

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

FOR FAA USE ONLY

OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE CESSNA	MODEL A 185 F
	SERIAL NO. 18502213	NATIONALITY AND REGISTRATION MARK N 3946Q
2. OWNER	NAME (As shown on registration certificate) PAUL MENNEN	ADDRESS (As shown on registration certificate) 1452 OWEN SOUND DR SUNNYVALE, CA 94087

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
				REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS ADVANCED AVIATION SERVICES INC 1144 Coleman Ave San Jose Calif 95110	B. KIND OF AGENCY		C. CERTIFICATE NO.
	<input type="checkbox"/> U.S. CERTIFICATED MECHANIC		AX3R387L RADIO 142 INSTA 143
	<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC		
	<input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION		
<input type="checkbox"/> MANUFACTURER			

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE 10-2-91	SIGNATURE OF AUTHORIZED INDIVIDUAL
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7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is APPROVED REJECTED

BY	FAA P.L.T. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	
DATE OF APPROVAL OR REJECTION 10-2-91	CERTIFICATE OR DESIGNATION NO. AX3R387L	SIGNATURE OF AUTHORIZED INDIVIDUAL 		

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

INSTALLED INSIGHT CORP. MODEL SF 2000
STRIKE FINDER PER INSIGHT INSTALLATION MANUAL
2000-10 DATED 7-15-91.

INSTALLED MASTER PRODUCTS INC. MODEL "ON-BOARD
ENGINE ANALYZER" PER MASTER PRODUCTS
INSTALLATION MANUAL DATED 10-10-90 AND
STC # SA16186L PLUS LETTER FOR EXCEPTION
FROM MASTER PRODUCTS DATED 9-27-91.

WEIGHT AND BALANCE AS FOLLOWS:

EMPTY WEIGHT =	1912.76
USEFUL LOAD	1437.24
C.G.	38.05"
MOMENT	72778.59

END

ADDITIONAL SHEETS ARE ATTACHED

Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SA1618GL

This certificate, issued to Masten Products Incorporated
 713 W. Ellsworth Road, Suite A
 Ann Arbor, Michigan 48108

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 3 of the Civil Air

Regulations. See Type Certificate Data Sheet No. 3A24 for complete certification basis.

Original Product — Type Certificate Number: 3A24
Make: Cessna
Model: 185, 185A, 185B, 185C, 185D, 185E, A185E, and A185F

Description of Type Design Change:

Installation of On-Board Engine Analyzer System in accordance with Masten Products Incorporated Installation Manual, Edition 1, Revision B, dated 9/12/90, or later FAA Approved revision.

Limitations and Conditions: 1. This instrument is approved as optional equipment only and shall not replace any other required instrument. 2. FAA Approved Airplane Flight Manual Supplement dated June 14, 1991, or later FAA approved revisions required. 3. Fuel flow transducer installation per Supplemental Type Certificate (STC) SA5581SW is required. 4. Cylinder Head and Exhaust Gas Temperature thermocouple installation per STC SA552SW or SA2586NM is required. 5. Other Fuel flow transducers and Exhaust Gas Temperature and Cylinder Head Temperature thermocouple installations must be previously FAA approved for this installation. (See STC Continuation Sheet, Page 3.)

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: April 26, 1991

Date issued:

Date of issuance: June 14, 1991

Date amended:



By direction of the Administrator

Charles L Smalley
 (Signature)

for Donald P. Michal, Manager
 Chicago 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.

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

Number SA1618GL

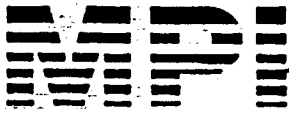
Limitation and Conditions: (Continued)

Date of Issuance: June 14, 1991

6. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the interrelationship between this change and any of the other previously approved modifications will introduce no adverse effect upon the airworthiness of that aircraft.

. . . END . . .

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.



MASTEN PRODUCTS INCORPORATED
713 W. Ellsworth Road, Suite A • Ann Arbor, Michigan 48108

313-996-1990 • 800-543-7620
Fax 313-996-3801

F.A.A.-P.M.A.

September 27, 1991

Jim
Advance Aviation
1144 Coleman Ave.
San Jose, CA 95110

Dear Jim,

Utilize the installation drawing included in the fuel flow sensor installation kit #073 for the IO520 with the following exceptions to facilitate crankcase vent line routing:

- 1) Replace item three with a 45 degree fitting (MS20823-4) and an adapter (AN912-1J). These fittings are enclosed.
- 2) Use a longer length of fuel hose in item 2.
- 3) Use the right angle fitting in item one so that it enters the rear of the fuel manifold instead of the front.

NOTE: Terry Horton of Teledyne Continental Engines has confirmed that either front or rear entry into the fuel manifold has the same function.

If you have any other questions, please call me.

Cordially,


Mike Masten

Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SE5583SW

This certificate, issued to ALCOR

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 33 of the Federal Aviation Regulations.

Original Product — Type Certificate Number: E9CE, E3CE-19, E5CE-24

Make: Teledyne Continental

Model: L/TSIO-360, TSIO-360, IO-360, GTSIO-520,
L/TSIO-520, TSIO-520, IO-520

Description of Type Design Change:

Installation of Fuel-flow Transducers (Tru-Flow Totalizer) in accordance with Master Drawing List 38066, Revision E dated 2/16/84, or later FAA approved revision.

Limitations and Conditions:

FAA Approved Airplane Flight Manual Supplement dated 2/13/84 is required.

Compatibility of this modification with other previously approved modifications must be determined by the installer.

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

Date of application: November 28, 1983

Date issued:

Date of issuance: February 16, 1984

Date amended:

By direction of the Administrator



Don P. Watson (Signature)
 Manager, Aircraft Certification Division
 Southwest Region

(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.

MASTEN PRODUCTS INCORPORATED
713 W. ELLSWORTH RD., STE.A
ANN ARBOR, MICHIGAN 48108

FAA APPROVED SUPPLEMENT
TO THE
FAA APPROVED AIRPLANE FLIGHT MANUAL
FOR

CESSNA AIRCRAFT CORP. TYPE CERTIFICATE #
3A24 FOR MODELS: 185, 185A, 185B, 185C,
185D, 185E, A185E, A185F

REGISTRATION NO. 3946Q

SERIAL NO. 18502213

This supplement must be attached to the FAA Approved Airplane Flight Manual, dated 6/14/91 when the airplane is modified by the installation of a Masten Products Inc. On-Board Engine Analyzer System in accordance with Supplemental Type Certificate No. SA1618GL. The information contained herein supplements or supersedes the information of the basic Airplane Flight Manual only in those areas listed herein. For limitations, procedures and performance information not contained in the supplement, consult the basic FAA Approved Airplane Flight Manual.

FAA APPROVED: Charles L Smalley
for DONALD P. MICHAL
Manager, Chicago Aircraft
Certification Office, CHI-ACO

Date: June 14, 1991

MASTEN PRODUCTS INCORPORATED
713 W. ELLSWORTH RD., STE. A
ANN ARBOR, MICHIGAN 48108

AFM SUPPLEMENT FOR
CESSNA AIRCRAFT CORP.
TYPE CERTIFICATE # 3A24
FOR MODELS: 185, 185A,
185B, 185C, 185D, 185E,
A185E, A185F

LOG OF REVISIONS TO SUPPLEMENT

Supplement Revision <u>Number</u>	Revised Pages	Description of Revision	FAA Approved	Date
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FAA APPROVED

DATE: June 14, 1991

MASTEN PRODUCTS INCORPORATED
713 W. ELLSWORTH RD., STE.A
ANN ARBOR, MICHIGAN 48108

AFM SUPPLEMENT FOR
CESSNA AIRCRAFT CORP.
TYPE CERTIFICATE # 3A24
FOR MODELS: 185, 185A,
185B, 185C, 185D, 185E,
A185E, A185F

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FAA APPROVED

DATE: June 14, 1991

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MASTEN PRODUCTS INCORPORATED
713 W. ELLSWORTH RD., STE. A
ANN ARBOR, MICHIGAN 48108

AFM SUPPLEMENT FOR
CESSNA AIRCRAFT CORP.
TYPE CERTIFICATE # 3A24
FOR MODELS: 185, 185A,
185B, 185C, 185D, 185E,
A185E, A185F

SECTION 0

PREFACE

NO CHANGE

SECTION 1

LIMITATIONS

1. Masten Products Pilot's Operating Manual, Edition I, or later FAA approved revision must be immediately available for pilot use.
2. Fuel quantity and Cylinder Head Temperature (CHT) information provided by the On-Board Engine Analyzer is advisory only and may not be used in lieu of the primary fuel quantity and CHT indicating systems.
3. The On-Board Engine Analyzer's CHT information may vary up to 75 degree F. from the original equipment CHT due to different thermocouple locations on the critical cylinder.
4. FLACARD
Masten Products Placard P/N MP-4903-90A must be located near the On-Board Engine Analyzer.

THE ON-BOARD ENGINE
ANALYZER IS ADVISORY
ONLY. ORIGINAL EQUIPMENT
MUST BE USED AS THE
PRIMARY SOURCE FOR FUEL
AND TEMPERATURE
INFORMATION.

FAA APPROVED

DATE: June 14, 1991

PAGE 4 OF 5

MASTEN PRODUCTS INCORPORATED
713 W. ELLSWORTH RD., STE. A
ANN ARBOR, MICHIGAN 48108

AFM SUPPLEMENT FOR
CESSNA AIRCRAFT CORP.
TYPE CERTIFICATE # 3A24
FOR MODELS: 185, 185A,
185B, 185C, 185D, 185E,
A185E, A185F

SECTION 2 NORMAL PROCEDURES

1. Before flight, it is essential that the pilot determine that the fuel programmed into the computer is the same as the usable fuel onboard the airplane.
2. Cruise, total fuel remaining must be verified with the factory installed fuel quantity indicator.

SECTION 3 EMERGENCY PROCEDURES

1. The ON-BOARD ENGINE ANALYZER is protected by a 2AMP circuit breaker located in the D.C. circuit breaker panel. In the event that the circuit breaker should open turn the ON-BOARD ENGINE ANALYZER system switch "OFF".

SECTION 4 PERFORMANCE NO CHANGE

FAA APPROVED

DATE: June 14, 1991

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