KUNGL.
LUFTFARTSSTYRELSEN
Stockholm 12

ROYAL BOARD OF CIVIL AVIATION
Sweden

Specification No. 6B/55
Model Saab 91C Safir
June 10th, 1955.

AIRCRAFT SPECIFICATION

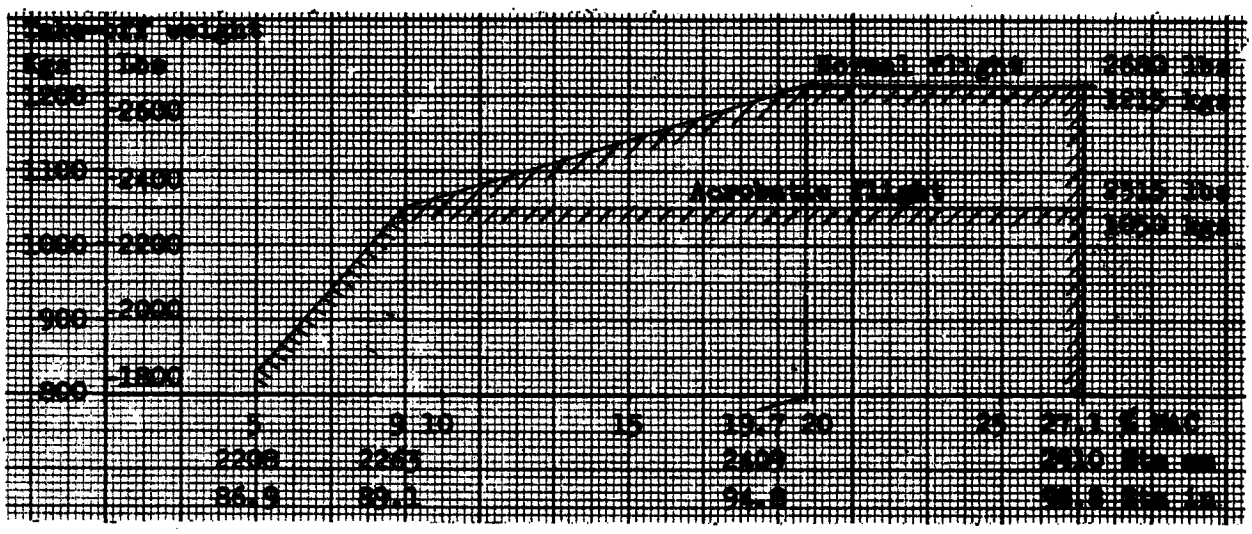
An aircraft of the type specified below and conforming with approved data on file with the Swedish Board of Civil Aviation will upon application receive an airworthiness certificate, when in the opinion of the Inspector General the aircraft is in an airworthy condition.

Aircraft Model	Saab 91 C, Safir.
Designer	Svenska Aeroplan AB (Saab Aircraft Co.), Linköping, Sweden.
Design	The type of aircraft conforming with this specification complies with the valid Swedish airworthiness requirements. This type of aircraft is - with the exception stated in Note 4, below - proved to be designed in conformity with the requirements for the normal and acrobatic categories of the U.S. Civil Aeronautics Board's CAR Part 3, Airplane Airworthiness, dated November 1, 1949, with all amendments published up to and including no. 3 - 10, effective May 16, 1953.
Type Certificate	No. A-6/54, dated July 9, 1954.
Manufacturer	Saab Aircraft Co., Linköping, Sweden or N.V. Koninklijke Maatschappi "De Schelde", Dordrecht, Holland.
General	Four seat enclosed cabin, single engine monoplane. Tricycle retractable undercarriage. Low single-spar cantilever wing. Stressed-skin Alclad sheet covering except for fabric-covered wing trailing edge and movable control surfaces. Tailplane of monoplane type. All metal split flaps. Dual controls of conventional type. Flexible fuel tanks, one in each wing.
Dimensions	Span 10.6 m (34 ft. 9 in.) Length 7.9 m (25 ft. 11 in.) Height 2.2 m (7 ft. 3 in.) Wing area 13.6 m^2 (146 sq.ft.)
Engine	Lycoming O-435-A Rating, take-off, 190 hp at 2550 rpm " , normal, 140 hp at 2300 "
Fuel	Minimum 80 octane aviation gasoline.

Copies of this specification may be obtained upon application to Kgl luftfartsstyrelsen, Stockholm 12, Sweden.

Propeller limits	Maximum permissible diameter 2080 mm (6 ft 10 in)
Airspeed limits	Glide or dive 342 km/h (213 mph) IAS Flaps extended 153 km/h (95 mph) IAS Landing gear operation 175 km/h (109 mph) IAS Landing gear extended 220 km/h (137 mph) IAS.
C.G. Range	Normal category: Sta. 2208 (5 % MAC) to 2510 (27,1 % MAC) at 830 kg Sta. 2263 (9 % MAC) to 2510 (27,1 % MAC) at 1050 kg Sta. 2409 (19,7 % MAC) to 2510 (27,1 % MAC) at 1215 kg. Acrobatic category: Sta. 2208 (5 % MAC) to 2510 (27,1 % MAC) at 830 kg Sta. 2263 (9 % MAC) to 2510 (27,1 % MAC) at 1050 kg.

Center of gravity limits (within area indicated)



Retracting of the landing gear does not to any appreciable amount affect the location of the C.G. of the aeroplane.

Datum	Fuselage Station 0, located 2670 mm in front of the centre of bolt in main spar fitting lower side of wing, or 3800 mm in front of the forward side of the frame behind the rear seats.
MAC	1365 mm. Leading edge of MAC is at Sta 2140.
Levelling means	The fuselage rail shall be horizontal.
Max. weight	1215 kg (2680 lbs) for normal category. 1050 kg (2315 lbs) for acrobatic category. The rear seats may not be occupied during acrobatic flight.
Empty weight	Approx. 740–780 kg (1630–1720 lbs) according to equipment (See Note 2).
Number of seats	Four (two at 2445 mm and two at 3500 mm) (See Note 1).

Fuel capacity 160 lit. (35.2 Imp.gals) (2450 mm).
Oil sump capacity 11.4 lit. (2.5 Imp.gals) (780 mm).
Baggage compartment (3950 mm).

EQUIPMENT

1.	Wing	Item	Weight	Location (See Note 1)
		Saab dwg no. SA 1078456 (left) and SA 1078458 (right).		
2.	Engine			
2.1		Lycoming O-435-A with starter and generator but without propeller	184 kg (406 lbs)	(770 mm)
3.	Propeller			
3.1		Hartzell HC-12x20-8D with metal blades 8433-6	30,4 kg (67,0 lbs)	(180 mm)
		or HC-12x20-8D with plastic blades 8428-6	28,1 kg (62.0 lbs)	(180 mm)
		or HC-12x20-8C with metal blades 8433-6	31,3 kg (69.0 lbs)	(180 mm)
		or HC-12x20-8C with plastic blades 8428-6	28,1 kg (62.0 lbs)	(180 mm)
4.	Landing gear			
4.1		Nose wheel installation (380x150 mm tire model 527586) Saab dwg no. 1075016-1	17,2 kg (37.9 lbs)	(1425 mm)
4.2		Main wheels installation, total weight (465x165 mm tire, model 527584 or 1106213) Saab dwg no. 1075015-3 (left) and 10755015-4 (right)	35,5 kg (78,3 lbs)	(2935 mm)
5.	Electrical and Radio Equipment			
5.1		Starter, Delco-Remy	8,2 kg (18.0 lbs)	(860 mm)
5.2		Generator, Delco-Remy	4,8 kg (10.6 lbs)	(870 mm)
5.3		Battery, Reading R 24	21,0 kg (46.3 lbs)	(3900 mm)
5.4		Radio See Note 3		
6.	Other Equipment:			
6.1		Pilot seat left, incl seat back	4,2 kg (9.3 lbs)	(2445 mm)
6.2		Pilot seat right, incl seat back	4,2 kg (9.3 lbs)	(2445 mm)
6.3		Rear seats	11,0 kg (24.3 lbs)	(3500 mm)
6.4		Tool kit	4,7 kg (10.4 lbs)	(3100 mm)

6.5	Safety Belts, front seats, left and reight Saab dwg no 1038020-1, each	0,5 kg (1.0 lbs)	(2445 mm)
	rear seats, left and right Saab dwg no 1038020, each	0,5 kg (1.0 lbs)	(3500)
	Safety harness, front seat only, Safety belt as above with the addition of shoulder strap, Saab dwg no 1077965, complete each	1,1 kg (2.5 lbs)	(2445 mm)
6.6	Pre-stall warning indicator:		
	a) Type "Safe Flight", Saab dwg no 1102939	0,6 kg (1.3 lbs)	(2000 mm)
	b) Type "Youngman" Saab dwg no 1078488	1,5 kg (3.3 lbs)	(2245 mm)

NOTE 1. Values in mm shown i parentheses after equipment represent the horizontal arms from the Datum to the C.G. of the item measured.

NOTE 2. Aeroplane Flight Manual including list of basic equipment and weight data will be submitted for each aircraft with the certificate of airworthiness.

NOTE 3. Aircraft radio may be installed. The radioinstallation shall be inspected and certificated.
Available power for radio equipment is 200 W.

NOTE 4. According to Civil Air Regulations Amendment 3-4 § 4.85 a, (a), the steady rate of climb at sea level shall not be less than 10 V_{sl} or 300 feet per minute (=1.5 m/sek.), whichever is the greater.
V_{sl} (in the take-off configuration at max. take-off weight 1215 kg) is 112 km/h.
The rate of climb required is 695 feet per minute (3.5 m/sek.).
According to test flight reports the actual rate of climb in the take-off configuration is 590 feet per minute (3.0 m/sek.).
The Board considers this value acceptable.

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Division of Civil Aviation Inspektion

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