

# Poplar Grove Airmotive, Inc.

CRS YYB664L

## SUGGESTED ENGINE BREAK-IN PROCEDURES

After starting the engine ensure a normal warm up, but avoid prolonged ground running. Follow the airframe manufacturer's recommendations for takeoff power. When possible, reduce power to the climb power setting specified in the operator's manual. Establish a shallow climb angle to ensure good air speed for proper cooling. Use more cowl flaps than normal or step climb to help in this process. Adjust mixture per aircraft operating handbook. Excessive heat is the primary cause of cylinder bore glazing. Make every effort to keep your operating temperature well into the green arc.

If the engine is normally aspirated (non-turbocharged) it will be necessary to cruise at a low altitude to obtain the required cruise power levels. We recommend a density altitude less than 5,000 feet to allow the engine to develop sufficient cruise power for a good break-in.

For proper break-in/piston ring seating, operate the engine at 65-75% power during cruise altitude while keeping engine temperatures well in the green arc. Maintain these power settings until oil consumption stabilizes, this will minimize the chance of glazing the cylinder bores. Glazing cylinder bores require cylinder removal, honing, and installing new piston rings. Poplar Grove Airmotive does not warranty this condition.

Descend at low cruise power while closely monitoring the engine instruments. Avoid long descents at low manifold pressure and rapid descents, as this will cause engine to cool too rapidly.

There is only one objective to be accomplished during the break-in: the stabilization of oil consumption. Record all oil additions and flight hours in such a manner that quart per hour of flight is known. During this portion of the break-in, which would range from 25 to 100 hours, mineral oil must be used in the engine. The oil may be changed per your normal schedule, however, do not use AD (ashless dispersant) oil until oil consumption stabilizes.

### Engine oil recommendation for Piston Ring Seating

Aeroshell 100	SAE 50	Above 60 degrees F
Aeroshell 80	SAE 40	30 degrees-90 degrees F
Aeroshell 65	SAE 30	0 degrees -70 degrees F
Phillips 20W-50	Type M	Winter months

Use mineral based AD oils only after break-in – No synthetics