

U.S. DEPARTMENT OF TRANSPORTATION  FEDERAL AVIATION ADMINISTRATION  TYPE CERTIFICATE DATA SHEET NO. E8NE	TCDS NUMBER E8NE REVISION: 35			
	General Electric Company			
	MODELS:			
	CT7-2A	CT7-7A	CT7-8B	CT7-9B
	CT7-2D	CT7-7A1	CT7-8B5	CT7-9B1
	CT7-2D1	CT7-8	CT7-8E	CT7-9B2
	CT7-2E1	CT7-8A	CT7-8E5	CT7-9C
	CT7-5A2	CT7-8A1	CT7-8F	CT7-9C3
	CT7-5A3	CT7-8A5	CT7-8F5	CT7-9D
	CT7-6	CT7-8A6		CT7-9D2
CT7-6A	CT7-8A7			
May 15, 2015				

Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E8NE) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certified aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations, provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

**TYPE CERTIFICATE (TC) HOLDER:** General Electric Company  
 GE Aviation  
 1000 Western Avenue  
 Lynn, MA 01910 (USA)

**TYPE**

CT7-2A/2D/2D1/2E1/6/6A/8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5	Axial flow, free-turbine turboshaft. Five-stage axial / single-stage centrifugal compressor; annular combustion chamber; two-stage gas generator turbine; two-stage power turbine. Full Authority Digital Engine Control (FADEC) only for the CT7-2E1/8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5 models.
CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2	Axial flow, free-turbine turboprop. Five-stage axial / single-stage centrifugal compressor; annular combustion chamber; two-stage gas generator turbine; two-stage power turbine; integral propeller gearbox.

Ratings are AEO unless labeled OEL.

RATINGS (See NOTES 5 and 11)	MODELS: CT7-									
	2A/2D/2D1	2E1	6/6A	8	5A2	5A3	7A/7A1	9B/9C/9C3	9B1/9B2	9D/9D2
Maximum Continuous (SL) Equivalent Shaft hp	---	---	---	---	1,660	---	1,764	---	---	---
Shaft hp	1,595	1870	1,718	2,043	1,600	1,600	1,700	1,750	1,750	1,750
Thrust, lb	---	---	---	---	150	---	160	---	---	---
Output, rpm	21,000	21,000	20,463	21,945	1,384 (1)	1,384 (1)	1,384 (1)	1,384 (1)	1,384 (1)	1,384 (1)
Normal Takeoff (5 min) (SL) Equivalent Shaft hp	---	---	---	---	1,800	---	1,764	---	---	---
Shaft hp	1,625	1983	2,000	2,520	1,735	1,665	1,700	1,750	1,750	1,750
Thrust, lb	---	---	---	---	164	---	160	---	---	---
Output, rpm	21,000	21,000	20,463	21,945	1,384 (1)	1,384 (1)	1,384 (1)	1,384 (1)	1,384 (1)	1,384 (1)
Maximum Takeoff (5 min) (SL) Shaft hp	---	---	---	---	---	1,785	---	1,870	1,950	1,940
Output, rpm	---	---	---	---	---	1,384 (1)	---	1,384 (1)	1,384 (1)	1,384 (1)
(1) Output for these turboprop models is specified as nominal propeller speed (gear-reduced Np). 1,384 rpm is not a rating or limitation and is presented for reference only. The limit for continuous operation is 1,396 rpm. See NOTE 7.										

SL: Sea level

PAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
REV.	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35

LEGEND: "—" NOT APPLICABLE

RATINGS - Continued (See NOTES 5 and 11)	MODELS: CT7-									
	2A/2D/ 2D1	2E1	6/6A	8	5A2	5A3	7A/ 7A1	9B/9C/ 9C3	9B1/ 9B2	9D/ 9D2
Continuous OEI (SL) Shaft hp Output, rpm	---	1983 21,000	2,000 20,463	---	---	---	---	---	---	---
30-minute OEI (SL) Shaft hp Output, rpm	1,625 21,000	---	---	2,498 21,945	---	---	---	---	---	---
2½-minute OEI (SL) Shaft hp Output, rpm	1,725 21,000	---	2,000 20,463	---	---	---	---	---	---	---
2-minute OEI (SL) Shaft hp Output, rpm	---	---	---	2,520 20,848	---	---	---	---	---	---
Flat 30-sec/2-min OEI (SL) Shaft hp Output, rpm	---	2104 21,000	---	---	---	---	---	---	---	---

RATINGS - Continued (See NOTES 5 and 11)	MODELS: CT7-										
	8A	8A1	8A5	8A6	8A7	8B	8B5	8E	8E5	8F	8F5
Maximum Continuous (SL) Shaft hp Output, rpm	2,043 21,945	2,041 21,527	2,157 21,945	2,329 21,945	2,323 21,527	2,041 20,900	2,154 20,900	2,041 20,872	2,154 20,872	1,960 20,841	2,151 20,841
Normal Takeoff (5 min) (SL) Shaft hp Output, rpm	2,520 21,945	2,538 21,527	2,634 21,945	2,695 21,945	2,685 21,527	2,529 20,900	2,609 20,900	2,527 20,872	2,608 20,872	2,474 20,841	2,603 20,841
30 Minute (SL) Shaft hp Output, rpm	2,336 21,945	2,334 21,527	2,544 21,945	2,637 21,945	2,627 21,527	2,489 20,900	2,529 20,900	2,488 20,872	2,528 20,872	2,383 20,841	2,524 20,841
Continuous OEI (SL) Shaft hp Output, rpm	2,498 21,945	2,495 21,527	2,544 21,945	2,637 21,945	2,627 21,527	2,489 20,900	2,529 20,900	2,488 20,872	2,528 20,872	2,383 20,841	2,524 20,841
2-minute OEI (SL) Shaft hp Output, rpm	2,520 20,900	2,502 20,482	2,606 20,900	2,684 20,900	2,667 20,482	2,523 20,900	2,606 20,900	2,522 20,872	2,604 20,872	2,430 19,800	2,599 20,841
30-second OEI (SL) Shaft hp Output, rpm	2,740 20,900	2,712 20,482	2,769 20,900	2,845 20,900	2,788 20,482	2,740 20,900	2,769 20,900	2,739 20,872	2,767 20,872	2,624 19,800	2,762 20,841

FUEL SYSTEM	MODELS: CT7-									
	2A/2D	2D1	2E1	6/6A	8/8A/8A1/ 8A5/8A6/ 8A7/8B/ 8B5/8F	8E/8E5	8F5	5A2/5A3/ 7A/7A1	9B/9B1/ 9B2/9C/9C3 /9D/9D2	
Fuel Control Hamilton Standard (P/N) Woodward Governor (Model) FADEC (P/N)	JFC78-4 ---	JFC78-4 3470 ---	---	JFC78-4 ---	819700-8 ---	819700-8 ---	819700-8 ---	JFC78-5 ---	JFC78-5 (1) 3470 ---	
Fuel Boost pump Lear Siegler-Romec (P/N)	RR53150	RR53150	RR53150	RR53150	RR53150	RR53150	RR53150	RR53150	RR53150	
Fuel (See NOTE 12) GE Jet Fuel Specification	D50TF2	D50TF2	D50TF2	D50TF2	D50TF2	D50TF2	D50TF2	D50TF2	D50TF2	
For specific approved fuels, see Operating Instructions:	SEI- 569	SEI- 569	GEK 112766	SEI- 694	GEK 105157	GEK 112153	GEK 114117	SEI- 575	SEI- 575	
(1) Some CT7-9B/9C engines were shipped with Hamilton Standard JFC 78-5 Fuel Controls, which remain an alternate to the Woodward Governor unit on the CT7-9B/9B1/9B2/9C/9C3/9D/9D2.										

OIL	MODELS: CT7-						
	2A/2D/2D1	2E1	6/6A	8/8A/8A1/8A5/8A6/8A7/8B/8B5/8F	8E/8E5	8F5	5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2
GE Oil Specification	D50TF1	D50TF1	D50TF1	D50TF1	D50TF1	D50TF1	D50TF1
For specific approved oils, see Operating Instructions:	SEI-569	GEK 112766	SEI-694	GEK 105157	GEK 112153	GEK 114117	SEI-575

PRINCIPAL DIMENSIONS (See NOTE 34)	MODELS: CT7-										
	2A	2D	2D1	2E1	6/6A	8	8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F	8F5	5A2/5A3/7A/7A1	9B/9B1/9B2/9C/9D	9C3/9D2
Length (in)	47	47	47	47	48.2	48.8	48.8	42.3	96	96	96
Maximum diameter (in)	---	---	---	---	---	---	---	---	---	---	---
Width (in)	26	26	26	26	26	26	26	26	26	26	26
Height (in)	25	25	25	26	25	25	25	25	29	29	29
Weight, dry (lb)	429	442	466	491	493	537 (1)	542 (1)	542 (1)	783	805	807

(1) Does not include cables from engine to FADEC.

CENTER OF GRAVITY LOCATION	MODELS: CT7-									
	2A	2D	2D1	2E1	6/6A	8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F	8F5	5A2/5A3/7A/7A1	9B/9B1/9B2/9C/9C3/9D/9D2	
Aft of front mount centerline (in)	13.22	13.19	13.29	13.42	13.76	13.58	21.76	31.08	31.45	
Above engine horizontal centerline (in)	1.38	1.39	1.40	1.19	1.25	1.98	1.10	2.75	2.73	
Left of vertical centerline (in)	0.42	0.45	0.47	0.64	0.49	1.02	0.46	0.28	0.26	

IGNITION SYSTEM, DUAL (Includes exciter unit and two igniter plugs)	EXCITER UNIT		IGNITER PLUG
	Supplier Part Number	GE Part Number	GE Part Number
MODELS: CT7-			
2A	48987	4040T18	4053T22
2D/2D1	44525	4068T11	5044T67
2E1	---	5157T09	5044T67
5A2/5A3/6/6A/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2	44525	4068T11	5044T67
8/8A/8A5/8A1/8A6/8A7/8B/8B5/8E/8E5/8F/8F5	9049950-1	3060T07	5044T67

**NOTES**

MODELS: CT7-	
2A/2D/2D1	See NOTES 1 through 18, 24, 34 and 44.
2E1	See NOTES 1 through 17, 24, 29, 34 through 38, 46 and 48.
5A2/7A	See NOTES 1 through 17, 21 through 25, 33 and 34.
5A3	See NOTES 1 through 17, 21 through 25, 30, 32 and 34.
6/6A	See NOTES 1 through 17, 24 and 34.
7A1	See NOTES 1 through 17, 21 through 25 and 34.
8	See NOTES 1 through 17, 24, 29, 34 through 38 and 40.
8A/8A1	See NOTES 1 through 17, 24, 29, 34 through 40.
8A6	See NOTES 1 through 17, 24, 29, 34 through 38, and 40
8A7	See NOTES 1 through 17, 24, 29, and 34 through 40.
8A5/8B/8B5/8E5/8F	See NOTES 1 through 17, 24, 29, 34 through 38 and 42.
8E	See NOTES 1 through 17, 24, 29, 34 through 38 and 49.
8F5	See NOTES 1 through 17, 21, 24, 29, 34 through 38 and 43.
9B/9B1/9B2/9D	See NOTES 1 through 17, 21 through 25, 29, 30, 33 and 34.
9C	See NOTES 1 through 17, 21 through 25, 28, 29, 30, 33 and 34.
9C3/9D2	See NOTES 1 through 17, 21 through 25, 29, 30 and 34.

**CERTIFICATION BASIS**

MODELS: CT7-	
2A/2D/2D1	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-5; Special Condition 33-76-NE-2.
2E1	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-20; Special Condition 33-012-SC; Equivalent Level of Safety memo AT3011EN-E-P-4.
6/6A	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-5; 14 CFR 33.87, Amendment 12; Special Condition number 33-76-NE-2.
8	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-19; Special Conditions 33-002-SC and 33-003-SC. The inlet particle separator blower rotor was certified to 14 CFR 29.1461 as amended by amendment 29-3, instead of 14 CFR 33.27.
8A/8A1/8A5/8B/8B5/8E/8E5/8F/8F5	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-20; Special Conditions 33-002-SC and 33-005-SC.
8A6/8A7	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-20; Special Conditions 33-002-SC and 33-005-SC; Equivalent Level of Safety memo 8040-ELOS-12-NE04.
5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2	14 CFR 33, effective February 1, 1965, as amended by amendments 33-1 through 33-5; 14 CFR 33.17 and 14 CFR 33.77 as amended by amendments 33-1 through 33-6; Special Condition 33-NE-1.

**TYPE CERTIFICATE NUMBER E8NE**

MODEL	APPLIED FOR	ISSUED/REVISED	DELETED
CT7-1	JUL 02 1974	JUN 29 1977	MAY 28 1981
CT7-2	FEB 02 1978	SEP 06 1978	JAN 15 1982
T700/T1C	AUG 01 1977	SEP 06 1978	MAY 18 1983
T700/T2C	OCT 10 1980	MAY 28 1981	JUL 30 1992
CT7-2A	MAY 30 1980	MAY 28 1981	
CT7-2B	MAR 17 1982	MAY 18 1983	JUL 30 1992
CT7-5A	AUG 06 1981	AUG 29 1983	OCT 02 1986
CT7-7	AUG 14 1981	AUG 29 1983	NOV 26 1985
CT7-7E	JUL 08 1983	AUG 29 1983	NOV 26 1985
CT7-5A1/7A/7E1	APR 17 1984	MAY 15 1984	OCT 02 1986
CT7-7A	APR 17 1984	MAY 15 1984	
CT7-7E1	APR 17 1984	MAY 15 1984	NOV 26 1985
CT7-5A2	DEC 18 1984	MAR 25 1985	
CT7-2D	JUL 15 1985	AUG 22 1985	
CT7-9B	MAR 16 1987	JUN 17 1988	
CT7-9C	AUG 15 1985	JUN 17 1988	
CT7-6/6A	MAR 17 1987	JUN 30 1988	
CT7-5A3/7A1	AUG 29 1988	MAR 16 1989	
CT7-2D1	DEC 07 1988	JUN 30 1989	
CT7-9B1/9B2/9D	JUN 03 1991	JUN 24 1992	
CT7-9C3/9D2	SEP 26 1997	JUN 25 1998	
CT7-8	OCT 2 1996	SEP 29 2000	
CT7-8A/8A5/8B/8B5/8E/8E5/8F/8F5	SEP 15 2003	APR 08 2004	
CT7-8A1	JUN 12 2007	JUN 21 2010	
CT7-8A6/8A7	MAY 20 2010	MAY 21, 2012	
CT7-2E1	SEP 10, 2009	JUNE 12, 2013	

**IMPORT REQUIREMENTS:**

To be considered eligible for installation on United States (U.S.) registered aircraft, each engine to be exported to the U.S. shall be accompanied by a certificate of airworthiness for export or by a certifying statement, endorsed by the exporting cognizant civil airworthiness authority and containing the following language:

1. This engine conforms to its Type Certificate Number E8NE and is in a condition for safe operation.
2. This engine has been subjected by the manufacturer to a final operational check and is in a proper state of airworthiness.

Reference 14 CFR Section 21.500, which provides for the airworthiness acceptance of aircraft engines manufactured outside of the U.S. and for which a U.S. type certificate has been issued. Additional guidance is contained in FAA Advisory Circular 21-23, "Airworthiness Certification of Civil Aircraft, Engine, Propellers and Related Products Imported into the United States."

**PRODUCTION BASIS:**

FAA Production Certificate number 108.

Transport Canada Manufacturing Approval Certificate number 231-91 for CT7-8A/8A1/8A7 engine Serial Numbers 530001 to 530099 (See NOTE 39).

EASA Production Organization Approval ES.21G.0016 for CT7-8F5 engine Serial Numbers 731004 to 731099 and 733001 to 733100 (See NOTE 43).

EASA Production Organization Approval IT.21G.0008 for CT7-8E engine Serial Numbers 087001 to 087050 (See NOTE 49).

**NOTES**

Limitations are AEO unless labeled OEI.

**NOTE 1.**

	MAXIMUM PERMISSIBLE GAS GENERATOR OPERATING SPEEDS (rpm)						
	MODELS: CT7-						
	2A/2D/2D1	2E1	6/6A	8	8A/8A1/8A5/8B / 8B5/8E/8E5/8F	8F5	8A6/8A7
30-second OEI	---	---	---	46,340	46,340	46,340	46,340
2-minute OEI	---	---	---	46,010	46,010	46,010	46,010
2½-minute OEI	46,070	---	46,060	---	---	---	---
Flat 30-second/2-minute OEI	---	46,935	---	---	---	---	---
30-minute OEI	45,430	---	---	45,760	---	---	---
Continuous OEI	---	45,907	45,900	---	45,760	46,010	46,010
Normal takeoff (5 min)	45,430	45,907	45,900	46,010	46,010	46,010	46,010
30-minute	---	---	---	45,350	45,760	46,010	46,010
Maximum continuous	45,240	45,907	45,420	44,660	44,660	44,660	44,950
Transient (12 sec)	47,000	46,137	47,440	46,120	46,120	46,120	46,120
Transient OEI (12 sec)	47,000	---	47,440	---	---	---	---

**NOTE 1. - Continued**

	MAXIMUM PERMISSIBLE GAS GENERATOR OPERATING SPEEDS (rpm)				
	MODELS: CT7-				
	5A2	5A3	7A/7A1	9B/9C/9C3	9B1/9B2/ 9D/9D2
Normal takeoff (5 min)	45,000	44,650	45,000	45,288 (1)	45,100
Maximum takeoff	---	45,000	---	45,600	45,600
Maximum continuous	44,720	44,720	44,720	45,600	45,600
Transient (12 sec)	47,000	47,000	47,000	47,000	47,000
APU (prop brake on)	(2)	(2)	(2)	(3)	(3)
(1) CT7-9C: See NOTE 28. (2) Refer to Figure 6-5, SEI-575 (3) Refer to Figure 6-6, SEI-575					

**NOTE 2.**

	MAXIMUM PERMISSIBLE TEMPERATURES					
	MODELS: CT7-					
	2A	2D	2D1	2E1	6/6A	8
POWER TURBINE INLET (T4.5/ITT) (1)	°C/°F	°C/°F	°C/°F	°C/°F	°C/°F	°C/°F
30-second OEI	---	---	---	---	---	1010/1,851
2-minute OEI	---	---	---	---	---	990/1,814
2½-minute OEI	915/1,680	911/1,671	858/1,577	---	968/1,774	---
Flat 30-second/2-minute OEI	---	---	---	1078/1,972	---	---
30-minute OEI	878/1,613	873/1,603	858/1,577	---	---	979/1,794
Continuous OEI	---	---	---	968/1,775	948/1,738	---
Normal takeoff	878/1,613	873/1,603	858/1,577	968/1,775	948/1,738	986/1,807
30-minute	---	---	---	---	---	957/1,755
Maximum continuous	863/1,585	858/1,576	841/1,546	942/1,727	899/1,650	920/1,688
Transient (12 sec)	950/1,742	945/1,733	903/1,657	974/1,785	1011/1,852	987/1,809
Transient OEI (12 sec)	950/1,742	945/1,733	903/1,657	---	1011/1,852	---
Starting	950/1,742	945/1,733	903/1,657	963/1,766	948/1,738	1000/1,832
Oil inlet	150/302	150/302	150/302	150/302	150/302	149/300
(1) The power turbine inlet gas temperature is measured by 7 thermocouples mounted in the power turbine casing. For inspection requirements when limits are exceeded, refer to Maintenance Manual SEI-570 for CT7-2A/2D/ 2D1/2E1, SEI-695 for CT7-6/6A, and GEK105159 for CT7-8.						

**NOTE 2. - Continued**

	MAXIMUM PERMISSIBLE TEMPERATURES				
	MODELS: CT7- (other models next page)				
	8A/8A1	8A5	8A6/8A7	8B	8B5/8E/8E5 /8F/8F5
POWER TURBINE INLET (T4.5/ITT) (2)	°C/°F	°C/°F	°C/°F	°C/°F	°C/°F
30-second OEI	1,049/1,921	1,049/1,921	1,097/2,006	1,049/1,921	1,049/1,921
2-minute OEI	1,006/1,843	1,006/1,843	1,013/1,855	1,006/1,843	1,006/1,843
Continuous OEI	988/1,811	988/1,811	996/1,824	988/1,811	988/1,811
Normal takeoff	995/1,823	1,002/1,835	1,007/1,844	995/1,823	1,002/1,835
30-minute	988/1,811	988/1,811	996/1,824	988/1,811	988/1,811
Maximum continuous	935/1,715	935/1,715	946/1,734	935/1,715	935/1,715
Transient (12 sec)	1,003/1,838	1,003/1,838	1,008/1,847	1,003/1,838	1,003/1,838
Starting	1,000/1,832	1,000/1,832	1,000/1,832	1,000/1,832	1,000/1,832
Oil inlet	149/300	149/300	149/300	149/300	149/300
(2) The power turbine inlet gas temperature is measured by 7 thermocouples mounted in the power turbine casing. For inspection requirements when limits are exceeded, refer to Maintenance Manual GEK105159.					

**NOTE 2. - Continued**

	MAXIMUM PERMISSIBLE TEMPERATURES					
	MODELS: CT7-					
	5A2/7A/7A1	5A3	9B/9C3	9B1/9B2	9C	9D/9D2
POWER TURBINE INLET (T4.5/ITT) (3)	°C/°F	°C/°F	°C/°F	°C/°F	°C/°F	°C/°F
Normal takeoff (5 min)	930/1,705	919/1,687	917/1,683	907/1655	921/1,690 (6)	909/1,668
Normal takeoff (2 min) (4)	---	---	927/1,701	917/1683	---	919/1,686
Maximum takeoff (5 min) (5)	---	943/1,730	940/1,724	940/1,724	950/1,742	940/1,724
Maximum takeoff (2 min) (4) (5)	---	---	950/1,742	950/1,742	---	950/1,742
Maximum continuous	917/1,682	921/1,690	944/1,731	944/1,731	944/1,731	944/1,731
Transient (12 sec)	960/1,760	960/1,760	965/1,769	965/1,769	975/1,787	965/1,769
Starting	960/1,760	960/1,760	965/1,769	965/1,769	970/1,778	965/1,769
Oil inlet						
Propeller gearbox, continuous	77/171	77/171	77/171	77/171	77/171	77/171
Transient (15 min)	93/199	93/199	93/199	93/199	93/199	93/199
Power unit, continuous	122/252	122/252	122/252	122/252	122/252	122/252
Transient (15 min)	132/270	132/270	132/270	132/270	132/270	132/270
(3) The power turbine inlet gas temperature is measured by 7 thermocouples mounted in the power turbine casing. For inspection requirements when limits are exceeded, refer to Maintenance Manual SEI-576 for CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/ 9C/9C3/9D/9D2.						
(4) 2-minute transient maximum during a 5-minute takeoff.						
(5) Automatic power reserve (APR). See NOTE 30.						
(6) See NOTE 28.						

**NOTE 3.**

FUEL PRESSURE LIMITS			
MODELS: All CT7 Models			
At engine boost pump inlet: For all operation, including starts, the minimum pressure shall be 1.0 psi above true vapor pressure of the fuel, with a vapor/liquid ratio less than or equal to 1.0. Maximum fuel pressure shall be 50 psi above absolute ambient atmospheric pressure. In addition, minimum fuel pressure during starting shall be no lower than atmospheric pressure (or tank pressure, whichever is higher) minus 2.8 psi.			
OIL PRESSURE LIMITS			
MODELS: CT7-			
	2A	2D/2D1/2E1/6/6A/8/8A/8A1/8A5/ 8A6/8A7/8B/8B/ 8E/8E5/8F/8F5	5A2/5A3/7A/7A1/9B/9B1/9B2/ 9C/9C3/9D/9D2
Ground idle, minimum	20 psig	20 psid	---
Operating range	40-100 psig	30-100 psid	---
Power unit			
Ground idle, minimum	---	---	20 psid
Operating range	---	---	30-100 psid
Propeller gearbox			
Ground idle, minimum	---	---	5-25 psig
Operating range	---	---	25-140 psig

**NOTE 4.**

**ACCESSORY DRIVE PROVISIONS**

Drive	Type	Rotation*	Speed	Maximum Torque (in-lb)	
				Continuous	Static
<b>MODELS</b>					
CT7-2A/2D/2D1/6/6A/8/8A/ 8A1/8A5/8A6/8A7/8B/ 8B5/8E/8E5/8F Starter	MS3326-2 (1)	CW	0.64979 (2)	336	900(3)/1000 (4)
CT7-8F5 Starter Clutch	V-Band Pad (13)	CW	0.64979 (2)	336	900(3)/1000 (4)
CT7-2E1 Starter-Generator	AS963-1	CCW	0.29736	730 (5)	1320 (3)/1470 (7) /1700 (10)
CT7-5A2/5A3/7A/7A1/9B/9B1 9B1/9B2/9C/9C3/9D/9D2 Starter-Generator	AS963A-12V (8)	CCW	0.26630 (2)	820 (5)/192 (6)	1530 (3)/1900 (10)/ 1645 (7)
Propeller Gearbox					
Propeller shaft	AS1414(8)	CCW	0.06291 (9)	(8)	(8)
Hydraulic pump	MS3326(AS)-2 (8)	CW	0.27932 (9)	123	(11)
AC generator	AS963A-12V (8)	CW	0.54650 (9)	370(12)	(12)
Propeller overspeed governor	MS3325(AS)-2 (8)	CW	0.38091 (9)		(11)
Propeller control unit	(13)	CW	0.06291 (9)		(11)
(1) Modified (2) Ratio to gas generator speed (3) 3 seconds maximum duration (4) Maximum axial impact force, pounds (5) Starter (6) Generator mode for 3 minutes restricted at ground idle without customer Bleed. Unrestricted maximum is 112 in-lb (7) 0.05 seconds maximum duration (8) Modified For CT7-5A2/5A3/7A/7A1 see Installation Manual SEI-585 For CT7-9B/9B1/9B2/9C/9C3/9D/9D2 see Installation Manual SEI-726 (9) Ratio to power turbine speed (10) Shear torque for starter/generator shaft shear section (11) Overtorque allowance minimum of 1.5 x maximum normal rated torque for 10 <sup>8</sup> cycles and minimum of 5 x maximum normal rated torque as a limit load. (12) Maximum overload up to 415 in-lb for 5 minutes (13) For CT7-8F5 see Installation Manual GEK 114116 For CT7-5A2/5A3/7A/7A1 see Installation Manual SEI-585 For CT7-9B/9B1/9B2/9C/9C3/9D/9D2 see Installation Manual SEI-726					

\* Facing engine pad, CW = CLOCKWISE CCW = COUNTERCLOCKWISE

**NOTE 5.** Engine ratings are based on calibrated test stand performance under the following conditions:

CT7-2A/2D/2D1/6/6A/  
8/8A/8A5/8A6/8A7/8B/  
8B5/8E/8E5/8F/8F5/8A1

Static sea level standard conditions of 59°F and 29.92 inches Hg.

GE Aviation air inlet, GE Aviation P/N 1076662-542 (CT7-2A/2D/2D1) or P/N 17A132-505 (CT7-8/8A/8A1/8A5/8A6/8A7-8B/8B5/8E/8E5/8F/8F5), and shaft shield, P/N 17A132-506 or GE Aviation P/N 1076662-486 (CT7-6/6A), and shaft shield, GE Aviation P/N 1076662-592. CT7-8F5 outer bellmouth adapter, P/N 17A210-005, and inner bellmouth adapter, P/N 17A210-004.

No external air bleed for aircraft accessories.

Exhaust configuration as defined by GE Aviation P/N 1076662-524 or P/N 1076662-554 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5).

No anti-icing airflow.

The following engine performance decks are the prime source of engine performance data throughout the flight envelope:

- 83102 (CT7-2A)
- 85163 (CT7-2D/2D1)
- 93093 (CT7-6/6A)
- L0078C (CT7-8)
- L0078S (CT7-8A)
- L0091F (CT7-8A1)
- L0081I (CT7-8A5)
- L0096E (CT7-8A6)
- L0096G (CT7-8A7)
- L0081F (CT7-8B)
- L0081J (CT7-8B5)
- L0081G (CT7-8E)
- L0081K (CT7-8E5)
- L0081H (CT7-8F)
- L0091W (CT7-8F5)

Power ratings for the CT7-8A/8A1/8A6/8A7/8E/8F5 are based on operating in test cell mode (engine capabilities), which disables the EECU torque limiting corresponding to the rotorcraft capabilities. In their respective rotorcraft installations, the EECU applies torque limits of:

CT7-8A/8A1/8A6/8A7					
	8A	8A1	8A6	8A7	
30-Second OEI	673.4	701.8	698.4	698.4	ft-lb
2-Minute OEI	598.6	603.6	598.6	698.4	ft-lb
Continuous OEI	598.6	603.6	598.6	653.5	ft-lb
Normal Takeoff	548.7	553.2	548.7	568.2	ft-lb
CT7-8E/8F5					
	8E	8F5			
30-Second OEI	564.0	N/A	ft-lb		
2-Minute OEI	564.0	602.0	ft-lb		
Continuous OEI	564.0	N/A	ft-lb		
AEO	467.9	602.0	ft-lb		

CT7-5A2/7A

Static sea level standard conditions of 59°F and 29.92 inches Hg.

No inlet system loss, no anti-icing, no customer bleed or power extraction.

Exhaust system specified per Note 36 on the installation drawing.

Engine performance decks 85151 (CT7-5A2) and 84129 (CT7-7A) summarize performance data.

CT7-5A2 takeoff flat rated to 93°F, maximum continuous flat rated to 95°F.

CT7-7A takeoff flat rated to 91°F, maximum continuous flat rated to 86°F.

CT7-5A3/7A1

Static sea level standard conditions of 59°F and 29.92 inches Hg.

No inlet system loss, no anti-icing, no customer bleed or power extraction.

Exhaust system specified per Note 36 on the installation drawing.

Engine performance decks 88271 (CT7-5A3), 88270 (CT7-7A1) summarize performance data.

CT7-5A3 maximum takeoff flat rated to 93°F, normal takeoff flat rated to 93°F, maximum continuous flat rated to 95°F.

CT7-7A1 takeoff flat rated to 97°F, maximum continuous flat rated to 86°F.

CT7-9B/9B1/9B2/9C/  
9C3/9D/9D2

Static sea level standard conditions of 59°F and 29.92 inches Hg.

No inlet system loss, no anti-icing, no customer bleed or power extraction.

Exhaust system specified per Note 36 on the installation drawing.

The following engine performance decks summarize the data:

CT7-9B	88250A, 88250B (1)
CT7-9C	88252A
CT7-9C3	95031A
CT7-9D	92060A
CT7-9B1/9B2/9D2	There are no current applications for these engine models. Engine performance decks and associated documentation will be submitted to the FAA for approval when an application has been established.

(1) Alternate performance defined by 88250B applies to CT7-9B engines that comply with GE Service Bulletin 73-0046. The Service Bulletin configures the CT7-9B engine with an alternate fuel control that is capable of increased fuel flow at high throttle positions.

CT7-9B maximum takeoff flat rated to 93°F, normal takeoff flat rated to 93°F, maximum continuous flat rated to 91°F.

CT7-9B1 maximum takeoff flat rated to 84°F, normal takeoff flat rated to 93°F, maximum continuous flat rated to 91°F.

CT7-9B2 maximum takeoff flat rated to 93°F, normal takeoff flat rated to 93°F, maximum continuous flat rated to 91°F.

CT7-9C maximum takeoff flat rated to 95°F, normal takeoff flat rated to 106°F, maximum continuous flat rated to 106°F.

CT7-9C3 maximum takeoff flat rated to 101°F, normal takeoff flat rated to 101°F, maximum continuous flat rated to 106°F.

CT7-9D maximum takeoff flat rated to 86°F, normal takeoff flat rated to 91°F, maximum continuous flat rated to 97°F.

CT7-9D2 maximum takeoff flat rated to 93°F 34°C, normal takeoff flat rated to 93°F, maximum continuous flat rated to 97°F.

CT7-2E1

Static sea level standard conditions of 59°F and 29.92 inches Hg.

GE Aviation P/N 1076662-542 air inlet, and GE Aviation P/N 1076662-592 shaft shield.

No inlet system loss, anti-icing airflow, customer bleed airflow or power extraction.

Exhaust configuration as defined by GE Aviation P/N 1076662-524 or P/N 1076662-554.

Power ratings for the CT7-2E1 are based on operating in test cell mode (engine capabilities), which disables the EECU torque limiting corresponding to the rotorcraft capabilities. In its rotorcraft installation, the EECU applies torque limits of:

30-minute	355.5 ft-lb
30-Second OEI	502.7 ft-lb
2-Minute OEI	475.1 ft-lb
Continuous OEI	413.8 ft-lb

Engine performance deck L0096Z is the prime source of engine performance data throughout the flight envelope.

**NOTE 6.**

CT7-2A/2D/2D1/2E1/6/6A/8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F  
 Maximum permissible customer air bleed extraction is 6.5 percent.

CT7-8F5  
 Maximum permissible customer air bleed extraction is 4.0 percent.

CT7-5A2/5A3/7A/7A1  
 Customer bleed air is provided through two bleed ports (mid-compressor and compressor discharge). At the mid-compressor port, maximum allowable bleed (no engine anti-icing airflow) is 6.5 percent. Maximum allowable bleed airflow at the compressor discharge bleed port is approximately 8 percent in flight and 12 percent while in APU mode. See CT7-5A2/5A3/7A/7A1 Installation Manual SEI-585.

CT7-9B/9B1/9B2/9C/9C3/9D/9D2  
 Customer bleed air is provided through two bleed ports (mid-compressor and compressor discharge). At the mid-compressor bleed port, maximum allowable bleed (no engine anti-ice airflow) is 6.5 percent. Maximum allowable bleed airflow at the compressor discharge bleed port is approximately 8 percent in flight and 12 percent while in APU mode. See CT7-9B/9B1/9B2/9C/9C3/9D/9D2 Installation Manual SEI-726.

**NOTE 7.**

POWER TURBINE OPERATING RANGE (rpm)										
MODELS: CT7-										
	2A/2D/2D1	2E1	6/6A	8/8A/8A5	8A1	8A6	8A7	8B/8B5	8E/8E5	8F/8F5
Transient (12 sec)	22,500	23,100	25,300	24,350	24,350	24,350	24,350	24,350	24,350	24,350
Maximum continuous	21,000	22,000	22,200	22,200	22,200	22,200	22,200	22,200	22,200	22,200
Maximum governing	21,000	22,000	21,000	21,945	21,527	21,527	21,527	21,527	21,527	21,527
Nominal	21,000	21,000	20,463	21,945	21,527	21,945	21,527	20,900	20,872	20,841
Minimum governing	19,000	19,000	18,200	19,855	19,855	19,855	19,855	19,855	19,855	19,855

POWER TURBINE OPERATING RANGE (rpm)	
MODELS: CT7-	
5A2/5A3/7A/7A1	9B/9B1/9B2/9C/9C3/9D/9D2
Transient (12 sec)	25,240
Maximum continuous	1,396 (1)
Maximum governing	---
Nominal rating	1,384 (1)
Minimum governing	970

(1) Output for these turboprop models is specified as propeller speed (gear reduced Np).

Transient (12 sec)	25,240
Maximum continuous	1,396 (1)
Maximum governing	---
Nominal rating	1,384 (1)
Minimum governing	970

**NOTE 8.**

POWER TURBINE SHAFT TORQUE LIMITS (ft-lb)											
MODELS: CT7-											
	2A/2D/ 2D1	2E1	6/6A	8	8A/8A1/ 8A5/8B/ 8B5/8E/ 8E5/8F	8A6/8A7	8F5	5A2	5A3	7A/7A1	9B/9B1/ 9B2/9C/ 9C3/9D/ 9D2
30-second OEI	---	---	---	676	702	734	734	---	---	---	---
2-minute OEI	---	---	---	636	660	702	660	---	---	---	---
Flat 30-second/2-minute OEI	---	575	---	---	---	---	---	---	---	---	---
2½-minute OEI	---	---	560	---	---	---	---	---	---	---	---
30-minute OEI	500	---	---	604	---	---	---	---	---	---	---
Continuous OEI	---	515	547	---	640	660	640	---	---	---	---
Normal takeoff (5 min)	500	515	547	603	660	676	660	420	404	413	510
Maximum takeoff (5 min)	---	---	---	---	---	---	---	---	433	433	510
30-minute	---	---	---	574	640	660	640	---	---	---	---
Maximum continuous	450	490	488	525	610	610	610	389	389	389	460
Transient (12 sec)	700	545	700	638	777	777	777	500	500	500	600

**NOTE 9.**

All engine models meet FAA requirements for operation in icing conditions. At temperature minus 4°F and below engine gas generator speed must be maintained at or above the physical speed defined on Figure A-5 SEI-520 Installation Manual (CT7-2A), SEI-692 Installation Manual (CT7-2D/2D1), SEI-693 Installation Manual (CT7-6/6A). The CT7-2E1/5A2/5A3/7A/7A1/8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5/9B/9B1/9B2/ 9C/ 9C3/9D/9D2 engine models have no anti-icing operational restrictions in their normal operating ranges.

**NOTE 10.**

If an Ng (NOTE 1), T4.5/ITT (NOTE 2), Np (NOTE 7), or Torque (NOTE 8) limit for the engine has been exceeded, or if an associated time-limitation has been exceeded, e.g. 12 seconds, 5 minutes, etc., the engine must be inspected per GE Aviation Maintenance Manual:

- SEI-570 (CT7-2A/2D/2D1/2E1)
- SEI-695 (CT7-6/6A)
- SEI-576 (CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2)
- GEK 105159 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5).

In addition, if propeller shaft speed has exceeded 1,588 rpm for more than 12 seconds, the CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2 turboprop engine must be inspected per SEI-576.

**NOTE 11.**

SEA LEVEL STATIC POWER LIMITS BELOW 59°F				
These ratings and the limitations on the usage of them are defined in Title 14, Code of Federal Regulations (14 CFR).				
MODELS: CT7-				
	2A/2D/2D1	2E1	6/6A	5A2/5A3/7A/7A1/ 9B/9B1/9B2/9C/ 9C3/9D/9D2
Flat 30-second/ 2-minute OEI	---	Decreases linearly to 1922 shp at -58°F	---	---
2½-minute OEI	Increases linearly to 1,748 shp at 32°F. For characteristics below 32°F, refer to Performance Bulletin, SEI-601.	---	Increase Linearly to 2,173 shp at -65°F.	---
Normal takeoff, Maximum takeoff, 30-minute OEI and Continuous OEI (1)	Increases linearly to 1,722 shp at 32°F; increases linearly to 1,738 shp at 23°F. For characteristics below 23°F, refer to Performance Bulletin, SEI-601.	Flat rated to -20°F, decreases linearly to 1922 shp at -58°F	Increase linearly to 2,131 shp at -36°F, then flat rated to -65°F	Flat rated to -65°F.
Maximum continuous	Increases linearly to 1,724 shp at 23°F, increase linearly to 1,730 shp at 18°F. For characteristics below 18°F, refer to Performance Bulletin, SEI-601.	Flat rated to -58°F	Increase linearly to 1,901 shp at -43°F, then flat rated to -65°F.	Flat rated to -65°F.

(1) CT7-2E1 has normal takeoff and continuous OEI ratings only.

**NOTE 11. – Continued**

SEA LEVEL STATIC POWER LIMITS BELOW 59°F These ratings and the limitations on the usage of them are defined in 14 CFR.					
MODELS: CT7-					
	8	8A	8A1	8A5	8A6/8A7
30-second OEI	Increase linearly to 2675 shp at 47°F, then flat to -57°F, decreasing linearly to 2644 shp at -65°F.	Increase linearly to 2750 shp at 51°F, then flat to -36°F, decreasing linearly to 2645 shp at -65°F.	Flat to -46°F, then decreasing to 2636 shp at -65°F.	Flat to -56°F, then decreasing to 2662 shp at -65°F.	Flat rated to -65°F.
2-minute OEI	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.
Continuous OEI	---	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.
30-minute OEI	Flat rated to -65°F.	---	---	---	---
Normal takeoff	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.
30-minute	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.
Maximum continuous	Increase linearly to 2110 shp at 53°F, then flat rated to -65°F	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.

**NOTE 11. – Continued**

SEA LEVEL STATIC POWER LIMITS BELOW 59°F These ratings and the limitations on the usage of them are defined in 14 CFR.					
MODELS: CT7-					
	8B	8B5/8E5	8E	8F	8F5
30-second OEI	Flat to -39°F, then decreasing to 2645 shp at -65°F.	Flat to -36°F, then decreasing to 2662 shp at -65°F.	Flat to -44°F, then decreasing to 2656 shp at -65°F.	Flat rated to -65°F.	Flat rated to -40°F.
2-minute OEI	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -40°F.
Continuous OEI	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -40°F.
30-minute OEI	---	---	---	---	---
Normal takeoff	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -40°F.
30-minute	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -40°F.
Maximum continuous	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -65°F.	Flat rated to -40°F.

**NOTE 12.**

The following optional additive may be used in approved fuels (all models):

Phillips PFA-55-MB or anti-icing additives to specification MIL-1-27686 at a concentration not in excess of 0.15% by volume.

**NOTE 13.**

Life limits, established for critical rotating components, are published in the following GE Aviation Maintenance Manuals Chapter 5:

- SEI-570 (CT7-2A/2D/2D1/2E1)
- SEI-695 (CT7-6/6A)
- GEK 105159 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5)
- SEI-576 (CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D /9D2)

**NOTE 14.** Recommended maintenance inspection intervals are published in the following GE Aviation publications:

- Service Bulletin No. (CT7-TS) 72-1 (CT7-2A/2D/2D1)
- Service Bulletin No. (CT7-TS) 72-9 (CT7-6/6A)
- Service Bulletin No. (CT7-TP) 72-02 (CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2)
- GEK 105159 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5)
- SEI-570 (CT7-2E1).

**NOTE 15.**

The following engine components provide means to satisfy the indicated requirements of the 14 CFR Part shown.			
	2A/2D/2D1/6/6A, 14 CFR 29 (Part 29 Amendment 13)	2E1/8/8A/8A1/8A5/8A6/ 8A7/8B/8B5/8E/8E5/8F/ 8F5, (Part 29 Amendment 46)	5A2/5A3/7A/7A1/9B/9B 1/9B2/9C/9C3/9D/9D2, (Part 25 Amendment 43)
(1) Fuel filter	29.997(a),(b),(c),(d) 29.1305 (a)(17) *	29.997(a),(b),(c),(d) 29.1305 (a)(18) *	25.997(a)(b)(c)(d) 25.1305(c)(6) *
(2) Oil tank	29.1011(a) 29.1013(a) 29.1013 (b)(1)(3) 29.1013(c)(1)(2)(3) 29.1013(d)(1)(2) 29.1013(e) 29.1015(a)(b) 29.1189(a)(2) 29.1305(a)(7) *	29.1011(a) 29.1013(a) 29.1013(b)(1)(3) 29.1013(c)(1)(2)(3) 29.1013(d)(1)(2) 29.1013(e) 29.1015(a)(b) 29.1189(a)(2) 29.1305(a)(8) *	25.1011(a) 25.1013(a) 25.1013(b)(1)(3) 25.1013(c)(1)(2) 25.1013(d)(1)(2) 25.1013(e) 25.1015(a)(b) 25.1189(a)(2) 25.1305(a)(3) *
(3) Oil filter	29.1019(a)(1)(2)(4) 29.1019(a)(3)(5) * 29.1305(a)(18) *	29.1019(a)(1)(2)(4) 29.1019(a)(3)(5) * 29.1305(a)(19) *	25.1019(a)(1)(2)(4) 25.1019(a)(3) * 25.1305(c)(7) *
(4) Inlet particle separator blower	29.1461(c)	29.1461(c)	---
(5) Ventilation	29.831(b)	29.831(b)	25.831(b)
* Means to satisfy the requirement are provided by the engine.			

**NOTE 16.**

a. The temperature value and/or nacelle airflow requirements specified in Paragraph A-8 and A-9, or Table B-7 (CT7-2E1), of the Installation Manual must be met when installing the engine:

- SEI-520 (CT7-2A)
- SEI-692 (CT7-2D/2D1)
- GEK 112765 (CT7-2E1)
- SEI-693 (CT7-6/6A)
- SEI-866 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F)
- GEK 114116 (CT7-8F5)

b. The requirements specified in the Installation Manual must be met when installing the turboprop engine:

- SEI-585 Paragraph A-9 (CT7-5A2/5A3/7A/7A1).
- SEI-726 Paragraph A-7 (CT7-9B/9B1/9B2/9C/9C3/9D/9D2)

Compliance with 14 CFR 33.17 Amendment 6 concerning ignition of leaking oil is obtained only when the above requirements are met.

**NOTE 17.**

The following models incorporate the following general characteristics:

- CT7-2A: Basic Model.
- CT7-2D: Similar to CT7-2A but incorporates higher flow compressor and surface coatings to improve resistance to wear and corrosion.
- CT7-2D1: Similar to CT7-2D but incorporates CT7-6/6A hot section.

CT7-2E1: Similar to CT7-2D1 but incorporates CT7-8 growth models improved durability hot section, CT7-9 AGB and combustor, and FADEC control system

CT7-6/6A: Similar to CT7-9B/9C except for turboshaft CT7-2 family inlet and exhaust frames.

CT7-8: Similar to CT7-6 except for increased airflow compressor, improved durability turbine and FADEC based control.

CT7-8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5: Similar to CT7-8 except for increased durability turbine.

CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2: Turboprop power units are similar to turboshaft engines with slightly increased airflows, a one-inch increase in power turbine rotor shaft length and associated hardware changes. Turboprop engines incorporate a propeller gearbox coupled to the power unit by a drive shaft housing and two interconnecting struts.

The turboprop models' propeller gearbox has the capability of being equipped with an optional propeller brake assembly. The propeller brake when engaged stops propeller rotation while allowing the gas generator portion of the engine to remain in operation as an auxiliary power unit (APU mode).

**NOTE 18.** The CT7-2A engine control system incorporates total torque limiting capability which limits total torque of a twin engine installation to a combined output of approximately 615 ft-lb at rated output speed.

**NOTE 19.** The CT7-1/2, T700/T1C, CT7-2B and T700/T2C engines were removed from Type Certificate No. E8NE on May 28, 1981, January 15, 1982, May 18, 1983, and July 30, 1992, respectively, at the request of the type certificate holder.

**NOTE 20.** This note has been deleted.

**NOTE 21.** FOREIGN OBJECT INGESTION PROTECTION

The CT7 turboprop engine models (CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2) have substantiated the ingestion requirements of 14 CFR 33.77 fitted with the following GE Aviation inlet duct reference drawings:

17A133-912 and SK585500-121 Sheets 1, 2 and 3 (CT7-5A2/5A3/7A/7A1)  
17A151-828 and 17A151-837 (CT7-9B/9B1/9B2/9C/9C3/9D/9D2)

GE Aviation should be consulted regarding the aerodynamics and structural requirements of this feature.

The CT7-8F5 Engine shall be limited to aircraft installation in which it is shown that a bird cannot strike the engine, be ingested into the engine, or adversely restrict airflow into the engine.

**NOTE 22.** CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2 propeller steady state avoidance ranges are 375-500 rpm and 625-950 rpm.

**NOTE 23.** CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2 engines can incorporate a propeller brake assembly as optional equipment. Refer to CT7-5A2/5A3/7A/7A1 Installation Manual SEI-585 or CT7-9B/9B1/9B2/9C/9C3/9D/9D2 Installation Manual SEI-726 for aircraft installation considerations. The aircraft propeller brake system must preclude inadvertent brake applications.

**NOTE 24.** All models meet the fuel venting and smoke requirements of 14 CFR Part 34, as amended by amendment 34-4. CT7-2E1/8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5 models comply with 14 CFR Part 34, for fuel venting only (14 CFR 34.11).

**NOTE 25.** Turboprop models (CT7-5A2/5A3/7A/7A1/9B/9B1/9B2/9C/9C3/9D/9D2) incorporate a constant torque governing system including overtorque and overtemperature limiting features.

- NOTE 26.** The CT7-7/7E/7E1 engines were removed from Type Certificate No. E8NE on November 26, 1985, at the request of the type certificate holder. No CT7-7/7E/7E1 models are in existence.
- NOTE 27.** The CT7-5A and the CT7-5A1 engines were removed from Type Certificate No. E8NE on October 2, 1986, at the request of the type certificate holder. No CT7-5A/5A1 models are in existence.
- NOTE 28.** For the CT7-9C model, the limits for gas generator speed (Ng, rpm) and power turbine inlet temperature (T4.5/ITT) at normal takeoff power rating are further defined as follows:
- The Ng limit is 45,288 rpm when outside air temperature (OAT) is less than 95°F. When OAT is between 95°F and 106°F, the Ng limit varies linearly with OAT. When OAT is greater than 106°F the Ng is 45,600 rpm.
- The T4.5/ITT limit is 1690°F when OAT is less than 95°F. When OAT is between 95°F and 106°F, the T4.5/ITT limit varies linearly with OAT from 1690°F to 1731°F. When OAT is greater than 106°F the T4.5/ITT limit is 1742°F.
- NOTE 29.** Limits have been established for certain models with regard to Electromagnetic Interference (EMI) and lightning. Refer to the Installation Manual for more detailed descriptions of EMI and lightning capabilities and limits:
- SEI-726 (CT7-9B/9B1/9B2/9C/9C3/9D/9D2)  
SEI-866 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F)  
GEK 114116 (CT7-8F5)  
GEK112765 (CT7-2E1)
- NOTE 30.** For the CT7-5A3/9B/9B1/9B2/9C/9C3/9D/9D2 models, the Normal Takeoff power, T4.5/ITT and Ng limits are presented for the purpose of defining the maximum T4.5/ITT and Ng at which Normal Takeoff power can be set to ensure that:
1. Maximum takeoff power will be achieved if demanded by the automatic power reserve (APR) mechanism, and
  2. No maximum limits will be exceeded.
- NOTE 31.** This note has been deleted.
- NOTE 32.** For the CT7-5A3 model, the pilot may elect to operate the engine to CT7-5A2 normal takeoff limits provided the APR mechanism is not activated and provided that the climb-cruise power settings are restricted to CT7-5A2 levels.
- NOTE 33.** The CT7-5A2/7A/9B/9B1/9B2/9C/9D engines, may be operated under the Derivative Engine Takeoff Rating program as outlined in GE Aviation CT7 Operations Engineering Bulletins 1 and 11, latest Revisions. The Derivative Engine Takeoff Rating program reduces the NOTE 5 flat rated temperatures for maximum takeoff, normal takeoff and maximum continuous by 5°C.
- NOTE 34.** The Principal Dimensions are nominal values for reference only. More exact dimensions are defined in the Installation Drawing found in:
- SEI-520 (CT7-2A)  
SEI-692 (CT7-2D/2D1)  
GEK 112765 (CT7-2E1)  
SEI-693 (CT7-6/6A)  
SEI-585 (CT7-5A2/5A3/7A/7A1)  
SEI-726 (CT7-9B/9B1/9B2/9C/9C3/9D /9D2)  
SEI-866 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F)  
GEK 114116 (CT7-8F5)

- NOTE 35.** For the CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5 models, the FADEC system isochronously governs engine output shaft speed (Np) and therefore aircraft main rotor speed (Nr), and incorporates torque matching between engines. Automatic operational limiters are provided for torque, speed and power turbine inlet temperature (T4.5/ITT).
- For the CT7-2E1 the FADEC system isochronously governs engine output shaft speed (Np) and therefore aircraft main rotor speed (Nr), and incorporates either torque or power turbine inlet temperature matching between engines (pilot selectable). The FADEC also provides automatic operational limiters for torque, rotor speeds and power turbine inlet temperature (T4.5/ITT) as defined in the Installation Manual GEK 112765.
- NOTE 36.** For the CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5 models, the power turbine inlet gas temperature (T4.5/ITT) and torque data are required for the aircraft system to alert the pilot and track the time when the engine is at the 30-second and 2-minute OEI ratings; see Installation Manual SEI-866 (CT7-8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F) or GEK 114116 (CT7-8F5). The FADEC system provides the T4.5/ITT and Torque signals to the aircraft system to track the time at those ratings.
- For the CT7-2E1 model, the power turbine inlet gas temperature (T4.5/ITT), gas generator speed (Ng) and torque data are required for the aircraft system to alert the pilot and track the time when the engine is at the flat rated 30-second/2-minute OEI rating; see Operating Instructions GEK 112766. The FADEC system provides the T4.5/ITT, Ng, and Torque signals to the aircraft system to track the time at those ratings.
- NOTE 37.** For the CT7-2E1/8/8A/8A1/8A5/8A6/8A7/8B/8B5/8E/8E5/8F/8F5 models, engine maintenance logic is provided by the FADEC system, which transmits maintenance information over an ARINC data bus. This information includes system fault event indications and power assurance calculation results.
- NOTE 38.** For the CT7-2E1 model, in an all engines operating (AEO) condition, the T4.5 limit will be automatically set to the flat 30-second/2-minute OEI limit when the engine senses a PT rotor speed (Np) droop to 95% of the reference speed, or to 99.5% of the reference speed with a rate of decrease faster than 3% per second. The T4.5 limit will reset to the Takeoff (AEO) limit when Np is greater than 99.5% of the reference speed and T4.5 is at least 5.5°C below the AEO T4.5 reference temperature for 3 seconds.
- For the CT7-8, 8A, 8A1, 8A5, 8A6, 8A7, 8E, 8E5, 8F and 8F5 models, in an AEO condition, the FADEC provides torque, speed and T4.5 Limiting at takeoff power. For specific models,
- CT7-8/8A/8A1/8A5/8A6/8A7: The T4.5 limit will be automatically set to 30-second OEI limit when the engine senses an Np droop of more than 5%. The T4.5 limit will reset to the Takeoff (AEO) limit when Np is at or above 99% of the reference Np speed.
- CT7-8E/8E5: The T4.5 limit will be automatically set to 30-second OEI limit when the engine senses an Np droop to 96% or less. The T4.5 limit will reset to the Takeoff (AEO) limit when Np is at or above 99% of the reference Np speed.
- CT7-8F/8F5: The T4.5 limit will be automatically set to 30-second OEI limits when the engine senses an Np droop to 93% or less. The T4.5 limit will reset to the Takeoff (AEO) limit when Np is at or above 99% of the reference Np speed.
- Any such event will trigger a 30-second OEI rating cockpit annunciation and post-flight maintenance action in accordance with the Maintenance Manual.
- NOTE 39.** CT7-8A/8A1/8A7 engines and parts thereof manufactured by Vector Aerospace Helicopter Services Inc., 4551 Agar Drive, Richmond, British Columbia, Canada, under Licensing Agreement Number 10.0062 with the General Electric Company, are identified by engine Serial Numbers 530001 to 530099.
- NOTE 40.** The CT7-8/8A/8A1/8A6/8A7 models are approved to operate with certain faults present in the control system. This is based on satisfaction of 14 CFR Part 33 requirements and appropriate engine control system reliability requirements. Criteria pertaining to the time limited dispatch and maintenance requirements for engine control systems are contained in Chapter 5 of the Engine Maintenance Manual GEK 105159. Details of the fault codes, various configurations and maximum operating intervals are in GE Report No. GEK 112652, Control System Time Limited Dispatch Summary for the Sikorsky S92 Helicopter.
- NOTE 41.** This note has been deleted.

- NOTE 42.** The Component Maintenance Manual (CMM) for the CT7-8A5/8B/-8B5/-8E5/-8F FADEC has not been issued. Any FADEC removed from service on a CT7-8A5/8B/-8B5/-8E5/-8F engine may not be repaired until the CMM is issued.
- NOTE 43.** CT7-8F5 engines and parts thereof manufactured by Industria de Turbo Propulsores S. A. (ITP)/Industria de Turbinas Helicoptero S.A. (ITH) Edificio 300, Parque Tecnologico, 48170 Zamudio, Vizcaya, Spain under Appendix of Licensing Agreement Number 79.0055 with GE Aviation are identified by engine Serial Numbers 731004 to 731099 and 733001 to 733100.
- NOTE 44.** The Component Maintenance Manual (CMM) for the CT7-2A/2D/2D1 Anti-Icing/Start Bleed Valve manufactured by Garrett/Allied Signal/Honeywell identified by GE part number 5066T38 has not been issued. Any AISBV of this part number removed from service may not be repaired until the CMM is issued.
- NOTE 45.** This note has been deleted.
- NOTE 46.** The Component Maintenance Manuals (CMMs) for the three CT7-2E1 components have not been issued:
- Anti-Icing/Start Bleed Valve (AISBV) manufactured by VACCO, GE Aviation P/N 4189T67  
Fuel Metering Unit (FMU) manufactured by Woodward Governor, GE Aviation P/N 515T31  
Electronic Engine Control Unit (EECU) manufactured by BAE Systems, GE Aviation P/N 5158T32
- Any AISBV/FMU/EECU of these part numbers, if removed from service, may not be repaired until the CMM is issued.
- NOTE 47.** This note has been deleted.
- NOTE 48.** For the CT7-2E1, GE voluntarily elected to show compliance to 14 CFR 33.28, Amendment 28 for the Electronic Engine Control, Fuel Metering Unit, and Anti-Icing/Start Bleed Valve.
- NOTE 49.** CT7-8E engines and parts thereof manufactured by AVIO S.p.A., Strada del Drosso 145, Torino, Italy, under Licensing Agreement Number 79.0055 with the General Electric Company, are identified by engine Serial Numbers 087001 to 087050.

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