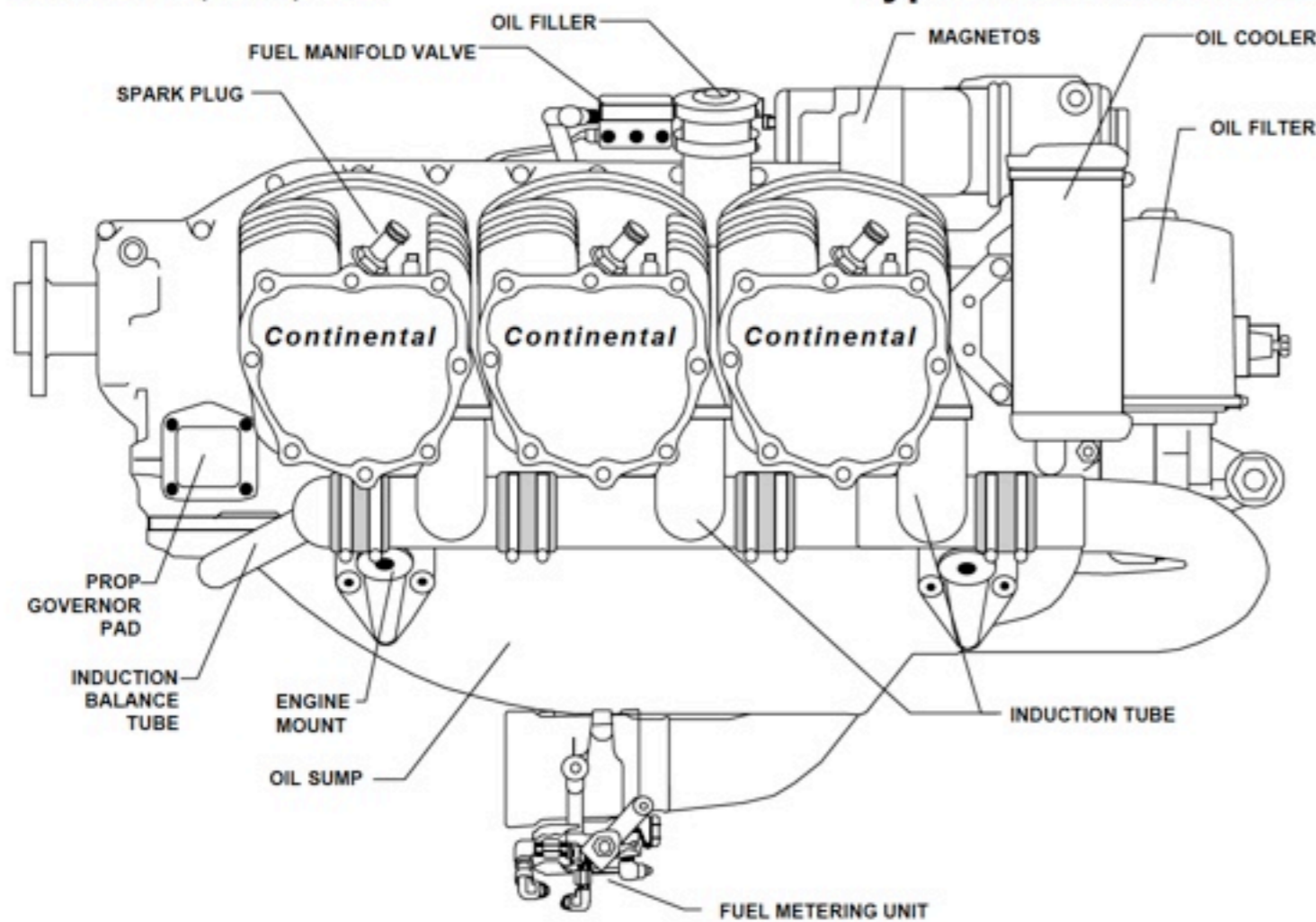


**IO-520-B, BA, BB**

**Type Certificate E5CE**



The IO-520-B, BA, BB models are six cylinder fuel injected air cooled engines producing 285 brake horsepower with a crankshaft speed of 2700 RPM. The model B & BA are identical except for crankshaft damper configuration. The BB model incorporates a modified crankshaft and related parts. The engine has horizontally opposed air cooled cylinders. The engine cylinders incorporate an overhead inclined valve design. The cylinders have updraft intake inlets and downdraft exhaust outlets mounted on the bottom of the cylinder head.

The IO-520- B, BA, BB engines have a 520 cubic inch displacement achieved by using a cylinder design with a 5.25 inch diameter bore and a 4.00 inch stroke. The engine enclosure is of the Permold series crankcase design. The dry weight of the engine is 406.65 lbs. without accessories. The average weight of the engine with installed accessories is approximately 460 lbs.

OVERALL ENGINE DIMENSIONS INCHES	
HEIGHT	27.32
WIDTH	33.56
LENGTH	37.97

**ENGINE SPECIFICATIONS ..... IO-520-B, -BA & -BB**

**Cylinders**

Arrangement .....	Horizontally Opposed
Number of Cylinders.....	6
Compression Ratio.....	8.5:1
Firing Order.....	1-6-3-2-5-4
Bore (Inches) .....	5.25
Stroke (Inches).....	4.00
Piston Displacement (cu. in.) .....	520

**Brake Horsepower**

Rated Maximum Continuous Operation.....	285 BHP @ 2700 RPM
Recommended Cruise.....	213 BHP @ 2500 RPM

**OPERATING LIMITS**

**Crankshaft Speed - RPM**

Rated Maximum Continuous Operation.....	2700
Recommended Idle .....	600

Manifold Pressure Limit (In. Hg.) Absolute ..... Full Throttle

Fuel Control System ..... TCM Fuel Injection

Fuel ..... 100/100LL  
Oil

TEMPERATURE	AVIATION GRADE	SAE GRADE	MULTI-VISCOSITY
BELOW 40	65	30	10W-30 / 15W-50 / 20W-50
ABOVE 40	100	50	15W-50 / 20W-50 / 20W-60

**Oil Pressure**

Idle, Minimum, psi .....	10
Normal Operation, psi.....	30-60

Oil Sump Capacity (U.S. Quarts)..... 12

Max. Oil Consumption (Lb./BHP/Hr. Max.)..... .006 X % Power  
..... 100

**Oil Temperature Limits**

Minimum for Take-Off.....	75° F
Maximum Allowable .....	240° F

**Cylinder Head Temperature**

<b>Recommended Max. at Cruise.....</b>	<b>380° F</b>
Limit.....	460° F

**Ignition Timing (Compression Stroke, Breaker Opens)**

Right Magneto, Degrees BTC .....	22°
Left Magneto, Degrees BTC .....	22°

**Spark Plug**

TCM .....	634675
Champion .....	RHB32E

