
Type Acceptance Report

TAR 17/21B/12

Lycoming IO-580 Series Engines

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Executive Summary

New Zealand Type Acceptance has been granted to the Lycoming (AE)IO-580-B1A engines based on validation of FAA Type Certificate number E00004NY. There are no special requirements for import.

Applicability is limited to the Models and/or serial numbers detailed in Appendix 1, which are now eligible for installation on a NZ-registered aircraft. Additional variants or serial numbers approved under the foreign type certificate can become type accepted after supply of the applicable documentation, in accordance with the provisions of NZCAR §21.43(b).

NOTE: The information in this report was correct as at the date of issue. The report is generally only updated when an application is received to revise the Type Acceptance Certificate. For details on the current type certificate holder and any specific technical data, refer to the latest revision of the State-of-Design Type Certificate Data Sheet referenced herein.

1. Introduction

This report details the basis on which Type Acceptance Certificate No. 17/21B/12 was granted in the Standard Category in accordance with NZCAR Part 21 Subpart B.

Specifically the report aims to:

- (a) Specify the foreign type certificate and associated airworthiness design standard used for type acceptance of the model(s) in New Zealand; and
- (b) Identify any special conditions for import applicable to any model(s) covered by the Type Acceptance Certificate.

2. Aircraft Certification Details

(a) State-of-Design Type and Production Certificates:

Manufacturer: Lycoming Engines
Type Certificate: E00004NY
Issued by: Federal Aviation Administration
Production Approval: Production Certificate No. 3

(b) Models Covered by the Part 21B Type Acceptance Certificate:

- (i) Model: IO-580-B1A
- (ii) Model: AEIO-580-B1A

3. Application Details and Background Information

The application for New Zealand type acceptance was from Lycoming Engines, dated 16 November 2016. Type Acceptance was requested to permit the use of the IO-580-B1A engine in the Pacific Aerospace Model E350 aircraft, and the AEIO-580-B1A engine in the Extra Aircraft Model 330 aircraft.

The IO-580-B1A is a 315 HP fuel injected, direct drive, six cylinder, horizontally opposed air cooled engine with an automotive type starter. The AEIO-580-B1A is similar, but with an aerobatic fuel and oil system.

Type Acceptance Certificate No. 17/21B/12 was granted on 02 May 2017 to the IO-580-B1A and AEIO-580-B1A models based on validation of FAA Type Certificate E00004NY. There are no special requirements for import into New Zealand.

4. NZCAR §21.43 Data Requirements

The type data requirements of NZCAR Part 21B Para §21.43 have been satisfied by supply of the following documents, or were already held by the CAA:

(1) State-of-Design Type certificate:

FAA Type Certificate Number E00004NY

FAA Type Certificate Data Sheet number E00004NY at Rev. 2 dated 24 May 2012

– Model IO-580-B1A approved 23 March 2001

– Model AEIO-580-B1A approved 13 August 2007

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the IO-580-B1A is FAR 33 effective 01 February 1965 as amended by 33-1 through 33-18. This is the basic standard for aircraft engines called up under Part 21 Appendix C. There are no non-compliances and no special conditions have been prescribed by the Director under §21.23.

The certification basis of the AEIO-580-B1A is FAR 33 effective 01 February 1965 as amended by 33-1 through 33-20. This is the basic standard for aircraft engines called up under Part 21 Appendix C. There are no non-compliances and no special conditions have been prescribed by the Director under §21.23.

(ii) *Special Conditions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

Nil

(iv) *Airworthiness Limitations:*

See the Airworthiness Limitations Section of each Maintenance Manual.

(3) Environmental Certification:

None (not required for piston engines)

(4) Certification Compliance Listing:

Compliance Check List – IO-580-B1A

Compliance Check List – AEIO-580-B1A Certification

(5) Flight Manual:

N/A

(6) Operating Data for Engine:

(i) *Maintenance Manual:*

IO-580-B1A Operation and Installation Manual P/N 60297-28

AEIO-580-B1A Operation and Installation Manual P/N 60297-32

IO-580-B1A Maintenance and Overhaul Manual P/N LMO-580-B

AEIO-580-B1A Maintenance and Overhaul Manual P/N LMO-AEIO-580

(ii) *Current service Information:*

The latest revisions of Lycoming Service Bulletins, Service Instructions, and Service Letters are available on the Lycoming website www.lycoming.com.

(iii) *Illustrated Parts Catalogue:*

IO-580-B1A Engine Parts Catalog P/N PC-701-1

AEIO-580-B1A Engine Parts Catalog P/N PC-701-2

(7) Agreement from manufacturer to supply updates of data in (5), and (6):

CAA 2171 from Senior VP & General Manager dated 16 November 2016

(8) Other information:

Lycoming Engine specification No. 2655-C dated 10 June 2014 – “Detail Specification for Engine Aircraft Model IO-580-B1A 315 Horsepower Direct Drive”

Lycoming Engine specification No. 2663-C dated 26 August 2014 – “Detail Specification for Engine Aircraft Model AEIO-580-B1A

Drawing No. 04D63600, Revision E – *Installation (Front Air Inlet) – IO-580-B1A & IO-580-B1B*

Drawing No. 04D63608, Initial Revision – *Installation – AEIO-580-B1A*

IO-580-B1A FAA Airworthiness Directives Compliance List

AEIO-580-B1A FAA Airworthiness Directives Compliance List

Attachments

The following documents form attachments to this report:

Copy of FAA Type Certificate Data Sheet Number E00004NY

Sign off

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Andrea Wadsworth
Airworthiness Engineer

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Checked – Shaun Johnson
Manager Airworthiness

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
IO-580-B1A	Lycoming Engines	17/21B/12	02 May 2017
AEIO-580-B1A	Lycoming Engines	17/21B/12	02 May 2017