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REPLACE ANY OPERATING
INFORMATION REQUIRED
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CADET PA-28-161 PILOT'S OPERATING HANDBOOK

AND

FAA APPROVED AIRPLANE FLIGHT MANUAL

AIRPLANE
SERIAL NO. _____

AIRPLANE
REGIST. NO. _____

PA-28-161

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D.O.A. NO. SO-1

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THIS HANDBOOK INCLUDES THE MATERIAL REQUIRED TO BE FURNISHED TO THE PILOT BY THE FEDERAL AVIATION REGULATIONS AND ADDITIONAL INFORMATION PROVIDED BY THE MANUFACTURER AND CONSTITUTES THE FAA APPROVED AIRPLANE FLIGHT MANUAL. THIS HANDBOOK MUST BE CARRIED IN THE AIRPLANE AT ALL TIMES.

TABLE OF CONTENTS

SECTION 4

NORMAL PROCEDURES

Paragraph No.		Page No.
4.1	GENERAL	4-1
4.3	AIRSPEED FOR SAFE OPERATIONS	4-2
4.5	NORMAL PROCEDURES CHECKLIST	4-3
4.5a	Preparation (4.9)	4-3
4.5b	Preflight Checklist (4.11)	4-4
4.5c	Before Starting Engine Checklist (4.13)	4-6
4.5d	Engine Start Checklist (4.15)	4-6
	NORMAL START - COLD ENGINE (4.15a)	4-6
	NORMAL START - HOT ENGINE (4.15b)	4-7
	ENGINE START WHEN FLOODED (4.15c)	4-7
	ENGINE START WITH EXTERNAL POWER SOURCE (4.15d)	4-7
4.5e	Warm-Up Checklist (4.17)	4-8
4.5f	Taxiing Checklist (4.19)	4-8
4.5g	Ground Check Checklist (4.21)	4-8
4.5h	Before Takeoff Checklist (4.23)	4-9

TABLE OF CONTENTS

SECTION 4 (cont)

Paragraph No.		Page No.
4.5i	Takeoff Checklist (4.25)	4-10
	NORMAL (4.25a)	4-10
	0° FLAPS TAKEOFF PERFORMANCE (4.25b) .	4-10
	25° FLAPS TAKEOFF PERFORMANCE (4.25c)	4-10
	SOFT FIELD, OBSTACLE CLEARANCE (4.25d)	4-10
	SOFT FIELD NO OBSTACLE (4.25e)	4-11
4.5j	Climb Checklist (4.27)	4-11
4.5k	Cruise Checklist (4.29)	4-11
4.5m	Descent Checklist (4.31)	4-11
	NORMAL DESCENT (4.31a)	4-11
	POWER OFF DESCENT (4.31b)	4-12
4.5n	Approach And Landing Checklist (4.33)	4-12
4.5o	Stopping Engine Checklist (4.35)	4-12
4.5p	Mooring Checklist (4.37)	4-13
4.7	AMPLIFIED NORMAL PROCEDURES (GENERAL) .	4-15
4.9	PREPARATION (4.5a)	4-15
4.11	PREFLIGHT CHECK (4.5b)	4-15
4.11a	Cockpit (4.5b)	4-15
4.11b	Right Wing (4.5b)	4-16

4.5m Descent Checklist (4.31)

NORMAL DESCENT (4.31a)

Throttle..... 2500 rpm
Airspeed 126 KIAS
Mixture..... RICH
Carburetor Heat..... ON if required

POWER OFF DESCENT (4.31a)

Carburetor heat..... ON if required
Throttle..... CLOSE
Airspeed AS REQUIRED
Mixture..... AS REQUIRED
Power..... VERIFY with throttle
EVERY 30 SECONDS

4.5n Approach And Landing Checklist (4.33)

APPROACH AND LANDING (See charts in Section 5) (4.33)

Fuel Selector PROPER TANK
Seat Backs ERECT
Belts / Harness FASTEN/CHECK

NOTE

If the fixed shoulder harness (non-inertial reel type) is installed, it must be connected to the seat belt and adjusted to allow proper accessibility to all controls including fuel selector, flaps, trim, etc, while maintaining adequate restraint for the occupant.

NOTE

If the inertia reel type shoulder harness is installed, a pull test of its locking restraint feature should be performed.

Electric Fuel Pump..... ON
Mixture..... SET

4.29 CRUISE (4.5k) (Continued)

CAUTION

Prolonged operation at powers above 75% with a leaned mixture can result in engine damage. While establishing Best Economy Cruise Mixture, below 6,000 feet, care must be taken not to remain in the range above 75% power more than 15 seconds while leaning. Above 6,000 feet, the engine is incapable of generating more than 75% power.

To lean for best economy cruise performance, place the mixture control full forward and set the throttle to obtain the desired power setting for the conditions in Section 5. Gradually lean the mixture control until the engine operation becomes rough or until engine power rapidly diminishes as noted by an undesirable decrease in airspeed or engine RPM. When either condition occurs, enrich the mixture sufficiently to obtain a smooth and evenly firing engine or to regain most of the lost airspeed or engine RPM.

Always turn the electric fuel pump ON before switching tanks, and leave it ON for a short period thereafter. To keep the airplane in best lateral trim during cruising flight, use fuel alternately from each tank. It is recommended that one tank be used for one hour after takeoff, then the other tank be used for two hours; then return to the first tank, which will have approximately one and one half hours of fuel remaining if the tanks were full at takeoff. The second tank will contain approximately one half hour of fuel. Do not run tanks completely dry in flight. The electric fuel pump should be normally OFF, so that any malfunction of the engine driven fuel pump is immediately apparent. If signs of fuel starvation should occur at any time during flight, suspect fuel exhaustion. Immediately position the fuel selector to the other tank, and switch the electric fuel pump ON.

4.31 DESCENT (4.5m)

4.31a Normal Descent (4.5m)

To achieve the performance on Figure 5-31, a power on descent must be used. The throttle should be set for 2500 RPM, mixture full rich and maintain an airspeed of 126 KIAS. In case carburetor ice is encountered apply full carburetor heat.

4.31b Power Off Descent (4.5m)

If a prolonged power off descent is to be made, apply full carburetor heat prior to power reduction if icing conditions are suspected,. Throttle should be retarded and mixture control leaned as required. Power response should be verified approximately every 30 seconds by partially opening and then closing the throttle (clearing the engine). When leveling off, enrichen mixture, set power as required and select carburetor heat off unless carburetor icing conditions are suspected.

4.33 APPROACH AND LANDING (See charts in Section 5) (4.5n)

Check to ensure the fuel selector is on the proper (fullest) tank and that the seat backs are erect. The seat belts and shoulder harnesses should be fastened and the inertia reel checked.

NOTE

If the fixed shoulder harness (non-inertial reel type) is installed, it must be connected to the seat belt and adjusted to allow proper accessibility to all controls including fuel selector, flaps, trim, etc, while maintaining adequate restraint for the occupant.

NOTE

If the inertia reel type shoulder harness is installed, a pull test of its locking restraint feature should be performed.

Turn the electric fuel pump ON and turn the air conditioner OFF. The mixture should be set in the full RICH position.

The airplane should be trimmed to an initial approach speed of 70 KIAS, and a final approach speed of 63 KIAS with flaps extended to 40°. If desired, the flaps can be lowered at speeds up to 103 KIAS.

The mixture control should be kept in full RICH position to ensure maximum acceleration if it should be necessary to open the throttle again. Carburetor heat should not be applied unless there is an indication of carburetor icing, since the use of carburetor heat causes a reduction in power which may be critical in case of a go-around. Full throttle operation with carburetor heat on can cause detonation.

3.3 EMERGENCY PROCEDURES CHECKLIST

3.3a ENGINE FIRE DURING START (3.7)

Starter..... CRANK ENGINE
Mixture..... IDLE CUT-OFF
Throttle..... OPEN
Electric Fuel Pump..... OFF
Fuel Selector OFF
Abandon if fire continues

3.3b ENGINE POWER LOSS DURING TAKEOFF (3.9)

If sufficient runway remains for a normal landing, land straight ahead.

If insufficient runway remains:

Maintain safe airspeed

Make only shallow turn to avoid obstructions

Flaps as situation requires

If sufficient altitude has been gained to attempt a restart:

Maintain safe airspeed

Fuel Selector SWITCH to tank
containing fuel

Electric Fuel Pump..... CHECK ON

Mixture..... CHECK RICH

Carburetor Heat ON

Primer..... LOCKED

If power is not regained, proceed with power off landing (3.3d).

3.3c ENGINE POWER LOSS IN FLIGHT (3.11)

Fuel Selector SWITCH to tank
containing fuel

Electric Fuel Pump..... ON

Mixture..... RICH

Carburetor Heat ON

Engine Gauges..... CHECK for indication
of cause of power loss

3.3c ENGINE POWER LOSS IN FLIGHT (3.11) (Continued)

PrimerCHECK LOCKED
If no fuel pressure is indicated, check tank selector position to be sure it is on a tank containing fuel.

When power is restored:
Carburetor Heat OFF
Electric Fuel Pump OFF

If power is not restored, prepare for power off landing (3.3d).
Trim for 73 KIAS

3.3d POWER OFF LANDING (3.13)

Locate suitable field.
Establish spiral pattern.
1000 ft. above field at downwind position for normal landing approach. When field can easily be reached slow to 63 KIAS for shortest landing.

Touchdowns should normally be made at lowest possible airspeed with full flaps extended.

When committed to landing:
Ignition OFF
BATT MASTR Switch OFF
ALTR Switch OFF
Fuel Selector OFF
Mixture IDLE CUT-OFF
Seat Belts and Harnesses TIGHT

3.3e FIRE IN FLIGHT (3.15)

Source of Fire CHECK

Electrical fire (smoke in cabin):

BATT MASTR Switch OFF
ALTR Switch OFF
Vents OPEN
Cabin Heat OFF
Land as soon as practical.

3.3m OPEN DOOR (3.29)

If both upper and lower latches are open, the door will trail slightly open and airspeeds will be reduced slightly.

To close the door in flight:

Slow airplane to 89 KIAS

Cabin Vents CLOSE

Storm Window OPEN

If upper latch is open LATCH

If side latch is open PULL on ARMREST while
moving latch handle to
LATCH position.

If both latches are open LATCH SIDE LATCH
then TOP LATCH.

3.3n ENGINE ROUGHNESS (3.31)

Carburetor Heat ON

If roughness continues after one minute:

Carburetor Heat OFF

Mixture ADJUST for MAXIMUM
SMOOTHNESS

Electric Fuel Pump ON

Fuel Selector SWITCH TANKS

Engine Gauges CHECK

Magneto Switch L then R
then BOTH

If operation is satisfactory on either magneto, continue on that magneto at reduced power and full RICH mixture to first airport.

Prepare for power off landing (3.3d).

NOTE

Partial carburetor heat may be worse than no heat at all, since it may melt part of the ice which will refreeze in the intake system. Therefore, when using carburetor heat always use full heat; and, when ice is removed, return the control to the full cold position.

3.27 SPIN RECOVERY (3.3k)

Intentional spins are prohibited in this airplane. If a spin is inadvertently entered, immediately move the throttle to idle and the ailerons to neutral.

Full rudder should then be applied opposite to the direction of rotation followed by control wheel full forward. When the rotation stops, neutralize the rudder and ease back on the control wheel as required to smoothly regain a level flight attitude.

3.29 OPEN DOOR (3.3m)

The Cadet's cabin door is double latched, so the chance of it opening at both the top and bottom in flight are remote. However, should the upper latch not be closed, or the side latch not be fully engaged, the door may spring partially open at takeoff or soon afterward.

If both the upper and side latches have not been engaged, the door will trail slightly open, resulting in unpleasant air and propeller noise, and a slight reduction in airspeed. A partially open door will not affect normal flight characteristics, and a normal landing can be made.

To close the door in flight, slow the airplane to 89 KIAS, close the cabin vents and open the storm window. If the top latch is open, latch it. If the side latch is open, pull on the armrest while moving the latch handle to the latched position. If both latches are open, close the side latch first, and then the top latch.

3.31 ENGINE ROUGHNESS (3.3n)

Engine roughness is usually due to carburetor icing which is indicated by a drop in rpm, and may be accompanied by a slight loss of airspeed or altitude. If too much ice is allowed to accumulate, restoration of full power may not be possible; therefore, prompt action is required.

Turn carburetor heat on (see Note). Rpm will decrease slightly and roughness will increase. Wait for a decrease in engine roughness or an increase in rpm, indicating ice removal. If there is no change in approximately one minute, return the carburetor heat to OFF.