issues

SERVICE BULLETIN No. SportStar MAX-046a R1

1. CONCERNING TO:	SportStar MAX aircraft with S/N that follows: 20091202; 20091203; 20091204.
2. REASON:	Issue of Revision 1 of Supplement No. 21, Doc. No. SSM2008AOIUSS21, which includes added compliance with CFR Title 14 Part 91.205 and Part 91.411 requirements for IFR under VMC operation.
3. REQUIRED ACTIONS:	The operator/aircraft owner will replace existing POH Supplement No. 21 Revision 0 with Supplement No. 21 Revision 1, which is attached to this service bulletin.
4. LATEST DAY OF THE ACTION:	Unspecified.
5. CARRIED OUT BY:	Operator / owner of the aircraft.
6. COSTS COVERED BY:	Operator / owner of the aircraft.
7. NECESSARY MATERIAL:	POH Supplement No. 21 Revision 1, Doc. No. SSM2008AOIUSS21, date of issue May 10th, 2024.
8. WORK PROCEDURE:	Replace existing POH Supplement No. 21 Revision 0, Doc. No. SSM2008AOIUSS21, issued on March 1st, 2009, with new Supplement No.21 containing Revision 1, issued on May 10th, 2024. Enter the date of insertion and add your signature in the Log of Revisions on page 2.
9. APPENDICES:	POH Supplement No. 21, Revision 1, Doc. No. SSM2008AOIUSS21, date of issue May 10th, 2024.

Valid from: July 3rd, 2026

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Supplement No. 21

IFR Operation

Airplane Serial Number:

Airplane Registration Number:

Date of Issue: 10.5.2024

This Supplement must be contained in the Aircraft Operating Instructions if aircraft is approved for operation according to instrument flight rules (IFR) under visual meteorological conditions (VMC).

Information contained in this Supplement add or replace information from the standard Aircraft Operating Instructions in the further mentioned parts only.

Limitation, procedures and information not mentioned in this supplement are contained in the standard Aircraft Operating Instructions.

Log of Revisions

Rev. No.	Affected Pages	Description	Approved / Date	Inserted / Date
1	1 to 11	Added compliance with CFR Title 14 Part 91.205 and Part 91.411 requirements for IFR under VMC. Deleted unnecessary powerplant and performance information.	by Evektor / 16th of May, 2024	

Section 1 – General Information

1.1 Introduction

This supplement adds information necessary for the SportStar MAX operation according to instrument flight rules (IFR) under visual meteorological conditions (VMC), with equipment per 14 CFR 91.205 installed.

For additional information concerning IFR/IMC flying refer to:

FAA-H-8083-16B Instrument Flying Handbook / Instrument Procedures Handbook, available online at:
https://www.faa.gov/sites/faa.gov/files/regulations_policies/handbooks_manuals/aviation/instrument_procedures_handbook/FAA-H-8083-16B.pdf

Title 14 Part 91.205(b) of the U.S. Code of Federal Regulations concerning requirements for day VFR flights, available online at:
https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-91/subpart-C/section-91.205

Title 14 Part 91.205(c) of the U.S. Code of Federal Regulations concerning requirements for night VFR flights, available online at:
https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-91/subpart-C/section-91.205

Title 14 Part 91.205(d) of the U.S. Code of Federal Regulations concerning requirements for IFR flights, available online at:
https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-91/subpart-C/section-91.205

Title 14 Part 91.411 of the U.S. Code of Federal Regulations concerning requirements for inspections on aircraft that can fly IFR, available online at:
https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-91/subpart-E/section-91.411

1.2 Certification basis

This SportStar MAX airplane in IFR under VMC version complies with requirements for LSA operated under Instrument Flight Rules in accordance with CFR Title 14 Part 91.205 requirements, particularly in terms of instrument and equipment installed in accordance with 14 CFR Part 91.205(d), and inspections in accordance with 14 CFR Part 91.411.

1.5 Definitions and abbreviations

IFR conditions – weather conditions below the minimum for flight under visual flight rules

IMC – instrument meteorological conditions

VMC – visual meteorological conditions

AMT – means aviation maintenance technician

Section 2 – Limitations

2.12 Kind of Operation

This SportStar MAX airplane is approved for kinds of operation that follows:

a) Normal VFR operation
SportStar MAX is approved for day VFR flight operations under no icing conditions.

b) Night VFR operation
Subject to legal requirement applicable in the country of registration, the SportStar MAX may be operated VFR at night under no icing conditions.

c) IFR operation
Subject to legal requirement applicable in the country of registration and provided that the aircraft is appropriately equipped, the aircraft may be operated IFR in VMC (visual meteorological conditions) with VFR minimums and with the following limitations:

i. Not authorized for IFR flight under known icing conditions,
ii. Not authorized for IFR flight within 25 miles of known lighting or thunderstorm.
iii. IFR flight under IMC (instrument meteorological conditions) or below VFR minimums is prohibited.

All flights for IFR also require that the aircraft is maintained to country of registration. For aircraft registered in the United States, this includes Title 14 Part 91.411 tests and appropriate AMT.

WARNING

NIGHT FLIGHTS ACCORDING TO VFR, FLIGHTS ACCORDING TO IFR UNDER VMC, ARE APROVED ONLY WHEN INSTRUMENTTATION REQUIRED FOR SUCH FLIGHTS IS INSTALLED AND FLIGHT PERFORMED BY A PILOT WITH APPROPRIATE RATING! INTENTIONAL FLIGHTS UNDER ICING CONDITIONS ARE PROHIBITED.

FLIGHT WITHIN 25 MILES OF KNOWN LIGHTNING OR THUNDERSTORMS IS PROHIBITED.

Instruments and equipment required for VFR Day, VFR Night, and IFR under IMC in accordance with applicable regulation:

Equipment (page 1 of 2)	Kind of operation in accordance with regulation				
	VFR Day		**VFR Night**		**IFR under VMC**
	ASTM F 2245	**CFR 91.205(b)**	**ASTM F 2245 Annex 2 LSA**	**CFR 91.205 (c)**	**CFR 91.205(d)**
Electrical power					
Master switch	✓	-	✓	-	-
Switches, circuit breakers or fuses	✓	-	✓	-	-
Spare fuse set	-	-	✓	✓	✓
An adequate source of electrical energy for all installed electrical and radio equipment	-	-	✓	✓	✓
Generator or alternator of adequate capacity	-	-	-	-	✓
Equipment and Furnishing					
Safety harness for every used seat	✓	✓	✓	✓	✓
ELT – if required	✓	✓	✓	✓	✓
Approved flotation gear - if required	-	✓	-	✓	✓
A clock displaying hours, minutes, and seconds	-	-	-	-	✓
Fuel System					
Fuel quantity indication	✓	✓	✓	✓	✓
Lighting					
Anti-collision lights	-	✓	✓	✓	✓
Position lights	-	-	✓	✓	✓
Landing light - if required	-	-	✓	✓	✓
Instrument lighting	-	-	✓	-	-
One switch for each light	-	-	✓	-	-
Navigation and Pitot-static					
Airspeed indicator	✓	✓	✓	✓	✓
Altimeter	✓	✓	✓	✓	✓
Altimeter adjustable for barometric pressure	-	-	-	-	✓
Magnetic compass – if required	✓	✓	✓	✓	✓
Attitude indicator (Artificial horizon)	-	-	✓	-	✓
Gyroscopic rate-of-turn indicator - if required	-	-	-	-	✓
Gyroscopic direction indicator (Directional gyro or equivalent)	-	-	-	-	✓
Slip-skid indicator	-	-	-	-	✓
Suitable two-way radio communication and navigation equipment	-	-	-	-	✓

Equipment (page 2 of 2)	Kind of operation in accordance with regulation				
	VFR Day		VFR Night		IFR under VMC
	ASTM F 2245	CFR 91.205(b)	ASTM F 2245 Annex 2 LSA	CFR 91.205 (c)	CFR 91.205(d)
Powerplant					
Coolant temperature indication – if required	✓	✓	-	✓	✓
RPM indication	✓	✓	✓	✓	✓
Oil temperature indication – if required	✓	✓	✓	✓	✓
Oil pressure indication – if required	✓	✓	✓	✓	✓
Engine ignition switch	✓	-	✓	-	-
Engine instruments as required by the engine manufacturer	✓	-	✓	-	-

NOTE

"If required" means required by operating / flight rules.

2.18 Limitation Placards

The following placard is located on the tilting canopy:

This Light Sport Aircraft has been approved by Manufacturer for IFR flights in VMC (Visual Meteorological Conditions) with the following limitations:
Non authorized for IFR flight under known icing conditions.
Non authorized for IFR flight within 25 miles of known lightning or thundersrorm.
IFR flight under IMC (Instrument Meteorological Conditions) or below VFR minimums is prohibited.

Section 3 – Emergency Procedures

Not affected.

Section 4 – Normal Procedures

4.4 Pre-flight Check

IFR under VMC version requires below listed additional checks:

1. Condition and attachment of the static discharge wicks on the ailerons, elevator, and rudder.
2. Condition and attachment of the alternate Pitot tube under the right wing.
3. Visual check of no water in pitot system sediment cups from bottom of the fuselage.

Section 5 – Performance

Not Affected.

Section 6 – Weight & Balance

Not Affected.

Section 7 – Airplane & System Description

7.4 Controls in the Cockpit and Instrument Panel

Figure 7-1 Cockpit control elements

IFR under VMC version includes:

6	Static pressure selector	to switch between primary or alternate static pressure
20	Dimmer	to adjust intensity of instrument lighting

7.10 Canopy

IFR under VMC version of the airplane is fitted with a black-painted fiberglass glareshield, mounted on the tip-up canopy. The glareshield avoids reflection of the instruments on the windshield and improved readability of instruments under sunny conditions.

7.13 Electrical System

IFR under VMC version of SportStar MAX airplane is fitted with the **auxiliary generator** SD-20 (or BC 425-H), or with the external alternator F3A mounted on the engine.

The external alternator is switched on/off by **AUX. GEN** switch located on the lower left part of the instrument panel. There is also **AUX. GEN** circuit breaker located below the left part of the instrument panel.

In case of external alternator installation in the airplane there is also a **GEN** switch installed on the lower left part of the instrument panel. The **GEN** switch switches off and on the main generator.

There are also **static discharge wicks** installed on the ailerons, elevator, and rudder. They are used to allow continuous satisfactory operation of onboard navigation and radio communication systems. During adverse charging conditions they limit the potential static buildup on the airplane and control interference generated by static charge.

WARNING

STATIC DISCHARGERS ARE NOT LIGHTING ARRESTORS AND DO NOT REDUCE OR INCREASE THE LIKEHOOD OF AN AIRCRAFT BEING STRUCK BY LIGHTNING.

THE AIRPLANE IS NOT AUTHORIZED FOR FLIGHT WITHIN 25 MILES OF KNOWN LIGHTNING OR THUNDERSTORMS.

There is also bonding done on IFR under VMC version of SportStar MAX airplane. Bonding connections are made of screws, nuts, washers, clamps, and bonding jumpers. Bonding ensures that all metal parts have the same amount of static charge, which reduce risk of spark and fire. Bonding also provides the necessary low-resistance return path for single-wire electrical systems. This low-resistance path provides a means of bringing the entire aircraft to the earth's potential when it is grounded.

7.11.1 Lighting

IFR under VMC version is equipped with the landing light, position lights and anticollision beacons on the wing tips. There is also cockpit light installed. The instruments are illuminated with a dimmer on the instrument panel to decrease intensity of instrument lighting. Some instruments, like GPS etc., have their own adjustment of brightness, contrast, etc.

7.12 Pitot-static System

IFR under VMC version is equipped with an alternate pitot-static tube located under the right half of the wing which serves only as a source of alternate static pressure. Both primary and alternate pitot tubes are heated. There is a static pressure select knob located on the instrument panel to switch from Primary to Alternate static pressure.

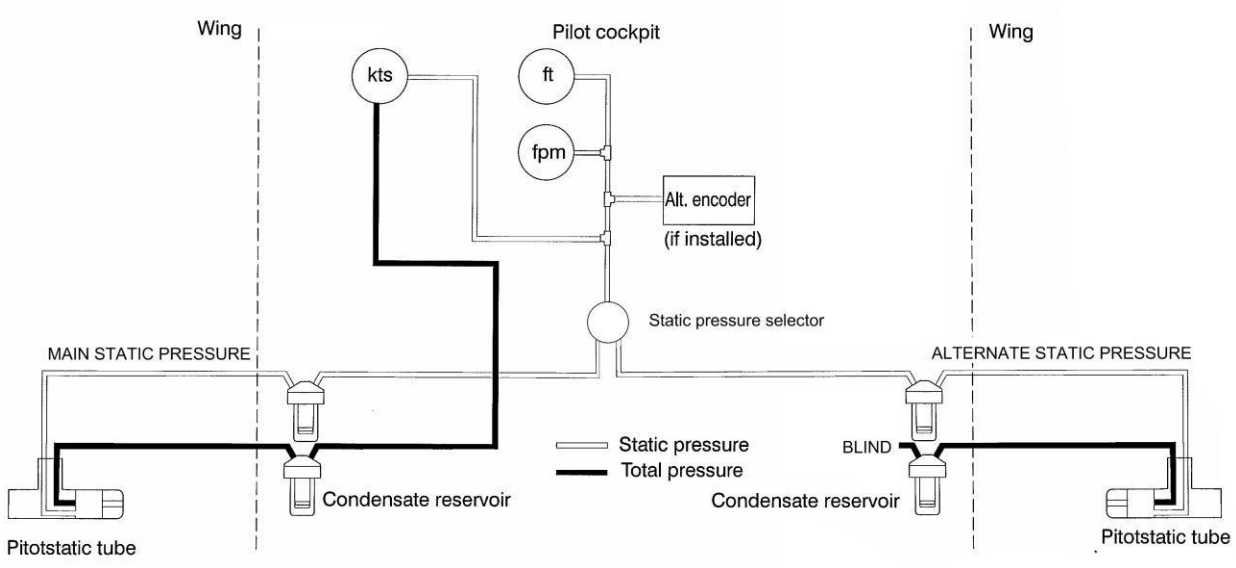

Fig. 7-5 Scheme of IFR under VMC pitot-static system

WARNING

THE AIRPLANE IS NOT FITTED WITH DEICING SYSTEM. THE AIRPLANE IS NOT AUTHORIZED FOR FLIGHT INTO THE KNOWN OR FORECAST POSSIBLE ICING CONDITIONS.

Section 8 – Handling, Servicing & Maintenance

Not Affected.

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