M20R OVATION

NORMAL PROCEDURES

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 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

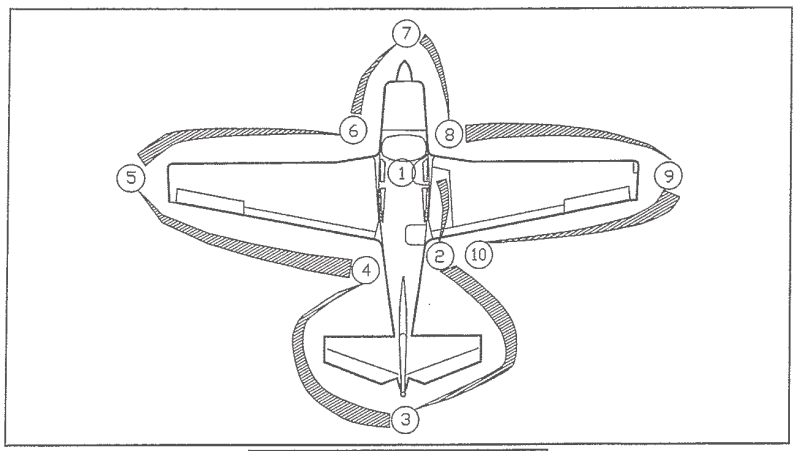
MAXIMUM RECOMMENDED TURBULENT AIR PENETRATION SPEED:

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, only a demonstrated number)

(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 (if installed)	OFF
Oxygen Pressure Gauge	CHECK

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 is installed , pitot heat annunciator will illuminate AMBER when switch is ON and Pitot Heat has failed. Annunciator will not be illuminated when switch is ON and system is operating properly.

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).

~~~~~~~~
~CAUTION ~
~~~~~~~~

Some diesel may be BLUE, Verify by smell and feel that 100LL is being used.

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
Exhaust Pipes . . . . . INSPECT SECURED
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
. . . . . 8 Qts.(7.57 l)
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
Windshield . . . . . CLEAN
Cabin Air Inlet . . . . . UNOBSTRUCTED

9. Right Wing

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).
. . . . . **SEE CAUTION** on diesel fuel on previous page
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.

Tiedown 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

Preflight Inspection . . . . . COMPLETED
Seats, Seat Belts/Shoulder Harness (1 occupant per restraint) ADJUST & SECURED
Magneto/Starter Switch . . . . . OFF
Master Switch . . . . . OFF
Alternator Field Switch . . . . . OFF
Radio Master Switch . . . . . OFF
Fuel Boost Pump Switches . . . . . 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
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 POSITION

RED Emergency Gear Extension Handle . . . . . DOWN AND LATCHED
Internal Lights . . . . . OFF
Passenger Briefing . . . . . COMPLETED
. . . . . (Emergency and general information briefing)

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 ENGINE IF BOTH BATTERIES ARE INCAPABLE OF STARTING ENGINE. Recharge dead batteries for at least one hour (at 3-4 amps) before starting engine. Only No. 1 battery (left side of tailcone) is connected to the Auxiliary Power plug.

Before Starting Checklist . . . . . COMPLETED
Throttle . . . . . FULL OPEN
Propeller . . . . . FULL FWD (High RPM)
Mixture . . . . . Full Forward (RICH)
Master Switch . . . . . ON
Alternator Field Switch . . . . . ON
Annunciator Lights . . . . . PRESS TO TEST (All lights should illuminate)
Low Fuel Boost Pump Switch . . . . . ON during engine starting sequence

~ ~ ~ ~ ~ ~ ~

~ 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.

Throttle . . . . . IDLE POSITION
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 |

COLD ENGINE START - Low fuel boost pump ON during "Start" sequence. Turn low fuel boost pump OFF when engine obtains smooth operation.

| 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 600 - 700 RPM
* Engine Oil Pressure . . . . . CHECK in GREEN ARC
If minimum oil pressure (10 PSI) is not indicated within 30 seconds, accomplish engine shutdown procedures.
Low Fuel Boost Pump Switch . . . . . OFF
* 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)
* Throttle . . . . . 900/1000 RPM
* Mixture . . . . . ADJUST FOR SMOOTH OPERATION

~ ~ ~ ~ ~ ~ ~
~ CAUTION~
~ ~ ~ ~ ~ ~ ~

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

FLOODED ENGINE START

Throttle . . . . . 1/ 2 OPEN
Mixture . . . . . IDLE CUTOFF
Low Fuel Boost Pump Switch . . . . . ON – 8 -10 SECONDS THEN OFF
Magneto/Starter Switch . . . . . TURN & PUSH to START
release to BOTH when engine starts.
Mixture . . . . . Slowly advance toward RICH until engine starts
Throttle . . . . . IDLE 600 - 700 RPM
SEE ENGINE START PROCEDURES ABOVE * FOR REMAINING SEQUENCES.

WARM ENGINE START

Throttle . . . . . 1/2 to 1 inch OPEN
Mixture . . . . . Full Forward (RICH)
Low Fuel Boost Pump Switch . . . . . ON - (TO CLEAR FUEL VAPORS)
Low Fuel Boost Pump Switch . . . . . OFF
Magneto/Starter Switch . . . . . WITHIN 1-2 SECONDS, TURN & PUSH to START
release to BOTH when engine starts.
Throttle . . . . . IDLE 600 - 700 RPM
SEE ENGINE START PROCEDURES ABOVE * FOR REMAINING SEQUENCES.

HOT ENGINE START

Throttle . . . . . FULL OPEN
Mixture . . . . . IDLE CUT-OFF
Boost Pump . . . . . HIGH for 5 sec. or LOW for 15 sec.
Boost Pump . . . . . OFF
Throttle . . . . . IDLE POSITION
Mixture . . . . . Full Forward (RICH)
Magneto/Starter Switch . . . . . TURN & PUSH to START
release to BOTH when engine starts.
Throttle . . . . . IDLE 600 - 700 RPM
SEE ENGINE START PROCEDURES ABOVE * FOR REMAINING SEQUENCES.

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
Stand-by vacuum operational indicator red button - VISIBLE
STBY VAC Switch . . . . . ON

BEFORE TAXI (con't.)

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
Cabin Heat . . . . . AS DESIRED
Defroster . . . . . AS DESIRED
Cabin Vent . . . . . AS DESIRED
Optional Equipment Checks . . . . . Reference SECTION IX.

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
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
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
Low Fuel Boost Pump Switch . . . ON-Verify annunciator light will illuminate BLUE
Low Fuel Boost Pump Switch . . . . . OFF

Elevator Trim	TAKEOFF SETTING
Rudder Trim	TAKEOFF SETTING
Wing Flaps SET AT TAKEOFF position	CHECK operation.
Flight Controls	CHECK free and correct movement
Cabin Door	CHECK SECURED
Seats, Seat Belts and Shoulder Harness	SECURED
Avionics and Auto Pilot	CHECK
Annunciator Lights	CHECK
Internal/External Lights	AS DESIRED
Strobe Lights/Rotating Beacon	ON
Pilots Window	CLOSED
Emergency Gear Extension Handle	DOWN & LATCHED
Oil Temperature	75°F minimum
CHT	250°F 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 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 high RPM is developed, and gravel or loose material will be blown back from the propeller area instead of being pulled into it.

TAKEOFF (NORMAL)

Power	**FULL THROTTLE** (2500 RPM)
Annunciator	CHECK
Engine Instruments	CHECK for proper indications
Lift Off/Climb Speed	CHECK
Landing Gear	RETRACT IN CLIMB after clearing obstacles.
Wing Flaps	UP

NOTE

If maximum performance takeoffs are desired obtain full power before brake release.

CLIMB

CLIMB (CRUISE)

Power	2500 RPM
Manifold Pressure	24 Inches
Mixture	FULL RICH or BLUE ARC on EGT
Rudder Trim	As Desired
Airspeed	120 KIAS

CLIMB (BEST RATE)(V_Y)

Power	FULL THROTTLE /2500 RPM
Mixture	FULL RICH or BLUE ARC on EGT
Rudder Trim	As Desired
Airspeed	105 KIAS

Power . . . . . FULL THROTTLE/2500 RPM
Mixture . . . . . FULL RICH
Rudder Trim . . . . . As Desired
Airspeed . . . . . 85 KIAS

Leaning may be required during CLIMB depending on atmospheric conditions.

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 5)

NOTE

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

Propeller . . . . . Set RPM to selected setting
Mixture . . . . . LEAN TO 50°F rich of PEAK EGT

NOTE

Cruise operation at BEST POWER will result in a substantial increase in fuel flow, greatly decreasing range and endurance;

Engine instruments . . . . . **CHECK**

NOTE

Careful leaning of mixture control will result in best fuel efficiency. This requires operating at proper EGT. Failure to do so will result in excessive fuel burn. After leveling off at cruise altitude,Slowly lean Mixture until EGT reaches peak value. Enrichen to 50°F rich of peak EGT for best power (50°F lean of peak is best economy); careful adjustments are necessary for accurate setting. Changes in altitude or power MAY REQUIRE readjustment of EGT.

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

Low Fuel Boost Pump Switch . . . . . ON
Fuel Selector . . . . . OPPOSITE TANK
Low Fuel Boost Pump Switch . . . . . OFF

OXYGEN SYSTEM

(OPTIONAL EQUIPMENT)

////////////////////
// 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 reasons NO SMOKING should be allowed in the airplane while oxygen is being 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 flow of oxygen from that outlet.
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 closely monitor* 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.

DESCENT

| NOTE|

***Avoid extended descents at low manifold pressure setting,* as engine can cool excessively and may not accelerate satisfactorily when power is re-applied.**

NORMAL DESCENT - GEAR UP

Seats, Seat Belts/Shoulder Harness . . . . . ADJUST AND SECURE
Wing Flaps . . . . . **UP**
Landing Gear . . . . . **UP**
Throttle . . . . . CHT in Green)
Propeller . . . . . *2400 RPM*
Mixture . . . . . Peak EGT (Monitor as descent progresses)
Cylinder Head Temperature (CHT) . . . MONITOR [250° F(121°C) minimum]
Airspeed . . . . . AS DESIRED(196 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 YELLOW ARC speed range unless the air is smooth.

NORMAL DESCENT - GEAR DOWN

Seats, Seat Belts/Shoulder Harness	ADJUST AND SECURE
Wing Flaps	UP
Airspeed	**DECELERATE** to 140 KIAS
Landing Gear	**DOWN**
Throttle	Keep CHT in Green Arc
Propeller	2400 RPM
Mixture	Peak EGT (Monitor as descent progresses)
Cylinder Head Temperature (CHT)	Monitor (250° F (121°C) min)
Airspeed	165 KIAS or LESS.

| NOTE |

Using 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 allowable weight and balance envelope for landing 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 landing at a weight exceeding maximum landing weight (3200 Lbs.)(1452 Kgs.)

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 Switches	OFF
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 nose down pitching moment caused by reduction of power and/or extension of flaps.

Elevator Trim	AS DESIRED
Rudder Trim	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 nose up pitching moment as power is increased and/or flaps are retracted.

Power	FULL FORWARD (2500 RPM)
Mixture	Verify FULL RICH
Fuel Boost Pump Switches	OFF
Wing Flaps	TAKEOFF POSITION (10°)
	(After POSITIVE climb established)
Trim	NOSE DOWN to reduce forces
Airspeed	85 KIAS
Landing Gear	RETRACT
Wing Flaps	RETRACT
Airspeed	105 KIAS

LANDING

LANDING (NORMAL)

Approach for Landing Checklist	COMPLETED
Approach Airspeed	CHECK
Touchdown	MAIN WHEELS FIRST (aligned w/ runway)
Landing Roll	LOWER nose wheel gently
Brakes	MINIMUM required

| NOTE |

If maximum performance landings are desired, use above procedures except, reduce 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 above procedures except maintain approach speed appropriate for wind conditions. Allow aircraft to crab until the landing flare. Accomplish touchdown in a slight wing low sideslip (low wing into wind) and aircraft aligned with runway. During landing roll, position flight controls to counteract crosswind.

~ ~ ~ ~ ~ ~ ~

~ CAUTION ~

~ ~ ~ ~ ~ ~ ~

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 Switches	OFF
Wing Flaps	RETRACT
Elevator Trim	TAKEOFF SETTING
Avionics/Radios	AS REQUIRED
Interior/Exterior Lights	AS DESIRED

SHUTDOWN

Parking Brake	SET
Throttle	IDLE RPM
Radio Master Switch	OFF
Interior/Exterior Lights	OFF
Pitot Heat	OFF
Magneto/Starter Switch	GROUNDING CHECK
Mixture	IDLE CUT-OFF
Alternator Field Switch	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**
Cabin Windows and Doors	with seat belts, cabin vents closed; CLOSED AND LOCKED

TIE DOWN AIRCRAFT at wing and tail points.