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Report: AW0708-3
Revision: B
Date: 12/29/09

STC SA02809CH

Aircraft Registration Number: N _____

Aircraft Serial Number: _____

INSTALLATION INSTRUCTION

INSTALLATION OF AEROSPACE WELDING MINNEAPOLIS STAINLESS STEEL EXHAUST SYSTEM ON CESSNA AIRCRAFT MODELS 206 / 207 / 210

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KAC
FEB 17 2010

FAA Approved: _____
CHIEF AIRCRAFT
CERTIFICATION OFFICE
CENTRAL REGION

Date: _____

LOG OF REVISIONS

Revision Number	Revision Date	Affected Pages	Description of Revision	Approved
IR	9/29/08		Initial Issue (draft).	
A	1/29/09	4 5&6	Updated description Updated engine charts	<i>BWM</i>
B	12/29/09	All	Up-dated for STC release	<i>BWM</i>

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1. INTRODUCTION

Installation of the Exhaust System on Cessna Aircraft Models 206, 207 and 210 aircraft with this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the Operator's Aircraft Maintenance Manual and the Operator's Aircraft Scheduled Maintenance Program.

Referenced Documents:

Author	Document Number	Document Title
Federal Aviation Administration	Advisory Circular 43.13-1()	Acceptable Methods, Techniques, and Practices. Chapter 8, Section 3, Exhaust Systems
Aerospace Welding	AW0708-4	Instructions for Continued Airworthiness
Cessna Aircraft	Subscription	Service Documents
Cessna Aircraft	Aircraft Specific	Maintenance Manuals

Note: Owner and operators of Cessna Aircraft should contact the Cessna Distributor or authorized Service Center to obtain the latest information pertaining to their products. The list of valid Cessna manuals, service bulletins, AD's and their latest revision can be reviewed or hardcopies ordered from your nearest Cessna Service Center to find the nearest Cessna Service Center, go to;
www.cessna.com/customer-service.html

Or contact

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2. DESCRIPTION

The modification removes the existing exhaust collectors as used with the Teledyne Continental Motors IO-470, IO-520-A, D, F & L and aircraft modified by STC's to replace the IO-520 and IO-550 series engine with the more modern version of these engines.

The Exhaust System consists of two exhaust stacks assemblies for the right and left bank of cylinders, (2, 4, 6) side left, (1, 3, 5) right side as view from the rear of the engine)

The original exhaust mufflers / heat exchanger & tail pipes are unchanged and will retain there original installation position.

The AWI exhaust system incorporates slip joints between cylinders and one slip joint for vertical alignment. See Appendix A for assemble drawings. **The exits of the collector are in the same position as the original OEM units which allows for original muffler, muffler heat exchanger and tail pipes to be use.**

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3. REMOVAL AND INSTALLATION

3.1 Pre-Installation

- Inspection of shipping package
Examine the exterior of the shipping container for signs of shipping damage, especially if the box has tears or crushed appearance.
- After removing the Exhaust System from the shipping container, examine the components for shipping damage.

PREPARATION:

- Check / verify aircraft is eligible for installation of the AWI Exhaust System.

**CESSNA 206 SERIES
APPLICATION CHART**

Cessna 206 Model Number	TCM Engine Model	Max Cont BHP	Max Cont RPM	5 Min T.O. BHP/RPM
206	IO520A	285	2700	N/A
U206	IO520A	285	2700	N/A
P206	IO520A	285	2700	N/A
U206A	IO520A	285	2700	N/A
P206A, B, C, D & E	IO520A	285	2700	N/A
U206B, C, D, E, F & G	IO520F	285	2700	300/2850
206 series	IO550F	300	2700	NA
206 series	IO550N	310	2700	NA
206 series	IO520F-CF	290	2700	300/2800
206 series	IO550F-CF	310	2700	NA

**CESSNA 207 SERIES
APPLICATION CHART**

Cessna 207 Model Number	TCM Engine Model	Max Cont BHP	Max Cont RPM	5 Min T.O. BHP/RPM
207	IO520F	285	2700	300/2850
207A	IO520F	285	2700	300/2850
207 series	IO550F	300	2700	NA
207 series	IO550N	310	2700	NA
207 series	IO520F-CF	290	2700	300/2800
207 series	IO550F-CF	310	2700	NA

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**CESSNA 210 SERIES
APPLICATION CHART**

Cessna 210 Model Number	TCM Engine Model	Max Cont BHP	Max Cont RPM	5 Min T.O. BHP/RPM
210-5	IO470S	260	2625	N/A
210-5A	IO470S	260	2625	N/A
210B, 210C	IO470S	260	2625	N/A
210D,E, F	IO520A	285	2700	N/A
210G, 210H	IO520A	285	2700	N/A
210J	IO520J	285	2700	N/A
210K, 210L	IO520L	285	2700	300/2850
210M	IO520L	285	2700	300/2850
210N	IO520L	285	2700	300/2850
210 series	IO550L	300	2700	NA
210 series	IO550P	310	2700	NA
210 series	IO520L-CF	290	2700	300/2800
210 series	IO550L-CF	310	2700	NA

3. Installation

COMPATIBILITY OF THE INSTALLATION CHANGE WITH PREVIOUSLY APPROVED MODIFICATION MUST BE DETERMIND BY THE INSTALLER

Applicable Manuals:

- Cessna Aircraft Maintenance Manuals, See Item 1, Introduction.
- Cessna Aircraft Company Maintenance Manual – Appropriate Cessna Series Aircraft

2.2 Tooling requirements

- Safety wire pliers
- Torque wrench
- Command hand tools

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2.3 Expendables

- 0.032 Stainless Steel Aircraft Safety Wire
- TCM or equivalent P/N 652458 Exhaust Assembly – Gaskets (6 each)
- P/N MS20500-428 Nuts, Exhaust System (24 each)

**COMPATIBILITY OF THE INSTALLATION CHANGE WITH PREVIOUSLY APPROVED
MODIFICATION MUST BE DETERMIND BY THE INSTALLER**

2.4 Removal Procedures:

Applicable Manuals:

- Refer to the appropriate Cessna Aircraft Maintains manuals
- Remove existing exhaust system in accordance with the appropriate aircraft maintenance manual.
- Clean engine exhaust flanges.
- Inspect the tailpipes, muffler and heater muff for damaged or missing heat studs, fins or other heat sink material. Repair or replace before installation.
- Baffles – Look to see if the muffler has internal baffles or tubes. If damaged or missing, repair or replace before installation.

NOTE: A properly functioning exhaust system is critical to flight safety

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INSTALLATION

Installation Tips:

- Don't force fit any parts, damage may occur resulting in a shorten component service life.
- Use new hardware and gaskets See page3 and Master Parts List AW0708-7
- Install the new exhaust riser assemblies using new gasket, P/N 652458 between the cylinder exhaust pad and the exhaust riser flanges.
- Using new exhaust flange nuts, P/N MS20500-428. Torque exhaust stacks nuts at cylinder to 100 – 110 inch lb. **Re-torque the nuts after 25 hours of operation**
- **Re-install original muffler, heater and tailpipes only after determining they are safe for returning to service. Consideration should be given to replacing these components depending on time in service and condition.**

3.12 Perform full power static RPM check, check for signs of exhaust leaks, fuel leaks or any other unsafe conditions. Correct any know unsafe conditions prior to flight. Make all necessary engine and governor adjustments as required. After adjustment is complete, final safety checks are made, safety wire installation as required, make all required log book entries.

- There is no significance change in weight and balance. Make the appropriate logbook entries, and return aircraft to service with FAA Form 337 referencing STC.

END OF DOCUMENT

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