

Part 4

EMERGENCY HANDLING

135. Engine failure on take-off

For safety speeds and recommended action with one engine at full power and the other idling, refer to Part 3 - Handling, (*para.119*).

136. Single-engine failure in flight

(1) *Mechanical*

- (a) If an engine fails due to obvious mechanical causes immediate action should be:-

Throttle

H.P. COCK CLOSED

Fuel pump switches

Both to good engine

- (b) Do not attempt to relight. Carry out the recommended fuel drill for single-engine recovery (*para.138*).

(2) *Flame-out*

- (a) If a flame-out occurs a relight may be attempted immediately, while r.p.m. are decreasing, by pressing the relight push switch for 2 sec, leaving the throttle at the position at which flame-out occurred. A successful relight will be indicated by r.p.m. stabilizing and then commencing to rise. J.p.t. should be checked to ensure that the limit is not exceeded; throttle back if necessary.
- (b) If the engine has not relit within 20 sec move the throttle to H.P. COCK CLOSED, wait one minute, and carry out the relighting drill ◀ (*para.137*). ▶

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137. Relighting

(1) Confirm the following: -

- (a) Airspeed Mach 0.9 max.
- ◀(b) Altitude 40,000 ft. max (30,000 ft.
max pre-Avon Mod.2262)
- (c) H.P. cock/throttle H.P.COCK CLOSED
- and then*
- (d) Relight button Press for 2 seconds
- (e) H.P. cock/throttle IDLING

Then open up slowly to half throttle. When the r.p.m. and j.p.t. have stabilized the engine may be opened up smoothly to the desired r.p.m. ▶

(2) *Engine fails to relight*

Should the engine fail to relight within 20 sec of pressing the relight switch: -

- (a) Throttle lever H.P. COCK CLOSED
- (b) Wait at least one minute; try again at a lower altitude keeping the air speed as low as practicable.

Note...

- (1) *Relights are obtained more easily at lower altitudes and with lower air speeds.*
- (2) *If repeated attempts to relight are unsuccessful, move the throttle to H.P. COCK CLOSED, select both tank systems to feed the remaining engine and carry out the recommended fuel drill for single-engine recovery (para.138).*

138. Fuel drill for single-engine recovery

(1) *Both tank systems feeding*

If the fuel gauges confirm that both tank systems

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are feeding, either equally or asymmetrically, the recovery should be made without any further action, and particularly without attempting to correct asymmetry.

(2) *One tank system not feeding*

Ascertain whether the feeding system contains sufficient fuel for a return to base; if so the recovery should be made without any subsequent alteration of pump switch settings. If insufficient fuel is indicated climb or descend to a safe altitude for re-lighting, throttle the serviceable engine to IDLING, and select the pumps in the feeding tank system OFF. Provided that the fuel pressure warning associated with the serviceable engine does not appear, all fuel can be used from both tank systems, although with both selected on, the tank with the lower pump delivery pressure will only start to feed when the other is empty. After carrying out this test select all pumps to the good engine.

Note...

If a fuel pressure warning appears when switching off one system to determine the serviceability of the other, the pumps should be selected on again immediately and the relight push-switch pressed. Only the fuel in the feeding tank will then be available.

139. Double engine flame-out

- (1) Attempt immediate relight as in para.136 (2).
- (2) Owing to loss of the turbine-driven alternator and generator supplies, commence a fast descent (*Mach 1.1/450 knots; providing hydraulic power for restrained use of the flying controls*) to maximum relighting altitude.
- (3) Shed all non-essential d.c. loads as soon as possible (*para.140*).

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- (4) Carry out normal relighting drill on one engine only. When relit, switch on required electrical supplies and relight the other engine. In the event of an unsuccessful relight, further attempts should be made at 250 knots in decrements of 5000 feet.
- (5) Should it not be possible to relight either engine the aircraft should be abandoned.

◀ 140. Electrical failure considerations

(1) *Alternator failure*

- (a) In the event of an alternator failure all a.c. services are lost except those provided via the stand-by inverter (*para. 73 (2)*).
- (b) A major consideration is the effect on the fuel system; in each wing the three a.c.-operated fuel pumps stop running and only the d.c.-operated pump - on the rear spar of the main tank - remains effective. It is IMPORTANT that the d.c. pumps should always be immersed. Other than at low altitude, if these pumps are allowed to come out of the fuel the engines are likely to flame-out. To keep these pumps immersed, nose-down attitudes and forward decelerations should be avoided; in all descents and manoeuvres normal g must be applied.
- (c) Immediately following the failure the recuperator in each wing will discharge its contents (*para. 103 (5)*). If flying at high speed in reheat it is possible that recognition of the failure and action taken to cancel reheat cannot be done within the recuperator discharge time, in which case the engines may flame-out.
- (d) Altitude and r.p.m. restrictions have to be imposed in order to avoid cavitation of the engine H.P. pumps. A recovery cruise at 22,000 ft 85% r.p.m. will positively avoid cavitation and ►

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27,000 ft 85% r.p.m. is permissible if extra range is needed.

- (e) An unfavourable fuel tank attitude will be produced in the final stages of descent at less than 200 knots if flaps are lowered. It is recommended that flapless landings should be made. It is not advisable to overshoot but if an overshoot is essential 90%/90% r.p.m. must not be exceeded.

(2) ◀ Generator failure ▶

- (a) In the event of a generator failure all d.c. loads and essential instrument (*inverter*) loads will be transferred to the 24 amp./hr. battery. It is estimated that, fully charged, the battery will provide power for unimpaired operation of essential services for 15 minutes provided that non-essential services are switched off within 1 minute of the failure occurring. Services which may be switched off are: flight test instrumentation, ILS, one VHF set, Rebecca or Tacan, radio compass, navigation lights, camera heater, cockpit lights and autopilot.
- (b) If a landing is made within the 'life' of the battery there are no fuel system problems. With a failing battery, however, the d.c. pump in each wing will fail and subsequently the a.c. pumps will stop because the relays, connecting a.c. power to the pumps, are d.c. controlled and will be de-energized.
- (c) With all L.P. pumps inoperative, continued flight is only possible using H.P. pump suction through the stationary a.c. pumps in the collector box. To guarantee avoidance of H.P. pump cavitation it is essential to descend to and cruise at 10,000 ft, 85% r.p.m.; 17,000 ft, 85% r.p.m. is permissible if range is vital. Anose-up attitude must be maintained to ensure gravity flow into the collector box.

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- (d) On aircraft without a voltmeter, because the charge state of the battery is not known a descent to recovery altitude must be made immediately after the failure. With a voltmeter fitted the descent may be delayed until 22-volts is indicated.
- (e) If a landing has not been made within the useful life of the battery, the effects of loss of d.c. will be as follows:-

The trim rate will become progressively slower until the trimmers fail. The fuel gauges will progressively underread and finally indicate zero. The MRG (*attitude indicator and G.M. compass*) will fail.

VHF will deteriorate and finally fail.

Air brakes, flaps, and normal undercarriage lowering will become inoperative; the brake parachute can be streamed but not jettisoned.

(3) *Air turbine failure*

- (a) An air turbine failure results in simultaneous loss of generator and alternator supplies, therefore the only power available is the 24 amp./hr. battery and the emergency battery. The emergency battery provides for emergency cockpit lighting and for the turn-and-slip indicator or artificial horizon, as fitted, when the associated NORMAL/EMERGENCY switch is selected to EMERGENCY. ►
- (b) As with an alternator failure alone, it is essential to maintain the d.c.-operated pumps (*running on battery power*) immersed until the aircraft is at a safe height for H.P. pump suction. Without a voltmeter it is essential to descend to 10,000 ft or V.M.C. below cloud whichever is lowest. With a voltmeter fitted and indicating a charged battery, a descent may be made to 22,000 ft (*27,000 ft*) followed by a cruise at 85% r.p.m. until 22-volts is indicated

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when a descent to 10,000 ft (17,000 ft) or below must be made.

141. Electrical failures - pilot's procedures

(1) Alternator failure

Indication:

ALTNR FAIL doll's eye white, FLIGHT INST. SUPPLY doll's eye white.

Action:

Check the ALT. FIELD circuit breaker and reset if necessary

If the warning remains

Land at the nearest diversion airfield

If the engines flame-out

Make a fast rate descent to relighting altitude, reduce speed and relight (250 knots gives a nose-up attitude)

No flame-out

Pull maximum normal g in a level turn. Once g is applied throttle to idling

Decelerate in level turn to Mach 0.9

Continuing to pull g enter spiral descent at Mach 0.9, engines idling, pulling out at 22,000 ft (27,000 ft). Set throttles to give 85% r.p.m. for cruise

For the final descent pull a minimum of 3g in a level turn. Once g is applied throttle to idling. ►

Decelerate in level turn to 200 knots

Select air brakes out and commence gliding descent at less than 200 knots

Select air brakes in at circuit height and set throttle to normal circuit r.p.m.

Approach and land without flaps.

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(2) *Generator failure*

Indication:

GEN' R FAILURE warning light appears on S.W.P.

Action:

Check the GEN. FIELD circuit breaker and reset if necessary

If the warning remains

Switch off all unnecessary d.c. loads

Land at the nearest diversion airfield

If no voltmeter

Make fast descent to 10,000 ft (17,000 ft) or V.M.C. below cloud, whichever is lower. Cruise at 85% r.p.m.

With a voltmeter

Voltmeter indicating 22-volts or below, take action as for no voltmeter

Voltmeter indicating a charged battery, descend and cruise at Mach 0.9/36,000 ft until 22 volts is indicated then descend at max. rate to 10,000 ft (17,000 ft) or V.M.C. below cloud, whichever is lower.

If the battery fails

◀ TURN & SLIP or ART.

HORIZON switch ▶

select EMERGENCY

EMGCY LTS switch

ON, if required

Use the undercarriage emergency lowering system

Set up approach for flapless landing

(3) *Air turbine failure*

Indication:

GEN' R FAILURE warning on S.W.P. ALTNTR FAIL & AIR TURBINE UNDERSPEED doll's eyes on A.W.P. white

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◀ Action:

Take action as for Alternator Failure switching off all non-essential d.c. loads as early as possible

If a voltmeter is not fitted or, if fitted, is indicating 22-volts or less, descend to 10,000 ft (17,000 ft) or V.M.C. below cloud, whichever is lower

With a voltmeter indicating a charged battery, the first descent can be made to 22,000 ft (27,000 ft) and a cruise at 85% r.p.m. The second descent must be started when 22-volts is indicated

If the battery subsequently fails take action as for Generator Failure ▶

142. Autostabilizer/autopilot malfunction

- (1) The autostabilizer/autopilot may malfunction even when not in use, producing two types of aircraft response, namely 'hard over' control application and oscillatory control application. In both forms of aircraft response tail plane malfunctions will be magnified by poor trimming when in the I.L.S. mode.

(2) *'Hard over' control application*

In order to ensure that reaction to 'hard over' malfunction will be immediate, the aircraft must not be flown hands-off below 10,000 ft with autostabilizer engaged.

(a) *Tail plane*

4g peak increment in normal acceleration (*positive or negative*) at high subsonic speeds and low altitude. At subsonic speeds above 40,000 ft pre-stall buffet may be encountered, increasing in severity with increase of altitude.

(b) *Ailerons*

90 deg. bank application in 2 seconds at high subsonic speeds, or high supersonic speeds.

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(c) *Rudder*

Sharp yaw application which is not critical at any flight condition. Care should be taken in this case during recovery to avoid producing large side slip values due to abrupt rudder correction.

(3) *Oscillatory control application*

Without immediate pilot action the worst consequences are:-

(a) *Tail plane*

$\pm \frac{1}{2}g$ at 1 to 2 cycles per second

(b) *Aileron*

Negligible effect

(c) *Rudder*

Large oscillatory side slip but not structurally dangerous.

143. Action in the event of autostabilizer/autopilot malfunction

(1) In all malfunctions pilot action should be:-

(a) Correct the aircraft response by appropriate control application; when an oscillatory malfunction is recognised do not continue to 'chase' it.

(b) Switch OFF the autopilot MASTER switch, anticipating a change of trim in the tail plane channel.

(c) Retrim stick and pedal forces.

(d) Disengage the autopilot and switch off the autostabilizer switches.

(2) It is recommended that, following a malfunction, the autopilot system should not be used again during the flight. However, if it proves necessary to do

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so to investigate the condition further, then the MASTER switch should only be selected ON (*all other switches off*) at low I.A.S., well clear of the ground or other aircraft, anticipating a sharp pitch change and possible recurrence of the malfunction.

(3) Summary of the effects of power supply failure:-

FAILURE	EFFECT	ACTION
D.C. supply	Actuators remain centred, stroke restricters close	Disengage autopilot and autostabilizer channels
A.C. supply	Stroke restricters close. Tail plane actuator drifts to limited authority	Correct aircraft response with controls. Switch off MASTER switch & disengage autopilot & autostabilizer. Retrim tail plane if required
Partial (internal) a.c. supply	Actuators drift to extent of relevant authority either singly or in pairs:- (1) two ailerons (2) tail plane and rudder	As above
Hydraulic power (services)	Actuators are friction locked in the position pertaining when the accumulators exhaust	As above

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144. Emergency use of oxygen

SYMPTOMS	ACTION
A-Inhalation difficult. Blinker inoperative or erratic	1. Check regulator pressure gauge (200 - 400 lb/in²). 2. Select EMERGENCY on selector lever. <i>If breathing is still restricted:-</i> 3. Pull emergency oxygen knob. 4. Descend to 10,000 ft cockpit altitude or below and return to base. N.B.Exhaustion of the emergency oxygen is indicated by increased difficulty in breathing in. This can be relieved by setting the air-dilution lever to NORMAL or by disconnecting the oxygen mask when below 10,000 ft cockpit altitude.
B-Blinker inoperative. Breathing unrestricted.	1. Select 100% OXYGEN. 2. Check mask connection. 3. Check P.E.C. connection. 4. Check regulator pressure gauge (200 - 400 lb/in²). <i>If breathing is still unrestricted:-</i> Regulator is serviceable and delivering oxygen; blinker only is U/S and sortie may be continued on 100% OXYGEN. <i>If breathing becomes restricted:-</i> 5. Pull emergency oxygen knob. 6. Descend to 10,000 ft cockpit altitude or below and return to base.
C-Toxic fumes or smoke in the cockpit	1. Select 100% OXYGEN. 2. Move regulator selector lever to EMERGENCY. 3. If necessary to prevent leaks, move mask toggle to high pressure position.

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145. Jettisoning the canopy

(1) If it is required to jettison the canopy without seat ejection:-

(a) Reduce speed if possible to not more than 300 knots.

(b) The yellow-and-black spade grip handle at the port side of the seat pan must be pulled to its fullest extent.

►(2) Operation of either of the seat firing handles will jettison the canopy prior to ejection. ◀



146. Abandoning the aircraft in flight (Part 1, para.93 to 100)

Note...

►(a) *On all aircraft ejection can be effected at ground level provided I.A.S. is not below 90 knots.* ◀

◀(b) *On all aircraft, above 42,000 ft aircraft altitude, ► the pressure clothing will probably not be fully inflated from the main oxygen system unless a three-second delay occurs between cockpit depressurization and ejection.*

(c) *Use of the ejection seat should be avoided whilst the aircraft is inverted.*

(1) (a) Reduce speed to 250 knots if possible.



(b) Fly in straight and level or climbing flight.

(c) If above 42,000 ft and circumstances permit, depressurize the cockpit for 3 seconds to ensure that the pressure clothing is fully inflated prior to ejection.

(d) Pull the face blind handle fully down over the face ensuring that the elbows are kept well in and that the head and back are pressed firmly

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against the seat. If the face blind handle cannot be reached, pull up the seat pan firing handle. ►►

(2) If the automatic system fails after ejection proceed as follows: -

- (a) When the forward speed is sufficiently low, discard the face screen.
- (b) Pull the override D-ring to the full length of its travel to isolate the parachute auto-device.
- (c) Grasp the rip-cord handle.
- (d) Operate the manual separation lever and fall out of the seat.
- (e) When clear of the seat pull the rip-cord D-ring.

(3) If the ejection seat fails to eject: -

- ◄(a) Pull the face screen handle again. If this fails, pull the seat pan firing handle.
- (b) If the seat still fails to eject pull the override D-ring to the full length of its travel to isolate the parachute auto-device. ►
- (c) Operate the manual separation lever and proceed as on an aircraft not fitted with an ejection seat. The emergency oxygen system will be disconnected when separation takes place. If descending into water remove helmet and oxygen mask, but not if descending on to land. If a partial pressure helmet is worn, remove it and throw it away whether landing in water or not. To do this easily, unplug the helmet hose first and then use the helmet emergency release. ►
- (d) When the parachute has developed, disconnect the survival pack side quick-release couplings and allow the pack to hang on its lowering line.

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147. Action in the event of engine fire

F1 or F2 warning

- | | | |
|-----|--------------------------------------|-----------------------|
| (1) | Appropriate throttle | H.P. COCK CLOSED |
| (2) | Appropriate fuel switch | To remaining engine |
| (3) | I. A. S. | Reduce if practicable |
| (4) | Appropriate fire extinguisher switch | Press |
| (5) | Land as soon as possible | |

If the warning clears:-

- (6) Test the standard warning system and if unserviceable proceed as for persistent fire.

If the warning persists:-

- (7) Look for signs of fire, and if an F1 warning, jettison the ventral tank.

Note...

- (a) A visual check by another aircraft will be of assistance.
- (b) If the other fire warning comes on, no extinguishant will be available and the aircraft must be abandoned.
- (c) Do not relight the engine.

If signs of fire are apparent:-

(smoke or flame, control system malfunction, instrument indications)

- (8) Abandon the aircraft.

148. Action in the event of reheat warnings

Single reheat warning

- (1) Cancel reheat on both engines

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If the warning clears:-

- (a) Continue flight using minimum power on both engines.
- (b) Land as soon as possible.

If the warning persists:-

- (2) Appropriate throttle H.P. COCK CLOSED
- (3) Appropriate fuel switch To remaining engine

If the warning still persists:-

- (4) Look for signs of fire and if a NO.1 ENG. reheat warning: jettison the ventral tank.
- (5) Use minimum power necessary for the remainder of the flight.

If signs of fire are apparent:-

(smoke or flame, control system malfunction, instrument indications)

- (6) Abandon the aircraft.

Double reheat warning

- (1) Cancel reheat on both engines and continue the flight using the minimum of power necessary.
- (2) Land as soon as possible.

If one warning persists:-

- (3) Appropriate throttle H.P. COCK CLOSED
- (4) Appropriate fuel switch To remaining engine
- (5) If a NO.1 ENG. reheat warning Jettison the ventral tank

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If the warning clears:-

- (6) Test the Standard Warning System and if unserviceable proceed as for (4), (5) and (6) under 'single reheat warning'.

If both warnings persist:-

- (7) Abandon the aircraft.

Note...

The ventral tank must not be jettisoned at speeds greater than 500 knots below 25,000 ft.

149. Action if cockpit temperature fails

(1) Complete loss of air supply

- (a) Descend immediately to a safe altitude (less than 40,000 ft). A return to base at 350 knots at altitudes below 20,000 ft in I.C.A.N. conditions would produce a reasonable cockpit temperature. The ram-air valve may be used to provide ventilation if necessary.
- (b) Possible causes may be a burst pipe, double engine failure, failure of pressure ratio controller in the closed position or failure of shut-off cock in the closed position (*unlikely to occur in flight*).

Note...

Loss of cockpit air supply will also cause de-pressurization of the radar bullet and loss of A.I. cooling air; in these circumstances A.I. should be switched off to avoid possible damage.

(2) Overheating the cockpit

- (a) Select COOL in the MANUAL sector of the temperature selector; hold in this position for 13 seconds to ensure that the control valve has moved to the full cold position. If the system

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responds the condition will not deteriorate, although there will be an appreciable delay before the temperature level falls. The remainder of the flight should be completed using the manual control. If the temperature is still increasing approx. 1 minute after the cold selection has been made, switch off the cockpit air supply and proceed as in (1) (a).

- (b) Possible causes of overheating may be failure of the automatic control system, temperature control valve, cold-air unit or pressure ratio controller (*in the almost closed position*).

(3) *Cockpit becomes very cold*

- (a) Select WARM in the MANUAL sector of the temperature selector, and hold in this position for 13 seconds. If the temperature begins to rise after approx. 1 minute, the remainder of the flight should be completed using manual control. If conditions continue to deteriorate after this period, switch off the cockpit air supply and proceed as in (1) (a).
- (b) A possible cause of this condition may be failure of either the automatic control system or the temperature control valve.

150. Ventral tank jettison

When jettisoning the ventral tank speed should preferably be below 500 knots to minimise the risk of structural damage to the hinges. Jettisoning the tank at low altitudes results in extremely violent pitching motion which would - in the absence of corrective action by the pilot - exceed the negative 'g' structural limitation. Above 25,000 ft however, the nose-down pitching motion is comparatively mild. On jettisoning the tank the nose-down pitch can be anticipated and, therefore, minimised by making appropriate pitch correction.

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151. Emergency jettison of guided weapons

◀ Jettison by jettison gun is permitted at speeds up to 300 knots/0.8M between 1g and 2g. ▶

152. Hydraulic feel inoperative

- (1) Failure of the hydraulic feel will be indicated by a marked lightening of the stick and rudder forces, but spring feel continues to operate. The spring forces will be adequate at low speeds but will be low at high I.A.S.; gentle manoeuvres only should be undertaken.
- (2) Failure of the hydraulic component of feel may be due to:-
 - (a) Pitot failure - apparent by loss of indication by associated instruments and decrease in feel force.
 - (b) Local hydraulic failure - only apparent by decrease in feel force, probably most noticeable on the tail plane control.
 - (c) Services system failure - causing loss of hydraulic pressure. This will normally leave 15 minutes operating time for the feel system from its accumulator.

153. Action if ventral tank fuel fails to transfer

If fuel in the ventral tank fails to transfer, the aircraft c.g. will move further aft than normal; to avoid difficult flight conditions the following flight limitations should be observed:

Gentle manoeuvres only and turns up to 60 deg. bank 2g are permitted. Rolling manoeuvres are not permitted. Additionally, if missiles are carried, reduce speed to 250 knots on descending below 35,000 ft.

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154. Tail plane trim malfunction

The tail plane trim rate is relatively slow, and changes in stick force can readily be held if a runaway occurs. Should the trimmer stick in the fully forward position, handling on the approach is improved if feel is selected out.

155. Action in the event of rudder manual reversion (XA 847 and 853 only)

- (1) These aircraft are not fitted with the tandem piston rudder jack, and should the No.2 controls hydraulic system fail completely, the rudder will revert to manual control. To avoid rudder flutter (*the onset of which is possible some 20 to 30 seconds after pressure failure if speed is substantially above 400 knots*), speed should be reduced immediately.
- (2) Immediate action must include throttling the engines, extending the air brakes, and climbing the aircraft until the speed is reduced to 400 knots.

156. Undercarriage emergency lowering

The following actions are to be taken if the undercarriage fails to unlock or lock down. A fuel state of 800 lb/side should allow sufficient time to carry out the drill.

- (1) Check the serviceability of the services hydraulic system by selecting air brakes OUT and then IN.
- (2) *Undercarriage fails to unlock* - all undercarriage lights out.
 - (a) Reselect several times.
 - (b) If unsuccessful select undercarriage emergency down whether the services system is serviceable or not. If the undercarriage still fails to unlock it is recommended that the aircraft be abandoned.

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- (3) *Undercarriage unlocks but fails to lock down - one or more undercarriage red lights on.*
- (a) If the services system is unserviceable select undercarriage emergency down.
 - (b) If the services system is serviceable:-
 - (i) Try reselection.
 - (ii) Ascertain the position of the undercarriage from the control tower or another aircraft.
 - (iii) If an undercarriage leg is within approximately 20 degrees of fully down, yaw the aircraft for periods of at least 20 seconds favourable to that leg (*i.e. yaw to starboard to lock port leg*), increasing speed into the range 270-280 knots. The maximum benefit of yaw is obtained in this speed band.
 - (iv) If the leg is stopped at a higher position, use roll first and then yaw.
 - (v) If still unsuccessful select undercarriage emergency down.
- (4) *Use of emergency selection*
- (a) Maintain level or climbing flight with minimum use of the control column.
 - (b) Speed - 180 knots.
 - (c) Run No.1 engine at the highest practicable power commensurate with configuration and speed and at least 70% r.p.m. until the undercarriage is locked down.
 - (d) If still unsuccessful, proceed as in 3 (b) (iii) and (iv) above.
- (5) *Landing with a main wheel or wheels unlocked*
- A landing should not be attempted, abandon the aircraft.

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(6) *Landing with both main wheels locked down but nose wheel unlocked*

- (a) Jettison the ventral tank and all other jettisonable stores.
- (b) On the final approach to land, at a speed above 200 knots with flaps up, jettison the canopy.
- (c) Select flaps down if available.
- (d) When the main wheels touch, stream the brake parachute, holding a nose high attitude for maximum aerodynamic braking.
- (e) Shut the H.P. cocks.
- (f) Lower the nose on to the runway before tail-plane control is lost.
- (g) Apply the brakes to keep straight.
- (h) If a barrier is in use on the runway, have it in the down position.

157. Brake parachute failure on landing

- ◀ (1) Where fuel and/or weather prohibit an overshoot, throttle both engines to idling, apply maximum wheel brake pressure and call for barrier. When max. wheel braking has been applied do not taxi the aircraft.
- (2) Other than in (1) above, operate the 'chute jettison button, overshoot and proceed as follows:-
 - (a) Carry out a normal approach and landing using extra care to ensure that the correct threshold speed is not exceeded. After touchdown lower the nose and apply maximum wheel braking.
 - (b) Where runway length is critical and diversion fuel remains, proceed to diversion airfield and carry out drill as in (2) (a) above.

Note...

As much as 400/400 lb of fuel may be required for overshoot circuit and landing. ▶

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