

B & C Specialty Products Inc

123 East 4th St, P.O. Box "B", Newton KS 67114-0894
Telephone (316) 283-8000 ***** Fax (316) 283-7400

Manufacturer of Lightweight Electrical Systems

General Information on Bonanza Standby Alternators

B&C Specialty Products is pleased to announce that we have received FAA STC/PMA approval for installation of the BC410 Standby Alternator and matching regulator on all Bonanzas from the J35 (1958 model year) forward. Eligible serial numbers are detailed on page 2.

Prices for the various components are as follows:

BC410 Alternator and Regulator w/ STC (specify 14v or 28v)	\$2200.00
Installation Kit (specify 14v or 28v)	\$435.00
New Electroluminescent Panel, 5.25" x 17" ('84 – Newer A36/B36TC)	\$495.00 exchange
New Electroluminescent Panel, 2" x 11" ('72 – '83 A36; '70-'94 F33/F33A)	\$495.00 exchange
Air Conditioning Bracket Modification (if equipped with factory A/C)	\$150.00

Installation Notes

Aircraft equipped with electroluminescent switch panels will need to have the nomenclature on the lower left hand "EL" panel changed during installation to comply with the FAR's. We have arranged with the OEM supplier of these panels to make a special production run with correct nomenclature for our system. For 1984 and newer A36/B36TC's, new 5.25" x 17" electroluminescent panels are available for \$495.00 with exchange. For 1972 through 1983 A36's, and 1970 through 1994 F33/F33A's, a new 2" x 11" panel is available for \$495.00 with exchange.

Aircraft equipped with air conditioning will also require the AC compressor mounting casting to be modified with a relief for alternator clearance. This bracket must be removed, stripped of all hardware, and sent to B&C for modification at the above price (this includes its own unique STC). Every effort will be made to process this modification in a timely fashion, usually 48 hours. Note: new aircraft, or aircraft which have recently had this part replaced, may already have this relief.

Aircraft not covered by STC

For individuals interested in obtaining one-time field approvals on aircraft not yet covered by the STC, a general system wiring diagram has been provided to assist in these efforts. We will continue to work on STC's for other models. A tremendous amount of time, money and paperwork is required to obtain these STC's. Please, let us know if you are interested in the standby alternator system for your aircraft and feel free to call if you have any questions.

B&C Specialty Products' Standby Alternator System is installed on every new Bonanza as standard equipment. Mooney Aircraft and New Piper have adopted this same system, also (factory-installed on every Ovation since June 1996; and on the PA32 beginning in late 2004). B&C also has STC/PMA Standby Alternator systems for the Cessna 210, and Piper PA32's.

B & C Specialty Products Inc.
STC No. SA00724WI
Bonanza Standby Alternator Approved Models List

Model	Serial Numbers
J	D5062, D5331 thru D-5725
K	D-5726 thru D-6161
M	D-6162 thru D-6561
35-33	CD-1 thru CD-224, CD-233, CD-234, CD-236, CD-241, CD-246 thru CD-250
35-A33	CD-225 thru CD-232, CD-235 CD-237 thru CD-240 CD-242 thru CD-245 CD-251 thru CD-387
35-B33	CD-388 thru CD-813
35-C33	CD-814 thru CD-1118
E33	CD-1119 thru CD-1234
F33	CD-1235 thru CD-1254
N35	D-6562 thru D-6841
P35	D-6842 thru D-7139 & D-7141 thru D-7309
S35	D-7140 & D-7310 thru D-7976
V35/TC	D-7977 thru D-8598
V35A/TC	D-8599 thru D-9068
V35B/TC	D-9069 and after
35-C33A	CE-1 thru CE-179
E33A	CE-180 thru CE-289
E33C	CJ-1 thru CJ-25
F33A	CE-290 and after
F33C	CJ-26 and after
G33	CD-1255 thru CD-1304
36	E-1 thru E-184
A36	E-185 and after
A36TC	EA-1 thru EA-241 & EA-243 thru EA-272
B36TC	EA-242 & EA-273 and after

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

SAMPLE

Number SA00724WI

This certificate issued to B & C Specialty Products, Inc.
123 E. 4th Street
Newton, KS 67114-0894

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.

Original Product - Type Certificate Number : 3A15

Make : Raytheon Aircraft Company

Model :

* See Attached Approved Model List (AML) SA00724WI

Description of Type Design Change:

Installation of B&C Specialty Products

BC410-1 Standby Alternator on airplanes listed on FAA Approved Model List (AML) No. SA00724WI:
Data Required: (1) B&C Specialty Products, Inc. Master Drawing No. 410LST1.DOC, Rev C, dated December 1, 1998, and Document No. FMS410-1, FAA Approved Airplane Flight Manual Supplement, dated December 18, 1998; or (2) B&C Specialty Products, Inc. Master Drawing No. 410LST2.DOC, Rev 0, dated March 10, 2000; and Document No. FMS410-2, FAA Approved Airplane Flight Manual Supplement, dated June 26, 2000, or later FAA Approved Revisions to (1) or (2).

Limitations and Conditions: Compatibility of this design change with previously approved modifications must be determined by the installer. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

* Note: The attached AML is applicable only to the aircraft serial numbers called out on the Installation Drawing Applicability Chart.

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 : May 18, 1998

Date reissued :

Date of issuance : December 18, 1998

Date amended : June 26, 2000



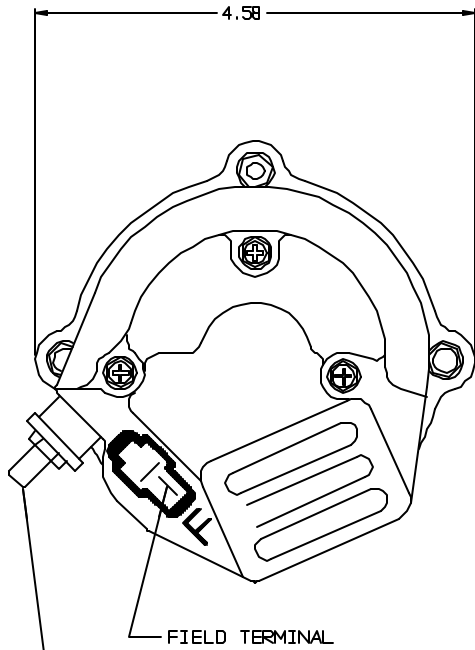
By direction of the Administrator

Joel Ligon
(Signature)

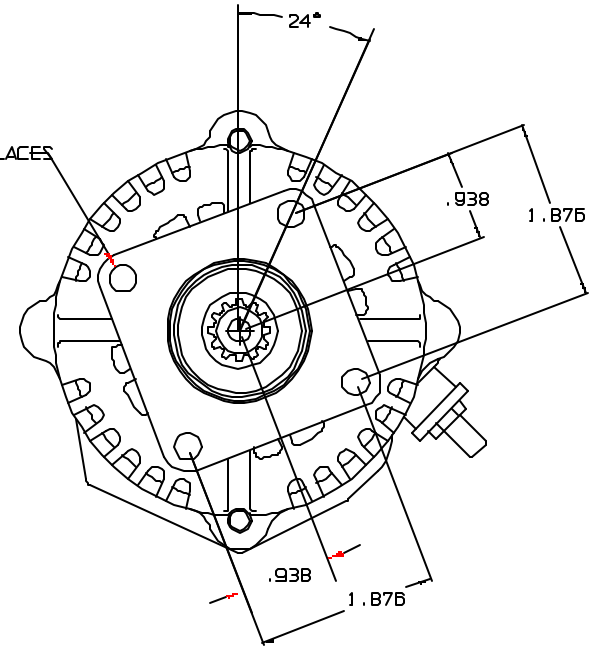
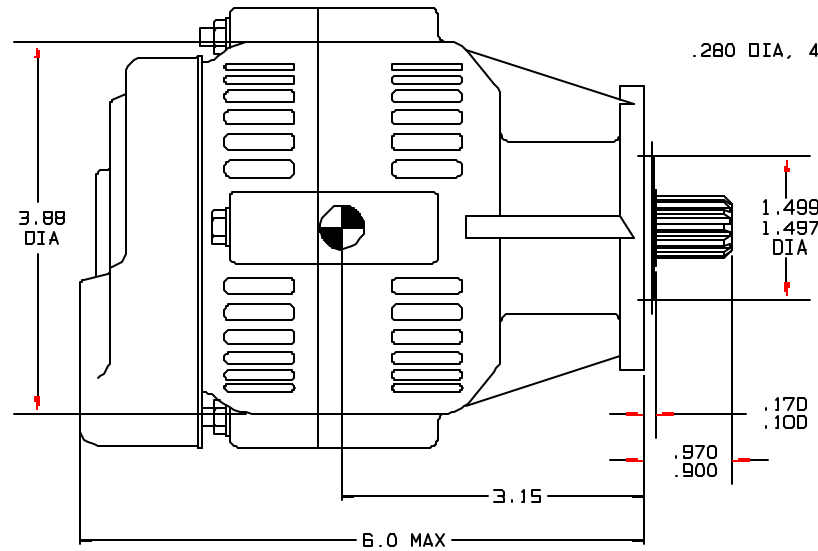
Joel Ligon
Program Manager
Wichita Aircraft Certification Office

(Title)

REV	DATE	DESCRIPTION
A	8/26/97	ADDED 24 DEG DIMENSION
B	5/20/98	REMOVED SPLINE CALLOUT; ADDED 4.58 DIM & REF. NOTE
C	6/16/99	TBD WAS 1600 HRS.



MAIN OUTPUT "B" TERMINAL
M6 X 1 THREAD

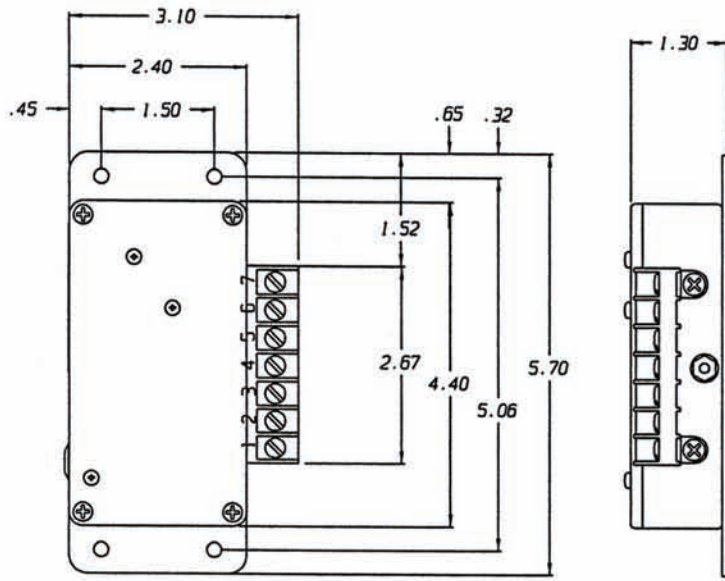


- NOTE: 1. ALL DIMENSIONS FOR REFERENCE ONLY
2. RECOMMENDED INTERVAL BETWEEN OVERHAUL IS 1700 HRS.

-1 ALTERNATOR 14/28V, 20 AMP

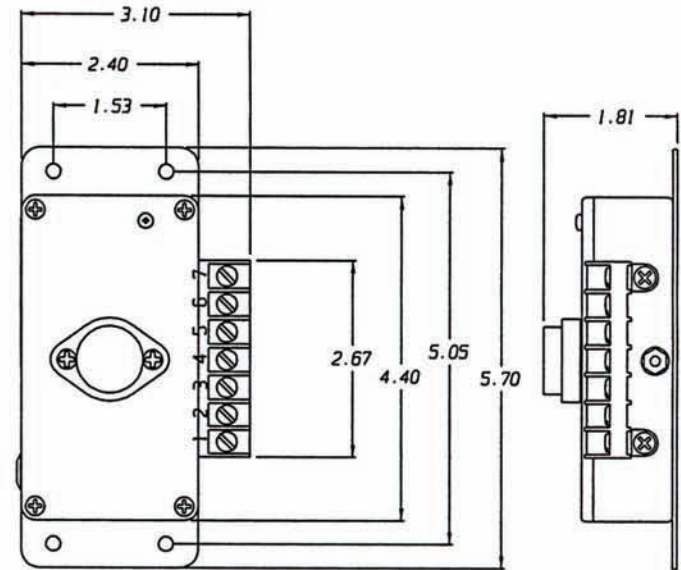
WEIGHT: 5.72 LBS.
MAX STATOR TEMP: 300°F
FOR USE ON AND20000 ACCESSORY PAD.
ALL DIMENSIONS ARE REFERENCE ONLY

		1	410-100-1	ALTERNATOR ASSY, 14/28V, 20A
			-1	ALTERNATOR, 14/28V, 20A
		-1	PART NO.	DESCRIPTION
USED ON			B & C Specialty Products P.O. Box 8, Newton, Kansas 67114	
UNLESS OTHERWISE SPECIFIED			TITLE ENVELOPE DRAWING AIRCRAFT ALTERNATOR, 14/28 VOLT, 20 AMP	
DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMAL D.XX = ± 0.03 DECIMAL 0.XXX = ± 0.010 ANGLES = 30.5 DEGREES			DRAWING NO. BC410	
ENGINEER	NAME	DATE	REVISION C	
DRAWN	DLS	8-31-96	DATE 6/16/99	
CHECKED	TH	8/13/98	SHEET 1 OF 1	
PROJECT			SCALE	JOB NO.



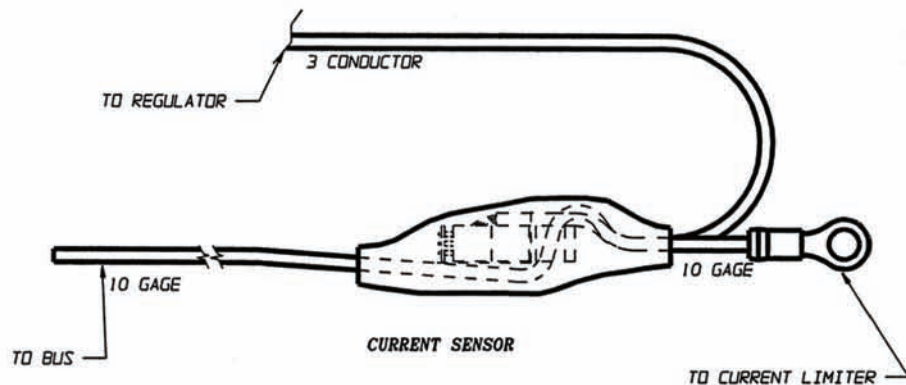
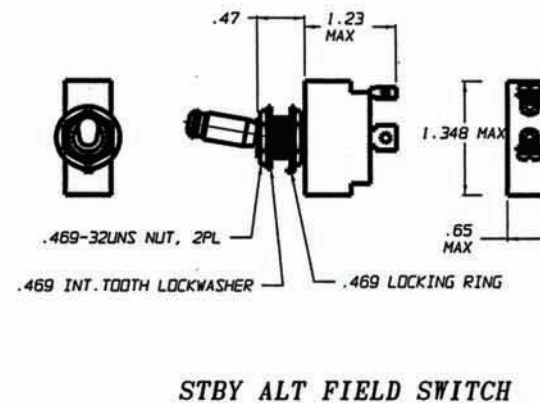
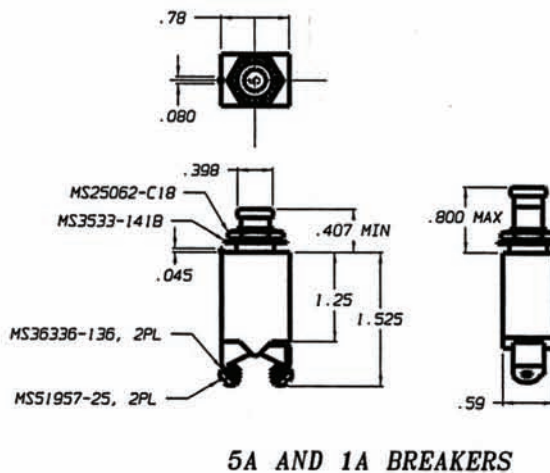
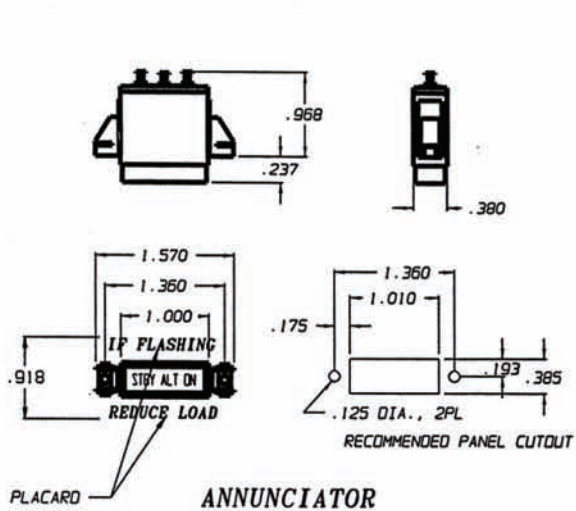
- TERMINAL FUNCTIONS (-2A):
(STANDBY CONTROLLER)
1. BUS SENSE
 2. STBY ALT ON ANNUNCIATOR
 3. CURRENT SENSOR ANALOG (OPTIONAL)
 4. CURRENT SENSOR +10 VOLTS (OPTIONAL)
 5. FIELD
 6. BUS SUPPLY
 7. GROUND

BC203-2D
(28 V)

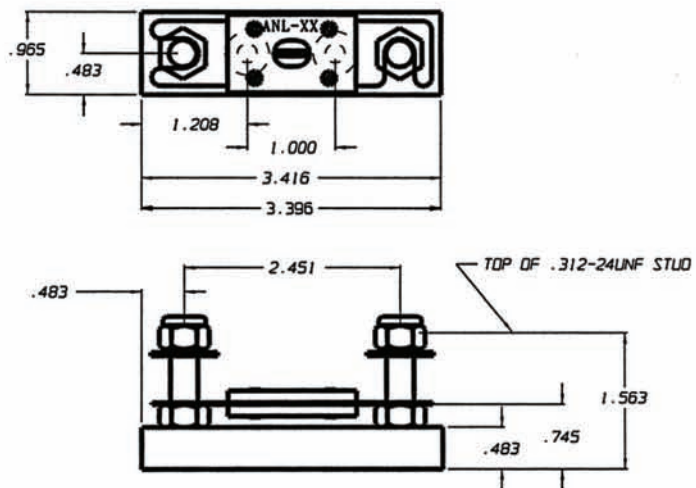


- TERMINAL FUNCTIONS:
1. SENSOR +10 VOLTS
 2. SENSOR ANALOG
 3. BUS VOLTAGE SENSE
 4. FIELD
 5. LOW VOLTAGE WARNING LIGHT
 6. BUS SUPPLY (ALSO TEMPERATURE PROBE WHITE WIRE (OPTIONAL))
 7. GROUND

BC217-1A
(14 V)



NOTE: THE CURRENT LIMITER AND CURRENT SENSOR ARE INSTALLED ON THE FORWARD SIDE OF THE FIREWALL.



COMPONENTS TO INSTALL

B & C Specialty Products Inc

123 East 4th St, P.O. Box "B", Newton KS 67114-0894
Telephone (316) 283-8000 ***** Fax (316) 283-7400

BC410 Standby Alternator Final Test

1. Perform a normal preflight inspection.
2. Move the aircraft to an area safe for engine start.
3. Perform a normal engine start and allow the engine to reach proper temperature for runup RPM.
4. Assure that the standby alternator "Field" and "Sense" circuit breakers and "Standby Alt" master are in the ON position.
5. Reduce system electrical loads to approx. 10-15 amps.
6. Set engine to 2100 RPM minimum.
7. Switch primary alternator master switch to OFF.
8. Check that the "Stby Alt On" annunciator lights.
9. Increase system load to approximately 20 to 25 amps. The "Stby Alt On" annunciator should begin to flash. Reduce RPM and system load. The "Stby Alt On" annunciator should return to steady ON.
10. Turn the primary alternator master switch ON. Check to see that the "Stby Alt On" annunciator goes OFF. Check that the load meter, voltmeter, or ammeter indicates the primary alternator is carrying the load.
12. Return the engine to idle RPM.

From: "Tim Krahn" <tkrahn@usit.net>
To: <B&C Specialty Products, Inc.>
Sent: Tuesday, October 31, 2000 9:42 PM
Subject: standby alternator

I would like to thank you for providing us a fantastic product. I recently had your standby alternator installed in my 1983 Beechcraft Bonanza by Shelby Avionics in Millington TN and it works great. I was flying home last week at night and turned off the main alternator. To my amazement, the standby alternator would power my entire avionics panel including a Sandel HSI. It is a nice feeling to know that I have this security. This past summer I lost my alternator in hard IFR weather and I was very fortunate to make a safe landing without an incident. I now feel much better when flying at night and in IFR weather. I would recommend your system to anyone and in all honesty, I cannot imagine anyone who flies in anything but VFR weather would not want to have one in their plane. I have a feeling you will be hearing from a friend of mine named Owen Tabor in the future who will also want to purchase the unit from you.

I would also like to recommend to you a local avionics shop named Shelby Avionics which is located at Charles Baker Airport in Millington TN. They did a terrific job with the installation and they were very reasonable. Don Evertts is in charge and is very easy to work with. IF anyone ever wants to talk with someone who has installed the unit in their plane, feel free to give them my email address. Thanks again Tim Krahn N6660R

MOONEY AIRCRAFT CORPORATION
LOUIS SCREINER FIELD, KERRVILLE, TEXAS 78028

June 4, 1998

Bill Bainbridge, President

B & C Specialty Products, Inc.
123 E. 4th Street
Newton, Kansas 67114

To Whom It May Concern:

The B&C alternator part number BC410-1 is installed as required equipment on the Mooney M20R, Ovation when equipped with our Known Icing Protection System. In addition, the Alternator and its associated Regulator are offered as a stand alone option to Ovation customers who desire a second alternator. In the past two years Mooney Aircraft has ordered and installed approximately 47 of these systems on our Ovations. This accounts for 46% of the total Ovations produced to date. I have checked with our Warrantee Department and have found that there has never been a field service action on this system since the first installation two years ago. Mooney Aircraft extends a full two year all parts and labor warrantee to Ovation purchasers so any problem would certainly have been addressed in these records.

I personally find this product to be of the highest quality and reliability. I have enjoyed working with Mr. Bainbridge on the development of this product; he is outstanding on technical issues and has superior "Common Sense".

If you have questions about this unit or the installation and service experience on the Ovation, please feel free to call me directly at the number below.

Sincerely,



Thomas A. Bowen
Vice President of Engineering

Shops that have installed BC410-1 Standby Alternator System

ALABAMA

Continental Motors
8600 County Road 32
Fairhope, AL 36532
(877) 777-1870
Contact: Ron Humphrey

ARIZONA

West Wind Aviation
732 West Deer Valley Road
Phoenix, AZ 85027
(623) 869-0866
Contact: Al Yoder

CALIFORNIA

Alpine Aviation
13310 Nevada City Ave.
Grass Valley, CA 95945
(530) 477-7701
Contact: Serge Bartlome

Crown Air
3753 John J Montgomery Dr.
San Diego, CA 92123
(858) 277-1453
Contact: Tom Nolan

Cruise Air Aviation
2428 Montecito Road
Ramona, CA 92065
(760) 789-8020
Contact: Dick Kuck

Honeycutt Aviation
1489-A Sky Harbor Drive
Olivehurst, CA 95961
(530) 741-1345
Contact: Daniel Honeycutt
www.honeycuttaviation.com

Howard Aviation
911 McKinley Ave.
LaVerne, CA 91750
(877) 871-4660
Contact: Robin Howard

Woodland Aviation
17992 County Road 94B
Woodland, CA 95695
(800) 442-1333
Contact: Ron Sanow

COLORADO

Freedom Avionics
11915 Airport Way
Broomfield, CO 80021
(303) 469-5633
Contact: Cliff Olson

DELAWARE

Hangar 6
1 Dales Way
New Castle, DE 19720
(302) 352-2703
Contact: Roger Robinson

FLORIDA

Orlando Aircraft Services
601 Humphries Ave.
Orlando, FL 32803
(407) 894-9963
Contact: Ed Redfield

ILLINOIS

Decatur Aviation
790 S Airport Road
Decatur, IL 62521
(800) 798-9832
Contact: Shay Everett

J A Air Center
3N060 Powis Road
West Chicago, IL 60185
(630) 584-3200

INDIANA

Aircraft Specialists, Inc.
Clark County Airport
6005 Propeller Lane
Sellersburg, IN 47172
(812) 246-4696, ext. 701
Contact: Douglas Bramer

KANSAS

Midwest Aviation Services
Newton City/County Airport
1114 Oliver Road, Hangar E
Newton, KS 67114
(316) 283-5915
Contact: Larry Koehn

KENTUCKY

Aircraft Services
2260 Country Club Lane
Hartford, KY 42347
(270) 298-3500
Contact: Ron Fortener
www.forteneraviation.com

Midwest Aviation Services
200 Hardy Roberts Drive
West Paducah, KY 42086
(270) 744-8686 ext.25
Contact: Dan Taylor

MASSACHUSETTS

Jet Aviation of America Inc.
380 Hascom Drive
Bedford, MA 01730
(781) 274-0030
Contact: Mike Gilmore

Nagle Aircraft, Inc.
Bullock Hangar
Fitchburg Municipal Airport
Fitchburg, MA 01420
(781) 274-1210
Contact: Joseph Nagle

Shoreline Aviation
93 Old Colony Lane
Marshfield Airport
Marshfield, MA 02050
(781) 834-4928
Contact: Ed Novak

MICHIGAN

Avantgarde Aviation
6250 H Row
Waterford, MI 48327
(248) 666-3730

Aviation Center
719 Airport Drive
AnnArbor, MI 48108
(734) 662-6806
Contact: John Solo

Shops that have installed BC410-1 Standby Alternator System

Kalamazoo Aircraft Inc.
2729 E Milham Road
Portage, MI 49002
(269) 381-0790
Contact: Jim Michalka
Ralph Michalka

MINNESOTA

Aircraft Maintenance
8891 Airport Road
Blaine, MN 55449
(763) 784-9165
Contact: Bill Ahmann

Elliott Aviation
13801 Pioneer Trail
Eden Prairie, MN 55347
(800) 541-9110

MISSOURI

Aviation Maintenance
3110 E. 40 Hwy
Blue Springs, MO 64015
(816) 229-8822
Contact: Dave Baltz

NEVADA

Rebuilt Aircraft
2208 Bellanca Street
Minden-Tahoe Airport
Minden, NV 89423
(775) 782-5282
Contact: Dave Monti

NEW HAMPSHIRE

Edmonds Aircraft Services
115 Perimeter Road
Nashua, NH 03063
(603) 598-4740

NEW JERSEY

Calwell Air Services
35 Wright Way
Fairfield, NJ 07004
(973) 808-9047

Ronson Aviation Inc.
Trenton Mercer Airport
W. Trenton, NJ 08628
(609) 771-9500
Contact: Ron Mittelstaedt
www.ronsonaviation.com

NORTH DAKOTA

AIC Maintenance
Hwy 18 South, Hangar #4
Casselton, ND 58012
(701) 347-4680
Contact: Perry Ochsner

OHIO

Grissom Aviation
6650 Haggerty Road
Hillsboro, OH 45133
(937) 402-1172
Contact: Tom Grissom

TENNESSEE

Star Avionics Inc.
Lovell Field
521 Airport Road
Chattanooga, TN 37421
(423) 499-1100
Contact: Jeff Miller

TEXAS

DFW Aero Mechanix
4581 Claire Chennault
Addison, TX 75001
(972) 250-2403
Contact: Juan

Hammock Aviation Services
3002 W. Ennis
Ennis, TX 75114
(972) 875-4279
Contact: Gary Hammock

Air-O Specialists of Texas
4666 Glenn Curtiss
Addison, TX 75001
(972) 931-1669
Contact: Charles Schandelmeier

Fritz Aviation
465 Airport Road
Fredericksburg, TX 78624
(830) 990-9050
Contact: Joe Fritz

VIRGINIA

Piedmont-Hawthorn
1005A Sycolin Road
Leesburg, VA 20175
(703) 777-1540
Contact: Mike Myers

WISCONSIN

Skycom Avionics, Inc.
Waukesha County Airport
(Crites Field)
2525 Aviation Drive
Waukesha, WI 53188
(800) 443-4490
Contact: Pete Corrao
Pete Halbouer

WEST VIRGINIA

Albatross Air
380 Airport Circle
Beaver, WV 25813
(888) 790-2717
Contact: Joe Smith

WASHINGTON

Juliet Fox Aviation
10108 32nd Ave.
Everett, WA 98204
(425) 355-3511
Contact: Joe Frewdenberg