

1. Also eligible on Model PA-28-151 When Modified Per STC SA2969SW (160 H.P. Engine Conversion).  
(See Continuation Sheet, Page 2, a part of this STC.)

*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:* 6-26-97

*Date reissued:*

*Date of issuance:* 6-30-97

*Date amended:*

*By direction of the Administrator*



*William J. Thomas*  
(Signature)

William J. Thomas  
DAS Staff Coordinator, DAS 5 SW  
(Title)

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

# Reiff Preheat Systems

*Long engine life starts with Reiff.*

S14 W31825 High Meadow Ln.      Delafield, WI 53018  
Phone/Fax: 262-968-2342      E-mail: Reiff@execpc.com  
**www.execpc.com/reiff**

## HOTPADD OIL SUMP HEATER INSTALLATION INSTRUCTIONS

Failure to follow these instructions may result in product failure and warranty invalidation.  
If any of these instructions are unclear, please call for clarification before beginning.

- 1) CAUTION: DO NOT CUT THE PAD OR PLUG IT IN BEFORE IT IS INSTALLED. Doing so may ruin it, but you should test it before installation by plugging it in for a few seconds until it begins to feel warm.
- 2) The pad should be installed on a smooth, flat surface on the bottom or side of the oil sump below the oil level, with suitable clearance from moving parts such as throttle linkage. It is CRITICAL to have good pad-to-metal contact over the entire area of the pad. Any part of the pad that is not against metal will cause a hot spot on that part of the pad and its life expectancy will be reduced. Do not install over a dented or concave surface (dished in), bolts, cast letters, weld seams, ridges, or any voids more than normal surface roughness. Any raised numbers in the casting must be ground down flush with the sump surface. Voids should NOT simply be filled in with adhesive. If necessary, the pad is able to bend around gentle contours but should not be mounted over sharp bends. INSTRUCTIONS FOR SPECIFIC ENGINES: Large Continentals with stamped oil sumps, the side is the preferred location due to being flatter than the bottom. Small Continentals with kidney tanks, mount the pad horizontally on the front or rear. The thermostat tab will not lay flat so fill in the raised edge with adhesive. Lycoming O-320/360, put it on the right side of the bottom. Lycoming O-320-H, install vertically on the front side. Lycoming IO-360-A, Model 213 wraps around the left side of the oil sump, opposite the engine data plate. Lycoming IO-360-C, Model 56 installs horizontally on the bottom surface of the shelf above the front right intake tube, with the cord facing towards the center. Lycoming IO-540, install both Model 540 pads above the intake tubes with the larger pad (with the thermostat tab) on the left rear of the sump with cord facing aft, and the smaller pad on the right rear with cord aft. Lycoming O-540 on Cessna 182RG, Model 331-A installs vertically on the right side. Lycoming 541, Model 57 installs on the flat section that slopes up and forward.
- 3) The adhesive will need to be kept at 75° F or higher for 24 hrs. to properly cure. Use a heat lamp or other means to do this if necessary.
- 4) Proper surface preparation is CRITICAL to the quality of the adhesive bond and the life of the heater pad. Remove the paint from the oil sump. This is easily done by tracing the outline of the pad with a felt tip pen, then using a wire brush in a Dremel tool, or paint remover, to remove the paint inside the drawn outline. Do not polish the surface - a rough surface gives the best adhesion. The surface must be clean and dry. Clean the installation area using Permatex 4MA Gasket Remover or equivalent, or a residue-free solvent such as isopropyl alcohol, heptane, lacquer thinner, acetone, or M.E.K. (no gasoline, kerosene, etc.).



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

*Number* SA01071LA

*This Certificate issued to* Met-Co-Aire  
14656½ Firestone Blvd  
La Mirada, California 90638

*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 23\* of the Federal Aviation Regulations.*

*Original Product Type Certificate Number :* \*See attached FAA Approved Model List (AML)  
No. SA01071LA for list of approved airplane  
*Make :* models and applicable airworthiness regulations.  
*Model :*

*Description of Type Design Change:*

Installation replacement tail cone fairing assembly in accordance with FAA approved Met-CO-Aire Controlled Drawing List, MA1-1-03, dated September 10, 2000, or later FAA approved revision.

*Limitations and Conditions:* The installation should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of the aircraft. The approval of this modification applies to the above noted airplane model series only. 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.

*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 :* June 29, 2000

*Date issued :*

*Date of issuance :* October 6, 2000

*Date amended :*



*By direction of the Administrator*  
*Michael W. Chan*

(Signature)

Manager, Airframe Branch  
Los Angeles 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.

**Brantford Flying Club**  
**Major Repair or Modification Report**

For instructions, see Standard 571 Appendix L

1. Aircraft	Make <b>PIPER</b>	Model <b>PA 28-181</b>
	Serial No. <b>7690334</b>	
2. Owner	Name <b>BPL Aviation Inc.</b>	Registration Marks <b>C-GSLM</b>

3. Type of work

☐ Modification

☒ Repair

4. Name and address of person or organization who accomplished the repair or modification

Brantford Flying Club, P.O. Box 903, Brantford, On. N3T 5L7

5. Description of work accomplished

-Install new rudder skin P.N. 63396-802 I.A.W Piper Maintenance Manual Chapter 51-10-00 and AC 43.13-1B, 4-57 (Riveting), using original rivet sizes and spacing thruout.

-Rudder prepped, primed and painted to match original.

-Control surface balance checked

9 5/8 in/lbs (13.5 limit)

Signature of person submitting report



Date of report June 02, 2016



## MAJOR REPAIR AND MAJOR MODIFICATION REPORT

1. Aircraft	Make Piper	Model  PA28-181
	Serial No. 28-7690334	
2. Owner	Name BPL Aviation	Registration marks  C-GSLM

3. Type of work  
☒ Modification      ☐ Repair

4. Name and address of person or organization who accomplished the repair or modification

Brantford Flying Club      AMO 153-92  
 P.O. Box 903      Phone 1-519-753-2521  
 Brantford, On N3T 5S1      Fax 1-519-753-3617

5. Description of work accomplished

Installed Insight G2 Graphic Engine Monitor in accordance with installation manual 610C-001, Document No. 070906 and Canadian STC No. SA09-30 issue 4 dated October 26, 2012.

Installed Insight fuel flow signal adapter 610C-025 in accordance with drawing No. 101116.  
 Aircraft retains Shadin fuel flow as the primary system.

Weight & Balance and Equipment List amended.  
 Installed AFM supplement Document No. 610C-FMS

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*[Signature]*

16 AUG 2013

**IMPORTANT DOCUMENTS**  
**Supplemental Type Certificate**  
KEEP WITH AIRCRAFT RECORDS

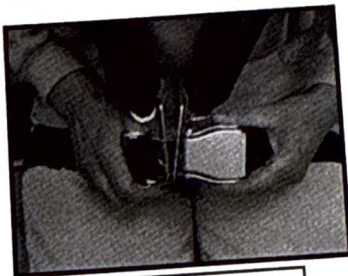
Number SA01643SE

Reg # C-65LM  
AC Ser. # 28-7690334  
B.A.S. Inc. Ser. # 242  
1. 243  
2. 243

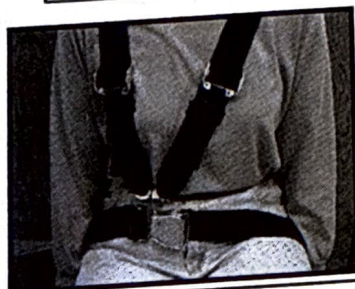
ATTENTION:  
CHECK REEL OPERATION BEFORE EACH FLIGHT



Incorrect: Buckle Too High

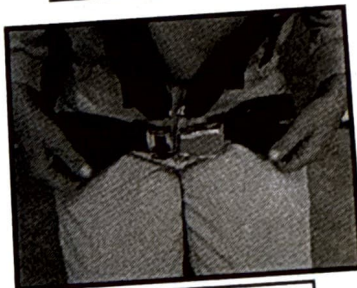


Utility Float Plane Buckle

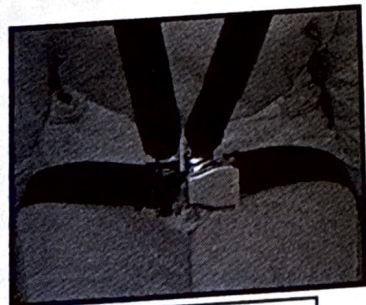


Incorrect: Buckle Must Be Centered

Lift Buckle  
Latch For  
Removal!



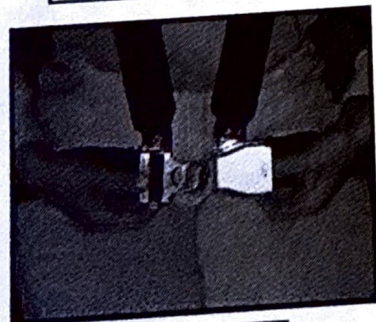
Pull Belt Ends To Tighten



Correct: Pull Down Snug



Pull Strap Ends To Tighten 190/195 & Luscombe



Standard Buckle



Pull Tabs to Loosen 190/195 & Luscombe

to limitations and conditions  
23 of the Federal Aviation

Approved Model List (AML)  
list of approved airplane models  
thickness regulations.

or harness with inertia reel in  
r FAA-approved revision.

ies only to the model aircraft  
other aircraft of this model on  
is determined that the  
ved modifications, including  
iness of that aircraft. A copy  
must be maintained as part of

the product, the holder shall

remain in effect until  
by the Administrator of the

for

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	Owners Manual Supplement	Report 1302
REV A May 1, 2003		Page 1 of 1
		BAS Incorporated

ling 3 years, or both.

ed in accordance with FAR 21.47.



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

# Supplemental Type Certificate

Jason

Number SA470CH GPS 508

This certificate issued to

Plane Dynamix, LLC  
3650 Rogers Road, Suite 231  
Wake Forest, NC 27587

This STC is valid only as registered with  
Plane Dynamix, LLC 407-917-2359

certifies that the change in the type design for the following product with the limitations and conditions  
therefore as specified herein meets the airworthiness requirements of Part 3 of the Civil Air Regulations.  
(See Type Certificate Data Sheet Number 2A13 for the complete certification basis.)

Original Product - Type Certificate Number: 2A13

Make: Piper Aircraft Corporation

Model: PA-28-140, PA-28-150, PA-28-151, PA-28-160,  
PA-28-161, PA-28-180, PA-28-181, PA-28-235,  
PA-28-236, PA-28S-160, PA-28S-180,  
PA-28R-180, PA-28R-200, PA-28R-201,  
PA-28R-201T, PA-28-201T

### Description of Type Design Change:

Installation of 3M Scotch #8672 one inch wide polyurethane tape as gap seals for the ailerons and the stabilator trim tabs according to the installation instructions titled "Aileron Gap Seal" and "Stabilator-Trim Tab Gap Seal", no revisions, dated August 18, 1995, or later FAA approved revisions.

### Limitations and Conditions:

- 1) The installer must determine whether this design change is compatible with previously approved modifications.
- 2) The Never Exceed Speed (VNE) for the modification is limited to 186 knots (214 mph) Indicated Airspeed (IAS).
- 3) The Airplane Flight Manual Supplement, dated September 24, 1996 or later FAA approved revisions, is required with this modification.
- 4) If the airplane is certified with a VNE lower than 214 mph, then this lower VNE remains in effect.
- 5) If the holder agrees to permit another person to use this certificate to alter the product, the holder must give the other person written evidence of that permission.

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: October 21, 1994

Date of issuance: December 12, 1995

Date reissued: August 26, 2015

Date amended: September 24, 1996

By direction of the Administrator

(Signature)

Karol Mordasiewicz  
Manager, Airframe and Administrative Branch  
Chicago Aircraft Certification Office

(Title)

