



U.S. Department
of Transportation
**Federal Aviation
Administration**

Aircraft Certification Service
Special Certification Office, ASW-190

2601 Meacham Blvd.
Fort Worth, TX 76137

MAY 19 2014

Mr. Keith Chatten
Executive Vice President
Superior Air Parts
621 South Royal Lane, Suite 100
Coppell, TX 75019

Dear Mr. Chatten:

The Federal Aviation Administration (FAA) received your proposal dated May 15, 2014 proposing a global alternative method of compliance (AMOC) to paragraph (i)(2) of Airworthiness Directive (AD) 2014-05-29. Paragraph (i)(2) requires replacement of affected Superior Air Parts (SAP) cylinders when the cylinder reaches 12 calendar years-since-installation.

SAP has proposed an Alternate Method of Compliance as listed in Superior Air Parts Service Bulletin Number B14-01, Revision B, dated May 15, 2014. The subject service bulletin submitted with the reference letter has been reviewed. The Fort Worth Special Certification Office, ASW-190, approves the engineering aspects of service bulletin, SB B14-01, Revision B, dated May 15, 2014 as a global alternate method of compliance to AD 2014-05-29 paragraph i(2).

This FAA AMOC is transferable with the aircraft to operator who operates the aircraft under U.S. registry.

Before using this AMOC, notify your appropriate principal inspector, or lacking a principle inspector, the manager of the local Flight Standards District Office/certificate holding district office.

All provisions of (AD) 2014-05-29 that are not specifically referenced above remain fully applicable and must be complied with accordingly.

If you have any questions, please contact Peter W. Hakala, Aerospace Engineer, Special Certification Office, ASW-190, FAA, 2601 Meacham Boulevard, Fort Worth, TX 76137; phone: (817) 222-5145; fax: (817) 222-5785; email: peter.w.hakala@faa.gov.

Sincerely,

S. Frances Cox
Manager, Special Certification Office, ASW-190
Aircraft Certification Service

Date: 5/15/2014

Subject: Global Alternative Method of Compliance (AMOC) for AD2014-05-29, Para. (i)(2), "When the cylinder reaches 12 calendar years-since-installation."

Application: The products affected by this Global AMOC are the same as those under AD 2014-05-29 and are as follows:

(1) Continental Motors, Inc. (CMI) IO-520, TSIO-520, and IO-550 series reciprocating engines with replacement Superior Air Parts, Inc. (SAP) parts manufacturer approval (PMA) investment cast cylinder assemblies, part numbers (P/Ns) SA52000-A1, SA52000-A20P, SA52000-A21P, SA52000-A22P, SA52000-A23P, SA55000-A1, or SA55000-A20P, installed.

(2) All other engine models approved for the use of CMI 520 and 550 cylinder assemblies such as the CMI 470 series engines when modified by Supplemental Type Certificate (STC), with SAP investment cast cylinder assemblies, P/Ns SA52000-A1, SA52000-A20P, SA52000-A21P, SA52000-A22P, SA52000-A23P, SA55000-A1, or SA55000-A20P, installed.

(3) All serial numbers for the P/Ns listed in paragraphs (c)(1) and (c)(2) of AD 2014-05-29.

AMOC Applicability: Cylinders that have not reached the hourly time in service but have reached the calendar time in service per CMI SIL 98-9C, Revision C, dated July 17, 2013,

Compliance: Upon reaching 12 calendar years TIS, but less than the published engine model hourly Time in Service, perform the following tests and inspections at 50 hour intervals or annually, whichever comes first. Upon reaching 17 years TIS, the remaining affected cylinders must be replaced.

- 1) Visually inspect each affected cylinder assembly per CMI Service Bulletin No. SB96-12, dated September 10, 1996, Part I, Section A, Paragraph (a) cylinder barrel and (b) cylinder head.
 - a. Comply with CMI Service Bulletin No. SM96-12, Table 1.
 - b. Any abnormality or damage Identified in Table I requires cylinder removed from service.
- 2) Compression Check each cylinder per CMI Service Bulletin No. SB96-12, dated September 10, 1996, Part I, Section B.
 - a. Refer to CMI Service Bulletin SB03-3, dated March 28, 2003, Section B for detailed instruction for the Cylinder Differential Pressure Test.
 - b. Warning: It will be necessary to hold the propeller stationary while pressure is applied to the cylinder. Use extreme caution to prevent injury to personnel or damage to equipment.
- 3) Leak check each affected cylinder assembly per CMI Service Bulletin No. SB96-12, dated September 10, 1996, Part I, Section C.
 - a. Note It is recommended that the aircraft is operated on the ground rather than flying for purposes of this Service Bulletin. After the engine has been brought to operating temperature via ground run and shut down, allow 30 minutes, but less than 90 minutes to elapse before proceeding (this step is necessary to ensure that the cylinders are not so hot that the soap/water solution used is not evaporated away before bubbling can occur).

b. Warning: It will be necessary to hold the propeller stationary while pressure is applied to the cylinder. Use extreme caution to prevent injury to personnel or damage to equipment.

- 4) Perform a borescope inspection per CMI Service Bulletin No. SB03-3, dated March 28, 2003, Section C. Comply with all replacement instructions. Any abnormality noted identified in Table 2 requires cylinder removed from service. Any observation of heavy corrosion on a cylinder wall will also require that the cylinder be replaced.

FAA Contact Instructions: You may approve your aircraft for return to service after accomplishing this AMOC only if you record the AMOC in your aircraft maintenance records as your method of compliance with the AD. Annotate the maintenance records as follows:

1. Global AMOC approval from the [XXX] ACO (or Directorate) approval authority to [global AMOC requester's name], dated [MM-DD-YYYY].
2. Additionally, the Order 8110.103 indicates by using the service document as an AMOC, you (owner/operator) are responsible for notifying your Principal Inspector (PI), or lacking a PI, the manager of the FSDO/CHDO) before using it.

If you intend to use Superior Air Parts Service Bulletin No. B14-01 as a Global AMOC for AD2014-05-29, Para. (i)(2), you must notify your FSDO PI, or if you have no PI, your local FSDO manager, prior to doing so. To ensure that the contact is a permanent record, it should include an email or letter. If you or your organization and/or, the aircraft, move to a different FSDO jurisdiction, notification of the new FSDO is required, prior to continuing compliance to this Global AMOC. For your convenience, the following letter format can be used:

Example notification to FAA of use of this Global AMOC

Date
Your organizations name, address and
contact information

FAA Flight Standards District Office
FSDO address
Attention PI's name or "Manager"

Subject: Intention to use Superior Service Bulletin No. B14-01 as a Global AMOC for AD2014-05-29, Para. (i)(2).

Dear Sir or Madam:

It is our intention to use Superior Service Bulletin No. B14-01 as an AMOC for AD2014-05-29, paragraph (i)(2). The aircraft to which this AMOC will be applied is/are:

Aircraft make _____
Aircraft Model _____
Aircraft N Number _____
Aircraft S/N _____
Engine Model _____
Engine S/N _____
(Repeat as necessary)

Please contact the undersigned if additional information is required.

Regards,

Your signature
Your name and title

Supplemental Guidance:

1. The AFS Order 8900.1, Volume 3, Chapter 59, Section 1 states: "Regarding the records for an AD, the "method of compliance" means a concise description of the action taken to comply with the requirements of the AD. If the AD or its service instructions permit the use of more than one method of compliance, the record must include a reference to the specific method of compliance used. If the operator uses an AMOC to comply with an AD, the method of compliance means a description of the AMOC and a copy of the FAA approval of the AMOC."
2. The rule 43.9 requires maintenance performed by the AMOC requires an appropriate maintenance record entry made by maintenance personnel.
3. The rule 43.10 Disposition of Life Limited Parts should also be considered to be mentioned as any cylinder removed from service should to be treated as a life limited article by maintenance personnel.
4. The owner/operator also has requirements under 91.417 for keeping records for the current status of life limited parts (if these are considered to be) and the current status of applicable AD's.