

EC130B4 **NORMAL CHECK LIST**



ALLWAYS REFER TO AFM FOR MANUFACTURER PROCEDURES

LIMITATIONS			
MTOW	INTERNAL ONLY	MAXIMUM	2427 KG
	WITH EXTERNAL LOAD		2800 KG
	ON HOOK		1160 KG
SPEED (VNE)	POWER ON	MAXIMUM	155 KIAS – 3KTS/1000FT
	POWER OFF		125 KIAS – 3KTS/1000FT
	LH SLIDING DOOR OPEN		80 KIAS
	OPENING SLIDING DOOR		70 KIAS
	OTHER DOOR CONFIG		REF RFM SECT 2
	EXTERNAL LOAD		80 KIAS
ALTITUDE		MAXIMUM	23,000 FT PA
TEMP	OAT	MINIMUM	-40°C
		MAXIMUM	ISA +35°C LIMITED TO +50°C
MAIN ROTOR (NR)	POWER ON	STABILIZED FLIGHT	375 TO 405 RPM
		CAUTION HIGH	405 TO 430 RPM
		CAUTION LOW	320 TO 375 RPM
	POWER OFF	MAXIMUM	430 RPM
		MINIMUM	320 RPM
	ROTOR BRAKE APPLY	MAXIMUM	170 RPM
FIRST LIMIT INDICATOR (FLI)	MAXIMUM	CONTINUOUS	9.6
		TAKE OFF POWER	9.6 TO 10
		TRANSIENT	10.4 (5 SECONDS)
TORQUE		MAX CONTINUOUS	92.7%
		MAX TAKE OFF	92.7% TO 100% (0 TO 40 KTS)
		MAX TRANSIENT	104% (5 SEC LIMIT)
FREE TURBINE (NF)	POWER ON	MINIMUM	349 RPM
		MAXIMUM CONTINUOUS	349 TO 418 RPM
		MAX TRANSIENT	450 RPM (5 SEC LIMIT)
T4	START & SHUT DOWN	MAXIMUM	750°C CONTINUOUS 865°C (10 SEC LIMIT)
	TAKE OFF		915°C
	IN FLIGHT		MAXIMUM CONTINUOUS 849°C
GENERATOR	LOAD	MAXIMUM	150 AMP
		VOLTAGE MAX	31.5 V
SLOPE LIMITS	MAXIMUM	NOSE UP	6°
		NOSE DOWN	6°
		SIDWAYS	8°
CREW			1 LEFT SIDE
PERSONS CARRIED			7 (INCLUDING PILOT)
FUEL		STANDARD	540 LITER
FUEL BURN		MAXIMUM	~190 L/HOUR



4.3 START UP

4.3.1 ENGINE PRESTART CHECK

- Seats and control pedals ADJUSTED.
- Seat belts FASTENED.

NOTE

Copilot seat belts shall be fastened in all cases.

1. Rotor brake RELEASED, fully forward.
2. Fuel shut-off lever FORWARD, plastic guard condition.
3. Twist grip IDLE detent.
4. [EMER SW] (if fitted) FORWARD, LOCK-WIRED
5. Starting selector OFF.
6. [SCU TEST] (if fitted) COMPLETE.
7. [EXT PWR BATT.] or [BAT/EPU] [DIRECT BATT.] or [DCT BAT] [GEN] or [GENE] ON.
8. ICS and GPS nav.system (if fitted) ON.
9. Lighting circuits 1 and 2 test COMPLETE (night flight intended).
10. Electrical mirror (if fitted) SET to avoid dazzling (night flight).
11. [W/LT TEST] or [W/LT TST] COMPLETE.
12. [FIRE/TEST] or [FIRE TST] COMPLETE.
13. [SERVO/TEST] or [SERVO TST] **SERVO** when depressed.
14. CWP lights CHECK :

- With battery power

GENE	PITOT	ENG P
FUEL P	HORN	MGB P
SERVO	HYDR	TWT GRP
- With EPU power Same lights as above + **BATT**

- | | |
|--|---|
| 15. VEMD..... | 3-data page DISPLAYED
Vehicle page DISPLAYED
Battery voltage > 22 V |
| 16. Control pedals..... | Freedom of travel, then NEUTRAL. |
| 17. Cyclic pitch..... | CENTER, friction adjusted. |
| 18. Collective pitch..... | LOCKED. |
| 19. Heating, demisting,
air conditioning (if fitted)..... | OFF. |

4.3.2 ENGINE STARTING

1. CWP.....CHECK **GOV**
2. **[FUEL PUMP]** or **[FUEL P]**ON
3. **[A/COL LT]**.....ON
 - After 30 s
4. Starting selector.....ON position
5. Check Ng increases
 - . T4 remains below its limits
 - . Rotor is turning at $Ng \geq 25\%$
 - . Engine oil pressure increases
 - When $Ng \geq 67\%$
6. CWP.....CHECK :
 - ENG P** , **MGB P** , **HYDR.**
 - SERVO** , **FUEL P**
7. **[PITOT]** or **[PITOTS]**ON, **PITOT**
8. **[FUEL PUMP]** or **[FUEL P]**OFF
9. **[SERVO/TEST]** or **[SERVO TST]**... **SERVO** when depressed.
- 10.Starting selector guardLOWER
- 11.All necessary systems.....ON - TESTED
(Master avionic switch, lights, etc.)

NOTE

At $Ng > 60\%$ the **VEMD** upper screen automatically switches to **FLI** display.

- If EPU is used :
12. EPU.....DISCONNECT
 - GENE** , **BATT**

Make sure EPU door closed.

4.3.3 RUN-UP CHECK

1. Twist grip FLIGHT detent.
 - When NR \geq 340 rpm
2. [HORN] ON, **HORN**
CHECK aural warning :
. ON for NR \leq 360 rpm and
. OFF for NR $>$ 360 rpm.
3. NR indication CHECK in lower green range.
4. Check No warning light illuminated.
Electrical system voltage and current
Engine oil pressure.

4.3.4 CRANKING

The cranking procedure can be performed after an aborted start or for check or maintenance purposes.

Proceed as follows :

1. Start selector OFF.
2. Emergency fuel
shut-off lever FORWARD.
3. Ng CHECK \leq 10 %.
4. [FUEL PUMP] or [FUEL P] ON.
5. [CRANK] PRESSED 20 sec max.
6. [CRANK] OFF.
7. [FUEL PUMP] or [FUEL P] OFF.

CAUTION

Do not crank the engine with the emergency fuel shutoff valve closed or with the fuel pump off as this could damage the engine high pressure fuel pump.

4.4 TAKEOFF

4.4.1 BEFORE TAKEOFF CHECK

1. Doors CLOSED or OPEN LOCKED
(left sliding door).
2. Cyclic and collective frictions AS REQUIRED.
3. Landing light AS REQUIRED.
4. Temperatures and pressures NORMAL RANGE.
5. Warning panel All lights OFF.
6. Collective pitch UNLOCK.

NOTE

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

4.4.2 TAKEOFF CHECK AND PROCEDURE

CAUTION

Use of P2 air bleeds is forbidden above engine maximum continuous rating (Ng or T4).

- Gradually increase collective pitch to hover at 5 ft. Check engine and mechanical control instruments, no warning light.
- Increase airspeed with HIGE power until IAS = 40 kt, then begin to climb so as to clear 20 ft at IAS = 50 kt.

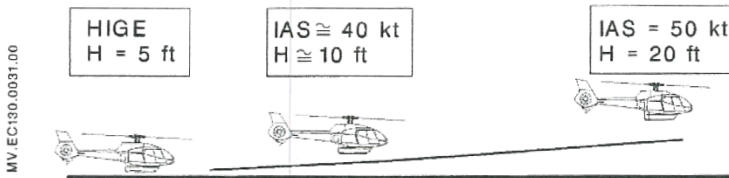


Figure 4-2 : Takeoff Procedure

CAUTION

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

4.8 ENGINE AND ROTOR SHUTDOWN

1. Cyclic stick NEUTRAL
2. Collective pitch LOCK
3. Twist grip IDLE detent
4. Engine oil cooling WAIT for 30 seconds
5. [PITOT] or [PITOTS], [HORN], Landing light..... OFF
6. Non-required systems,
 [MASTER AVIONICS] or [AVIONIC] OFF
7. Starting selector OFF position
8. [GEN] or [GENE] OFF
 - For NR ≤ 140 RPM normal NR
 170 RPM maximum NR (in strong wind operations)
9. Rotor brake APPLY
 - When rotor is stopped :
10. GPS navigation system (if fitted) OFF
11. [A/COL LT] OFF
 - **BEFORE LEAVING HELICOPTER**
12. VEMD CHECK for Flight Report page data :
 - . Operating time (counted from Ng > 60 % until Ng < 50 %)
 - . Ng and Nf cycles CHECK (written in white characters
 and above 0).
 - . Advisory messages of **FAILURE** or **OVERLIMIT DETECTED**
13. [DIRECT BATT.] or [DCT BAT],
 [EXT PWR BATT.] or [BAT/EPU] OFF
14. Pitot, air intake and exhaust covers, blade socks as required.



Safety Around Helicopters

APPROACHING OR LEAVING A HELICOPTER



Do not approach without receiving a visual signal from the pilot. Do not leave without a visual or spoken instruction to do so. Stay where the pilot can see you at all times.



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



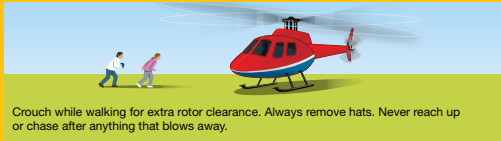
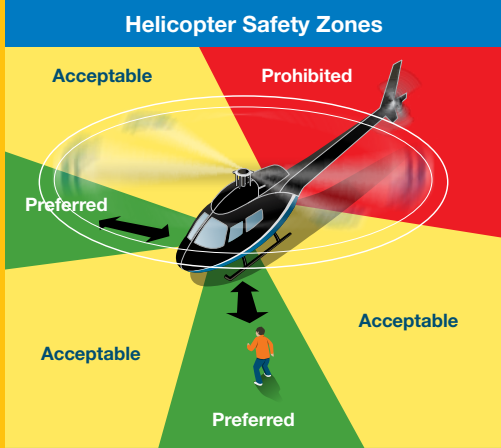
If blinded by swirling dust or grit, STOP – crouch lower, or sit down and wait for assistance.



If disembarking while the helicopter is hovering, get out slowly and smoothly when cleared to by the pilot.



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



Crouch while walking for extra rotor clearance. Always remove hats. Never reach up or chase after anything that blows away.



Carry long objects horizontally below waist level – never upright or on the shoulder.

TAKEOFF, LANDING, AND LOADING OPERATIONS



Clear helipad of loose articles. Secure your gear from the effects of rotor wash.

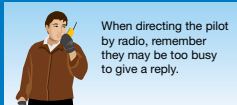


When transporting personnel, loading staff should ensure that:

- Passengers are briefed on approaching and leaving the helicopter
- They are grouped together and positioned to one side of the landing zone
- They face away from helicopter during takeoff and landing
- Each person looks after their own gear
- They are ready to board in turn as soon as the pilot gives the signal, and they are escorted to the helicopter.



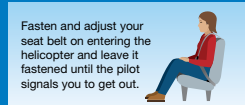
When directing the pilot for landing, stand with back to wind and arms raised.



When directing the pilot by radio, remember they may be too busy to give a reply.



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



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

Revised April 2007