3 EMERGENCY PROCEDURES

3.1 Emergency Check List

The full Emergency Procedures check list is reproduced at Appendix A. This is a laminated document, separate to this Operations Manual. A checklist of pages for all Emergency Procedures is produced at Annex A to this section.

3.2 Power Loss and Ditching

Introduction

This Operations Manual information is provided to cover all aspects of total power loss, autorotation and subsequent engine-off landing. Over land and over water engine-off landings will be covered with advice for the night and IMC cases. Deliberate ditching, ditching following a single engine failure and post ditching actions are also covered. The Flight Manual remains the authoritative document and the information is designed to supplement this.

Entry to Autorotation

General: A total loss of power to the rotor, due either to engine or transmission failure, will result in a very rapid decay of rotor rpm. The rate of decay will depend on the amount of power being used at the time of failure and will be greatest in high power and low speed conditions. As a general guide, the Nr will decay to transient power minima in approximately 2 seconds. In the event of total power loss the prime consideration must be to contain Nr within safe limits by lowering the collective lever fully, immediately.

It is of particular importance to be prepared for the failure of a second engine following failure of the first. Engine failures can have common causes, e.g. icing, fuel contamination or possible damage to the ‘good’ engine following a serious first engine failure. Pilots should familiarise themselves with the indications of the second engine failure (usually this will only be the low rotor rpm warning as Nr decays) and keep a hand on the collective lever as much as possible to reduce the delay before the collective is lowered.

The EC155 has a low inertia head, relative to other types the pilot may be familiar with, and consequently Nr control during autorotation will require careful monitoring, particularly during manoeuvring.

Indications:

a. Reduction in Nr, audio warning if Nr below 330 rpm, change in rotor noise and yaw to the right

b. Reduction in N2, FLI gauge reducing to 0 and in OEI mode

c. After a short time, ENG 1 and ENG 2 captions illuminate on CWP
**Entry to Autorotation** (cont’d)

**NOTE:** Remember that Nr will reduce to an unrecoverable state with resultant loss of control unless autorotation is entered immediately.

*Total Power Loss whilst Hovering or during Take-off below 15 feet:*

The aircraft will settle towards the ground rapidly and yaw to the right with no possibility of lowering the collective. The handling pilot must take the following immediate actions:

a. Maintain level attitude with ground contact  
b. Stop the yaw rate with pedal prior to touchdown  
c. Prevent drift with cyclic  
d. Cushion touchdown using the collective  
e. After touchdown, lower collective gently and apply the wheel brakes

*Total Power Loss During Initial Climb:*

Nr decay will be very rapid in this situation due to low airspeed and high torque. Once the climb has been started, the collective must be lowered immediately and fully. The interval between lowering the lever and raising it again to cushion the touchdown will depend on the height at time of failure but will be very short at low heights (below 50-75 ft). If height and speed are below the normal values for the initiation of a flare, do not attempt to dive on speed due to the resultant high rate of descent. The handling pilot must take the following immediate actions:

a. Lower lever fully to contain Nr  
b. Reduce groundspeed by flaring if groundspeed too high and height allows  
c. Level aircraft prior to touchdown  
d. Cushion touchdown using collective (this may be required almost immediately after lowering the lever if height is low)  
e. After touchdown, lower collective gently and apply the wheel brakes
Entry to Autorotation (cont’d)

Total Power Loss During Cruise and Descent:

The handling pilot must take the following immediate actions:

a. Lower collective to control Nr between 316-375 rpm (audio warning on at 330 rpm) with a transient maximum of 390 rpm. Minimum collective (fully down) should be selected until Nr builds to within normal operating range. Apply tail rotor pedal as necessary to maintain balance.

b. Adjust airspeed (maximum 135 knots) to 80 knots for minimum rate of descent. The action of flaring whilst reducing from cruise speed will assist the recovery of Nr. Similarly, should the aircraft be 'bunted', the Nr will reduce. This action should be avoided until fully established in autorotation.

c. Turn to the most suitable landing site to arrive into wind.
**Autorotation**

The actions to be taken during autorotation are:

- **Radios** ........................................ Transmit distress/Squawk 7700
- **Passengers/Crew** ............................ Warn, lifejackets, seatbelts
- **Undercarriage** ............................... Down over land / Either up or down over water
- **Brakes** .......................................... OFF
- **Flotation** ........................................ Arm if necessary
- **Landing Lights** ............................... ON at night
- **Shutdown** ...................................... Engine switches OFF/ Fuel Cut Off
- **Restart** ......................................... If time (height) permits attempt to restart one or both engines

**Engine-off Landings**

*Introduction:* Dependent upon surface conditions, a power-off autorotative landing may be made safely except when operating at low altitude and at low airspeed. These procedures apply after autorotative entry has been completed.

**Engine-off Landing Over Land:** The following points should be noted:

a. **Direction** - final approach into wind if altitude and landing site permit

b. **Airspeed** - 80 knots

c. **Flare** - at about 120 feet agl if aircraft is heavy or 90 feet if aircraft is light, execute a flare to 15° to 20° nose up with no change of collective pitch. This will reduce airspeed, groundspeed and rate of descent and will cause an increase in Nr with possible associated high Nr warning above 375rpm

d. **Touchdown** - at approximately 20 feet, raise the collective progressively and apply forward cyclic as the aircraft settles and until ground contact is made, using full collective to cushion the touchdown if required. Nose up attitude at touchdown should be 10° or less and touchdown should be in a nose up attitude and on the main wheels. On soft ground surfaces, the ground contact speed should be kept to a minimum to avoid damage to the undercarriage and a subsequent rollover.

**NOTE:** Immediately after ground contact, decrease collective pitch slowly and smoothly and centralise the cyclic. Apply the wheel brakes as necessary below 35 knots. The effect of increasing wind will reduce the ground contact speed. This is of particular importance on soft ground.
**Engine-Off Landings** (cont’d)

*Engine-Off Landing Over Water:* Pre-ditching drills are:

a. Undercarriage – up (but not essential)

b. Flotation gear - armed below 90 knots. Inflate prior to touchdown to allow full inflation before water contact (inflation takes approximately 2.5 seconds)

c. Forward speed at touchdown should be as near to zero as possible and with little or no lateral drift component

d. Every effort should be made to land the helicopter with as little sideways drift as possible as the roll rate after touchdown increases sharply with an increase in lateral motion

e. The RadAlt should be used to determine height above the water due to the difficulty in judging height particularly over a smooth, calm surface

f. The ideal touchdown point would be into wind and at the crest or back of a wave with a minimum rate of descent. Greatly increased touchdown forces will be experienced if the landing is made on the front of the rising surface of a wave. Fuselage angle at impact should be between 0° and 10° nose up

*Engine-Off Landing at Night or in IMC*

The procedure to be adopted at night or in IMC must leave the aircraft in such a configuration as to enable the pilot to revert to a visual engine-off landing at any time. It is anticipated that visual reference would be gained before touchdown even at a late stage.

a. Attitude - select and maintain 10° nose up attitude. As airspeed decreases, adjust to maintain minimum rate of descent speed 80 knots, the use of the speed trend cue will assist greatly in this

b. Turn - as the airspeed decreases, bank to turn through the shortest arc into wind. Maintain balanced flight and Nr within limits throughout.

c. Drills - carry out emergency drills.

d. Touchdown - if visual reference has NOT been acquired, adopt the following procedure:

   At 100 feet above the surface, smoothly select 20° nose up. Control Nr with a small application of collective. As airspeed reduces to 40 knots, adjust attitude to 10° nose up and apply collective from approximately 20 feet to arrest the rate of descent. Maintain aircraft heading into wind and in balance throughout
Engine-Off Landings (cont’d)

Controlled Ditching With Power Available

The following procedures are recommended in circumstances which require an IMMEDIATE landing on water but engine(s) providing power to the transmission.

a. Actuate the flotation system in a hover if sufficient power is available
b. Reduce forward speed to as near zero as possible
c. Reduce lateral drift component to a minimum
d. Avoid rising faces of large waves
e. Reduce rate of descent to a minimum at touchdown
f. Fuselage angle at impact should be between 0° and 10° nose up
g. If the helicopter is unstable or taking on water, shut down engines, notify cabin occupants to wait until the rotor blades have stopped turning before evacuating through emergency exits

Ditching With One Engine Inoperative

The following procedures are recommended if single engine hover or flight to a safe landing area is not possible:

a. Inflate flotation at 300 feet
b. Establish normal approach so as to arrive at approximately 100 feet above the surface at 40 knots at a rate of descent of no more than 500 ft/min
c. Decelerate to pass 50 feet at 30 knots and increase power to reduce rate of descent to a maximum 300 ft/min
d. The ability to achieve a zero speed touchdown will be dependent upon aircraft weight and sufficient wind for translational lift. In some circumstances a touchdown with forward speed may have to be accepted


**Engine-Off Landings (cont’d)**

**Actions After Ditching**

When the aircraft is in the water, and if the sea conditions are such that helicopter stability is enhanced by keeping the rotors turning, it may be advisable for the Commander to remain at the controls whilst the Co-pilot prepares for evacuation prior to stopping the rotor. The rotor must be stopped before evacuation is commenced.

Extended water taxiing should not be considered as an option because emergency flotation equipment is certified for short term use only (5 minutes) to enable early and orderly evacuation. Therefore priority must be given to evacuation. Subsequent take-off after ditching must not be attempted.

Crew and passengers should make ready for evacuation. Pilots should note that, despite careful briefing, experience has demonstrated a definite tendency by passengers to begin evacuating the aircraft as soon as it is on the surface. If sea state permits, apply the rotor brake gently to prevent violent yaw.

**Evacuation:** Do not evacuate the helicopter until the rotor blades have stopped turning. Do not inflate life jackets until clear of the helicopter.

If the sea state allows:

a. Jettison hinged doors and push out windows

b. Launch and inflate both life rafts

c. Passengers and crew to board life rafts, one crew member to each

d. Crew to take first aid kit, torches etc. into life rafts

e. Cut short painter and consider cutting long painter if life raft will contact the aircraft

If the aircraft is unstable and likely to capsize:

Jettison all exits, launch the life rafts from inside and evacuate all occupants from the aircraft as soon as rotors have stopped.

**Information:** Successful ditching without capsize should be possible in sea states up to and including Sea State 4 (wave height of 6.5 feet wave height to length ratio 1 to 10) depending on wind conditions.
3.3 Fenestron control problems

The likelihood of a successful landing following a fenestron problem will depend on the exact nature of the problem and the prevailing flight regime at the onset of the problem. However, if the a/c has more than approximately 40 kt of airspeed, there is a very good chance of landing safely, if a suitable landing site is available that will allow a shallow approach and a run on landing.

Loss of thrust in the hover

As with any a/c type, loss of TR thrust in the hover requires immediate lowering of the collective and landing, accepting any yaw present and attempting to maintain a level attitude with cyclic. Any delay in lowering the collective, or an attempt to raise the collective, will result in yaw rates developing that will rapidly disorientate the pilot.

Loss of thrust in forward flight

It should be possible with combinations of pitch, roll and collective settings to establish level flight with minimal yaw, and to then route to a suitable landing area.

TR Control Restrictions

The ability to deal with jammed pedals will depend very much on the pedals’ position at the time of jamming; the more extreme the position, the more difficult will be the recovery. The further forward the left pedal is, the faster will be the required landing in order to maintain the nose straight. With right pedal forward it may be possible to achieve a ‘zero, zero’ touchdown.

Landing Technique

Before committing to land, pilots should attempt to carry out a low speed handling check at a safe altitude in order to gauge the aircraft’s likely behaviour during the approach. Pilots should take care not to allow the airspeed to decay below 40 kt, however, as loss of control may result and the situation may not be recoverable. The aim of the exercise is to see at what speed the nose will align itself with the direction of travel.

The final approach itself should be more shallow than usual and airspeed kept sufficiently high to keep the nose yawed off to the right. The speed trend arrow is particularly useful during this phase. Pilots should avoid excessively high speeds as the ensuing space required will be large, and attempts to flare the speed off may result in difficulty in controlling the final touchdown. If a choice is available, a wind from the forward right hand quarter is ideal.
**Landing Technique (cont’d)**

The aircraft should be allowed to descend to a low height, approximately 6 ft, and a nose up attitude of 7 degrees set and held to reduce the speed. If more than 7-10 degrees of nose up attitude is selected, the rate of speed decay and subsequent yawing of the a/c will be such as to be difficult to control or judge accurately. As speed reduces any tendency for the aircraft to descend should be prevented using collective, until the nose is aligned. To further reduce the speed, judicious use of right roll can be applied in the final stages, and this will maintain a nose right attitude for longer.

Once the nose is aligned with the direction of travel, smoothly lower the aircraft onto the ground with collective, and apply braking to bring the aircraft to a halt and, if necessary, control the direction.

If during the approach the nose yaws left of centre, the approach should be abandoned and another attempt made.

**Fenestron Stall**

On early versions of the fenestron, as fitted to the Gazelle, there have been instances of loss of tail rotor effectiveness during low speed manoeuvres. Extensive trials failed to pinpoint a precise flight regime that would produce this and with modern generations of fenestron, where the direction of rotation is reversed, the problem is not considered likely to occur. However if, during hovering, an undemanded yaw to the left occurs (not associated with loss of TR drive), the correct recovery action is to apply full right pedal, and maintain it until the yawing stops.

### 3.4 Fuel Management in Flight following an Emergency

**Fuel Management Following an Engine Failure**

In the event of an engine failure, fuel shall be transferred to the appropriate tank group as early as practicable, if necessary. Consideration should be given to the possibility of the engine failure being caused by fuel contamination.

**Fuel Management Following Unforeseen Erosion of Reserves**

If, due to unforeseen circumstances, it is calculated that fuel reserves will be seriously eroded and no alternative course of action is available, or in the case of an emergency life or death situation arising during the flight, as a last resort consideration may be given to continuing the flight at a safe height with one engine shut down. Should the headwind component be in excess of 40 knots, single engine fuel used per ground nautical mile is greater than used by two engines and therefore the flight should be continued on both engines. In this case, fuel contents shall be adjusted to provide a 2% mismatch between the forward (LH) and aft (RH) groups. Should it be necessary to continue flight until the fuel is completely exhausted, a landing shall be initiated following the first engine flame-out, 2% should allow approximately 5 minutes flying time at MCP.
Fuel Management in Flight following an Emergency (cont’d)

Fuel Management Following an Engine Failure with a Strong Headwind

Following an engine failure en route, additional fuel will be required if the flight is continued into a strong headwind (single engine fuel used per nautical mile is greater than that on two engines). This additional fuel requirement should be calculated from the figures in Table 3-1 as a percentage of fuel required to destination and alternate (if required).

Table 3-1 - Additional OEI Fuel Requirement in Strong Headwinds

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<th>Power</th>
<th>Headwind (knots)</th>
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<td>40-49</td>
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<td>OEI Continuous</td>
<td>5%</td>
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3.5 Plug Doors - Inadvertent Opening in Flight

In flight, if one of the plug doors opens, or is indicated to have opened on the door warning panel, a landing should be made as soon as practicable. Re-securing the door in flight must not be attempted.

Procedure

The following actions should be taken:

Advise any passengers of the problem and request them to remain seated and securely strapped in

Divert to the nearest suitable landing point where the door can be inspected and re-secured.

Consideration

A reduction in airspeed will reduce the pressure differential between the inside and outside of the cabin.


3.6 Engine Fire Warnings

It should be noted that when a fire extinguisher is discharged and the extinguishing agent comes into contact with a hot engine, a smell that could be interpreted as a burning smell may be produced. Therefore, if the only other indication of a fire, apart from the warning light, is a smell of burning which only occurred after using a fire extinguisher, the crew should consider the possibility of the smell being produced by the extinguishing agent.

It should also be noted that this aircraft has had spurious warnings and therefore the crew should make every effort to confirm a fire exists in the case of a warning that will not disappear, before ditching or landing in inhospitable terrain.

3.7 Jamming of Nose Wheel in Undercarriage Bay

It is possible that after certain taxiing and towing situations the nose wheel will not self centre and will remain in a 180° position after lift-off. If retracted in this condition the nose wheel will jam in the undercarriage bay and a normal or emergency lowering of the undercarriage may not subsequently be possible.

To prevent this situation from arising pilots shall taxi slightly forward prior to take-off to ensure the nose wheel is straightened.

During rig turn rounds in high winds or turbulent conditions, if the nose-wheel lock is unserviceable, the main wheels should be chocked after touchdown to prevent the nose-wheel swivelling. If the pilot is in any doubt about the positioning of the nose-wheel, consideration should be given to returning to base with gear extended.

3.8 Double Generator Failure

In the event of a double generator failure, the co-pilot’s FCDM will be shed. If this happens when the PF is in the LHS he should maintain control and revert to the standby instruments until such time that the PNF has reconfigured the FCDMs, AHRSs and ADCs. This is to avoid the sudden handing over of control, possibly in a critical phase of flight, to the PNF. The Commander can then deal with the emergency in a more controlled environment.

**Note:** It should also be borne in mind that the emergency procedures refer to switching off the 2 remaining booster pumps to save battery life. If this is done the unusable fuel will increase due to loss of jet pump action (see the section on jet pump failure).
3.9 Manual Reconfiguration

The task of reconfiguration is essentially very simple and should be possible from memory. In good conditions it is never vital to rush into using the RCU; however, in IMC it may be important to restore lost services.

Pilots must be aware that inadvertent selections on the RCU, made in haste, can create more problems than the original failure and so crews should ensure that when using the RCU they take sufficient time to analyse and agree upon the nature of the failure and the best solution.

3.10 Shed Bus Failure

There have been cases of the number 2 Shed Bus being shed without warning in flight. The symptoms are similar to a double generator failure but care should be taken not to confuse the two. With this shed bus failure there are no CAD warnings other than the RNAV. The primary buses are still powered by the generators and the Battery contactor stays closed. The following services are lost, though:

- FCDM 1
- AHRS 1
- ND 1
- GPS
- Radio Altimeter
- VRU (Weather radar)
- Strobe Light
- Booster Pumps 2 & 3
- MFDAU

Therefore, in the event that these symptoms are experienced, the crew should ‘force’ the bus on by using the shed bus switch on the 12 Alpha panel. This should restore the services. Having achieved this, it should be viewed as a means of returning to base, however, rather than to continue the program. Other problems may still result.

3.11 Loss of Jet Pump Function and Fuel Quantity Warning

There has been a case of fuel tank contamination with debris, resulting in blockage of the jet pumps (in the LH group in this instance). The consequence of this was an unexpected engine flame out due to the crew’s inability to determine the true usable fuel state. This section is to remind pilots of the consequences of the blockage of one or both jet pumps. It deals primarily with the LH group as this has the greatest implications.
Loss of Jet Pump Function and Fuel Quantity Warning (cont’d)

_Rear jet pump_

The result of the rear jet pump becoming blocked is that the feeder tank will no longer be replenished. Consequently, as soon as the fuel level (head) reduces below the level at which the fuel QTY probe activates the warning, the 7 alpha FUEL Q warning will illuminate accompanied by the QTY light on the fuel management panel.

This level equates to approximately 42% total fuel in the LH group. However, as the forward jet pump is still functioning the actual usable fuel will remain close to the total fuel because the feeder tank allows fuel through a one way valve in its base.

_Foreward Jet Pump_

In this case, the fuel within the 2 forward tanks will pass through the interconnecting pipe into the rear tank until such time that the level reaches the bottom of the pipe. As the pipe is approximately half way up the forward left tank this results in unusable fuel being left. This equates to approximately 13%, or 130 kg. However, as the rear jet pump will have kept the feeder tank full until the rear tank is dry, the first warning the pilot will receive is the FUEL Q and QTY lights coming on as the feeder tank then depletes. In this case there will only be 14 kg of fuel remaining before the engine flames out from starvation.

_Both Jet Pumps_

Obviously the symptoms will be a combination of the 2 individual cases. Once the total fuel drops below 42% the FUEL Q light will come on and the engine will continue to run until the level falls below 13%, when it will flame out.

_Summary_

Clearly the problem facing the pilot is that he is unable to determine which of the 3 failure cases he is faced with. It is not possible to lay down specific guidelines as there will obviously be many variables in any given case. What is suggested is that when this warning occurs the pilot should firstly determine whether he has more or less than 13% total fuel in the LH group. If the level is less than 13% the pilot should set a safe single engine power figure of around 5 FLI units in order to avoid using OEI HI on the RH engine should the LH engine fail. If the level is greater than 13%, the pilot should remain in AEO mode. Once the fuel approaches 13% he should revert to OEI power.

If, the LH engine flames out once the fuel level has dropped below 13%, then clearly a forward or both pumps are blocked. If the engine continues to run then the probability is the rear pump only that is blocked, and that therefore the remainder of the fuel is usable. In this case it is suggested that MCP cruise be re-established.
Loss of Jet Pump Function and Fuel Quantity Warning (cont’d)

When considering the options for diversion in the case of the FUEL Q light illuminating, the following points should be borne in mind:

- The aircraft may only have up to half the usable fuel anticipated (assuming tank groups balanced)
- The specific air range OEI is practically the same as AEO
- The specific ground range OEI is considerably reduced with headwinds relative to the AEO figure
- A single engine landing may need to be carried out
- It may be preferable to land at a destination other than base while AEO ability is still guaranteed.

RH Tank group

In the case of pump failures in the RH group the effects are considerably less due to the natural draining of the rear tanks into the forward tank. Consequently the unusable fuel is only 2%.

Booster Pumps

It should be borne in mind that the symptoms described above will also be present in the case of loss of both booster pumps. This must be borne in mind before switching off pumps following a double generator failure.

3.12 In Flight Engine Shutdown Procedure

There are a number of cases where an engine has to be shutdown in flight or the engine switch retarded to the IDLE position. In decreasing order of severity these may include:

- Engine Fire
- Mechanical failure or severe distress
- Loss of Oil Pressure
- Engine Chip
- Incipient Fuel starvation

When considering the method by which to carry out these actions, it is important to prioritise the safety of the aircraft versus the health of the other engine.

In the event of a fire, the reason for setting single engine power before actioning the shutdown drills is solely to avoid rotor decay and hence assure the safety of the aircraft. No consideration is to be given to whether OEI HI is used on the other engine. In this instance the airspeed should be beeped back to approximately Vy.
In Flight Engine Shutdown Procedure (cont’d)

In the case of a precautionary shutdown or IDLE selection, however, it is highly desirable to avoid using OEI HI if possible. In this case, the power should be set at no more than 5 on the FLI. If prolonged flight with one engine in IDLE is anticipated, the crew should be aware that the Specific Air Range will be considerably reduced (of the order of 75% of AEO SAR).

AP modes

The pilot reaction to setting engine power will be dependent on how he is using the AP at the time. Normally one would expect to have 4 axes engaged. Where a rapid power change is required the IAS should be decoupled to give the pilot control of the collective. The ALT hold will then keep the aircraft safely level.

Where a less rapid power change is required it would be entirely acceptable to simply beep back the IAS to lower the power demand. To ensure maximum chance of avoiding the use of OEI HI it may be prudent to set Vy as this will give the lowest possible power demand (short of descending).

What should be avoided, if at all possible, is the over-riding of the collective when it is coupled to the AP. If the pilot does so, the AP will relinquish control but still try and meet the datum demands for the cyclic modes. If the pilot has reduced the power, but kept the IAS datum at the cruise setting, the aircraft will dive. This is seen during training and rates of descent of over 1000 ft/min can develop rapidly. If close to the ground the dangers are obvious.

It is understandable that a pilot may wish to intervene on the controls, especially when the low RPM warning is activated, but every attempt should be made to allow the AP to control the aircraft in the manner it is designed. It is to reduce the pilot’s workload precisely during such periods. There is also the danger of lowering the power too much and the IAS decaying to dangerously low levels.
3.13 AP Malfunctions

There are a number of AP malfunctions that have been experienced to date of varying severity. It greatly assists the diagnosis of the fault if the crew can endeavour to record the failure codes from the systems status page, as shown below:

![System Status Page]

There have also been several cases of uncommanded collective rises for various, differing reasons. The actions to each are different but the following guidelines should be borne in mind:

- If a collective trim failure is suspected, then depressing the trim button in the reverse sense for 2 seconds may clear the fault, if not, depress the trim release button. If still unsuccessful, turn off the collective trim switch on the 12 alpha panel.
- If a VEMD failure occurs, deselect the IAS hold if engaged, to revert to 3 axis mode.
- If, in 4 axis mode, the collective rises following selection of ALT.A, restrain it immediately and decouple the IAS hold. If the collective still rises, depress the trim release and if this fails, turn off the collective trim switch.

In all cases, it is imperative that the pilot restrains the collective before the power is allowed to increase too far as the possibility of a large over torque exists.
3.14 Emergency Landings on Soft Ground.

If a wheeled undercarriage aircraft lands on soft ground it will inevitably sink to some degree. This may only be up to the wheel axle, or it may come to rest on its belly. This is true of any landing, scheduled or otherwise. A consequence of this sinking is a reduction in rotor disc height above the ground and therefore an increase in the danger of personnel beneath the disc being struck by it.

A further consequence is that the aircraft may not necessarily come to rest ‘wings level’, which may further reduce the rotor disc height on one side of the aircraft.

There are some locations where the ground may rise to one side of the aircraft and this is a danger in any sloping ground situation that should be borne in mind.

In summary, following a landing on soft ground the crew should attempt to make a conscious decision concerning when and in what direction the passengers should be evacuated. This should take into account the points raised above and also, in the case of a fire warning, the side on which the fire is located and the prevailing wind.

3.15 Discovery or Warning of an Explosive Device in the Aircraft

Should the crew receive a warning of a suspected explosive device being on board the aircraft, the Commander must decide whether to land immediately, return to the departure point or divert elsewhere, dependent upon the urgency of the warning.

Radio transmissions should be minimised in an aircraft suspected of having an explosive device on board as they could activate a detonator. The danger of possible anti-handling devices must also be considered and movement of the aircraft on the ground minimised. Baggage shall be identified and collected by the passengers for subsequent search.

The responsibility of searching the aircraft is that of the Company. When passengers and crew have disembarked and the aircraft is parked in a safe search area, an inspection of the aircraft will be organised.
### Annex A: Checklist of Pages - Emergency Procedures

<table>
<thead>
<tr>
<th>Page</th>
<th>Revision</th>
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<tbody>
<tr>
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