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INTRODUCTION

This section describes the recommended procedures for the conduct of normal operations for the airplane. All of the required (FAA regulations) procedures and those necessary for operation of the airplane as determined by the operating and design features of the airplane are presented.

These procedures are provided to present a source of reference and review and to supply information on procedures which are the same for all aircraft. Pilots should familiarize themselves with the procedures given in this section in order to become proficient in the normal operations of the airplane.

Normal procedures associated with those optional systems and equipment which require handbook supplements are provided by SECTION IX (Supplemental Data).

SPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following speeds are based on a weight of 3368 pounds and may be used for any lesser weight. However, to achieve the performance specified in SECTION V for take off distance and climb performance, the speed appropriate to the particular weight must be used.

TAKEOFF:

Normal Climb Out	80-90 KIAS
Short Field Takeoff, Speed At 50 Ft.	75 KIAS

ENROUTE CLIMB, GEAR and FLAPS UP:

Best Rate of Climb	105 KIAS
Best Angle of Climb	85 KIAS

LANDING APPROACH (3200 lbs.):

Normal Approach, Flaps 10 degrees	80 KIAS
Normal Approach, Flaps 33 degrees	75 KIAS
Short Field Approach, Flaps 33 degrees	70 KIAS

BALKED LANDING (3200 lbs.):

Maximum Power, Flaps 10 degrees	85 KIAS

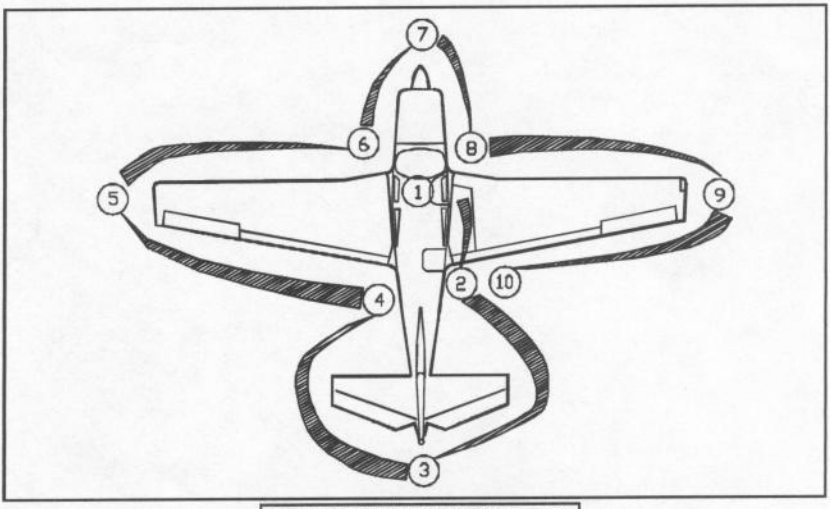
MAXIMUM RECOMMENDED TURBULENT AIR PENETRATION SPEED:

3368 lbs./1528 Kgs.	127 KIAS
3200 lbs./1452 Kgs.	123 KIAS
2900 lbs./1315 Kgs.	117 KIAS
2600 lbs./1179 Kgs.	111 KIAS
2400 lbs./1089 Kgs.	106 KIAS

DEMONSTRATED CROSSWIND VELOCITY:

Takeoff or Landing	13 Knots (This is NOT A LIMITATION)

(See CROSSWIND COMPONENT CHART, SECTION V)



PREFLIGHT INSPECTION

1. Cockpit -

Gear Switch . . . . . DOWN
Magneto/Starter Switch . . . . . OFF
All Rocker Switches . . . . . OFF
Master Switch . . . . . ON
All Circuit Breakers . . . . . IN
Battery Select Switch . . . . . SELECT from 1 to 2 or 2 to 1.
CHECK Voltmeter after each selection. Leave on Battery with highest voltage.
Internal/External Lights . . . . . CHECK operation
(Check for ammeter fluctuations as each light is checked)
Pitot Heat Switch . . . . . ON
(Check Pitot Heat annunciator light illuminated BLUE) *
Fuel Quantity Gauges . . . . . CHECK QTY
Fuel Selector
It is recommended that wing tank sumps be drained prior to draining Gascolator.
. . . . . Rt. Tank: Pull Gascolator ring (5 seconds)
Lt. Tank: Pull Gascolator ring (5 seconds)
Oxygen Supply Control Knob . . . . . OFF
Oxygen Pressure Gauge . . . . . CHECK
Verify adequate oxygen supply for trip, (if use of oxygen is anticipated), refer to oxygen duration chart (Fig. 7-13).
Also check that face masks and hoses are accessible and in good condition.

2. Right Fuselage/Tailcone

Oxygen Filler Access Door and Filler Cap . . . . . SECURED
Battery # 2 Access Panel . . . . . SECURED
Instrument Static Pressure Port . . . . . UNOBSTRUCTED
General Skin Condition . . . . . INSPECT
Tailcone/Empennage Access Panel . . . . . SECURED
Tail tiedown rope/chain . . . . . REMOVE

3. Empennage

Elevator and rudder attach points and control linkage attachments . INSPECT
Empennage Freeplay-Vertical/Horizontal . . . . . INSPECT
General skin condition . . . . . INSPECT
Remove ice, snow, or frost.

* If TKS System installed - Pitot Heat Annunciator will illuminate AMBER when switch is OFF. Will NOT illuminate when switch is ON.

4. Left Fuselage/Tailcone

Cabin Fresh Air Vent (Dorsal Fin)	UNOBSTRUCTED
Tailcone/Empennage Access Panel	SECURED
Instrument Static Pressure Port	UNOBSTRUCTED
Avionics/Battery # 1 Access Panel	SECURED
Auxiliary Power Plug Access Door	SECURED
Static System Drain	PUSH Plunger UP, (Hold 3-5 Seconds)
General Skin Condition	INSPECT

5. Left Wing

General Skin Condition	INSPECT-Remove ice, snow, or frost.
Wing Flap & attach points	INSPECT
Aileron & attach points	INSPECT
Control linkages	INSPECT
Wing Tip, Lights and Lens	INSPECT
Fuel Tank Vent	UNOBSTRUCTED
Pitot Tube	UNOBSTRUCTED/SECURED (Heat element Operative)
Landing/Taxi Lights	INSPECT Lens & Bulbs
Stall Switch Vane.	CHECK operation
Fuel Tank	CHECK QUANTITY/SECURE CAP

| NOTE |

The optional visual fuel quantity gauge is to be use for partial refueling purposes only; DO NOT use for preflight quantity check.

Tiedown rope/chain	REMOVE
Wheel chock.	REMOVE
Left Main Landing Gear, shock discs,tire & doors	INSPECT
Fuel Tank Sump Drain	DRAIN

Use sampler cup to VERIFY fuel is free of water, sediment & other contamination;
VERIFY proper fuel (BLUE/100LL)(GREEN/100 octane).
VERIFY drain closes and does not leak.

Pitot System Drain	PUSH plunger UP, (Hold for 3-5 seconds)

6. Left Cowl Area

Windshield	CLEAN
Cabin Air Inlet	UNOBSTRUCTED
Left Side Engine Cowl Fasteners	SECURED
Cowl Flaps	INSPECT
Exhaust Pipe	INSPECT & SECURE
Engine Oil Filler Door	OPEN & INSPECT AREA

| NOTE |

The engine compartment must be free of foreign objects which could result in possible over heating and serious damage to the engine.

Engine Oil	CHECK QUANTITY 10 Qts.(9.5 li) MAX—(6 Qts. (5.7 li)Minimum for flight)
Engine Oil Filler Door	CLOSE & SECURE
Cooling Air Inlet	Verify UNOBSTRUCTED

7. Propeller/Spinner & Front Cowl Area

Propeller/Spinner	INSPECT for nicks, cracks, oil leaks/rotational movement.
Prop De-Ice Boots (if installed)	INSPECT condition
Induction Air Inlet/Filter	UNOBSTRUCTED
Nose gear, shock discs, tire & doors	INSPECT
Wheel chock.	REMOVE

8. Right Cowl Area

Right Side Engine Cowl Fasteners	SECURED
Cooling Air Inlet	Verify UNOBSTRUCTED
Inter-cooler Inlet	UNOBSTRUCTED
Cowl Flap	INSPECT
Windshield	CLEAN
Cabin Air Inlet	UNOBSTRUCTED

9. Right Wing

Gascolator Drain Valve	CLOSED(check for drips)
Fuel Tank Sump Drain	DRAIN

Use sampler cup to VERIFY fuel is free of water, sediment & other contamination.
VERIFY proper fuel (BLUE/100LL) (GREEN/100 octane).
VERIFY drain closes and does not leak.

Right main gear, shock discs, tire & doors	INSPECT
Wheel chock.	REMOVE
General Skin Condition	INSPECT Remove ice, snow and frost.
Fuel Tank	CHECK QUANTITY/SECURE CAP

| NOTE|

The optional visual fuel quantity gauge is to be use for partial refueling purposes only; DO NOT use for preflight quantity check.

Tie down rope/chain	REMOVE
Fuel Tank vent	UNOBSTRUCTED
Landing/Taxi Lights	INSPECT Lens & Bulbs
Wing tip, lights and lens	INSPECT
Aileron and attach points	INSPECT
Wing Flap and attach points	INSPECT
Control linkages	INSPECT

10. Baggage Door Area

Baggage Door	VERIFY SECURED (VERIFY inside handle is properly secured) (CHECK outside handle operation)

RETURN TO COCKPIT — MASTER/ROCKER SWITCHES . . OFF

BEFORE STARTING CHECK

Pre-flight Inspection	COMPLETED
Seats, Seat Belts/Shoulder Harness (one occupant per restraint)	ADJUST & SECURED
Magneto/Starter Switch	OFF
Master Switch	OFF
Alternator Field Switches	OFF
Radio Master Switch	OFF
Fuel Boost Pump	OFF
Directional Gyro (slave/free switch)	SLAVED (If installed)
Circuit Breakers	CHECK - ALL IN
ELT Switch	ARMED
Rocker Switches	OFF
Alternate Static Source	Push OFF
Throttle	CLOSED
Propeller	FULL FORWARD (HIGH RPM)
Mixture	IDLE CUT-OFF
Cowl Flaps	VERIFY-FULL OPEN
Parking Brakes	SET
Wing Flap Switch	FLAPS UP
Defrost	PUSH OFF
Cabin Heat	PUSH OFF
Cabin Vent	AS DESIRED
Fuel Selector	FULLEST TANK
All Rocker Switches	OFF
Landing Gear Switch	DOWN
RED Emergency Gear Extension Handle	DOWN AND LATCHED
Internal Lights	OFF
Passenger Briefing (Emergency and general information briefing)	COMPLETED

Refer to SECTION IX for Optional Equipment Procedures and Checks.

Obtain local information prior to engine start.

ENGINE START

~CAUTION~

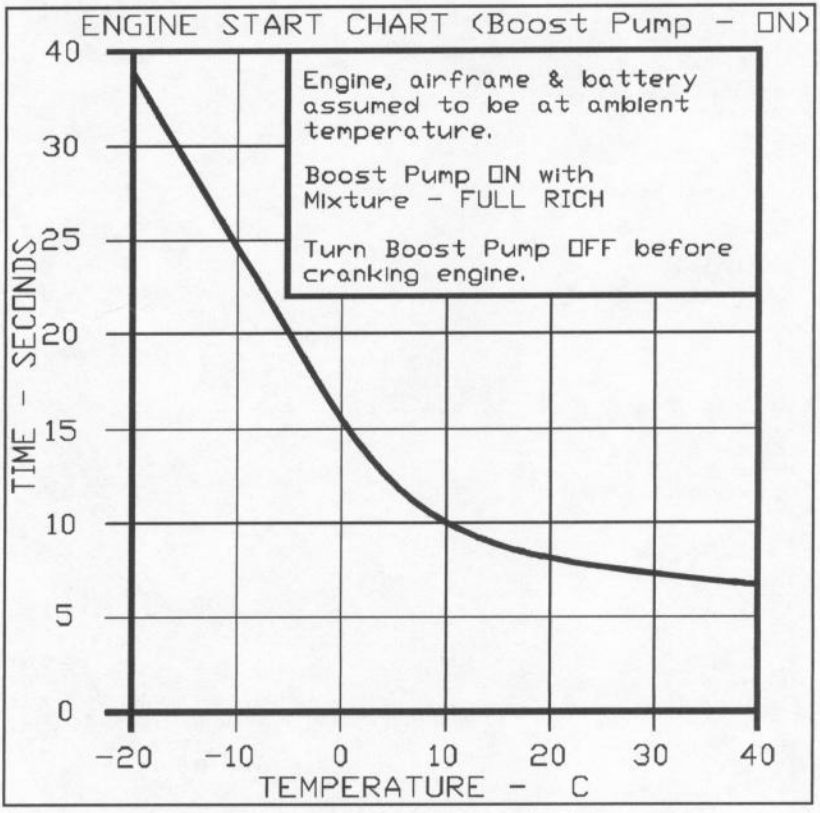
When either battery voltage is low, inspection should be conducted to determine condition of battery and/or reason for battery being low. Replacement or servicing of batteries is essential and charging for at least one hour should be done before engine is started. Batteries must be serviceable and it is recommended that batteries be fully charged to operate aircraft. Electrical components may also be damaged if aircraft is operated when batteries are low.

| NOTE|

When starting engine using the approved external power source no special starting procedure is necessary. Use normal starting procedures below. DO NOT START THE ENGINE IF BOTH BATTERIES ARE COMPLETELY DEAD; recharge dead batteries for at least one hour before starting engine. Only No. 1 battery (left side of tailcone) is connected to the Auxiliary Power plug.

Before Starting Checklist . . . . . COMPLETED
Throttle . . . . . OPEN 1/4 in.
Cowl Flaps . . . . . OPEN
Propeller . . . . . FULL FWD(High RPM)
Mixture . . . . . Full Forward (RICH)
Master Switch . . . . . ON
Annunciator Lights . . . . PRESS TO TEST (All lights should illuminate)
Fuel Boost Pump . . . . . ON

(See ENGINE START CHART for time vs. Temperature)



~ CAUTION ~

For engine operation at outside air temperatures below -25° C (-13°F), the engine and engine oil should be preheated to at least -25° C (-13°F) before the engine is started.

Fuel Boost Pump . . . . . OFF
Propeller Area . . . . . CLEAR
Magneto/Starter Switch . . . . . TURN & PUSH to START, release to BOTH when engine starts.
If No. 1 battery will not start engine . . . . SELECT No. 2 battery

| NOTE |

"START POWER" warning light should illuminate when Magneto/Starter switch is in "START" position.

| NOTE |

Cranking should be limited to 30 seconds, and several minutes allowed between cranking periods to permit the starter to cool.

Throttle . . . . . IDLE 700 - 750 RPM
* Engine Oil Pressure . . . . . CHECK in GREEN ARC
If minimum oil pressure is not indicated within 30 seconds, accomplish engine shutdown procedures.
Alternator Field Switches . . . . . ON
* Ammeter . . . . . CHECK
Turn LDG LT ON & observe Negative movement of needle.
* Interior/Exterior Lights . . . . . AS DESIRED
* Engine Instruments . . . . . CHECKED
* Fuel Flow Indicator . . . . . TEST/RESET (if desired)

~CAUTION~

Do not operate engine above 1000 RPM unless oil temperature is 75^{0} F (24^{0}C) minimum. Operation of engine above 1000 RPM at temperatures below 75^{0} F (24^{0}C) may damage engine.

FLOODED ENGINE START

Fuel Boost Pump . . . . . OFF
Throttle . . . . . 1/ 2 OPEN
Mixture . . . . . IDLE CUTOFF
Magneto/Starter Switch . . . . . TURN & PUSH to START
release to BOTH when engine starts.
Mixture . . . . . Slowly Advance to RICH until engine starts
Throttle . . . . . IDLE 700 - 750 RPM
* SEE REMAINING ENGINE START PROCEDURES ABOVE.

WARM ENGINE START

Throttle . . . . . OPEN 1/8
Mixture . . . . . FULL FORWARD
Fuel Boost Pump . . . . . ON-PRIME engine for 1 to 3 seconds
(DO NOT PRIME, IF ENGINE IS HEAT SOAKED)
Magneto/Starter Switch . . . . . TURN & PUSH to START
release to BOTH when engine starts.
Throttle . . . . . IDLE 700 - 750 RPM
* SEE REMAINING ENGINE START PROCEDURES ABOVE.

BEFORE TAXI

Engine Start Checklist . . . . . COMPLETED
Radio Master Switch . . . . . ON
Elevator Trim Switch . . . . . ON
Internal/External Lights . . . . . As Desired
Directional Gyro . . . . . SET or Slave switch ON
Stand-by Vacuum Pump Operational Check (not applicable to all aircraft)
Stand-by vacuum operational indicator red button . . . . . VISIBLE
STBY VAC Switch . . . . . ON
Stand-by vacuum operational indicator red button . . . . . NOT VISIBLE
STBY VAC Switch . . . . . OFF
Instruments . . . . . Normal Operation

Radios	CHECKED and SET
Altimeter	SET
Fuel Selector	SWITCH TANKS verify engine runs on other tank
Cowl Flaps	FULL OPEN or As Desired
Cabin Heat	AS DESIRED
Defroster	AS DESIRED
Cabin Vent	AS DESIRED
Optional Equipment Checks	Reference SECTION IX.

| NOTE |

During cold weather, ground operations may be conducted with cowl flaps positioned partially or fully closed to help keep engine temperatures in normal operational ranges prior to takeoff. However, if cowl flaps are fully closed operations, monitor engine temperatures to avoid exceeding maximum allowable limits.

TAXI

Before Taxi Checklist	COMPLETED
Rudder Trim	AS DESIRED

~CAUTION ~

With rudder trim in the full right position, the aircraft will tend to steer to the right during taxi.

Parking brake	RELEASE
Brakes	CHECK during TAXI
Directional Gyro	Proper indication during turns
Turn Coordinator	Proper indication during turns
Artificial Horizon	ERECT during turns
Throttle	Minimum power
Cowl Flaps	OPEN or As Required
Propeller	Full Forward (HIGH RPM)

~CAUTION ~

To prevent battery depletion in prolonged taxi or holding position before takeoff, increase RPM until "AMMETER" indicates positive charge.

BEFORE TAKEOFF

Taxi Checklist	COMPLETED
Parking Brake	SET
Fuel Selector	FULLEST TANK
Throttle	1000 RPM
Cowl Flaps	OPEN or As Required
Propeller	HIGH RPM
Mixture	FULL FORWARD
Alternate Air	Verify CLOSED
Alternator Field Switch	Verify ON
Throttle	2000 RPM
Magneto Switch	CHECK - BOTH to L, BOTH to R, BOTH

Verify engine operates smoothly on each magneto separately. (150 RPM MAX drop on each magneto, 50 RPM MAX difference)

| NOTE |

An absence of RPM drop may be an indication of faulty magneto grounding or improper timing. If there is doubt concerning ignition system operation, RPM checks at a leaner mixture setting or higher engine speed will usually confirm whether a deficiency exists.

Propeller	CYCLE/Return to high RPM
Ammeter	CHECK Positive Charge Indication
Throttle	RETARD to 1000 RPM
Fuel Boost Pump Switch	ON-Verify annunciator light will illuminate BLUE
Fuel Boost Pump Switch.	OFF
	(Full throttle position will automatically turn Boost Pump ON)
Elevator Trim	TAKEOFF SETTING
Rudder Trim	TAKEOFF SETTING
Wing Flaps	CHECK operation.
	SET AT TAKEOFF position (10 Degrees)
Flight Controls	CHECK free and correct movement
Cabin Door	CHECK SECURED
Seats, Seat Belts and Shoulder Harness	SECURED
Avionics and Auto Pilot	CHECK - (Refer to SECTION IX)
Annunciator Lights	CHECK
Internal/External Lights	AS DESIRED
Strobe Lights/Rotating Beacon	ON
Pilots Window	CLOSED
Emergency Gear Extension (RED) Handle	DOWN & LATCHED
Oil Temperature	100°F(38°C) minimum
CHT	250°F(121°C) minimum
Parking Brake	RELEASE

TAKEOFF

Proper engine operation should be checked early in the takeoff roll. Any significant indication of rough or sluggish engine response is reason to discontinue the takeoff.
When takeoff must be made over a gravel surface, it is important that the throttle be applied SLOWLY. This will allow the aircraft to start rolling before a high RPM is developed, and gravel or loose material will be blown back from the propeller area instead of being pulled into it.

If the turbocharger and its controlling system are properly rigged, manifold pressure will increase to approximately 34 to 38 in. Hg. when the throttle is full open. However, engine operation with oil temperature below 100° F (38°C) will result in an overboost (manifold pressure above 38 in. Hg.). If an overboost occurs, retard throttle to lower manifold pressure below 38 in. Hg. and continue flight. As the oil warms above 100° F (38°C), throttle can be moved to full throttle position and controller will maintain proper manifold pressure for maximum continuous power.
Full throttle operation during hot weather conditions may also result in manifold pressure over 38 in. Hg. If this occurs retard the throttle below 38 in. Hg. and continue flight.

TAKEOFF (NORMAL)

Power	FULL THROTTLE (2575 RPM)
	(DO NOT EXCEED 38" MP)
Annunciator	CHECK
	(BLUE Boost Pump Light - ON)
Engine Instruments	CHECK for proper indications
Lift Off/Climb Speed	As specified in SECTION V (Takeoff Distance)
Landing Gear	RETRACT IN CLIMB after clearing obstacles.
Wing Flaps	UP
Fuel Pressure	24 PSI (minimum)

| NOTE |

If maximum performance takeoffs are desired obtain full power before brake release.Use lift off and climb speed as specified in SECTION V.

CLIMB

| NOTE |

If applicable, use noise abatement procedures as required.

| NOTE |

See SECTION V, for rate of climb graph.

CLIMB (CRUISE)

Power	34 In. Hg./2400 RPM)
Mixture	RICH
Cowl Flaps	FULL OPEN or AS REQUIRED
Rudder Trim	As Desired
Airspeed	120 KIAS

CLIMB (BEST RATE) (V_y)

Power	FULL THROTTLE /2575 RPM (DO NOT EXCEED 38" MP)
Mixture	RICH
Cowl Flaps	FULL OPEN
Rudder Trim	As Desired
Airspeed	105 KIAS

CLIMB (BEST ANGLE) (V_x)

Power	FULL THROTTLE/2575 RPM (DO NOT EXCEED 38" MP)
Mixture	RICH
Cowl Flaps	FULL OPEN
Rudder Trim	As Desired
Airspeed	85 KIAS

CRUISE

|NOTE |

Use recommended engine break-in procedures as published by engine manufacturer.

Airspeed	ACCELERATE to cruise airspeed
Throttle	SELECTED SETTING (Ref. CRUISE PERFORMANCE CHARTS in SECTION V)

As the throttle is reduced, the BOOST PUMP annunciator light will extinguish. Verify fuel pressure remains in GREEN arc.

| NOTE |

Prolonged climbs to high cruise altitudes during hot weather operations may result in some fuel pressure fluctuations when the throttle is reduced. If fluctuations occur, turn Boost Pump Switch ON until cooling has alleviated fluctuations.

Propeller . . . . . Set RPM to selected setting
Mixture . . . . . LEAN TO PEAK TIT
(See CAUTION below)

~ CAUTION ~

Operation at a TIT in excess of 1750° F(954°C). is prohibited. Cruise power settings at and below 34 in. Hg., 2400 RPM, peak TIT or 1750° F. (954°C), which ever is lower, are permitted from sea level to 25,000 ft. However, at altitudes above 22,000 ft. power settings above 32 In. Hg. must be operated at 1650° F(898°C)(best power mixture) or richer.

| NOTE |

Cruise operation at BEST POWER will result in a substantial increase in fuel flow, greatly decreasing range and endurance; reference charts published in SECTION V.

Engine instruments . . . . . CHECK

| NOTE |

Careful leaning of the mixture control will result in best fuel efficiency. This requires operating at peak TIT (where permissable) for the power setting being used. Failure to do so will result in excessive fuel burn. After leveling off at cruise altitude, set MP and RPM for desired power setting per Cruise Power Chart in Section V. Slowly lean Mixture until TIT reaches peak value. TIT indications become sensitive as peak is approached; careful adjustments are necessary for accurate setting. Changes in altitude or power MAY REQUIRE readjustment of TIT.

DO NOT LEAN ONLY TO TIT, ALL ENGINE GAUGES SHOULD BE IN NORMAL OPERATING RANGES FOR OPTIMUM AND PROPER ENGINE OPERATION.

Cowl Flaps . . . . . AS REQUIRED
to maintain cylinder head and oil temperatures in normal operation ranges.

~ CAUTION ~

When cruising in conditions where OAT is well above standard or at very high altitudes, it may be necessary to slightly OPEN cowl flaps in order to keep engine temperatures within operating limits. When the cowl flaps are OPEN during cruise the following effects on cruise speed will result:

Cowl Flaps - 1/2 Open. . . . . Approx. loss in TAS 2.5 KTS

Engine temperatures . . . . . STABILIZE at cruise condition.
Rudder Trim . . . . . As Desired

When increasing power always return mixture to full rich, then increase RPM before increasing manifold pressure; when decreasing power decrease manifold pressure before reducing RPM. Always stay within the established operating limits, and always operate the controls slowly and smoothly.

FUEL TANK SELECTION

Fuel Boost Pump Switch . . . . . ON
Fuel Selector . . . . . OPPOSITE TANK
Fuel Boost Pump Switch. . . . . OFF
(Observe Fuel Pressure Gauge for Proper Pressure Reading)

OXYGEN SYSTEM

////////////////////
// WARNING //
////////////////////

Greasy lipsticks and waxed mustaches have been known to ignite spontaneously inside oxygen masks. Passengers should be suitably advised prior to flight.

For safety rea sons no smok ing should be al lowed in the air plane while oxy gen is be ing used.

When ready to use the oxygen system, proceed as follows:

Mask and Hose . . . . . SELECT - either MIC or STD
Adjust mask to face and adjust metallic nose strap for snug mask fit.
Delivery Hose . . . . . PLUG INTO OUTLET assigned to that seat.

| NOTE |

When the oxygen system is turned ON, oxygen will flow continuously at the appropriate rate of flow for the altitude without any manual adjustments.

Oxygen Supply Control Knob . . . . . ON.
Face Mask Hose Flow Indicator . . . . . CHECK
Oxygen is flowing if the indicator is being forced toward the mask.
Delivery Hose . . UNPLUG from outlet when discontinuing use of oxygen.
This automatically stops the flow of oxygen.
Oxygen Supply Control Knob . . OFF when oxygen is no longer required.

////////////////////
// WARNING //
////////////////////

Proper oxygen flow is critical to pilot/passenger safety, especially at altitudes above 20,000 ft. MSL. It is important to monitor closely the face mask hose flow indicator to ensure oxygen is constantly flowing to the mask. A GREEN indication on the flow indicator denotes proper oxygen flow. Always place the flow indicator in a position where it is in the normal scan area of the cockpit.

Refer to duration chart (Fig. 7-13) for safe operational quantities.

DESCENT

| NOTE |

Avoid extended descents at manifold pressure setting below 15 In.Hg. as the engine can cool excessively and may not accelerate satisfactorily when power is reapplied. Additionally, leaning the mixture to peak TIT during descent will save fuel and will eliminate any engine roughness associated with an overly rich mixture setting. During descent engine MP may increase as the aircraft loses altitude. Occasional power reductions with the throttle may be required to maintain the original descent manifold pressure setting.

NORMAL DESCENT - GEAR UP

Seats, Seat Belts/Shoulder Harness . . . . . ADJUST AND SECURE
Wing Flaps . . . . . UP
Landing Gear . . . . . UP
Throttle . . . . . ABOVE 15 In. Hg. (keep CHT in Green)
Propeller . . . . . 2400 RPM
Mixture . . . . . Peak TIT
Cowl Flaps . . . . . CLOSED

Cylinder Head Temperature (CHT) . . MONITOR (250° F(121°C) minimum)
Airspeed . . . . . AS DESIRED(195 KIAS max.)
Rudder Trim . . . . . AS DESIRED

| NOTE |

Plan descents to arrive at pattern altitude on downwind leg for maximum fuel efficiency and minumum aircraft noise.

~CAUTION~

DO NOT fly in the YELLOW ARC speed range unless the air is smooth.

NORMAL DESCENT - GEAR DOWN

Seats, Seat Belts/Shoulder Harness	ADJUST AND SECURE
Airspeed	DECELERATE to 140 KIAS
Landing Gear	DOWN
Throttle	ABOVE 15 In. Hg. (Keep CHT in Green Arc)
Propeller	2400 RPM
Mixture	Peak TIT
Cowl Flaps	Closed
Cylinder Head Temperature (CHT)	Monitor (250 ^{o} F (121^{o}C) min)
Airspeed	165 KIAS or LESS.

| NOTE |

Using the landing gear as a descent aid will result in a steeper descent rate (greater altitude loss per horizontal distance traveled).

APPROACH FOR LANDING

~CAUTION ~

The airplane must be within the allowable weight and balance envelope for landing (REF. SECTION VI). It will require a minimum of one hour of flight before a permissable landing weight is attained when takeoffs are made at maximum gross weight. If a landing at a weight exceeding maximum landing weight (3200 Lbs.)(1452 Kgs.) is required, see OVERWEIGHT LANDING PROCEDURE, SECTION III.

Seats, Seat Belts/Shoulder Harness	ADJUST AND SECURE
Internal/External lights	AS DESIRED
Landing Gear	EXTEND below 140 KIAS
	(Check Gear Down light ON-Check visual indicator)
Mixture	FULL RICH (on final)
Propeller	HIGH RPM (on final)
Fuel Boost Pump	ON
Fuel Selector	FULLEST TANK
Wing Flaps	T/O POSITION
	(FULL DOWN below 110 KIAS)

~CAUTION ~

To minimize control wheel forces when entering landing configuration, timely nose-up trimming is recommended to counteract the nose down pitching moment caused by reduction of power and/or extension of flaps.

Elevator Trim	AS DESIRED
Rudder Trim	CENTERED OR AS DESIRED
Parking Brake	VERIFY OFF

| NOTE |

The parking brake should be rechecked to preclude partially applied brakes during touchdown.

GO AROUND (BALKED LANDING)

~ CAUTION ~

To minimize control wheel forces during GO-AROUND, timely nose-down trimming is recommended to counteract the nose up pitching moment as power is increased and/or the flaps are retracted.

Power	FULL FORWARD/2575 RPM)
Mixture	Verify FULL RICH
Fuel Boost Pump	Verify ON (BLUE light on Annunciator) (Full Throttle automatically turns Fuel Boost Pump ON)
Wing Flaps	TAKEOFF POSITION (10^{o}) (After POSITIVE climb established)
Trim	NOSE DOWN to reduce forces
Airspeed	85 KIAS
Landing Gear	RETRACT
Wing Flaps	RETRACT
Cowl Flaps	OPEN
Airspeed	105 KIAS

LANDING

LANDING (NORMAL)

Approach for Landing Checklist	COMPLETED
Approach Airspeed	As specified in SECTION V (Landing Distance)
Touchdown	MAIN WHEELS FIRST (aligned w/ runway)
Landing Roll	LOWER nose wheel gently
Brakes	MINIMUM required

| NOTE |

Landing information for reduced flap settings is not available. See SECTION V for Landing Distance tables.

| NOTE |

If maximum performance landings are desired, use the above procedures except, reduce the approach airspeed to 70 KIAS (flaps full down) and apply maximum braking (without skidding tires) during rollout.

| NOTE |

Crosswind landings should be accomplished by using the above procedures except maintain approach speed appropriate for the wind conditions. Allow aircraft to crab until the landing flare. Accomplish the touchdown in a slight wing low sideslip (low wing into the wind) and the aircraft aligned with the runway. During the landing roll, position the flight controls to counteract the crosswind.

~ CAUTION ~

The landing gear may retract during landing roll if landing gear switch is placed in the UP position.

TAXI AFTER LANDING

Throttle	AS REQUIRED
Fuel Boost Pump	OFF
Cowl Flaps	OPEN
Wing Flaps	RETRACT
Elevator Trim	TAKEOFF SETTING
Avionics/Radios	AS REQUIRED
Interior/Exterior Lights	AS DESIRED

SHUTDOWN

~ CAUTION ~

Operate the engine at idle (below 1000 RPM) for 5 minutes to allow the TURBOCHARGER to COOL. Taxi time after landing may be considered as part of the 5 minutes.

Parking Brake	SET
Throttle	IDLE RPM
Radio Master Switch	OFF
Interior/Exterior Lights	OFF
Pitot Heat	OFF
Alternator Field Switches (L/R)	OFF
Magneto/Starter Switch	GROUNDING CHECK
Mixture	IDLE CUT-OFF
Master Switch	OFF
Magneto/Starter Switch	OFF

SECURING AIRCRAFT

Magneto/Starter Switch	VERIFY OFF/ Key removed
Master Switch	VERIFY OFF
Radio Master Switch	Verify OFF
Electrical Switches	Verify OFF
Interior Light Switches	VERIFY OFF
Parking Brake	RELEASE - INSTALL WHEEL CHOCKS
Extended parking	CONTROL WHEEL SECURED with seat belts, cabin vents closed;
Cabin Windows and Doors	CLOSED AND LOCKED

TIE DOWN AIRCRAFT at wing and tail points.