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SERVICE INSTRUCTION

DATE: November 22, 2021 Service Instruction No. 1573E
(Supersedes Service Instruction No. 1573D)
Engineering Aspects are FAA Approved

SUBJECT: Lycoming TEO-540 Engine Series Approved Engine Configurations

MODELS AFFECTED: Refer to Table 1

TIME OF COMPLIANCE: As Required for Inspection/Maintenance/Replacement

REASON FOR REVISION: Changed “models” and “numbers” to “model” and “number”. Revised the third paragraph on page 1 to indicate a new ECU calibration availability. Added new row to Table 1. Revised the ♥ footnote and the “Information shown as...” footnote for Table 1. Revised the WARNING after Table 1.

NOTICE: Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

This Service Instruction identifies the approved configurations for specific Lycoming electronically controlled engine models. Each individual row in Table 1 identifies the approved Lycoming fuel injector, solenoid valve, ECU model, ECU assembly part number, and software Cyclic Redundancy Check (CRC) number cross-references for corresponding Lycoming engine models.

As of June 14, 2021, all TEO-540-C1A engines shipped from Lycoming have fuel injectors part number 61X29461-CT installed and all fuel injector spares shipped from Lycoming will be part number 61X29461-CT. Spare injectors must be replaced in complete sets if replacing a previous injector part number and the corresponding ECU assembly must be reworked by installing the required software. The new fuel injector P/N 61X29461-CT will have a purple identification band on the body of the fuel injector (Figure 2).

It is recommended that all engines currently in the field that are still using Fuel Injectors P/N 61X26294-CT, install a new Wastegate Solenoid Valve P/N 02L29677 and update the ECU assembly software in accordance with instructions in the latest revision of the TEO-540-C1A Engine Maintenance Manual. As of November 22, 2021, there is a new ECU calibration available for the hardware configuration that includes the Solenoid Valve P/N 02L29677 and Fuel Injectors P/N 61X29461-CT on the same engine.



Figure 1
Fuel Injector
Part Number 61X26294-CT



Figure 2
Fuel Injector
Part Number 61X29461-CT

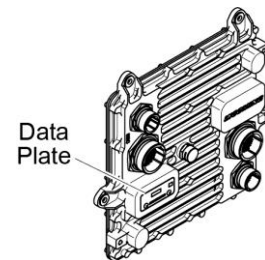


Figure 3
ECU Data Plate

NOTICE: Fuel injectors installed in each cylinder on an engine must all be the same part number.

The ECU assembly part number is located on the ECU data plate (Figure 3) and must be the correct assembly containing the software calibration compatible with the hardware configuration specified in Table 1.

For information regarding the method to verify that the proper software is loaded on the ECU and operating properly, please see the information provided with the Field Service Tool (FST), in the latest revision of the applicable engine maintenance manual. The latest revision of the applicable engine maintenance manual is available on the Technical Publications Tab at www.Lycoming.com.



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WARNING FUEL INJECTOR PART NUMBERS, SOLENOID PART NUMBERS, ECU PART NUMBERS, AND CALIBRATION TABLES **MUST** BE USED TOGETHER AS IDENTIFIED IN EACH ROW OF TABLE 1. ANY VARIATION IN THE APPROVED COMBINATION OF FUEL INJECTORS, SOLENOID, ECU, AND CALIBRATION WILL RESULT IN UNSAFE ENGINE OPERATION AND FAILURE TO MEET TYPE DESIGN REQUIREMENTS. THE ENGINE WILL BE **UNAIRWORTHY**.

Table 1
Lycoming Engine ECU Cross-Reference

Engine Model	Fuel Injector Part Number	Solenoid Valve Part Number	ECU Model	ECU Assembly Part Number	Calibration Data Table	CRC Values (Primary)	CRC Values (Secondary)
TEO-540-A1A	◆61X26294-CT (Figure 1)	02L26305	ACU-100	60B29062	92N100334	*E6318B4B **9077BEAA ***E8982DCE	*E6318B4B **9077BEAA ***D58C89FB
TEO-540-C1A	◆61X26294-CT (Figure 1)	02L26305	ACU-100	60B29098	92N100451	*E6318B4B **9077BEAA ***7EB341BE	*E6318B4B **9077BEAA ***035A1952
TEO-540-C1A	◆61X26294-CT (Figure 1)	02L26305	ACU-100	60B29156	92N100711	*E6318B4B **7EB09B7B ***32084B49	*E6318B4B **7EB09B7B ***67956A84
TEO-540-C1A	◆61X26294-CT (Figure 1)	02L26305	ACU-100	60B29438	92N100745	*E6318B4B **7EB09B7B ***51D97F3B	*E6318B4B **7EB09B7B ***04445EF6
♣TEO-540-C1A	61X29461-CT (Figure 2)	02L26305	ACU-100	60B29659	92N100804	*E6318B4B **7EB09B7B ***4D191A2C	*E6318B4B **7EB09B7B ***76CA5A84
♥TEO-540-C1A	◆61X26294-CT (Figure 1)	02L29677	ACU-100	60B29705	92N100809	*E6318B4B **7EB09B7B ***457E6C55	*E6318B4B **7EB09B7B ***312D48A0
♥TEO-540-C1A	61X29461-CT (Figure 2)	02L29677	ACU-100	60B29726	92N100813	*E6318B4B **7EB09B7B ***87B9BD6E	*E6318B4B **7EB09B7B ***F3EA999B

* Boot Code, ** Application Code, *** Calibration Code

◆ Fuel Injector P/N 61X26294-CT is obsolete and No Longer Available from Lycoming

♣ Refer to the Fuel Flow versus Percent of Rated Power (For engines configured with fuel injectors P/N 61X29461-CT and solenoid valve P/N 02L26305) Figure A-6, Curve No. 13630-B in the latest revision of the TEO-540-C1A Installation and Operation Manual

♥ Refer to the Fuel Flow versus Percent of Rated Power (For engines configured with fuel injectors P/N 61X26294-CT or 61X29461-CT and solenoid valve P/N 02L29677) Figure A-7, Curve No. 13630-C in the latest revision of the TEO-540-C1A Installation and Operation Manual
Information shown as [REDACTED] has been superseded for new engines shipped from Lycoming and is shown for reference only for fielded engines.

WARNING REFER TO THE LATEST REVISION OF SERVICE INSTRUCTION NO. 1582 FOR INSTRUCTIONS, REQUIREMENTS, AND SERVICE KIT PART NUMBER WHEN INITIALLY REPLACING FUEL INJECTORS P/N 61X26294-CT WITH FUEL INJECTORS P/N 61X29461-CT, INCLUDING ADAPTERS AND FIRE SLEEVES.

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