

DUCHESS 76 NORMAL PROCEDURES

PRE-FLIGHT

Cockpit	
Parking brake	SET
Avionics	OFF
Mixtures	IDLE CUT-OFF
Magneto/start switches	OFF
Battery switch	ON
Fuel gauges	CHECK QUANTITY
Warning lights	CHECK
Flaps	CHECK OPERATION
Battery switch	OFF
Flight controls	CHECK OPERATION
Trims	NEUTRAL

BEFORE STARTING ENGINES

Circuit breakers	IN
Carburettor heat	OFF
Cowl flaps	OPEN
Fuel selectors	ON
Light switches	OFF
Battery/alternator switches	ON

ENGINE STARTING

Alternator-out under-voltage lights	ILLUMINATED
Mixture	FULL RICH
Propeller	HIGH RPM
Throttle ¼	OPEN
Auxiliary fuel pump	ON
Magneto/start switch	BOTH
Prime	PUSH
Magneto/start switch	START

When the engine starts:	
Magneto/start switch	BOTH
Throttle	1,000-1,200 RPM
Oil pressure	ABOVE RED RADIAL WITHIN 30 SECS
Starter warning light	EXTINGUISHED

Repeat for other engine

Left alternator and battery switch	OFF
Left alternator-out under-voltage light	ILLUMINATED
Left alternator and battery switch	ON

Repeat for right alternator

TAXIING

Avionics	ON, AS REQUIRED
Lights	AS REQUIRED
Warning lights	CHECK
Auxiliary fuel pumps	OFF, THEN ON (check fuel pressure)
Engine instruments	CHECK
Taxi area	CLEAR
Parking brake	RELEASE
Throttles	APPLY SLOWLY
Brakes	CHECK
Steering	CHECK

BEFORE TAKE-OFF

Parking brake	SET
Radios	CHECK
Flight instruments	CHECK AND SET
Starter warning lights	EXTINGUISHED
Throttles	2,200 RPM
Propellers	EXERCISE (100-200 RPM drop)
Magnetos	CHECK (max. drop 175 RPM)
Throttles	IDLE
Parking brake	RELEASE

TAKE-OFF

Lined up on runway CHECK COMPASS
Flaps SET
Trim SET
Throttles FULL, 2,700 RPM

Accelerate to 71 KIAS

Yoke Back pressure to rotate smoothly to climb attitude
Landing gear RETRACT, CONFIRM UP
Airspeed Establish desired climb speed

CLIMB

Maximum climb FULL, 2,700 RPM
Cruise climb FULL, 2,600 RPM
Engine temperatures MONITOR
Mixtures LEAN AS REQUIRED
Cowl flaps AS REQUIRED
Auxiliary fuel pumps OFF

CRUISE

Maximum cruise power 24.0 inHg or full throttle, 2,700 RPM
Recommended cruise power .. 24.0 inHg or full throttle, 2,500 RPM
Economy cruise power 20.0 inHg or full throttle, 2,300 RPM
Power SET AS DESIRED
Mixtures LEAN AS REQUIRED
Cowl flaps AS REQUIRED

For level flight at 75% power or less, the EGT gauge can be used to lean the mixture for economy.

- *Cruise (lean) mixture – enrich mixture (push mixture control forward) until EGT indicator shows a drop of 25-50°F on rich side of peak.*
- *Best power mixture – enrich mixture (push mixture control forward) until EGT indicator shows a drop of 75-100°F on rich side of peak.*

DESCENT

Altimeter SET
Cowl flaps CLOSE
Carburettor heat ON
Power AS REQUIRED
Mixtures ENRICH AS REQUIRED

APPROACH AND LANDING

Airspeed 87 KIAS
Auxiliary fuel pumps ON
Mixtures FULL RICH
Cowl flaps AS REQUIRED
Landing gear DOWN (140 KIAS max.)
Landing lights AS REQUIRED
Flaps FULL DOWN (110 KIAS max.)
Airspeed 76 KIAS
Propellers HIGH RPM

AFTER LANDING

Landing lights AS REQUIRED
Wing flaps UP
Trims SET TO TAKE-OFF RANGE
Cowl flaps OPEN

SHUTDOWN

Parking brake SET
Auxiliary fuel pumps OFF
Avionics OFF
Propellers HIGH RPM
Throttles 1,000 RPM
Mixtures IDLE CUT-OFF
Propellers LOW RPM
Magneto/start switches OFF
Battery/alternator switches OFF