

Cessna. 1964

MODEL  
205



OWNER'S  
MANUAL

set of plugs. Then move switch to "L" position and note RPM. The difference between the two magnetos operated singly should not be more than 50 RPM. If there is a doubt concerning the operation of the ignition system, RPM checks at a higher engine speed will usually confirm whether a deficiency exists.

An absence of RPM drop may be an indication of faulty grounding of one side of the ignition system or should be cause for suspicion that the magneto timing has been "bumped-up" and is set in advance of the setting specified.

## TAKE-OFF.

It is important to check full-throttle engine operation early in the take-off run. Any signs of rough engine operation or sluggish engine acceleration is good cause for discontinuing the take-off.

Full throttle run-ups over loose gravel are especially harmful to propeller tips. When take-offs must be made over a gravel surface, it is very important that the throttle be advanced slowly. This allows the airplane to start rolling before high RPM is developed, and the gravel will be blown back of the propeller rather than pulled into it.

For maximum engine power, the mixture should be adjusted during the initial take-off roll to the fuel flow corresponding to the field elevation. The power increase is significant above 3000 feet and this procedure always should be employed for field elevations greater than 5000 feet above sea level.

Using 20° wing flaps reduces the ground run and total distance over the obstacle by approximately 10 per cent. Soft field take-offs are performed with 20° flaps by lifting the nosewheel off the ground as soon as practical and leaving the ground in a slightly tail-low attitude. However, the airplane should be leveled off immediately to accelerate to a safe climb speed of 75 MPH.

Take-offs into strong crosswinds normally are performed with the minimum flap setting necessary for the field length, to minimize the drift angle immediately after take-off. The airplane is accelerated to a speed slightly higher than normal, then pulled off abruptly to prevent possible settling back to the runway while drifting. When clear of the ground, make a coordinated turn into the wind to correct for drift.

## CLIMB.

A cruising climb at 24 inches of manifold pressure, 2450 RPM (approximately 75% power) and 110 to 120 MPH is recommended to save time and fuel for the overall trip. In addition, this type of climb provides better engine cooling, less engine wear, and more passenger comfort due to lower noise level.

Cruising climbs should be conducted at approximately 15 GPH up to 6500 feet and at 1 GPH more than the normal lean fuel flow shown on the Cessna Power Computer at higher altitudes and lower power.

If it is necessary to climb rapidly to clear mountains or reach favorable winds at high altitudes, the best rate-of-climb speed should be used with maximum power. This speed is 99 MPH at sea level, decreasing approximately 1 MPH for each 1000 feet above sea level. The mixture should be leaned as shown by the white radials on the fuel flow indicator.

If an obstruction ahead requires a steep climb angle, the airplane should be flown at the best angle of climb with flaps up and maximum power. This speed is 75 MPH at sea level, increasing 1/2 MPH for each 1000 feet above sea level.

## CRUISE.

Normal cruising is done between 65% and 75% power. The power settings required to obtain these powers at various altitudes and outside

| OPTIMUM CRUISE PERFORMANCE |        |          |               |                    |
|----------------------------|--------|----------|---------------|--------------------|
| % BHP                      | GAL/HR | ALTITUDE | TRUE AIRSPEED | RANGE (STD. TANKS) |
| 75                         | 14.1   | 6500     | 162           | 730                |
| 70                         | 13.2   | 8000     | 160           | 770                |
| 65                         | 12.2   | 10,000   | 158           | 820                |

Figure 2-3.

air temperatures can be determined by using your Cessna Power Computer or the Cruise Performance charts, pages 5-4 thru 5-8.

The Optimum Cruise Performance table (figure 2-3) shows that cruising can be done most efficiently at higher altitudes because very nearly the same cruising speed can be maintained at much less power.

For greater cruising range at a given throttle setting, select the lowest engine RPM in the green arc range that will give smooth engine operation.

The cowl flaps should be adjusted to maintain the cylinder head temperature near the middle of the normal operating (green arc) range to assure prolonged engine life.

The fuel injection system employed on this engine is considered to be non-icing. An induction air heat system is incorporated, however, to assure satisfactory operation in the event that unusual atmospheric conditions should cause intake system icing. The induction hot air knob should be left in the full cold position for all normal operations. Should intake system icing be encountered, the knob should be pulled out to the full heat position.

## **STALLS.**

The stall characteristics are conventional and aural warning is provided by a stall warning horn which sounds between 5 and 10 MPH above the stall in all configurations.

Power-off stall speeds at maximum gross weight and aft c. g. position are presented on page 5-2 as calibrated airspeeds since indicated airspeeds are unreliable near the stall.

## **SPINS.**

Intentional spins are prohibited in this airplane. Should an inadvertent spin occur, standard light plane recovery techniques should be used.

## **LANDINGS.**

Landings are usually made on the main wheels first to reduce the landing speed and subsequent need for braking in the landing roll. The nose

wheel is lowered to the runway after the speed has diminished to avoid unnecessary nose gear load. This procedure is especially important in rough field landings.

For short field landings, make a power-off approach at 83 MPH with 40° flaps and land on main wheels first. Immediately after touchdown, lower the nose gear and apply heavy braking as required. For maximum brake effectiveness after all three wheels are on the ground, retract the flaps, hold full nose up elevator and apply maximum possible brake pressure without sliding the tires.

## **COLD WEATHER OPERATION.**

The use of an external pre-heater and an external power source is recommended whenever possible to reduce wear and abuse to the engine and the electrical system.

Pre-heat will thaw the oil trapped in the oil cooler, which probably will be congealed prior to starting in extremely cold temperatures. When using an external power source, the position of the master switch is important. Refer to Section 6, paragraph GROUND SERVICE PLUG RECEPTACLE, for operating details.

In very cold weather, no oil temperature indication need be apparent before take-off. After a suitable warm-up period (2 to 5 minutes at 1000 RPM), the airplane is ready for take-off if it accelerates smoothly and the oil pressure is normal and steady.

During let-down, observe engine temperatures closely and carry sufficient power to maintain them in the recommended operating range.