Oil Pressure/Temp (OPT-1)

(Primary Replacement Instrument)

Operating and Installation Instructions

OI 0520911

5/20/91
Rev. C: 10/8/97 **

You must read this manual before installing or operating the instrument. This manual contains warranty and other information that may affect your decision to install this product and/or the safety of your aircraft.

OPT-1 S/N: _____

PT-100GA S/N: _____

Electronics International Inc.®

63296 Powell Butte Hwy • Bend, OR 97701 • (541) 318-6060 • iFlyEi.com

Important Notice

***** MUST READ *****

If you think it is not important to read this manual, you're wrong! This manual contains important installation information that may affect the safety of your aircraft, delay your installation or affect the operation of your instrument. You Must read this manual prior to installing your instrument. Any deviation from these installation instructions is the sole responsibility of the installer/pilot and may render the STC invalid.

Read the Warranty / Agreement. There is information in the Warranty / Agreement that may alter your decision to install this product. If you do not accept the terms of the Warranty / Agreement, do not install this product. This product may be returned for a refund. Contact Electronics International inc. for details.

Check that the instrument make and model marked on the side of the instrument and on the invoice are correct before starting the installation.

Check that the limit information on this instrument matches the published limits in your aircraft's P.O.H. or Flight Manual. Also, this information may be listed in the T.C. Data Sheet for your aircraft. Any AD's and/or STC's may set forth additional limitations on the operation of your engine. The limit information listed in the AML is for unmodified aircraft and is intended for reference only. It is the aircraft owner's and/or installer's responsibility to determine proper instrument calibration and range markings for your aircraft.

On the front of this instrument you will find two red lights marked with the maximum oil pressure and temperature information. If there are any additional red or yellow lights on this instrument, the operating range of these lights can be found on a sticker located on the side of the instrument (see the AML at the back of this manual to decode this information). This instrument designates any "Caution Range" with yellow LEDs, any "Maximum and Minimum Limits" with Red LEDs and the "Safe Operating Range" with green LEDs. The "Safe Operating Range" on this instrument is equivalent to the green "Normal Operating Range" and any unmarked areas on a analog gauge.

It is possible for any instrument to fail thereby displaying inaccurate high, low or jumpy oil pressure or temperature readings. Therefore, you must be able to recognize an instrument failure and you must be proficient in operating your aircraft safely in spite of an oil pressure or temperature instrument failure. If you do not have this knowledge, contact the FAA or a local flight instructor for training.

The pilot must understand the operation of this product before flying the aircraft. Do not allow anyone to operate the aircraft that does not know the operation of this product. Keep the Operating Manual in the aircraft at all times.

Rev: C 10/8/97

Contents

Warranty / Agreement

Electronics International Inc. warrants this instrument and system components to be free from defects in materials and workmanship for a period of one year from the user invoice date. Electronics International Inc. will repair or replace any item under the terms of this Warranty provided the item is returned to the factory prepaid.

1. This Warranty shall not apply to any product that has been repaired or altered by any person other than Electronics International Inc., or that has been subjected to misuse, accident, incorrect wiring, negligence, improper or unprofessional assembly or improper installation by any person. This warranty does not cover any reimbursement for any person's time for installation, removal, assembly or repair. Electronics International retains the right to determine the reason or cause for warranty repair.

2. This warranty does not extend to any machine, vehicle, boat, aircraft or any other device to which the Electronics International Inc. product may be connected, attached, interconnected or used in conjunction with in any way.

3. The obligation assumed by Electronics International Inc. under this warranty is limited to repair, replacement or refund of the product, at the sole discretion of Electronics International Inc.

4. Electronics International Inc. is not liable for expenses incurred by the customer or installer due to factory updates, modifications, improvements, upgrades, changes, or any other alterations to the product that may affect the form, fit, function or operation of the product.

5. Personal injury or property damage do to misinterpretation or lack of understanding this product is solely the pilots responsibility. The pilot must understand the operation of this product before flying the aircraft. Do not allow anyone to operate the aircraft that does not know the operation of this product. Keep the Operating Manual in the aircraft at all times.

6. E. I. Inc. is not responsible for shipping charges or damages incurred under this Warranty.

7. No representative is authorized to assume any other liability for Electronics International Inc. in connection with the sale of Electronics International Inc. products.

8. If you do not agree to and accept the terms of this warranty, you may return the product for a refund.

This Warranty is made only to the original user. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR OBLIGATIONS: EXPRESS OR IMPLIED. MANUFACTURER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PURCHASER AGREES THAT IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS OR LOSS OF USE OR OTHER ECONOMIC LOSS. EXCEPT AS EXPRESSLY PROVIDED HEREIN, MANUFACTURER DISCLAIMS ALL OTHER LIABILITY TO PURCHASER OR ANY OTHER PERSON IN CONNECTION WITH THE USE OR PERFORMANCE OF MANUFACTURER'S PRODUCTS, INCLUDING SPECIFICALLY LIABILITY IN TORT.

Operating Instructions
OPT-1

0520911

Instrument

The OPT-1 is a precision oil pressure/temperature instrument featuring dual 90 degree analog displays. These two displays provide the primary monitoring of oil pressure and temperature and have many advantages over conventional analog gauges as described below.

The digital display provides a method of monitoring oil pressure to 1 PSI or oil temperature to 1°F. This can be very helpful in detecting trends and allowing you to control your aircraft to divert engine problems.

The OPT-1 features long term accuracy and reliability. Since the OPT-1 does not incorporate any moving parts (needles, bearings, springs, etc.) there is little to go wrong or wear out. Also, the internal microprocessor assures accuracy and repeatability.

The OPT-1 incorporates an external oil pressure transducer mounted in the engine compartment. This keeps the oil lines out of the cabin, reducing weight and assuring safety.

Analog Display

The dual 90 degree analog displays provide a quick reference for oil temperature and pressure with respect to their operating ranges. At a glance you can get a relative idea of where in the range you are operating the engine and how close to the maximum limits you are. Precise information is provided in the digital display.

An advantage of the analog display is its ability to emit a green, yellow or red light. With a quick glance you can determine if you're operating in a normal, caution or restricted range. Also, when you exceed a maximum limit a red light will blink 20 times at full intensity to catch your attention and warn you that a maximum limit has been violated. After 20 blinks the red light will stop blinking and display continuous red so it does not distract you.

During night operation the analog lights may be too bright. If so, turn the panel light rheostat up and the analog lights will dim. The red (maximum limit) light will always be displayed at full intensity.

Digital Display (Oil Pressure)

By setting the toggle switch on the front of the instrument to "Press" you can monitor oil pressure changes to 1 PSI. This can be very helpful in detecting problems or in monitoring trends. Abnormally low oil pressure can be caused by an oil leak, low oil level, worn or defective oil pump, excessively high oil temperature, contaminated oil or possible other problems. Abnormally high oil pressure can be caused by a restricted oil line or cold oil temperatures. Oil lubricates and carries heat away from the bearing surfaces in the engine. Without it, your engine will only run for a few minutes. Become familiar with your normal operating oil pressure.

Oil pressure readings at or below 5 PSI will be displayed as "00".

If the digital display backlight has been permanently powered up (as recommended), the digital display will be easier to see during low ambient light conditions and at night.

Digital Display (Oil Temperature)

As the oil passes through the engine, it is heated. It then passes through the oil cooler and reaches a stable temperature depending on internal engine temperatures, oil flow (pressure, etc.) and oil cooler efficiency (airspeed, etc.). A change in any of these parameters will cause the oil temperature to increase or decrease. With the 1'F resolution of the OPT-1, oil temperature changes can be detected easily. This allows the pilot to diagnose many problems that may never be noticed with a less sensitive gauge.

Maintaining your oil temperatures within operating limits is essential. If the oil exceeds its maximum operating temperature or if it is operated at excessively high temperatures for a long period of time, the oil will break down and it will not possess the necessary lubricating properties to protect your engine. The formula for long engine life is to change your oil at regular intervals and watch your oil temperatures.

Installation Instructions
OPT-1

Important Information and Initial Check Out

1. **The installer and aircraft owner must read the Warranty / Agreement before starting the installation.** There is information in the Warranty that may alter your decision to install this instrument. **If you do not accept the terms of the Warranty, do not install this instrument.**

2. If you are not an FAA Certified Aircraft Mechanic familiar with the issues of installing aircraft Oil Pressure/Temperature instruments, Do Not attempt to install this instrument. The installer should use current aircraft standards and practices to install this instrument (refer to AC 43.13).

3. **Check that any necessary FAA Approvals (STC's, etc.) are available for your aircraft before starting the installation. The FAA Approved Model List (AML) is located at the back of this manual. Resolve any issues you may have before starting the installation.**

4. Before starting installation, read the entire Installation Instructions and resolve any installation, operating and performance issues you may have. This may eliminate any delays once the installation is started.

5. Check that the instrument make and model marked on the side of the instrument and on the invoice are correct before starting the installation.

6. **Check that the limit information on this instrument matches the published limits in your aircraft's P.O.H. or Flight Manual. Also, this information may be listed in the T.C. Data Sheet for your aircraft. Any AD's and/or STC's may set forth additional limitations on the operation of your engine. The limit information listed in the AML is for unmodified aircraft and is intended for reference only. <u>It is the aircraft owner's and/or installer's responsibility to determine proper instrument calibration and range markings for your aircraft.</u>**

   On the front of this instrument you will find two red lights marked with the maximum oil pressure and temperature information. If there are any additional red or yellow lights on this instrument, the operating range of these lights can be found on a sticker located on the side of the instrument (see the AML at the back of this manual to decode this information). This instrument designates any "Caution Range" with yellow LEDs, any "Maximum and Minimum Limits" with Red LEDs and the "Safe Operating Range" with green LEDs. The "Safe Operating Range" on this instrument is equivalent to the green "Normal Operating Range" and any unmarked areas on a analog gauge.

   Do not attempt to remove or replace the limit information on this instrument. If the oil pressure or temperature limits for your engine do not match those which are marked on this instrument send this unit back to Electronics International Inc. for recalibration. <u>DO NOT install or use a primary engine instrument that is not properly calibrated for your aircraft.</u>

7. **Before starting the installation make sure the unit will fit in the location you intend to install it without obstructing the operation of any controls.**

8. **If this instrument is to replace an existing unit in the aircraft, it is the installer's responsibility to move or replace any existing instruments or components in accordance with FAA approved methods and procedures. The following Installation Instructions do not cover moving or the removal of any existing instruments or components.**

Route The Circular Connector

Starting from under the instrument panel, route the circular connector wire harness up to the instrument mounting location. (See the wiring diagram at the back of this manual). Place the circular connector about 8 inches back from the panel. Tie wrap the harness in place approximately 1 foot back from the circular connector. This will allow the harness to be flexible and accommodate varying lengths in instrument wires. <u>Be sure these wires do not obstruct the freedom of travel of any controls.</u>

Route the Power and Ground Wires

In the wire harness is a 6 foot red and black wire used for the pressure transducer and a 3 foot red and black wire use for instrument power and ground. Route the 3 foot red wire in the harness to the aircraft's 12 or 24 volt main or emergency bus as applicable via an independent circuit breaker (five amps or less). An alternate method would be to route the red lead to the bus via a one amp in-line fuse. With this method a spare fuse should be kept in the aircraft.

Route the 3 foot black wire in the harness to a good ground . <u>Tie wrap these wires so they do not obstruct the freedom of travel of any controls.</u>

Route the Backlight Wires

Connect the backlight wires as follows:

1. It is recommended to permanently power up the digital display backlight.

a) For a 12-volt system connect the white/brown wire to the instrument Red Power Lead. Connect the white/red wire to ground (see Wiring Diagram).

b) For a 24-volt system leave the white/brown open and connect the white/red wire to the instrument Red Power Lead (see Wiring Diagram).

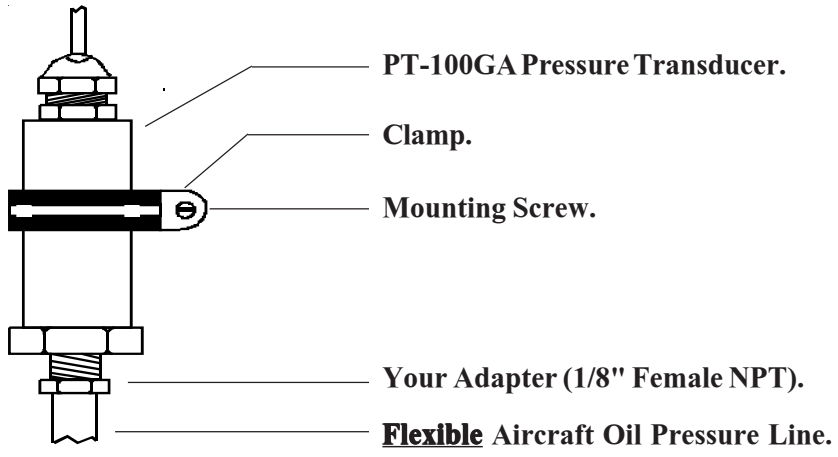
2. Connect the white/orange wire to the panel light rheostat. This wire will dim the analog LED's for night operation when the panel lights are turned on. If this line is left open, the analog LED's will remain at full intensity at all times. Also, if the voltage on this line drops below 11.5 volts, the analog LED's will be displayed at full intensity. Tie wrap all wires so they do not obstruct the freedom of travel of any controls. Note: This line may be connected to the CP-1 Intensity Control Pot (see price sheet.

Route the (Optional) External Warning Control Line

The white/yellow wire can be connected to an external light (AL-1), buzzer (ATG-1), voice annunciator (AV-17), a relay, etc. This wire grounds when the red warning light is on. The current in this line must be limited to 2/10 of an amp maximum. Exceeding this limit will damage the unit. If this feature is not used, leave this line open. Tie wrap this wire so it does not obstruct the freedom of travel of any controls.

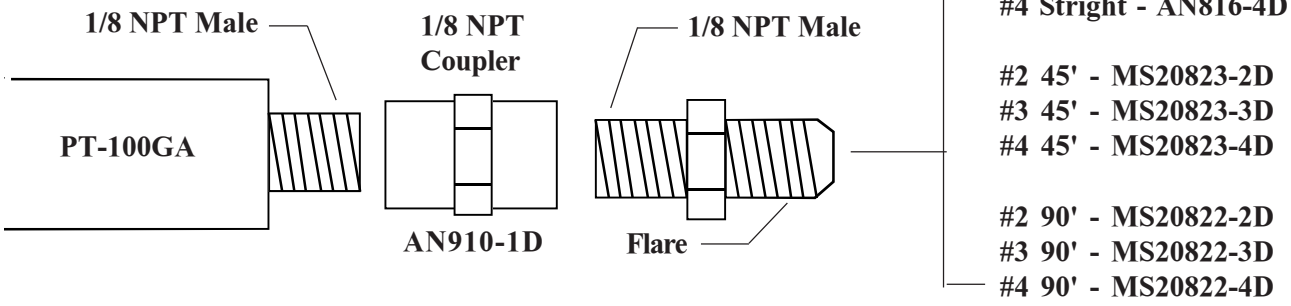
Install the Oil Pressure Transducer

Find a convenient location on the fire wall and mount the pressure transducer with the clamp provided. The oil pressure line does not have to be routed into the cabin area although you will need access on the cabin side of the fire wall to tighten the pressure transducer clamp nut. Do not mount



the pressure transducer to an engine baffle or directly on the engine supported by an adapter or fitting. Vibration can cause the adapter to break, resulting in loss of engine oil. The pressure transducer is equipped with a 1/8" NPT male port. This port can be adapted any oil pressure line. Use only a flexible hose and fittings suitable for aircraft use. Route a flexible oil pressure line from the primary oil pressure pick up point to the pressure transducer and tighten all fittings. **Do not use the case of the oil pressure transducer to tighten the pressure fittings.**

Some Fittings you may want to consider using are shown below:



Install the Oil Temperature Probe

Replace your existing primary oil temperature probe with the probe provided in the kit. Oil temperature can vary throughout an engine. Your engine's oil temperature specifications are based on a specific location of the oil temperature probe. If this instrument is to be used as a primary instrument, the oil temperature probe must be installed at the primary oil temperature pick up point. Otherwise the OPT-1 must be placard as a secondary instrument.

If the oil temperature probe must be removed on a regular basis to drain the oil, order a precision connector for the probe and extension cable to allow for easy disconnect.

Route the Oil Temperature Extension Cable

Route the temperature cable in the wire harness to the oil temperature probe. When tie wrapping this cable down, be sure there is no strain or pull against the probe. Keep the probe and cable leads away from any hot areas such as exhaust stacks or cylinder heads. Connect the temperature cable to the oil temperature probe using OLC-1 Overlap Connectors. See the OLC-1 Instructions for details.

Any excess cable can be rolled up and tie wrapped under the instrument panel. **Tie wrap these wires so they do not obstruct the freedom of travel of any controls.** Do not kink this cable. Any bend in this cable should have a 1/2 inch or more radius. You may decide to cut the extension cable to a specific length before connecting it to the probe.

Route the Pressure Transducer Extension Wires

In the wire harness is a 3 foot red and black wire used for instrument power and ground and a 6 foot red and black wire used for the pressure transducer. Route the four 6 foot pressure transducer wires (red, black, green and white) in the wire harness to the pressure transducer and cut to length. These wires maybe spliced if extra wire length is required. Connect to the pressure transducer using the OLC-1 Overlap Connectors. See OLC-1 Instructions for details.

Install the Instrument in the Panel

Install the instrument from behind the instrument panel using 6 x 32 screws. These screws should not be any longer than 1/2". Tie wrap any loose wires as needed.

Connect the Circular Connector to the Instrument

1) Push the two mating connectors together and twist them until they snap into position.

2) Turn the locking ring on the instrument connector clockwise (1 1/2 turns) until it locks into position.

Check Instrument Operation

Check instrument operation as follows:

1. Turn the master switch on (engine off) and verify that the instrument sequences through all the analog lights. A problem at this step could be caused by poor connections on the red and/or black leads.

2. Set the instrument toggle switch to "Oil Press" and check for a digital oil pressure reading of "00." A problem at this step could be caused by a poor connection or crossed pressure transducer wires. The voltage on the pressure transducer wires (with the transducer connected to the unit) should measure as follows:

Red Wire - +5 Volts.
Black Wire - 0 Volts.
Green Wire - 2.5 Volts.
White Wire - 2.5 Volts.

50mV Green to White at 100PSI

3. Set the instrument toggle switch to "Temp" and check the instrument to read proper oil temperature. A problem at this step could be caused by poor or improper connections between the oil temp probe and instrument. If the instrument is not connected to the oil temperature probe it will read cabin temperature. By applying a small amount of heat to the oil temperature probe the oil temperature readings will increase one degree at a time.

4. **Check the digital display backlight. With high or medium ambient light it is hard to see the digital display backlight (it is only required during low ambient light conditions but should be on all the time).**

5. **If the analog LED dimming wire has been connected, turn the panel light rheostat up and look for the analog lights to dim. Note: If any red warning light is on, none of the analog lights will dim.**

6. **Start the aircraft engine and check the digital and analog displays to read oil pressure properly. A problem at this step could be caused by a poor connection or crossed pressure transducer wires. Measure the voltage on the pressure transducer wires as listed in step 2. If the voltage measurements are correct and the oil pressure reads "00", the white and green wires between the pressure transducer and instrument may be reversed.**

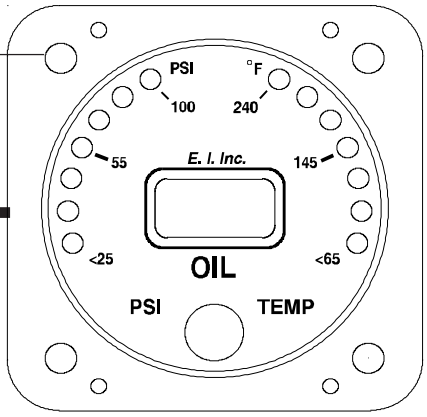
7. **With the engine running, check the digital and analog displays to read oil temperature properly. If there is a problem at this point see step 3 above for troubleshooting information.**

8. **After running the engine, check the engine and pressure transducer fittings for oil leaks.**

Oil Pressure/Temp (OPT-1) Wiring Diagram

WD 0315911

Do not use screws longer than 1/2" (4 ea.).



Circular Connector

Wire Harness

Red — 3' Power Lead, connects to 12 or 24 Volt Bus.

Black — 3' Ground Lead, connects to Ground.

White/ Brwn — 3' 12V Backlight Control Line, connects to Red Power Lead for a 12V system. 12 volts turns on the digital display backlight.

White/Red — 3' 24V Backlight Control Line, connects to Red Power Lead for a 24V system. **Connect to ground for 12 Volt System.**

White/ Orng — 3' Analog LED Lighting Control Line, connects to Panel Light Rheostat. 12/24 volts dims the analog LEDs.

White/Yel — **3'** (Optional) External Warning Control Line. Can be connected to a relay to control an external light, buzzer, etc. Grounds when Red Warning Light is on. Current must be limited to 2/10 amp maximum.

Red
Yellow — 6' Extension Cable

Oil Temp Probe.

Connect the same color of 6' wires from the unit to the pressure transducer. Connectors are supplied in the kit. Be sure these wires are connected properly.

6' Red Wire — Red
6' Black Wire — Black
6' White Wire — White
6' Green Wire — Green

Pressure Transducer

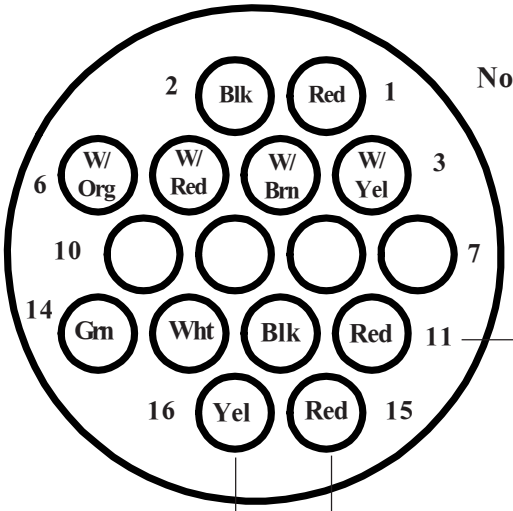
PT-100GA

OPT-1 Circular Connector

Connecting Cable Harness, Back View (wire side)

OR

Instrument Connector, Front View



Note: See Wiring Diagram for hook up information.

11 to 14 (Oil Pressure Transducer Wires).

Oil Temp. Extension Cable

Specifications and Operating Features

Model:

OPT-1 (Oil Pressure/Temperature Instrument)

Case Dimensions:

2.5" x 2.5" x 3.65" depth, 2 1/4" Bezel.

Weight:

Unit Only:	10 Oz.
Pressure Transducer:	8 Oz.
Temp Probe and 6 ft. cable:	4 Oz.
Extra Extension cable:	0.33 Oz./ft.

Environmental:

Meets TSO C47/C43a.

Power Requirements:

7.5 to 35 Volts, 1/10 Amp.

PT-100GA Pressure Transducer:

0 to 100 PSI
300 PSI Proof
500 PSI Burst
1/8" NPT female

P-120 Temperature Probe:

-50°F to 700°F
5/8 - 18 Thread

Analog Display:

Two sets of 7 High Intensity Light Emitting Diodes (LEDs) in a 90 degree arc with Intensity Control Line available for dimming. Sequential flash test on power up. Microprocessor eliminates LED hunting (flicker).

Red LEDs:

If the Analog Display goes from a Green LED or Yellow LED to a Red LED, the Red LED will blink 20 times then go solid Red. Red Limit LEDs are always displayed at full intensity.

Digital Display:

LCD (viewable in direct sunlight), with 12 and 24 volt backlight control wires for night operation. Displays "8888" on power up.

Accuracy:

Pressure:	2% in accordance with TSO C47/C43a.
Temperature:	2% in accordance with TSO C47/C43a.

Resolution:

Pressure:	1 PSI. (Readings at or below 5 PSI will be displayed as "00")
Temperature:	1°F.

Max Displayed Range (Unit Only):

Pressure:	5 to 999 PSI.
Temperature:	0 to 1999°F.

Update Time:

2 times per second.

External Warning Control Line:

Grounds when any Red Warning Light is on or blinking. Current should be limited to 2/10 amp.

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA5925NM

This certificate, issued to Electronics International, Inc.

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 * *of the* * *Regulations.*

Original Product — Type Certificate Number: * See attached FAA Approved Model List (AML)

Make: * No. SA5925NM for list of approved airplane

Model: * models and applicable regulations.

Description of Type Design Change: Electronics International oil pressure/temperature instrument manufactured and installed in accordance with the drawings and installation instructions specified on the FAA Approved Model List (AML) of this STC, or later FAA approved revisions.

Limitations and Conditions: Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this certificate and FAA Approved Model List (AML) No. SA5925NM, dated February 17, 1993, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

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: November 10, 1992 *Date reissued:*

Date of issuance: February 17, 1993 *Date amended:*

By direction of the Administrator

/ [signature] *(Signature)*

Acting Manager, Special Certification Branch
Seattle 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.

FAA Form 8110-2 (10-68)

FAA Approved Model List (AML) SA5925NM
For
Electronics International Oil Pressure/Temperature Instrument

Issue Date: February 17, 1993

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	FAA Sealed Drawings		Installation Instructions		Instrument Model Number (See Note 1)	AML Amended Date
					Number	Rev.	Number	Rev. No.		
----	----------	----------	----------	----------	TD0327921	N/R	OI 0520911	C	----------	-------
1.	Aeronca Inc. (Also see American, Bellanca)	50-LA, 65-LA, -LB 15AC, S15AC	A-702 A-802	Car 4a Car 3	" "	" "	" "	" "	OPT-1-R0G10R40/Y0G90R220 OPT-1-R0G10R40/Y0G90R220	6/3/94 "
2.	Aerospatiale	See Socata.	----------	----------	---------	-----	----------	--------	----------	6/3/94
3.	American Blimp	A-60, A-60+	AS1NM	FAR 21	"	"	"	"	OPT-R0G15R59/Y0G65R245	10/30/97
4.	American Champion (Also see Aeronca, Bellanca)	7AC,S7AC	A-759	Car 4a	"	"	"	"	OPT-1-R0G30R60/Y0G65R220	6/3/94
			"	"	"	"	"	"		"
		7ECA	"	"	"	"	"	"	OPT-1-R0G30R60/Y0G65R225	"
			"	"	"	"	"	"		"
		7BCM,7CCM,7DC,7EC	"	"	"	"	"	"	OPT-1-R0G30R40/Y0G65R225	"
		S7DC,S7CCM,S7EC	"	"	"	"	"	"	"	"
		7FC,7JC	"	"	"	"	"	"	"	"
			"	"	"	"	"	"		"
		7GC,7HC,7GCA,7GCB	"	"	"	"	"	"	OPT-1-	"
		7KC,7GCBA,7GCAA	"	"	"	"	"	"	R0Y25G60Y90R100/Y0G65R245	"
		7GCBC	"	"	"	"	"	"	"	"
			"	"	"	"	"	"		"
		7KCAB	"	"	"	"	"	"	OPT-1-	"
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			"	"	"	"	"	"		"
		7ACA	"	"	"	"	"	"	OPT-1-R0GY25G55R95/Y0G65R285	"
			"	"	"	"	"	"		"
		8KCAB	A21CE	Far 21	"	"	"	"	OPT-1-	10/30/97
			"	"	"	"	"	"	R0Y25G60Y90R100/Y0G65R245	"
			"	"	"	"	"	"		"
		8GCBC	"	"	"	"	"	"	OPT-1-	"
			"	"	"	"	"	"	R0Y25G55Y95R115/Y0G65R245	"
			"	"	"	"	"	"		"
		11AC, S11AC	A-761	Car 4a	"	"	"	"	OPT-1-R0G30R60/Y0G65R220	"
			"	"	"	"	"	"		"
		11BC, S11BC	"	"	"	"	"	"	OPT-1-R0G30R40/Y0G65R225	"
5.	Aviat	A-1	A22NM	Far 23	"	"	"	"	OPT-1-R0G25R100/Y0G65R240	6/3/94
		S-1S, -1T	A8SO	Far 21	"	"	"	"	OPT-1-R0Y25G60R100/Y0G100R245	"
		S-2, -2A	"	"	"	"	"	"	"	"
		S-2S -2B	"	"	"	"	"	"	"	"

FAA Approved Model List (AML) SA5925NM
For
Electronics International Oil Pressure/Temperature Instrument

Issue Date: February 17, 1993

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	FAA Sealed Drawings		Installation Instructions		Instrument Model Number (See Note 1)	AML Amended Date
					Number	Rev.	Number	Rev. No.		
----	----------	----------	----------	----------	TD0327921	N/R	OI 0520911	C	----------	-------
6.	Beech Aircraft Corp.	18A,D,S18A,D,A18D	A-684	Bul 7A	"	"	"	"	OPT-1-R0G25R100/Y0G65R205	8/15/93
		19A, B19, M19A	A1CE	CAR 3	"	"	"	"	OPT-1-R0Y25G60R85/Y0G120245	"
		23, A23	"	"	"	"	"	"	OPT-1-R0Y25G60R100/Y0G120R245	"
		A23A, A23-24	"	"	"	"	"	"	OPT-1-R0Y10G30R100/Y0G120R225	"
		C23, B23, A24	"	"	"	"	"	"	OPT-1-R0Y25G60R100/Y0G120R245	"
		A24R, B24R, C24R	"	"	"	"	"	"	OPT-1-R0Y25G60R100/Y0G120R245	"
		35, A35, B35, C35	A-777	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		D35, E35, F35	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		G35, 35R	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		H35, J35, K35	3A15	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		M35, N35, P35,	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		S35	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		V35, V35A, V35B	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G100R240	"
		35-33, 35-A33	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		35-B33, 35-C33	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G100R225	"
		35-C33A, E33	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G100R240	"
		E33A, E33C, F33	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G100R240	"
		F33A, F33C	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G100R240	"
		G33	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G100R225	"
		36, A36	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G100R240	"
		A36TC, B36TC	"	"	"	"	"	"	OPT-1-R0Y10G30R100/Y0G100R240	"
		45, A45, D45	5A3	"	"		"	"	OPT-1-R0G30R60/Y0G65R225	10/30/97
		50,C,D,E,F,G,H,J	5A4	"	"	"	"	"	OPT-1-R0G25R100/Y0G100R235	8/15/93
		A55, B55, B55B,	3A16	"	"	"	"	"	OPT-1-R0G30R100/Y0G75R240	"
		C55, C55A, D55	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G75R240	"
		D55A, E55, E55A	"	"	"	"	"	"	OPT-1-R0G30R100/Y0G75R240	"
		56TC, A56TC	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G100R240	"
		58, 58A	A23CE	FAR 23	"	"	"	"	OPT-1-R0Y10G30R100/Y0G75R240	"
		58P, 58PA, 58TC	"	"	"	"	"	"	OPT-1-R0Y10G30R100/Y0G100R240	"
		58TCA	"	"	"	"	"	"	OPT-1-R0Y10G30R100/Y0G100R240	"
		60, A60, B60	A12CE	"	"	"	"	"	OPT-1-R0G25R100/Y0G100R245	"
		65,-80,-88,B,-90	3A20	CAR 3	"	"	"	"	OPT-1-R0G25R85/Y0G100R225	"
		A65,-8200,70,A90	"	"	"	"	"	"	OPT-1-R0G25R85/Y0G100R235	"
		70	3A20	CAR 3	"	"	"	"	OPT-1-R0G25R85/Y0G100R235	"
		76	"	"	"	"	"	"	OPT-1-R0G25R85/Y0G100R235	"
		77	A30CE	FAR 23	"	"	"	"	OPT-1-R0G25R100/Y0G120R245	"
6.	Beech Aircraft Corp. (Cont)	95, B95, B95A	3A16	CAR 3	"	"	"	"	OPT-1-R0G25R85/Y0G140R245	8/15/93
		D95A, E95	"	"	"	"	"	"	OPT-1-R0G25R85/Y0G140R245	"
		95-55, -A55, -B55	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G75R225	"
		95-B55A, -B55B	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G75R225	"
		95-C55, -C55A	"	"	"	"	"	"	OPT-1-R0G30R80/Y0G75R225	"
7.	Bellanca Aircraft Corporation	14-19	1A3	CAR 3	"	"	"	"	OPT-1-R0G10R35/Y0G90R220	6/3/94
		17-30, -31, -31TC	"	"	"	"	"	"	OPT-1-R0Y25G60R100/Y0G100R245	"
		17-30A	A18CE	FAR 23	"	"	"	"	OPT-1-R0G10R100/Y0G75R240	"
		17-31A, 17-31ATC	"	"	"	"	"	"	OPT-1-R0Y25G60Y90R100/Y0G75R245	"

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					Number	Rev.	Number	Rev. No.		
----	----------	----------	----------	----------	TD0327921	N/R	OI 0520911	C	----------	-------
8.	Boeing Aircraft (Stearman)	A75-L3,-L300	A-743	Car 4a	"	"	"	"	OPT-1-R0G50R100/Y0G65R200	10/30/97
		A75N1	"	"	"	"	"	"	OPT-1-R0G50R100/Y0G65R210	"
		A75J1	"	"	"	"	"	"	OPT-1-R0G60R90/Y0G65R200	"
		IB75A	"	"	"	"	"	"	OPT-1-R0G50R100/Y0G65R200	"

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----	----------	----------	----------	----------	TD0327921	N/R	OI 0520911	C	----------	-------
9.	Cessna Aircraft Corp.	120, 140, 140A	A-768	CAR 4a	"	"	"	"	OPT-1-R0Y10G30R100/G0R240	8/15/93
		150, 150A, 150B	3A19	CAR 3	"	"	"	"	"	"
		150C, 150D	"	"	"	"	"	"	"	"
		150E, 150F, 150G	"	"	"	"	"	"	"	"
		150H, 150J, F150F	"	"	"	"	"	"	"	"
		150J, 150K, A150K	"	"	"	"	"	"	"	"
		150L, A150L	"	"	"	"	"	"	"	"
		150M, A150M	"	"	"	"	"	"	"	"
		152, A152	"	"	"	"	"	"	OPT-1-R0G25R115/Y0G100R245	"
		170, 170A, 170B	A-799	"	"	"	"	"	OPT-1-R0G25R100/G0R245	"
		172, 172A, 172B	3A12	"	"	"	"	"	OPT-1-R0Y10G30R100/G0R240	"
		172C, 172D, 172E	"	"	"	"	"	"	"	"
		172F, 172G, 172I	"	"	"	"	"	"	"	"
		172K, 172L, 172M	"	"	"	"	"	"	OPT-1-R0Y10G30R100/Y0G100R240	"
		172N, 172P	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G100R245	"
		172RG, P172D	3A17	CAR 3	"	"	"	"	"	"
		R172E, R172F,	"	"	"	"	"	"	"	"
		R172G	"	"	"	"	"	"	"	"
		R172H, R172J,	"	"	"	"	"	"	"	"
		R172K, 172Q	"	"	"	"	"	"	"	"
		175,175A,B,C	"	"	"	"	"	"	OPT-1-R0G10R100/Y0G100R245	6/3/94
		177, 177A, 177B	A13CE	FAR 23	"	"	"	"	OPT-1-R0G26R100/Y0G100R245	8/15/93
		177RG	A20CE	"	"	"	"	"	"	"
		180, 180A, 180B	5A6	CAR 3	"	"	"	"	OPT-1-R0Y10G30R100/Y0G100R240	"
		180C, 180D, 180E	"	"	"	"	"	"	"	"
		180F, 180G, 180H	"	"	"	"	"	"	"	"
		180J, 180K	"	"	"	"	"	"	"	"
		182, 182A, 182B	3A13	"	"	"	"	"	"	"
		182C, 182D, 182E	"	"	"	"	"	"	"	"
		182F, 182G, 182H	"	"	"	"	"	"	"	"
		182J, 182K	"	"	"	"	"	"	"	"
		182L, 182M, 182N,	"	"	"	"	"	"	"	"
		182P, 182Q	"	"	"	"	"	"	"	"
		182R, R182	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G100R245	"
		T182, TR182	"	"	"	"	"	"	"	"
		185, 185A, 185B	3A24	"	"	"	"	"	OPT-1-R0Y10G30R100/G0R225	"
		185C, 185D, 185E	"	"	"	"	"	"	"	"
		A185E, A185F	"	"	"	"	"	"	OPT-1-R0Y10G30R100/G0R240	"
		188, 188A, 188B	A9CE	FAR 21	"	"	"	"	"	"
		A188, A188A	"	"	"	"	"	"	"	"
		T188C	"	"	"	"	"	"	"	"
		190, 195, -A, -B	A-790	CAR 3	"	"	"	"	OPT-1-R0G30R90/R0G100R200	"
		205, 205A	3A21	"	"	"	"	"	OPT-1-R0Y10G30R100/G0R240	"
		206 Series	A4CE	"	"	"	"	"	OPT-1-R0Y10G30R100/Y0G100R240	"
		U206 Series	"	"	"	"	"	"	"	"
		TU&TP206 Series	"	"	"	"	"	"	"	"
		207, 207A	A16CE	FAR 23	"	"	"	"	OPT-1-R0Y10G30R100/G0R240	"

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----	----------	----------	----------	----------	TD0327921	N/R	OI 0520911	C	----------	-------
9.	Cessna Aircraft Corp. (Cont.)	T207, T207A	3A21	CAR 3	"	"	"	"	OPT-1-ROY10G30R100/G0R240	8/15/93
		210, 210A	"	"	"	"	"	"	"	"
		210B, 210C, 210D,	"	"	"	"	"	"	"	"
		210F, A210 Series	"	"	"	"	"	"	"	"
		210-5, 210-5A	"	"	"	"	"	"	"	"
		T210F, 210G,	"	"	"	"	"	"	"	"
		T210G, 210H, 210J	"	"	"	"	"	"	"	"
		T210H, T210J,	"	"	"	"	"	"	"	"
		210M, 210K, 210L	"	"	"	"	"	"	OPT-1-ROY10G30R100/Y0G100R240	"
		T210L, T210F,	"	"	"	"	"	"	"	"
		T210M 210N,	"	"	"	"	"	"	"	"
		P210N, P210R	"	"	"	"	"	"	"	"
		T210N	"	"	"	"	"	"	"	"
		305A, 305B, 305C	5A5	CAR 3	"	"	"	"	OPT-1-ROY10G40R100/Y0G75R225	"
		305D, 305E, 305F	"	"	"	"	"	"	"	"
		310, 310A, 310B	3A10	CAR 3	"	"	"	"	"	"
		310C, 310D, 310E	"	"	"	"	"	"	"	"
		310F, 310H, E310H	"	"	"	"	"	"	"	"
		310I, 310J	"	"	"	"	"	"	OPT-1-ROY10G30R100/Y0G75R225	"
		E310J, 310K, 310L	"	"	"	"	"	"	"	"
		310N, 310P, 310R	"	"	"	"	"	"	"	"
		T310P, T310R	"	"	"	"	"	"	"	"
		T310Q	"	"	"	"	"	"	"	"
		310Q	"	"	"	"	"	"	"	"
		320, -A, -B, -C	3A25	"	"	"	"	"	"	"
		320D, -E, -F	"	"	"	"	"	"	"	"
		336	A2CE	"	"	"	"	"	"	"
		337, 337A, 337B	A6CE	"	"	"	"	"	OPT-1-ROY10G30R100/Y0G75R240	"
		337E, 337C	"	"	"	"	"	"	"	"
		T337B, T337E,	"	"	"	"	"	"	"	"
		T337C, T337G	3A25	"	"	"	"	"	"	"
		337D, P337B	"	"	"	"	"	"	"	"
		M337B, 337H	"	"	"	"	"	"	"	"
		T337D, T337H	"	"	"	"	"	"	"	"
		340, 340A	A7CE	"	"	"	"	"	"	"
		401, 401A, 401B	"	"	"	"	"	"	"	"
		402, 402A, 402B	"	"	"	"	"	"	"	"
		402C	"	"	"	"	"	"	"	"
		404	"	"	"	"	"	"	"	"
		411, 411A	"	"	"	"	"	"	"	"
		414, 414A	"	"	"	"	"	"	"	"
		421, 421A, 421B	"	"	"	"	"	"	"	"
		421C, 425	"	"	"	"	"	"	"	"

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----	----------	----------	----------	----------	TD0327921	N/R	OI 0520911	C	----------	-------
10.	Commander Aircraft	112, 112B	A12SO	Far 23	"	"	"	"	OPT-1-R0Y25G50Y90R100/Y0G160R245	6/3/94
		114, 114A, B, C	"	"	"	"	"	"	"	"
		112TC, 112TCA	"	"	"	"	"	"	"	"
		500, -B, -S, -U	6A1	Car 3	"	"	"	"	OPT-1-R0Y25G55Y95R115/Y0G65R245	10/30/97
			"	"	"	"	"	"	"	"
		500-A	"	"	"	"	"	"	OPT-1-R0Y10G30Y60R100/Y0G65R225	"
			"	"	"	"	"	"	OPT-1-R0G60R85/Y0G65R225	"
		520	"	"	"	"	"	"	OPT-1-R0Y25G65R85/Y0G65R225	"
		560, -A, -E	"	"	"	"	"	"	OPT-1-R0Y25G55Y95R1150/Y0G65R245	"
		700	A12SU	Far 23	"	"	"	"	"	"
					"	"	"	"	"	"
11.	DeHavilland Aircraft of Canada, Ltd.	DHC-2	A-806	CAR 10	"	"	"	"	OPT-1-R0G50R100/Y0G100R190	6/3/94
		DHC-3	A-815	"	"	"	"	"	OPT-1-R0G50R100/Y0G100R190	"
12.	Extra Flugz.	EA 300,S,L,/200	A67EU	Far 21	"	"	"	"	OPT-1-R0Y25G55YR95R115/Y0G65R245	10/30/97
13.	Fairchild	24 C8C	A-535	Bul 7a	"	"	"	"	OPT-1-R0G25R100/Y0G65R200	10/30/97
		24R9, 24R40	A-706	Car 4a	"	"	"	"	"	"
14.	Grumman	F8F-2	AR-32	Car 4a	"	"	"	"	OPT-1-R0G60R100/Y0G65R200	10/30/97
		AF-2S	AR-36	"	"	"	"	"	"	"
15.	Gulfstream American Corp. (Grumman Aircraft)	AA-1, AA-1A,	A16EA	FAR 23	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	6/3/94
		AA-1B, AA-1C	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	"
		AA-5, AA-5A	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	"
		AA-5B	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	"
16.	Helio Aircraft (Taylorcraft)	15A	3A3	Car 4a	"	"	"	"	OPT-1-R0G30R60/Y0G65R230	10/30/97
		20	"	"	"	"	"	"	OPT-1-R0Y10G30R60/Y0G65R225	"
17.	Helio Enterprise	H-250,H700	1A8	Car 3	"	"	"	"	OPT-1-R0Y25G55Y95R115/Y0G65R245	10/30/97
			"	"	"	"	"	"	"	"
		H-295,HT295,F295	"	"	"	"	"	"	OPT-1-R0Y25G65R85/Y0G100R225	"
		H-395	"	"	"	"	"	"	"	"
			"	"	"	"	"	"		"
		H-395A,H-391	"	"	"	"	"	"	OPT-1-R0G60R85/Y0G100R225	"
			"	"	"	"	"	"		"
		H-800	"	"	"	"	"	"	OPT-1-R0Y25G50Y95R115/Y0G100R245	"
			"	"	"	"	"	"	"	"
18.	Interceptor (Aero Commander) (Meyers)	200	3A18	Car 3	"	"	"	"	OPT-1-R0Y10G30R60/Y0G65R225	10/30/97
		200A,B,C,D	"	"	"	"	"	"	OPT-1-R0Y10G30Y60R100/Y0G65R240	"
			"	"	"	"	"	"	"	"

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19.	Lake	See Revo.	----------	----------	--------	-----	----------	--------	----------	6/3/94
20.	Luscombe	8,A,B,C,D,E,F, T-8F	A-694	CAR 4a	"	"	"	"		6/3/94
21.	Maule	M-4,C,S,T,-210,C	3A23	CAR 3	"	"	"	"	OPT-1-R0G25R100/Y0G65R240	6/3/94
		M-4S,T,-220,C,S,	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G65R240	"
		M-4T,-180C,S,T	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G65R240	"
		M-5-180C,-210C	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G65R240	"
		M-5TC, -220C	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G65R240	"
		M-5-235C	"	"	"	"	"	"	"	"
		M-6-180	"	"	"	"	"	"	"	"
		MX-7-235	"	"	"	"	"	"	"	"
22.	Mooney Aircraft Corp.	M20	2A3	CAR 3	"	"	"	"	OPT-1-R0Y26G61R100/Y0G100R245	None
		M20A	"	"	"	"	"	"	"	"
		M20B	"	"	"	"	"	"	"	"
		M20C	"	"	"	"	"	"	"	"
		M20D	"	"	"	"	"	"	"	"
		M20E	"	"	"	"	"	"	"	"
		M20F	"	"	"	"	"	"	"	"
		M20G	"	"	"	"	"	"	"	"
		M20J	"	"	"	"	"	"	"	"
		M20K	"	"	"	"	"	"	"	"
		M20L	"	"	"	"	"	"	"	"
		M20M	"	"	"	"	"	"	"	"
		M22	A6SW	"	"	"	"	"	"	"
23.	Moravan	Z-526C	A30EU	Far 23	"	"	"	"	OPT-1- R0Y25G55Y95R115/Y0G65R245	10/30/97
		Z-242L, Z-143L	A76EU	"	"	"	"	"		"
24.	Navion	See Thompson.	----------	----------	---------	-----	----------	--------	----------	6/3/94

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25.	Piper Aircraft Corp.	PA-12,-S,-14,	A-797	CAR 3	"	"	"	"	OPT-1-R0Y25G60R90/Y0G65R245	10/30/97
		PA-15,-16,-17	A-800	"	"	"	"	"	OPT-1-R0G25R100/Y0G65R245	"
		PA-18	1A2	"	"	"	"	"	OPT-1-R0Y10G31R40/Y0G91R225	5/10/93
		PA-(18, 18A, 18S)	"	"	"	"	"	"	OPT-1-R0Y10G31R40/Y0G121R245	"
		"125"	"	"	"	"	"	"		"
		PA-(18, 18A, 18S)	"	"	"	"	"	"	OPT-1-R0Y10G31R40/Y0G121R245	"
		"135"	"	"	"	"	"	"		"
		PA-(18, 18A, 18S)	1A4	"	"	"	"	"	OPT-1-R0Y26G61Y85R100/	"
		"150"	"	"	"	"	"	"	Y0G121R245	"
		PA-20,S,115,	"	"	"	"	"	"	OPT-1-R0Y26G61Y85R100/	"
		S-115,135,S-135	"	"	"	"	"	"	Y0G121R240	"
		PA-22&S,108,	1A10	"	"	"	"	"	OPT-1-R0Y26G61Y85R100/	"
		135,150,160	"	"	"	"	"	"	Y0G121R240	"
		PA-23	"	"	"	"	"	"	OPT-1R0Y26G61Y85R100/	"
			"	"	"	"	"	"	Y0G121R240	"
		PA-23-160	"	"	"	"	"	"	OPT-1-R0Y26G61Y85R100/	"
			"	"	"	"	"	"	Y0G121R240	"
		PA-23-250	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-23-235	1A15	"	"	"	"	"	OPT-1-R0Y26G61Y85R100/	"
			"	"	"	"	"	"	Y0G121R245	"
		PA-24-180	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-24-250	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-24-260	2A8	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-24-400	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-25-235	2A13	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G121R245	"
		PA-25-260	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G121R245	"
		PA-28-140	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-28-150	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-28-151	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-(28, 28S)-160	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-28-161	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-(28, 28R)-180	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-28-181	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-28R-200	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-28R-201	"	"	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-28-201T	"	"	"	"	"	"	OPT-1-R0Y11G31R100/Y0G75R240	"
		PA-28R-201T	"	"	"	"	"	"	OPT-1-R0Y11G31R100/Y0G101R240	"
		PA-28RT-(201,	A20SO	"	"	"	"	"	OPT-1-R0Y11G31R100/Y0G101R240	"
		201T)	"	"	"	"	"	"		"
		PA-28-235 & 236	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-31	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-31P	"	"	"	"	"	"	OPT-1-R0Y11G56R100/Y0G121R245	"
		PA-31-325	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-31-350	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	

FAA Approved Model List (AML) SA5925NM
For
Electronics International Oil Pressure/Temperature Instrument

Issue Date: February 17, 1993

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	FAA Sealed Drawings		Installation Instructions		Instrument Model Number (See Note 1)	AML Amended Date
					Number	Rev.	Number	Rev. No.		
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25.	Piper Aircraft Corp. (Cont.)	PA-32-260	A3SO	CAR 3	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	5/10/93
		PA-32-300	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-32R-300	"	"	"	"	"	"	OPT-1-R0Y26G56R100/Y0G75R245	"
		PA-32RT-300T	"	"	"	"	"	"	OPT-1-R0Y26G56R100/Y0G75R245	"
		PA-32-301	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-32-301T	"	"	"	"	"	"	OPT-1-R0Y26G56R100/Y0G75R245	"
		PA-32R-301	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-32R-301T	"	"	"	"	"	"	OPT-1-R0Y26G56R100/Y0G75R245	"
		PA-34-200	A7SO	FAR 23	"	"	"	"	OPT-1-R0Y26G61R90/Y0G75R245	"
		PA-34-200T	"	"	"	"	"	"	OPT-1-R0Y11G31Y81R100/	"
			"	"	"	"	"	"	Y0G75R240	"
		PA-34-220T	"	"	"	"	"	"	OPT-1-R0Y11G31R100/Y0G100R240	"
		PA-36-285	A9SO	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-36-300	"	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-36-375	"	"	"	"	"	"	OPT-1-R0Y26G56R100/Y0G75R245	"
		PA-38-112	A18SO	"	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-39	A1EA	CAR 3	"	"	"	"	OPT-1-R0Y26G61R100/Y0G121R245	"
		PA-44-180	A19SO	FAR 23	"	"	"	"	OPT-1-R0Y26G61R100/Y0G75R245	"
		PA-44-180T	"	"	"	"	"	"	OPT-1-R0Y16G61R115/Y0G75R245	"
		PA-46-310P	A25SO	"	"	"	"	"	OPT-1-R0Y11G31R100/Y0G101R240	"
		PA-46-350P	"	"	"	"	"	"	OPT-1-R0Y26G56R115/Y0G101R245	"
		PA-60-600	A17WE	"	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	"
		PA-60-601	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	"
		PA-60-601P	"	"	"	"	"	"	OPT-1-R0G25R100/Y0G75R245	"
		PA-60-602P	"	"	"	"	"	"	OPT-1-R0G26R115/Y0G75R245	"
		PA-60-700P	"	"	"	"	"	"	OPT-1-R0G26R115/Y0G75R245	"
26.	Pitts	See Avait.	----------	----------	---------	-----	----------	--------	----------	6/3/94
27.	Revo Inc. (Lake)	C-1, -2	1A13	Far 23	"	"	"	"	OPT-1-R0Y25G60R100/Y0G65R245	6/3/94
		LA-4, -4A, -4P	"	"	"	"	"	"	"	"
		LA-200, -250	"	"	"	"	"	"	"	"
28.	Rockwell Int. Corp.	See Commander	----------	----------	---------	-----	----------	--------	----------	6/3/94
29.	Scheizer	G164	1A16	Car8	"	"	"	"	OPT-1-R0G50R100/Y0G65R210	10/30/97
30.	Sky Enterprises (SeeBee)	RC 2, 3, 4	A-769	FAR 21	"	"	"	"	OPT-1-R0G30Y60R65/Y0G65R260	6/3/94
31.	Socata Group (Aerospatiale)	TB9	A51EU	CAR 3	"	"	"	"	OPT-1-	6/3/94
									R0Y25G55Y90R100/Y0G100R245	
		TB10	"	"	"	"	"	"	OPT-1-	"
									R0Y25G55Y90R100/Y0G100R245	
		TB20, TB21, TB-200	"	"	"	"	"	"	OPT-1-	"
									R0Y25G55Y90R100/Y0G100R245	

FAA Approved Model List (AML) SA5925NM
For
Electronics International Oil Pressure/Temperature Instrument

Issue Date: February 17, 1993

Item	Aircraft Make	Aircraft Model	Original Type Certificate Number	Certification Basis for Alteration	FAA Sealed Drawings		Installation Instructions		Instrument Model Number (See Note 1)	AML Amended Date
					Number	Rev.	Number	Rev. No.		
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32.	Stinson	See Univair.	----------	----------	---------	-----	----------	-------	----------	6/3/94
33.	Swift (Globe)	GC-1A GC-1B	A-766	Car 4a	"	"	"	"	OPT-1-R0G30R40/Y0G65R225 OPT-1-R0G30R40/Y0G65R220	10/30/97 "
34.	Thompson, Jimmie, Enterprise (Navion)	A, B, C, D E, F, G, H.	A-782 "	CAR 3 "	" "	" "	" "	" "	OPT-1-R0G30R90/Y0G100R215 OPT-1-R0G30R90/Y0G100R215	6/3/94 "
35.	Univair Aircraft Corp. (Stinson)	108, 108-1 108-2, -3, -5	A-767 "	CAR 3 "	" "	" "	" "	" "	OPT-1-R0G35R55/Y0G80R230 OPT-1-R0G35R55/Y0G80R230	6/3/94 "
36.	Zenair	CH2000	TA5CH	Far 21	"	"	"	"	OPT-1-R0Y25G60Y90R100/Y0G65R245	10/30/97
----	- End of List	----------	----------	----------	---------	-----	----------	--------	----------	--------

Note 1: Electronics International Model Designation System.

OPT-1 ( ) - ( ) / ( )

- ( ) — A combination of letters and numbers defining the green, yellow and red Oil Temperature arcs that the analog portion of the instrument was programmed to.
- ( ) — A combination of letters and numbers defining the green, yellow and red Oil Pressure arcs that the analog portion of the instrument was programmed to.
- ( ) — A Letter here indicates any major changes in the hardware and/or software of the instrument.
- OPT-1 — Indicates the base model number of the instrument.

Example: OPT-1-R0Y26G56R100/Y0G66R240 indicates the following markings and calibration (arc information is for reference only):
Oil Pressure: A red arc from 0 to 25 PSI, a yellow arc from 26 to 55 PSI, a green arc from 56 to 99 PSI and red from 100 PSI on up.
Oil Temperature: A yellow arc from 0 and below to 65'F, a green arc from 66 to 239'F and red from 240'F on up.

FAA Approved: _____ **Date:** Dec. 8, 1997

Acting Manager, Seattle
Aircraft Certification Office