

~~RESTRICTED~~

APPENDIX "B"

Specification No. 2020
2 Pages, Page 1

LYCOMING
Division-The Aviation Corporation

PRELIMINARY SPECIFICATION
July 5, 1943

Lycoming X-6 Engine

Ratings:

Take-Off
Military

- 2600
- 5000 HP @ 2800 RPM.
- 4850 HP @ 2750 RPM @ 2000 ft. altitude.

Note: Critical altitude with Turbo-supercharger will correspond to the Turbo-supercharger rating for an outlet pressure of 29.5 in. Hg. abs. at carburetor at not more than 100° F. and with not more than 31 in. Hg. abs. back pressure on the engine.

Normal

- 4000 HP @ 2500 RPM @ 3500 ft. altitude.

Note: Critical altitude with Turbo-supercharger will correspond to the Turbo-supercharger rating for an outlet pressure of 28.5 in. Hg. abs. at carburetor at not more than 100°F. and with not more than 31 in. Hg. abs. back pressure on the engine.

Cruising

- 2000 BHP.

Fuel Specification

Fuel Consumption (Approximate)

Take-Off and Military
Normal Rated
Cruising

- AN-F-28, Grade #130
- .70 lb. per BHP/HR.
- .60 lb. per BHP/HR.
- .37 lb. per BHP/HR.

Oil Consumption (Maximum)

Normal Rated
Cruising

- .025 lb. per BHP/HR.
- .020 lb. per BHP/HR.

Weight - Dry

- 5500 lb.

Note: Engine to this specification will be furnished with nose end having single speed single rotation propeller shaft geared to run at approximately crankshaft speed. See Page #2 for weight of engine equipped with nose ends having other propeller reduction gear drives.

Cooling Media - Liquid

- Ethylene Glycol or 70% Ethylene Glycol and 30% Water.

Weight of Coolant in Engine

- 14.0 lb.

Dimensions: Overall Length

- 115"

Overall Height

- 67"

Overall Width

- 67"

Drawings:

Installation

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Engine is designed so that nose ends can be installed having the following propeller reduction gear drives:--

Type "A" Engine Nose End

Single speed single rotation propeller shaft with propeller reduction gear ratio of .925. Propeller shaft end, AN #70. The first engine to be supplied will be furnished with this engine nose end. Engine dry weight 5500 pounds maximum. *667 10/25/43 ? 2/2/44 #60 Out*

Type "B" Engine Nose End

Single speed single rotation propeller reduction gear having a propeller gear ratio of .32. Propeller shaft end, AN #70. Engine dry weight 5850 pounds maximum.

Type "C" Engine Nose End

Two speed single rotation propeller shaft with high speed propeller gear ratio of .38 and low speed propeller gear ratio of .24. Propeller shaft end, AN #70. Engine dry weight 6100 pounds maximum. *borderline no!*

Type "D" Engine Nose End

Single speed dual rotation propeller reduction gear having propeller gear ratio of .32. Propeller shaft end, AN #60-80. Engine dry weight 6150 pounds maximum. *borderline*

Type "E" Engine Nose End

Two speed dual rotation propeller reduction gear having high propeller speed gear ratio of .38 and low propeller speed gear ratio of .24. Propeller shaft end, AN #60-80. Engine dry weight 6350 pounds maximum. *borderline*