

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A47NM Revision 7 Saab AB, Saab Aeronautics Model SAAB 2000 July 7, 2016
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TYPE CERTIFICATE DATA SHEET NO. A47NM

This data sheet, which is part of Type Certificate No. A47NM 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

Model SAAB 2000, (Transport Category Aircraft) approved April 29, 1994

General Description A low wing, twin-engine turboprop aircraft equipped to carry up to 53 passengers and cargo in a pressurized cabin and intended for short to medium haul routes.

<u>Dimensions</u>	Span	24.8 m	(81 ft 3 in)
	Length	27.3 m	(89 ft 6 in)
	Height	7.7 m	(25 ft 4 in)
	Wing area	55.7m ²	(600 ft ²)

Engines Two Engines - Allison Engine Company, Model AE 2100A, two spooled and FADEC-controlled turbine engine. Refer to engine FAA Type Certificate No. TE1CH and JAA Engine Data Sheet JAA/E/93-002.

Power turbine/propeller reduction gearing 13.98:1

Auxiliary Power Unit (APU) Sundstrand Aerospace, Model T-62T-46C7 (APS 1000). Limitations are stated in T-62T-46C7 Model Specification Sundstrand Doc. No. ESRO687.

Fuel ASTMJ Jet A, Jet A-1 or JP 5 conforming to the latest revision of Allison Installation Design Manual No. CSP34003 for the AE 2100A installation.

Engine Limits The maximum continuous, take-off normal, and take-off Maximum static sea level ratings at ISA for AE 2100A.

	Shaft Power		Jet Thrust		Power Units
	(KW)	(SHP)	(N)	(lb)	(Percent of Max. Cont.)
Takeoff Normal	2788	3738	3025	680	100
Take-off Max.	3097	4152	3305	743	111
Max. Cont.	2788	3738	3025	680	100

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Propellers and
Propeller limits

2 Propellers - Dowty Aerospace Propellers, Model
(c)R381/6-123-F/5
Blades: 6
Diameter: 3.81 m (12 ft 6 in)
Refer to propeller FAA-Type Certificate P6BO and CAA-Type Certificate No.
114.

Airspeed Limits (IAS)

V_{MO}	Max Operating Sea Level	250 KIAS
	9000 ft	252 KIAS
	11000 ft	273 KIAS
	21400 ft	277 KIAS
	31000 ft	226 KIAS
	Straight line variations between points	
V_A	Design Maneuvering	205 KIAS
$V_{RA\sim VB}$	Max Rough Air Penetration	205 KIAS
V_{FE}	Flaps Extended, Flaps 7°	190 KIAS
	Flaps 15°	185 KIAS
	Flaps 20°	180 KIAS
	Flaps 35°	165 KIAS
V_{LE}	Landing Gear Extended	220 KIAS
V_{LOR}	Landing Gear Retraction	175 KIAS
V_{LOE}	Landing Gear Extension	220 KIAS
V_{LOEE}	Landing Gear Emergency Extension	220 (max) KIAS
		150 (min) KIAS

For other airspeed limits, see the appropriate European Aviation Safety Agency (EASA) approved Airplane Flight Manual.

C.G. Range

See the appropriate EASA approved Airplane Flight Manual

Maximum Weights

Taxi	23,200 kg	51,140 lbs
Take-off	22,999kg	50,700 lbs
Landing	22,000 kg	48,500 lbs
Zero Fuel	20,000 kg	44,090 lbs

Crew/Passengers/
Baggage

Minimum crew 2 (Pilot and co-pilot)
Maximum occupants 4 crew, 1 observer and 53 passengers (See Note 4)
Maximum baggage 1200 kg (2645 lbs) in rear cargo compartment.
See the appropriate Weight and Balance Manual.

Fuel Capacity
(Usable fuel)

<u>Location</u>	<u>Volume</u>		<u>Weight</u>	
	litres	U.S. Gal.	kg	lb
Left Wing	2650	700	2125	4685
Right Wing	2650	700	2125	4685
Total usable	5300	1400	4250	9370

Fuel weight based upon fuel density 0.802 kg/l (6.7 lb/U.S. Gal).
Pressure fueling.
Max pressure for pressure fueling is 350 kPa (50 psi).

Max Operating Altitude

31,000 ft.

Serial Numbers Eligible

SAAB 2000-003 and up.

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 (CAA). 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. A47NM and to be in a condition for safe operation.'

The U.S. airworthiness certification basis for aircraft type certificated under 14 CFR part 21, section 21.29, exported by country of manufacture is section 21.183(c) or 21.185(c)

The U.S. airworthiness certification basis for aircraft type certificated under section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is section 21.183(d) or 21.185(b).

Certification Basis

14 CFR Part 25 of the Federal Aviation Regulations (FAR) as amended by Amendment 25-1 through 25-71 except where superseded by:

- Sections 25.361, 25.365, 25.571, 25.772, 25.773, 25.783(g), 25.801, 25.905(d), 25.933, and 25.1419 as amended by Amendment 25-72.
- Sections 25.903 and 25.951(d) amended by Amendment 25-73.
- Sections 25.851 and 25.854 amended by Amendment 25-74.
- Section 25.729 amended by Amendment 25-75.
- Section 25.813 amended by Amendment 25-76.

14 CFR part 34, effective September 10, 1990.

14 CFR part 36 through amendment 36-20. Airplanes with SAAB 2000 Airplane Flight Manual, revision 44 and above are certificated to 14 CFR part 36 through amendment 36-30, Stage 4.

FAA equivalent safety findings exist with respect to the following:

- Use of 1-g stall speeds instead of minimum speed in the stall. Saab's letter 73CCS0435 dated March 13, 1993, which references NPA 25B-215, dated July 1992 with follow-on changes, document equivalency.
- APU instrumentation and monitoring. Automatic features of the APU and the indications provided by the Engine Indication and Crew Alerting System (EICAS) described in Saab's document 73PAS0132A dated June 4, 1993, provide equivalency to certain cockpit indications required by sections 25.1305 and 25.1501(b).
- Powerplant valve indication. The fuel system described in Saab document 73PPS0262, Rev. A, dated March 18, 1993, and indications provided by the EICAS provides an equivalent level of safety to the powerplant valve position indication requirement of section 25.1141.

FAA Special Conditions (S.C.):

- Interaction of Systems and Structure, S.C. No. 25-ANM-82 issued March 11, 1994, effective April 25, 1994; (Docket NM-91, 59 FR 13873 dated March 24, 1994).
- Lightning and High Intensity Radiated Fields (HIRF), S.C. No. 25-ANM-66 issued January 12, 1993, effective February 22, 1993; (Docket NM-74, 58 FR 5571 dated January 22, 1993).

- Operation without Normal Electrical Power, Command Signal Integrity, and Design Maneuver Requirements, S.C. No. 25-ANM-97 issued March 29, 1995, (Docket NM-105, 60 FR 17194 dated April 5, 1995).

The Swedish LFV originally type certificated this SAAB 2000 under its type certificate Number A 1/94. The FAA validated this product under U.S. Type Certificate number A47NM. Effective September 28, 2003, the European Aviation Safety Agency (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 basic required equipment as prescribed in the applicable Federal Aviation Regulations must be installed in the airplane.

Equipment approved for the Model SAAB 2000 are listed in Saab Aircraft AB Document No. 72PDS0039, Master Equipment Register.

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

Model SAAB 2000 Doc No. 73LKS0042 Designation AFM 2000 Code 000.

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, SaabAeronautics 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.

Available documents

- Aircraft Operations Manual, Doc No. 73LKS0041

The following documents are valid for model SAAB 2000:

- Weight and Balance Manual, Doc No. 73LKS0034
- Structural Repair Manual, Doc. No. 73LKS0033
- Illustrated Parts Catalogue, Doc. No. 73LKS0031
- Wiring Diagram Manual, Doc No. 73LKS0032
- Aircraft Maintenance Manual Doc. No. 73LKS0030

- Maintenance Review Board Report, Doc. No. 73LKS0035.
- Airworthiness Limitation Manual, Doc. No. 2000LKS031010

Notes

1. Weight and Balance
 - 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 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.
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.
3. Instructions for Continued Airworthiness required under section 21.50 for service life limits on components, required inspections, and inspection intervals are listed in Airworthiness Limitation Manual referenced in the "Available Documents" section. Certification Maintenance Requirements are listed in Document Number 73DSS0106, latest Revision, and in Airworthiness Limitation Manual.
4. An interior layout for 53 passengers requires mod 5407 to be installed
5. Ditching requires mod numbers 5352, 5540, and 6054 to be installed.
6. Ditching provision (i.e. excluding life rafts) requires mod numbers 5342, 5352, and 5540 to be installed.
7. If modification 5786, "Automatic Flaps Retraction (AFR) System", is embodied, it can improve the aircraft required landing distance in runways with shortfiled.

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