

## **Chapter 72**

### **Engine**

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## **72-00-00**

## **GENERAL**

This chapter describes the engine installed in the EXTRA 300S aircraft, together with its fitted assemblies. Operation and maintenance work of the engine requires consultation of the Lycoming Operator's Manual (P/N 60297-21).

Proper control, operation and troubleshooting of the engine is also described in the Lycoming Operator's Manual (P/N 60297-21) of the manufacturer.

## 72-10-00

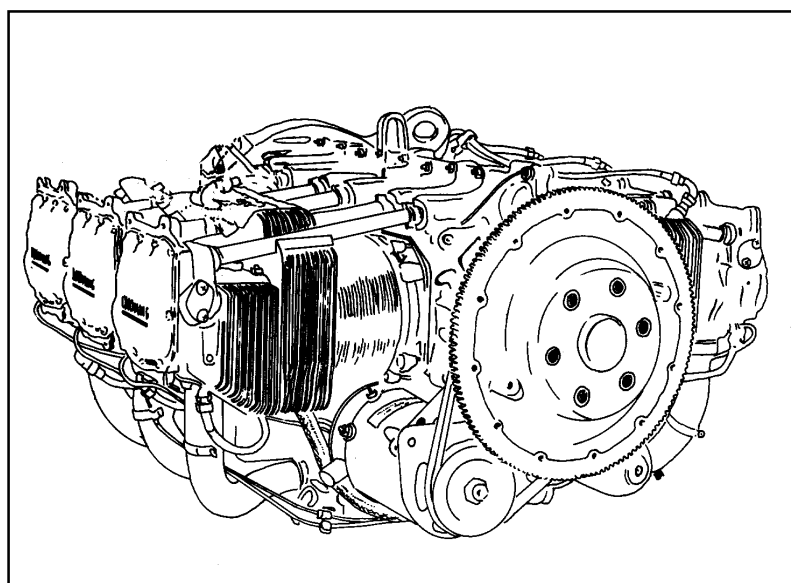
## ENGINE

The engine installed is a TEXTRON Lycoming 6-cylinder direct drive, horizontally opposed, air cooled engine. Engine type

a) AEIO-540-L1B5

b) AEIO-540-L1B5D

normal rated 2700 RPM, 300 HP. The following Figures 1 show the Lycoming engine of the EXTRA 300S:



*Lycoming engine  
Figure 1*

The induction system is equipped with a BENDIX RSA-10 fuel injection system which is attitude independent.

The fuel is injected into the intake ports of each cylinder. The mixture control is proportional to the intake air flow. A manual mixture adjustment as an overriding system is provided. The power setting is done manually by means of a butterfly valve in the air induction tube.

The engine is air cooled. Baffles are provided to build up a pressure and force the air through the cylinder fins. The cooling air flow is dependent on engine speed and dynamic air pressure.

The engine is lubricated by means of an engine driven oil pump. The system uses an oil sump as reservoir. For

acrobatic maneuvers, lubrication is assured via an inverted flight oil system (refer to CHRISTEN 801 Inverted Oil System and Chapter 79).

Oil temperature is limited by installation of 2 oil coolers.

Ignition is a magneto type with 2 independent systems.

#### NOTE

**For more information about the engine refer to Lycoming Operator's Manual.**

The complete power plant is attached to the fuselage structure using 4 mounting points and rubber vibration absorbers.

#### IMPORTANT

**If replacement of the engine control cables is necessary, renew the sealing of the bushing grooves and gaps at the engine side of the firewall. Use PRC-812 (Products Research & Chemical Corporation, USA) firewall sealant. Cover the control cables with AEROQUIP AE102-6 Fire sleeves inside the engine department.**