HELILAUSANNE

HB-ZSY

AS 350 B3 e CHECKLIST
EMERGENCY CHECKLIST
LIMITATIONS
PERFORMANCES
PREFLIGHT CHECKLIST
ALERT CHECKLISTE
SECURITY AROUND
W&B COMPUTATION SAMPLES
M-MEL

The pilot is responsible for correct operation of the helicopter according AFM. This summary is provided only as additional material for preflight preparation. Heli-Lausanne declines all responsability in case of non respect of any official manufacturer limitations(AFM).

ALLWAYS REFER TO AFM FOR MANUFACTURER PROCEDURES

AS 350 B3e - NORMAL PROCEDURES / CHECKLISTS

Cockpit Preparation

1. Outside check .....completed
2. Helicopter documents ..... checked
3. Seats and pedals .....adjusted
4. Seat belts……...fastened
5. Rotorbrake..... ..forward / released
6. Fuel shut-off lever ..... forward and secured
7. Twist grip .....Idle position
8. Hydraulic switch..... ON
9. **Engine starter (overhead switch).....OFF**
10. Battery .....ON
11. **Gen..... OFF**
12. Instrument light .....as necessary
13. **GPS (G430) .....ON**
14. Warning lights (W/LT TST) .....Press to test
    (Check TRQ indicates 100% for 2 seconds)
15. ACCU / HYD TEST.....press for 2 sec
    (centers pedals to neutral)
16. Warning Pannel
    GENE FUEL P PITOT HORN
    HYDR ENG P MGB P TWT GRIP
    with EPU + BATT
17. VEMD check
    no message/ 2 screens
    Batt > 22 Volts
    Bleed valve opended
18. Control pedals — free travel
19. Cylclic — center and friction
20. Collective — down and locked
21. Heating system.....OFF
22. Instruments..... static or zero
23. Flight time counter/Chrono.....checked
24. COM / NAV / Transponder..... off
25. Switches..... all off
26. Cargo hook (electrical + manual)…… checked and set as required

Engine Start

1. Start-up clearance (if necessary) ..... received
2. Rotor..... free
3. Area..... clear
4. **CPW..... check GOV light is OFF**
5. **Fuel pump..... ON**
6. **GENE ..... OFF**
7. Starter Selector..... ON
8. Check parameters : Ng..... increase
   TOT .....below limits
   Engine oil pressure .....checked

   When N1 > 60% VEMD switch to FLI MODE
   (FLI MODE)

9. When N1 > 67 % -> GENE ……..... ON
10. Warning lights..... all out, exc. HORN / PITOT / TWT GRIP
11. Pitot..... ON
12. **Fuel Pump ..... OFF**
13. **Engine starter selector guard.....closed**
14. Avionics ..... ON
15. All neccessary systems ..... ON
16. Avionic / Gyros (Att ind./D..... ON
17. FM / COM / NAV / Transponder /GPS.....on and set
18. Altimeter ..... QNH set
19. **Hyd. accumulator test ..... checked**
20. **Hyd. isolation test..... checked**
21. Gyros (Att ind./DG) ..... set
22. Twist grip..... flight position
23. Horn..... ON when RRPM at 340 / check sound
24. NR..... check RPM in lower green arc
25. Fire Test..... gong + illumination
26. Parameters.....check NO warning, Voltage and Pressure
27. **Landing Light ..... ON**
    (for in-flight collision avoidance, keep light ON all flight duration)

CRANKING - after aborted start or maintenance

1. Engine starting selector..... OFF
2. Shut OFF Lever.....forward
3. N1 < 10 % ..... check
4. Crank ..... press max 20 sec

4.4 TAKEOFF

4.4.1 BEFORE TAKEOFF CHECK

1. Doors.....CLOSED or sliding doors OPEN LOCKED.
2. Cyclic and collective frictions .....AS REQUIRED.
3. Landing light.....AS REQUIRED.
4. Temperatures and pressures.....NORMAL RANGE.
5. CWP.....All lights OFF.
6. Collective pitch.....UNLOCK.

NOTE

Adjust collective and cyclic frictions so that friction loads are felt by the pilot when moving the flight controls.

4.4.2 TAKEOFF CHECK AND PROCEDURE

CAUTION

Heating and demisting system can be used during takeoff but this degrades the aircraft hover and climb performance shown in SECTION 5 when operating at engine limits (N1, TOT).

- Gradually increase collective pitch to hover at 5 ft (1.5 m). Check engine and mechanical control instruments, no warning light.
- Increase airspeed with HIGE power until IAS = 40 kt (74 km/h), then begin to climb so as to clear 40 ft (12 m) at IAS = 50 kt (93 km/h).

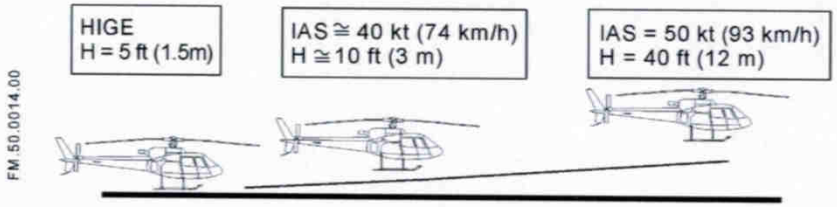


Figure 4-2: Takeoff Procedure

CAUTION

For safe operation, takeoff path should avoid HV diagram (Refer to SECTION 5).

4.5 CLIMB

Above 100 ft (30 m), for maximum climb performance, select Maximum Continuous Power and optimum climbing speed (Vy):

IAS kt = 65 kt at 0 Hp - (1 kt / 1000 ft).
IAS km/h = 120 km/h at 0 Hp - (2 km/h per 300 m).

4.6 CRUISE

Fast cruise is obtained by the first limitation reached corresponding to the beginning of the FLI amber area:
Corresponding mechanical or engine limits (TRQ, N1, TOT) are indicated by underlined numerical value.
Reduce indicated airspeed in turbulence.

4.7 APPROACH AND LANDING

4.7.1 APPROACH

- Begin approach at Vy.
- At approximately 100 ft (30 m), reduce airspeed down to HIGE at 5 ft (1.5 m).

• Approach check:

1. Landing light ..... AS REQUIRED.
2. All parameters ..... CHECK.

4.7.2 LANDING

- In hover, gradually reduce collective pitch until touchdown, then fully reduce collective pitch.

Engine Shut Down

1. Cyclic ..... neutral
2. Collective ..... full down and locked
3. Frictions ..... on
4. Horn..... off
5. Landing light ..... off
6. Throttle Idle position (TWT Grip) ..... for 30 seconds
7. FM / COM 2/ NAV / Transponder..... off

G430 / GPS must remain ON (error on VEMD)

8. Pitot heat ..... off
9. Avionic / Gyros (Att / DG)..... off
10. Engine starting selector (overhead switch)..... off
11. Generator..... off
12. Rotor brake..... apply as required below 140 RRPM
13. Rotor ..... stopped
14. Instrument lights..... off
15. HYD TEST button ..... press for 1-2 sec. to center pedals

16.VEMD .....report datas for techlog

17. Battery ..... off

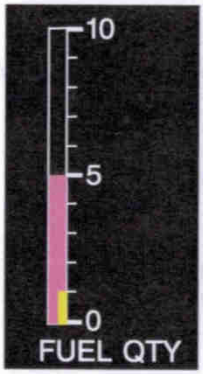
4.9 MISCELLANEOUS PROCEDURES AND DATA

4.9.1. TANK CAPACITY

- **Maximum capacity**

  540 liters (142.7 US gal - 427 kg - 941 lb).

- **Fuel gauge**



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10 = usable fuel quantity, depending on type of fuel tank (Refer to § 1.3.4, Section 1).

: 15 min. of flight time remains at MCP at the beginning of this range.

NOTE 1

The unusable fuel quantity is reached when zero is indicated on the fuel gauge.

NOTE 2

Fuel quantity indication in kg and fuel flow indication in kg/h is based on a fuel density of 0.79 kg/l.

4.10 EXTREME WEATHER OPERATIONS

4.10.1 HIGH WIND OPERATION (WIND ABOVE 30 KT (56 KM/H))

- **Parking**
  - Park the helicopter head into the wind. Maintain rotor brake applied with one blade at 12 o'clock. Keep blade socks until start up.
  - For wind above 40 kt (74 km/h) the helicopter must be tied down.
- **Start up**
  - When the rotor begins to turn, apply a small cyclic stick input into the wind.
  - As soon as N1 > 67 %:

    Twist grip.....FLIGHT position.
- **Run up check**
  - Perform the hydraulic checks with the twist grip in FLIGHT position and NR at nominal speed.
- **Engine and rotor shutdown**
  - Allow engine oil to cool with twist grip in FLIGHT position.

NOTE

Start up and shutdown have been demonstrated up to 40 kt (74 km/h) of wind from any direction and for 50 kt (93 km/h) headwind.

4.10.2 COLD WEATHER OPERATION

Refer to SUP.4 "Instructions for use in cold weather".

SNOW CONDITIONS

FLIGHT UNDER FALLING SNOW **IS FORBIDDEN** UNLESS FITTED WITH SAND FILTER .

HB-ZSY IS NOT FITTED WITH SAND FILTER !

AS 350 B3 e - EMERGENCY PROCEDURES

ENGINE FAILURE

1. Enter autorotation immediately
2. If altitude permits, attempt engine air restart

ENGINE AIR RESTART

1. Establish steady autorotation
2. Starting selector OFF
3. Generator - OFF
4. Carry out normal starting procedure

SMOKE IN THE CABIN

- Source of smoke identified
  1. Shut off the corresponding system
  2. If necessary use fire extinguisher
  3. Air the cabin
- Source of smoke not identified

  1. Shut off heating/demisting system
  2. Switch off “EMER SHED” , GENE OFF, AVIONICS OFF
  3. When smell has disappeared, set all switches to “OFF”
  4. Reset battery switch to “ON”
  5. Switch on generator, check voltage
  6. Switch on circuits one by one until malfunction is identified or land as soon as possible

  NB: VEMD will goes out during procedure -> refer to VEMD failure

YAW SERVO CONTROL MALFUNCTION (BLOCKED PEDALS)

- Hover
  1. If no yaw – land normally
  2. If helicopter is yawing – hydraulic switch on collective OFF
- Forward flight
  1. Reduce speed
  2. Hydraulic switch on collective - OFF
  3. Perform run-on landing if necessary

TAIL ROTOR CONTROL FAILURE

- Complete Loss of Thrust - OGE
  1. Enter autorotation – maintain 65 kt IAS
  2. Shut down engine
- Complete Loss of Thrust - IGE
  1. Reduce collective before yaw rate is too high

- Fixed Pitch Failure
  1. Set IAS to 70 kt in level flight
  2. Press hydraulic push-button for 5 seconds
  3. Make shallow approach with run-on landing

ENGINE OIL TEMPERATURE HIGHER THAN MAX

- At Low Speed or in Hover
  1. Land if possible
  2. Shut down engine
  3. Check that cooler fan is operating

  If landing is impossible

  1. Increase speed and reduce power
  2. Fly at approximately 80 kt – temperature should fall rapidly
  3. Check Engine pressure
  3. If cooling can not be obtained – land as soon as possible

- In Cruise Flight
  1. Reduce power
  2. Proceed as above (A)

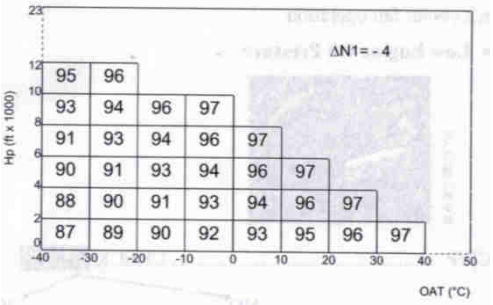
NG INDICATOR FAILURE

In the event of an NG indicator failure, do not exceed the maximum authorized TRQ and 842 °C TOT value limits

NB: in this case, maximum TOT displayed is starting limitations

TORQUEMETER FAILURE

In the event of a torquemeter failure, do not allow the engine speed to rise above the **following limits**:



T4 INDICATOR FAILURE

1. Comply with the N1 and TRQ limitations
3. Switch off heating and demisting
2. Do not attempt to start the engine

VEMD FAILURE

One screen failure: OFF 1 or OFF 2 according to failure
Information will be switch automatically to the not affected screen.
FLI not available (3 parameters page)
Use scroll to switch form page to page

Both screen failure: IAS : 100 kts minus 2 kts/1'000 ft
carry a shallow approach and no hover landing

COMPLETE ROTOR RPM (NR) INDICATOR FAILURE

1. Maintain engine torque above 10%. Use Nf needle as reference
2. Land as soon as possible

FREE TURBINE RPM (Nf) INDICATOR FAILURE

1. Check that NR reading remains within governed range when collective is changed
2. Keep torque above 0% and continue flight

Note: in case of Nf failure, ECBAU may be not available !

BLEED VALVE FLAG ON /NG INDICATOR REMAINS ON IN FLIGHT

1. If possible, increase power to check if bleed valve closes

If bleed valve remains open:

1. Avoid sudden power changes – compressor stall may occur
2. Make a flat approach be prepared for decreased hover performance

Note : Bleed vlave failure result in GOV

ICS INOPERATIVE

1. ICS OFF
2. COM 1 ON

VHF for RH pilot only via COM 1 and audio warning available via COM 1
Avoid or cancel hoist operations

AS 350 B3 e - WARNINGS

ENG P

Check gauge
if pressure low or nil : **Land immediately**
and be prepared to autorotate

if pressure normal: Land as soon as practicable

MGB P

Land as soon as possible
Collective : reduce
if landing not possible, proceed to suitable
landing place at minimum power speed / Vy
(55' test bench)

GOV

Major governor fail - emerg. mode self engaged
Flight parameters: check

avoid abrupt changes
Hp< 20'000ft maintain Ng > 80 %
Hp> 20'000ft maintain Ng > 85 %

Land as soon as particable
Powered approach
avoid sttep angle
slowly down collective

GOV failure can occure if loss of NG and torque
on VEMD

During start: shut down immediately

ENG FIRE

at start up
Starting selector : OFF
Fuel shut-off lever : AFT
Booster pump : OFF
Crank depress 10s
BATT : OFF
Rotor brake : apply (< 170 rpm)
Evacuate aircraft

at hover, takeoff, final
Land immediately
Carry out a no hover powered landing,
then apply same procedure as above (start)

ENG FIRE

in flight
Land immediately
collective pitch : reduce
IAS : Vy (70 kts)
Autorotation procedure : apply
Emergency fuel shut-off lever : AFT
Fuel Pump : OFF
Starting selector : OFF
After landing:
BATT: OFF
Rotor brake : apply (< 170 rpm)
Evacuate aircraft

HYDR

Keep aircraft in level attitude
Do not use ACCU test button (yaw)
Do not turn twist grip to Idle (load on collective)
Carry a slightly running landing (10kts)

in **Hover**
Land normally,
Lock collective on ground / Shut down

In **Flight**
immediately :
Reduce speed between 40 to 60 kts MAX
Collective HYD switch off below 60 kts
Land as soon as possible, flat approach and running landing (10 kts)
Lock collective on ground / Shut down

BATT TEMP

BATT -> OFF
check volatge
if normal , land as soon as practicable
if above U normal -> Batt ON
-> GENE OFF
-> Unnecessary equip OFF

TWT GRIP

Turn to flight position

FUEL

Land as soon as possible
Fuel Quantity less than < 48 kg
Max 15 minutes flight remaining at MCP
Avoid large attitude changes

FUEL P

Land as soon as possible
Low Fuel Pressure
Collective pitch : reduce
Fuel Booster Pump ON
Be prepared to autorotate in case of flame out

FUEL FLT

Fuel filter level 2 reached
By-pass open - risk of fuel contamination

- **land as soon as practicable**

Monitor NG

- **if NG oscilliation NG : land immediately and be prepared to autorotate**

GENE

Check U voltage bus on VEMD
Check push button GENE is ON [press]

- if light goes out : continue flight

- if light stays : press GENE RESET button
- **if light goes out** : **continue flight**
- **if light stays**: unnecessary equip OFF
  land as soon as practicable

Note : if batt fails, VEMD goes out. NR stays
Max time on battery: day 50 min
night 20 min

BATT

EXT BATT or BATT: check ON

- **if light goes out : continue flight**
- **if light stays** : check voltage on VEMD
  : **land as soon as practicable**

PITOT

Continue flight
Check push button: PITOT / ON

- if light goes out: continue flight
- if light stays: monitor IAS

HORN	**Continue flight** Check push button: HORN / ON if light goes out: continue flight if light stays: aural warning failure
MGB TEMP	IAS set to Vy / 70 kts CPW, check • **if light goes out** : **land as soon as practicable** • **if light stays: land as soon as possible**
DOOR	**Land as soon as practicable** 1 or 2 cargo doors open Reduce speed to 70 kts Low sink rate approach
INST LIGHT	on or both instrument light u/s forward reading lights can be used (dct batt)
GOV	**Land as soon as practicable** Minor governor failure Collective : avoid abrupt change IAS, maintaine below PowerOff VNE **Do not restart** Flashing at idle or startin & shut down: Start up : abort procedure , ref to Maint Manuel AR training : abort training
ENG CHIP	**Land as soon as possible** Reduce power Be prepared of engine loss of power Restart / take off prohibited before engine maint.agreement
MGB CHIP	**Land as soon as possible** Reduce power Monitor MGB P and MGB TEMP
TGB CHIP	**Continue flight or land as soon as practicable** Avoid prolonged hovering

GENERAL LIMITATIONS - for details refer to AFM

Forbidden :	aerobatics engine start with snow and ice in ou around engine air intake flight under falling snown if no sand filter fitted flight in freezing /icing conditions power reduction using thottle (except training) in flight complete shut off VEMD (1+2)
Crew	minimum 1 pilot right seat / maximum 6 occupants
Maximum weight **Minimum weight**	**2'250kg** **1'310 kg**
Max Cargo Weight	2'800 kg
Sliding door	manoeuvering : opening 110 kt / closing 80 kts locked 135 kt
Slopes	up 10° down 6° lateral 8°
Max Alt.	23'000ft
AOT	- 40°C to + 50°C (or ISA +35)

Engine Limitation Markings

	caution range : take off range 0 to 40 kts
	max continuous, safety or take off limitation
	max VNE Power OFF / Autorotation
	max transient (no intentional use)
TRQ	100 to 104% : 5 sec transient
△NG	0 to +1% : 20 sec transient
T4	starting : max 750°C / max 840 °C transcient 10 sec in flight: 949 °C to 981 °C : 20 sec transient
N2	413 to 440 max transcient : 20 sec
Voltage	31.5 V max / 150 A max continuous
other gauges	self explanatory on instruments

PERFORMANCES

5.7 HOVER OUT OF GROUND EFFECT

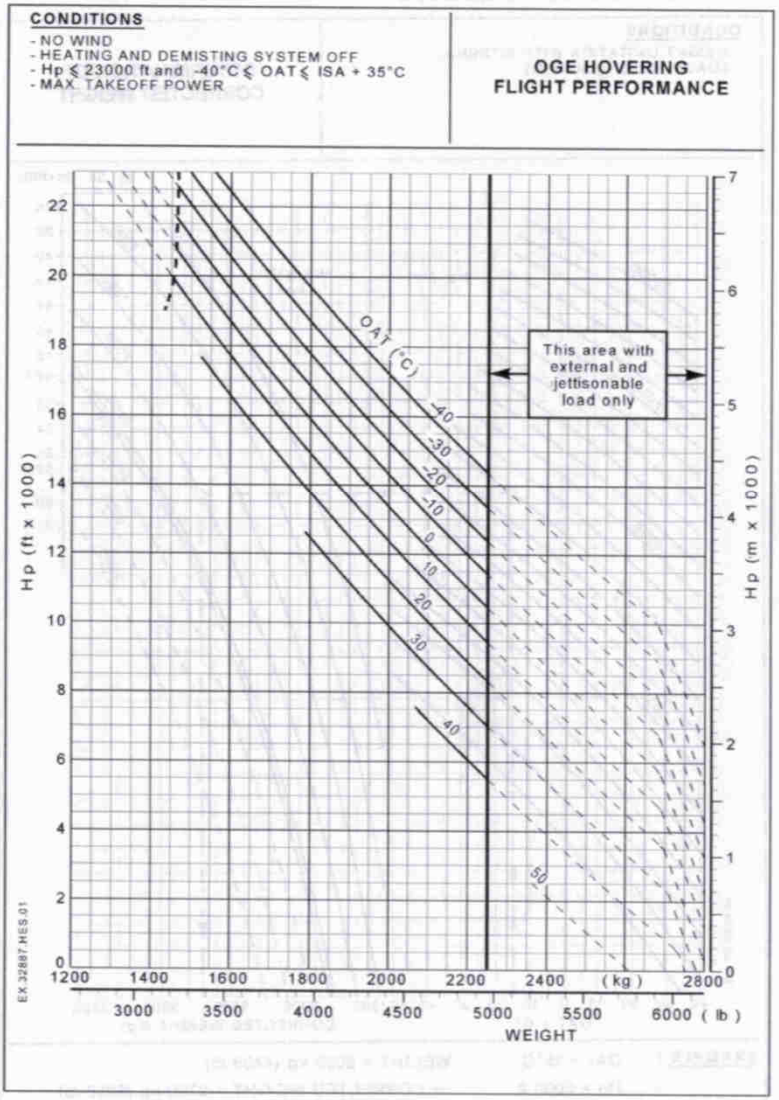


Figure 5 - 6

AS 350 B3E - NORMAL PROCEDURES – PREFLIGHT CHECK
(NB : Daily Check & Check après le dernier vol : voir document spécifique)

4.2 PREFLIGHT CHECK

- Make sure that all flightworthiness-required corrective maintenance operations have been performed.
- These preflight checks can be done without opening any cowlings unless the helicopter had been parked for more than 2 days or in case of any visible leak or doubt.
- Check that the aircraft area is clean and unobstructed.
- Remove all picketing items if applicable
- Carry out the following checks:

4.2.1 EXTERIOR CHECK

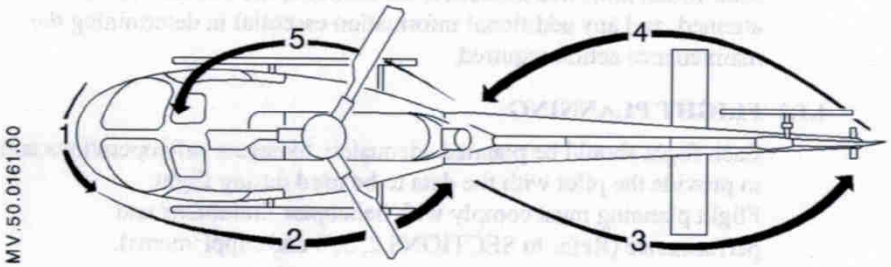


Figure 4-1: Sequence of checks

Station 1

- Transparent panels ..... Condition - Cleanliness.
- Windshield wiper (if installed) ..... Condition.
- MGB – Engine oil cooler air inlet ..... Check no obstruction nor debris.
- Side slip indicator ..... Condition.
- Pitot tube ..... Cover removed - Condition.
- Landing lights ..... Condition.

Station 2

WARNING:

ICE OR SNOW ACCUMULATIONS THAT REMAIN IN OR AROUND THE ENGINE AIR INTAKE MAY BE INGESTED AND CAN CAUSE A SUDDEN IN-FLIGHT ENGINE FAILURE.

- Front door ..... Condition, jettison system check.
- Rear door ..... Condition, closed or open locked (sliding door).
- Left cargo door ..... Open.
- Loads and objects carried ..... Secured.
- Left cargo door ..... Closed, locked.
- Fuel tank filler plug ..... Closed, locked.
- Fuel tank ..... Drained (before the first flight, if OAT $\geq 0°C$), absence of leakage at the drain.
- MGB cowl ..... MGB oil level - Cowl locked.
- All lower fairing panels ..... Locked.
- Landing gear and foot step ..... Secure - Visual check.
- Bear Paws , skis ..... Conditions & Secure
- Ski basket, if installed ..... Conditions & Secure
- Static ports ..... Clear, covers removed.
- OAT sensors, antennas ..... Condition.
- Main rotor head and blades ..... Visual inspection, no impact.
- Engine cowl ..... Locked.
- Rear cargo door ..... Open.
- Loads and objects carried ..... Secured.
- ELT ..... Check ARMED.
- Rear cargo door ..... Closed, locked.
- Oil drain ..... No oil under scupper.
- Cargo Hook, Swing ..... Conditions & Secure

Station 3

- Heat shield on tail rotor drive ..... Condition, attachment.
- Tail boom, antennas ..... Condition - Fairing fasteners locked.
- Stabilizer, fin, external lights ..... General condition.
- Tail rotor guard (if fitted) ..... Condition, attachment.
- TGB fairing ..... Secured, fasteners locked.
- TGB oil level ..... Checked.
- Tail skid ..... Condition, attachment.

Station 4

- Tail rotor head.....Condition, laminated bearing. Checked for separation, cracks, etc.
- Tail rotor blades.....Visual inspection, no impact.
- Stabilizer, fin, external lights.....General condition.
- Tail boom, antennas.....Condition - Fairing fasteners locked.
- Heat shield on tail rotor drive.....Condition, attachment.

Station 5

- Oil drain.....No oil under scupper.
- EPU door.....Closed or EPU connected.
- Engine air intake.....Clean - No foreign objects or accumulations of ice or snow in or around the engine air intake and no stagnant water at the drain hole.
- Engine cowl.....Locked.
- Exhaust cover.....Removed.
- Right cargo door.....Open.
- Loads and objects carried.....Secured.
- Right cargo door.....Locked.
- Main rotor head and blades.....Visual inspection, no impact.
- MGB cowl.....No foreign objects on transmission deck. Cowl locked.
- Hydraulic oil level.....Check reservoir level.
- Engine oil level.....Check reservoir level.
- Landing gear and foot step.....Secure – Visual check.
- Bear paws, Skis.....Conditions & Secure
- All lower fairing panels.....Locked.
- Door.....Condition, jettison system check.
- External mirror (if fitted).....Set to avoid dazzling (night flight).
- Cargo mirrors (nose & LH skid).....Conditions & Secure

4.2.2 INTERIOR CHECK

- Cabin ..... Clean.
- Fire extinguisher ..... Secured - Checked.
- Fuses or breakers..... All set.
- Loads and objects carried..... Stowed and secured.
- Front door jettison systems ..... Check - Plastic guard condition.

4.2.3 TURNAROUND CHECK

- Overall aspect ..... Condition, cleanliness.
- Engine / MGB / TGB ..... Oil level.
- Main and tail rotor blades ..... Visual inspection, no impact.
- Loads ..... Secured.
- All cowlings ..... Locked.
- Doors ..... Closed or sliding door open-locked.

NOTE

If the aircraft is to be parked for some time between flights, temporary picketing is recommended by fitting blanks, covers and blade socks (in winds above 40 kt (74 km/h)).
In this case, perform a complete pre-flight check.

QUI	QUAND	QUOI	COMMENT	CONTACT
EQUIPAGE	**Immédiat 1**	**Alerte**	- **REGA** - Ambulance - Police - Pompiers	**1414** **canal K/R** **144** **117** **118**
	Immédiat 2	**Secours**	- sécuriser le site de l'accident - actions pour sauver les vies - information aux sauveteurs	
	Immédiat 3	**Information**	Communication externe EXCLUSIVEMENT par le management de la COMPAGNIE. Aucune information aux médias ou tiers	
			- Management compagnie - Responsable des opérations - Management technique	
		Protocole	- noter tous les appels et messages	

Les principes les plus importants lors de l'alerte

Alerte	**Que s'est-il passé** **Où cela s'est-il passé (lieu, rue, montagne, altitude, coordonnées, etc.)** **Quand cela s'est-il passé** **Qui est concerné (nombres personnes, blessés, décès, etc.)** **Hélicoptère et immatriculation** **Quelles mesures ont été prises** **Tous les appels, messages et mesures prises ont été enregistrées jusqu'à ce que le management prenne le relais**

Proches	**Les proches sont informées exclusivement par le management ou une personne autorisée par le management**

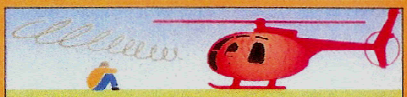
Information	**L'information à des tiers et aux médias est effectuée exclusivement par le management ou une personne autorisée par le management**

SAFETY AROUND HELICOPTERS

APPROACHING OR LEAVING A HELICOPTER

Do not approach or leave without the pilot's visual knowledgement. Keep in pilot's field of vision **at all times. Observe Helicopter Safety Zones** *(see diagram right)*

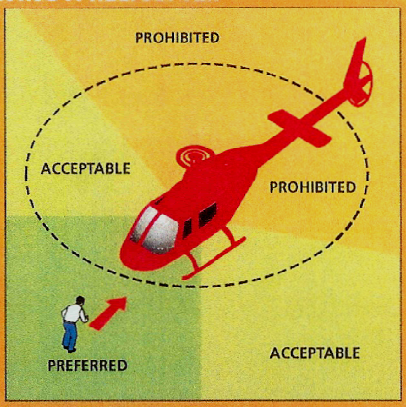
On sloping ground always approach or leave on the downslope side for maximum rotor clearance.



If blinded by swirling dust or grit, STOP – crouch lower, or sit down and await assistance.

If disembarking while helicopter is at the hover, get out and off in a smooth unhurried manner.

Do not approach or leave a helicopter when the engine and rotors are running down or starting up.



Proceed in a crouching manner for extra rotor clearance. Hold onto hat unless chin straps are used. Never, never, reach up or chase after a hat or other articles that blow away.

Carry tools, etc, horizontally below waist level – never upright or on the shoulder.

LANDING, TAKE-OFF AND LOADING OPERATIONS

Keep helipad clear of loose articles – water-bags, ground-sheets, tins, etc. Secure other gear from effects of rotor wash.

When transporting personnel, loading staff should ensure that:

- Passengers are briefed as above
- They are grouped together and well back at side of landing zone
- They face away from helicopter during take-off and landing
- Each person looks after their own gear
- They are paired off and ready to board in turn as soon as the pilot gives the signal

When directing pilot for landing, stand with back to wind and arms upraised.

After hooking up cargo sling, move forward and to the side to signal pilot. Ensure sling is not across skid. Never ride on sling.

When directing pilot by radio, remember that he or she may be too busy to give an acknowledgment.

Fasten and adjust seat belt on entering helicopter and leave it fastened until pilot signals to get out.

Safety Education & Publishing Unit, Civil Aviation Authority of New Zealand. July 2002