

U.S. DEPARTMENT OF TRANSPORTATION  FEDERAL AVIATION ADMINISTRATION  TYPE CERTIFICATE DATA SHEET E00055EN	TCDS NUMBER E00055EN  REVISION: 3 * DATE: MAY 9, 2000  CFM INTERNATIONAL, S.A.  MODELS:
	CFM56-7B18 CFM56-7B20            CFM56-7B20/2 CFM56-7B22            CFM56-7B22/2            CFM56-7B22/B1 CFM56-7B24            CFM56-7B24/2            CFM56-7B24/B1 CFM56-7B26            CFM56-7B26/2            CFM56-7B26/B1 CFM56-7B27            CFM56-7B27/2            CFM56-7B27/B1 CFM56-7B27/B3

Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E00055EN) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated 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: CFM International, S.A.  
 2 Boulevard du General Martial Valin  
 75015 Paris, France

I. MODELS	CFM56-7B18	CFM56-7B20	CFM56-7B22	CFM56-7B24
TYPE	High bypass turbofan; coaxial front fan/booster driven by multi-stage low pressure turbine, multi-stage compressor with one-stage high pressure turbine CFM56-7B series: single annular combustor CFM56-7B/2 series: double annular combustor			
RATINGS (See NOTE 4)				
Takeoff (5 min. see NOTE 13), sea level, static thrust, lb.	19,500/ 8,674 daN	20,600/ 9,163 daN	22,700/ 10,097 daN	24,200/ 10,765 daN
Maximum continuous, sea level static thrust, lb.	18,800/ 8,363 daN	19,400/ 8,630 daN	22,300/ 9,920 daN	22,800/ 10,142 daN
Flat rating	AMBIENT TEMPERATURE			
Takeoff	86°F / 30°C	--	--	--
Maximum continuous	77°F / 25°C	--	--	--
FUEL SYSTEM	See NOTE 7 for approved fuels			
Fuel pump / SNECMA P/N (Combined boost and single element gear-type pump)	340-402-103-0	--	--	--
Hydromechanical unit GE P/N	1853M56P07	--	--	--

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LEGEND: "--" INDICATES "SAME AS PRECEDING MODEL"  
 "---" NOT APPLICABLE  
 NOTE: SIGNIFICANT CHANGES ARE BLACK-LINED IN THE LEFT MARGIN.

I. MODELS (CONT.)	CFM56-7B18	CFM56-7B20	CFM56-7B22	CFM56-7B24
Electronic control unit -Hardware	GE P/N 1851M50P03/P04 1853M33P02/P03	-- --	-- --	-- --
- Software	1853M78P12-P17	--	--	--
Identification plugs	SNECMA P/N 340-131-703-0 340-131-707-0 340-131-704-0 340-198-650-0 340-198-750-0	340-131-712-0 340-131-717-0 340-131-713-0 340-198-850-0 340-198-950-0	340-131-722-0 340-131-727-0 340-131-723-0 340-199-250-0 340-199-350-0	340-131-732-0 340-131-737-0 340-131-733-0 340-200-050-0 340-200-150-0
OIL	Synthetic type conforming to GE Specification D50TF1, Type I and Type II. CFMI Service Bulletin CFM56-7B 79-001 list approved brand oils.			
IGNITION SYSTEM	GE PART NUMBER			
Two ignition units Unison	9238M66P07 9238M66P08	-- --	-- --	-- --
Simmonds	1538M69P01	--	--	--
Two igniter plugs Unison Champion	1374M12P01 1374M13P05	-- --	-- --	-- --
PRINCIPAL DIMENSIONS	INCHES / MILLIMETERS			
Length (fan case forward flange to LPT frame aft flange)	98.7/2507.5	--	--	--
Width (maximum envelope)	83.4/2118.0	--	--	--
Height (fan case forward flange outer diameter)	72.0/1829.0	--	--	--
WEIGHT (dry)	Includes basic engine accessories and optional equipment as listed in manufacturers engine specification, including engine mounted portions of the condition monitoring instrumentation.			
Pounds	5257.0	--	--	--
Kilograms	2384.5	--	--	--
CENTER OF GRAVITY LOCATIONS	STATION, ENGINE ONLY (REFER TO INSTALLATION DRAWING)			
Inches	207.4± 1.0	--	--	--
Millimeters	5268± 25	--	--	--

II. MODELS	CFM56-7B26	CFM56-7B27	CFM56-7B20/2	CFM56-7B22/2
TYPE	High bypass turbofan; coaxial front fan/booster driven by multi-stage low pressure turbine, multi-stage compressor with one-stage high pressure turbine CFM56-7B series: single annular combustor CFM56-7B/2 series: double annular combustor			
RATINGS (See NOTE 4)				
Takeoff (5 min. see NOTE 13), sea level, static thrust, lb.	26,300/ 11,699 daN	27,300/ 12,144 daN	20,600/ 9,163 daN	22,700/ 10,097 daN
Maximum continuous, sea level static thrust, lb.	25,900/ 11,521 daN	25,900/ 11,521 daN	19,400/ 8,630 daN	22,300/ 9,920 daN
Flat rating	AMBIENT TEMPERATURE			
Takeoff	86°F / 30°C	--	--	--
Maximum continuous	77°F / 25°C	--	--	--

II. MODELS (CONT.)	CFM56-7B26	CFM56-7B27	CFM56-7B20/2	CFM56-7B22/2
FUEL SYSTEM	See NOTE 7 for approved fuels			
Fuel pump / SNECMA P/N (Combined boost and single element gear-type pump)	340-402-103-0	--	--	--
Hydromechanical unit GE P/N	1853M56P07	--	--	--
Electronic control unit -Hardware	GE P/N 1851M50P03/P04 1853M33P02/P03	-- --	-- --	-- --
- Software	1853M78P12-P17	--	--	--
Identification plugs	SNECMA P/N 340-131-742-0 340-131-747-0 340-131-743-0 340-200-850-0 340-200-950-0	340-131-752-0 340-131-757-0 340-131-753-0 340-201-450-0 340-201-550-0	340-138-710-0 340-138-715-0 340-131-713-0 --- ---	340-138-720-0 340-138-725-0 340-131-723-0 --- ---
OIL	Synthetic type conforming to GE Specification D50TF1, Type I and Type II. CFMI Service Bulletin CFM56-7B 79-001 list approved brand oils.			
IGNITION SYSTEM	GE PART NUMBER			
Two ignition units Unison	9238M66P07 9238M66P08	-- --	-- --	-- --
Simmonds	1538M69P01	--	--	--
Two igniter plugs Unison Champion	1374M12P01 1374M13P05	-- --	-- --	-- --
PRINCIPAL DIMENSIONS	INCHES / MILLIMETERS			
Length (fan case forward flange to LPT frame aft flange)	98.7/2507.5	--	--	--
Width (maximum envelope)	83.4/2118.0	--	--	--
Height (fan case forward flange outer diameter)	72.0/1829.0	--	--	--
WEIGHT (dry)	Includes basic engine accessories and optional equipment as listed in manufacturers engine specification, including engine mounted portions of the condition monitoring instrumentation.			
Pounds	5257.0	--	5347.0	--
Kilograms	2384.5	--	2425.4	--
CENTER OF GRAVITY LOCATIONS	STATION, ENGINE ONLY (REFER TO INSTALLATION DRAWING)			
Inches	207.4 ± 1.0	--	--	--
Millimeters	5268 ± 25	--	--	--

III. MODELS	CFM56-7B24/2	CFM56-7B26/2	CFM56-7B27/2	CFM56-7B26/B1
TYPE	High bypass turbofan; coaxial front fan/booster driven by multi-stage low pressure turbine, multi-stage compressor with one-stage high pressure turbine CFM56-7B series: single annular combustor CFM56-7B/2 series: double annular combustor			
RATINGS (See NOTE 4)				
Takeoff (5 min. see NOTE 13), sea level, static thrust, lb.	24,200/ 10,765 daN	26,300/ 11,699 daN	27,300/ 12,144 daN	26,300/ 11,699 daN
Maximum continuous, sea level static thrust, lb.	22,800/ 10,142 daN	25,900/ 11,521 daN	25,900/ 11,521 daN	25,900/ 11,521 daN
Flat rating	AMBIENT TEMPERATURE			
Takeoff	86°F / 30°C	--	--	--
Maximum continuous	77°F / 25°C	--	--	--
FUEL SYSTEM	See NOTE 7 for approved fuels			
Fuel pump / SNECMA P/N (Combined boost and single element gear-type pump)	340-402-103-0	--	--	--
Hydromechanical unit GE P/N	1853M56P07	--	--	--
Electronic control unit	GE P/N			
-Hardware	1851M50P03/P04	--	--	--
	1853M33P02/P03	--	--	--
- Software	1853M78P12-P17	--	--	--
Identification plugs	SNECMA P/N			
	340-138-730-0	340-138-740-0	340-138-750-0	340-143-201-0
	340-138-735-0	340-138-745-0	340-138-755-0	340-143-301-0
	340-131-733-0	340-131-743-0	340-131-753-0	340-143-421-0
	---	---	---	340-201-050-0
	---	---	---	340-201-150-0
OIL	Synthetic type conforming to GE Specification D50TF1, Type I and Type II. CFMI Service Bulletin CFM56-7B 79-001 list approved brand oils.			
IGNITION SYSTEM	GE PART NUMBER			
Two ignition units				
Unison	9238M66P07	--	--	--
	9238M66P08	--	--	--
Simmonds	1538M69P01	--	--	--
Two igniter plugs				
Unison	1374M12P01	--	--	--
Champion	1374M13P05	--	--	--
PRINCIPAL DIMENSIONS	INCHES / MILLIMETERS			
Length (fan case forward flange to LPT frame aft flange)	98.7/2507.5	--	--	--
Width (maximum envelope)	83.4/2118.0	--	--	--
Height (fan case forward flange outer diameter)	72.0/1829.0	--	--	--
WEIGHT (dry)	Includes basic engine accessories and optional equipment as listed in manufacturers engine specification, including engine mounted portions of the condition monitoring instrumentation.			
Pounds	5347.0	--	--	5257.0
Kilograms	2425.4	--	--	2384.5

III. MODELS (CONT.)	CFM56-7B24/2	CFM56-7B26/2	CFM56-7B27/2	CFM56-7B26/B1
CENTER OF GRAVITY LOCATIONS	STATION, ENGINE ONLY (REFER TO INSTALLATION DRAWING)			
Inches	207.4 ± 1.0	--	--	--
Millimeters	5268 ± 25	--	--	--
IV. MODELS	CFM56-7B27/B1	CFM56-7B27/B3	CFM56-7B22/B1	CFM56-7B24/B1
TYPE	High bypass turbofan; coaxial front fan/booster driven by multi-stage low pressure turbine, multi-stage compressor with one-stage high pressure turbine CFM56-7B series: single annular combustor CFM56-7B/2 series: double annular combustor			
RATINGS (See NOTE 4)				
Takeoff (5 min. see NOTE 13), sea level, static thrust, lb.	27,300/ 12,144 daN	--	22,700/ 10,097 daN	24,200/ 10,765 daN
Maximum continuous, sea level static thrust, lb.	25,900/ 11,521 daN	--	22,300/ 9,920 daN	22,800/ 10,142 daN
Flat rating	AMBIENT TEMPERATURE			
Takeoff	86°F / 30°C	--	96.8°F / 36°C	105.8°F / 41°C
Maximum continuous	77°F / 25°C	--	--	--
FUEL SYSTEM	See NOTE 7 for approved fuels			
Fuel pump / SNECMA P/N (Combined boost and single element gear-type pump)	340-402-103-0	--	--	--
Hydromechanical unit GE P/N	1853M56P07	--	--	--
Electronic control unit	GE P/N			
-Hardware	1851M50P03/P04	--	--	--
	1853M33P02/P03	--	--	--
- Software	1853M78P12-P17	--	1853M78P17	--
Identification plugs	SNECMA P/N			
	340-142-801-0	340-143-441-0	340-142-001-0	340-142-201-0
	340-142-901-0	340-143-451-0	340-142-101-0	340-142-301-0
	340-143-431-0	340-131-773-0	---	---
	340-201-650-0	340-202-050-0	340-199-450-0	340-200-250-0
	340-201-750-0	340-202-150-0	340-199-550-0	340-200-350-0
OIL	Synthetic type conforming to GE Specification D50TF1, Type I and Type II. CFMI Service Bulletin CFM56-7B 79-001 list approved brand oils.			
IGNITION SYSTEM	GE PART NUMBER			
Two ignition units				
Unison	9238M66P07	--	--	--
	9238M66P08	--	--	--
Simmonds	1538M69P01	--	--	--
Two igniter plugs				
Unison	1374M12P01	--	--	--
Champion	1374M13P05	--	--	--

IV. MODELS (CONT.)	CFM56-7B27/B1	CFM56-7B27/B3	CFM56-7B22/B1	CFM56-7B24/B1
PRINCIPAL DIMENSIONS	INCHES / MILLIMETERS			
Length (fan case forward flange to LPT frame aft flange)	98.7/2507.5	--	--	--
Width (maximum envelope)	83.4/2118.0	--	--	--
Height (fan case forward flange outer diameter)	72.0/1829.0	--	--	--
WEIGHT (dry)	Includes basic engine accessories and optional equipment as listed in manufacturers engine specification, including engine mounted portions of the condition monitoring instrumentation.			
Pounds	5257.0	--	--	--
Kilograms	2384.5	--	--	--
CENTER OF GRAVITY LOCATIONS	STATION, ENGINE ONLY (REFER TO INSTALLATION DRAWING)			
Inches	207.4 ± 1.0	--	--	--
Millimeters	5268 ± 25	--	--	--

## CERTIFICATION BASIS

Federal Aviation Regulations (FAR) Part 33 effective February 1, 1965, with Amendments 33-1 through 33-15 thereto. In addition, the engines are in compliance with the emissions requirements of FAR Part 34.

<u>MODEL</u>	<u>APPLICATION DATE</u>	<u>TYPE CERTIFICATE ISSUED/AMENDED</u>	<u>TYPE CERTIFICATE WITHDRAWN</u>
CFM56-7B18	NOV 28, 1995	DEC 17, 1996	
CFM56-7B20	NOV 28, 1995	DEC 17, 1996	
CFM56-7B22	NOV 28, 1995	DEC 17, 1996	
CFM56-7B24	NOV 28, 1995	DEC 17, 1996	
CFM56-7B26	NOV 28, 1995	DEC 17, 1996	
CFM56-7B27	NOV 28, 1995	DEC 17, 1996	
CFM56-7B20/2	NOV 28, 1995	NOV 14, 1997	
CFM56-7B22/2	NOV 28, 1995	NOV 14, 1997	
CFM56-7B24/2	NOV 28, 1995	NOV 14, 1997	
CFM56-7B26/2	NOV 28, 1995	NOV 14, 1997	
CFM56-7B27/2	NOV 28, 1995	NOV 14, 1997	
CFM56-7B26/B1	MAR 4, 1998	OCT 30, 1998	
CFM56-7B27/B1	MAR 4, 1998	OCT 30, 1998	
CFM56-7B27/B3	JUL 30, 1998	OCT 30, 1998	
CFM56-7B22/B1	JUN 11, 1997	MAY 9, 2000	
CFM56-7B24/B1	JUN 11, 1997	MAY 9, 2000	

## PRODUCTION BASIS

Production Certificate No. 108 for engines produced in the United States by General Electric under license from CFM International, S.A. (See NOTE 10).

**NOTES**

NOTE 1.

TURBINE EXHAUST GAS (T495) (See NOTE 14)  
 Takeoff (5 min.)  
 Maximum continuous Starting

Time temperature envelope  
 Refer to model's S.O.I.

FUEL PUMP INLET  
 OIL SUPPLY (See NOTE 18)  
 Continuous operation

Transient (45 minutes)

MAXIMUM PERMISSIBLE TEMPERATURES (ALL MODELS)	
	As measured by a harness of eight thermocouples located at the second stage low pressure turbine vane:
	950°C 925°C 725°C
	CFMI-TP.01.14
	REFER TO THE APPROPRIATE INSTALLATION MANUAL
	140°C/284°F
	155°C/311°F

NOTE 2.

Fuel limits

**FUEL AND OIL PRESSURE LIMITS**

Fuel system pressure limits required to meet all engine operating conditions extend from a minimum fuel pressure of not less than 5 psia (0.35 bar absolute) above the true fuel vapor pressure to a maximum fuel pressure of 148 psia (10.2 bar absolute) with a fuel vapor/liquid ratio < 0.45 at all conditions. For specific installation limits, see Installation Manual, CFM7B01, Part A, Section 5, Figures A2 and A3.

Oil limits

The minimum pressure limit is 13 psid (90 kPa differential). The maximum pressure limit during cold starts is 300 psid (2069 kPa differential), limited by a pressure-relief valve. See NOTE 12.

NOTE 3.

ELECTRICAL  
 Rotation (1)  
 Speed ratio to core (2)  
 Pad Rating (kW)  
 Shear Torque (in-lb)  
 Maximum overhung moment (in-lb)

HYDRAULIC PUMP  
 Rotation (1)  
 Speed ratio to core (2)  
 Pad Rating (in-lb)  
 Shear Torque (in-lb)  
 Maximum overhung moment (in-lb)

ACCESSORY DRIVE PROVISIONS (ALL MODELS)	
	CW
	0.565
	135
	9,000
	2,500
	CW
	0.256
	1,550
	4,400
	500
(1)	CW = CLOCKWISE FACING PAD / CCW = COUNTERCLOCKWISE FACING PAD
(2)	100% CORE ENGINE SPEED = 14,460 RPM

NOTE 4. Engine ratings are based on calibrated stand performance (sea level static) under the following conditions:

Takeoff thrust is nominally independent of ambient temperature (flat rated) up to ambient temperature of:

- Std + 15° C (30° C, 86° F) for all models except 7B22/B1 and 7B24/B1
- Std + 21° C (36° C, 96.8° F) for 7B22/B1
- Std + 26° C (41° C, 105.8° F) for 7B24/B1

Maximum continuous is nominally independent of ambient temperature (flat rated) up to ambient temperature of Std. + 10° C (25° C, 77° F) for all models.

Zero customer bleed and horsepower extraction.

100% inlet recovery.

Based on the production flight exhaust system.

NOTE 5.

Low pressure rotor (N1)  
High pressure rotor (N2)

MAXIMUM PERMISSIBLE ENGINE ROTOR SPEEDS (ALL MODELS)	
RPM	%
5,382	104
15,183	105
100% N1 = 5,175 RPM, 100% N2= 14,460 RPM	

NOTE 6.

LOCATION  
Fan Discharge  
HPC Stage 5 only  
Compressor discharge only  
HPC Stage 5 and compressor discharge combined

MAXIMUM PERMISSIBLE AIR BLEED EXTRACTION (ALL MODELS)	
FAN CORRECTED SPEED	FLOW LIMIT
All speeds above minimum idle	2% fan airflow
All speeds above minimum idle	10% core airflow (up to 5.92 lbm/sec)
Minimum idle to 61% N1K 61% to 82.5% N1K	12% core airflow Linear variation from 12% to 7% core airflow
Above 82.5% N1K	7% core airflow
Minimum idle to 61% N1K 61% to 82.5% N1K	13% core airflow Linear variation from 13% to 10% core airflow
Above 82.5% N1K	10% core airflow

NOTE 7.

Approved fuel conforming to GE Specification D50TF2. MIL-T-5624, Grades JP-4 or JP-5, ASTM D 1655, Jet A, A1 and B are consistent with this GE Specification. Primary fuel is Jet A, with other fuels listed being acceptable alternates. No fuel control adjustment is required when changing from primary to alternate fuels. Use of aviation gasoline is not authorized. Consult Specific Operating Instructions, CFMI-TP.01.14, Section 3, for additive usage.

NOTE 8.

Life limits established for critical rotating components are published in Chapter 5 of the CFM56-7B Engine Shop Manual, CFM-TP.SM.10

NOTE 9.

Power setting, power checks and control of engine thrust output in all operations is to be based on CFMI engine charts referring to fan speed. Fan speed sensors are included in the engine assembly for this purpose.

- NOTE 10. The type certificate holder, CFM International, S.A., is a company established and jointly owned by Societe Nationale l'Etude et de Construction de Moteurs d'Aviation (SNECMA) of France and the General Electric Company for the certification, sale, and support of CFM56 series engines. With respect to the benefits of type certification for production, General Electric and SNECMA function as licensees of CFM International, S.A.
- This type certificate applies only to engines produced in the United States under Type Certificate No. E00055EN. Engines of the same model designation produced in France under Type Certificate No. E00056EN are identical to and fully interchangeable with engines produced under this type certificate. Similarly, modules, assemblies, or parts produced in France are eligible for use in engines produced under this type certificate provided an airworthiness approval tag, JAA Form 1, issued by SNECMA on behalf of the French Direction Generale de l'Aviation Civile under Production Certificate No. F.G.007 or P03 is attached to each item or invoice covering a shipment of similar items (Ref. FAR 21.502).
- These engines, when produced by General Electric, are identified by serial number prefix "874" or "876"; when produced by SNECMA, they are identified by the prefix "875" or "877".
- Beginning on April 3, 1998, all engines identified by the prefix "875" will be produced by SNECMA under Production Certificate No. F.G.007. Engine serial number 875-214 was the first engine produced by SNECMA under Production Certificate No. F.G.007.
- All engines identified by the prefix "877" will be produced by SNECMA under Production Certificate No. F.G.007.
- NOTE 11. The minimum permissible idle in flight corresponds to  $N_2=64.7\%$  (9,350 rpm) below 25°F. Between 25°F (-3.8°C) and 40°F (4.4°C), the idle speed varies from 64.7% (9,350 rpm) to 58.8% (8500 rpm). Above 40°F (4.4°C), the minimum permissible idle speed is 58.8% (8500 rpm). This is a non-adjustable limit, preset into the ECU Control schedule.
- NOTE 12. During negative-g operation only, it is permissible to operate below minimum oil pressure (13 psid) for a maximum of 10 seconds. See Specific Operating Instructions, CFMI-TP.01.14, Section 6.
- NOTE 13. The normal 5 minute takeoff rating may be extended to 10 minutes for engine out contingency.

NOTE 14 (a). The indicated maximum permissible takeoff exhaust gas temperature (EGT) is 950°C. These indicated takeoff EGT redlines are accomplished via an EGT shunt and an EGT trim in the ECU software as noted below.

The effect on EGT (units °C) with respect to the indicated takeoff EGT redline value of 950°C for each of the models is summarized below:

Model	Actual Measured Takeoff Redline Value	Indicated Takeoff EGT level with 30°C Shunt Only*	Maximum EGT Trim Level**	Indicated Takeoff EGT Redline
7B18	857	887	63	950
7B20	884	914	36	950
7B22, 7B22/B1	886	916	34	950
7B24, 7B24/B1	908	938	12	950
7B26, 7B26/B1	920	950	0	950
7B27, 7B27/B1, 7B27/B3	920	950	0	950

Model	Actual Measured Takeoff Redline Value	Indicated Takeoff EGT level with 20°C Shunt Only*	Maximum EGT Trim Level**	Indicated Takeoff EGT Redline
7B20/2	894	914	36	950
7B22/2	896	916	34	950
7B24/2	918	938	12	950
7B26/2	930	950	0	950
7B27/2	930	950	0	950

\* EGT shunt adds 30°C to actual measured engine EGT on CFM56-7B series engines and 20°C to the actual measured engine EGT on CFM56-7B/2 series engines to provide an indicated EGT level. This EGT shunt is triggered above 8500 RPM core speed for all CFM56-7B, -7B/2 series engines.

\*\* The EGT trim function adds the values noted above to the indicated EGT levels. This EGT trim is only triggered at mach numbers from 0 to 0.40 and when the core speed is greater than 11,200 RPM. This function is only applicable for the 7B18, 7B20, 7B20/2, 7B22, 7B22/B1, 7B22/2, 7B24, 7B24/B1, and 7B24/2 engine models.

NOTE 14 (b). The indicated maximum permissible maximum continuous EGT is 925°C corresponding to an actual measured EGT of 895°C on CFM56-7B series engines and 905°C on CFM56-7B/2 series engines. EGT shunt adds 30°C to actual measured engine EGT on CFM56-7B series engines and 20°C to the actual measured engine EGT on CFM56-7B/2 series engines to provide an indicated EGT level. This EGT shunt is triggered above 8500 RPM core speed for all CFM56-7B, -7B/2 series engines.

NOTE 14 (c). All CFM56-7B, -7B/2 series engines are certified with an indicated maximum permissible takeoff EGT transient allowance of 960°C for 20 seconds. This equates to a 10°C increase above the maximum permissible indicated value of 950°C.

NOTE 15. Overhaul of CFM56-7B, -7B/2 series engine components is not authorized until component manuals become available. In the interim, components utilizing new part tolerance may be provided by the manufacturer.

NOTE 16. Overhaul of CFM56-7B, -7B/2 series engines is not authorized until the CFM56-7B engine overhaul manual becomes available. In the interim, the engine may be overhauled to new engine tolerances by CFM International, S.A.

- NOTE 17. Criteria pertaining to the dispatch and maintenance requirements for the engine control systems are specified in the airworthiness limitation section of the CFM56-7B Engine Shop Manual (CFM-TP.SM.10), which defines the various configurations and maximum operating intervals.
- NOTE 18. The actual maximum permissible oil temperature for starting and idle conditions is 10°C higher for continuous operation and 5°C higher for transient operation than the corresponding indicated oil temperatures.
- An indicated oil temperature for continuous operation of 140°C (284°F) corresponds to an actual oil temperature of 150°C (302°F).
- An indicated oil temperature for transient operation of 155°C (311°F) corresponds to an actual oil temperature of 160°C (320°F).
- NOTE 19. CFM56-7B series include: CFM56-7B18, -7B20, -7B22, -7B22/B1, -7B24, -7B24/B1, -7B26, -7B27, -7B26/B1, -7B27/B1, and -7B27/B3  
CFM56-7B/2 series include: CFM56-7B20/2, -7B22/2, -7B24/2, -7B26/2, and -7B27/2
- NOTE 20. The models shown on this TCDS have the following general characteristics:

MODEL	CHARACTERISTICS
CFM56-7B18	Base model
CFM56-7B20	Same as CFM56-7B18 except for increased thrust ratings.
CFM56-7B22	Same as CFM56-7B18 except for increased thrust ratings.
CFM56-7B24	Same as CFM56-7B18 except for increased thrust ratings.
CFM56-7B26	Same as CFM56-7B18 except for increased thrust ratings.
CFM56-7B27	Same as CFM56-7B18 except for increased thrust ratings.
CFM56-7B20/2	Same as CFM56-7B20 except CFM56-7B20/2 has a double annular combustor.
CFM56-7B22/2	Same as CFM56-7B22 except CFM56-7B22/2 has a double annular combustor.
CFM56-7B24/2	Same as CFM56-7B24 except CFM56-7B24/2 has a double annular combustor.
CFM56-7B26/2	Same as CFM56-7B26 except CFM56-7B26/2 has a double annular combustor.
CFM56-7B27/2	Same as CFM56-7B27 except CFM56-7B27/2 has a double annular combustor.
CFM56-7B27/B1	Same as CFM56-7B27 except CFM56-7B27/B1 has optimized power management at takeoff.
CFM56-7B26/B1	Same as CFM56-7B26 except CFM56-7B26/B1 is intended for a business jet application (different mission).
CFM56-7B27/B3	Same as CFM56-7B27 except CFM56-7B27/B1 is intended for a business jet application (different mission).
CFM56-7B22/B1	Same as CFM56-7B22 except CFM56-7B22/B1 has an extended flat rated temperature for takeoff.
CFM56-7B24/B1	Same as CFM56-7B24 except CFM56-7B24/B1 has an extended flat rated temperature for takeoff.

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