

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A52EU Revision 16 Saab AB, Saab Aeronautics 340A (SAAB/SF340A) SAAB 340B July 7, 2016

TYPE CERTIFICATE DATA SHEET NO. A52EU

This data sheet which is a part of Type Certificate No. A52EU, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Saab AB, Saab Aeronautics
 (formerly known as Saab AB, Saab Aerosystems)
 SE-581 88 Linköping
 Sweden

I. Model SAAB SF340A (Transport Category Airplane), Approved June 27, 1984.
 (SAAB- FAIRCHILD 340A, See NOTE 7)

Engines 2 Engines - General Electric Company, Model CT7-5A2, free turbine turboprop.
 Power turbine/propeller reduction gearing 15.9:1. (See NOTE 12)

Fuel ASTM.D Jet A, Jet A1, JP5, Jet B, JP4 conforming to the latest revision of General
 Electric Company Jet Fuel Specification No. D50TF2 for the General Electric CT7
 installation.

Engine Limits The maximum continuous and takeoff static level ratings at ISA:

Conditions	Shaft Horse Power	Jet Thrust (lbf)	Torque Meter Reading	ITT T4.5 (°C)	Engine RPM (%)	Specific Fuel Consumption lb/shp/hr
<u>CT7-5A2</u>						
Takeoff	1735	164	108	930	45000	.476
Max. Cont.	1600	150	100	917	44720	.484

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Propeller and Propeller Limits
(cont'd)

CT7-5A2: 2 Propellers - Dowty Aerospace, Model (c) R.354/4-123F/13
or
(c) R.389/4-123-F/25

Blades 4
Diameter 132 in. - no reduction permitted
Pitch settings at 0.7 blade radius
Ground Fine 0°
Flight Fine 10°
Coarsen 50°
Feathered 82.5°
Full Reverse -16.0°
Propeller spinner (c) SB 14/4/1
Propeller deicer 660000916

or

2 Propellers - Dowty Aerospace, Model (c) R.354/4-123-F/20
or
(c) R.389/4-123-F/26

Blades 4
Diameter 132 in - no reduction permitted
Pitch settings at 0.7 blade radius
Ground Fine 0°
Flight Fine 10°
Coarsen 50°
Feathered 82.5°
Full Reverse -16.0°
Propeller spinner (c) SB 14/4/1
Propeller deicer 660000927

or

2 Propellers - Dowty Aerospace, Model (c) R.375/4-123-F/21
or
(c) R.390/4-123-F/27

Blades 4
Diameter 132 in. - no reduction permitted
Pitch settings at 0.7 blade radius
Ground Fine 0°
Flight Fine 10°
Coarsen 50°
Feathered 82.5°
Full Reverse -16.0°
Propeller spinner (c) SB 25/4/1
Propeller deicer 660000929

Maximum Weights

Ramp 27,300 lb. (28,300 lb. with Mod. No. 1531)
Takeoff 27,275 lb. (28,000 lb. with Mod. No. 1531)
Landing 26,500 lb. (27,200 lb. with Mod. No. 1531 see NOTE 8)
Zero Fuel 25,200 lb. (25,700 lb. see NOTE 8 and 9)

II. Model SAAB 340B (Transport Category Airplane), Approved August 15, 1989

Engines 2 engines - General Electric Company, Model CT7-9B, free turbine turboprop.
Power turbine/ propeller reduction gearing 15.9:1.

Fuel ASTM.D Jet A, Jet A-1, JP5, Jet B, JP4 conforming to the latest revision of General Electric Company Jet Fuel Specification No. D50TF2 for the General Electric CT7 installation.

Engine Limits The maximum continuous and takeoff static level ratings at ISA:

Conditions	Shaft Horse Power	Jet Thrust (lbf)	Torque Meter Reading	ITT T4.5 (°C)	Engine RPM (%)	Specific Fuel Consumption lb/shp/ hr
<u>CT7-9B</u>						
Max Takeoff (with APR)	1870	178	107	950	45600	0.471
Takeoff	1750	167	100	927	45288	0.477
Max. Cont.	1750	167	100	940	45600	0.477

Propeller and Propeller Limits CT7-9B: 2 Propellers - Dowty Aerospace, Model (c) R.354/4-123-F/13
or
(c) R.389/4-123-F/25

Blades 4
Diameter 132 in - No reduction permitted
Pitch settings at 0.7 blade radius
Ground Fine 0°
Flight Fine 10°
Coarsen 50°
Feathered 82.5°
Full Reverse -16.0°
Propeller spinner (c) SB 14/4/1
Propeller deicer 660000926

or

2 Propellers - Dowty Aerospace, Model (c) R.354/4-123-F/20
or
(c) R.389/4-123-F/26

Blades 4
Diameter 132 in. - No reduction permitted
Pitch settings at 0.7 blade radius
Ground Fine 0°
Flight Fine 10°
Coarsen 50°
Feathered 82.5°
Full Reverse -16.0°
Propeller spinner (c) SB 14/4/1
Propeller deicer 660000927

or

2 Propellers - Dowty Aerospace, Model (c) R.375/4-123-F/21 or
(c) R.390/4-123-F/27

Blades 4
Diameter 132 in - No reduction permitted
Pitch settings at 0.7 blade radius
Ground Fine 0°
Flight Fine 10°
Coarsen 50°
Feathered 82.5°
Full Reverse -16.0°
Propeller spinner (c) SB 25/4/1
Propeller deicer 660000929

Propeller and Propeller Limits (cont'd)	or	
		2 Propellers - Hamilton Standard, Model 14 RF-19
		Blades 4
		Diameter 132 in - No reduction permitted
		<u>Degrees nominal Beta 42</u>
		Ground Fine -1.14
		Flight Fine 13.02
		Feather 80.80
		Full Reverse -13.04
		Propeller spinner 802313-1
		Propeller deicer Dowty timer 660713245
		Hamilton Standard Brush Block 802315-1
		Hamilton Standard Bracket 782364-2
Maximum Weights	Ramp	28,800 lb. (29,300 lb. with Mod. No. 2438)
	Takeoff	28,500 lb. (29,000 lb. with Mod. No. 2438)
	Landing	28,000 lb. (28,500 lb. with Mod. No. 2438)
	Zero Fuel	26,000 lb. (26,500 lb. with Mod. No. 2438)
		(See NOTE 9)

Data Pertinent To All Models

Airspeed Limits (IAS)	Unless otherwise noted below, speeds are indicated airspeeds.																		
	V _{MO} (Maximum Operating)																		
	16,000 ft. and below	250 kts.																	
	25,000 ft.	210 kts.																	
	Straight line variation between points																		
	V _A (Maneuvering)	180 kts.																	
	V _{FE} (Flap Extension)																		
	Flaps 7° and 15°	175 kts.																	
	Flaps 20°	165 kts.																	
	Flaps 35°	140 kts.	(see NOTE 4)																
	V _{LE} (Landing Gear Extended)	200 kts.																	
Approved Airplane Flight	For other airspeed limits, see the appropriate European Aviation Safety Agency (EASA) Manual listed below.																		
C.G.	See the appropriate EASA Approved Airplane Flight Manual listed below.																		
Minimum Crew	Two (2): Pilot and co-pilot																		
Maximum Passengers	37 (see NOTE 5)																		
Maximum Baggage	2100 lb in rear cargo compartment. See the appropriate Weight and Balance Manual listed below																		
Fuel Capacity	Usable fuel (see NOTE 1 for unusable fuel)																		
	<table border="1"> <thead> <tr> <th>Location</th> <th>Volume U.S. Gal</th> <th>Weight lb</th> <th>Arm in</th> </tr> </thead> <tbody> <tr> <td>Left Wing</td> <td>425</td> <td>2845</td> <td>442.8</td> </tr> <tr> <td>Right Wing</td> <td>425</td> <td>2845</td> <td>442.8</td> </tr> <tr> <td>TOTAL USABLE</td> <td>850</td> <td>5690</td> <td>442.8</td> </tr> </tbody> </table>	Location	Volume U.S. Gal	Weight lb	Arm in	Left Wing	425	2845	442.8	Right Wing	425	2845	442.8	TOTAL USABLE	850	5690	442.8		
Location	Volume U.S. Gal	Weight lb	Arm in																
Left Wing	425	2845	442.8																
Right Wing	425	2845	442.8																
TOTAL USABLE	850	5690	442.8																

Fuel weight based upon fuel density 6.7 lb/U.S. gal.
Pressure fueling: Maximum pressure for pressure fueling is 50 psi.

Oil Capacity	1.83 U.S. gal/tank on each engine (+371.4 in) 0.95 U.S. gal/tank usable 1.25 U.S. gal/tank on each propeller gearbox (+352.4 in) 0.92 U.S. gal/tank usable
Maximum Operating Altitude	25,000 feet
Datum	STA 0.0 located 98.0 in. forward of airplane nose.
Mean Aerodynamic Chord (MAC)	Length 82.07 in L.E. of MAC Station 412.3 in.
Leveling Means	A bubble-type level, when placed on seat tracks
Control Surface Movements	Elevator Up 22° Down 18° Rudder Right 27.5° Left 27.5° Aileron Up 23.2° Down 19.8° Flaps Down 35° (20°) See NOTE 4. Rigging tolerances are included in the Aircraft Maintenance Manual.
Serial Nos. Eligible	SAAB SF340A: Serial No. 004 through 159 SAAB 340B : Serial No. 160 and up The Swedish Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual airplane for which application for certification is made.
Import Requirements	The FAA can issue a U.S. airworthiness certificate based on an Export Certificate of Airworthiness (Export C of A) signed by a representative of the Swedish Civil Aviation Administration. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to conform with the Type Design approved under U.S. Type Certificate No. A52EU and to be in a condition for safe operation.' The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183 (c) or 21.185 (c). The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is FAR Sections 21.183 (d) or 21.183 (b).
Certification Basis	<u>(a) For Model SAAB SF340A (SAAB-FAIRCHILD 340A)</u> 14 CFR Section 21.29 and 14 CFR Part 25, effective February 1, 1965, including Amendments 25-1 through 25-51 and 14 CFR Section 25.807 (d) Ditching emergency exits (Amendment 25-55). Federal Aviation Administration Exemption No. 3469, from 14 CFR Section 25.571 (e) (2), issued on February 23, 1982. Special Federal Aviation Regulation No. 27, effective February 1, 1974, including Amendments 27-1 through 27-4 (Fuel Venting). 14 CFR Part 36, effective December 1, 1969, including Amendments 36-1 through 36-28. Airplanes with SAAB 340A Airplane Flight Manual, revision 52 and above are certificated to 14 CFR part 36 through amendment 36-30, Stage 4 Noise for the weight and noise levels provided in NOTE(10). Equivalent safety findings exist with respect to the following regulations: - 14 CFR Section 25.773 (b)(2): First Pilot Openable Window - 14 CFR Section 25.811(d)(1): Type III Exit Locator Sign

- 14 CFR Section 25.811 (e)(3): Overwing Exit Handle Illumination
- 14 CFR Section 25.979 (b)(1): Pressure Fuel Check for Auto Shut-Off
- 14 CFR Section 25.1351 (b)(6): Electrical Generating System, Quantities, AC Heating System, and
- 14 CFR Section 25.1551: Oil Quantity Indicator

Certification basis (cont'd)

SAAB Aircraft AB elected to demonstrate compliance with:

- 14 CFR Section 25.1419: Ice Protection,
- 14 CFR Section 25.832: Cabin Ozone Concentration (As amended by Amendment 25-56), and
- 14 CFR Section 25.801: Ditching Provisions excluding 25.1411 and 25.1415 with Modification No. 1198 Installed.

SAAB Aircraft AB has also demonstrated compliance with the following Amendments to 14 CFR Part 25 under noted conditions:

- 14 CFR Section 25 Amendment 60, Fire Protection Requirements for Cargo Compartment, with Mod. 1819 and 2243 included.
 - 14 CFR Section 25 Amendment 65, Cockpit Voice Recorder.
 - 14 CFR Section 25 Amendment 65, Flight Data Recorder, with Mod 2245 included.
 - 14 CFR Section 25 Amendment 66, Improved Flammability Standards for Material used in the Interiors of A/C cabin, A/C S/N 201 and up.
 - 14 CFR Section 25 Amendment 69, Fuel Tank Access Covers
 - 14 CFR Section 25 Amendment 70, Independent Power Source for Public Address.
- Date of Application for Type Certificate March 31, 1980

The Swedish LfV originally type certificated this SAAB SF 340A under its type certificate Number A 1/84. The FAA validated this product under U.S. Type Certificate number A52EU. Effective September 28, 2003, the EASA began oversight of this product on behalf of the Swedish LfV.

14 CFR part 26 – Continued Airworthiness and Safety Improvements for Transport Category Airplanes:

Based on 14 CFR § 21.29(a) for new import TCs, (or 14 CFR § 21.101(g) for changes to TCs), applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

(b) For Model SAAB 340B

14 CFR Section 21.29 and 14 CFR Part 25, effective February 1, 1965, including Amendments 25-1 through 25-51 and Amendments 25-58, 25-59, 25-61 and 25-62.

Federal Aviation Administration Exemption No. 3469, from 14 CFR Section 25.571(e) (2), issued on February 23, 1982.

Special Federal Aviation Regulation No. 27, effective February 1, 1974, including Amendments 27-1 through 27-6 (Fuel Venting).

14 CFR Part 36, effective December 1, 1969, including Amendments 36-1 through 36-28. Airplanes with SAAB 340B (without extended wing-tip) Airplane Flight Manual, revision 30 and SAAB 340(with extended wing-tip) AFM, revision 22 and above are certificated to 14 CFR part 36 through amendment 36-30, Stage 4 noise for the weight and noise levels provided in NOTE(11).

- FAA Special Condition No. 25-ANM-27, effective May 2, 1989.

Equivalent safety findings exist with respect to the following regulations:

- 14 CFR Section 25 All Sections dealing with stall speeds and related factors (SAAB 340B with Mod. 2571 only).
- 14 CFR Section 25.305, 331, 333, 335, 341, 343, 345, 349, 351, 371, 373, 391 and 427 (SAAB 340B with Mod. 2571 only)

- 14 CFR Section 25.773(b)(2) First Pilot Openable Window
- 14 CFR Section 25.811(d)(1) Type III Exit Locator Sign
- 14 CFR Section 25.811(e)(3) Overwing Exit Handle Illumination
- 14 CFR Section 25.979(b)(1) Pressure Fuel Check for Auto Shut-off
- 14 CFR Section 25.1351(b)(6) Electrical Generating System, Quantities, AC Heating System, and
- 14 CFR Section 25.1551 Oil Quantity Indicator

SAAB Aircraft AB elected to demonstrate compliance with:

- 14 CFR Section 25.1419 Ice Protection,
- 14 CFR Section 25.832 Cabin Ozone Concentration (As amended by Amendment 25-56)
- 14 CFR Section 25.807(d) Ditching Emergency Exit (As amended by Amendment 25-55), and
- 14 CFR Section 25.801 Ditching Provisions excluding 25.1411 and 25.1415 with Modification No. 1198 installed.

SAAB Aircraft AB has also demonstrated compliance with the following Amendments to 14 CFR Part 25 under noted conditions:

- 14 CFR Section 25 Amendment 60, Fire Protection Requirements for Cargo Compartment, with Mod 1819 and 2243 included.
- 14 CFR Section 25 Amendment 65, Cockpit Voice Recorder.
- 14 CFR Section 25 Amendment 66, Flight Data Recorder, with Mod 2245 included
- 14 CFR Section 25 Amendment 66, Improved Flammability Standards for Material used in the Interiors of A/C cabin, A/C S/N 201 and up.
- 14 CFR Section 25 Amendment 69, Fuel Tank Access Covers.
- 14 CFR Section 25 Amendment 70, Independent Power Source for Public Address.

Date of Application for Amendment to Type Certificate to include the model SAAB 340B: October 29, 1987.

The Swedish LFV originally type certificated this SAAB 340B under its type certificate Number A 1/84. The FAA validated this product under U.S. Type Certificate number A52EU. Effective September 28, 2003, the EASA began oversight of this product on behalf of the Swedish LFV.

14 CFR part 26 – Continued Airworthiness and Safety Improvements for Transport Category Airplanes:

Based on 14 CFR § 21.29(a) for new import TCs, (or 14 CFR § 21.101(g) for changes to TCs), applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

Required Equipment

The basis required equipment as prescribed in the applicable Federal Aviation Regulations must be installed in the airplane.

Equipment approved for the Model SAAB SF340A (or SAAB-FAIRCHILD 340A) and SAAB 340B are listed in Saab Aircraft AB Document No. 72PWS0861, Master Equipment List.

Airplane Flight Manual approved by EASA, is required as follows:

- Model SAAB SF340A (or SAAB-FAIRCHILD 340A): Doc. No. AFM SF340A 001 (LFV approved on June 21, 1984).
- Model SAAB 340B: Doc. No. AFM 340B 001 (LFV approved on August 15, 1989).
- Model SAAB 340B with extended wing tips (Mod 2571): Doc No. AFM 340B 010 (LFV approved on November 30, 1995).

Service Information

Each of the documents listed below must state that it is approved by EASA – or for approvals made before September 28, 2003 – by the Swedish LFV. Any such documents are accepted by the FAA and are considered FAA approved. Additionally, approvals issued by Saab AB, Saab Aeronautics under the authority of EASA approved Design Organization EASA.21J.066 - or for approvals made before September 28, 2003 - under the authority of LFV Design Organization Certificate No. 1/1998 or Production Certificate 2:III are considered FAA approved. These approvals pertain to the type design only.

- TC holder Service Bulletins, except as noted below,
- Structural repair manuals
- Vendor manuals referenced in TC holder Service Bulletins
- Airplane flight manuals
- Repair instructions.

Note: Design changes that are contained in TC holder Service Bulletins and that are classified as Level 1 Major in accordance with either the US/Sweden or US/EASA Bilateral Aviation Safety Agreement – Implementation Procedures for Airworthiness, must be approved by the FAA.

NOTES

NOTE 1

Weight and Balances

- a. A current Weight and Balance Report must be in each aircraft at the time of original airworthiness certification and at all times thereafter except in the case of an operator having an FAA approved loading system for weight and balance control.
- b. The airplane empty weight and corresponding center of gravity location must include:
Total engine and gearbox oil 75 lb at Sta 363 in.
Type hydraulic fluid of 25 lb at 218 in
Unusable fuel (110 lb) listed as follows:

<u>Unusable Fuel</u>	<u>U.S. Gallons</u>	<u>Pounds</u>	<u>Arm (In)</u>
Drainable:			
Left Wing	4.0	27.5	440
Right Wing	4.0	27.5	440
Trapped Fuel:			
Tanks and fuel lines	8.0	55	440
Total Unusable Fuel	16.0	110	440

- c. The airplane must be loaded in accordance with Section 2 of the approved Airplane Flight Manual and the C.G. must be within the specified limits at all times.

NOTE 2

Airplane operation must be in accordance with the approved AFM, listed above. All placards required in either the approved AFM, the applicable operating rules, or the Certification Basis must be installed in the airplane.

- NOTE 3 Required structural inspections and retirement for structural parts and for components are listed in Airworthiness Limitation Manual document No. 72LKS036057. The inspections cover structure, systems and powerplants. This document is valid for both models SAAB SF340A (or SAAB-FAIRCHILD 340A) and SAAB 340B. Material covered in this document must not be changed without FAA approval.
- NOTE 4 For model SAAB SF340A (or SAAB-FAIRCHILD 340A) Modification No. 1462 must be installed to permit 35° flap operation, if not installed then maximum 20° flap operation applies.
- NOTE 5 Airplane configured for 14 CFR Part 135 operation may carry 30 passengers. This configuration is defined by Modification No. 1142 for the oxygen system and drawing number 72PSC1576 for the interior installation. The oxygen system complies with 14 CFR Part 135.157(b).
- NOTE 6 NOTE 6 is deleted. This NOTE was related to the CT7-5A and the CT7-5A1 engines types that were removed from revision 13. (See NOTE 12)
- NOTE 7 SAAB SF340A is same as SAAB-FAIRCHILD 340A.
- NOTE 8 Weights valid when carrying passengers and/or passenger seats are used for cargo storage in all passenger configuration or when carrying in all cargo configuration and center of Gravity is aft of or at 28% MAC.
- NOTE 9 For operation under FAR Part 135, Maximum Payload is 7500 lb.
- NOTE 10 Approved Weights and Noise Levels for SAAB SF340A

SAAB SF340A is approved for stage 4 noise level for the following weight and noise levels provided:

	SAAB SF340A EPNL (EPNdB)		
	MTOW = 27275 lb MLW = 26500 lb	MTOW = 28000 lb MLW = 27200 lb (Mod No. 1531)	MTOW = 28500 lb MLW = 27200 lb (Mod No. 3139)
Takeoff, flyover	76.7	77.3	77.8
Lateral	85.4	85.4	85.4
Approach	93.1	92.9	92.9

- NOTE 11 Approved Weights and Noise Levels for SAAB 340B

SAAB 340B is approved for stage 4 noise level for the following weight and noise levels provided:

Propeller	SAAB 340B (GE CT7-9B Engine) (EPNL dB)			
	Dowty Rotol R.354/375/389/390 (132 in.)		Hamilton Standard 14RF-19 (132 in.)	
MTOW (lbs)	28,500	29,000	28,500	29,000
MLW (lbs)	28,000	28,500	28,000	28,500
Takeoff	77.7	78.3	77.7	78.3
Lateral	85.4	85.4	85.8	85.8
Approach	92.8	92.8	89.9	89.8

- NOTE 12 The CT7-5A and the CT7-5A1 engines were removed from engine Type Certificate No. E8NE on October 2, 1986 at the request of the engine type certificate holder. No CT7-5A or CT7-5A1 models are in existence.

.....END.....