

EIS-61000 Instructions for Continued Airworthiness

Electroair
5097 Williams Lake Road
Waterford, MI 48329 U.S.A.
Ph: 248-674-3433 Fax: 248-674-4231
Email: sales@electroair.net

Table of Contents

Table of Contents	1
Revision Log	3
1.0 Introduction:	
2.0 System Description	4
2.1 Dual Electronic Ignition Systems Limitations and Requirements	
3.0 System Operating Information	7
3.1 Placards	
4.0 Service Information	7
5.0 Maintenance Instructions	8
5.1 Precautionary Statements:	8
5.2 Scheduled Maintenance	
5.2.1 Annually:	8
5.2.2 Each 1000 hours or five years:	9
5.2.3 At 2500 hours or Sudden Stoppage:	
5.3 Installation and Removal Instructions	10
5.4 Trouble-shooting	10
5.4.1 Specification Checks	10
5.4.2 Higher than Normal RPM drops during Ignition Check	11
5.4.3 Engine runs poorly or rough	12
5.4.4 High CHTs	12
5.4.5 Hard Starting and/or Engine Kick-Back during starting	13
5.4.6 Engine runs poorly or rough at high RPM and/or high engine load	13
5.4.7 EIS dropping off-line or is intermittent.	
5.4.8 EIS will not start	14
5.5 Special Inspection	14
6.0 Receiving and Acceptance Checking of EIS Kit:	15
7.0 Eligibility:	16
8.0 Manual Reference:	
9.0 Airworthiness Limitations Section (ALS):	17
10.0 Glossary and Abbreviations:	18

Revision Log

Revision	Pages Affected	Date of Revision	Description of Revision	Approved by	Date of Approval
00		08/26/2013	Initial Release	KP	08/26/2013
01		09/30/2013	Document Maintenance	KP	09/30/2013
02		10/01/2013	Corrected issues from FAA memo dated 08/30/2013 and received 09/30/2013	KP	10/01/2013
03		11/01/2013	Added handling information.	KP	11/04/2013
04		11/25/2013	Corrected issues from AEG follow up email dated 11/22/2013.	KP	11/25/2013
05		11/25/2013	Added information regarding MTH cover orientation to annual inspection.	KP	11/25/2013
06		05/06/2014	ECO 1116-0050	KP	05/06/2014
07		09/03/2014	ECO 1116-0071	KP	10/01/2014
08		01/28/2015	ECO 1116-0110	KP	03/16/2015
09		08/10/2015	ECO 1116-0136	R	08/10/2015
10		12/14/2015	ECO 1116-0144	KP	12/18/2015
11	1,3,5,6,8	03/20/2018	ECO 1019-0051	JMS	03/20/2018
12	3,6,8	05/17/2019	SA09950CH-A	JMS	07/24/2019
13	2-13	05/20/2021	SA09966CH-A: Electronic Ignition Timing Software Project	JMS	
14	2-18	12/17/2021	Dual EIS Updates	JMS	

1.0 Introduction:

This Instruction for Continued Airworthiness contains the necessary information required for the maintenance of the electronic ignition system (EIS) approved for installation in accordance with STC SA03286CH. Electroair is responsible for this document and any changes to it will be made electronically.

2.0 System Description

For STC SA03286CH, the Electroair EIS-61000 Electronic Ignition System can be used as a single magneto replacement, or with certain limitations, can replace both magnetos. An aircraft equipped with an EIS-61000 and a single magneto or two EIS-61000s will make up the dual ignition system. The EIS-61000 kit consists of the following components: Controller (EA-21000), Coil Pack (EA-8000), Spark Plug Wires (EA-4000(T)), Wire Harness (EA-22000), and Trigger Mechanism (EA-11000, EA-9000A, EA-10000, EA-12000, EA-16000, EA-17000, and EA-19000). One trigger mechanism per kit.



Figure 1: EIS-61000-1M Kit

The EIS-61000 Electronic Ignition System performs its function by delivering energy generated by the coil pack to each spark plug attached to the system. This high voltage from the coil pack (on the order of 70,000V), creates a high intensity, long duration spark which more effectively ignites a wide range of fuel/air mixtures inside of the cylinder. The EIS-61000 is also able to vary the ignition timing (spark event) during the combustion cycle so as to more closely have the peak pressure as a result of combustion occur at an optimal range for a piston engine. The adjustment of ignition timing is based on MAP inside the engine. The combination of a high energy spark and variable timing, the two principle differences between the EIS-61000 and a magneto, permits more an efficient operation of the engine. The trigger mechanisms send a speed and position signal to the controller. The trigger mechanisms attach to the engine

ICA EIS-61000

either at the magneto hole (MAG Timing Housing(MTH), EA-10000, EA-12000, EA-16000, EA-17000, and EA-19000) or on the crankshaft (Crank Shaft Trigger Wheel (CSTW), EA-11000 or EA-9000A). One trigger mechanism per kit.



Figure2: EA-12000 MTH (from EIS-61000-5M kit)



Figure 3: EA-9000A CSTW Kit (Missing magnetic sensor)

The EIS-61000 is operated by DC power provided by the aircraft's power bus. There are two circuit protection devices used for the EIS-61000; reference table one for the type and size of the protection devices. These circuit protection devices are not normally accessed during flight.

The EIS-61000 is controlled by using the switch labeled "EIS". The EIS-61000 may be disabled by setting the switch labeled "EIS" to the OFF position. Pilots should familiarize themselves with the location of the "EIS" before proceeding with the pre-flight checklist.

FUNCTION	IDENT	RATING	BUS	POWER SUPPLY
EA-21000 Power	EIS	2.0 AMP	Aircraft Power	12/24VDC
EA-8000 Power	EIS	10.0 AMP	Aircraft Power	12/24VDC

Table One: DC Circuit Protection

2.1 Dual Electronic Ignition Systems Limitations and Requirements

The electrical power requirements for engines equipped with dual electronic ignition systems will require a separate source of backup electrical power that is independent of the primary source. The separate source of electrical power can take one to the following forms:

- <u>Dual Electrical System</u>: On aircraft with a dual battery or dual alternator/generator systems with independent primary electrical busses, power from each of the electrical busses can be used when the failure of one electrical system is isolated from the other system.
 - <u>Note:</u> Twin-engine applications with dual electrical systems may share a common backup power source, independent of either engine's primary power source, which can provide electrical power after loss of power from both independent electrical systems.
- Backup Alternator/Generator System: This system differs from the Dual Electrical
 System because the backup alternator/generator is not used as a primary source of
 aircraft electrical power. The backup alternator/generator is used, as an alternate source
 of electrical power should the primary system fail. These systems are usually attached to
 either a dedicated or an essential buss and offer reduced current capability when
 compared to the primary system.

The following must be shown for any backup power supply configuration proposed on any airplane engine installation equipped with a dual EIS.

- (1) If any emergency or other procedure recommends or requires the shutoff of any or all electrical systems in flight, such as for smoke in the cabin or loss of a power generation, then a dedicated backup power source must be provided, which is independent of the primary electrical system and automatically available when any electrical system is shutoff in flight. This applies to both single and dual buss systems on single and multi-engine airplanes.
- (2) For any one engine on a single or multi-engine airplane, it must take at least two independent power source failures for a LOPC event
- (3) For twin-engine airplanes, it must take at least three independent power source failures for a LOPC event in both engines.
- (4) For twin-engine installations, the design must continue to meet the powerplant isolation requirements of §23.903(c), including in at least one configuration, an independent power supply for at least one EIS on each engine.

The minimum requirements for the electrical power system are addressed in 14 CFR 23.1309, 23.1351, 23.1353, 23.1357, 23.1359, 23.1361, 23.1365 and 23.1367. The time required in 14 CFR 23.1353(h) is the minimum time for backup electrical power in the event of a failure of primary aircraft electrical power. The backup power does not need to be wholly dedicated to the electronic ignition system since other critical systems may be supplied by the backup electrical power. However, following the loss of the primary power generation system, a minimum of 60 minutes of backup electrical power for the electronic ignition system is highly recommended. Additionally, the inherent redundancy of an independent power source dedicated to the electronic ignition system is also highly recommended when considering an aircraft electrical power failure.

ICA EIS-61000

Prepared by: EAC

Please contact Electroair with any questions or clarifications.

3.0 System Operating Information

Under normal operating conditions, the EIS-61000 Electronic Ignition System will be controlled by the flight crew in the same manner as the magneto that was previously installed. The AFM has been updated to reflect the change to the aircraft ignition system. Refer to Operation Manual: AFMS EIS-61000 revision 09 or later FAA approved revision. Installation Manual: IM EIS-61000 revision 16 or later FAA approved revision.

3.1 Placards

Ignition system will be placarded in accordance with installation instructions, identifying the magneto and the EIS. In the case of two or more EISs, placards should differentiate between each EIS.

ICA EIS-61000

Prepared by: EAC

4.0 Service Information

Refer to aircraft maintenance manual for access and locations of components. No servicing is required for the EIS-61000 and its components.

5.0 Maintenance Instructions

5.1 Precautionary Statements:

- Read this entire document before starting any processes listed within. If there
 are any questions please contact Electroair before starting to resolve them.
 (248-674-3433 or sales@electroair.net)
- If an EIS is improperly installed, maintained, or misfired; the EIS, the aircraft, the engine, or the installer could be seriously damaged.
- Always use appropriate work and safety practices.
- Spark plug leads shall be disconnected from the ignition system before inspection.
- **DO NOT NEGLECT** the required maintenance of the remaining magneto or pressurize magneto.
- For the latest up to date information refer to <u>www.electroair.net</u> (ICA, AML, Installation Manual, AFMS, etc.)
- For abnormal operation, for ignition systems that have a suspected failure, refer to the Electroair Trouble Shooting Instructions at http://electroair.net/pdfs/troubleshooting the EIS.pdf
- For AD notes, service bulletins, or other product notes, review Electroair website (<u>www.electroair.net</u>).
- For ordering or questions about replacement parts, please contact Electroair. (248-674-3433 or sales@electroair.net)

5.2 Scheduled Maintenance

5.2.1 Annually:

- 1. Inspect all wire connectors. Verify connections are securely attached and free from damage such as chaffing or excessive heat exposure.
- 2. Inspect all ground connections. Verify the connections have continuity with the ground terminal on the aircraft battery or other acceptable ground buss using an Ohmmeter.
- 3. Inspect "Gasket" area on MAG Time Housing (MTH), if installed. Ensure no oil leaks coming from the gasket area. If a new gasket is required contact the factory for replacement part number: EA-001J.
- 4. Inspect for oil seal failures if MTH is installed.
 - a. Remove the MTH cover.
 - b. Inspect for oil pooling. If oil seal has failed, MTH must be replaced. Note: A thin film of oil does not indicate a failure.
 - c. Replace the cover in the same orientation it was removed.
 - d. **NOTE:** The MTH is not a field serviceable or repairable unit.
- 5. Inspect all spark plug wires to check for exterior damage such as cuts in silicone, chaffing, evidence of arcing or burn marks. Replace wires if damage is evident. If any wire is suspected of misfiring, verify continuity and resistance values of the wire. Resistance values: Blue Wire (p/n EA-4090) resistance is 350 ohms/ft ±10%. Red Wire (p/n EA-4091) resistance is 5700 ohms/ft ±10%. If wire does not have

- continuity or is out of resistance value range, replace spark plug wire. Use part number EA-4000REM if using REM spark plugs. Use part number EA-4000RHMRHB if using RHM or RHB spark plugs. Refer to the installation manual, IM EIS-61000, for instructions on how to install spark plug wires.
- 6. Remove and inspect spark plugs.
 - a. Replace if fouled or out of acceptable resistance range. Acceptable resistance range of Electroair sparkplugs should be 5000Ω or less. For non-Electroair spark plugs, refer to the spark plug manufacturer for resistance values.
 - b. Verify spark plug gap at this time. For non-Electroair manufactured spark plugs, refer to manufacturers maintenance instructions on how to adjust the gap. Adjust as required.
 - c. The gap for the Electroair spark plugs is preset at 0.036 inches. Acceptable range is 0.028-0.038. Gaps larger than the acceptable range should be closed to acceptable range.
- 7. Inspect all placards and labels for existence and legibility. If missing or no longer readable, replace. Any original placards were created by original install. Refer to Installation manual, IM EIS-61000 Revision15 or later FAA approved revision, for required placards or labels and follow those instructions if replacements are needed.
- 8. If fuses were used instead of circuit breakers, inspect for the existence of readily accessible spare fuses. (Note: 14CFR 91.205(c)(6) applies when using fuses.)

5.2.2 Each 1000 hours or five years:

1. Replace spark plug wires and attaching hardware with new Electroair spark plug wires and attaching hardware. Use part number EA-4000REM if using REM spark plugs. Use part number EA-4000RHMRHB if using RHM or RHB spark plugs. Refer to the installation manual, IM EIS-61000 revision15 or later FAA approved revision, for instructions on how to install spark plug wires.

5.2.3 At 2500 hours or Sudden Stoppage:

- 1. Replace MAG Timing Housing (MTH), if installed, with a new or rebuilt Electroair MTH part number EA-10000, EA-12000, EA-16000, EA-17000, or EA-19000 series appropriate for the engine, at 2500 hours after installation or sudden stoppage. Reinstall MTH in accordance with the installation manual: IM EIS-61000 revision15 or later FAA approved revision.
- 2. Inspect Crank Shaft Trigger Wheel (CSTW), if installed, and brackets.
 - a. Replace magnetic sensor, part number: EA-9070.
 - b. Inspect brackets for any damage (bending or cracking). Replace damaged brackets.
 - c. Remove crank trigger wheel and inspect for damage (bending or cracking). Replace if damaged. Reinstall CSTW assembly in accordance with the installation manual: IM EIS-61000.

ICA EIS-61000

5.3 Installation and Removal Instructions

- 1. For removal, follow the EIS-61000 Installation Manual in reverse order.
- 2. For instructions on reinstalling individual EIS-61000 components or the entire system, refer to the EIS-61000 Installation Manual that was included with the EIS 61000 kit. If the original manual is not with the system, contact the factory for an up to date replacement installation manual (248-674-3433 or sales@electroair.net) or retrieve from the factory's website www.electroair.net.
- 3. After re-install, to verify the operation of the EIS system, perform a normal start and ignition check per aircraft's Pilot Operating Handbook (POH) and AFMS EIS-61000 revision 09 or later FAA approved revision.

5.4 Trouble-shooting

If experiencing abnormal conditions not listed in this section or these troubleshooting instructions do not solve the issue, contact Electroair for assistance.

5.4.1 Specification Checks

These specification checks are not required to be performed on a periodic basis. They are provided here for reference in the event that the EIS is malfunctioning.

- 1. **Magnetic Sensor Resistance Check**: Electroair has two types of magnetic sensors. Both function in the same way and have three wires, but have different resistance values. Resistance is checked across two of the three wires at the connector. The sensor has either a red, black, and bare wire, or a white, black, and bare wire.
 - Measured resistance across the red and black wires should be between 600-800 Ohms.
 - Measured resistance across the white and black wires should be between 900-1100 Ohms.
- 2. **Gap between magnetic sensor and trigger wheel check**: A feeler gauge can be used to check the gap between the magnetic sensor and the trigger wheel on the MTH or CSTW.
 - MTH Gap: 0.008-0.015". Set at 0.011" at factory.
 - CSTW Gap: 0.024"
- 3. **Coil Pack Resistance Check:** Resistance of coils on the EA-2000 or EA-8000 should be between 10k-12k ohms. To check resistance, measure from tower to tower across the same coil. Tower 1 to Tower 2 and Tower 3 to Tower 4 for the EA-2000. Tower A to A, B to B, and C to C for the EA-8000.
- 4. **Spark Plug Wire Resistance Check:** Spark plug wire resistance is measured from end to end. Boot terminal to boot terminal, or boot terminal to spring end.

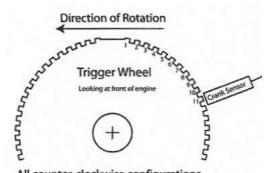
ICA EIS-61000

- Blue Wire (part # EA-4090): 350 ohms per foot (+/- 10%)
- Red Wire (part # EA-4091): 5700 ohms per foot (+/- 10%)

5. **Spark Plug Gap Check:** The gap for the Electroair spark plugs is preset at 0.036 inches. Acceptable range is 0.028-0.038. Gaps larger than the acceptable range should be closed to acceptable range.

5.4.2 Higher than Normal RPM drops during Ignition Check

- 1. Perform an ignition check and note the RPM drops. If magneto has higher than normal RPM drop, service the magneto. If EIS has higher than normal RPM drop, proceed to step 2.
- 2. If engine is running poorly or rough, proceed to Section 5.4.3 "Engine runs poorly or rough". If engine is not running poorly or rough, proceed to step 3.
- 3. Check Cylinder Head Temperatures (CHTs). If any CHT is high, proceed to Section 5.4.4 "High CHTs".
- 4. Perform and induction leak check. If there is a leak, repair the leak and then verify if the RPM drop problem has been fixed. If there is no leak or the RPM drop has not been fixed, proceed to step 5.
- 5. Inspect MTH for oil seal failure or other damage.
 - a. Remove the MTH cover.
 - b. Inspect for oil pooling. If oil seal has failed, MTH must be replaced. Note: A thin film of oil does not indicate a failure.
 - c. Inspect tamper paint and trigger wheel. If tamper paint has been disturbed or trigger wheel has been loosened from the screws and shaft, MTH must be replaced.
 - d. Replace the cover in the same orientation it was removed.
 - e. NOTE: The MTH is not a field serviceable or repairable unit.
- 6. Check the gap between magnetic sensor and trigger wheel. Make sure the sensor is held firmly in place by the set screws. Verify that the trigger wheel has not struck the sensor. If the trigger wheel has struck the sensor, then the sensor needs to be replaced.
- 7. Verify the correct installation of the MTH or CSTW. The trailing edge of the 11th tooth after the two missing teeth on the trigger wheel needs to be centered under the sensor with the engine at TDC cylinder #1. Correct as necessary, then verify RPM drop has been fixed. See Figure 4 for tooth alignment.



All counter-clockwise configurations
Figure 4: Trigger Wheel Positioning for TDC

5.4.3 Engine runs poorly or rough

- 1. Verify all ground connections are competent and have continuity with the ground terminal on the aircraft battery or other acceptable ground buss using an ohmmeter.
- 2. Verify that spark plug wires are set to correct firing order and securely connected at the coil tower and spark plug.
- 3. Inspect all spark plug harness for evidence of arcing or arc-out (indicated by small burn marks near the spark plug/spring); round black marks on spark plug wire near attaching hardware. Repair or replace as necessary.
- 4. Inspect all spark plugs for proper gap, cracked ceramic, cleanliness, wear and resistance. Resistance values should be 5k ohms or less. Repair or replace as necessary.
- 5. Verify placarded timing on controller matches engine placarded timing.
- 6. Record RPM rise on shutdown. Verify that this meets engine requirements. If it doesn't meet the engine requirements, follow the steps from the engine manufacture instructions to fix the problem.
- 7. If one or more cylinders can be identified as dropping off, swap wires at coil towers. If problem remains with suspect cylinder, inspect and repair plug or wire as necessary. If problem moves to a different cylinder, replace the coil pack.

5.4.4 High CHTs

- 1. Verify placarded timing on controller matches engine placarded timing.
- 2. Verify the correct fuel is being used and verify the fuel system is working correctly.
- 3. Perform and induction leak check. If there is a leak, repair the leak and then verify if the problem has been fixed. If there is no leak or the problem has not been fixed, proceed to step 4.
- 4. Inspect the MTH for oil seal failure or other damage.
 - Remove the MTH cover.
 - b. Inspect for oil pooling. If oil seal has failed, MTH must be replaced. Note: A thin film of oil does not indicate a failure.
 - c. Inspect tamper paint and trigger wheel. If tamper paint has been disturbed or trigger wheel has been loosened from the screws and shaft, MTH must be replaced.
 - d. Replace the cover in the same orientation it was removed.
 - e. NOTE: The MTH is not a field serviceable or repairable unit.
- 5. Check the gap between magnetic sensor and trigger wheel. Make sure the sensor is held firmly in place by the set screws. Verify that the trigger wheel has not struck the sensor. If the trigger wheel has struck the sensor, then the sensor needs to be replaced.
- 6. Verify the correct installation of the MTH or CSTW. The trailing edge of the 11th tooth after the two missing teeth on the trigger wheel needs to be centered under the sensor with the engine at TDC cylinder #1. Correct as necessary. See Figure 4 for tooth alignment.

ICA EIS-61000

5.4.5 Hard Starting and/or Engine Kick-Back during starting

- 1. Verify all ground connections are competent and have continuity with the ground terminal on the aircraft battery or other acceptable ground buss using an ohmmeter.
- Check for a weak battery.
- 3. Check for bad/worn/small gauge starter cables.
- 4. Verify that the RPM is above 60RPM during starting.
- 5. Verify the correct installation of the MTH or CSTW. The trailing edge of the 11th tooth after the two missing teeth on the trigger wheel needs to be centered under the sensor with the engine at TDC cylinder #1. Correct as necessary. See Figure 4 for tooth alignment.
- 6. Verify placarded timing on controller matches engine placarded timing.
- 7. Verify that fuel system is working correctly.

5.4.6 Engine runs poorly or rough at high RPM and/or high engine load

This indicates possible failure of either a spark plug or spark plug wire.

- 1. Inspect all spark plug harness for evidence of arcing or arc-out (indicated by small burn marks near the spark plug/spring); round black marks on spark plug wire near attaching hardware.
- 2. Inspect all spark plugs for proper gap, cracked ceramic, cleanliness, wear and resistance. Resistance values should be 5k ohms or less. Repair or replace wires and/or spark plugs as necessary.

5.4.7 EIS dropping off-line or is intermittent.

- 1. Perform a Magnetic Sensor Resistance Check. See section 5.4.1. Replace sensor if resistance is outside of the specified range.
- 2. Inspect the power supply to the controller. Check voltage at Pin 6 on the C1 connector in the EA-22000(T) wire harness. Voltage needs to be at least 10 volts for EIS to run.
- 3. Inspect the power supply to the coil pack. Check voltage at Pin 4 on the C2 connector in the EA-22000(T) wire harness (See Figure 5). Voltage needs to be at least 10 volts for EIS to run.



Electroair Acquisition Corp. Revision 14

ICA EIS-61000 Prepared by: EAC

Figure 5: Power Pin of Coil Pack Connector (C2)

5.4.8 EIS will not start

- 1. With power on to the system, check the LED on the EA-20000 controller. If the LED is not on, then the system is not receiving power. Inspect wiring for bad connections or damage. Repair as necessary.
- 2. Check to see is controller and coil pack are receiving enough voltage. Voltage needs to be at least 10 volts during the starting sequence for the EIS to run.
- 3. Verify that the RPM during starting is at least 60 RPMs. The EIS needs to be able to read 2 consistent rotations of the engine above 60 RPM before it starts.
- 4. Perform a Magnetic Sensor Resistance Check. See section 5.4.1. Replace sensor if resistance is outside of the specified range.

5.5 Special Inspection

Lightning Strikes, Engine Fires, Water Immersion:

- 1. Inspect the EIS wiring harness and controller.
- 2. If there is obvious damage, replace the damaged parts.
- 3. If there is no obvious damage, perform a ground run-up. If no problems are found, continue with the standard procedures as stated in the AFMS.

ICA EIS-61000

Prepared by: EAC

4. If unsure, contact factory (248-674-3433 or sales@electroair.net)

6.0 Receiving and Acceptance Checking of EIS Kit:

- 1. Review the packaging before acceptance from the freight carrier. If damaged refuse.
- 2. Open the package. Components of the EIS kit are inserted into different sections and each component should be handled with care.
- 3. Review the contents of the package to the content listing on the package.
- 4. Are all of the materials there?
 - a. Yes, proceed to step 4.
 - b. No, contact the factory. Have the serial number of the kit available when contacting. (factory 248-674-3433 or sales@electroair.com)
- 5. Review the controller for damage to the aluminum housing.
- 6. Review the wires for nicks and cracks.
- 7. Review the coil pack and plate for external damage.
- 8. Review the CSTW/MTH for external damage.
- 9. Are all materials acceptable?
 - a. Yes, proceed with installation.
 - b. No, contact the factory. Have the serial number of the kit available when contacting. (factory 248-674-3433 or sales@electroair.com)

ICA EIS-61000

Prepared by: EAC

If possible, store parts in original packaging when not in use. If not possible, wrap parts in cushioning material and place in one location. Review as above prior to reinstallation.

7.0 Eligibility:

Make:	Lycoming	Continental	
Model:	540 6-cylinder series	360 6-cylinder series	
	541 6-cylinder series	470 6-cylinder series	
	580 6-cylinder series	520 6-cylinder series	
		550 6-cylinder series	
		300 6-cylinder series	
		E-165 6-cylinder series	
		E-185 6-cylinder series	
		E-225 6-cylinder series	

(See STC#03286CH Approved Model List (AML) for exact model numbers)

8.0 Manual Reference:

Electroair Kit Part Number	Installation Manual Number
EIS-61000-1C	IM EIS-61000
EIS-61000-T1C	IM EIS-61000
EIS-61000-5C	IM EIS-61000
EIS-61000-T5C	IM EIS-61000
EIS-61000-TTT5C	IM EIS-61000
EIS-61000-1M	IM EIS-61000
EIS-61000-T1M	IM EIS-61000
EIS-61000-4M	IM EIS-61000
EIS-61000-5M	IM EIS-61000
EIS-61000-T5M	IM EIS-61000
EIS-61000-TTT5M	IM EIS-61000
EIS-61000-6M	IM EIS-61000
EIS-61000-T6M	IM EIS-61000
EIS-61000-7M	IM EIS-61000

(See STC#03286CH Approved Model List (AML) for kit part number applicability)

9.0 Airworthiness Limitations Section (ALS):

Airworthiness Limitations section is FAA approved and specifies maintenance required under 14 CFR §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

For Dual Electronic Ignition System installation:

"Dual Electronic Ignition System Installation is eligible for these airplane models that have converted to Dual Split buss electrical systems or dual alternator system by FAA Approved means as applicable.

For aircraft with a dual, or back-up alternator, one EIS shall be attached directly to the back-up alternator. The load attached to each alternator shall not exceed 80% of the total capacity for the alternator, and may need to be adjusted to allow for supplying power to one of the Electroair Electronic Ignition Systems (when dual Electroair systems are installed). Refer to the appropriate Electroair Installation Manual for your kit to receive additional, detailed information."

Revision	Date of Revision	Description of Revision	FAA Approved by	Date of FAA Approval
11	03/20/2018	ECO 1019-0051		07/17/2018
12	05/17/2019	SA09950CH-A		07/24/2019
14.01	03/31/2022	ALS Update		

FAA Approved:	Date:

10.0 Glossary and Abbreviations:

- AD(s) airworthiness directive(s)
- AFM aircraft flight manual
- AFMS aircraft flight manual supplement
- ALS airworthiness limitations section
- AML approved model list
- BTDC before top dead center
- CFR code of federal regulations
- CHT Cylinder Head Temperature
- CSTW crankshaft trigger wheel
- EIS electronic ignition system
- FAA federal aviation administration
- LOPC Loss Of Power Control
- MAG -- magneto
- MAP manifold absolute pressure
- May/Should an optional requirement
- MTH mag timing housing
- MEL minimum equipment list
- Must/Shall a mandatory requirement
- POH Pilot Operating Handbook
- RPM revolutions per minute
- STC Supplemental Type Certificate
- TDC top dead center

ICA EIS-61000