi	Never exceed 112 mph IAS for standard sea level day at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual for V_{NE} reductions with altitude and gross weight.						
280F Airspeed limits	Never exceed lbs. gross wei reductions wi	Never exceed 117 mph IAS for standard sea level day at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual for V_{NE} reductions with altitude and gross weight.						
Altitude limits	12,000 ft. der FAA-approve gross weight.	sity altitude at or below 2350 lbs. gross weight. See ad Rotorcraft Flight Manual for altitude reductions with						
C.G. limits	Longitudinal:	Maximum Forward C.G. is +92.0 in. at all G.W. up to 2350 lbs. decreasing linearly to +96.3 in. at 2600 lbs. Maximum Aft C.G. is +100.0 in. at all G.W. up to 2000 lbs. decreasing linearly to +98.0 in. at 2600 lbs. See FAA-approved Rotorcraft Flight Manual for schedule with gross weight.						
	Laterar.	above 2050 lbs. See FAA-approved Rotorcraft Flight Manual for schedule with gross weight.						
Maximum weight	2600 lbs.	Tot solloude with gross weight						
No. of seats	3(+62.0)							
Maximum baggage	108 lb. (+135	(.0)						
Fuel capacity	42 gal. (+96.7	7), 40 gal. usable. See NOTE 1.						
Oil capacity	10 gts. (+96.0)) See NOTE 1 for data on undrainable oil.						
(engine sump)	1	,						
Control System Rigging	Refer to Mair	ntenance Manual.						
Stabilizer Setting	F-28F: S/N 5	106, 507, and 509 thru 743						
C	Fixed	, 6° TE up relative to WL.						
	S/N 7	44 and subsequent						
	Fixed	, 3°30' TE up relative to WL.						
	280F: Fixed	, 6° TE up relative to WL.						
Serial Nos. Eligible	All approved	F-28F & 280F Models (See NOTE 29)						

XIV - Model F-28F/280F Helicopter, 3 PCLH, Originally Manufactured in Compliance with or Modified per Notes 7, and 16, Approved July 1, 1984 (See NOTE 14)

(This version of the model F-28F/280F differs from the basic model F-28F/280F in that the installation of the items described in Enstrom Drawing 28-17326 and Enstrom Specification Drawing 28-100015 permits operation with floats up to 2600 pounds gross weight in the normal category. There are three gross weight/center of gravity envelops for this version, each of which corresponds to a different V_{NE} /altitude envelope.)

Engine	Lycoming HIO-360-F1AD with Rajay Model 325E10-2 or Rotomaster Model 3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1 Parts List 2524858-A, -1, -2, -3, or -4 fuel injector.						
Fuel	100/130 min. or 100LL min. grade aviation gasoline.						
Engine limits	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)						
RPM limits	Engine (Power On) 3050 maximum; 2900 minimum Rotor (Power Off) 385 maximum; 332 minimum						
Airspeed limits	Never exceed 100 mph IAS for standard sea level day at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for V_{NE} reductions with altitude and gross weight.						
Altitude limits	12,000 ft. density altitude at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for altitude reductions with gross weight.						
C.G. limits	Longitudinal:	Maximum Fwd. C.G. is +92.0 in. at all G.W. up to 2350 lbs. and decreasing linearly to +96.5 in. at 2600 lbs. Maximum Aft C.G. is +98.5 in. at all G.W. up to 2070 lbs. and decreasing linearly to +98.0 in. at 2600 lbs. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for schedule with gross weight.					
	Lateral:	Maximum approved asymmetric moment +3700 to -3250 in. -lbs. above 2025 lbs. See FAA-approved Rotorcraft Flight Manual for schedule with gross weight.					
Maximum weight	2600 lbs.						
No. of seats	3 (+62.0)						
Maximum baggage	108 lb. (+135.0)						
Fuel capacity	42 gal. (+96.7)), 40 gal. usable. See NOTE 1					
Oil capacity	10 gts. (+96.0) See NOTE 1 for undrainable oil.						
(engine sump)							
Control System Rigging	Refer to Maint	tenance Manual.					
Stabilizer Setting	F-28F: S/N 506, 507, and 509 thru 743.						
	Fixed, 6° TE up relative to WL.						
	S/N 74	14 and subsequent					
	Fixed,	3°30' TE up relative to WL.					
	280F: Fixed,	6° TE up relative to WL, Trim tab per Dwg 28-17326.					
Serial Nos. Eligible	All approved F-28F & 280F Models (See NOTE 29)						

XV - Model 280FX Helicopter, 3PCLH, Approved January 14, 1985 (See NOTES 6 & 8)

(This model 280FX differs from the basic model 280F in that the helicopter is equipped with landing gear fairings, a redesigned inlet airscoop, tail rotor driveshaft fairings, a redesigned and relocated horizontal stabilizer equipped with vertical endplates, a cockpit annunciator panel, and a Graphic Engine Monitor. This model is approved for normal category operations at 2600 lbs. There are four gross weight/center of gravity envelopes for this version, each of which corresponds to a different V_{NE} /altitude envelope.)

Engine	Lycoming HIC 3BT5EE10J2 List 2524858-	Lycoming HIO-360-F1AD with Rajay Model 325E10-2 or Rotomaster Model 3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1 Parts List 2524858-A, -1, -2, -3, or -4 fuel injector.					
Fuel	100/130 min.	100/130 min. or 100LL min. grade aviation gasoline.					
Engine limits	For all operati	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)					
RPM limits	Engine (Powe Rotor (Power	Engine (Power On) 3050 maximum; 2900 minimum Rotor (Power Off) 385 maximum; 332 minimum					
Airspeed limits	Never exceed lbs. gorss weig reductions wit	Never exceed 117 mph IAS for standard sea level day at or below 2350 lbs. gorss weight. See FAA-approved Rotorcraft Flight Manual for V_{NE} reductions with altitude and gross weight.					
Altitude limits	12,000 ft. den FAA-approved gross weight.	sity altitude at or below 2350 lbs. gross weight. See d Rotorcraft Flight Manual for altitude reductions with					
C.G. limits	Longitudinal:	Maximum Fwd. C.G. is +92.0 in. at all G.W. up to 2350 lbs. and decreasing linearly to +96.3 in. at 2600 lbs. Maximum Aft C.G. is +100.0 in. at all G.W. up to 2000 lbs. and decreasing linearly to +98.0 in. at 2600 lbs. See FAA-approved Rotorcraft Flight Manual for schedule with gross weight.					
	Lateral:	Maximum approved asymmetric moment +3700 to -3250 in. -lbs. above 2025 lbs. See FAA-approved Rotorcraft Flight Manual for schedule with gross weight.					
Maximum weight	2600 lbs.	Manual for Schodale Will gross weight.					
No. of seats	3 (+62.0)						
Maximum baggage	108 lbs. (+135	5.0)					
Fuel capacity	42 gal. (+96.7), 40 gal. usable. See NOTE 1					
Oil capacity	10 qts. (+96.0). See NOTE 1 for data on undrainable oil.					
(engine sump)							
Control system rigging	Refer to Main	tenance Manual					
Stabilizer setting	Fixed, 3°30' T	E up relative to WL.					
Serial Nos. eligible	2001 and subs	2001 and subsequent (See NOTE 29)					

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XVI - Model 280FX Helicopter 3PCLH, Originally Manufactured in Compliance with or Modified per Note 7, Approved July 12, 1985

(This version of the model 280FX differs from the basic model 280FX in that installation of the items described in Enstrom Drawing 28-17326, 28-20119, and Enstrom Specification Drawing 28-100015 permits operation with floats up to 2600 pounds gross weight in the normal category. There are three gross weight/center of gravity envelopes for this version, each of which corresponds to a different V_{NE} /altitude envelope.)

Engine	Lycoming HIC 3BT5EE10J2 Number 25248	Lycoming HIO360-F1AD with Rajay Model 325E10-2 or Rotomaster Model 3BT5EE10J2 turbocharger per STC SE484GL and Bendix RSA-5AB1 Parts Number 2524858-A, -1, -2, -3, or -4 fuel injector.						
Fuel	100/130 min. o	100/130 min. or 100LL min. grade aviation gasoline.						
Engine limits	For all operation	For all operations: 3050 rpm, 39.0 in. Hg manifold pressure (225 hp.)						
RPM limits	Engine (Power Rotor (Power)	Engine (Power On) 3050 maximum; 2900 minimum Rotor (Power Off) 385 maximum; 332 minimum						
Airspeed limits	Never exceed lbs. gross weig Supplement Ne	Never exceed 100 mph IAS for standard sea level day at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for V_{NE} reductions with altitude and gross weight.						
Altitude limits	12,000 ft. dens FAA-approved reductions with	12,000 ft. density altitude at or below 2350 lbs. gross weight. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for altitude reductions with gross weight.						
C.G. limits	Longitudinal:	Maximum Fwd. C.G. is +92.0 in. at all G.W. up to 2350 lbs. and decreasing linearly to +96.5 in. at 2600 lbs. Maximum Aft C.G. is +98.5 in. at all G.W. up to at 2070 lbs. and decreasing linearly to +98.0 in. at 2600 lbs. See FAA-approved Rotorcraft Flight Manual Supplement No. 2 for schedule with gross weight.						
	Lateral:	Maximum approved asymmetric moment +3700 to -3250 in. -lbs. above 2025 lbs. See FAA-approved Rotorcraft Flight Manual for schedule with gross weight.						
Maximum weight	2600 lbs.							
No. of seats	3 (+62.0)							
Maximum baggage	108 lb. (+135.	0)						
Fuel capacity	42 gal. (+96.7)), 40 gal. usable. See NOTE 1						
Oil capacity	10 qts. (+96.0)	See NOTE 1 for undrainable oil.						
(engine sump)								
Control System Rigging	Keter to Maint	enance Manual.						
Stabilizer Setting	F1Xed, 5°30'T	E up relative to WL.						
Serial Nos. eligible	2001 and subs	2001 and subsequent (See NOTE 29)						

<u>XVII - Model TH-28 Helicopter, 3PCLH, Approved September 11, 1992 (See NOTE 20)</u> (The TH-28 is a derivative of the 280FX with a turbine engine, a larger cabin, a taller landing gear with aerodynamic fairings, a larger diameter tail rotor, and larger horizontal and vertical stabilizers.)

Engine		Allison 250-C20W							
Fuel		Mil-T-5624, Grade JP-4 or JP-5; Aviation Turbine Fuels ASTM D1655 Jet A or A-1 (or Allison Spec. EMS-64) or Jet B; Mil-T-83133, Grade JP8; JP-1 or Diesel #1 fuel conforming to ASTM D1655, Jet A; Artic Diesel Fuel DF-A (W-F-800B) conforming to ASTM D1655, Jet A or Jet A-1.							
Engine limits Takeoff (5 min.) Max. Continuous	<u>Torque 1</u> 67 psi (2 60 psi (2	PressureOutput Shaft285 HP)103% (6196256 HP)103% (6196			<u>Speed</u> RPM) RPM)	<u>Turbine Outlet Temp</u> 810°C 737°C	<u>. Gas Gen Speed</u> 105% (53,519 RPM) 105% (53,519 RPM)		
Rotor limits		<u>Power Off</u> Maximum 385 RPM Minimum 334 RPM			Power On Maximum 365 RPM Minimum 357 RPM				
Airspeed limits		Never exceed 140 mph (122 knots) IAS for standard sea level day at maximum gross weight. See FAA-approved Rotorcraft Flight Manual for V_{NE} with altitude.							
Altitude limits		13,000 feet max. height density altitude. For reduction in take-off and landing altitude with gross weight, see FAA-approved Rotorcraft Flight Manual.							
C.G. limits		Longitudinal: Maximum Forward C.G. is +134.0 in. at all G.W. up to 2200 lb decreasing linearly to +136.35 in. at 2850 lbs. Maximum Aft C.G. is +143.0 in. at all G.W. up to 2500 lbs.					all G.W. up to 2200 lbs. 50 lbs. 6.W. up to 2500 lbs.		
Maximum Weight		Lateral: Maximum asymmetric monent ± 7500 in-lbs. 2850 lbs.					I-lbs.		
Minimum crew		One (1) at (+99.1 in.) station.							
Passengers		1 at (+99.1), and 1 at (+113.1).							
Maximum baggage		Not applicable.							
Fuel Capacity		90.0 gallons Total (607 lbs) at (+144.6 in.); 0.3 gallon unusable. See NOTE 1							
Oil Capacity		12.0 pints (12.6 lbs.) at (+153.0 in.).							
Control System Rigg	ing	Refer to Maintenance Manual.							
Stabilizer setting		Fixed, 1.5° TE down relative to WL.							
Serial Nos. eligible		S/N 3004 and subsequent (See NOTE 29)							

XVIII - Model 480 Helicopter, 5PLCH, Approved November 10, 1993 (See NOTES 19 thru 24, 26, and 27)

(The 480 is a derivative of the TH-28 having five-place seating, a smaller instrument panel, removable right-seat controls, a footrest for the front right seat, a baggage box, and an optional aft battery location.)

Engine	Allison 250-0	Allison 250-C20W							
Fuel	Mil-T-5624, A-1 (or Alliso Diesel #1 fue F-800B) conf	Mil-T-5624, Grade JP-4 or JP-5; Aviation Turbine Fuels ASTM D1655 Jet A or A-1 (or Allison Spec. EMS-64) or Jet B; Mil-T-83133, Grade JP8; JP-1 or Diesel #1 fuel conforming to ASTM D1655, Jet A; Artic Diesel Fuel DF-A (W-F-800B) conforming to ASTM D1655, Jet A or Jet A-1.							
Engine limits Takeoff (5 min.) Max. Continuous	Torque Pressure Or 67 psi (285 HP) 10 60 psi (256 HP) 10	Pressure Output Shaft Speed Turbine Outlet Temp. Gas Ga 285 HP) 103% (6196 RPM) 810°C 105% 256 HP) 103% (6196 RPM) 737°C 105%							
Rotor limits	<u>Power Off</u> Maximum 38 Minimum 334	Power O S RPM Maximu 4 RPM Minimur	Power On PM Maximum 365 RPM PM Minimum 357 RPM						
Airspeed limits	Never exceed maximum tak Manual for V	d 140 mph (122 knot ke-off gross weight. W _{NE} reductions with a	s) IAS for standard sea le See FAA-approved Roto ltitude.	evel day at rcraft Flight					
Altitude limits	13,000 feet m altitude with	13,000 feet max. height density altitude. For reduction in take-off and landing altitude with gross weight, See FAA-approved Rotorcraft Flight Manual.							
C.G. limits	Longitudinal: Lateral:	Longitudinal:Maximum Forward C.G. is +134.0 in. at all G.W. up to 220 decreasing linearly to +136.35 in. at 2850 lbs. Maximum Aft C.G. is +143.0 in. at all G.W. up to 2500 lbs decreasing linearly to +141.5 in. at 2850 lbs.Lateral:Maximum asymmetric monent ± 7500 in-lbs.							
Maximum Weight	2850 lbs.	2850 lbs.							
Minimum crew	One (1) at (+	One (1) at (+99.1 in.) station.							
Passengers	1 at (+89.0 in	1 at (+89.0 in.), and 3 at (+113.1 in.); or 1 at (+99.1 in.) and 1 at (+113.1 in.).							
Maximum baggage	150 lbs. at (+	150 lbs. at (+192.0 in.)							
Fuel Capacity	90.0 gallons	90.0 gallons Total (607 lbs) at (+144.6 in.); 0.3 gallon unusable. See NOTE 1							
Oil Capacity	12.0 pints (12	12.0 pints (12.6 lbs.) at (+153.0 in.).							
Control System Rigg	ing Refer to Main	Refer to Maintenance Manual.							
Stabilizer setting	Fixed, 1.5° T	Fixed, 1.5° TE down relative to WL.							
Serial Nos. eligible	S/N 5002 three	S/N 5002 thru 5016 (See NOTES 19 & 29)							

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XIX - Model 480 Helicopter, 5PLCH, Originally Manufactured in Compliance with or Modified per Note 25, Approved August 12, 1996 (See NOTES 19 thru 24, 26, and 27)

(This version of the model 480 differs from the basic model 480 in that installation of the items listed in Enstrom Drawing 4230002 permits operation with increased main rotor rpm and torque limits.)

Engine		Allison 250-C20W							
Fuel		Mil-T-5624, Grade JP-4 or JP-5; Aviation Turbine Fuels ASTM D1655 Jet A or A-1 (or Allison Spec. EMS-64) or Jet B; Mil-T-83133, Grade JP8; JP-1 or Diesel #1 fuel conforming to ASTM D1655, Jet A; Artic Diesel Fuel DF-A (W- F-800B) conforming to ASTM D1655, Jet A or Jet A-1.							
Engine limits Takeoff (5 min.) Max. Continuous	<u>Torque</u> 68 psi (2 63 psi (2	PressureOutput Shaft289 HP)103% (6196268 HP)103% (6196			<u>Speed</u> RPM) RPM)	<u>Turbine Outlet Temp</u> 810°C 737°C	<u>Gas Gen Speed</u> 105% (53,519 RPM) 105% (53,519 RPM)		
Rotor limits		<u>Power Off</u> Maximum Minimum	<u>Power Off</u> Maximum 385 RPM Minimum 334 RPM			<u>Power On</u> Maximum 372 RPM Minimum 365 RPM			
Airspeed limits		Never exc maximum Manual Su	eed 144 take-off upplemen	mph gross nt No	(125 knots s weight. S . 6 for V _{NE}	i) IAS for standard sea See FAA-approved Ro reductions with altitude 3	level day at torcraft Flight de.		
Altitude limits		13,000 fee altitude w	et max. h ith gross	eight weig	density al ht, See FA	titude. For reduction i A-approved Rotorcraf	n take-off and landing t Flight Manual.		
C.G. limits		Longitudinal:Maximum Forward C.G. is +134.0 in. at all G.W. up to 22 decreasing linearly to +136.35 in. at 2850 lbs. Maximum Aft C.G. is +143.0 in. at all G.W. up to 2500 lb decreasing linearly to +141.5 in. at 2850 lbs.Lateral:Maximum asymmetric monent ± 7500 in-lbs.					all G.W. up to 2200 lbs. 0 lbs. .W. up to 2500 lbs. lbs. -lbs.		
Maximum Weight		2850 lbs.							
Minimum crew		One (1) at (+99.1 in.) station.							
Passengers		1 at (+89.0 in.), and 3 at (+113.1 in.); or 1 at (+99.1 in.) and 1 at (+113.1 in.).							
Maximum baggage		150 lbs. at (+192.0 in.)							
Fuel Capacity		90.0 gallons Total (607 lbs) at (+144.6 in.); 0.3 gallon unusable. See NOTE 1							
Oil Capacity		12.0 pints (12.6 lbs.) at (+153.0 in.).							
Control System Rigg	ing	Refer to Maintenance Manual.							
Stabilizer setting		Fixed, 1.5° TE down relative to WL.							
Serial Nos. eligible		S/N 5002 thru 5042, and 5044 (See NOTES 19, 28, & 29)							

<u>XX</u> (The	- Model 480B Helicop 480B is derivative of	<u>pter, 5PL</u> f the 480	<u>CH, Appro</u>	oved l rease	February	<u>8, 2001 (</u>	See NOTES 20 thru 24) power limits.)		
(111	Engine		Rolls-Roy	Rolls-Royce 250-C20W					
	Fuel		Mil-T-5624, Grade JP-4 or JP-5; Aviation Turbine Fuels ASTM D1655 Jet A A-1 (or Allison Spec. EMS-64) or Jet B; Mil-T-83133, Grade JP8; JP-1 or Diesel #1 fuel conforming to ASTM D1655, Jet A; Artic Diesel Fuel DF-A (F-800B) conforming to ASTM D1655, Jet A or Jet A-1.						
	Engine limits Takeoff (5 min.) Max. Continuous	<u>Torque</u> 72 psi (65 psi (<u>Pressure</u> 305 HP) 276 HP)	<u>Out</u> 103 103	<u>tput Shaf</u> 3% (6196 3% (6196	t <u>Speed</u> RPM) RPM)	<u>Turbine Outlet Temp.</u> 810°C 737°C	<u>Gas Gen Speed</u> 105% (53,519 RPM) 105% (53,519 RPM)	
	Rotor limits		Power OffPower OnMaximum 385 RPMMaximum 372 RPMMinimum 334 RPMMinimum 365 RPM						
	Airspeed limits		Never exceed 144 mph (124 knots) IAS for standard sea level day at maximum take-off gross weight. See FAA-approved Rotorcraft Flight Manual for V_{NE} changes with altitude and gross weight.						
	Altitude limits		10,000 feet max. height density altitude at 3,000 lbs. gross weight. 13,000 feet max. height density altitude at and below 2,850 lbs. gross weight. For reduction in take-off and landing altitude with gross weight, See FAA-approved Rotorcraft Flight Manual.						
	C.G. limits		Longitudinal: Maximum Forward C.G. is +134.0 in. at all G.W. up to 2200 l decreasing linearly to +136.9 in. at 3,000 lbs. Maximum Aft C.G. is +143.0 in. at all G.W. up to 2500 lbs. decreasing linearly to +140.95 in. at 3,000 lbs.					all G.W. up to 2200 lbs. lbs. W. up to 2500 lbs. 0 lbs.	
	Maximum Weight		$3\ 000\ \text{lbs}$					105.	
	Minimum crew		One (1) at (+99.1 in.) station.						
	Passengers		1 at (+89.0 in.), and 3 at (+113.1 in.); or 1 at (+99.1 in.) and 1 at (+113.1 in.).						
	Maximum baggage		150 lbs. at (+192.0 in.)						
	Fuel Capacity		90.0 gallons Total (607 lbs) at (+144.6 in.); 0.3 gallon unusable. See NOTE 1						
	Oil Capacity		12.0 pints (12.6 lbs.) at (+153.0 in.).						
	Control System Rigg	ging	Refer to Maintenance Manual.						
	Stabilizer setting		Fixed, 1.5	5° TE	down re	lative to V	WL.		
	Serial Nos. eligible		S/N 5043	, 504	5 and sul	osequent ((See NOTES 28 & 29)		

Datum	Piston-powered Models - 100 inches forward of the center of the main rotor hub and the centerline of the rotorcraft. Turbine-powered Models - 143.3 inches forward of main rotor hub centerline.
Leveling means	Lower longeron of pylon section.
Certification basis	Piston-powered Models - Part 6 of the Civil Air Regulation effective December 10, 1956, as amended by 6-1 thru 6-5; and FAR 21.25 (a) (1) effective February 1, 1965 for special purpose of agricultural operation per FAR 21.25(b). See NOTE 6. In addition, the F-28F, 280F, and 280FX Models have demonstrated compliance with FAR 36, amendment 20 (Appendix J), effective September 11, 1992.
	Application for Type Certificate dated July 26, 1962. Type Certification No. H1CE issued April 15, 1965.
	Turbine-powered Models - Federal Aviation Regulation FAR Part 27, effective November 24, 1964, as amended by 27-1 thru 27-23, effective September 2, 1988; FAR 27.337, 27.351, 27.395, 27.401, 27.501, 27.613, 27.629, 27.663, 27.685, 27.727, 27.783, 27.861, and 27.865 (a) as amended by 27-26, effective April 5, 1990; FAR 27.775 as amended by 27-27, effective October 22, 1990; FAR 27.2 as amended by 27-28, effective August 16, 1991; and FAR Part 36, amendment 20 (Appendix J), effective September 11, 1992.
	<u>NOTE</u> : Originally certificated to Part 6 of the Civil Air Regulation effective December 20, 1956, as amended by 6-1 thru 6-8; Federal Aviation Regulation; FAR Part 27, amendment 23, effective September 2, 1988, for the turbine engine installation, induction system, fuel system, lubrication system, and airworthiness limitations; FAR Part 27, amendment 26, effective April 5, 1990, for the landing gear; and FAR Part 36, amendment 20 (Appendix J), effective September 11, 1992. The original Type Design Data was reexamined and found to comply with FAR 27 on December 2, 1994
	Application for Type Certificate dated November 17, 1988. Type Certificate No. H1CE amended September 11, 1992; Reissued February 8, 2001.
Production Certificate	Production Certificate No. 319
Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification basis) must be installed in the helicopter for certification. In addition, the following items of equipment are required:
	F-28 Models:

(a) FAA Approved Rotorcraft Flight Manual dated April 15, 1965.

F-28A Models:

- (a) FAA Approved Rotorcraft Flight Manual dated May 21, 1968; Reprinted June 1, 1972.
- (b) FAA Approved Rotorcraft Flight Manual Supplement No. 1 dated June 6, 1969; (For External Loads) see NOTE 8.
- (c) FAA Approved Rotorcraft Flight Manual Supplement No. 2 dated June 6, 1969; (For Float Landing Gear) see NOTE 7.
- (d) FAA Approved Rotorcraft Flight Manual Supplement No. 3 dated February 27, 1970; (For External Litter) see NOTE 10.
- (e) FAA Approved Rotorcraft Flight Manual Supplement No. 4 dated April 3, 1975; (For External Auxiliary Fuel Tank) see NOTE 11.

280 Models:

- (a) FAA Approved Rotorcraft Flight Manual dated September 13, 1974.
- (b) FAA Approved Rotorcraft Flight Manual Supplement No. 1 dated November 21, 1978; (For External Loads) see NOTE 8.
- (c) Deleted

F-28C Models:

- (a) FAA Approved Rotorcraft Flight Manual dated December 8, 1975; reissued December 21, 1976.
- (b) FAA Approved Rotorcraft Flight Manual dated April 20, 1978; (Modified for increased gross weight) See NOTE 5.
- (c) FAA Approved Rotorcraft Flight Manual Supplement No. 1 dated May 5, 1978; (For Agricultural Kit to 2600 lbs. Restricted Category) See NOTE 6.
- (d) FAA Approved Rotorcraft Flight Manual Supplement No. 2 dated June 16, 1978; (For Float Landing Gear) See NOTE 7.
- (e) FAA Approved Rotorcraft Flight Manual Supplement No. 3 dated July 28, 1978; (For External Loads) See NOTE 8.
- (f) FAA Approved Rotorcraft Flight Manual Supplement No. 4 dated July 28, 1978; (For Snowshoes) See NOTE 9.
- (g) FAA Approved Rotorcraft Flight Manual Supplement No. 5 dated June 26, 1981; (For Right Side Pilot Configuration) See NOTE 14.
- (h) FAA Approved Rotorcraft Flight Manual Supplement No. 7 dated June 26, 1981; (For Electric Clutch Actuator).
- (i) FAA Approved Rotorcraft Flight Manual Supplement No. 8 dated November 20, 1981; (For Emergency Float Landing Gear) See NOTE 7.
- (j) FAA Approved Rotorcraft Flight Manual Supplement No. 9 dated June 30, 1981; (For Throttle Correlator).
- (k) Deleted
- (l) FAA Approved Rotorcraft Flight Manual Supplement No. 11 dated September 23, 1983; (For Auxiliary Fuel Tank) See NOTE 17.

280C Models:

- (a) FAA Approved Rotorcraft Flight Manual dated December 8, 1975; reissued December 21, 1976.
- (b) FAA Approved Rotorcraft Flight Manual dated September 23, 1977; (Modified for increased gross weight) See NOTE 5.
- (c) FAA Approved Rotorcraft Flight Manual Supplement No. 1 dated May 5, 1978; (For Agricultural Kit to 2600 lbs. Restricted Category) See NOTE 6.

- (d) FAA Approved Rotorcraft Flight Manual Supplement No. 2 dated May 19, 1978; (For Float Landing Gear) See NOTE 7.
- (e) FAA Approved Rotorcraft Flight Manual Supplement No. 3 dated July 28, 1978; (For External Loads) See NOTE 8.
- (f) FAA Approved Rotorcraft Flight Manual Supplement No. 4 dated July 28, 1978; (For Snowshoes) See NOTE 9.
- (g) FAA Approved Rotorcraft Flight Manual Supplement No. 8 dated November 20, 1981; (For Emergency Float Landing Gear) See NOTE 7.
- (h) FAA Approved Rotorcraft Flight Manual Supplement No. 9 dated June 30, 1981; (For Throttle Correlator).
- (i) FAA Approved Rotorcraft Flight Manual Supplement No. 11 dated September 23, 1983; (For Auxiliary Fuel Tank) See NOTE 17.

F-28F & 280F Models:

- (a) FAA Approved Rotorcraft Flight Manual dated December 31, 1980; revised July 1, 1984.
- (b) FAA Approved Rotorcraft Flight Manual Supplement No. 1 dated December 31, 1980; (For Agricultural Kit to 2600 lbs. - Restricted Category) See NOTE 6.
- (c) FAA Approved Rotorcraft Flight Manual Supplement No. 2 dated December 31, 1980; (For Float Landing Gear) See NOTE 7.
- (d) FAA Approved Rotorcraft Flight Manual Supplement No. 3 dated December 31, 1980; (For External Loads) See NOTE 8.
- (e) FAA Approved Rotorcraft Flight Manual Supplement No. 4 dated December 31, 1980; (For Snowshoes) See NOTE 9.
- (f) FAA Approved Rotorcraft Flight Manual Supplement No. 6 dated June 26, 1981; (For Right Side Pilot Configuration) See NOTE 14.
- (g) FAA Approved Rotorcraft Flight Manual Supplement No. 7 dated June 26, 1981; (For Electric Clutch Actuator)
- (h) FAA Approved Rotorcraft Flight Manual Supplement No. 8 dated November 20, 1981; (For Emergency Float Landing Gear) See NOTE 7.
- (i) Deleted
- (j) FAA Approved Rotorcraft Flight Manual Supplement No. 11 dated September 23, 1983; (For Auxiliary Fuel Tank) See NOTE 17.
- (k) FAA Approved Rotorcraft Flight Manual Supplement No. 12 dated July 16, 1986; (For Muffler Installation) See NOTE 18.

280FX Models

- (a) FAA Approved Rotorcraft Flight Manual dated January 11, 1985; revised July 12, 1985.
- (b) FAA Approved Rotorcraft Flight Manual Supplement No. 1 dated January 11, 1991; (For Agricultural Kit) See NOTE 6.
- (c) FAA Approved Rotorcraft Flight Manual Supplement No. 2 dated July 12, 1985; (For Float Landing Gear) See NOTE 7.
- (d) FAA Approved Rotorcraft Flight Manual Supplement No. 3 dated January 11, 1985; (For External Loads)
- (e) FAA Approved Rotorcraft Flight Manual Supplement No. 4 dated May 11, 1989; (For Snowshoes) See NOTE 9.
- (f) Deleted
- (g) FAA Approved Rotorcraft Flight Manual Supplement No. 11 dated January 11, 1985; (For Auxiliary Fuel Tank) See NOTE 17.
- (h) FAA Approved Rotorcraft Flight Manual Supplement No. 12 dated July 16, 1986; (For Muffler Installation) See NOTE 18.

TH-28 Models:

(a) FAA Approved Rotorcraft Flight Manual dated September 11, 1992; revised August 17, 1994.For Cargo Hook operations see NOTE 20.

480 Models:

- (a) FAA approved Rotorcraft Flight Manual dated June 7, 1993; revised February 1, 1995.
- (b) FAA approved Rotorcraft Flight Manual Supplement No. 1 dated June 1, 1994 (For Cargo Hook) See NOTE 20.
- (c) FAA approved Rotorcraft Flight Manual Supplement No. 2 dated June 1, 1994 (For Snowshoes) See NOTE 21.
- (d) FAA approved Rotorcraft Flight Manual Supplement No. 3 dated June 1, 1994 (For External Fuel Filter) See NOTE 22.
- (e) FAA approved Rotorcraft Flight Manual Supplement No. 4 dated June 1, 1994 (For Baggage Box Extension) See NOTE 23.
- (f) FAA approved Rotorcraft Flight Manual Supplement No. 5 dated August 12, 1996 (For Camera Door) See NOTE 24.
- (g) FAA approved Rotorcraft Flight Manual Supplement No. 6 dated August 12, 1996 (For Increased Rotor Speeds and Torque Limits) See NOTE 25.
- (h) FAA approved Rotorcraft Flight Manual Supplement No. 7 dated November 27, 1996 (For Air Conditioning) See NOTE 26.

(i) FAA approved Rotorcraft Flight Manual Supplement No. 8 dated January 23, 1997 (For Pop-out Floats) See NOTE 27

480B Models:

- (a) FAA approved Rotorcraft Flight Manual dated February 9, 2001.
- (b) FAA approved Rotorcraft Flight Manual Supplement No. 1 dated February 9, 2001 (For Cargo Hook) See NOTE 20.
- (c) FAA approved Rotorcraft Flight Manual Supplement No. 2 dated February 9, 2001 (For Snowshoes) See NOTE 21.
- (d) FAA approved Rotorcraft Flight Manual Supplement No. 3 dated February 9, 2001 (For External Fuel Filter) See NOTE 22.
- (e) FAA approved Rotorcraft Flight Manual Supplement No. 4 dated February 9, 2001 (For Baggage Box Extension) See NOTE 23.
- (f) FAA approved Rotorcraft Flight Manual Supplement No. 5 dated February 9, 2001 (For Camera Door) See NOTE 24.

All Models:

- (a) Each rotorcraft must be furnished with a Maintenance Manual applicable to that model.
- NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight and loading instructions when necessary must be provided for each helicopter at the time of original certification. For piston-engine powered models, the certificated empty weight and corresponding center of gravity locations must include unusable fuel of 2.0 lbs. (+98) for 30 gal. tanks, 12.0 lbs. (+94) for 40 gal. tanks; and undrainable oil of 4 lbs. (+96). For turbine-engine powered models, certificated empty weight and corresponding center of gravity locations must include unusable fuel of 2.0 lbs. (+98) for 30 gal. tanks, 12.0 lbs. (+94) for 40 gal. tanks; and undrainable oil of 4 lbs. (+96). For turbine-engine powered models, certificated empty weight and corresponding center of gravity locations must include unusable fuel as tabulated below:

Model	Fuel Bladder Part Number	Unusable Fuel
TH-28	4122000	12.0 lbs. at +143.4 in.
	4122009, No Rev., -1 & -2	12.0 lbs. at +143.4 in.
	4122009, Rev. A, -1, -2, & -4	2.0 lbs. at +143.4 in.
480, 480B	4122009, Rev A, -1, -2, & -4	2.0 lbs. at +143.4 in.
	4122052, No Rev., -1 & -2	11.4 lbs. at +143.4 in.

NOTE 2. The following placard must be displayed in front of and in clear view of the pilot:

"This helicopter must be operated in compliance with operating limitations specified in the Approved Rotorcraft Flight Manual."

See FAA Approved Rotorcraft Flight Manual for additional operation limitations and placard.

NOTE 3. Information essential for the proper maintenance of the helicopter is contained in the pertinent model Maintenance Manual. The retirement times of critical parts are listed in the following table. These values of retirement times of service life cannot be increased without FAA Engineering Approval.

Enstrom Models F-28C and 280C helicopters are eligible for Restricted Category operation at a gross weight up to 2600 lbs. when configured in accordance with NOTE 6 and/or NOTE 8. Enstrom Models F-28F and 280F helicopters are eligible for operation at a gross weight up to 2600 lbs. in both the Normal and Restricted categories when configured in accordance with the following:

~

Category	Usage - Configuration Requirement
Restricted	Agricultural Spraying - configured per NOTE 6.
Restricted	Floats - configured per NOTE 7.
Restricted	External Cargo - configured per NOTE 8
Normal	Configured per NOTE 16

Once the helicopter is operated at a gross weight in excess of 2350 lbs. up to the maximum authorized 2600 lbs., the service life requirements for 2600 lbs. must be used.

The following special notations augment the Service Life Tables specifying limitations and/or special conditions associated with authorized Gross Weights and service lives. Table 1 applies to all piston powered models. Table 2 applies to all turbine powered models.

- Δ Retire from service 5 calendar years from date of manufacture.
- $\Delta\Delta$ Retire from service 5 calendar years from date of manufacture all Lamiflex bearings serial number 5997 and prior.

Retire from service 5 calendar years from date of installation* or 8 calendar years from date of manufacture, which ever occurs first, all Lamiflex bearings serial numbers 5998 and subsequent. *Note: Date of installation is defined as the date the Lamiflex bearing packaging is opened.

- + No Time limit. Remove Component on condition per Maintenance Manual inspection criteria.
- ++ Right hand installations only (28-16300); left hand installations are on condition.
- ^o Inspect daily per Airworthiness Directive 79-10-06R1.
- ** On Condition when used with grease fitting.
- * Retire from service 24 months after date of installation or 1200 hours, whichever occurs first.
- Retire from service 15 years from the original test date marked on the manufacture's label.
- N/A Not approved for installation.

		Table 1.	Service	Life Limit	ts - Hours						
		Model F-28 F-28A 280 F-28C, 280		F-28C, 280	С	F-28F, 280F		280FX			
Part Number	Old Part Number	Component Wt. lbs.	1950	2150	2150	2200	2350	2600	2350	2600	2600
ECD 018-11	202SZZ	Bearing, Belt Idler Pulley	600	600	600	600	600	600	600	600	600
ECD 014-11, -13	Z99606X3B 6308-2RS	Bearing, Upper Jack Strut	600**	600**	600**	600**	600**	600**	+	+	+
28-13401-1	CL40526-1 thru -7 (Formsprag)	Clutch	1200	1200	1200	1200	1200	1200	N/A	N/A	N/A
RJ0328		Turbo Charger Model 301E10-2	N/A	N/A	N/A	1000	1000	1000	N/A	N/A	N/A
RJ0332		Turbo Charger Model 325E10-2	N/A	N/A	N/A	2000	2000	2000	2000	2000	2000
103574-00		Turbo Charger Model 3BT2EE10J2	N/A	N/A	N/A	2000	2000	2000	2000	2000	2000
600700-00	103574-00	Turbo Charger Model 3BT5EE10J2	N/A	N/A	N/A	2000	2000	2000	2000	2000	2000
ECD 009-11, -13	5201SBKZZ	Bearing, Lower Swashplate	1200**	1200**	1200**	1200**	1200**	1200**	1200**	1200**	+
ECD 013-11, 13	Z993L13X3B 6013-RS	Bearing Upper Swashplate	1200**	1200**	1200**	1200**	1200**	1200**	1200**	1200**	+
28-16119-1, -3		Universal Housing, Lower Swashplate	+	+	+	20,560	17,700	17,700	17,700	17,700	17,700
28-15120-1		Tail Rotor Blade, 3.3 in. cord	N/A	4500++	4500++	N/A	N/A	N/A	N/A	N/A	N/A
28-150002-1		Tail Rotor Blade, 4.4 in. cord	N/A	N/A	N/A	3100	3100	3100	3100	3100	3100
28-15202-13		Tail Rotor Spindle (3.3 in. cord T/R Assy)	7500	7500	7500	7500	N/A	N/A	N/A	N/A	N/A
28-150064-11, - 13		Tail Rotor Spindle (4.4 in. cord T/R Assy)	N/A	N/A	N/A	1200	1200	1200	1200	1200	1200
28-150074-11, - 13		Tail Rotor Spindle (4.4 in. cord T/R Assy)	N/A	N/A	N/A	1200	1200	1200	1200	1200	1200
28-150044-1		Tail Rotor Blade Grip	N/A	N/A	N/A	6200	6200	6200	6200	6200	6200
28-150013-1		Tail Rotor Blade Grip	N/A	N/A	N/A	3100°	3100°	3100°	N/A	N/A	N/A
28-13609-1		Coupling, Tail Rotor Driveshaft	1200	1200	1200	1200	1200	1200	1200	1200	N/A
28-01041-3	A005-1992 (Dana)	Coupling, Flex Pack Assembly	1200	1200	1200	1200	1200	1200	1200	1200	1200

Table 1. Service Life Limits - Hours												
		Model		F-28	F-28A	280	F-28C, 280C			F-28F, 280F		280FX
Part Number	Old Part Number	Component	Wt. lbs.	1950	2150	2150	2200	2350	2600	2350	2600	2600
ECD 074-1, -2	XR-137-2YL, -2R	Tail Rotor Gear set		1200	1200	1200	1200	1200	1200	1200	1200	1200
ECD 100-1, -2, -		Tail Rotor Gear set		1200	1200	1200	1200	1200	1200	1200	1200	1200
1A, -2A, -1B, -2B												
28-14283-1		Drag Link		+	+	+	+	+	13,750	+	13,750	13,750
28-14282-11		Main Rotor Spindle		+	19,000	19,000	19,000	19,000	19,000	N/A	N/A	N/A
28-14320-12, -15		Thrust Bearing (Lamiflex)		$\Delta\Delta$								
NAS1611-333		Tachometer Drive Bel (O-Ring)	t	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ

	Model	TH-28	480	480B
Part Number	Component Wt. lbs.	2850	2850	3000
ECD 084-1	Tension-Torsion Strap	1,200*	1,200*	1,200*
ECD 100 (All part numbers)	Tail Rotor Gearset	1,000	1200	1,000
ECD 4000	Drive Belt	5,500	5,500	5,500
ECD 4056-1, -3	Bearing Lower Pulley Assembly	1,200	1,200	1,200
20368	Reservoir Cylinder (Pop Out Floats)	N/A	•	N/A
28-13106-3	Ring Gear Carrier	2,400	2,400	2,400
28-13108 (All part numbers)	Main Rotor Ring Gear and Pinion Set	3,700	3,700	2,300
28-14207-9	Pitch Change Bellcrank Assembly	3130	3130	N/A
28-14207-101	Pitch Change Bellcrank Assembly	15,000	15,000	15,000
28-14280-1	Main Rotor Hub Plate (Upper)	5,000	5,000	N/A
28-14280-3	Main Rotor Hub Plate (Upper)	+	+	N/A
28-14280-5	Main Rotor Hub Plate (Upper)	+	+	4,592
28-14281-1	Main Rotor Hub Plate (Lower)	5,000	5,000	N/A
28-14281-3	Main Rotor Hub Plate (Lower)	+	+	N/A
28-14281-5	Main Rotor Hub Plate (Lower)	+	+	4,592
28-14320-12, -15	Thrust Bearing (Lamiflex)	ΔΔ	ΔΔ	N/A
28-150074-11, -13	Tail Rotor Spindle	1,200	1,200	1,200
4110006-17, -18	Pylon/Keel Attachment Plate	10,000	10,000	N/A
41120034-11	Vibration Absorber Beam (Tailcone)	3,835	3,835	3,835
4130002-1	Ring Gear Carrier	1200	1200	N/A
4131003-15, -21	Splined Driveshaft, Overrunning Clutch	3,500	3,500	3,500
4166024-15, -23	Vibration Absorber Beam (Cyclic	1,200	1,200	1,200
	Control System)			

Table 2.	Service Life Limits – Hou	irs

NOTE 4. The "C" Model Turbocharger conversions must be accomplished by the Enstrom Helicopter Corporation in accordance with Enstrom Service Information Letter 0049, and are eligible for Models:

F-28A: S/N 003 thru 303 and 305 thru 330.

280: S/N 1002 thru 1019 including 1021 and 1022.

- NOTE 5. Enstrom Model F-28C and 280C helicopters are eligible for increased gross weight to 2350 lbs. if requirements of Enstrom Specification Drawing Number 28-100005 are complied with at the time of original manufacture or retrofitted at a later date and logged accordingly.
- NOTE 6. Enstrom Model F-28C, F-28F, 280C, 280F, and 280FX helicopters are certified for multiple certificate operation at a gross weight up to 2600 lbs. for restricted category operation when equipped with Agrinautics Agricultural Kit as specified on Enstrom drawing 28-22620 and installed in accordance with Enstrom Helicopter Corporation Report No. DO-280, Owner & Operator Manual for Wet/Dry Ag Kit 83100. F-28C and 280C Model helicopters must be converted to the 2350 lbs. configuration (see NOTE 5) and operated within the limitations specified in the Flight Manual Supplement. The helicopter may be returned to normal category operation upon the removal of the agricultural kit. A logbook entry shall be made when these conversions are accomplished.

The following portions of Part 6 of the Civil Air Regulations were considered inappropriate for the intended agricultural operations:

CAR 6.100(c), 6.113(b) (c), 6.114, 6.116, and 6.123(b) (3).

The following paragraphs of CAR 6 were demonstrated at near sea level and 7,500 feet density altitude conditions only:

CAR 6.121(d) and 6.123(b) (4).

NOTE 7. Model F-28C, 280C, F-28F, 280F, and 280FX helicopters are eligible for the installation of Air Cruiser inflatable floats, P/N D-24780 in accordance with Enstrom drawing 28-17326. When so equipped, F-28C and 280C Models may be operated up to 2350 lbs. GW in the normal category; and F-28F and 280F Models may be operated up to 2350 and 2600 lbs. GW in the normal and restricted categories, respectively (see NOTE 3). F-28F and 280F Models configured per NOTE 16, and 280FX Models may be operated up to 2600 lbs. GW in the normal category. Model F-28A helicopters are eligible for the installation of Air Cruiser inflatable floats, P/N 23D24409, in accordance with Enstrom drawing 28-17301, and may be operated in the normal category up to 2150 lbs. GW. Each helicopter so equipped is approved for amphibious operations within the limitations prescribed by Flight Manual Supplement No. 2 for that model. A logbook entry shall be made when changing category of operation for Models F-28F and 280F helicopters.

See NOTE 6 for portions of Part 6 of the Civil Air Regulations considered inappropriate for restricted category operations at gross weights between 2350 and 2600 lbs. The helicopter must be operated within the restricted category limitations prescribed in the appropriate Flight Manual Supplement.

Model F-28C, 280C, F-28F, 280F, and 280FX helicopters are approved for interchangeable floats. These model helicopters are eligible for the installation of Air Cruiser inflatable floats, P/N 23D24409, in accordance with Enstrom drawing 28-17301. When so equipped, the helicopter must be operated within the normal category limitations prescribe in Flight Manual Supplement No. 8. Helicopters equipped with float, P/N 23D24409, are limited to 2150 lbs. GW for amphibious operations and must be placarded to so indicate. This provision excludes amphibious operations, yet allows emergency water landings at gross weights over 2150 lbs.

NOTE 8. Model F-28A, F-28C, F-28F, 280C, 280F, and 280FX helicopters are eligible for installation of a cargo hook in accordance with Enstrom drawing 28-22000 for the transportation of external cargo. The helicopter must be operated within the limitations prescribed in the appropriate Flight Manual Supplement. The maximum external load permitted on the cargo hook is 1,000 lbs. The Enstrom models F-28C and 280C (when converted to the 2,350 lbs. gross weight per NOTE 5) and F-28F, 280F, and 280FX helicopters are certificated for multiple certificate operation at a gross weight up to 2,600 lbs. for restricted category cargo hook operation. A logbook entry shall be made when changing category of operation.

See NOTE 6 for portions of Part 6 of the Civil Air Regulations considered inappropriate for restricted category operations at gross weights between 2,350 and 2,600 lbs.

- NOTE 9. Model F-28C, F-28F, 280C, 280F, and 280FX helicopters are eligible for the installation of Snowshoe Kit No. 28-22400 when operated within the prescribed limitations of the Flight Manual Supplement. Models F28A and 280 are eligible for the installation of Snowshoe Kit No. 28-22400 when operated within the prescribed limitations of the basic Rotorcraft Flight Manual.
- NOTE 10. The Model F-28A helicopter is eligible for the installation of an external litter in accordance with Enstrom drawing 28-22115 when operated within the prescribed limitations of the Flight Manual Supplement.

- NOTE 11. The Model F-28A helicopter is eligible for the installation of an externally mounted auxiliary fuel tank (Chadwick tank) in accordance with Enstrom drawing 28-22500 when operated within the prescribed limitations of the Flight Manual Supplement.
- NOTE 12. Enstrom Model F-28C-2 helicopters have a serial number that contains a dash 2 suffix. These models have a cabin structure containing a one-piece windshield, a 280 console and other product improvements defined by Enstrom Report No. DO-282, Definition of Enstrom Model F-28C-2 Helicopter.
- NOTE 13. Enstrom Model F-28C (S/N 304 and 331 thru 480) and 280C (S/N 1020 and 1023 thru 1183) helicopters are eligible for installation of a Lycoming Model HIO-360-E1BD engine, which has been modified in accordance with STC No. SE100GL and is equipped with a Bendix RSA-5AB1, Parts List 2524712-1, 2, -3, -5, -6, -7, -8, -9, or -10 fuel injector. (See Enstrom Service Information Letter No. 0091, Rev. A). All limitations and conditions for the Model F-28C and 280C helicopters remain applicable.
- NOTE 14. Model F-28C-2 and F-28F helicopters are eligible for installation of a "Right Hand Pilot in Command" Kit (Kit No. 28-01002-3). These helicopters, when so configured, will be identified with a serial number dash R suffix. Eligible helicopters, when so equipped, will have a dash R model designation (F-28C-2R or F-28F-R) and must be operated within the prescribed limitation of their respective Flight Manual Supplement.
- NOTE 15. Deleted
- NOTE 16. Enstrom Model F-28F and 280F helicopters are eligible for increased gross weight to 2600 pounds in the normal category if the helicopter complies with the requirements of Enstrom Specification Drawing No. 28-100015 at the time of original manufacture or are retrofitted at a later date and logged accordingly. In accordance with Enstrom Service Information Letter 0130, Models eligible for retrofitting are:

All F-28F helicopters prior to S/N 731.

All 280F helicopters prior to S/N 1516, except 1506.

- NOTE 17. Enstrom Models F-28C, F-28F, 280F, and 280FX are eligible for installation of an internal auxiliary fuel tank per Kit No. 28-01009. When so equipped, the helicopter must be operated within the prescribed limitations of the respective Flight Manual Supplement.
- NOTE 18. Enstrom Model F-28F, 280F, and 280FX are eligible for installation of Wall-Colomony Muffler P/N ENX-0001 in place of the standard tailpipe. No further modification to the rotorcraft is required.
- NOTE 19. Enstrom Model 480, S/N 5001 was certificated June 7, 1993, with 4-place seating. It is eligible for 5place seating when retrofitted in conformance with Enstrom drawing 4119775 "Aft Bench Seat Installation," and 4192034 "Battery Installation."
- NOTE 20. Enstrom Models TH-28, 480, and 480B are eligible for installation of Cargo Hook Kit No. 4220024. When so equipped, the TH-28 must be operated within the prescribed limitations of Chapter 4 of the Flight Manual, and the 480 and 480B must be operated within the prescribed limitations of Flight Manual Supplement No.1.
- NOTE 21. Enstrom Model 480 and 480B are eligible for installation of Snowshoe Kit No. 4220016 when operated within the prescribed limitations of Flight Manual Supplement No. 2.
- NOTE 22. Enstrom Model 480 and 480B are eligible for installation of External Fuel Filter Kit No. 4220035 when operated within the prescribed limitations of Flight Manual Supplement No. 3.

- NOTE 23. Enstrom Model 480 and 480B are eligible for installation of Baggage Box Extension Kit No. 4220029 when operated within the prescribed limitations of Flight Manual Supplement No. 4.
- NOTE 24. Enstrom Model 480 and 480B are eligible for installation of Camera Door Kit No. 4220079 when operated within the prescribed limitations of Flight Manual Supplement No. 5.
- NOTE 25. Enstrom Model 480 is eligible for installation of Increased Rotor Speed Kit No. 4230002 when operated within the prescribed limitations of Flight Manual Supplement No.6. This kit also requires oil cooling system installation, P/N 4129100-3, and installation of the ring gear carrier, P/N 28-13106-6, in the main rotor transmission.
- NOTE 26. Enstrom Model 480 is eligible for installation of Air Conditioning System Kit No. 4220102 when operated within the prescribed limitations of Flight Manual Supplement No. 7; and maintained in accordance with Enstrom TH-28/480 Maintenance Manual Supplement No. 1.
- NOTE 27. Enstrom Model 480 is eligible for installation of Pop-Out Floats Kit No. 4220091 when operated within the prescribed limitations of Flight Manual Supplement No. 8; and maintained in accordance with Enstrom TH-28/480 Maintenance Manual Supplement No. 2.
- NOTE 28. Enstrom Model 480, Serial Number 5039 thru 5042 and 5044 are eligible for conversion to Model 480B when equipped in accordance with Enstrom 480B Conversion Kit No. 4230026.
- NOTE 29. Helicopter serial numbers listed in Table 3 are ineligible for certification in any category.

Model	Serial Numbers
F-28	
F-28A	0211, 0219
F-28C	0386, 0395, 0418, 0419
F-28C2	0440-2, 0490-2
F-28F	0710
280	
280C	1113, 1142
280F	1507
280FX	2070, 2087
TH-28	3005
480	5005, 5021, 5023, 5035
480B	

Table 3. Ineligible Serial Numbers

...END...