

ROUGH ENGINE OPERATION OR LOSS OF POWER

CARBURETOR ICING

A gradual loss of RPM and eventual engine roughness may result from the formation of carburetor ice. To clear the ice, apply full throttle and pull the CARB HEAT control knob full out until the engine runs smoothly; then reduce carburetor heat and readjust throttle as necessary. Monitor the G300 CARB °F indicator to verify the carburetor temperature rises out of the amber caution range. If conditions require the continued use of carburetor heat in cruise flight, use the minimum amount of heat necessary to prevent ice from forming and lean the mixture for smoothest engine operation. The G300 CARB °F indicator provides advisory information but does not replace the need to monitor engine condition and adjust carburetor heat or mixture as needed for safe engine performance.

SPARK PLUG FOULING

A slight engine roughness in flight may be caused by one or more spark plugs becoming fouled by carbon or lead deposits. This may be verified by turning the MAGNETOS switch momentarily from BOTH to either L or R position. An obvious power loss in single magneto operation is evidence of spark plug or magneto trouble. Leaning the mixture to the recommended lean setting for cruising flight may resolve a spark plug fouling issue. If the problem does not clear up in several minutes, determine if a richer mixture setting will produce smoother operation. If not, proceed to the nearest airport for repairs using the BOTH position of the MAGNETOS switch unless extreme roughness makes the use of a single MAGNETO position necessary.

MAGNETO MALFUNCTION

Sudden engine roughness or misfiring is usually a sign of a magneto problem. Changing the MAGNETOS switch from BOTH to the L and R switch positions will identify which magneto is malfunctioning. Select different power settings and enrichen the mixture to determine if continued operation on BOTH magnetos is possible. If not, change to the good magneto and continue to the nearest airport for repairs.

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DESCENT

Normal descent from altitude may be made with flaps retracted or with flaps extended to increase drag for a steepened descent angle. Caution should be used to observe flap limit speeds. Slips may be made in all flap configurations and are useful to increase descent rates while allowing power to be kept above idle. Carburetor heat should be used as needed for engine roughness and applied before reducing power to prevent carburetor ice from forming during low power descent. Since heated air causes a richer fuel mixture, readjust the mixture setting when carburetor heat is to be used for extended descent. If a low power descent is made, it is recommended that the throttle be cycled occasionally to check for engine roughness at higher power.

NOTE

Extended low power descents should be avoided during the first 25 hours of operation of a new engine.

LANDING

NORMAL LANDING

Normal landing approaches can be made with power on or power off with any flap setting within the flap airspeed limits. Surface winds and air turbulence are usually the primary factors in determining the most comfortable approach speeds. Slips to landing are very effective and may be performed in all flap configurations.

Landing at slower speeds will result in shorter landing distances and reduce wear to tires and brakes. The Low Airspeed Alert and Stall Warning System horn will sound as the airplane slows for landing flair and touchdown. Pilot should monitor airspeed closely and be prepared to initiate stall avoidance procedures. Power should be at idle as the main wheels touch the ground. The main wheels must touch the ground before the nosewheel. The nosewheel must be lowered to the runway carefully after the speed has diminished to avoid unnecessary nose gear loads. This procedure is very important for rough or soft field landings. Directional control should be maintained using up to full rudder deflection and differential braking as necessary.

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ENGINE (Continued)

ENGINE INSTRUMENTS (Continued)

CARBURETOR TEMPERATURE (CARB °F)

Carburetor temperature is provided as a reference to determine the potential for carburetor ice formation. The CARB °F indication is provided on vertical tape and in digital form on the right side of the EIS display atop the PFD and on the G300 ENGINE page. The tape display range is from 20 to 80°F and the digital indication range is from -40°F to 100°F. A yellow caution range is depicted from 5°F to 40°F. A red-X is displayed when the instrument is invalid or out of the data range.

NOTE

Although carburetor ice is more likely to form at temperatures within the yellow band range, it can form at temperatures outside the yellow caution range. If engine roughness or unexplained RPM loss is encountered, full carburetor heat should be immediately applied.

NEW ENGINE BREAK-IN AND OPERATION

The initial engine run-in was accomplished at the factory and is ready for the full range of use. It is recommended that cruising be accomplished at 75% power as much as practicable until a total of 50 hours has accumulated or oil consumption has stabilized. This will ensure proper seating of the piston rings. Low cruise power settings should be used for extended descents during the first 25 hours of new engine operations. Avoid extended descents with reduced power settings.

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