FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

For

SYSTEM INSTALLATION

Of

EA-15000 IGNITION/STARTER SWITCH PANEL FOR TWO MAGNETOS

Registration No. ________________

Serial No. ________________

This supplement must be attached to the FAA approved Aircraft Flight Manual when the Electroair EA-15000 has been installed per FAA STC SA 04280CH.

The information contained herein supplements or supersedes the basic Aircraft Flight Manual only in those areas listed. For limitations, procedures, and performance information not contained in this supplement, consult the basic Aircraft Flight Manual.

FAA APPROVED: ________________________
Manager, Southwest Flight Test Section, AIR-713
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ELECTROAIR RESTRICTED

FAA Approved Rev. 01
Date: 2/5/2018

Document Number: AFMS EA-15000
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## Log of Revisions:

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<th>Revision</th>
<th>Pages Affected</th>
<th>Date of Revision</th>
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<th>Approved by</th>
<th>Date of FAA Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>All</td>
<td>10/30/2017</td>
<td>Initial Release</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01</td>
<td>1-7</td>
<td>01/31/2018</td>
<td>Format changes, Added pictures, Reduced redundancy, and other minor changes.</td>
<td>[Signature]</td>
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Section 1: General:

This Aircraft Flight Manual Supplement contains the necessary information required for the operation of an ignition/starter switch panel installed onto aircraft using two magnetos.

A. FUNCTIONAL OVERVIEW

The Electroair EA-15000 Ignition/Starter Switch Panel is designed as an option to replace rotary ignition type switches that are commonly found in small aircraft. The option makes for a more intuitive operation of ignition systems and reduces maintenance cost.

The EA-15000 has two options that the installer/user can choose. Option A is a horizontal layout, and option B is a vertical layout. The installer/user of the EA-15000 will choose which option based on their own preference or what can fit onto the aircraft's instrument panel. Both options function in the same way.

B. SYSTEM OPERATION

Under normal operating conditions, the EA-15000 switch panel will be controlled by the flight crew. The AFMS shall be updated by adding the task pushing the switch buttons instead of rotating a key switch for controlling the ignition systems.
Section 2: Limitations:

PLACARDS

Ignition switch panels will be placarded in accordance with installation instructions, identifying the left and right magneto. See Figure 1 and Figure 2 for reference.
Section 3: Emergency/Abnormal Procedures:

Emergency Procedures

No Change

Abnormal Procedures

Alternator/Generator Failure:

No Change

Problem: Rough running engine and/or high CHTs:

Follow baseline AFM/POH procedures. Determine if one of the magnetos is bad and isolate the bad/suspected magneto.

Problem: Severe loss in engine power and/or low CHTs, engine operating smoothly:

Follow baseline AFM/POH procedures. Determine if one of the magnetos is bad and isolate the bad/suspected magnetos.
Section 4: Normal Procedures:

I. Preflight:

No Change

II. Starting:

The magneto starting switch configuration is dependent on the particular aircraft installation. Starting magnetos should be placed in the ON position for start while non-impulse or direct-drive magnetos should be in the OFF position. At the time of installation, the correct configuration should be determined and noted in the table below with a check mark (✓) next to the proper row:

<table>
<thead>
<tr>
<th>Select (✓)</th>
<th>Left</th>
<th>Right</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ON</td>
<td>OFF</td>
<td></td>
<td>Left is the starting magneto</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Right is impulse or direct drive magneto</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td></td>
<td>Both left and right magnetos are starting magnetos</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td></td>
<td>Right magneto is the starting magneto</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Left is impulse or direct drive magneto</td>
</tr>
</tbody>
</table>

With switches in the correct positions, push the red START button to engage starter

III. Ignition Check:

Procedure, With EA-15000:

The ignition check shall be made at the same RPM as defined in the AFM/POH.

Ignition BOTH (Left and Right) ON
LEFT Magneto OFF – Note RPM Drop _________
LEFT Magneto ON
RIGHT Magneto OFF – Note RPM Drop _________
RIGHT Magneto ON

Magneto RPM drop should not exceed the RPM defined in the AFM/POH. If there is a doubt concerning operation of the ignition systems, RPM checks at higher engine speeds will usually confirm whether a deficiency exists. At the end of the ignition check, verify both ignition switches are in the "ON" position.
**IV. Takeoff:**
No Change

**V. Cruise:**
No Change

**VI. Descent:**
No Change

**VII. Landing:**
No Change

**VIII. Shutdown:**
No Change

**IX. Post-flight:**
No Change

**Section 5: Performance:**
No Changes

**Section 6: Weight and Balance:**

A new weight and balance should be calculated for the aircraft after the removal of old components and the installation of the EA-15000. The weight of the EA-15000 is 1.4 ounces. All future loading calculations should use the updated aircraft weight and balance.
Section 7: Glossary and Abbreviations:

AD(s) – Airworthiness Directive(s)
AFM – Aircraft Flight Manual
AFMS – Aircraft Flight Manual Supplement
ALS – Aircraft Limitations Section
AML – Approved Model List
APU – Auxiliary Power Unit
BTDC – Before Top Dead Center
CFR – Code of Federal Regulations
CSTW – Crank Shaft Trigger Wheel
EIS – Electronic Ignition System
FAA – Federal Aviation Administration
Ignition Timing – is the process of setting the angle relative to piston position and crankshaft angular velocity that a spark will occur in the combustion chamber near the end of the compression stroke.
MAG – magneto
MAP – Manifold Absolute Pressure
May/Should – an optional requirement
MTH – Mag Timing Housing
Must/Shall – a mandatory requirement
RPM – Revolutions per Minute
POH – Pilot’s Operating Handbook
STC – Supplemental Type Certificate
TDC – Top Dead Center