U.S. Department
of Transportation

**Federal Aviation
Administration**

Flight Standards District Office
3180 N.W. 229th Ave.
Hillsboro Oregon 97124
503-615-3200 Fax: 503-615-3300

EXPERIMENTAL OPERATING LIMITATIONS
Operating Amateur-Built Aircraft

REG. NO.	MAKE:	MODEL:	SERIAL NO:
N 21MX	MOORE EDWARD R	MX8	008

THESE OPERATING LIMITATIONS ARE PART OF THE SPECIAL AIRWORTHINESS CERTIFICATE AND MUST BE ACCESSIBLE TO THE PILOT

Both Phase I and II:

1. No person may operate this aircraft for other than the purpose of meeting the requirements of § 91.319(b) during phase I flight testing, and for recreation and education after meeting these requirements as stated in the program letter (required by § 21.193) for this aircraft. In addition, this aircraft shall be operated in accordance with applicable air traffic and general operating rules of part 91 and all additional limitations herein prescribed under the provisions of § 91.319(e). These operating limitations are a part of the FAA Form 8130-7, special airworthiness certificate, and are to be carried in the aircraft at all times for availability to the pilot in command of the aircraft.

2. Aircraft instruments and equipment installed and used under § 91.205 must be inspected and maintained in accordance with the requirements of part 91. Any maintenance or inspection of this equipment must be recorded in the aircraft maintenance records.

3. No person may operate this aircraft for carrying persons or property for compensation or hire.

4. The aircraft shall contain the placards, markings, etc. as required by § 91.9. In addition, the placards and markings must be inspected for legibility and clarity, and the associated systems inspected for easy access and operation, to ensure they function as intended by the builder/owner during each condition inspection.

5. This aircraft must display the word **"EXPERIMENTAL"** in accordance with § 45.23(b).

6. This aircraft is prohibited from aerobatic flight; i.e., an intentional maneuver involving an abrupt change in the aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.

7. The pilot-in-command of this aircraft shall hold a category/class rating, or an authorized instructor's logbook endorsement. The pilot-in-command shall meet the requirements of § 61.31(e), (f), (g), (h), (i) and (j) as appropriate.

8. This aircraft shall not be used for glider towing, banner towing, or intentional parachute jumping.

9. The pilot in command of this aircraft shall notify air traffic control of the experimental nature of this aircraft when operating into or out of airports with an operational control tower. When filing Instrument Flight Rules (IFR) the experimental nature of this aircraft shall be listed in the remarks section of the flight plan.

10. After incorporating a major change as described in § 21.93, the aircraft owner is required to re-establish compliance with § 91.319(b) and **notify the geographically responsible FSDO of the location of the proposed test area. The aircraft owner must obtain concurrence from the FSDO as to the suitability of the proposed test area.** If the major change includes installing a different make and model of engine or propeller, the aircraft owner must fill out a revised FAA Form 8130-6 to update the aircraft's file in the FAA Aircraft Registry. All operations must be conducted day VFR conditions in a sparsely populated area. The aircraft must remain in flight test for a minimum of 5 hours or for the time the FSDO assigns. Persons nonessential to the flight must not be carried. The aircraft owner must make a detailed logbook entry describing the change before the test flight. Following satisfactory completion of the required number of flight hours in the flight test area, the pilot must certify in the records that the aircraft has been shown to comply with § 91.319(b). Compliance with § 91.319(b) must be recorded in the aircraft records with the following or a similarly worded statement: **"I certify that the prescribed flight test hours have been completed and the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, has no hazardous operating characteristics or design features, and is safe for operation. The following aircraft operating data has been demonstrated during the flight testing: speeds Vso_____, Vx_____, and Vy_____, and the weight_____, and CG location_____ at which they were obtained."**

11. No person shall operate this aircraft unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with the scope and detail of Appendix D to § 43, or other FAA approved programs, and was found to be in a condition for safe operation. As part of the condition inspection, cockpit instruments must be marked appropriately and needed placards installed in accordance with § 91.9. In addition, system-essential controls must be in good condition, securely mounted, clearly marked, and provide for ease of operation. This inspection will be recorded in the aircraft maintenance records.

12. Condition inspections shall be recorded in the aircraft maintenance records showing the following or similarly worded statement:

    I certify that this aircraft has been inspected on [INSERT DATE] in accordance with the scope and detail of Appendix D of Part 43 and found to be in a condition for safe operation.

    The entry will include the aircraft's total time in service and the name, signature, certificate number, and type of certificate held by the person performing the inspection.

13. An experimental aircraft builder certificated as a Repairman, for this aircraft, under § 65.104, or an appropriately rated FAA certificated mechanic as authorized by § 43.3 (Airframe and Powerplant mechanic) may perform the condition inspection required by these operating limitations.

14. Application must be made to the geographically responsible FSDO or MIDO for any revision to these limitations.

_ Experimental Operating Limitations - Operating Amateur-Built Aircraft

Phase I. Initial Flight Test in Restricted Area:

1. During Phase I flight testing, to meet the requirements of § 91.319(b), all flights shall be conducted within the geographical area described as follows:
   A 50 NM radius of Brazoria Co. Airport (LBX) Angeton Tx. (Lake Jakson).

   The designated area must be over open water or sparsely populated areas having light air traffic. This includes Class B and C airspaces. The size of the area shall be that required to safely conduct the type of anticipated maneuvers and tests, as appropriate.

2. This aircraft shall be operated for a minimum of 40 hours and shall be conducted in the assigned geographical area.

3. All test flights, as a minimum, must be conducted under VFR, day only. Guidance concerning the scope and detail of test flights can be found in Advisory Circular 90-89, Amateur-built Aircraft and Ultralight Flight Testing Handbook. Following satisfactory completion of the required number of flight hours in the flight test area, the pilot must certify in the records that the aircraft has been shown to comply with § 91.319(b). Compliance with § 91.319(b) must be recorded in the aircraft records with the following or a similarly worded statement: **"I certify that the prescribed flight test hours have been completed and the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, has no hazardous operating characteristics or design features, and is safe for operation. The following aircraft operating data has been demonstrated during the flight testing: speeds Vso_____, Vx_____, and Vy_____, and the weight_____ and CG location_____ at which they were obtained."**

4. During the flight testing phase, no person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight.

Phase I. Initial Flight Test in Restricted Area:

1. During Phase I flight testing, to meet the requirements of § 91.319(b), all flights shall be conducted within the geographical area described as follows:
   A 50 NM radius of Brazoria Co. Airport (LBX) Angeton Tx. (Lake Jakson)

   The designated area must be over open water or sparsely populated areas having light air traffic. This includes Class B and C airspaces. The size of the area shall be that required to safely conduct the type of anticipated maneuvers and tests, as appropriate.

2. This aircraft shall be operated for a minimum of 40 hours and shall be conducted in the assigned geographical area.

3. All test flights, as a minimum, must be conducted under VFR, day only. Guidance concerning the scope and detail of test flights can be found in Advisory Circular 90-89, Amateur-built Aircraft and Ultralight Flight Testing Handbook. Following satisfactory completion of the required number of flight hours in the flight test area, the pilot must certify in the records that the aircraft has been shown to comply with § 91.319(b). Compliance with § 91.319(b) must be recorded in the aircraft records with the following or a similarly worded statement: **"I certify that the prescribed flight test hours have been completed and the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, has no hazardous operating characteristics or design features, and is safe for operation. The following aircraft operating data has been demonstrated during the flight testing: speeds Vso_____, Vx_____, and Vy_____, and the weight_____ and CG location_____ at which they were obtained."**

4. During the flight testing phase, no person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight.

Phase II: The Following Limitations Apply Outside of the Flight Test Area:

1. This special operating limitation is applicable to this aircraft after it has satisfactorily completed all requirements for Phase I flight test, has the appropriate endorsement in the aircraft logbook and is operating in Phase II.

2. Except for takeoffs and landings, this aircraft may not be operated over densely populated areas or in congested airways.

3. This aircraft is prohibited from operating in congested airways or over densely populated areas unless directed by Air Traffic Control, or unless sufficient altitude is maintained to effect a safe emergency landing in the event of a power unit failure, without hazard to persons or property on the ground.

4. After completion of Phase 1 flight testing, unless appropriately equipped for night and/or instrument flight in accordance § 91.205, this aircraft is to be operated under VFR day only.

5. The pilot in command of this aircraft must advise each passenger of the experimental nature of this aircraft, and explain that it does not meet the certification requirements of a standard certificated aircraft.

6. This aircraft does not meet the requirements of the applicable, comprehensive, and detailed airworthiness code as provided by Annex 8 of the International Civil Aviation Organization (ICAO). The owner/operator of this aircraft must obtain written permission from another country's Civil Aviation Authority (CAA) prior to operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the CAA in the country of operation.

[redacted]
Frank Sneed
DART[redacted]

Date: 03-11-2009

ACKNOWLEDGMENT OF SPECIAL OPERATING LIMITATIONS

TO WHOM IT MAY CONCERN:

I certify that I have read and understand the Special Operating Limitations which are a part of the Special Airworthiness Certificate, FAA Form 8130-7, issued MARCH 11, 2009.

This Airworthiness Certificate is issued for aircraft make MOORE EDWARD R model MXS, serial number 008, and registration number N21MX.

[redacted] MARCH 11, 2009

APPLICANT DATE

Form Approved
O.M.B. NO. 2120-0018

US Department of Transportation
Federal Aviation Administration

ELIGIBILITY STATEMENT
AMATEUR-BUILT AIRCRAFT

Instructions: Print or type all information except signature. Submit original to an authorized FAA representative. Applicant completes Section I thru III. Notary Public Completes Section IV.

I. REGISTERED OWNER INFORMATION

Name(s) EDWARD R. MOORE

Address(es) [redacted] (No. & Street) SAN DIEGO (City) CA (State) 92109-1402 (Zip)

Telephone No.(s) ( ) (Residence) [redacted] (Business)

II. AIRCRAFT INFORMATION

Model MXS

Assigned Serial No. 008

Registration No. N21MX

Aircraft Fabricated: Plan ☐ Kit ☒

Engine(s) Make LYCOMING

Engine(s) Serial No. L-52636-08E

Prop./Rotor(s) Make HARTZELL

Prop./Rotor(s) Serial No.(s) A90516B

III. MAJOR PORTION ELIGIBILITY STATEMENT OF APPLICANT

I certify the aircraft identified in Section II above was fabricated and assembled by EDWARD R. MOORE
(Name of Person(s) (Please Print))
for my (their) education or recreation. I (we) have records to suppor this statement and will make them available to the FAA upon request.

-NOTICE-

Woever in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or who makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years, or both (U.S. Code, Title 18, Sec. 1001.)

APPLICANT'S DECLARATION

I hereby certify that all statements and answers provided by me in this statement form are complete and true to the best of my knowledge, and I agree that they are to be considered part of the basis for issuance of any FAA certificate to me. I have also read and understand the Privacy Act statement that accompanies this form.

Signature of Applicant (*In Ink*) [redacted] Date 3-10-2009

IV. NOTARIZATION STATEMENT

FAA Form 8130-12 (4-88)

ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of San Diego } SS.

On 3-09-09 (DATE), before me, Carol Harvey, Notary Public,

personally appeared Edward R. Moore, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

CAROL HARVEY
Commission # 1647818
Notary Public - California
San Diego County
My Comm. Expires Feb 26, 2010

WITNESS my hand and official seal.

[redacted]
NOTARY'S SIGNATURE

PLACE NOTARY SEAL IN ABOVE SPACE

OPTIONAL INFORMATION

The information below is optional. However, it may prove valuable and could prevent fraudulent attachment of this form to an unauthorized document.

CAPACITY CLAIMED BY SIGNER (PRINCIPAL)

- [x] INDIVIDUAL
- [ ] CORPORATE OFFICER _____ TITLE(S)
- [ ] PARTNER(S)
- [ ] ATTORNEY-IN-FACT
- [ ] TRUSTEE(S)
- [ ] GUARDIAN/CONSERVATOR
- [ ] OTHER: _____

DESCRIPTION OF ATTACHED DOCUMENT

Eligibility Statement - Amateur - Built Aircraft
TITLE OR TYPE OF DOCUMENT

1
NUMBER OF PAGES

3-10-09
DATE OF DOCUMENT

OTHER

SIGNER (PRINCIPAL) IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES)

RIGHT THUMBPRINT OF SIGNER

Top of thumbprint here

MOORE EDWARD R MARCH 11, 2009

N21MX MXS Serial# 008 Weight and Balance

MOST FORWARD LIMIT

	Station	Weight	Moment
Main Gear	6.85	1181.0	8089.850
Tail Wheel	182.23	50.0	9111.500
Main Fuel Tank	8.75	110.5	966.875
Wing Aux. Fuel	2.68	182.0	487.760
Smoke Oil Header	8.00	37.5	300.000
Pilot	61.00	230.0	14030.000
Baggage	81.95	0.0	0.000
Totals		1791.000	32985.985

Center of Gravity	18.42
Mean Aerodynamic Cord (MAC) =	52.86
% of MAC	19.56%

FWD LIMIT 19.5% MAC (CG at 18.42)

AFT LIMIT 28% MAC (CG at 22.91")

Leading Edge of MAC at 8.11

Note Empty weight includes 12 quarts of engine oil.

MOORE EDWARD R MARCH 11, 2009

N21MX MXS Serial# 008 Weight and Balance

EMPTY WEIGHT

	Station	Weight	Moment
Main Gear	6.85	1181.0	8089.850
Tail Wheel	182.23	50.0	9111.500
Main Fuel Tank	8.75	0.0	0.000
Wing Aux. Fuel	2.68	0.0	0.000
Smoke Oil Header	8.00	0.0	0.000
Pilot	61.00	0.0	0.000
Baggage	81.95	0.0	0.000
Totals		1231.000	17201.350

Center of Gravity	13.97
Mean Aerodynamic Cord (MAC) =	52.86
% of MAC	11.09%

FWD LIMIT 19.5% MAC (CG at 18.42)

AFT LIMIT 28% MAC (CG at 22.91")

Leading Edge of MAC at 8.11

Note Empty weight includes 12 quarts of engine oil.

MOORE EDWARD R MARCH 11, 2009

N21MX MXS Serial# 008 Weight and Balance

EMPTY WEIGHT

	Station	Weight	Moment
Main Gear	6.85	1181.0	8089.850
Tail Wheel	182.23	50.0	9111.500
Main Fuel Tank	8.75	0.0	0.000
Wing Aux. Fuel	2.68	0.0	0.000
Smoke Oil Header	8.00	0.0	0.000
Pilot	61.00	0.0	0.000
Baggage	81.95	0.0	0.000
Totals		1231.000	17201.350

Center of Gravity	13.97
Mean Aerodynamic Cord (MAC) =	52.86
% of MAC	11.09%

FWD LIMIT 19.5% MAC (CG at 18.42)

AFT LIMIT 28% MAC (CG at 22.91")

Leading Edge of MAC at 8.11

Note Empty weight includes 12 quarts of engine oil.

MOORE EDWARD R MARCH 11, 2009

N21MX MXS Serial# 008 Weight and Balance

MOST REARWARD LIMIT

	Station	Weight	Moment
Main Gear	6.85	1181.0	8089.850
Tail Wheel	182.23	50.0	9111.500
Main Fuel Tank	8.75	32.5	284.375
Wing Aux. Fuel	2.68	0.0	0.000
Smoke Oil Header	8.00	0.0	0.000
Pilot	61.00	230.0	14030.000
Baggage	81.95	45.0	3687.750
Totals		1538.500	35203.475

Center of Gravity	22.88
Mean Aerodynamic Cord (MAC) =	52.86
% of MAC	27.94%

FWD LIMIT 19.5% MAC (CG at 18.42)

AFT LIMIT 28% MAC (CG at 22.91")

Leading Edge of MAC at 8.11

Note Empty weight includes 12 quarts of engine oil.

MOORE EDWARD R MARCH 11, 2009

N21MX MXS Serial# 008 Weight and Balance

TEST FLIGHT

	Station	Weight	Moment
Main Gear	6.85	1181.0	8089.850
Tail Wheel	182.23	50.0	9111.500
Main Fuel Tank	8.75	110.5	966.875
Wing Aux. Fuel	2.68	0.0	0.000
Smoke Oil Header	8.00	0.0	0.000
Pilot	61.00	230.0	14030.000
Baggage	81.95	0.0	0.000
Totals		1571.500	32198.225

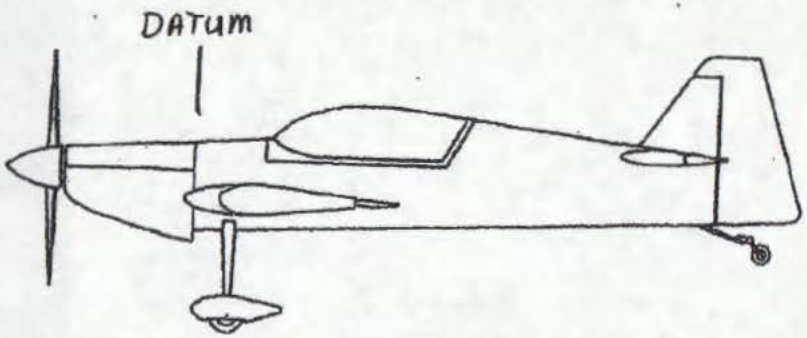
Center of Gravity	20.49
Mean Aerodynamic Cord (MAC) =	52.86
% of MAC	23.42%

FWD LIMIT 19.5% MAC (CG at 18.42)

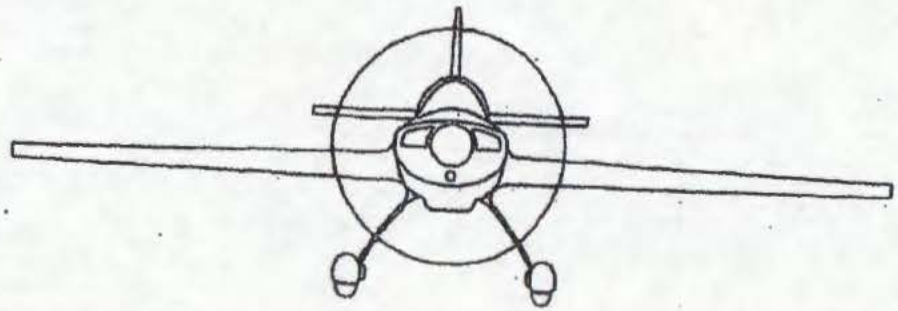
AFT LIMIT 28% MAC (CG at 22.91")

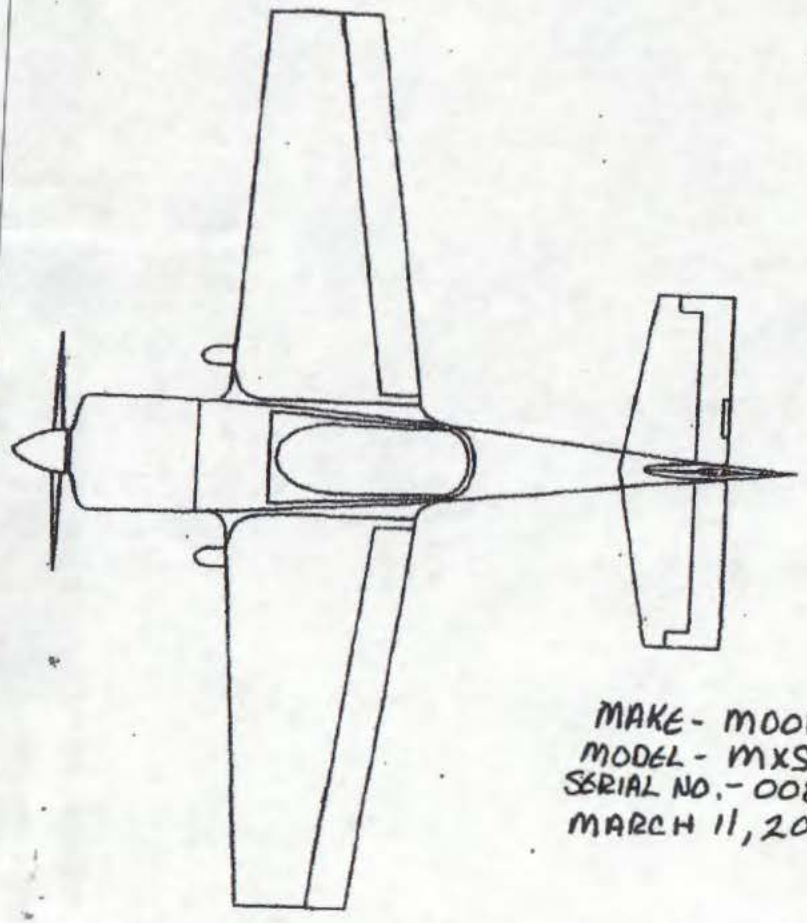
Leading Edge of MAC at 8.11

Note Empty weight includes 12 quarts of engine oil.



DATUM IS FORWARD FACE OF FIREWALL





MAKE- MOORE EDWARD R
MODEL- MXS
SERIAL NO.- 008
MARCH 11, 2009

MXR TECHNOLOGIES, INC.

HEIGTH (FT)	6.0
LENGTH (FT)	21.
WING SPAN (FT)	24
WING AREA (FT)	102
EMPTY WEIGHT (LBS)	1231
GROSS WEIGHT (LBS)	1840
ACRO WEIGHT	1600
ACRO WEIGHT ULTIMATE LOADING	± 14
ELEVATOR DEFLECTION (DEG)	±
RUDDER DEFLECTION (DEG)	± 30
AILERON DEFLECTION (DEG)	± 25
ENGINE (HP)	250-380
STALL SPEED	58 KTS.
MAX SPEED, VNE	240KTS
VERTICAL PENETRATION	3500 FT
COCKPIT WIDTH FRONT/REAR	28/23
PILOT SIZE RANGE	5'2" TO 6'4"
PILOT WEIGHT RANGE	UP TO 290 LBS
SEATBACK TO PANEL - REAR	27 IN
SEAT LAYBACK ANGLE (DEG)	45
RUDDER PEDAL ADJUSTMENT - REAR	7in.
FUEL CAPACITY (US GALS)	57