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42-47.

A three-dimensional gas-dynamic model was used for

selecting rational parameters for the gas-air flow duct in the

aircraft reciprocating engine. The gas-air flow duct of two

types has been examined, i.e. the original one and its optimized

option as well. The comparative calculation of three full-load

curve modes has been performed for these two duct options. In

the modes with the crankshaft speed of 5500 and 5800 RPM

the improved gas-air flow duct provided power increase by 13

% and 16 %, respectively. The reached delivery and residual

gas ratios were 1,12 and 0,028, respectively. The comparative

diagrams of gas exchange in the examined full-load curve

modes have been given. The obtained results have been analyzed.

Tаblе. 2. Il. 9. Bibliogr. 7 names.