CFR part 20 as well as a renumbering of those regulations. As such, this revision to the regulatory guide aligns with the regulatory structure of current 10 CFR part 20 by updating the regulatory guide's 10 CFR part 20 cross-references.

In addition, this revision includes additional guidance from operating ALARA experience since 1975. It provides more details describing management responsibilities to ensure commitment to ALARA.

II. Additional Information

The NRC published a notice of availability of DG–8033 in the **Federal Register** on December 24, 2015 (80 FR 80395), for a 60-day public comment period. The public comment period closed on February 22, 2016. The public comments on DG–8033 and the NRC staff responses to the public comments are available in ADAMS under Accession Number ML16105A137.

III. Congressional Review Act

This regulatory guide is a rule as defined in the Congressional Review Act (5 U.S.C. 801–808). However, the Office of Management and Budget has not found it to be a major rule as defined in the Congressional Review Act.

IV. Backfitting

This regulatory guide provides updated guidance on the methods acceptable to the NRC staff for complying with the NRC's regulations associated with ALARA. The regulatory guide applies to current and future applicants for, and holders of:

- Operating licenses for nuclear power reactors under 10 CFR part 50.
- approvals issued under subpart B, C, E, and F of 10 CFR part 52 (''protected applicants and licensees'').
- licenses issued under 10 CFR part 70 to possess or use, at any site or contiguous sites subject to licensee control, a formula quantity of strategic special nuclear material, as defined in 10 CFR 70.4.
- operating licenses for nuclear non-power reactors under 10 CFR part 50.
- specific domestic licenses to manufacture or transfer certain items containing byproduct material under 10 CFR part 32.
- specific domestic licenses of broad scope for byproduct material under 10 CFR part 33.
- licenses for industrial radiography under 10 CFR part 34.
- licenses for medical use of byproduct material under 10 CFR part 35.
- licenses for irradiators under 10 CFR part 36.
- licenses for well logging under 10 CFR part 39.
- licenses for source material under 10 CFR part 40.
- certificates of compliance for packaging of radioactive material under 10 CFR part 71.
- licenses for independent spent fuel storage installations under 10 CFR part 72.

The backfitting provisions in 10 CFR 50.109, 70.76, and 72.62, and the issue finality provisions in 10 CFR part 52 do not apply to holders of licenses under 10 CFR parts 31, 32, 33, 34, 35, 36, 39, 40, or 71, or to holders of licenses for non-power reactors under 10 CFR part 50, unless those licensees also have an NRC regulatory approval under 10 CFR parts 50 or 52 (for a nuclear power reactor), 70, or 72. In addition, the issuance of this regulatory guide would not constitute backfitting under 10 CFR 50.109, 70.76, or 72.62, and would not otherwise be inconsistent with the issue finality provisions in 10 CFR part 52. As discussed in the ''Implementation'' section of this regulatory guide, the NRC has no intention of initiating any regulatory action that would require the use of this regulatory guide by current holders of 10 CFR part 50 operating licenses, 10 CFR part 52, subpart B, C, E, or F approvals, 10 CFR part 70 licenses, or 10 CFR part 72 licenses.

If a licensee protected by a backfitting or issue finality provision (a ''protected licensee'') voluntarily seeks a license amendment or change, and (1) the NRC staff's consideration of the request involves a regulatory issue directly relevant to this revised regulatory guide and (2) the specific subject matter of this regulatory guide is an essential consideration in the NRC staff's determination of the acceptability of the licensee's request, then the NRC staff may request that the licensee either follow the guidance in this regulatory guide or provide an equivalent alternative process that demonstrates compliance with the underlying NRC regulatory requirements. Such a request by NRC staff is not considered backfitting as defined in 10 CFR 50.109(a)(1), 70.76(a)(1), or 72.62(a), or a violation of any applicable finality provisions in 10 CFR part 52.

If a protected licensee believes that the NRC is either using this regulatory guide or requesting or requiring the protected licensee to implement the methods or processes in this regulatory guide in a manner inconsistent with the discussion in the Implementation section of this regulatory guide, then the protected licensee may file a backfit appeal with the NRC in accordance with the guidance in NRC Management Directive 8.4, ''Management of Facility-Specific Backfitting and Information Collection'' (ADAMS Accession No. ML12059A460); and NUREG–1409, ''Backfitting Guidelines'' (ADAMS Accession No. ML032230247).

Dated at Rockville, Maryland, this 3rd day of August, 2016.

For the Nuclear Regulatory Commission.

Thomas H. Boyce,

Chief, Regulatory Guidance and Generic Issues Branch, Division of Engineering, Office of Nuclear Regulatory Research.

[FR Doc. 2016–18767 Filed 8–10–16; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2012–0002; Directorate Identifier 2011–NE–42–AD; Amendment 39–18610; AD 2016–16–12]

RIN 2120–AA64

Airworthiness Directives; Continental Motors, Inc. Reciprocating Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Continental Motors, Inc., (CMI) San Antonio (formerly known as Airmotive Engineering Corp. (AEC)), replacement parts manufacturer approval (PMA) cylinder assemblies marketed by Engine Components International Division (ECi). On July 17, 2015, AEC was purchased by CMI and is now operating as ''Continental Motors—San Antonio.'' These cylinder assemblies are used on all CMI model –520 and –550 reciprocating engines, and on all other CMI engine models approved for the use of model –520 and –550 cylinder assemblies, such as the CMI model –470 when modified by supplemental type certificate (STC). This AD was prompted by reports of multiple cylinder head-to-barrel separations and cracked and leaking aluminum cylinder heads. This AD requires removal of the affected cylinder assemblies, including overhauled cylinder assemblies, according to a phased removal schedule. We are issuing this AD to prevent failure of the cylinder assemblies, which could lead to failure of the engine, in-flight shutdown, and loss of control of the airplane.

DATES: This AD is effective September 15, 2016.

ADDRESSES: For service information identified in this AD, contact Continental Motors, Inc., San Antonio, 9503 Middlex Drive, San Antonio, TX 78217; phone: 210–820–8100; Internet: *http://www.continentalsanantonio.com.* You may view this service information

at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781–238–7125. It is also available on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2012–0002.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2012–0002; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800–647–5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT:

Jurgen E. Priester, Aerospace Engineer, Delegation Systems Certification Office, FAA, Rotorcraft Directorate, 10101 Hillwood Parkway, Fort Worth, TX 76177; phone: 817–222–5190; fax: 817–222–5785; email: *jurgen.e.priester@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

August 12, 2013—NPRM

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain CMI San Antonio replacement PMA cylinder assemblies marketed by ECi. These assemblies are used on CMI model –520 and –550 reciprocating engines, and all other CMI engine models approved for the use of models –520 and –550 cylinder assemblies such as the CMI model –470 when modified by STC. The NPRM published in the **Federal Register** on August 12, 2013 (78 FR 48828) (referred to herein after as the ''August 12, 2013, NPRM''). The August 12, 2013, NPRM proposed to require initial and repetitive inspections, immediate replacement of cracked cylinder assemblies, and replacement of cylinder assemblies at reduced times-in-service (TIS) since new. The August 12, 2013, NPRM also proposed to prohibit the installation of affected cylinder assemblies into any engine.

September 26, 2013–March 12, 2014—Posting Technical Documents/Extension of Comment Period/Initial Regulatory Flexibility Analysis (IRFA)

We received several hundred comments to our August 12, 2013, NPRM. In response to this high-level of public interest, we undertook several actions to help the public understand and provide further comment on our proposed rule. These actions included:

- Extending the comment period to the August 12, 2013, NPRM;
- publishing an IRFA; and
- adding several technical documents that were posted to Docket No. FAA–2012–0002 (see Addresses section of this final rule for information on locating the docket) on September 20, 2013.

Documents added to the docket include:

(1) FAA Safety Recommendations 08.365, 08.366, and 11.216, which were written against the subject ECi cylinder assemblies;

(2) NTSB Safety Recommendation A–12–7, also written against the subject ECi cylinder assemblies;

(3) The original ECi AD worksheet for 2011–NE–42–AD, which documents the reasons for the proposed rule;

(4) A list of separations of ECi cylinder assemblies;

(5) A white paper [1] on failures of ECi cylinders by the FAA Chief Scientific and Technical Adviser (CSTA) for Engine Dynamics;

(6) Figures showing ECi Dome Separation Failures;

(7) A briefing on ''ECi Cylinder Head Failures on Continental IO 520 & 550 Engines''; and

(8) FAA Policy Memorandum on ''Risk Assessment for Reciprocating Engine Airworthiness Directives,'' dated May 24, 1999.

We notified the public of these actions on September 26, 2013, via the **Federal Register** (78 FR 59293). In that notification, we extended the comment period for the August 12, 2013, NPRM to December 11, 2013. This extension allowed the public additional time to comment on our August 12, 2013, NPRM and the additional information we had added to the docket.

We also determined that we needed to add to the docket a detailed regulatory flexibility analysis to estimate the effects of the proposed rule on small business entities. We published an Initial Regulatory Flexibility Analysis in Docket FAA–2012–0002 on March 12, 2014 (79 FR 13924).

[1] An authoritative report that informs readers about a complex issue.

September 3–4, 2014—Challenge Team's Review of August 12, 2013, NPRM

Because the response to our August 12, 2013, NPRM was so negative—we received over 500 comments, most disagreeing with the NPRM—we established a Challenge Team to review our proposed AD. The Challenge Team was an independent, multi-disciplinary team, consisting of three FAA CSTAs, FAA Aircraft Certification Service (AIR) managers, and other FAA technical experts from all four Directorates.

The Challenge Team reviewed the technical information that formed the basis for our proposed AD and the public comments we had received concerning our proposal. The CSTA for Aircraft Safety Analysis also independently computed a new risk assessment using the earlier failure reports, and the additional failure reports that we received from the public as comments to our August 12, 2013, NPRM.

Based on their review of this data and the new risk assessment of failures of affected cylinder assemblies, the Challenge Team determined that an AD was still required. But, they suggested changes to make compliance less aggressive and substantially reduce cost. Their recommended changes included revising the compliance schedule in favor of a phased removal schedule, clarifying that overhauled cylinder assemblies are included in the proposed phased removal schedule, eliminating the reporting requirement for removed cylinder assemblies, and removing the requirement for initial and repetitive inspection.

January 8, 2015—First Supplemental Notice of Proposed Rulemaking (SNPRM)

We adopted the Challenge Team's recommendations, and we then published them as an SNPRM in the **Federal Register** on January 8, 2015 (80 FR 1008) (referred to herein after as the ''January 8, 2015, SNPRM''). The January 8, 2015, SNPRM proposed to modify the schedule for removal of the affected cylinder assemblies, added that overhauled affected cylinder assemblies be removed within 80 hours, eliminated a reporting requirement, and removed a requirement for initial and repetitive inspections.

We also responded in our January 8, 2015, SNPRM, to the several hundred comments that we received to the August 12, 2013, NPRM. Many of these comments were repetitious, so we grouped the comments and provided our responses to the different groups,

depending on the nature of the comment. For example, some comments claimed that airplanes can operate safely with a separated cylinder head; others suggested that pilot error was causing cylinder head separations; and others recommended adopting less stringent compliance requirements. Each of these groups received our response to the group's comment.

June 9, 2015—Meeting With National Transportation Safety Board (NTSB)

The NTSB, in its comments to our August 12, 2013, NPRM; January 8, 2015, SNPRM; and in its Safety Recommendation A–12–07, did not fully support our approach to resolving the unsafe condition that is the subject of this final rule. Therefore, we met with the NTSB on June 9, 2015 to understand the technical basis for their recommendation and their technical objections to our proposed AD. At this meeting, we presented the NTSB the technical information upon which we based our AD as amended. Information that was reviewed included failure reports, the risk assessment by the FAA's CSTA for Aircraft Safety Analysis, FAA safety recommendations, and the data supporting our conclusion that field inspections had an insufficient probability of cylinder failure detection.

The NTSB noted in this meeting that Safety Recommendation A–12–7, and the NTSB's comments to the August 12, 2013, NPRM and the January 8, 2015, SNPRM, were based on the information available to them at that time. The NTSB also indicated it would reassess its recommendation and comments to our proposed rule based on the presentations and the supporting data that we had presented.

June 23, 2015—Additional Technical Documents Posted

We received additional comments to our August 12, 2013, NPRM and our January 8, 2015, SNPRM, requesting that we provide additional information that supports this AD. Commenters also requested that we identify the data that we relied on in drafting this AD and to explain why that data supported our conclusion that an unsafe condition exists. Based on these comments, we concluded that further additional public participation in our proposed AD was appropriate. Specifically, we concluded that we would post to the docket the additional technical information responsive to the comments. So, on June 23, 2015, we posted the additional technical information to Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). These documents provide further technical rationale for this AD. This additional technical information included:

(1) The risk analysis process conducted by the FAA's CSTA for Aircraft Safety Analysis—referenced in Docket No. FAA–2012–0002 as the ''Proposed Airworthiness Directive for ECi Cylinders Risk Analysis Process,'' referred to herein as the ''risk analysis'';

(2) A risk analysis using the Small Airplane Risk Analysis (SARA) methods used by the FAA's Small Airplane Directorate (SAD)—referenced in Docket No. FAA–2012–0002 as ''SARA Worksheet Systems/Propulsion'';

(3) A June 2011, presentation by AEC to the FAA concerning its ECi cylinder assemblies;

(4) A list of ECi cylinder assembly failure reports consisting of only those reports where both cylinder serial number and time in service are included in the reports;

(5) A list of additional failures of ECi cylinder assemblies reported by a maintenance organization; and

(6) AEC Technical Report 1102–13, dated April 30, 2011.

August 28, 2015—2nd SNPRM

We published a second SNPRM in the **Federal Register** on August 28, 2015 (80 FR 52212, referred to herein after as the ''August 28, 2015, SNPRM''). The August 28, 2015, SNPRM retained the compliance requirements proposed by the January 8, 2015, SNPRM. We published the August 28, 2015, SNPRM to provide the public a final opportunity to comment on the proposed AD and the additional technical documentation we had added to the docket on June 23, 2015.

Also, since many commenters had cited NTSB support for their positions, we wanted to clarify our rationale for disagreeing with the compliance actions proposed by the NTSB in its Safety Recommendation A–12–7, and the NTSB's comments to the August 12, 2013, NPRM and the January 8, 2015, SNPRM.

The NTSB did submit a final comment to our August 28, 2015, SNPRM, that was posted to the docket on November 23, 2015. In the NTSB's final comment, the NTSB indicated that it now considers that our proposed compliance actions satisfy the intent of Safety Recommendation A–12–7. The information we covered with the NTSB, including copies of FAA presentations to the NTSB, were subsequently posted to Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket) on April 6, 2016.

Comments

Introduction

We have, through the August 12, 2013, NPRM; the September 26, 2013, posting of additional information; our extension of the August 12, 2013, NPRM comment period; the January 8, 2015, SNPRM; and August 28, 2015, SNPRM, given the public the opportunity to participate in developing this AD. The public, as noted already, has participated deeply in this rule making; providing hundreds of comments.

This final rule includes our responses to any previously unaddressed comments to the August 12, 2013, NPRM and to the January 8, 2015, SNPRM, that we may have left without response, and to the August 28, 2015, SNPRM.

To organize comments and facilitate their review, we again grouped like comments and responses. These groupings in this final rule's comments section are:

(1) Comments to withdraw or revise the SNPRMs for technical reasons—these comments, and the resulting groupings, were similar to those we used in responding to the August 12, 2013, NPRM. They include, for example, requests to withdraw the SNPRM because the commenters claim that ECi cylinder assemblies are not unsafe; airplanes can operate safely with a separated cylinder head; or the root cause of cylinder failure is unknown.

(2) Comments to the FAA's risk assessment processes and policies—these comments generally asserted that the SNPRMs should be withdrawn because the FAA had not appropriately followed its risk assessment processes and policies in determining that the failure of ECi cylinder assemblies represents an unsafe condition.

(3) Comments to the FAA's rulemaking processes—these comments generally requested that the SNPRMs be withdrawn, alleging that the FAA had failed to follow its rulemaking processes and was adopting a rule that is ''arbitrary and capricious.''

(4) Comments to the cost of compliance—these comments indicated that the cost of compliance to this AD was higher than the FAA has estimated and will have a substantial effect on small entities.

(5) Administrative comments—these were generally comments that did not pertain to the substance of this AD, such as requests for names and phone numbers of FAA personnel involved in this rulemaking.

(6) Support for the SNPRMs—these were comments in support of issuing the SNPRMs.

A. Comments To Withdraw or Revise the SNPRMs for Technical Reasons

Request To Withdraw the SNPRMs Because ECi Cylinder Assemblies Are Not Unsafe

Comment. Several organizations and individuals, commenting to the August 12, 2013, NPRM, commented also to the January 8, 2015, and August 28, 2015, SNPRMs, that the affected ECi cylinder assemblies have an equivalent, or lower, failure rate than that of cylinder assemblies manufactured by the original equipment manufacturer (OEM). The commenters also indicated that there have been no failures of ECi cylinder assemblies in the last 3 years. These commenters request the FAA withdraw this AD because they believe that the ECi cylinder assemblies are not unsafe.

Response. We disagree. The rate of separation for the affected ECi cylinder assemblies is at least 32 times greater than that of OEM cylinder assemblies over the same period. Although there are approximately four times as many OEM cylinder assemblies in service than ECi cylinder assemblies, the ECi cylinder assemblies suffered more cylinder head separations than OEM cylinder assemblies since 2004. This data is available for review in Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). In addition, we have continued to receive field reports of failures of the affected cylinders in the past three years. We did not withdraw the August 28, 2015, SNPRM.

Comment. Commenters also questioned the validity of the data that the FAA used to justify the proposed AD.

Response. We interpret the comment as suggesting that the data used to justify the rule is not valid. We disagree. We used warranty reports from ECi and RAM Aircraft, which is a major overhauler of CMI engines, STC holder for an increased horsepower version of the affected model engine, and the largest user of the affected ECi cylinders. We also used service difficulty reports (SDRs), and other field service reports regarding ECI cylinder separations. We did not withdraw the August 28, 2015, SNPRM.

Comment. The IPL Group LLC (IPL Group) commented that the FAA has mischaracterized ''quality enhancements'' in production as ''design changes.'' IPL Group noted that ECi had applied experience gained during manufacturing, as well as through service feedback, to make quality improvements in production and the changes made to the design data were not due to design deficiencies.

Response. We disagree. We correctly stated that ECi has made increases in the dome transition radius through cylinder serial number 33697, and has made incremental increases in the head-to-barrel interference fit at least through cylinder serial number 61177 (see Airmotive Engineering Technical Report 1102–13) to address the two identified inherent design deficiencies associated with the effected cylinder assemblies. These changes are design changes. We did not withdraw the August 28, 2015, SNPRM.

Comment. RAM Aircraft commented that when it submitted its December 9, 2013, comment, it calculated the likelihood of a cylinder separation. RAM Aircraft indicated it provided a significant amount of data that proves that the likelihood of a cylinder separation is ''extremely remote.'' RAM commented that at that time their data showed one cylinder separation for every: 21,808 multi-engine aircraft flight hours, or 172 average years of active service; and 42,057 single engine aircraft flight hours, or 455 average years of active service. Further, that the fleet of aircraft using the cylinders subject to the January 8, 2015, SNPRM have continued to fly for an additional 14 months since December 9, 2013. RAM Aircraft indicated that there is no doubt that both the 21,808 multi-engine aircraft flight hour number, and the 42,057 single engine aircraft flight hour number, would both be now much larger, thereby, further reducing the likelihood of a cylinder separation.

Response. We disagree. RAM Aircraft's data does not substantiate its claimed failure rate. Without knowing the total number of hours flown on all affected cylinders, it is not possible to accurately calculate an hours-based failure rate. This data is not available for general aviation aircraft. We, therefore, find RAM Aircraft's estimate to be unreliable. We did not withdraw the August 28, 2015, SNPRM.

Comment. RAM Aircraft also indicated that a statement by the FAA in the January 8, 2015, SNPRM regarding numbers of failures of affected cylinder assemblies was grossly misleading. RAM Aircraft assumes that the FAA is referring to reports entered via the SDR system. RAM Aircraft indicated that it has provided evidence in an earlier comment that not every piece of information in the SDR system can be taken at face value. With respect to this SNPRM, RAM suggested that it is very important to distinguish between the ''SNPRM failure modes'' (quotations not in original comment) and other types of ''nuisance'' cracks that are common occurrences in all manufacturer's air-cooled aircraft cylinders. The SNPRM failure modes do not include cracks between spark plug holes, valve seats, injector ports, etc. There is no doubt that the ''hundreds of failures'' referenced by the FAA were never researched to determine which were of the SNPRM failure mode and which were of the ''nuisance'' variety.

Response. We disagree. Our response in the January 8, 2015, SNRPM is not misleading. On the contrary, under-reporting of cylinder assembly cracks in the SDR system further reinforces the need for this AD. Further, the FAA did not include the SDR failure reports referred to by the commenter as of the ''nuisance'' variety in the list of separations that were used to substantiate the need for this AD. We did not base this AD on nuisance cracks in the affected cylinder assemblies. We did not withdraw the August 28, 2015, SNPRM.

Comment. One commenter stated that the separated cylinders that were determined to be the precipitating root cause events for the two fatal accidents cited by the FAA in the January 8, 2015, SNPRM were overhauled cylinders, so they therefore should not be considered in the determination as to whether or not the proposed corrective action should be implemented.

Response. We disagree. The ECi cylinder heads, P/N AEC 65385, of the separated cylinder assemblies that precipitated the two referenced fatal accidents were of the same type design and within the same affected cylinder assembly serial number range as are used in new ECi cylinder assemblies. The cast and then machined aluminum cylinder head shrink band region has the predominant features that define the final interference fit of the overall cylinder assembly, not the steel barrel. This is further supported by the fact that the design changes that ECi made to the interference fit were accomplished by modification of the cylinder head. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings commented that the FAA should withdraw the August 28, 2015 SNPRM because the FAA failed to establish that the affected product, *i.e.,* the ECi cylinder assemblies, do not meet the established minimum safety standards established by 14 CFR part 33.

Response. We disagree. The operational history of the affected ECi cylinder assemblies established that the affected ECi cylinder assemblies present an unacceptable compromise to safety, an unsafe condition, when installed in operating aircraft engines. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings also stated that the ''same unsafe condition'' that is addressed by this AD is present in the cylinders of all manufacturers and that the FAA failed to consider similar failures of the OEM cylinders.

Response. We disagree. The affected ECi PMA cylinders have separated at a significantly higher rate than the OEM cylinders over the same service period since the ECi PMA cylinders entered service. ECi itself identified two root causes for the separations. See AEC Technical Report 1102–13 in Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket) which recommends withdrawal from service of the affected ECi cylinders. We compared the number of separations of these affected ECi PMA cylinders to the number of OEM separations over the same service period, since the ECi PMA cylinders entered service in meaningful numbers. Over the same period of time the affected ECi PMA cylinders and OEM cylinders were in service, the ECi cylinders experienced eight times the number of OEM separations, even though only one-quarter as many ECI cylinders were in service as the OEM's. Further, the SDR database does not reveal similar separation rates or similar failure modes for OEM cylinders. Therefore, we have no reason to regard the OEM cylinder assemblies as subject to the same or similar unsafe condition. We did not withdraw the August 28, 2015, SNPRM.

Request To Withdraw the SNPRMs Because Airplanes Can Operate Safely With a Separated Cylinder Head

Comment. Several commenters indicated that we should not issue this AD because airplanes can continue to operate safely even after a cylinder head separation.

Response. We disagree. An in-flight cylinder head separation is an unsafe condition that presents multiple secondary effects. For example, in-flight fire and loss of aircraft control. Accident data confirms that separated cylinders have also been a precipitating event in fatal accidents. Therefore, the safety consequences represented by a cylinder head separation in flight are significant, and represent an unsafe condition appropriate for an AD. We did not withdraw the August 28, 2015, SNPRM.

Comment. Several commenters added that airplane engines are designed and certified to safely operate with one failed cylinder.

Response. We disagree. Applicants are not required to show that their engines are designed to operate with one cylinder failed or with a separated cylinder, nor that doing so constitutes safe operation of an engine. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Aerospace commented that the docket contains evidence from RAM Aircraft that valid and verifiable testing establishes that a head-to-barrel separation results in less than 20 percent power loss to the engine.

Response. We disagree. The RAM Aircraft testing that is included in Docket FAA–2012–0002 only quantified the horsepower output per cylinder. The RAM Aircraft testing was of an uninstalled engine in a test cell and RAM Aircraft did not attempt to assess the impact of reduced engine horsepower output on airplane level performance. We estimate that a 20% reduction in engine horsepower on a single-engine airplane results in a nearly 40% reduction in aircraft rate of climb, which is a hazardous condition. It is also a potentially hazardous condition for twin-engine airplanes due to the resultant asymmetric thrust condition. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Aerospace indicated that FAA guidance material does not define this condition as ''hazardous'' in the certification process.

Response. We interpret the comment to be that the FAA has no definition of hazardous event that includes loss of one cylinder in a six-cylinder engine, within the engine certification regulations (14 CFR part 33). We agree. The certification process does not define ''hazardous events.'' The FAA establishes through the engine certification process the minimum standards that an engine needs to meet to be considered airworthy. For example, § 33.19 establishes durability standards that are designed to minimize the development of an unsafe condition between overhaul periods. These minimum safety standards must also be met by PMA parts, either through establishing identicality or through test and computation. FAA Policy PS–ANE100–1997–00001, provides guidance for the certification of PMA applications for reciprocating engine critical, highly stressed or complex parts, including, but not limited to crankshafts and cylinder heads. We did not withdraw the August 28, 2015, SNPRM.

Comment. RAM Aircraft commented that it has run tests that substantiate and document the power loss as a ''minor power loss'' in the event of a cylinder separation.

Response. We interpret the comment to be that any power loss from cylinder head separation is only minor. We disagree. The loss of one cylinder's power would equate to approximately a 17 to 20% reduction in engine horsepower output. Further, loss of a cylinder at critical phases of flight, for example, during climb-out where like here, the failure is at increased probability of occurring, produces a power loss sufficient to result in a 40% reduction in airplane rate of climb. This would constitute a hazardous condition during a critical phase of flight like departure/climb. We did not withdraw the August 28, 2015, SNPRM.

Comment. RAM Aircraft suggested that this minor power loss would be classified as a ''minor hazard,'' based on guidance from the FAA's ''Policy Statement on Risk Assessment for Reciprocating Engine Airworthiness Directives'' (PS–ANE100–1999–00006). According to the FAA policy statement, minor hazards are candidates for AD action only when the probability of the event is very high.

Response. We disagree. FAA policy classifies service problems that do not result in a significant power loss, such as a partial power loss, rough running, pre-ignition, backfire, single magneto failures, as ''minor.'' We found that cylinder separations results in a 17 to 20% reduction in engine horsepower output results in an approximately 40% reduction in airplane excess power, which translates into a 40% reduction in airplane rate of climb. This constitutes a hazardous condition that is not a ''minor hazard.'' We did not change this AD based on this comment.

Comment. RAM Aircraft commented that Appendix VI of the SAD Airworthiness Directives Manual Supplement includes examples of conditions that potentially have a ''minor'' affect. The loss of one engine (multi-engine aircraft) is listed as a condition with a ''minor'' effect. Given the ''minor'' effect of the loss of one engine and the likelihood of the cylinder separation being extremely remote, then this AD should not be issued against multi-engine aircraft.

Response. We disagree. By comparing the risk analysis computed by the CSTA for Aircraft Safety Analysis with either the Small Airplane Risk Analysis guidelines used by the SAD or the Engine and Propeller Directorate (E&PD) Continued Airworthiness Assessment Process (CAAP) Handbook guidelines, demonstrates that an AD is needed for both single and twin-engine aircraft. We did not withdraw the August 28, 2015, SNPRM.

Comment. RAM Aircraft commented that they are not aware of any substantiated fact of a ''fire,'' or any other significant consequence of a

cylinder head separation. Further, RAM Aircraft noted that in its May 12, 2014, comment, it had documented the research it had done to refute the ''rumor'' of a fire resulting from a cylinder head separation of an ECi cylinder.

Response. We disagree. RAM Aircraft itself submitted data to the FAA indicating that a fire could occur from cylinder head separation. FAA requested to see that information. FAA's subsequent visit to RAM Aircraft confirmed that a failed cylinder caused an in-flight fire on a Cessna 414 airplane. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Aerospace cited FAA documents that indicate that the design of an aircraft engine, for reciprocating engines, should incorporate mitigating features. For example, Danbury quoted SAD Standards Staff (ACE–110) Memorandum, dated May 6, 1986, and an E&PD Standards Staff (ANE–110) memorandum, dated May 24, 1997.

Response. We agree. However, the regulatory requirement for a designer to mitigate a possible reciprocating engine failure prior to certification is different than correcting an unsafe condition found to exist after certification. This AD addresses an unsafe condition—cylinder head separation, found after certification. A regulatory requirement to mitigate in the aircraft design an engine failure is not the subject of this AD. We did not withdraw the August 28, 2015, SNPRM.

Comment. IPL Group commented that we were misusing the term ''catastrophic'' when describing the effects of potential cylinder failures.

Response. We disagree. As to the use of ''catastrophic,'' we did not use the term in the August 12, 2013, NPRM, the two SNPRMs, or in this final rule AD. We did not change the August 28, 2015, SNPRM based on this comment.

Comment. IPL Group argued that a cylinder head separation does not cause an unsafe event and that there is ''zero evidence'' in Docket No. FAA–2012–0002 to support the showing that a failed cylinder causes an unsafe condition.

Response. We disagree. Cylinder separations can cause partial or complete engine failure which can cause a subsequent loss of power and control of the airplane. Loss of control of the airplane may result in the loss of the airplane and injuries or death. Additionally, we note the NTSB has stated that cylinder head separations could result in a loss of control of the airplane (see NTSB's comment to ''Docket No FAA–2008–0052; Directorate Identifier 2008–NE–01–AD, dated September 25, 2009''). We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings commented that the FAA had not provided any information to substantiate the FAA's position that cylinder separations have a ''significant'' effect on airplane safety or that cylinder separations would result in a fire.

Response. We disagree. The impact of a cylinder separation in-flight is an unacceptable compromise to safety. To clarify this point, we changed the AD to use ''unacceptable.'' We disagree that cylinder head separations might not result in fire. Cylinder separations can result in engine failure and/or fire. As an example, on November 29, 1987, a Piper PA–46 airplane experienced a cylinder head separation followed by an in-flight fire. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings also stated that the FAA did not issue a similar AD against the OEM cylinder assemblies because the OEM manufactured more such cylinder assemblies.

Response. We disagree. The FAA did not mandate actions similar to those specified in this AD against the OEM cylinders because the OEM cylinders do not have the inherent design deficiencies that the ECi PMA cylinders have. Also, the service history of the OEM cylinders indicates that the OEM separation rate is approximately 32 times lower than the ECi cylinders. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings further commented that ADs are never justified for any cylinder manufacturer.

Response. We interpret the comment as suggesting that we should not issue an AD when engine design deficiencies related to cylinders are found. We disagree. Cylinders are engine parts whose structural failure can result in a degradation to or total loss of, engine power output, and loss of control of an airplane. Cylinder separations aloft can also cause an in-flight fire. We will exercise our regulatory arm to issue ADs when we determine doing so is necessary to resolve an unsafe condition in a product. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Aerospace commented that 14 CFR part 33.43 requires assessment of crankshaft vibration for one cylinder not firing because the condition is not an engine failure event condition.

Response. We disagree. As we noted in our January 8, 2015, SNPRM, 14 CFR part 33 does not require continued safe operation following a cylinder separation or following any other engine structural failure. Section 33.43(d), addressing the engine vibration survey of § 33.43(a), requires assessment of crankshaft vibration for an engine that has one cylinder that ''is not firing.'' We require vibration testing with a critical cylinder inoperative because it is a failure condition where stresses may exceed the endurance limit of the crankshaft material. We need to know the speed ranges where the excessive stresses occur so operational information may be provided to flight crews so they can avoid these speed ranges when a cylinder is inoperative. We did not withdraw the August 28, 2015, SNPRM.

Request To Withdraw the SNPRMs Because Root Cause of Cylinder Failure Is Unknown

Comment. Several commenters indicated that the FAA has failed to identify the root cause(s) of cylinder head separations.

Response. We disagree. We have identified the root cause of cylinder failure as design deficiencies inherent in the affected ECi cylinder assemblies. These ECi cylinder assemblies have two inherent design deficiencies: Insufficient dome radius and insufficient head-to-barrel interference fit. These design deficiencies are identified in AEC Technical Report 1102–13, dated April 30, 2011, that we posted to Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). We did not withdraw the SNPRMs.

Comment. Danbury Aerospace commented that root cause analysis is absolutely essential to determining compliance with regulations and if an unsafe condition has been created. Therefore the agency has not properly identified the unsafe condition.

Response. We disagree. We identified the unsafe condition in the engine: Cylinder head separation. The purpose of this AD is to correct that unsafe condition. We also identified that cylinder head separations are due to at least two inherent design deficiencies. All cylinders prior to S/N 33697 have insufficient dome transition radius, and all cylinders prior to S/N 61177 insufficient head-to-barrel interference fit. ECi characterized both of these as ''inherent design deficiencies'' in its AEC Technical Report 1102–13. We did not withdraw the August 28, 2015, SNPRM.

Request To Withdraw the SNPRMs Because Pilot Error Is Causing Cylinder Head Separations

Comment. Danbury Aerospace and Danbury Holdings commented that cylinder head separations involving the ECi cylinder assemblies affected by this AD were caused by excessive CHTs, presumably caused pilot error, rather than by design deficiencies of the cylinder assemblies.

One operator observed that operators who use the ECi cylinder assemblies and operate them within limits and with good instrumentation are not having issues. This operator noted that everyone, with the exception of the FAA, believes that overheating beyond CHT limits by operators has a direct effect on cylinder head separation.

Response. We disagree. Although pilot error may cause excessive CHT, we have no data to suggest it is the cause of the unsafe condition that is the subject of this AD. If pilot error results in excessive CHT, which leads to cylinder head separation, then we would expect to see similar damage in engines with other than ECi cylinder assemblies installed where the pilots exceeded the same limitation(s). However, we do not have any such data. Also, we have no evidence that either intentional or inadvertent exceedance of CHT limits has caused cylinder separation. Further ECi identified several design deficiencies in AEC Technical Report 1102–13, dated April 30, 2011.We did not withdraw the SNPRMs.

Request To Withdraw the SNPRMs Because of the Risk of Maintenance Errors

Comment. Several commenters commented that the FAA should withdraw the SNPRMs because the removal and replacement of affected cylinder assemblies before time between overhaul (TBO) would result in maintenance errors that would adversely affect safety. For example, IPL Group indicated that replacement of the cylinder assemblies would likely result in events of main bearings losing clamp-up and turning, resulting in cylinder through-bolt and flange stud failures, which would likely result in total engine failure.

Response. We disagree. Our regulatory framework presumes that maintenance will be performed correctly by experienced personnel authorized by the FAA to return aircraft to service in an airworthy condition. Further, we have not observed any negative effects on safety due to removal of these cylinder assemblies during maintenance. Also, cylinder removal and replacement is a maintenance action addressed in engine maintenance manuals. We did not withdraw the SNPRMs.

Request To Justify 80-Hour Removal Requirement for Overhauled Cylinder Assemblies

Comment. Danbury Aerospace and Danbury Holdings requested that the FAA provide evidence (including engineering analysis) supporting its conclusion that overhauled cylinder assemblies should be removed within 80 hours after the effective date.

Response. We interpret the comment to be that the commenters disagree that the phased removal plan required by this AD is appropriate. We disagree. This AD mandates a phased removal of affected cylinders with the intent to retire all affected cylinders by initial TBO. The FAA recognizes that some cylinders in service may already have exceeded their initial TBO. Metal fatigue damage is cumulative, and the longer a cylinder head remains in service, the more likely it will fail due to one of the inherent design deficiencies. Overhauled cylinders have likely experienced more load and temperature cycles than lower time cylinders and the total time in service since new of overhauled cylinders often cannot be determined. Our determination of 80 hours is supported by our Challenge Team's findings and our risk analysis that we uploaded to FAA Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). We did not change this AD based on this comment.

Comment. Danbury Aerospace and Danbury Holdings also stated that the FAA had not substantiated that the overhaul of a cylinder does not reduce the existing fatigue damage that a cylinder may have incurred while in service.

Response. We disagree. Fatigue strength of metal alloys operated at high temperatures continuously decreases with cycles until failure. This is particularly true for aluminum alloys, including the aluminum alloy used to cast cylinder heads. Metallic structural elements that are operated at high temperatures are more susceptible to time dependent fatigue. The overhaul of a cylinder assembly does not reverse the fatigue damage that had been previously accumulated in the aluminum cylinder head casting. We did not change the AD based on this comment.

Request To Revise Applicability

Comment. Danbury Holdings commented that the FAA has no evidence that all cylinders through S/N 61176 are at risk for separation in the first thread due to insufficient head-to-barrel interference fit.

Response. We disagree. The SDR database and other field reports document instances of first-thread failures of cylinders manufactured to design data applicable to all cylinders prior to S/N 61177. For this reason, all cylinders through S/N 61176 are subject to the corrective actions of this AD. We did not change this AD based on this comment.

Comment. One commenter stated that he has an O–470 engine converted by P. Ponk Aviation to the equivalent of an O–520 engine. He indicated that those engines should not be affected by this AD.

Response. We disagree. The affected S/N cylinders are installed on –470 engines, as well as the –520 and –550 engine models. Any engine that uses one of these affected cylinders is at risk. We have received at least one report of a separation of these affected S/N cylinders on –470 engines. Although the unmodified –470 engines have lower engine horsepower output, their brake mean effective pressure (BMEP) is actually higher than that of the –520 and –550 engines. BMEP is proportional to the ratio of horsepower per cubic inch of displacement. Therefore, the actual operating stresses in the same cylinder wall are even higher when these same cylinders are installed in an unmodified –470 engines than it would be for either the –520 or the –550 engines. The P. Ponk Aviation STC increases the displacement of the unmodified –470 engine to –520 cubic inches by installing the –520 cylinders on the –470 engine. Given that no valid sensitivity analysis exists showing the relationship of BMEP to fatigue life of these cylinders, and since the crack propagation rate is also unknown, we have included all the –470 engines, including those modified by the P. Ponk Aviation STC, in the effectivity of this AD. We did not change this AD based on this comment.

Request To Adopt Less Stringent Compliance Requirements

Comment. AOPA, RAM Aircraft, as well as operators and private citizens, requested that we adopt less stringent requirements than those in the proposed AD. The commenters indicated that the affected cylinder assemblies should be inspected at regular intervals, but removed at TBO. For example, one

commenter suggested recurring inspections every 60 hours. Several commenters cited the NTSB in support of its recommendation. RAM Aircraft commented that the FAA may be jumping to conclusions by eliminating these inspections. RAM Aircraft noted that the failure of a compression/soap test to detect a particular crack in a cylinder assembly on several occasions does not mean that the test will fail to detect cracked cylinders on most occasions. By their very nature and design compromises, *i.e.,* steel barrels to contain the forces of combustion combined with lighter cylinder head alloys to reduce weight so that aircraft engines have commercial viability and value, and the harsh conditions, altitudes, and temperatures in which they operate, reciprocating aircraft engine cylinders will inevitably crack. RAM Aircraft indicated that there is no question but that some cylinders are going to crack, and that therefore, they must be properly operated, maintained, and inspected.

Response. We disagree. Repetitive inspections until TBO, as suggested by the commenters, do not adequately address the unsafe condition in this particular case. Repetitive inspections would not detect cracks until they have already progressed completely across the cylinder head wall thickness.

Several operators and mechanics have reported that they successfully passed the compression/soap test with a partially separated cylinder. Others have reported that they successfully passed the compression/soap test and then experienced an in-flight separation before the next scheduled 50-hour inspection.

Therefore, we conclude that these tests are not sufficiently reliable. Also, engine overhaul is not a requirement for all operators. Therefore, tying the proposed recurrent inspection to engine overhaul would not resolve the unsafe condition. Based on its comment to the August 28, 2015, SNPRM, we know that the NTSB now considers this rule consistent with the rationale they have provided in the past in support of NTSB Safety Recommendation A–12–7 regarding these affected cylinder assemblies (Reference NTSB Comment FAA–2012–0002–0653, dated September 24, 2015 in Docket FAA–2012–0002). We did not change this AD based on this comment.

Comment. One commenter indicated it was incorrect to apply the same requirement to remove the cylinders at specified intervals to different CMI engine models. He noted, for example, that the TSIO–520–J engine that is allowed to produce 36 inches of manifold pressure and 310 horsepower will produce less stress on a cylinder head than a TSIO–520–NB engine that is allowed 41 inches of manifold pressure and 325 horsepower, as installed on a Cessna 414 airplane.

Response. We disagree. Service history indicates that the affected cylinder assemblies have cracked on –470, –520, and –550 engine models. The AD, therefore, applies to all affected CMI –470, –520 and –550 engine models. We have no engineering analysis or test data to justify varying compliance times by engine model or applying the corrective actions of this AD to only the higher power engines. We did not change this AD based on this comment.

Comment. Danbury Aerospace observed that the average number of cylinder assemblies, P/N AEC 631397, in the serial number range in the January 8, 2015, SNPRM that are still in operation have less than 500 hours left to TBO. Danbury Aerospace indicated that the early removal of these cylinders is not justified by a statistical analysis developed in accordance with the E&PD CAAP Handbook.

Response. We disagree. We do not know the exact number of total hours TIS for each affected cylinder assembly. We have no data to support the claim that the existing fleet of cylinder assemblies already has accumulated 1,200 or more hours TIS. Service history also shows that most of the separations occurred well before initial TBO. Therefore, removal of the affected cylinder assemblies before TBO is appropriate. We did not change this AD based on this comment.

Comment. Danbury Holdings commented that the FAA had not provided evidence that there have been separations within the originally proposed 50-hour recurrent compression test/soap inspection interval.

Response. We disagree. We received several field reports of cylinder separations occurring within 50 hours of passing either the originally proposed 50-hour recurrent compression test/soap inspection in the August 12, 2013, NPRM. SDR report No. SQP2011F00000 was submitted by a part 135 operator who operated a Cessna T210N with an affected ECi cylinder assembly installed. The operator reported that on September 9, 2011, that affected ECI cylinder head separated at the 5th cooling fin on-head. At the time of the failure, the engine and failed cylinder had 817.6 hours time since overhaul/time since new, and its last compression check inspection was at 19.2 hrs. prior. Other field reports also document separated cylinders (for example, see SDR Report 2010FA0000179) that recently passed the compression test/soap inspections. We did not change this AD based on this comment.

Comment. One commenter commented that, based on his experience, ECi has an aluminum head cracking issue and that these cylinders seem to crack more than CMI cylinders. The commenter further indicated that he believed the number of cylinder failures is underreported in the SDR database. The commenter further noted that in his 30 plus years of aircraft maintenance experience, he has never seen a cylinder failure rate this high. The commenter welcomed an AD that requires these cylinders to be inspected at around 100 hours and the reports of cracks sent to an FAA database.

Response. We note the comment. We agree that the ECi failure rate is much higher than the OEM failure rate over the same field service period and that cylinder cracks are under-reported. For example, many of the RAM failures listed in the docket were not reported under the SDR system or as required by 14 CFR 21.3. We did not change this AD based on this comment.

Comment. RAM Aircraft commented that, based on its previous comments, the FAA should withdraw the SNPRMs. RAM Aircraft recommended that the FAA consider education and requiring inspections of all reciprocating airplane engine cylinders on the terms and conditions the FAA determines to be appropriate.

Response. We disagree. Our analysis indicates that an AD is required to resolve the unsafe condition presented by installed affected ECi cylinder assemblies. We did not withdraw the SNPRMs based on this comment.

Comment. One commenter suggested that users of a JPI or other engine monitoring system should be subject to a different compliance interval.

Response. We disagree. As noted previously, the root cause of these cylinder failures are design deficiencies. The affected cylinders may fail without overtemping. Therefore, use of an engine monitoring system like JPI would be insufficient to detect the unsafe condition. We did not change this AD based on this comment.

Request To Use Mandatory Service Bulletin Instead of This AD

Comment. One commenter requested that the FAA use a mandatory service bulletin instead of this AD to implement corrective action.

Response. We disagree. Requiring a manufacturer to issue a mandatory service bulletin is outside the scope of

the FAA's authority. We did not change this AD based on this comment.

B. Comments to the FAA's Risk Assessment Processes and Polices

Request That the FAA Follow Its Own Risk Assessment Policies and Guidance

Comment. Multiple commenters, including Danbury Aerospace, Danbury Holdings, and the Aeronautical Repair Station Association (ARSA) commented that the FAA did not follow its own risk assessment policies and guidance, such as FAA Order 8110.107A, Monitor Safety/Analyze Data (MSAD), dated October 1, 2012, and FAA Order 8040.4A, Safety Risk Management Policy, dated April 30, 2012, and the E&PD CAAP Handbook, dated September 23, 2010.

Response. We interpret this comment as a comment that we failed to follow FAA Order 8110.107A, FAA Order 8040.4A, and the CAAP Handbook. We disagree. We performed the process as required by FAA Order 8110.107A, Monitor Safety/Analyze Data (MSAD), dated October 1, 2012, to analyze data and determine corrective action for continued operational safety issues. We acquired the failure event data from the MSAD, SDR, NTSB databases, ECi, and outside sources. We conducted a hazard criteria analysis where we filtered the data to identify relevant events. We performed a qualitative preliminary risk assessment and determined that this safety problem required corrective action. We performed risk analyses in conjunction with the E&PD risk assessment criteria. We identified that the ECi model separations have two inherent design deficiencies: Insufficient dome radius and insufficient head-to-barrel interference fit. Finally, we coordinated with our Corrective Action Review Board, which determined and agreed to the proposed corrective action in our August 12, 2013, NPRM.

Later, as part of the Challenge Team's meeting in September, 2014, the CSTA for Aircraft Safety performed a risk analysis that confirmed the need for this AD and shaped its compliance plan. We compared the results of the CSTA's risk analysis to the guidelines used by the SAD in its SARA and to the guidelines in the E&PD's CAAP Handbook and determined that an AD is required.

FAA Order 8040.4A requires a risk assessment methodology as outlined in the Order. FAA Order 8040.4A notes that the safety risk is a composite of two factors: The potential ''severity'' or worst possible consequence(s) or outcome of an adverse event that is assumed to occur, and also the expected frequency of occurrence or likelihood of occurrence (failure rate) for that specific adverse event. Each of these factors is assessed independent of the other and then entered as separate inputs into a risk matrix that yields an overall level of risk for the event.

We performed the risk assessment required by FAA Order 8040.4A and concluded that this AD was necessary. Therefore, our August 12, 2013, NPRM, as revised by the January 8, 2015 SNPRM, and as republished on August 28, 2015, are consistent with FAA Order 8040.4A, FAA Order 8110.107A, and the CAAP Handbook. We did not change this AD based on this comment.

Comment. Commenters, including Danbury Holdings, commented that the FAA should not have included the failure rate of the affected ECi cylinders in the FAA risk assessments that were used to substantiate the need for the corrective actions in this AD. Danbury Holdings indicated that the failure rate is irrelevant to the unsafe condition.

Response. We disagree. We did not use the failure rate in the risk analysis, however, we used the number of reported failures. A risk analysis involves using past data; both successful operation as well as failures (including cracks), to develop a relationship between part parameters, including age and usage, and risk of failure. Therefore, our use of failures was appropriate in this risk analysis. We did not change this AD based on this comment.

Comment. Danbury Aerospace commented that the FAA ignored its own standards for what constitutes an unsafe condition and therefore has failed to identify one.

Response. We disagree. The FAA followed its standard risk analysis processes in determining that the unsafe condition represented by the affected ECi cylinder assemblies exists. 14 CFR part 39 prescribes that we issue an AD when an unsafe condition exists in a product and that condition is likely to exist or develop in other products of the same type design. We did not change this AD based on this comment.

Comment. Danbury Holdings commented that the basis for the FAA's risk analysis is seriously flawed because the unsafe condition must be the basis for the failure, not one unsubstantiated fatality.

Response. We disagree. The unsafe condition in the engine presented by the presence of affected ECi cylinders is the basis of this AD. We did not change this AD based on this comment.

Comment. Danbury Holdings further commented that the FAA had failed to establish a connection between the cylinder separation issue addressed by this AD and the official reports of the two fatal accidents that the FAA references.

Response. We disagree. Reports by the Bahamas Department of Civil Aviation and the NTSB establish that these accidents in the Bahamas and in Swanzey, New Hampshire involved separated ECi cylinders (see Report AAIPU# A10–01312 and NTSB Accident Report No. NYC02FA178, respectively). We have determined that the separation of the affected ECi cylinder assemblies represents an unsafe condition. We are not required to establish any further connection with these accidents. We did not change this AD based on this comment.

Comment. Danbury Holdings added that the FAA should not have included the fatal accident in the Bahamas in the FAA's risk assessments because the NTSB full narrative for that accident (ERA11WA008) made no mention of a cylinder separation.

Response. We interpret the comment as the fatal accident in the Bahamas is not relevant to this AD. We disagree. As noted in the previous comment response, we have determined that the separation of the affected ECi cylinder assemblies, as occurred in the accident in the Bahamas, represents an unsafe condition. We did not change this AD.

Comment. Danbury Holdings also stated that the root cause of the other fatal accident, the Swanzey, New Hampshire, accident (see NTSB Accident Report No. NYC02FA178) that the FAA included in its risk assessments was unsafe and improper operation of the airplane by the pilot not cylinder separation.

Response. We disagree. As noted in the preceding comment discussion, we have determined that the separation of the affected ECi cylinder assemblies, as occurred in the accident in Swanzey, New Hampshire, represents an unsafe condition and is therefore relevant to this AD. We did not change this AD based on this comment.

Comment. Danbury Aerospace added that the accident in the Bahamas should not be included in the FAA's risk analysis because: (1) It did not concern a U.S.-registered aircraft and therefore cannot be used in this rulemaking; (2) loss of control and uncontrolled flight was cited as the cause; and (3) even if the accident could be included, it does not meet hazard level thresholds required for rulemaking.

Response. The commenter presents three comments, which have three parts. We disagree with all three parts. As to part one, the Bahamas accident involved a U.S.-type certificated product, an engine with affected ECi cylinders

installed. Therefore, the product is the proper subject of this AD. As to part two, the accident involved an engine with an ECI cylinder separation, a failure of a part of the engine, during flight. A cylinder separation during flight represents an unsafe condition in the engine. Therefore, our action in issuing this AD is appropriate. As to the part three, the cylinder failure presented a hazard to the engine and an unsafe condition, and therefore, meets the threshold for an AD. The need for this AD was confirmed by comparing the result of the risk analysis to the guidelines in the SAD's SARA and the E&PD's CAAP Handbook. We did not change this AD based on this comment.

Request That the FAA Define Guidelines Used To Define an Unsafe Condition

Comment. Danbury Holdings commented that the FAA had not defined the guidelines that it used to establish the existence of an unsafe condition.

Response. We interpret the comment to be a request to identify what guidance defines an unsafe condition. The comment therefore, is not to the technical merits of this AD, but a request for general guidance. As such, a response is unnecessary per the Administrative Procedures Act (APA), and we recommend that the commenter seek his answer through a direct request to the FAA Aircraft Certification Service or Flight Standards Division. We did not change this AD based on this comment.

Request To Withdraw the August 28, 2015, SNPRM Because Supporting Documents Do Not Support Issuing This AD

Comment. Danbury Holdings commented that the documents provided by the FAA in Docket No. FAA–2012–0002 do not support issuance of this AD. The supporting documents referred to by Danbury Holdings are: (1) The risk analysis conducted by the FAA's CSTA for Aircraft Safety Analysis; (2) a risk analysis using the Small Airplane Risk Analysis (SARA) methods; (3) a June 2011, presentation by Airmotive Engineering to the FAA concerning its ECi cylinder assemblies; (4) a list of ECi cylinder assembly failure reports consisting of only those reports where both cylinder serial number and time in service are included in the reports; (5) a list of additional failures of ECi cylinder assemblies reported by a maintenance organization; and (6) Airmotive Engineering Corporation Technical Report 1102–13, dated April 30, 2011.

Response. We disagree. The supporting documents that Danbury Holdings referred to, identified above, support that the FAA followed its process and were used to help determine that an unsafe condition exists. We have also uploaded additional documents to Docket No. FAA–2012–0002 on June 23, 2015 (see **ADDRESSES** section of this final rule for information on locating the docket).

The risk analysis performed by the FAA's CSTA for Aircraft Safety Analysis, recommends removal and replacement of the affected ECi cylinder assemblies as specified in this AD. The SARA applied to failures of ECi cylinder assemblies confirms that an AD is necessary. AEC Technical Report 1102–13 states that a root cause for the first thread separations was an inherent design deficiency in the form of insufficient head-to-barrel design interference fit. AEC Technical Report 1102–13 recommended withdrawing these cylinder assemblies from service. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings commented that that the FAA's risk analyses and other technical information were ''flawed, improperly applied, and replete with unsubstantiated conclusions.''

Response. The commenter failed to provide any examples of FAA technical information that was flawed, improperly applied, or replete with unsubstantiated conclusions. Without those details, we are unable to consider the comment as having technical merit. Accordingly, we interpret the comment as a general objection to the need for the AD. We disagree. Our Challenge Team applied the risk assessments by the FAA's CSTA for Aircraft Safety Analysis, against the SAD's SARA guidelines and the E&PD's CAAP guidelines and independently concluded that an AD is required to mitigate the unsafe condition presented by installed affected ECi cylinder assemblies. We presented both risk assessments in Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). We did not change this AD based on this comment.

Comment. Danbury Holdings commented that it found no relationship between the risk analysis using SARA methods and any analysis or conclusion provided by the agency in this rulemaking. We interpret Danbury Holding's comment as suggesting that no relationship exists between the risk analysis using SARA methods and any analysis or conclusion provided by the agency in this rulemaking.

Response. We disagree. In comments to the August 12, 2013, NPRM some commenters requested that we use the SARA to determine if an AD was warranted. We used the SARA, and it confirmed the need for an AD. We did not change this AD based on this comment.

Comment. Danbury Holdings commented that RAM Aircraft had concluded, through its own risk analysis, that ''the probability of a cylinder separation is extremely remote'' and that ''historical data and information thus far evident leads to the conclusion that there has been no physical discomfort to pilots or passengers and no damage to any aircraft as a result of the subject cylinders.''

Response. We interpret the comment as two parts; first, that our risk assessment reached a wrong conclusion, and second, that a cylinder head separation does not result in any discomfort to pilots or passengers, or damage to the aircraft. We disagree. FAA Order 8040.4A, ''Safety Risk Management Policy'', dated April 30, 2012, FAA Order 8110.107A, ''Monitor Safety/Analyze Data,'' and the guidance in Engine & Propeller Directorate memorandum ''Risk Assessment for Reciprocating Engine Airworthiness Directives,'' PS–ANE–100–1999–00006, dated May 24, 1999, direct how we do a risk assessment.

We analyze safety risk, per FAA Order 8040.4A, as a composite of two factors: The potential ''severity'' or worst possible consequence(s) or outcome of an adverse event that is assumed to occur, and also the ''expected frequency of occurrence'' for that specific adverse event. FAA Order 8040.4A directs us to assess both factors independently, then enter each as separate inputs into a risk matrix. The matrix yields an overall level of risk for the event. The overall risk is then categorized as either ''Unacceptable Risk,'' ''Acceptable Risk with Mitigation,'' or ''Acceptable Risk.'' The corrective action(s), if any, is driven by the assessed overall risk. Table C–1 of Appendix C of FAA Order 8040.4A defines five levels of severity and Table C–2 defines five levels of event frequency that are used in the determination of composite risk.

The FAA classification for the ''severity'' of an engine cylinder head separation event, per FAA Order 8040.4A, is ''hazardous'' for both single-engine and light-twin airplanes for several reasons. Cylinder head separations can significantly reduce the power of the airplane such that under some conditions it may not be able to safely takeoff and climb out. It could

also create a dangerous asymmetric thrust condition for twin-engine airplanes. If the separation occurs in cruise flight, the airplane may have insufficient excess power to continue safe flight at any altitude. Cylinder head separations have also caused in-flight fires. These are all unsafe conditions that warrant a ''hazardous'' severity level for risk assessment purposes.

Table C–2 in FAA Order 8040.4A defines ''extremely improbable'' as ''So unlikely that it is not expected to occur, but it is not impossible.'' It defines ''extremely remote'' as ''Expected to occur rarely.'' It defines ''Remote'' as ''Expected to occur infrequently.'' It defines ''probable'' as ''Expected to occur often.'' Finally, it defines ''frequent'' as ''expected to occur routinely.''

Service history failure reports indicate that in a population of 43,000 cylinders, that 1 of every 1,000 cylinders could separate on average; either in the dome radius or the first thread. A single-engine airplane has six of these cylinders, so the actual risk of a separation of any one of those six cylinders for any given airplane is 6/1,000: 1 of every 166 engines. Similarly, a twin-engine airplane will have 12 cylinders, so the risk of experiencing a separation of one cylinder on a twin-engine aircraft is twice that of a single engine, 12/1,000, 1 of every 83 twin-engine airplanes that use these model cylinders.

Separation event under-reporting occurs. This is evidenced by RAM Aircraft's submittal of 23 additional reported failures of the subject ECi cylinders after the August 12, 2013 NPRM was issued. Photos of these failures are available in Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). The calculated separation rate, therefore, is likely higher than what we used in our analysis. Also based on service experience, we expect more ECi cylinder head separations in the future. Therefore, we concluded that the most appropriate assessment for the frequency of occurrence for these cylinder separations is ''Remote C''; ''Expected to occur infrequently.''

Figure C–1 of FAA Order 8040.4A is a risk matrix that yields an overall risk based on the severity classification and the assessed frequency of occurrence. Using the FAA severity classification of ''hazardous'' and the FAA assessed frequency of occurrence ''Remote C'', yields an overall risk that is ''unacceptable.'' The corrective actions required by this final rule AD are based on and consistent with this overall risk assessment.

We, therefore, disagree with claims by RAM Aircraft and other commenters that a cylinder head separation will have a negligible effect on airplane safety. Also, several documented in-flight fires were precipitated by a cylinder head separation. We did not change this AD based on this comment.

Comment. Danbury Holdings also commented that AEC Technical Report 1102–13 was ''disavowed'' by AEC [now CMI San Antonio] since it was obtained under questionable circumstances and has since been proven incorrect given its predictions did not come to fruition.

Response. We disagree. AEC originally provided the analysis to the FAA when it was considering a service bulletin for the affected ECi cylinder assemblies. ECi requested the FAA return or destroy ECi Technical Report 1102–13 after they learned the FAA was considering an AD. We found the data in this report useful in our determination of an unsafe condition. We did not change this AD based on this comment.

Comment. Danbury Holdings commented that the FAA has not substantiated that the affected ECi cylinder assemblies have separated at 32 times the rate of the OEM cylinders. Danbury Holdings stated that the FAA had not provided any supporting documentation to substantiate the FAA's estimate that the OEM has produced approximately 4 times as many cylinders as ECi did over the same period of time. Danbury Holdings further commented that that the FAA ignores separations of other cylinder manufacturers.

Response. We disagree. We uploaded supporting information, including service history, to Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). We determined the comparative failure rate of affected ECi cylinders to OEM cylinders through comparing the service history of ECi cylinders to the OEM's since ECi received their PMA. That service history shows that the affected ECi cylinders have had approximately eight times as many separations over the same period of time as that of the OEM cylinders; since ECi received its PMA. We compared the affected ECi cylinder production rates from ECi, to that of the OEM since ECi received its PMA. From ECi's and the OEM's production information, we concluded that the OEM has produced approximately four times as many cylinders as ECi since ECi received its PMA. This yields a normalized failure rate that is approximately 8 (comparative cylinder failure rate) × 4 (comparative production rate), which showed an overall failure rate 32 times higher for ECi cylinders.

Since we first published that rate information, we subsequently learned of more failures of affected ECi cylinders. Those additional failures would, if included, increase the ECi failure rate. We did not update the failure rate to higher than 32 times that of the OEM's because it did not affect our decision regarding this AD. We did not change this AD based on this comment.

The FAA has also issued ADs against other cylinder manufacturers, including mandating early retirement of cylinders to preclude cracking and separation. For example, ADs 2014–05–29 and 2007–04–19R1 both apply to certain Superior Air Parts cylinder assemblies. We did not change this AD based on this comment.

Comment. Danbury Holdings also commented that the FAA failed to place all information in its purview into the docket and that the agency had failed to link its analyses to verifiable data.

Response. We disagree. As previously noted, we have uploaded the relevant documents used in the decision-making process of this AD in Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). Our analysis shows that the FAA's actions are based on the data that we included in the docket. Our analysis is therefore linked to ''verifiable data.'' We did not change this AD based on this comment.

Comment. Danbury Holdings commented that the FAA had failed to provide any evidence that cylinder separations have resulted in engine failures, in-flight shutdowns, and/or loss of control of an airplane and that the agency had included accidents that were not the direct result of a cylinder separation.

Response. We disagree. A cylinder separating from its engine is an engine failure. We did not change this AD based on this comment.

Comment. RAM Aircraft commented that it assumes that the failures of ECi cylinder assemblies shown in the supporting document titled ''ECi AD—Additional Failures Reported by RAM Aircraft'' are based on letters RAM Aircraft sent to the FAA in 2013. RAM Aircraft, therefore, commented that this is not new information since the issuance of the January 8, 2015, SNPRM. Also, of the 38 photographs of damaged cylinder assemblies, RAM Aircraft noted that only 23 failures actually represent ECi cylinder assemblies.

Response. We partially agree. First, we agree that the failed cylinder

assemblies identified in the supporting document ''ECi AD—Additional Failures Reported by RAM Aircraft'' do not represent new information since the issuance of the January 8, 2015, SNPRM. These failures are not represented in the SDR database but are consistent with our view that failures of these cylinder assemblies are under-reported.

Second, we agree that some of the cylinder photographs uploaded to the docket are not cylinder assemblies affected by this AD. The FAA sent a letter to RAM Aircraft specifically requesting any information that RAM Aircraft had relative to failures of ECi cylinder assemblies, P/N AEC 631397, after we learned of possible failures that had not been reported as required by 14 CFR 21.3. RAM Aircraft responded to this request with the photographs and data that we uploaded into Docket FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket). These photographs did not have any effect on our decision to issue this AD. We did not change this AD based on this comment.

Request To Describe FAA's Validation Process

Comment. Danbury Holdings requested that the FAA provide a description of the validation process that was used for each of the cylinder separations that the FAA used to substantiate the need for this AD.

Response. We interpret this comment as a request for identification of how we found out about the failures of ECi cylinder assemblies. We found out about the ECi cylinder assembly failures from the FAA SDR database and warranty information at ECi and RAM Aircraft, and failure reports from operators. Many of the operator SDR reports contained detailed information describing the nature and specific location of the separation. The findings of ECi Technical Report 1102–13 agreed with the original failure reports. We did not change this AD based on this comment.

C. Comments to the FAA's Rulemaking Processes

Request To Follow the APA

Comment. IPL Group, RAM Aircraft, and Danbury Holdings commented that the FAA had failed to follow the requirements of the APA when it dispositioned previous comments to the August 12, 2013, NPRM, and the January 8, 2015, SNPRM. IPL Group indicated that the FAA had, for example, summarily discounted previous comments, failed to conduct appropriate investigations of the failed cylinder assemblies, and mischaracterized hazard levels in the proposed ADs.

RAM Aircraft also commented that its previous comments were dispositioned in general categories in the January 8, 2015, SNPRM. RAM Aircraft, however, does not believe that the specifics of its comments were adequately or properly responded to, as required by the APA.

Response. We disagree. The commenters failed to provide any examples of where we failed to comply with the APA in our handling of comments to the August 12, 2013, NPRM, and by extension, the January 8, 2015, and August 25, 2015, SNPRMs. We have in our responses to the NPRM and the SNPRMs, and herein in this final rule, fully responded to all comments, including those comments concerning our investigation of the unsafe condition, hazard levels, and conclusions.

We carefully considered all comments we received. In our January 8, 2015, SNPRM and August 28, 2015, SNPRM, we responded to several hundred comments that we had received. Many were substantively the same and, therefore, as previously discussed we grouped them into several categories and answered the comments by category. The commenters have not indicated what, if anything, is improper about doing so nor how doing as we did might have violated the requirements of the APA. In this final rule, we responded to all remaining comments. We again used categories to group and answer comments that were similar if not identical. As to improperly recognizing affected ECi cylinder assemblies, we based our applicability of this AD on the reports of failure provided by ECi, the manufacturer, the reports required by 14 CFR that form the basis for the SDR, and the reports of the commenters themselves. We did not change this AD based on this comment.

Request To Withdraw the SNPRMs Because They Are Arbitrary and Capricious

Comment. Danbury Holdings and ARSA referred to the proposed rule as ''arbitrary and capricious'' because it does not apply equally to cylinder assemblies manufactured by the OEM. Danbury Holdings observed that the OEM's cylinders also separate and that the FAA has singled out ECi with this AD action.

Response. We disagree. The FAA is not mandating similar corrective actions against the OEM's cylinders because OEM service history data is different. Our review of OEM service history indicates that OEM cylinder assembly failures, unlike ECi cylinder assembly failures, are not traceable to any specific design or manufacturing anomaly. In contrast, the ECi PMA cylinder separations are traceable to design deficiencies, which ECi itself identified in ECi Technical Report 1102–13. We did not find the ECi cylinder assembly design deficiencies in cylinder assemblies produced by any other manufacturer. Further, ECi's failure rate is some 32 times greater than the OEM's. We did not change this AD based on this comment.

Comment. ARSA also indicated the rule is arbitrary and capricious because the FAA has failed to ''examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'' Further, ARSA cites the APA as requiring federal agencies to allow meaningful public participation in the rulemaking process and provide a ''statement of basis and purpose'' justifying a rule's issuance.'' ARSA notes the obligation of the FAA to demonstrate a sound factual basis for the issuance of a rule by specifically disclosing to interested parties the material upon which a prospective rule would be fashioned.

Response. We disagree. Beyond its generalized allegation, the commenter did not identify any examples of agency shortcoming. We examined the relevant data, including the failure rate of the ECi assemblies, the ECi cylinder assembly design deficiencies, and the consequences to the engine and airplane when an ECi cylinder assembly failed. We reviewed and applied the applicable FAA Orders and policies.

The agency therefore, has articulated a satisfactory explanation for its action including a ''rational connection between the facts found and the choice made.''

We provided the public several opportunities to participate in this rule making; through extending the comment period and the two supplemental notices with their comment periods. For example, we first published an NPRM on August 12, 2013 (78 FR 48828), then published an extension of the comment period on September 26, 2013 (78 FR 59293) to allow the public additional time to comment on the proposed rule. We then issued a notice of availability of an initial regulatory flexibility analysis on March 12, 2014 (79 FR 13924). We reviewed the over 500 comments to the proposed rule that we had received, determined that we needed to review how we proposed to address the unsafe condition, formed a team to review the technical basis of the

proposed rule, the numerous public comments, and the additional failure information provided by commenters to the NPRM. Through this team we confirmed that an AD is needed to correct the unsafe condition represented by the subject cylinder assemblies installed in aircraft engines, but that we could do so through a lengthier compliance interval. We published that revised compliance interval in our January 8, 2015, SNPRM.

After publication of the January 8, 2015, SNRPM, we issued the August 28, 2015, SNPRM to allow us to explain the rationale for this AD action. We also added several documents to Docket No. FAA–2012–0002 (see **ADDRESSES** section of this final rule for information on locating the docket), including the risk analyses by our CSTA for Aircraft Safety Analysis, and one using SARA methods, and various technical documents that list failures of ECi cylinder assemblies. For each of the documents we published, we allowed the public an opportunity to provide comments. We did not change this AD based on this comment.

Comment. ARSA also commented that presentation of relevant comments is further stymied by the agency's conclusory and unsupported responses to the NPRM submissions. ARSA commented that the agency stated that it was irrelevant that the root cause of the cylinder failures is unknown and that it ''disagreed'' that pilot error was a factor.

Response. We disagree. The purpose of this AD is to remove an unsafe condition in aircraft engines, not to identify root cause of cylinder failure(s). This AD resolves the unsafe condition by removing the affected cylinder assemblies from service in the engine models listed in this AD. We did not change this AD based on this comment.

Comment. Danbury Holdings also commented that the FAA had not provided substantiation for a change in the design requirement that ensures safe operation with one inoperative cylinder.

Response. The comment is not germane to this AD. We direct the commenter to the regulations relevant to design requirements, as found in 14 CFR. We did not withdraw the August 28, 2015, SNPRM.

Comment. Danbury Holdings commented that the FAA has admitted that the SDR database is problematic and that the FAA picked and chose data to fit a conclusion.

Response. We disagree. The SDR database reflects input received from field reporting. The SDR database may not reflect all service difficulty problems with affected ECI cylinder assemblies, but what information it contains indicates the need for this AD. Moreover, the SDR database is only one tool in our decision-making process. We did not change this AD based on this comment.

Comment. Several commenters commented that the FAA should withdraw the January 8, 2015, SNPRM because it unfairly targets ECi.

Response. We disagree. This AD does not ''target'' ECi, the PMA manufacturer of the affected cylinder assemblies. The AD resolves an unsafe condition in a product. We did not change this AD based on this comment.

Request To Substantiate That This AD Does Not Affect Airplanes Operated by Federal or State Agencies

Comment. Danbury Holdings commented that the FAA had not provided documentation to substantiate that no affected airplanes are operated by federal or state agencies.

Response. The comment is not relevant to whether this AD is necessary to resolve the unsafe condition presented by the engine with the affected ECi cylinders installed. We did not change this AD based on this comment.

Request To Substantiate That Airplanes Operating in Alaska Are Not Affected

Comment. Danbury Holdings stated that the FAA had not provided documentation that substantiates that remote locations of Alaska are not served by airplanes affected by this AD.

Response. The comment is not relevant to the technical basis for this AD. Further we state that this AD will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction. We did not change this AD based on this comment.

Request To Send Proposed Rule to Office of Information and Regulatory Affairs (OIRA) and Small Business Administration (SBA)

Comment. Danbury Aerospace commented that per Executive Order (E.O.) No. 13272, the FAA should provide the draft rule to the OIRA in the Office of Management and Budget (OMB) under E.O. No. 12866 and to the SBA's Chief Counsel for Advocacy.

Response. We partially agree. We do not agree that this rule meets the criteria of a significant regulatory action under E.O. 12866. Therefore, we did not provide the draft rule to the OMB. We agree that the rule has a significant effect on a substantial number of small entities. We, therefore, provided a copy of the rule to the SBA's Chief Counsel for Advocacy for comment. We received no comments from the SBA.

D. Comments to the Cost of This AD

Request To Revise and Provide Supporting Data for Number of Affected Cylinder Assemblies and Engines

Comment. Danbury Aerospace and RAM Aircraft indicated that the FAA has under-estimated the numbers of airplanes and engines affected and up to 11,000 aircraft may be affected based on the aircraft registry, or otherwise hasn't provided the data it used to determine the affected population of engines and cylinders.

Response. We disagree in part. We do not agree that 11,000 aircraft may be affected by this AD, or that we haven't provided the data used to determine the affected populations. Not all aircraft and engines on the aircraft registry use the affected ECi cylinder assemblies. Further, the commenter hasn't provided any factual basis for its assumption that all aircraft on the aircraft registry use ECi cylinder assemblies.

We agree that we could better estimate the number of engines affected by this AD. We again reviewed our estimate. We now estimate that approximately 6,200 engines are affected by this AD. That number is based on our initial estimate of approximately 43,000 affected cylinder assemblies produced by ECi from 2002 to 2011. This number is supported by AEC Technical Report 1102–13, dated April 30, 2011. We then reduced 43,000 by our estimated number of cylinder assemblies that would have been removed from service.

Our review indicates that approximately 6,000 of the 43,000 cylinder assemblies would have been retired from service by the time of the publication of this AD. Therefore, we estimate 37,000 cylinder assemblies may be in service, as of June 1, 2016. We divided this number by 6 cylinders per engine to give us an estimated 6,167 engines in service. To increase the conservatism of our cost estimate, we rounded this figure to 6,200 engines. We revised our cost estimate to reflect these updated calculations.

Request To Revise the Number of Labor Hours to Perform This AD

Comment. A few commenters, including IPL Group, indicated that the number of hours to replace 6 cylinders would be greater than the 18 hours that we estimated in our costs of compliance.

Response. We agree. In the August 12, 2013, NPRM, and the January 8, 2015, and August 28, 2015, SNPRM, we

estimated 18 work hours. Although the commenters did not provide data to support increasing the number of work hours, we held discussions with manufacturers regarding the number of hours they would allow to perform this work. Based on these more recent discussions, we revised our estimate for the number of work hours to replace 6 cylinder assemblies to 32 hours.

Request To Revise Cost of Replacing a Cylinder Assembly in This AD

Comment. Danbury Aerospace, Danbury Holdings, RAM Aircraft, and IPL Group commented that the cost of a cylinder assembly, as calculated by the FAA, does not accurately represent replacement costs. The commenters indicated that the FAA's use of ''pro-rated cost'' allows a vast underestimation of actual expenses that would be incurred by owners. The agency must at least provide sound reasoning and facts supporting the assertion that the pro-rated cost ''more accurately reflects'' replacement cost. IPL Group further commented that a ''pro-rated value'' is inconsistent with FAA policy and the Regulatory Flexibility Act.

Response. We disagree in part. Industry, including ECi, uses pro-rated cost in its cost estimates. For example, ECi, in its MSB 05–8, Revision No. 1, dated December 29, 2005, used a similar time in service based pro-rated cost calculation to determine the discounted cost to operators for replacement cylinders, instead of providing the cylinders to the operators at no cost. Further, we typically use pro-rated cost for larger, turbofan engines when life-limited parts are involved. Operators of those engines are typically airlines and other large operators. Pro rata estimating therefore, is an acceptable method of estimating cost.

We agree however, that engines with affected ECi cylinders installed may be installed on airplanes owned by individual operators in the general aviation community, who are less familiar with the concept of pro-rated costs to ADs. In consequence, we revised our estimate to use the full replacement cost of each cylinder assembly even though this will likely result in an over-estimate of the total cost of this AD. We, therefore, used the replacement cost of 6 cylinder assemblies in this final rule. This resulted in an increase from $4,202 in the SNPRMs to $11,520 in this final rule.

Request To Include Additional Costs in the Overall Cost Estimate

Comment. IPL Group and Danbury Aerospace requested that we add additional costs to our overall cost estimate. IPL Group indicated that the FAA should include costs for loss of use of the aircraft, test flight, and break-in expenses. Danbury Aerospace commented that we should account for loss of overhauled assemblies as replacement items and new costs associated strictly with their replacement.

Response. We disagree. In constructing our cost estimate, we followed the guidance of the FAA's Airworthiness Directives Manual, FAA–IR–M–8040.1C, dated May 17, 2010, which states ''Do not state any costs beyond initial work-hours and parts costs. . . .'' The additional costs cited by the commenters are not appropriate to our cost estimates. We did not change this AD based on this comment.

Request To Withdraw the SNPRMs Because of Excessive Overall Cost

Comment. Several commenters commented that the FAA should withdraw the January 8, 2015, SNPRM and the August 28, 2015, SNPRMs because the FAA has underestimated the cost of compliance of this AD. These commenters represented that the true cost is too high and that the FAA has ignored the broader impact of this AD on industry. Most commenters failed to provide any data to support these claims, however, IPL Group provided some calculations to show that the total cost of this AD should be somewhere between $168,666,625 and $320,360,156.

Response. We disagree. We considered the impact that this AD would have on operators. As explained in response to the comments above, we increased our estimates of inspection costs, labor costs, and replacement costs of the cylinder assemblies. Although we increased our cost estimate, we still conclude that the unsafe condition represented by the affected cylinder assemblies requires an AD. We did not withdraw the SNPRMs based on this comment.

Request To Substantiate Record-Keeping and Time Estimates

Comment. Danbury Holdings also stated that the FAA had not provided documentation to substantiate its estimated record keeping cost and time estimates.

Response. We agree in part. We interpret this comment as a reference to both time spent on checking log books and reporting requirements. We withdrew our reporting requirement when we published the January 8, 2015, SNPRM, so we have no need to account for that cost. We added an inspection cost in this final rule for the time operators spend determining if they own an ECi cylinder assembly affected by this AD. The Costs of Compliance section now states ''We estimate 0.5 hours will be needed to check log books to determine if an engine is affected by this AD.''

E. Administrative Comments

Request To Clarify Address

Comment. The Continental Motors Group commented that the business at the address and telephone number listed in the August 28, 2015, SNPRM (9503 Middlex Drive, San Antonio, Texas 78217, Phone 210–820–8101) is now that of Continental Motors Inc., San Antonio. Continental Motors Group also indicated that the associated company Web site (*http://www.eci.aero/pages/tech_svcpubs.aspx*) listed in the August 28, 2015, SNPRM is not functional at this time.

Response. We agree. We updated the address and Web site information listed in the **ADDRESSES** and ''Related Information'' sections of this AD.

Request To Provide Names of Those Involved in the AD Process

Comment. Danbury Aerospace and Danbury Holdings commented that the FAA should provide the names and technical positions of each of the members of the multi-disciplinary/multi-directorate team that were involved in the review of this service difficulty problem, along with the dates, locations, and minutes for any meetings that were held.

Response. We disagree. The names and positions of personnel associated with reviewing this AD are not necessary to the public's participation in the development of this AD. We did not change this AD based on this comment.

F. Support for the SNPRM

Comment. The NTSB commented that it believes that the August 28, 2015, SNPRM will satisfy the intent of NTSB Safety Recommendation A–12–7. An individual commenter indicated that he had reviewed the SDR database and determined that the separation rate of ECi cylinder assemblies is approximately 10 times the rate of OEM cylinder assemblies.

Response. We note the comment.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed.

Costs of Compliance

We estimate that this AD affects about 6,200 CMI model IO–520, TSIO–520, IO–550, and IOF–550 reciprocating engines and all other CMI engine models approved for the use of CMI models –520 and –550 cylinder assemblies (such as the CMI model –470 when modified by STC), installed on airplanes of U.S. registry. The average labor rate is $85 per hour. We estimate 0.5 hours will be needed to check log books to determine if an engine is affected by this AD. We estimate that about 32 hours will be required to replace all six cylinder assemblies of an engine during overhaul. We estimate the cost of replacement of six cylinder assemblies to be, on average, about $11,520 per engine. Based on these figures, we estimate the total cost of this AD to U.S. operators to change all ECi cylinder assemblies to be $88,551,500.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the business, organizations, and governmental jurisdictions subject to regulation.'' To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The RFA covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the Act. The FAA determined that this rule will have a significant economic impact on a substantial number of small entities and, accordingly, as required by Section 603(a) of the RFA, the FAA prepared and published an initial regulatory flexibility analysis (IRFA) (79 FR 13924, March 12, 2014) as part of the NPRM (79 FR 48828, August 12, 2013) and initial SNPRM (80 FR 1008, January 8, 2015) for this rule. For the second SNPRM, the FAA inadvertently stated that there would be no significant impact on a substantial number of entities. We also omitted the IRFA from the second SNPRM because we thought republication unnecessary as costs had not changed and the IRFA had already been published in the first SNPRM. In addition to the IRFA, Section 604 of the RFA also requires an agency to publish a final regulatory flexibility analysis (FRFA) in the **Federal Register** when issuing a final rule.

With this FRFA we correct our misstatement in the second SNPRM and restate our previous conclusions for the NPRM and in the first SNPRM that the rule will have a significant impact on a substantial number of small entities. Accordingly, in the following section we undertake the regulatory flexibility analysis.

Final Regulatory Flexibility Analysis

Under Section 604(a) of the RFA, the Final analysis must address:

(1*) Statement of the need for, and objectives of, the rule.*

This final rule AD was prompted by failure reports of multiple cylinder head-to-barrel separations and cracked and leaking aluminum cylinder heads. This AD will apply to certain CMI San Antonio replacement PMA cylinder assemblies marketed by ECi, used on the CMI model –520 and –550 reciprocating engines, and all other engine models approved for the use of CMI model –520 and –550 cylinder assemblies such as the CMI model –470 when modified by STC.

(2) *Statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments.*

Danbury Holdings commented that the FAA had not provided the raw data that was used in the IRFA. We note that the provision of raw data is not required by the FAA's rulemaking procedures or orders.

In response to comments about problems with the repetitive compression/soap test proposed by the NPRM, the FAA agrees that these tests do not always reliably detect a cracked cylinder of this failure mode and therefore the costs associated with such tests outweigh the safety benefits. In the January 8, 2015 SNPRM the FAA removed the requirement for repetitive compression/soap inspection tests.

The FAA received comments questioning the reduction of the estimated number of smaller air service businesses (in addition to the estimated 609 small part 135 operators) that would be affected by the rule, from 5,000 in the IRFA to 2,000 in the January 8, 2015, SNPRM. We note that in both cases the FAA stated that a substantial number of small entities would be affected. Given the lack of available data, the FAA is unable to make an accurate estimate of the number of smaller air service businesses that will be affected by this rule, but acknowledges that this number is substantial. In addition to the 609 small part 135 operators, we therefore estimate in this final rule that the number of smaller air service businesses affected is substantial.

After publication of the NPRM and after publication of each of the two SNPRMs, we also received comments from small businesses concerning understated compliance costs. Some commenters stated that the labor rate and the hours required to replace an affected engine's cylinders are underestimated. We agree with this comment in part and have increased our estimate of the labor hours required to replace an affected engine's six cylinder assemblies from 18 to 32 hours, with a corresponding labor cost increase from $1,530 to $2,720.

In response to comments we have also increased our cost of materials estimate from a loss-of-service estimate of $4,202 to the full cost to replace all six cylinders, which has increased to $11,520. Our estimate of the total cost to replace all six cylinders has therefore increased from $5,732 to $14,240.

After publication of the August 28, 2015, SNPRM, we received negative comments concerning the inadvertent change from our original determination of a significant economic impact on a

substantial number of small entities in the IRFA (and the January 8, 2015, SNPRM) to a determination of no significant impact on a substantial number of small entities. As noted in the introductory section, we are correcting this oversight in this FRFA.

(3) *The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments.*

The SBA did not submit comments.

(4) *Description and an estimated number of small entities to which the final rule will apply.*

Of the 610 part 135 operators we found to be affected by this rule, we identified 609 that meet the Small Business Administration (SBA) definition of a small entity (entities with 1,500 or fewer employees) that will be affected by this final rule. On this basis alone, we conclude that the final rule will affect a substantial number of small entities. In addition, we estimate that a substantial, but undetermined number of smaller air services businesses will be affected by this final rule. The FAA is unaware of the assets or financial resources of these businesses. The affected part 135 and smaller air services fly fixed wing aircraft; employ less than 1,500 employees; and conduct a variety of air services such as fly passengers and cargo for hire.

(5) *Description of the record keeping and other compliance requirements of the final rule.*

Record Keeping Requirement

The FAA estimates 0.5 hours will be needed to check log books to determine if an engine is affected by this AD. At a wage rate of $85 per hour, the estimated cost will be $42.50 per engine. As the affected small part 135 operators have between one and 88 affected airplanes, the costs of this requirement range from $42.50 to $3740 per part 135 operator.

Compliance Requirement To Replace Cylinder Assemblies of Affected Engines

This AD applies to certain CMI model IO–520, TSIO–520, IO–550, and IOF–550 reciprocating engines and all other engine models approved for the use of CMI models -520 and -550 cylinder assemblies (such as the CMI model -470 when modified by STC), installed on airplanes of U.S. registry. For the affected engines the AD requires replacement of the cylinder assemblies at reduced times-in-service.

As noted above our estimate of the total cost to replace all six cylinders has increased from $5,732 to $14,240. As the number of airplanes held by affected small part 135 operators ranges from one to 88, the costs of required cylinder assembly replacement per operator range from about $14.2 thousand to about $1.3 million.

To determine whether compliance costs will have a significant economic impact, we measured the cost of replacing cylinder assemblies of affected engines relative to the value of the affected airplanes held by the small part 135 operators. The estimated asset value of the affected airplanes held by the small part 135 operators ranges from $22,000 to $19.6 million. We find that the cost of replacing cylinder assemblies relative to affected airplane asset value is greater than 5 percent for 468 of the 609 affected small part 135 operators.[2] We therefore conclude that the final rule will have a significant economic impact on a substantial number of small entities.

(6) *Steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.*

In response to comments about problems with repetitive compression/soap test, the FAA agrees that these tests do not always reliably detect a cracked cylinder of this failure mode and the costs associated with such tests outweigh the safety benefit. The FAA removed that requirement for repetitive compression/soap inspection tests. We also considered these following alternatives:

(a) Do nothing—This option is not acceptable due to the number of failures of ECi cylinder head assemblies and the consequences of the failures.

(b) Periodic inspections only (no forced removals)—Though the NTSB recommended this option in its comments to the NPRM (August 12, 2013, 78 FR 48828), the service history has shown that such inspections may not reliably detect existing cracks and the rate of crack growth to separation is unknown and variable. The NTSB also submitted a later comment, in response to the August 28, 2015, SNPRM, that the revised rule as adopted in this final rule, meets the intent of its Safety Recommendations A–12–7.

(c) Forced removal with periodic inspections—Periodic inspections may not reliably detect cracks and even with removal the rate of crack growth to separation is unknown and variable. Forced removal is the only remaining option.

[2] This assessment does not take into account record keeping requirement costs. These costs, however, are minor and do not affect our assessment of the number of small part 121 operators significantly impacted by the final rule.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2016–16–12 Continental Motors, Inc. (formerly Teledyne Continental Motors, Inc., formerly Continental): Amendment 39–18610; Docket No. FAA–2012–0002; Directorate Identifier 2011–NE–42–AD.

(a) Effective Date

This AD is effective September 15, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Continental Motors, Inc. (CMI) model –520 and –550 reciprocating engines, and to all other CMI engine models approved for the use of model –520 and –550 cylinder assemblies such as the CMI model –470 when modified by supplemental type certificate (STC), with Continental Motors Inc., San Antonio (formerly Airmotive Engineering Corp.), replacement parts manufacturer approval (PMA) cylinder assemblies, marketed by Engine Components International Division (hereinafter referred to as ECi), part number (P/N) AEC 631397, with ECi Class 71 or Class 76, serial number (S/N) 1 through S/N 61176, installed.

(d) Unsafe Condition

This AD was prompted by multiple failure reports of cylinder head-to-barrel separations and cracked and leaking aluminum cylinder heads. We are issuing this AD to prevent failure of the cylinder assemblies, which could lead to failure of the engine, in-flight shutdown, and loss of control of the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) Review the engine maintenance records to determine if any affected cylinder assemblies are installed.

(2) If you cannot determine based on review of engine maintenance records if any affected cylinder assemblies are installed, comply with paragraph (e)(4) of this AD.

(3) If you do not have any of the affected ECi cylinder assemblies installed on your engine, no further action is required.

(4) Cylinder Identification and Serial Number Location

(i) Check the cylinder assembly P/N and Class number. The ECi cylinder assembly, P/N AEC 631397, Class 71 or Class 76, is stamped on the bottom flange of the cylinder barrel. Guidance on the P/N and Class number description and location can be found in ECi Service Instruction No. 99–8–1, Revision 9, dated February 23, 2009.

(ii) If you cannot see the cylinder assembly P/N when the cylinder assembly is installed on the engine, you may use the following alternative method of identification:

(A) Remove the cylinder assembly rocker box cover.

(B) Find the letters ECi, cast into the cylinder head between the valve stems.

(C) Check the cylinder head casting P/N. Affected cylinder assemblies have the cylinder head casting, P/N AEC 65385, cast into the cylinder head between the valve stems.

(D) Find the cylinder assembly S/N as specified in paragraphs (e)(4)(iii) or (e)(4)(iv) of this AD, as applicable.

(iii) For ECi cylinder assemblies, P/N AEC 631397, manufactured through 2008, find the cylinder assembly S/N stamped on the intake port boss two inches down from the top edge of the head.

(iv) For ECi cylinder assemblies, P/N AEC 631397, manufactured on or after January 1, 2009, find the cylinder assembly S/N stamped just below the top edge of the head on the exhaust port side.

(5) Removal From Service

(i) For any affected cylinder assembly with 680 or fewer operating hours time-in-service (TIS) since new on the effective date of this AD, remove the cylinder assembly from service before reaching 1,000 operating hours TIS since new.

(ii) For any affected cylinder assembly with more than 680 operating hours TIS since new and 1,000 or fewer operating hours TIS since new on the effective date of this AD, remove the cylinder assembly from service within the next 320 operating hours TIS or within 1,160 operating hours TIS since new, whichever occurs first.

(iii) For any affected cylinder assembly with more than 1,000 operating hours TIS since new on the effective date of this AD, remove the cylinder assembly from service within the next 160 operating hours or at next engine overhaul, whichever occurs first.

(iv) For any affected cylinder assembly that has been overhauled, remove the cylinder assembly from service within the next 80 operating hours TIS after the effective date of this AD.

(f) Installation Prohibitions

After the effective date of this AD:

(1) Do not repair, or reinstall onto any engine, any cylinder assembly removed per this AD.

(2) Do not install any affected ECi cylinder assembly that has been overhauled, into any engine.

(3) Do not install any engine that has one or more affected overhauled ECi cylinder assemblies, onto any aircraft.

(4) Do not return to service any aircraft that has an engine installed with an ECi cylinder assembly subject to this AD, if the cylinder assembly has 1,000 or more operating hours TIS.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Delegation Systems Certification Office or Fort Worth Aircraft Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(h) Related Information

(1) For more information about this AD, contact Jurgen E. Priester, Aerospace Engineer, Delegation Systems Certification Office, FAA, Rotorcraft Directorate, 10101 Hillwood Parkway, Fort Worth, TX 76177; phone: 817–222–5190; fax: 817–222–5785; email: *jurgen.e.priester@faa.gov.*

(2) For ECi Service Instruction No. 99–8–1, Revision 9, dated February 23, 2009, which is not incorporated by reference in this AD, contact Continental Motors—San Antonio, 9503 Middlex Drive, San Antonio, TX 78217; phone: 210–820–8101; Internet: *http://www.continentalsanantonio.com.*

(3) You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781–238–7125.

(i) Material Incorporated by Reference

None.

Issued in Burlington Massachusetts, on July 19, 2016.

Colleen M. D'Alessandro,

Manager, Engine & Propeller Directorate, Aircraft Certification Service.

[FR Doc. 2016–18708 Filed 8–10–16; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2016–5856; Airspace Docket No. 16–AGL–9]

Establishment of Class E Airspace; Park River, ND

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action establishes Class E airspace in Park River, ND. Controlled airspace is necessary to accommodate new Standard Instrument Approach Procedures developed at Park River-W C Skjerven Field, Park River, ND, for the safety and management of Instrument Flight Rules (IFR) operations at the airport. Additionally, to correct airport name to correspond with the NASR in the header and legal description.

DATES: Effective 0901 UTC, November 10, 2016. The Director of the Federal Register approves this incorporation by reference action under title 1, Code of Federal Regulations, part 51, subject to the annual revision of FAA Order 7400.9 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.9Z, Airspace Designations and Reporting Points, and subsequent amendments can be viewed on line at *http://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC, 20591; telephone: 202–267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html.*

FAA Order 7400.9, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

FOR FURTHER INFORMATION CONTACT: Rebecca Shelby, Federal Aviation Administration, Operations Support