DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A18SW Revision 3 Fairchild Aircraft, Inc. SA227-CC SA227-DC (C-26B) December 1, 2000

TYPE CERTIFICATE DATA SHEET A18SW

Type Certificate Holder: Fairchild Aircraft, Inc.

San Antonio, Texas 78279-0490

I - Model SA227-CC, 21 PCLM, Commuter Category, FAR 23, Approved June 25, 1990. * NOTE 10

Engines Two Garrett (Airesearch) TPE331-11U-612G

Fuel Aviation turbine fuels Garrett Specification

Type A EMS53111
Type A-1 EMS53112
Class A-JP4 and EMS53113

Class B-Type B

Type JP-5 EMS53116 Type JP-8 EMS53112

(Fuel shall conform to the specification as listed or to subsequent revisions thereof).

(See Note 3)

Oil MIL-L-23699B conforming to Garrett Engine Division Specification EMS53110 Type

II.

Engine Limits Static Sea Level Ratings.

	Shaft	Gas	Prop	Exhaust Gas
	Horse	Gen.	Shaft	Temp. (EGT)
	Power	Speed	Speed	(Single Red Line)
	(S.H.P.)	(R.P.M)	(R.P.M.)	(°C)
Take-off (5-min) Dry	1,000	41730*	1591*	650
Take-off (5-min) Wet	1,100	41730*	1591*	650
Max Continous-Dry	1,000	41730*	1591*	650
Starting Limit (1-sec)	-	-	-	770

*(See Note 4)

Oil Temps Minus 40°C to 110°C (normal operations)

Minus 40°C to 127°C (ground operations only)

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I - Model SA227-CC, 21 PCL	M, Commuter Catego	ry, FAR 23, Approved June 25, 1990. * NOTE 10 (Cont'd)
Propeller and	Number	2
Propeller limits	Make	McCauley

McCauley Make

Model 4HFR34C652()/()-L106LA-0

Diameter 106 inches Pitch At 30 in. station

> McCauley Propeller Assembly Number

> > D-6933

Feathered	$88.9^{\circ} \pm 0.5^{\circ}$	$88.5^{\circ} \pm 0.5^{\circ}$
Flight Idle	$15.0^{\circ} \pm 0.2^{\circ}$	$15.0^{\circ} \pm 0.2^{\circ}$
Start Locks	$9.0^{\circ} \pm 0.5^{\circ}$	$6.0^{\circ} \pm 0.5^{\circ}$
Full Reverse	$-5.0^{\circ} \pm 0.5^{\circ}$	$-5.0^{\circ} \pm 0.5^{\circ}$

D-5928

Airspeed Limits		Altitude (ft.)	Speed (Knots CAS)
	Maximum	17,800	248
	Operating	18,000	247
	Speed	20,000	237
		23,000	223
		25,000	214
	Maneuvering		
	@ 16,000#	all	183
	Flaps Full Ext.		166
	1/2 Ext.		180
	1/4 Ext.		215

Ldg Gear Ext.

Ldg Gear Oper.

262.8 (16.41% MAC) to 277.0 (36.0% MAC) at 16,500 lbs. C.G. Range (Inches Aft of 257.0 (8.40% MAC) to 277.0 (36.0% MAC) at 11,000 lbs. and below. Datum) Straight line variation between points given.

> Note: Gear Retraction will not move the c.g. beyond approved limits if the airplane is loaded within the gear down envelope.

176

176

Empty Weight C.G. Range

None

Maximum Weight (lbs.) Ramp 16,600 (See Note 6) 16,500 Take-off Landing 15,675 Max. Zero Fuel 14,500

Maximum Operating

Altitude

25,000 feet.

Minimum Crew One pilot except as otherwise required by the Airplane Flight Manual (See Note 9).

No. Seats Maximum 21 (crew at + 111.0). (Maximum of 19 passengers). See AFM for loading instructions for crew and passenger loading.

Maximum Baggage and/or Equipment

Rear Compartment: 850 lbs. (+473.4) Nose Compartment: 800 lbs. (+46.7)

Local loading on cargo and passenger compartment floor: 150 lbs./sq. ft.

I - Model SA227-CC, 21 PCLM, Commuter Category, FAR 23, Approved June 25, 1990. * NOTE 10 (Cont'd)

Fuel Capacity 652 gal. total (324 gal. usable in each of 2 wing tanks).

See Note 1 for data on unusable fuel.

Oil Capacity 14.1 qt. total (3.8 qt. usable in each engine oil tank).

See Note 1 for data on unusable oil.

Control Surface Wings Flaps $36^{\circ} \pm 1^{\circ}$ down

Main Surface

Aileron $18.5^{\circ} \pm 1^{\circ}$ up $21.5 \pm 1^{\circ}$ down Elevator $30^{\circ} \pm 1^{\circ}$ up $15^{\circ} \pm 1^{\circ}$ down Rudder $25^{\circ} \pm 1^{\circ}$ right $25^{\circ} \pm 1^{\circ}$ left

Stabilizer (mechanical stops):

 $2.40^{\circ} \pm .20^{\circ}$ L.E. up $7.80^{\circ} \pm 0.20^{\circ}$ L.E. down

(electrical stops):

 $0.2^{\circ} \pm .05^{\circ}$ before mechanical stops

Tabs (Main surface in Neutral)

Aileron $20^{\circ} + 2^{\circ}, -1^{\circ}$ up $20^{\circ} + 2^{\circ}, -1^{\circ}$ down Rudder $25^{\circ} \pm 1.5^{\circ}$ right $25^{\circ} \pm 1.5^{\circ}$ left

Serial Nos. CC-790 and up. (See Note 8)

Datum Located 274.1 inches forward of wing main (forward) spar centerline.

Leveling Means Lateral: Nose baggage compartment door sill.

Longitudinal: Nose baggage compartment floor.

Certification Basis FAR Part 23 through Amendment 23-34 plus Amendment 23-39; equivalent safety

finding per FAA letter dated September 20, 1990; FAR Part 36, SFAR 27 through Amendment 5 (See Note 6). Approved for flight into known icing in accordance with

FAR 23.1419.

Production Basis: Production Certificate No. 6SW.

Equipment The basic required equipment, as prescribed in the applicable airworthiness regulations

(See Certification Basis) must be installed in the aircraft for certification. Fairchild Drawing No. 27-10044 "Equipment List, Model SA227-CC" listing of all additional required equipment as well as optional installations approved by the FAA. (See Note 9)

II. Model SA227-DC (C-26B), 21 PCLM, Commuter Category, FAR 23, Approved September 29, 1990 (See Note 7 and 11).

Engines Two Garrett (Airesearch) TPE331-12UA-701G or TPE331-12UAR-701G or

TPE331-12UHR-701G.

Fuel Aviation turbine fuels Garrett Specification

Type A EMS53111
Type A-1 EMS53112
Class A-JP4 and EMS53113

Class B-Type B

Type JP-5 EMS53116
Type JP-8 EMS53112

(Fuel shall conform to the specification as listed or to subsequent revisions thereof). (See Note 3).

Oil

 $\mbox{MIL-L-23699B}$ conforming to Garrett Engine Division Specification EMS531100 Type II.

Gear Down

II. Model SA227-DC (C-26B), 21 PCLM, Commuter Category, FAR 23, Approved September 29, 1990 (See Note 7 and 11).(Cont'd)

Engine Limits	Static Sea Level	Ratings.						
C		Ü	Shaft	Gas	Pro	ор	Exhaust Gas	
			Horse			-	Temp. (EGT)	
				Spee			(Single Red Line)	
				_	_		(°C)	
	Take-off (5-mi	n)	(S.H.P. 1,100	41730			650	
	Dry)	1,100			•	000	
		Take-off (5-min)		41730	0* 159)1*	650	
		Wet		71750	5 15)		030	
		Max Continous-Dry		41730	0* 159)1*	650	
		Starting Limit		11750	, 15,	•	050	
	(1-sec)				_		770	
	(1-300)						770	
	*(See Note 4)	*(See Note 4)						
Oil Temps	Minus 40°C to	110°C (nor	rmal oper	ations)				
	Minus 40°C to	127°C (gro	ound oper	ations only	y)			
Propeller and	Number	Number 2						
Propeller limits	Make	McCaule	v			Ic Cauley	V	
1	Model		-	-L106KA-(-	C652()/()-L106LA-0	
	Diameter	106 inche				106 inches		
	Pitch At	30 in. sta				30 in. station		
					_			
					ley Propelle			
			Assembly Number					
			D-5928		D-6933 D-7274		D-7274	
	Feathered		88.9° ± 0.5°		$88.5^{\circ} \pm 0.5^{\circ}$		$88^{\circ} \pm 0.2^{\circ}$	
	Flight Idle		$15.0^{\circ} \pm 0.2^{\circ}$		$15.0^{\circ} \pm 0.2^{\circ}$		$16.0^{\circ} \pm 1.0^{\circ}$	
	Start Locks		9.0° ± 0.5°				$6.0^{\circ} \pm 0.2^{\circ}$	
	Full Reverse		$-5.0^{\circ} \pm 0.5^{\circ}$				$\text{-}4.0^{\circ} \pm 0.2^{\circ}$	
Airspeed Limits		Δltit	tude	Speed				
All speed Ellilles		Altitude (ft.)			(Knots CAS)			
		(1	ι.)	(IXIIOts C1)	15)			
	Maximum	17,8	800	248				
	Operating	18,0		247				
	Speed	20,0		237				
	•	23,0		223				
		25,0		214				
	Maneuvering							
	@ 16,000#		all	183				
	Flaps Full Ext.			166				
	1/2 Ext.			180				
	1/4 Ext.			215				
	Ldg Gear Ext.			176				
	Ldg Gear Oper.			176				
C.G. Dange	262 9 (16 410/ 1	MAC) to 2	77 0 (26	00% MACY	at 16 500			
C.G. Range	262.8 (16.41% I						l.	

257.0 (8.40% MAC) to 277.0 (36.0% MAC) at 11,000 lbs. and below.

(Inches Aft of Datum)

Straight line variation between points given.

Note: Gear Retraction will not move the c.g. beyond approved limits if the airplane is loaded within the gear down envelope.

II. Model SA227-DC (C-26B), 21 PCLM, Commuter Category, FAR 23, Approved September 29, 1990 (See Note 7 and 11).(Cont'd)

Empty Weight None

C.G. Range

 Maximum Weight
 Ramp
 16,600

 (lbs.)
 Take-off
 16,500

 (See Note 6)
 Landing
 15,675

 Max. Zero Fuel
 14,500

Maximum Oper. 25,000 feet.

Altitude

Minimum Crew One pilot except as otherwise required by the Airplane Flight Manual (See Note 9.)

No. Seats Maximum 21 (crew at + 111.0). (Maximum of 19 passengers).

See AFM for loading instructions for crew and passenger loading.

Maximum Baggage Rear Compartment: 850 lbs. (+473.4) and/or Equipment Nose Compartment: 800 lbs. (+46.7)

Local loading on cargo and passenger compartment floor: 150 lbs./sq. ft.

Fuel Capacity 652 gal. total (324 gal. usable in each of 2 wing tanks. See Note 1 for data on unusable

fuel.

Oil Capacity 14.1 qt. total (3.8 qt. usable in each engine oil tank).

See Note 1 for data on unusable oil.

Control Surface Wings Flaps $36^{\circ} \pm 1^{\circ}$ down

Main Surface

Aileron $18.5^{\circ} \pm 1^{\circ}$ up $21.5 \pm 1^{\circ}$ down Elevator $30^{\circ} \pm 1^{\circ}$ up $15^{\circ} \pm 1^{\circ}$ down Rudder $25^{\circ} \pm 1^{\circ}$ right $25^{\circ} \pm 1^{\circ}$ left

Stabilizer (mechanical stops):

 $2.40^{\circ} \pm .20^{\circ}$ L.E. up $7.80^{\circ} \pm .20^{\circ}$ L.E. down

(electrical stops):

 $0.2^{\circ} \pm .05^{\circ}$ before mechanical stops

Tabs (Main surface in Neutral)

Aileron $20^{\circ} + 2^{\circ}, -1^{\circ}$ up; $20^{\circ} + 2^{\circ}, -1^{\circ}$ down Rudder $25^{\circ} \pm 1.5^{\circ}$ right; $25^{\circ} \pm 1.5^{\circ}$ left

Serial Nos. DC-784 and up. (See Notes 7 and 8.)

Datum Located 274.1 inches forward of wing main (forward) spar centerline.

Leveling Means Lateral: Nose baggage compartment door sill.

Longitudinal: Nose baggage compartment floor.

Certification Basis: FAR Part 23 through Amendment 23-34 plus Amendment 23-39; equivalent safety

finding per FAA letter dated September 20, 1990; FAR Part 36, SFAR 27 through Amendment 5 (See Note 6). Approved for flight into known icing in accordance with

FAR 23.1419.

Production Basis:

Production Certificate No. 6SW.

II. Model SA227-DC (C-26B), 21 PCLM, Commuter Category, FAR 23, Approved September 29, 1990 (See Note 7 and 11).(Cont'd)

Equipment

The basic required equipment, as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the aircraft for certification. Fairchild Drawing No. 27-10045 "Equipment List, Model SA227-DC" contains listing of all additional required equipment as well as optional installations approved by the FAA. (See Note 9)

Note 1. Current weight and balance report, together with list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The airplane must be loaded so that the C.G. is within the specified limits at all times. Empty weight and corresponding center of gravity location must include:

Unusable fuel 27 lbs. (+282) Unusable oil 12 lbs. (+205) Unusable AWI 16 lbs. (+298)

- Note 2. All placards required in the approved AFM must be installed in the appropriate locations.
- Note 3. Emergency use of MIL-G-5572D, 80/87, aviation gasoline permitted not to exceed 1,000 gallons per engine for each 100 hours of engine operation. Emergency use of MIL-G-5572D, Grade 100/130 (low lead), aviation gasoline permitted not exceed 250 gallons per engine for each 100 hours of engine operation with the total use limited to 7,000 gallons during any 3,000-hour period. Jet fuel and aviation gasoline may be mixed in any proportion. If 25% or more aviation gasoline is used, add 1 quart of MIL-L-6082 specification grade 1065 or 1100 piston engine oil per 100 gallons of aviation gasoline to provide fuel pump lubrication.

Note: The amount of aviation gasoline used must be recorded in the Engine Log Book. Fuel System Icing Inhibitor MIL-T-27686E fuel additive approved not to exceed 0.15 percent by volume. No fuel system anti-icing credit is allowed.

- Note 4. The maximum propeller shaft overspeed limit is 1686 RPM (106%) for 5 seconds and 1615 RPM (101.5% for 5 minutes). 100% is defined as 1591 RPM.
- Note 5. The Airworthiness Limitations Manual ST-UN-M003 contains overhaul times, replacements times and special inspections required for continued airworthiness.
- Note 6. Compliance with SFAR 27-5. "Fuel Venting and Exhaust Emissions Requirements for Turbine Engine Powered Airplanes" is equivalent to compliance with FAR Part 34, effective September 10, 1990.
- Note 7. The C-26B is an SA227-DC airplane manufactured in accordance with Fairchild drawing 27-10048. These airplanes are identified by the letter "M" at the end of the serial number.
- Note 8. The manufacturer has elected to end the serial numbers of airplanes not affected by Note 7 with the letter "B".
- Note 9. Approval for single-pilot operation is based on the instrument/avionics arrangement shown by Fairchild Drawing 27-86081 or Drawing 27-88025 (C-26B). Any significant deviation from that arrangement must be evaluated for single pilot suitability.
- Note 10. The SA227-CC airplane may be converted to a Model SA227-DC in accordance with FAI drawing 27-14167 initial release.
- Note 11. The SA227-DC airplane may be converted to a Model SA227-CC in accordance with FAI drawing 27-14140

initial release plus EOS A-1 and A-2.

...END...