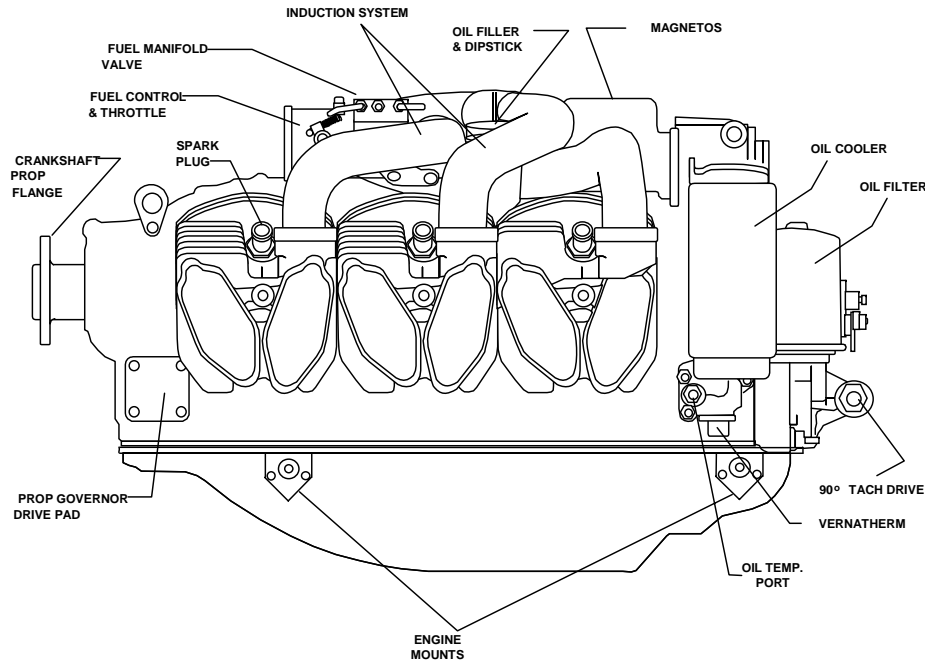


# IO-550-R

# Type Certificate E3SO



The IO-550-R is a six cylinder fuel injected air cooled engine producing 310 brake horsepower and has a crankshaft speed of 2700 RPM. The engine has horizontally opposed air cooled cylinders. The engine cylinders are cross flow design having overhead inclined valves. The cylinders have downdraft intake inlets mounted on the top of the cylinder head and downdraft exhaust outlets located on the bottom of the cylinder.

The IO-550-R engines have a 550 cubic inch displacement achieved by using a cylinder design with a 5.25 inch diameter bore and a 4.25 inch stroke. The engine enclosure is of the Permold series crankcase design. The dry weight of the engine is 412.0 lbs. without accessories. The average weight of the engine with installed accessories is approximately 470 lbs.

OVERALL ENGINE DIMENSIONS INCHES	
HEIGHT	22.93
WIDTH	34.04
LENGTH	38.43

# ENGINE SPECIFICATIONS.....IO-550-R

## 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)..... 4.25  
 Piston Displacement (cu. in.) ..... 550

## Brake Horsepower

Rated Maximum Continuous Operation ..... 310 BHP @ 2700 RPM  
 Recommended Cruise ..... 240 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

Recommended Max. at Cruise ..... 420° F  
 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

