

Pathfinder Flying Club

Robin DR400/180 G-FTIL

CHECKLIST (Jan 17)

1. INITIAL CHECKS
2. EXTERNAL CHECKS
3. PRE-START CHECKS
4. START CHECKS
5. AFTER START CHECKS
6. TAXY CHECKS
7. RUN-UP/POWER CHECKS
8. PRE TAKE-OFF CHECKS VITAL ACTIONS
9. RUNWAY CHECKS
10. CHECKS DURING TAKE-OFF
11. AFTER TAKE-OFF CHECKS
12. AIRFIELD DEPARTURE CHECKS
13. CRUISE & DESCENT/REJOIN CHECKS
14. ENTERING LOW LEVEL CHECKS
15. STALLING CHECKS
16. PRE LANDING CHECKS
17. FINALS CHECKS
18. AFTER LANDING CHECKS
19. SHUTDOWN CHECKS
20. BASIC DATA

1. INITIAL CHECKS

On approaching the aircraft check:

General position	Safe location to taxi
Ground fire extinguisher	Available
Airframe	Free from ice, contamination

Before commencing the external checks carry out the following in the cockpit:

Parking brake	ON
Fire extinguisher	Check, secure
First aid kit	Secure
Headsets	Available
Documents	Stowed
Baggage area	Loose articles secured (max 60 kg)
Flaps	Check operation
Magneto switch	OFF, key out
Controls	Free movement
Battery Switch	ON
Pitot heater	ON /check/off
Landing/taxy lights	ON /check/off
Navigation lights	ON /check/off
Strobe lights	ON /check/off
Stall warning vane	Check operation + audible warning
	Fuel contents gauge Check contents and confirm with tech log and visual check of wing tanks
Battery switch	OFF
Fuel Cock	ON

2. EXTERNAL CHECKS

Start at left wing inboard edge.

Left Wing

Fuel filler cap	Secure
Flap	Condition, play, linkage, hinges
Undercarriage	Tyre, brake leaks, spat secure
Aileron	Condition, play, drains, hinges
Wing surfaces	Condition, drains
Inspection Cover	Security
Wingtip	Nav light
Leading Edge	Condition
Landing/taxi Light	Undamaged
Pitot Head	Remove cover/hole clear
Undercarriage	Condition, extension. Tyre - Condition/creep, inflation. Brakes damage and leaks. Spat secure
Flap Underside	Condition, drains clear
Wing tank fuel drain	Check for water contamination

Forward Fuselage

Fuel drain selector on)	Check for water contamination (fuel)
Canopy emergency Release - port	Wire tell-tale secure
Canopy Runner	Secure and undamaged
Cowling Port Side	Security, 3 fasteners, 1 lug with safety pin, 1 screw, no oil leaks
Fresh Air Intake	Clear
Propeller	Condition, spinner secure
Nosewheel	Condition, extension, tyre-cuts/creep/inflation, spat secure
Ram Air Inlet	Check clear
Cowling Stbd Side	Security, 3 fasteners, 1 lug with safety pin, 1 screw, oil leaks Oil Contents-minimum 6 US quarts, panel secure (do not over tighten dipstick)

Canopy Runner	Secure and undamaged
Canopy emergency Release - stbd	Wire tell-tale secure

Right Wing

Fuel filler cap	Secure
Wing tank fuel drain	Check for water contamination
Leading Edge	Condition
Undercarriage	Condition, extension, Tyre condition/creep, inflation. Brakes – damage and leaks, spat secure
Flap Underside	Condition
Wing surfaces	Condition, drains
Inspection Cover	Security
Wingtip	Nav light
Aileron	Condition, play, drains
Wing	Drains
Undercarriage	Tyre, brake leaks, spat secure
Flap	Condition, play, linkage, hinges

Rear fuselage

Static Vent - Stbd	Clean, unobstructed
Fin fairing	Secure
Elevator	Secure, hinge clearance
Strobe Light	Condition
Rudder	DO NOT MOVE. Condition, stiff nut, nav lts, hinge clearance.
Trim Tab	Position, stiff nut, security, play, hinges
Static Vent - Port	Clean, unobstructed
Baggage Door	Secured [max 60 kg]

3. PRESTART CHECKS

Passenger Briefing	Stated
Harness	Secure (3 straps) Solo, secure RH harness, rear seat harnesses
Front Seats	Adjusted and locked
Headset	Plugged in, don
Master Switch	ON, intercom set & check
Circuit Breakers	All made
CO Monitor	Normal
Ammeter	Condition
Alternator	OFF
Throttle	Free movement – Set closed
Air Vents	Closed
Flight Instruments	Check Condition
Warning Lights	Test
Radios	OFF
Nav Equipment	OFF
Transponder	OFF
Cabin Heat	OFF
Pitot Heat	OFF
Instrument Lights	OFF (except night flying)
External Lights	OFF (except nav lights for night flying)
Carburettor Heat	Full movement and Cold
Engine instruments	Condition
Tacho Time (RPM gauge)	Note reading
Fuel Boost pump	OFF
Mixture	Full movement and Rich (Up)
Fuel Cock	ON, Check contents – all tanks, Select left tank
Parking Brake	Set ON
Trim	Full free movement and set Neutral
Flaps	Check at T/O and then UP
Controls	Full free movement – correct sense (except rudder) – no play or excessive friction
Canopy	Closed and locked

4. START CHECKS

Strobe Light	ON
Carb Heat	OFF
Fuel Pump	ON - check fuel pressure rises
Mixture	Full rich
Key In	Mags off
Throttle	Prime as required (slowly pump throttle 4 times if cold, none if CHT ↑ 250°F), set 1/4" open
Magneto	Left
Intercom	OFF
Propeller	Clear -call "Clear Prop"
Intercom	ON
Starter	Press, release when engine fires (max 30 secs)
Starter Engaged Light	Out (If not, shutdown and investigate)
Magnetos	Both
Throttle	Set 1200 rpm
Oil Pressure	Rising within 30 seconds
Alternator	ON

5. AFTER START CHECKS

Fuel Pump	OFF
Fuel cock	Select right tank
Alternator	Charging
Magneto	Check for dead magneto
Suction	Indicating
Horizon	Erecting, adjust datum
DI	Synchronise
Radios	ON, frequencies set
Nav Equipment	ON, frequencies set
Transponder	Standby, 7000 set
Radio	RT check & taxi clearance
Landing Light	ON (night flying only)

6. TAXY CHECKS

Brakes	Test (dual, both sides)
Flight Instruments	Check turn co-ordinator, slip ball, compass, DI, AI Right turn: needle right, ball left, numbers increasing, AI steady Left turn: needle left, ball right, numbers decreasing, AI steady
Rudder	Check full and free movement

7. RUN UP/POWER CHECKS

Park aircraft into wind with the nosewheel straight

Fuel cock	select main tank
Parking Brake	ON
Safety	Canopy locked, controls central, clear behind
Oil Pressure & temp	Green range
Fuel Pressure	Green range
Mixture	Fully rich
Carb heat	Cold
Throttle	Set 2000 rpm - check brakes holding
Suction	Indicating – Green range
Ammeter	Positive charge indicating
Carburetor Heat	Select Hot - Check drop in rpm approx. 100 rpm then reselect Cold rpm restored
Magnetos	Check Left & Right in turn. Max drop 175 rpm, max 50 rpm difference between Left & Right
Mixture	Lean until RPM reduction then reselect full rich
Throttle	Close. Check smooth idle 600 – 650 . Reset 1200 rpm

8. PRE TAKE-OFF CHECKS (VITAL ACTIONS)

Pitot Heater	As required
Suction	Check
TC Flag	Clear
Flight Instruments	Check and set – AI, DI, TC
Engine Ts and Ps	Check
Transponder	Test (check light on) set to ALT
Carburetor Heat	Cold
Mixture	Full rich
Magnetos	Both
Fuel Cock	ON, contents sufficient (<i>Note: Fullest tank is recommended for all circuit flying</i>)
Fuel Pump	ON, check pressure increase
Flaps	Take-off - check lift off speed (- 54 KIAS)
Elevator Trim	Set at Neutral or according to balance
Seat Belt	Tight and secure
Controls (Ail/Elev)	Full & free movement
Canopy	Closed & locked

TAKE-OFF BRIEF: *The following points must be briefed:*

- i. *Operating pilot for the departure*
- ii. *State of the grass (long/wet)*
- iii. *Runway length and crosswind*
- iv. *Action in the event of an engine failure on the ground*
- v. *Action in the event of an eng fail after take-off – identify potential landing area*
- vi. *Action of non-operating pilot/passenger*

9. RUNWAY CHECKS

Take-off Time	Note
Approach & Departure lanes	Clear
Compass/DI/Rwy Heading	Aligned

10. CHECKS DURING TAKE-OFF

Throttle	Full pwr, min 2200 rpm
Engine Temps & Pressures	Check ASI Increasing
Take-off speed (take-off flap)	54 kias

11. AFTER TAKE-OFF CHECKS

Climb speed	
Flaps at take-off	Best rate 81 kias, best angle 70 kias
Flaps up	Best rate 92 kias, best angle 76 kias
Engine Temps & pressures	Check
Flaps	Raise A/R

12. AIRFIELD DEPARTURE CHECKS

Fuel Pump	OFF (at safe height)
Landing Light	OFF
Radio/Nav Equipment	Set
Altimeter	Set (Note airfield QNH/QFE if returning)

13. CRUISE, PERIODIC & DESCENT (REJOIN) CHECKS

To be completed every 3000 ft in the climb and at intervals of not greater than every 15 minutes in the cruise

Fuel	Fuel pumps as required ON when changing tanks Fuel cock as required Throttle set as required Mixture set as required Contents & pressure checked Fuel tank selection <i>Fullest tank for T/O and Landing</i>
------	---

Radios/Nav aids	Set as required Transponder - ALT Ammeter charging Circuit breakers in
-----------------	---

Engine	Ts & Ps checked Carb ice check CO Monitor - Normal
--------	--

Direction Indicator	Align with compass Check suction
---------------------	-------------------------------------

Altimeter	Set as required
-----------	-----------------

In the descent:

Power	As required
-------	-------------

Carb Heat	As required
-----------	-------------

Every 1500 ft	Apply power to avoid engine over-cooling and to clear the plugs
---------------	---

14. STALLING CHECKS

Height Sufficient to recover by briefed height
 See FOB
Airframe Flaps up – as required
 No mist/ice on canopy
Security Harnesses secure
 Canopy locked
 Loose articles stowed
Engine Fuel pump ON
 Fuel cock – Fullest tank
 Mixture rich
 Fuel contents & pressure checked
 Ts & Ps checked
 Carb ice check
Location Clear of:
 Active airfields
 Built up areas
 Controlled airspace & cloud
 Danger /Restricted areas
 Good horizon available
Lookout Clear above and below. Min 180° before first
 stall, then 90°

Stalling speeds:

- Flaps up 57 kias
 - Flaps take-off 53 kias
 - Flaps land 51 kias

15. CIRCUIT JOINING CHECKS: FREDA

16. CIRCUIT SPEEDS

	Normal		Flapless
	Flap Position	Speed (Knots)	Speed (Knots)
Downwind	Up	80	80
Base turn	T/O	75	80
Finals	Land	70	76
Threshold	Land	60	65

17. PRE-LANDING CHECKS

Brakes OFF
 Undercarriage Down & Locked.
 Mixture Fully Rich
 Fuel cock ON, contents sufficient. (Main tank is recommended for all circuit flying)
 Fuel pump ON
 Indicators Ts & Ps checked
 Carb Heat Hot
 Hatches Secure
 Harnesses Secure
 Flap Take-off (max 92 kias)

18. FINALS CHECKS

Clearance Obtained
 Carburetor Heat Cold
 Flaps As required
 Brakes Toes Clear

19. CROSSWIND/GUSTING LANDING

Flaps Take-off
 App Speed 70 kias + ½ wind gusts
 Max demonstrated crosswind 22 kias

20. GO AROUND

Carb heat	Cold
Throttle	Open Fully
Speed	67 kias
<i>When safe to do so:</i>	
Flaps	Take-off
Speed	81 kias

21. AFTER LANDING CHECKS

Landing time	Note
Pitot Heat	OFF
External Lights	As required (Strobe light ON)
Nav Equipment	OFF
Transponder	OFF
Carb Heat	Cold
Fuel pump	OFF
Flaps	UP
Trim	Set neutral

22. SHUTDOWN CHECKS

Parking Brake	On
Throttle	Set 1200 rpm
Radios	Off
Magnetos	Check live/dead mag i.e. "Drop no stop"
Set 1800rpm for 15 seconds,	
Throttle	Set 1000 rpm
Mixture	Slowly to Idle Cut Off
Alternator	Off
<i>When propeller has stopped:</i>	
Magnetos	Off, key out
Fuel Cock	Off
External Lights	Off
Master Switch	Off
Flaps	Down
Tacho Time	Note reading
Headsets	Remove
Harness	Release, loosen & tidy straps
Aircraft	Vacate - remove personal belongings
Chocks	If available then brakes off

Aircraft - Carry out 4-point check (wing tips, prop and tail bumper)

ROBIN DR400-180 – BASIC DATA

1. GENERAL CONSTRUCTION

The Robin DR400-180 Regent is a four-seat, single engine, low-wing monoplane of wooden construction.

2. REGISTRATION CATEGORY & PERFORMANCE GROUP

Aircraft classified as - Aeroplane (Landplane)
Aircraft classified in - Performance Group 'E'
Aircraft certificated in - Public Transport Category

3. FLIGHT CONDITION LIMITATIONS

Flight in known or forecast icing conditions	Not cleared
Flight at night	Cleared*
Flight in Instrument Meteorological Conditions	Cleared*

* Flight permitted subject to carriage of appropriate equipment

4. DIMENSIONS

Length	7.10 m
Wingspan	8.72 m
Height	2.23 m

5. ENGINE

Engine type	: Avco Lycoming O-360-A3, 4
cylinder, 4 stroke	
Engine rating	: 180 HP at 2700 RPM
Max permitted RPM	: 2700

Avoid cont ops between 2150 & 2350 rpm

Cylinder head temp range	: 0° to 230° (Green arc)
Propeller type	: Sensenich76EM8S5-0-64
Propeller diameter	: 1.93 m
Propeller pitch	: Fixed (64")

Associated Engine controls / indicators:

RPM gauge, throttle, magneto switch, starter engaged light, oil pressure gauge, oil temperature gauge, cylinder head temperature gauge.

6. ENGINE LUBRICATION

Oil type (all temps)	:	SAE 15W-50 or 20W-50
Oil capacity (max/min)	:	8 US qts (club min 6)
Oil consumption (cruise power)	:	Approx 4 hrs per US qt
Oil circulation	:	Wetsump, Engine-driven pump
Oil temperature (normal range)	:	Max 118° C 60°– 118° C (green arc)
Oil pressure (normal range)	:	Min 25 psi (at idle) 55- 95 psi (green arc) Max 115 psi

NB: Oil pressure must be in green arc within 30 seconds of engine start.

7. FUEL SYSTEM

Fuel type	AVGAS 100 LL
Fuel pump	Engine driven + electric booster
Fuel capacity (total)	41.8 Imp Gals (190 Litres)
Fuel capacity (usable)	41.58 Imp Gals (189 Litres)
Fuel pressure – normal range	35-550 mbar (Green arc)
Fuel consumption	Approx 6 Imp Gal/Hr @ 2300 RPM
Fuel drain position	Rear L.H.S of lower cowling + 1 drain for each wing tank and 2 drains for the main tank

Associated controls / indicators:

Fuel cock, mixture control, throttle, fuel contents gauge, fuel pressure gauge, carburettor heat control.

Low fuel pressure & level warning light On annunciator panel

8. IGNITION SYSTEM

Number / type of magnetos	Two x Bendix
Magneto switch settings	Off – R – L – Both
Impulse & spark retard device (for engine start)	Left Magneto
Magneto drop check performed at	-2000 RPM
Acceptable magneto drop @ 2000 RPM	-175 RPM
Acceptable difference @ 2000 RPM	-50 RPM

NB: 1. Magnetos are ground to earth when switched off.
2. Ignition key should only be removable with magnetos switched off.

9. ELECTRICAL SYSTEM

Battery voltage/current :	12 Volts DC / 25 Ampere hours
Battery position	Forward side of firewall, left hand side of engine
Alternator :	12 Volt / 60 Ampere

Associated controls / indicators:

Ammeter, circuit breakers, battery master switch, alternator switch, alternator warning light.

Electrically driven instruments & systems

Turn co-ordinator
Stall warning audio
Pitot head heater
Clock
Radios
Navigation aids
Internal and external lighting & strobe
Fuel booster pump and contents gauge
Starter motor and warning light
Engine instruments
Alternator warning light
Annunciator panel

10. VACUUM SYSTEM

Vacuum pump	Engine driven
Vacuum pressure (normal range)	Green arc
Minimum RPM for green arc	1500 RPM
Vacuum driven gyro instruments:	AI & DI
Time to reach operating speed	2 minutes
Reliable time after vacuum failure	1 minute
Failure indication on AH and DI	Nil

11. PITOT & STATIC PRESSURE SYSTEMS

Pitot tube location	Under leading edge port wing
Pitot heating	Electrical
Instrument supplied	Airspeed indicator
Static source locations	Each side of rear fuselage

Instruments supplied : Airspeed indicator, Vertical speed indicator

Altimeter

12. UNDERCARRIAGE

Type	Fixed, tricycle with shock absorbers, pneumatic tyres and steerable nosewheel.
Tyre Pressures	
- nosewheel	26 PSI
- mainwheels	29 PSI
Oleo extensions	Approx 3 inches
Nose wheel steering	Via rudder pedals
Wheel brakes	Hydraulic disc brakes
Braking methods	Toe brakes and parking brake

13. CRITICAL SPEEDS

V_{ne}	Velocity never exceed	166	Kt
V_{no}	Velocity normal operations	140	Kt
V_a	Velocity manoeuvring	116	Kt
V_{fe}	Velocity flaps extended	92	Kt
	Lift-off speed (take-off flap)	50	Kt
	Lift-off speed (no flap)	53	Kt
	Best rate Climb speed (take-off flap)	81	Kt
	(Flap up)	92	Kt
	Best angle Climb speed		
	<i>(NB: Only when absolutely necessary, due to poor engine cooling)</i>		
	(take-off) flap	70	Kt
	(Flap up)	76	Kt
	Max Turbulence speed (flap up)	140	Kt
	Powered approach (Full flap)	68	Kt
	Best glide speed (range approx 2nm per 1000 feet)	81	Kt
	Best endurance speed	70	Kt
	Threshold speed (flaps extended)	60	Kt
	Threshold speed (no flap)	65	Kt
V_{so}	Velocity stall (take off flap : 18°)	53	Kt
V_{so}	Velocity stall (full flap : 40°)	51	Kt
V_{s1}	Velocity stall (no flap)	57	Kt
	Max cross-wind for take-off & landing	22	Kt

14. CRITICAL WEIGHTS

Maximum all up weight for take-off and landing (Cat N)	2425 lbs
	1100 Kg
Basic empty weight (inc engine oil)	623 Kg
Maximum luggage compartment weight	60 Kg
Weight of full fuel load 299 lbs (189 litres)	137 Kg

EMERGENCY DRILLS

1. ENGINE FIRE IN FLIGHT
2. ENGINE FIRE DURING START
3. ELECTRICAL FIRE
4. COCKPIT FIRE
5. FUMES IN THE COCKPIT
6. OIL PRESSURE FAILURE
7. ENGINE MECHANICAL FAILURE
8. ENGINE FAILURE - PROPELLER STOPPED
9. ENGINE FAILURE - PROPELLER TURNING
10. ENGINE FAILURE AFTER TAKE-OFF
11. ROUGH RUNNING ENGINE
12. ENGINE RESTART PROCEDURE
13. FORCED LANDING CHECKS
14. DITCHING
15. ALTERNATOR FAILURE
16. COMMUNICATIONS/RADIO FAILURE
17. LOST PROCEDURE

1. ENGINE FIRE IN FLIGHT

Fuel	Fuel cock OFF Full power until engine stops Throttle closed Mixture ICO Fuel pump OFF Magnetos OFF
Ignition	
Radio	Emergency call Squawk 7700
Electrics	Master OFF Alternator OFF
Cabin heat and ventilation	OFF
Max Glide speed	81 Kts
Carry out Forced Landing Cx	See 13.

2. ENGINE FIRE DURING START

Keep engine turning on starter

Fuel selector	OFF
Fuel pump	OFF
Throttle	Fully open
Mixture	ICO

Once fire is out turn off all electrical switches, vacate the aircraft and place it u/s.

If fire continues

Magnetos	OFF
Battery	OFF
Alternator	OFF

Vacate the aircraft and fight fire with available equipment

3. ELECTRICAL FIRE

Master Switch	OFF
Alternator	OFF
Circuit Breakers	Trip All
Cockpit Fire Drill (FIRE)	Action if necessary

Land as soon as possible

4. COCKPIT FIRE

Fresh Air Vents	Open
Radio	Emergency call Squawk 7700
Fire Extinguisher	As required*

For electrical fires

Cabin ventilation	Reduce
Alternator	OFF
Battery	OFF
Land ASAP .	

*** Halon fire extinguishers are a toxic hazard**

5. FUMES IN THE COCKPIT

Cockpit Hot Air	OFF
Fresh Air Vents	Open
Engine Instruments	Check for sign of malfunction

If smell is electrical, carry out Electrical Fire checks

If smell is petrol, do not make electrical selection

Land as soon as possible

6. LOW OIL PRESSURE

Throttle	Use minimum practicable power Monitor Oil temperature
----------	--

Assume engine failure is imminent

Land as soon as possible via precautionary forced landing pattern

If engine seizes carry out Engine Mechanical Failure (7) and Forced Landing checks (13)

7. ENGINE MECHANICAL FAILURE (Propeller stops suddenly perhaps with obvious signs of failure)

Adopt glide attitude and choose field for forced landing

Fuel	Throttle closed Mixture ICO Fuel cock OFF Fuel pump OFF
Ignition	Magnetos OFF

Radio	Emergency call Squawk 7700
-------	-------------------------------

Electrics	Master OFF Alternator OFF
Harness	Secure
Alternator	OFF

DO NOT ATTEMPT RESTART

On short final

Flaps	Full
Battery	OFF
Canopy	Unlock

8. ENGINE FAILURE (no signs of mechanical failure)

Select glide attitude and choose field for forced landing
If height sufficient (above 1500' agl) attempt restart

Warning: If the engine failed with unusual mechanical noise do not attempt restart.

Radio	Emergency call
Carburetor Heat	Change setting
Fuel selector	Select alternate tank which contains fuel
Fuel pump	ON
Mixture	Fully rich
Throttle	1/4" open
Magnetos	Both

If engine does not start from windmilling operate starter

If engine has not started by 1500' agl carry out Forced Landing checks

9. ENGINE FAILURE-PROPELLER TURNING

If there is no Oil Pressure or an unusual mechanical noise carry out Engine Mechanical Failure drill, otherwise attempt restart procedure

10. ENGINE FAILURE AFTER TAKE-OFF

Select glide attitude	78 kts
Radio	Emergency call

Select landing area within 30° of hdg

Flaps	As reqd
-------	---------

If time permits

Mixture	ICO
Fuel selector	OFF
Fuel Pump	OFF
Magnetos	OFF
Battery	OFF

Canopy Unlock
11. ROUGH RUNNING ENGINE

Change carburetor heat setting

Fuel pump	ON
- Fuel Pressure	Indicating
- Fuel contents	Sufficient
- Fuel selector	Change tanks

Mixture	Fully rich
Ignition	Select <u>best</u> of L-R-BOTH
Electrics	Master ON Alternator OFF

If engine fails to start, carry out Engine Mechanical Failure and Forced Landing checks.

12. ENGINE RESTART PROCEDURE

Fuel	Fuel pump ON Fuel cock ON Throttle 1/4 open Mixture full rich Pressure checked Contents checked
Ignition	Both
Electrics	Alternator OFF Master ON

Either operate starter or carry out Air Start. Once the engine is running:

Throttle	Advance slowly-allow engine to warm
Alternator	ON

13. FORCED LANDING CHECKS

- Glide at: (a) 80 kias - clean (still air glide range about 2nm/1000')
(b) 70 kias - flap take-off/land

Select suitable landing area & plan engine out approach

If appropriate and time permitting, carry out:

- (1) Engine Restart Drill
(2) Engine Mechanical Failure Drill

When committed to Forced Landing

Harness	Secure
Passengers	Brief
Fuel pump	OFF
Mixture	ICO
Throttle	Close
Magnetos	OFF
Fuel selector	OFF
Alternator	OFF

On short final

Flaps	Full
Battery	OFF
Canopy	Unlock

14. DITCHING

Warning: Ditching is best carried out whilst engine power is still available to control the rate of descent.

Flaps	LAND
Speed	55 kias
Rate of descent	300 fpm

Do not round out - continue descent into water

In strong wind, land into wind; otherwise land parallel to the swell

15. ALTERNATOR FAILURE

Electrical Equipment	All off
Alternator	Off
Excitation CB	Set
Alternator CB	Set
Alternator	On

If alternator output restored, re-establish only essential electrical loads, land as soon as practicable

If alternator output not restored, use minimum electrical services and attain VMC. Battery duration approx 30 minutes.

16. COMMUNICATIONS/RADIO FAILURE

Radio/Intercom	
Switches	Check
Circuit Breakers	Check
Radio	Change frequency
Headset	Check connections
	Change headsets
Radio	Switch Off/On
Transponder	Squawk 7600

17. LOST PROCEDURE

With radio/navigation aids serviceable

- a. Climb to improve view if certain of no airspace conflicts.
- b. Check DI synchronised
- c. If fix not immediately available, go to 121.5 MHz and make a PAN call or request a TRAINING FIX
- d. Do not delay. Make use of the emergency services as soon as possible

With no radio/navigation aids.

- a. If certain of no airspace conflicts, climb to improve view.
- b. Complete communications failure drill. Continue to transmit.
- c. Squawk 7600.
- d. Aircraft safety - check safety altitude and fuel remaining.
- e. Check why lost:
 - Check correct heading flown and DI synchronised.
 - Check correct speed being flown.
 - Time; check ETA
 - Check any previous calculations
 - Wind - check smoke etc to assess accuracy of planned wind
- f. If feasible return to last fix
- g. Revert to GROUND – CLOCK – MAP scan i.e. find large features on ground, check elapsed time and search the map for this feature around the timing mark
- h. Fly to a major line feature, e.g. coastline, and re-establish position.
- i. Take account of any potentially adjacent controlled airspace.

- j. When position re-established decide on sensible course of action. (Divert or RTB)

FLIGHT MANUAL DR400/180

