

MOONEY M20 SERIES SERVICE & MAINTENANCE MANUAL

APPLICABLE TO THE FOLLOWING AIRCRAFT

MODEL	SERIAL NUMBERS	MODEL	SERIAL NUMBERS
MARK 21		MASTER	
1962-M20C	S/N 1940 thru 2207, S/N 2209 thru 2255, S/N 2257 thru 2296, and S/N 1852	1963-M20D	S/N 101 thru 200 and S/N 201 thru 251
1963-M20C	S/N 2297 thru 2622, S/N 2208, and S/N 2256	1964-M20D	S/N 201 thru 251
1964-M20C	S/N 2623 thru 2741, S/N 2743 thru 2806	1965-M20D	S/N 252 thru 259
1965-M20C	S/N 2807 thru 3184 and S/N 2742	1966-M20D	S/N 260 Only
1966-M20C	S/N 3185 thru 3466		
1967-M20C	S/N 670001 thru 670149		
SUPER 21		EXECUTIVE 21	
1964-M20E	S/N 101 thru 399, 401 thru 469	1967-M20F	S/N 660003, 660004, and S/N 670001 thru 670539
1965-M20E	S/N 470 thru 831, and S/N 400		
1966-M20E	S/N 832 thru 1308		
1967-M20E	S/N 670001 thru 670062		

THIS REVISED EDITION SUPERSEDES ALL MOONEY M20C, D & E (1962-1965) SERVICE & MAINTENANCE MANUALS.

PART NUMBERS AND STATION CALLOUTS IN THIS MANUAL MAY NOT APPLY TO ALL MODELS.

ALL REFERENCES IN THIS MANUAL TO M20E MODEL AIRCRAFT ARE ALSO APPLICABLE TO M20F MODEL AIRCRAFT UNLESS OTHERWISE NOTED.

A SIX-DIGIT SERIAL NUMBER CODE WILL BE USED FOR ALL 1967 AND SUBSEQUENT M20 SERIES MODELS. CONSEQUENTLY, ALL FOUR-DIGIT (1962-1966) SERIAL NUMBER CALLOUTS IN THIS MANUAL WITH "& ON" DESIGNATIONS SHOULD BE UNDERSTOOD TO INCLUDE ALL SUBSEQUENT FOUR-DIGIT AND SIX-DIGIT SERIAL NUMBERS FOR THE MODEL(S) SPECIFIED.

W59929

Jan # 3216

5-18-99 π 2929

10-10-02 π 3202

12-10-07 π 3435

8-10-10 π 3550

4-26-12 π 3611

REVISED JULY 1980

MOONEY M20 SERIES

PARTS CATALOG

REVISED JULY 1976

APPLICABLE TO THE FOLLOWING AIRCRAFT

MODEL	SERIAL NUMBERS	MODEL	SERIAL NUMBERS
MARK 21			
1965—M20C	2807 thru 3184 and 2742	1965—M20E	470 thru 831 and 400
1966—M20C <u>32.16</u>	3185 thru 3466	1966—M20E	832 thru 1308
1967—M20C	670001 thru 670149	1967—M20E	670001 thru 670062
EXECUTIVE 21			
MASTER			
1967—M20F	660003 and 660004 670001 thru 670539	1965—M20D 1966—M20D	252 thru 259 260 only

NOTE: This revised catalog supercedes the 1965-1966 Mooney M20 Series parts catalog.

A six-digit serial number code is used for all 1967 and subsequent M20 Series models. Consequently, all four-digit (1965-1966) serial number references with "& ON" designations in this catalog should be understood to include all subsequent four-digit and six-digit serial numbers for the model(s) specified.



Richard, Nancy Oswald
315-626-2429
3386 Emerick Rd
Cato, NY 13033

Wayne McGhee

Account Executive
800.525.6726 503.391.3439 (direct)



UPS Aviation Technologies

A subsidiary of United Parcel Service

2345 Turner Road SE, Salem OR 97302
503.391.3856 (fax)
wayne.mcgee@at.ups.com (e-mail)

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Apollo GX User's Guide



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Introduction
Getting Started
Navigation Basics
Map Waypoint Database
Flight Plan Functions
System Functions
Appendices
Index

MOONEY "POSITIVE CONTROL"
OPERATION & SERVICE INSTRUCTIONS
11968

BRITTAIN INDUSTRIES, INC.
HAWTHORNE, CALIFORNIA



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
5/31/2018

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9.1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark N5992Q	Serial No 3216
	Make MOONEY	Model M20C
2. Owner	Name (As shown on registration certificate) KOZA PETER A	Address (As shown on registration certificate) Address 732 PRAIRIE STAR CIR City COLORADO SPRINGS State CO Zip 80916 Country USA

3. For FAA Use Only

AS PER FAA MEMO Installation Approval for ADS-B OUT Systems DATED 3/2/2016 Page 3, This form can be submitted directly to the Aircraft Registration Branch without FAA approval/completion of Block 3.

4. Type		5. Unit Identification		
Repair	Alteration	Unit	Make	Model
☐	☒	AIRFRAME	_____	(As described in Item 1 above)
☐	☐	POWERPLANT		
☐	☐	PROPELLER		
☐	☐	APPLIANCE	Type	
			Manufacturer	

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name	Gregory Jones	☒ U. S. Certified Mechanic	Manufacturer
Address	201 Whitney Dr	☐ Foreign Certified Mechanic	C Certificate No.
City	Pueblo	☐ Certified Repair Station	
Zip	81004	☐ Certified Maintenance Organization	3252805

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B	☐	Signature/Date of Authorized Individual <i>G. Jones</i> 2019-12-12
---	--------------------------	---

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is

☒ Approved ☐ Rejected

BY	FAA Fit Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	Repair Station	Inspection Authorization	Other (Specify)

Certificate or Designation No. 3252805	Signature/Date of Authorized Individual <i>G. Jones</i> 2019-12-12
---	---

LASAR SPEED MODIFICATIONS STC
FAA APPROVAL STC NO SA4443NM
Issued to PAUL E LOEWEN

LASAR SPEED MODIFICATIONS STC

WING TIP FAIRINGS

LASAR DRAWING LIST REPORT 107



For MOONEY Airplanes including Models : M20 B thru M20 J

Number of Pages : 1-5

Issued March 1, 1982

Revised May 24, 1990

LAKE AERO STYLING AND REPAIR

4725 Highland Springs Road

Lakeport, California 95453

LAKE AERO STYLING AND REPAIR
4725 Highland Springs Road
Lakeport, California 95453

DRAWING LIST REPORT NO 107

May 24, 1990
Revised July 1, 1997

INSTALLATION AND DRAWING PAGE CONTROL SHEET

	Page
Introduction	1 05 - 24 - 90
Installation Instructions	1 05 - 24 - 90
Installation Instructions	2 07 - 01 - 97
Parts List	3 07 - 01 - 97
Approval Data	3 05 - 24 - 90
Weight and Balance	3 05 - 24 - 90
Assembly Drawing, L020-1 - Wing Tip	4 07 - 01 - 97
FAA STC Certificate	5 07 - 09 - 82
*Detail Drawing, L020 - Wing Tip	6 05 - 24 - 90
*Proprietary Drawing	

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA8659SW SPINNER

This Certificate issued to

Aero Resources, Inc.
P. O. Box 1833
Houston, Texas 77251

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 3 of the Civil Air Regulations.

Original Product Type Certificate Number: 2A3

Make: Mooney

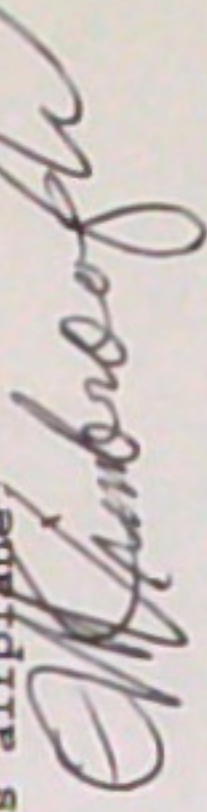
Model: M20A-G

Description of Type Design Change: Installation of Mooney 680031 spinner assembly or Hartzell Model A-2295-4 or -5 spinner assembly (2 or 3 blade propeller), in accordance with Aero Resources, Incorporated, drawing list Report Number 1005, dated December 9, 1992; Revision 2 dated July 9, 2001, or later FAA approved revision.

Limitations and Conditions: Installation of 3-blade propeller in accordance with STC SA4529NM or STC SA315CH is required for the 3-blade spinner installation. Compatibility of this modification with previously installed equipment must be determined by installer.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Issued on February 4, 2005, for installation on N5992Q, Serial Number 3216, a 1966 Mooney M20C, for exclusive use on this airplane.



Date of application: December 10, 1992

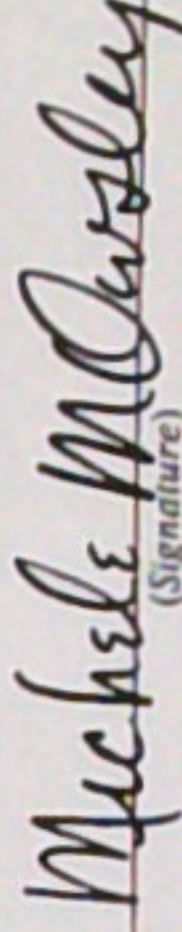
Date revised

Date of issuance: July 19, 1993

Date amended: 6/15/1997; 9/26/1997; 2/12/2002



By direction of the Administrator


(Signature)

Michele M Owsley
Manager, Airplane Certification Office
Southwest Region

(Title)

AERO RESOURCES, INCORPORATED
Post Office Box 1833
Houston, Texas 77251-1833

DRAWING LIST REPORT NUMBER 1005

INSTALL MOONEY 201 (M20J) SPINNERS ON EARLIER MODEL MOONEYS

MODEL YEARS: 1955 TO 1976

FOR MOONEY MODELS: M20A, M20B, M20C, M20D, M20E, M20F, M20G

DECEMBER 9, 1992

REVISION 1, MAY 20, 1997

REVISION 2, JULY 9, 2001

United States Of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate

This Certificate issued to

Eddie Kimbrough
P.O. Box 1833
Houston, TX 77251-1833

Number SA7589SW

Nose cowL

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 3 of the Civil Air Regulations

Original Product - Type Certificate Number: 2A3

Make: Mooney

Model: M20A, B, C, D, E, F and G

Description of Type Design Change: Installation of a modified nose bowl fairing in accordance with Aero Resources Incorporated drawing lists as follows:

Drawing List No. 1000, dated August 2, 1988, for 1963 M20C.

Drawing List No. 1101, Rev 2, dated September 24, 1993, for 1958-1965 M20A, B, C, D, and G.

(See continuation sheet)

Limitations and Conditions:

Compatibility of this modification with previously installed equipment must be determined by installer

Issued on February 4, 2005, for installation on N5992Q, Serial Number 3216, a 1966 Mooney M20C, for exclusive use on this airplane.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: December 31, 1986

Date revised:

Date of issuance: May 04, 1989

Date amended: Sept. 29, 1994 Rev. 2;
February 08, 1996 Rev. 3



By direction of the Administrator

Eddie Kimbrough
(Signature)

Michele M. Owsley
Airplane Certification Office
Southwest Region

(Title)

United States Of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate
(Continuation Sheet)

Number SA7589SW

Date of Issuance: May 04, 1989
Date Amended: February 08, 1996

Description of Type Design Change (Continued):

Drawing List No. 1102, dated September 24, 1993, for the 1964-1965 M20E.
Drawing List No. 1201, Revision 3, dated January 10, 1994, for the 1966-1978 M20C and M20G.
Drawing List No. 1202, Revision 2, dated September 29, 1994, for the 1966-1976 M20E and M20F.
Drawing List No. 1101, Revision 5, dated January 25, 1996, for the 1958 to 1965 M20A, B, C, D and G.
Drawing List No. 1102, Revision 3, dated January 25, 1996, for the 1964 to 1965 M20E.
Drawing List No. 1201, Revision 5, dated January 25, 1996, for the 1966 to 1978 M20C and M20G.
Drawing List No. 1202, Revision 3, dated January 25, 1996, for the 1966 to 1976 M20E and M20F.
Or any later FAA approved revisions.

-End-

281/438-3964

CONTENTS

1. Tools, Consumables, and Expendables	303
A. Tooling	303
B. Consumables	303
C. Expendables	303
2. Pre-Installation	304
A. Inspection of Shipping Package	304
B. Uncrating	304
C. Inspection after Shipment	304
3. Spinner Pre-Installation	305
A. Spinner Bulkhead to Propeller Hub Installation	305
B. Spinner Adapter to Starter Ring Gear Installation	309
4. Propeller Installation	309
A. Flange Description	309
B. Installation of "F" Flange Propellers	311
C. Installation of "N" Flange Propellers	312
D. Installation of "L" Flange Propellers	315
E. Installation of "K" and "R" Flange Propellers	316
5. Spinner Installation	317
A. Single Piece Spinner Dome	317
B. Two-Piece Spinner Dome (Procedure 1)	318
C. Two-Piece Spinner Dome (Procedure 2)	321
6. Post-Installation Checks	321
7. Spinner Removal	322
A. Removal of Single Piece Spinner	322
B. Removal of Two-Piece Spinner	322
C. Hub Mounted Spinner Bulkhead Removal	322
D. Starter Ring Gear Spinner Adapter Removal	322
8. Propeller Removal	323
A. Removal of "F" Flange Propellers	323
B. Removal of "N" Flange Propellers	323
C. Removal of "L" Flange Propellers	324
D. Removal of "K" and "R" Flange Propellers	324



You have purchased the finest Magnetic Compass in the world.

Regardless of how you plan to use it, there are certain things you should be aware of in order to obtain the best use of your Hamilton Vertical Card Compass.

The Hamilton Compass is the best mixture of American/Swiss technology and manufacture that can be obtained. The Compass relies on the magnetic flux lines of the earth in order to sense heading information usable to you. The Hamilton Compass is a delicate precision instrument and must be installed and handled accordingly. The Hamilton Compass is self contained and requires electricity only for lighting, if desired.

INSTALLATION INSTRUCTIONS

Please note, the Hamilton Vertical Card Compass must be installed according to the factory instructions or the warranty may be void. However, if installed correctly, the compass will provide excellent heading information.

Briefly: your Hamilton Compass comes to you in 2 sections, plus hardware. Slide the compass out of the bracket by unscrewing the screw in the back of the mounting case. Set compass aside in a safe place (dropping the compass will damage it and void the warranty).

To install the bracket:

Utilize hardware and template furnished with compass. These are non-magnetic screws, washers, etc. Steel parts cannot be used.

United States of America
Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SA3540NM

This certificate, issued to Paul E. Loewen

NOSE GEAR

certifies that the change in the type design for the following product, with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3rd of the Civil Air Regulations. See Aircraft Specification No. 2A3 for complete certification basis.

Original Product — Type Certificate Number: 2A3

Make: Mooney
Model: M20, M20A, B, C, D, E, F, G, J, K

Description of Type Design Change: Installation of modified nose gear truss bushing in accordance with FAA sealed Lake Aero Styling and Repair Drawing List Report No. 122A "NC" dated September 19, 1986 or later FAA approved revision. Parts manufactured in accordance with Lake Aero Styling and Repair drawings L025-914007 "NC" dated 6-4-86 and L025-REAM-628 Rev. A dated 9-19-86 or later FAA approved revision. FOR INSTALLATION ON 165 M20C

LASAR NOTE: Authorization for application of this modification is given for use on the specific airplane described here.

MOONEY N 3216

Limitations and Conditions: The approval of this change in type design applies to the basic aircraft of the specified models that are otherwise unmodified. This approval should not be extended to other specific airplanes of these models on which other previously approved modifications are incorporated, unless it is determined that the interrelationship between this change and any of those other previously approved modifications will introduce no adverse effect upon the airworthiness of that airplane.

This certificate and the supporting data which is the basis for approval shall remain in effect unless surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: November 18, 1985

Date of issuance: November 21, 1986



By direction of the Administrator
Paul E. Loewen
(Signature)
For Manager, Western Aircraft
Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred in accordance with FAR 21.47.

LASAR SPEED MODIFICATIONS STC

**NOSE GEAR TRUSS OVERSIZED BUSHING
SERVICE KIT SK - 01**

LASAR DRAWING LIST REPORT NO.122A



For MOONEY Airplanes including Models : M20 thru M20 K & ON

Number of Pages : 1-6

Issued September 19, 1986

LAKE AERO STYLING AND REPAIR

4725 Highland Springs Rd

Lakeport, California 95453

LASAR SPEED MODIFICATIONS STC
FAA APPROVAL STC NO. SA4443NM
Issued to: PAUL E. LOEWEN

LASAR SPEED MODIFICATIONS STC

WING FLAP GAP SEAL FAIRINGS

LASAR DRAWING LIST REPORT 100



For MOONEY Airplanes including Models : M20 B thru M20 G

Number of Pages : 1-7

Issued May 10, 1981

Revised August 19, 1996

LAKE AERO STYLING AND REPAIR

4725 Highland Springs Road

Lakeport, California 95453

LAKE AERO STYLING & REPAIR
4725 Highland Springs Road
Lakeport, California 95453

DRAWING LIST REPORT NO. 100

May 10, 1981
Revised Aug. 19, 1996

FLAP GAP SEALS
INSTALLATION AND DRAWING PAGE CONTROL CHART

	Page	Dated
Installation Instructions	1	08 - 19 - 96
Parts List	2	08 - 19 - 96
Approval Data	2	08 - 19 - 96
Weight and Balance	2	08 - 19 - 96
Installation, Figure 1	3	05 - 10 - 81
Installation, Figure 2	3	05 - 10 - 81
Installation Pictures	4	05 - 10 - 81
Flap Gap Seal Assembly Drawing L003	5	08 - 19 - 96
FAA STC Certificate	6	07 - 09 - 82
* Detail Drawing No. L002-210374: Seal: Flap Gap	7	02 - 26 - 81

* For Production Use Only

LASAR SPEED MODIFICATIONS STC
FAA APPROVAL STC NO. SA4443NM
Issued to : PAUL E. LOEWEN

LASAR SPEED MODIFICATIONS STC

AILERON LOWER GAP SEAL FAIRINGS

LASAR DRAWING LIST REPORT 101



For MOONEY Airplanes including Models : M20 B thru M20 K

Number of Pages 1-5

Issued May 10, 1981

Revised August 19, 1996

LAKE AERO STYLING AND REPAIR

4725 Highland Springs Road

Lakeport, California 95453

LAKE AERO STYLING AND REPAIR
4725 Highland Springs Road
Lakeport, California 95453

DRAWING LIST REPORT NO 101

May 10, 1981
Revised Aug. 19, 1996

INSTALLATION AND DRAWING PAGE CONTROL CHART

	Page	Dated
Aileron Seal Instructions	1	08 - 19 - 96
Parts List	2	08 - 19 - 96
Approval Data	2	08 - 19 - 96
Weight and Balance	2	08 - 19 - 96
Installation, Figure 1	3	08 - 19 - 96
Installation, Figure 2	3	08 - 19 - 96
FAA STC Certificate	4	07 - 09 - 82
* Assembly Drawing No. L005	5	08 - 19 - 96

* For Production Only