



Cessna®

1948



MODEL

170

OWNER'S
MANUAL

CESSNA AIRCRAFT COMPANY

1948

PREFACE

This book has been prepared for you as an owner and operator of a Cessna 170 airplane. It was written specifically for you — to help you get the best out of your airplane — for the longest period of time.

Your Cessna is a product of the best in aircraft engineering and production skill. The maintenance of the quality that is built into it will be assured by simple but necessary upkeep on your part. The purpose of this book is to acquaint you with the things you should know — both in operation and care of the airplane.

The book is divided into four basic sections. The first concern of the owner of any product is the operation of his equipment. The first section, therefore, sets forth in Pilot's Check List form the basic data that have been developed as the best operational methods for flying your Cessna. It is not a check list in its true form as it is considerably longer, but it does cover briefly all of the points that you would want to or should know concerning the operation of your airplane.

Section two of the book sets forth the operation limitations and performance data and should be of useful interest to those desiring the most in performance from their airplane.

In the third section are set forth details and explanations that are necessary to avoid complicating the check list to the point where it loses its purpose.

The fourth section is devoted to care of the airplane itself and covers your responsibilities to help it perform faithfully and economically the many hours of fine flying that are built into it. A list of Cessna distributors, who can provide you with service wherever you may be, together with a list of approved Cessna accessories has been included in this section for your convenience.

SECTION I — OPERATING CHECK LIST

The flight and operational characteristics of the Model 170 Cessna are normal in all respects. There are no "unconventional" characteristics or operations that need to be mastered. All controls respond in the normal way within the entire range of operation of the airplane.

A. BEFORE ENTERING THE AIRPLANE

- (1) Check oil level.
- (2) Make a visual check of the airplane.
- (3) Remove control locks, if installed.
- (4) On first flight of the day, drain a small (one-ounce) quantity of fuel from fuel strainer drains to insure that no free water is in the fuel line.

B. BEFORE STARTING THE ENGINE

- (1) Operate controls and make a rapid visual check for proper operation.
- (2) Make sure windshield is clean for maximum visibility.
- (3) Adjust seat for comfort and distance to rudder pedals.
- (4) Check brakes and set parking brake.
- (5) Fasten and check safety belt.
- (6) Check quantity of fuel (two gauges).

C. STARTING THE ENGINE

- (1) Set carburetor heat to "cold."
- (2) Set mixture control (if any) to "full rich."
- (3) Set fuel tank selector to fullest tank or preferably to "both tanks." (Take-off on less than $\frac{1}{4}$ tank is not recommended.)
- (4) If engine is cold (50°F or below), prime the engine as follows:

Turn master switch "on" (when using starter).

Clear propeller.

Make certain magneto switch is "off" and throttle "closed" then give engine three or four strokes with the primer as

the engine is turned over. (Ordinarily not required except at winter temperatures.)

- (5) Turn magneto switches "on."
- (6) Open throttle $\frac{1}{8}$ (to idle position) and start engine by pulling starter control or having propeller pulled through by hand. Note: In extremely cold weather a few strokes of the primer as the engine fires will enable the engine to keep running. (Avoid over-priming.) After priming push primer all the way in and turn to locked position to avoid possibility of engine drawing fuel through the primer. *Do not pull out on starter* for a second starting attempt until engine has come to a complete stop from the first attempt. Failure to do this may result in damage to the starting gear.

D. WARM-UP AND GROUND TEST

- (1) Do not allow engine to operate at more than 800 r.p.m. for first 60 seconds after starting. (Especially important in cold weather as lubricating oil will be slow in circulating.) After starting if oil gage does not *begin* to show pressure within 30 seconds in the summertime and about twice that long in very cold weather, stop engine and investigate. Lack of oil pressure may cause serious engine damage.
- (2) Apply full carburetor heat.
- (3) After two to three minutes running at 800 r.p.m., open the throttle gradually to 1200-1500 r.p.m. and allow to run for three to five minutes or until engine is sufficiently warm for take-off. Warm-up may be accomplished during taxiing. Do not overheat the engine by running engine at high speed while on the ground. It is not necessary to run the engine until oil is "hot"; if engine runs properly at full throttle and oil pressure is normal, you are ready for take-off.

E. BEFORE TAKE-OFF

- (1) Apply toe brakes.
- (2) Set altimeter.
- (3) Set trim tab to "take-off" position.
- (4) Check oil pressure — should show 30 to 40 lbs. sq. in. (Minimum idling oil pressure — 10 lbs. sq. in.)

- (5) Check fuel pressure — should show $1\frac{1}{2}$ to 3 lbs. sq. in. (Minimum idling pressure — 1 lb. sq. in.)
- (6) Check engine magnetos at 1600 r.p.m. by opening the throttle and switching off separately each magneto momentarily. Drop of r.p.m. from 1600 r.p.m. should not exceed 50 r.p.m. on the right magneto or 75 r.p.m. on the left magneto. Switch to both magnetos before continuing.
- (7) Full throttle r.p.m. check is optional. Engine should run smoothly and turn, with carburetor heat off, 2230 to 2330 r.p.m. or more. Engine should idle between 500 and 550 r.p.m.

F. TAKE-OFF

- (1) Release brakes.
- (2) For take-off use full throttle.
- (3) Turn carburetor heat "off."
- (4) Heels on the floor.
- (5) Climb at full throttle. Best rate of climb airspeed 89 m.p.h. indicated. At sea level, airspeed drops off approx. 7 m.p.h. for each 5000 ft. altitude change. The engine will turn 2325 to 2450 r.p.m.

G. CRUISING

- (1) Recommended cruising r.p.m. 2450. (Do not exceed 2700 r.p.m.)
- (2) Trim airplane by adjusting elevator tab.
- (3) Oil pressure — 30-40 lbs. sq. in.
- (4) Oil temperature — maximum 225°F.
- (5) Fuel pressure — $1\frac{1}{2}$ -3 lbs. sq. in.
- (6) Above 5000 ft. lean mixture as required to obtain maximum r.p.m.

H. BEFORE LANDING

- (1) Set fuel valve to fullest tank or both tanks.
- (2) Set mixture control full rich.
- (3) Apply full carburetor heat before closing throttle.
- (4) Suggested glide speed 70-75 m.p.h.

OPERATING CHECK LIST

- (5) Use tab to relieve control wheel pressure when establishing glide.
- (6) Lower flaps as desired (do not lower flaps when indicated airspeed is above 90 m.p.h.)

I. AFTER LANDING

- (1) Raise flaps.
- (2) Normal glide and taxiing should cool engine sufficiently; however, if excessive amount of taxiing is necessary, allow engine to cool before cutting ignition by allowing to idle slowly two to three minutes.
- (3) Turn magneto switches "off." (Open throttle to avoid pre-ignition when hot.)
- (4) Turn radio switch "off."
- (5) Turn master switch "off." Be sure — otherwise your battery may run down overnight.