



U.S. Department
of Transportation
Federal Aviation
Administration

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

Form Approved
OMB No. 2120-0020

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. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make <p style="text-align: center;">Socata</p>	Model <p style="text-align: center;">TB20</p>
	Serial No. <p style="text-align: center;">1866</p>	Nationality and Registration Mark <p style="text-align: center;">N1866S</p>
2. Owner	Name (As shown on registration certificate) <p style="text-align: center;">University of Dubuque</p>	Address (As shown on registration certificate) <p style="text-align: center;">2000 University Ave. Dubuque, Iowa 52001-5050</p>

3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~			X	
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address Paul M. Kaune 3538 Eclipse Circle Dubuque, Iowa 52003	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. <p style="text-align: center;">AP479885177</p>
--	---	---

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 <p style="text-align: center;">3-10-2009</p>	Signature of Authorized Individual <p style="text-align: center;"><i>Paul M. Kaune</i></p>
--	---

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 Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection <p style="text-align: center;">3-10-2009</p>		Certificate or Designation No. <p style="text-align: center;">IA479885177</p>		Signature of Authorized Individual <p style="text-align: center;"><i>Paul M. Kaune</i></p>	

University of Dubuque
2000 University Ave, Dubuque, IA 52001-5099

Weight and Balance Change

and
Equipment List Revision

A/C Registration Number: N1866S
A/C Serial Number: 1866
A/C Make: Socata
A/C Model: TB-20
A/C Year: 1998
WB Date: 14-Apr-07

Previous data taken from document dated: 22-Aug-05

Description of work: W/B updated to utilize max ramp weight in lieu of max take off weight.


		WEIGHT	ARM	MOMENT
Previous data:	22-Aug-05	1939.50	38.26	74214.62
Items removed:				
Items installed:				

1939.50

74214.62

Aircraft gross weight: 3097.0 Maximum Ramp Weight (Max take off weight 3086.0)
New A/C empty weight: 1939.50
New A/C empty weight CG: 38.26
New A/C useful load: 1157.50

AP:


James S. Jenkins AP3015266



FLYING SERVICE INC.

10800 Airport Road • Dubuque, IA 52003 • Phone: 563-582-1293

Weight And Balance Change and Equipment List Revision

DATE: 8, 22, 05

A/C Make: SOCATA

Year: 1998

Model: TB20

Serial No.: 1866

Registration: N1866S

Revises W & B Dated: 7-23-05

OWNER: UNIVERSITY OF DUBUQUE

DESCRIPTION OF WORK INSTALLED TANIS ENGINE PREHEATER SYSTEM

	WEIGHT	ARM	MOMENT
Previous A/C Empty Weight	<u>1938</u>	<u>38.30</u>	<u>74253</u>

ITEMS REMOVED

NONE

Superseded 4-14-02

ITEMS INSTALLED

<u>TANIS TA\$ 100 PREHEATER</u>	<u>1.50 lbs</u>	<u>-25.59</u>	<u>-38.38</u>
---------------------------------	-----------------	---------------	---------------

1939.5 lbs. 74214.62

AIRCRAFT GROSS WGT.: 3086 lbs MAX. TAKE OFF

NEW A/C EMPTY WGT.: 1939.5 lbs

NEW A/C E.W.C.G.: 38.26

NEW A/C USEFUL LOAD.: 1146.5 lbs.

FAA REPAIR STATION #D2FR184J

INSPECTOR Paul M. Kaune

W/O NUMBER 71572



US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

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. This report is required by law (49 U.S.C. 1421). Failure to report can result in civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make <i>SOCATA</i>	Model <i>TB-20</i>
	Serial No. <i>1866</i>	Nationality and Registration Mark <i>N1866S</i>
2. Owner	Name (As shown on registration certificate) <i>WARREN JAMES D</i>	Address (As shown on registration certificate) <i>2660 SW CRESTDALE DR PORTLAND OR 97225-3241</i>

3. For FAA Use Only

The data identified herein complies with the applicable Airworthiness Requirements and is approved only for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

8/1/05
Date

[Signature]
Shawn A. Skeggs FAA Inspector

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in Item 1 above)				<i>XXX</i>
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address <i>L.A.C. AVIONICS INC. 1250 AVIATION AVENUE SAN JOSE, CA. 95110</i>	B. Kind of Agency <input type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input checked="" type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. <i>FM4R185M, R 1, 2, 3 I 1, 2, 3, 4, PL, AL</i>
--	--	---

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 <i>JULY 23, 2005</i>	Signature of Authorized Individual <i>[Signature]</i> LOYD B NESBITT JR, ASSISTANT INSPECTOR
------------------------------	--

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 Fit. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection <i>08/07/05</i>		Certificate or Designation No. <i>FM4R185M</i>	Signature of Authorized Individual <i>[Signature]</i>	

U.S. Department
of Transportation
Federal Aviation
Administration

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 AC43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make SOCATA	Model TB-20 TRINIDAD
	Serial No. 1866	Nationality and Registration Mark N1866S
2. Owner	Name (As shown on registration certificate) SOCATA AIRCRAFT	Address (As shown on registration certificate) 7501 PEMBROKE ROAD Pembroke Pines, FL 33023

3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	_____ (As described in Item 1 above) _____				XXX
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address <i>EAST COAST AVIONICS, INC.</i> <i>1020 N.W. 62ND ST, HGR 2</i> <i>FT. LAUDERDALE, FL 33309</i>	B. Kind of Agency <input type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input checked="" type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. WO4R629M RADIO CLASS 1,2,3 LMTD-INSTR, ACCES, PWR PLT, AND AIRFRAME
---	--	---

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 16-DEC-98	Signature of Authorized Individual MICHAEL L. SCHOOLER
--------------------------	--

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 Ft. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 16-DEC-98		Certificate or Designation No. WO4R629M	Signature of Authorized Individual MICHAEL L. SCHOOLER	

WEIGHT/BALANCE & EQUIPMENT LIST REVISION 15-DEC-98
 EAST COAST AVIONICS, INC. - FAA CRS# WO4R629M
 1020 N.W. 62ND ST, HGR 2 - FT. LAUDERDALE, FL 33309

```

-----
SOCATA AIRCRAFT                                N1866S
7501 PEMBROKE ROAD                            SOCATA TB-20 TRINIDAD
Pembroke Pines, FL 33023                     S# 1866
-----
    
```

```

OLD >
                                EMPTY WEIGHT      ARM      MOMENT
                                1944.61          38.22     74314.33
    
```

* REMOVED *

```

78-8060-5970    BFG ANTENNA          -0.92     196.00     -180.32
78-8060-5960-2 INDICATOR          -1.56     20.50      -31.98
    
```

* INSTALLED *

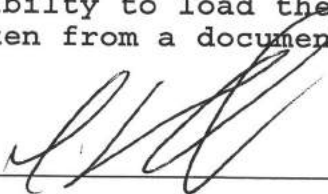
```

805-10930-001   BFG ANTENNA          0.92     196.00     180.32
805-10950-001   BFG DISPLAY         2.90     20.50      59.45
    
```

```

NEW >
                                EMPTY WEIGHT      ARM      MOMENT
                                1945.95          38.20     74341.80
    
```

It is the pilot's responsibility to load the A/C properly at all times.
 The "OLD" figures were taken from a document dated 09-DEC-98.



U.S. Department of Transportation Federal Aviation Administration	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 AC43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make SOCATA	Model TB-20 TRINIDAD
	Serial No. 1866	Nationality and Registration Mark NI866S
2. Owner	Name (As shown on registration certificate) SOCATA AIRCRAFT	Address (As shown on registration certificate) 7501 PEMBROKE ROAD Pembroke Pines, FL 33023

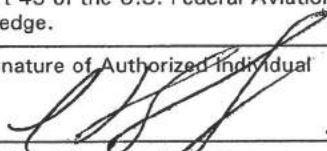
3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in Item 1 above)				XXX
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address EAST COAST AVIONICS, INC. 1020 N.W. 62ND ST, HGR 2 FT. LAUDERDALE, FL 33309	B. Kind of Agency <input type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input checked="" type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. WO4R629M RADIO CLASS 1,2,3 LMTD-INSTR, ACCES, PWR PLT, AND AIRFRAME
---	--	---

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 09-DEC-98	Signature of Authorized Individual  MICHAEL L. SCHOLTZ
--------------------------	---

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 Fit Standards Inspector		Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/>	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 09-DEC-98		Certificate or Designation No. WO4R629M		Signature of Authorized Individual  MICHAEL L. SCHOLTZ	

Amended Weight And balance With Equipment List Changes For N1866S

Registered Owner:

WARREN JAMES D
2660 SW CRESTDALE DR
PORTLAND OR 97225-3241

L.A.C. Avionics Inc.
1250 Aviation Ave. Suite 110
San Jose Ca. 95110
At San Jose Jet Center
FAA Repair Station # FM4R185M

Manufacturer SOCATA
Model TB-20
Serial # 1866
Registration N1866S

Work Order # 16264
Date 07/23/05

Previous Weight And Balance

Date 05/28/04
Weight 1947.1
C.G. 38.22
Moment 74424

New Weight And Balance

Date 07/23/05
Weight 1938.6
C.G. 38.30
Moment 74253

Net Change

-8.5
+ 0.08

8-22-05

Listing Of Items Removed Or Installed

R/I	MODEL	MAKE	FUNCTION	WEIGHT	ARM	MOMENT
R	RS12-030 SERIAL NO. 3611	NAT	ASSY, RELAY PART NUMBER RS12-030	-0.3	9.5	-3
R	KLN-90B SERIAL NO. 26305	BENDIX/KIN	REC, GPS PART NUMBER 066-04031-1121	-7.9	21.3	-168
R	KA-92 SERIAL NO. 21065	BENDIX/KIN	ANT, GPS PART NUMBER 071-01553-0200	-0.3	49.5	-15
R	KX-165-25 SERIAL NO. 60433	KING	NAV COM PART NUMBER 069-1025-25	-5.3	21.0	-111
I	GNS 430 SERIAL NO. 97128474	GARMIN	GPSCOMIDS PART NUMBER 011-00280-10	5.2	21.5	112
I	GA 56 SERIAL NO. 59029239	GARMIN	ANT, GPS PART NUMBER 011-00134-00	0.3	49.5	15
I	DORM 72 SERIAL NO. N/S-N1866S	GARMIN	DB, NAV PART NUMBER 010-10201-01	0.1	23.0	2
R	RS12-030 SERIAL NO. 3597	NAT	ASSY, RELAY PART NUMBER RS12-030	-0.3	9.5	-3

SUPPLEMENTAL

-----NOTHING FOLLOWS-----

Weight & Balance
Socata TB20 Trinidad
N1866S
S/N 1866

5-28-04
Supersedes computations
dated 12-15-98

<u>Old</u>	Empty Weight	Arm	Moment
	1945.95	38.20	74341.80
<u>Removed</u> 2 Landing gear relays and bracket assembly P/N TB2061261002	-0.33	70.92	-23.40
<u>Installed</u> 2 Landing gear relays and bracket assembly P/N OPT109269-00	1.49	70.92	105.67
<u>New</u>	1947.11	38.22	74424.07

Aaron Murray, A&P 546897797

A. Murray

Superseded

7-23-05

WEIGHT/BALANCE & EQUIPMENT LIST REVISION 09-DEC-98
 EAST COAST AVIONICS, INC. - FAA CRS# WO4R629M
 1020 N.W. 62ND ST, HGR 2 - FT. LAUDERDALE, FL 33309

 SOCATA AIRCRAFT
 7501 PEMBROKE ROAD
 Pembroke Pines, FL 33023

N18668
 SOCATA TB-20 TRINIDAD
 S# 1866

OLD >	EMPTY WEIGHT	ARM	MOMENT
	1943.27	38.23	74286.86

* REMOVED *

* NO ITEMS REMOVED

* INSTALLED *

78-8060-5970	BFG ANTENNA	0.92	196.00	180.32
78-8060-5960-2	BFG INDICATOR	1.56	20.50	31.98

Superseded Dec. 15/98

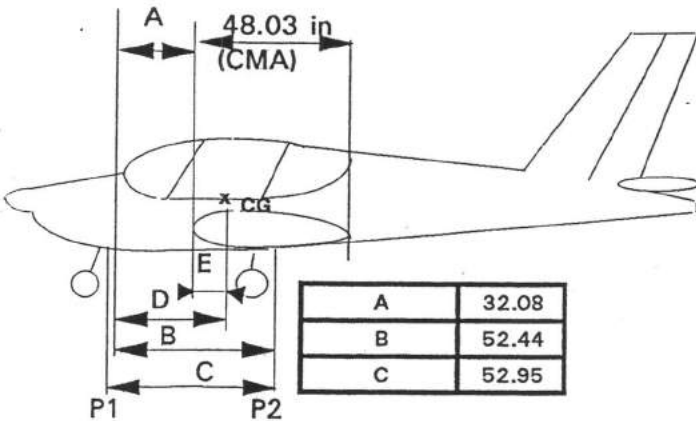
NEW >	EMPTY WEIGHT	ARM	MOMENT
	1945.75	38.29	74499.16

It is the pilot's responsibility to load the A/C properly at all times.
 The "OLD" figures were taken from a document dated 22-SEP-98.

[Handwritten Signature]

Levelling: "Door step" horizontal

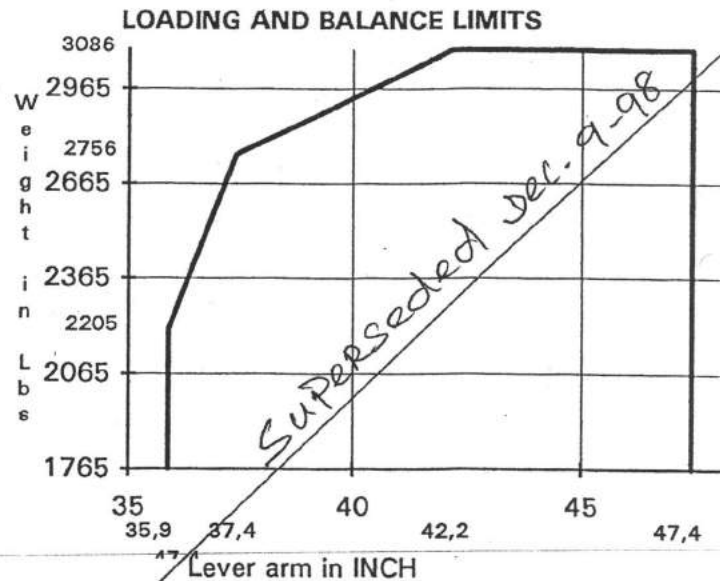
Datum: forward face of fire wall



A	32.08
B	52.44
C	52.95

P1 Front jack point

P2 Left and right jack point



WEIGHING EFFECTED ON JACK POINTS

Aircraft no painted, with engine oil

	read weight (lb)	tare (lb)	net weight (lb)
Left point	656.79	0	656.79
Right point	727.32	0	727.32
Fore point	526.76	0	526.76
WEIGHT P (lb) =			1910.87

DISTANCE OF C.G. TO C.G LOCATION DATUM

$$d(m) = B - (C * P1) / P$$

$$52,44 - (52,95 * 526,76) / 1910,87 = 37,84$$

CORRECTIONS

	read weight (lb)	arm (in)	moment
Weight P	1910.87	d = 37.84	72307.32
Painting	16.53	78.74	1301.57
Engine oil	0.00	0.00	0.00
Non usable fuel	15.87	42.72	677.97
EMPTY WEIGHT	1943.27	38.23	74286.86
		= D	

EMPTY C.G POSITION (in % of the CMA)

$$((D-A) * 100) / 48,03 =$$

$$(100 * 6.15) / 48.03 = 12.80 \%$$

EXAMPLES OF LOADING

	Forward C.G location			Rear C.G location		
	read weight (lb)	arm (in)	moment	read weight (lb)	arm (in)	moment
empty weight	1943.27	38.23	74286.86	1943.27	38.23	74291.21
Fuel	----	42.72	----	55.1	42.72	2353.87
1st Front passenger	169.71	45.47	7716.71	339.42	45.47	15433.43
Rear passengers	----	80.12	----	339.42	80.12	27194.33
Baggage (143 lbs maxi)	----	102.36	----	138.77	102.36	14204.71
RESULTS	2112.98	38.81	82003.57	2815.98	47.40	133477.55

Date and stamp

22 SEP 1998



REGISTRATION NOT TRANSFERABLE

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION CERTIFICATE OF AIRCRAFT REGISTRATION		This certificate must be in the aircraft when operated.
NATIONALITY AND REGISTRATION MARKS N 1866S	AIRCRAFT SERIAL NO. 1866	
MANUFACTURER AND MANUFACTURER'S DESIGNATION OF AIRCRAFT SOCATA TB-20 TRINIDAD ICAO Aircraft Address Code: 50255061		
ISSUED TO	UNIVERSITY OF DUBUQUE 2000 UNIVERSITY AVE DUBUQUE IA 52001-5050	
	GOVERNMENT	
It is certified that the above described aircraft has been entered on the register of the Federal Aviation Administration, United States of America, in accordance with the Convention on International Civil Aviation dated December 7, 1944, and with Title 49, United States Code, and regulations issued thereunder.		This certificate is issued for registration purposes only and is not a certificate of title. The Federal Aviation Administration does not determine rights of ownership as between private persons.
DATE OF ISSUE December 30, 2005		
<i>Maria C. Blahut</i> ADMINISTRATOR		U.S. Department of Transportation Federal Aviation Administration

U.S. Department of Transportation
Federal Aviation Administration

Civil Aviation Registry
 P.O. Box 25504
 Oklahoma City, OK 73125-0504



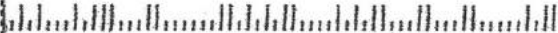
UNITED STATES POSTAGE
 U.S. OFFICIAL MAIL
 PENALTY FOR PRIVATE USE \$300
 PINNEY BOWLES
 02 1A
 0004204699 JAN 03 2006
 MAILED FROM ZIP CODE 73169

Official Business
 Penalty for Private Use \$300

AC Form 8050-3(10/2003) Supersedes previous editions 1866S

TO: UNIVERSITY OF DUBUQUE
 2000 UNIVERSITY AVE
 DUBUQUE IA 52001-5050

Creation



UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS N 1866 S	2. MANUFACTURER AND MODEL SOCATA TB 20	3. AIRCRAFT SERIAL NUMBER 1866	4. CATEGORY Normal
---	--	---	------------------------------

5. AUTHORITY AND BASIS FOR ISSUANCE

This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.

Exceptions:

None

6. TERMS AND CONDITIONS

Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE OCT 1, 1998	FAA REPRESENTATIVE Michael B. Fradette	DESIGNATION NUMBER AEU-100
--	--	--------------------------------------

Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.