PART II

HANDLING

33. **Management of the fuel system**

(i) Start up and take-off with all tanks on.

(ii) At a safe height, switch off Nos. 1 and 2 tanks and continue to fly on No. 3 tank until 300 gallons remain.* Then switch on Nos. 1 and 2 tanks. Subject to the variation in the output of individual L.P. pumps the level in all tanks then tends to even out.

(iii) When using the wing drop tanks proceed as in (ii), above. While fuel is transferring to No. 3 tank the fuel gauge for this tank will normally read full, but under certain conditions of flight the level may fall to 450 gallons before transfer has been completed. When the level in No. 3 tank falls steadily below 450 gallons it indicates that the transfer of fuel from the wing drop tanks has ceased.

(iv) In a steep climb 60 gallons of fuel becomes unusable in No. 3 tank, therefore when the fuel level in this tank falls to 80 gallons and the aircraft is climbing steeply the tank should be switched off until level flight is resumed when it may be reselected.

* On operational flights No. 3 tank (and wing drop tanks if fitted) should be emptied before selecting Nos. 1 and 2 tanks. This ensures that all the fuel in the non self-sealing tanks is used early in the flight. An intermediate landing, however, with No. 3 tank empty and Nos. 1 and 2 tanks full necessistates a higher approach speed due to the forward C.G. position—see para. 49 (iii).

34. **Cockpit checks**

(i) Before carrying out the internal checks particular attention should be paid to the following:—

Canopy and hatch jettison safety switches	OFF
Ejection seat safety pins	In

FINAL CHECKS FOR TAKE-OFF

TRIM	...	ALL NEUTRAL
FUEL	...	CONTENTS ALL L.P. COCKS AND PUMPS: ON CIRCUIT BREAKER PLATE: DEPRESS FUEL PRESSURE WARNING LIGHTS: OUT H.P. COCKS: ON
PUMP ISOL. SWITCHES	...	NORMAL
FLAPS	...	UP AIR BRAKES: IN BOMB DOORS: CLOSED
INSTRUMENTS	...	JET PIPE TEMP.: NORMAL OIL PRESSURE: NORMAL
OXYGEN	...	ON: CHECK WITH CREW CABIN PRESSURE, CABIN HEAT, VENTILATOR } AS REQUIRED
CANOPY AND HATCH	...	JETTISON SAFETY SWITCHES: ON ENTRANCE DOOR: LOCKED

FINAL CHECKS FOR LANDING

FUEL	...	CONTENTS CORRECT L.P. COCKS AND PUMPS: ON FUEL PRESSURE WARNING LIGHTS: OUT
PUMP ISOL. SWITCHES	...	NORMAL
UNDERCARRIAGE	...	DOWN AND LOCKED THREE GREEN LIGHTS
BRAKES	...	PRESSURE 2,500 LB/SQ. IN.
FLAPS	...	DOWN ON FINAL AIR BRAKES: IN BOMB DOORS: CLOSED

(ii) When carrying out the cockpit checks the L.P. fuel cocks and pumps should be checked as follows:—

(a) Switch on and leave on No. 3 tank switches and check that the fuel pressure warning lights are out.

(b) In turn, switch on and leave on the switches for No. 2 then No. 1 tank and as each is switched on check aurally the operation of the fuel cock actuator and fuel pump.

35. **Starting the engines**

(i) Checks before starting:—

Fuel pump isolating switches	NORMAL
Throttles	Closed
H.P. cocks	Closed
L.P. cock and pump switches	All ON
Canopy demisting	ON

(ii) Have a cartridge inserted into the breech of each engine starter.

(iii) If using an external electrical supply have the GROUND/FLIGHT switch set to GROUND

(iv) Switch ON the master starting switch and for each engine in turn:—

(a) Switch on the ignition switch.

(b) Open the H.P. cock and immediately press the starter pushbutton for approximately 2 seconds.

(v) When the cartridge fires the r.p.m. build up rapidly to 1,500-1,800 and may then drop back slightly. As the engine lights up the r.p.m. build up slowly to the idling figure of 2,750 ± 100.

(vi) Check that the oil pressure builds up to not less than 3 lb./sq. in.

(vii) Failure of an engine to start:—

(a) If an engine fails to accelerate to idling r.p.m. or if a cartridge fails to fire, the H.P. cock should be closed immediately and the master starting switch set to OFF.

(b) If a cartridge fails to fire a period of one minute must elapse before the breech cap is removed. If a second

cartridge fails to fire the electrical circuit should be checked.

(c) After the engine has stopped rotating the starter may be reloaded. The master starting switch should then be set to ON and the H.P. cock opened immediately before the fresh cartridge is fired.

(d) Two cartridges may be fired in rapid succession but a period of 10 minutes must elapse between each subsequent reloading.

(e) After failure to start, if the H.P. cock is closed without delay, there should be no necessity to "blow through" the engine. If in doubt, excess fuel may be removed by firing another cartridge with the master starting switch ON, the ignition switch OFF, the H.P. cock closed and, if an internal fire is suspected, with the L.P. cocks and pumps for the engine OFF.

(viii) When both engines are running satisfactorily have the external battery removed, the GROUND/FLIGHT switch set to FLIGHT, and the access door closed.

36. **Checks after starting**

Entrance door	Closed and handle locked
Electrical services	Battery isolating switch ON
	Field circuit breakers set
	Generator switches ON
	Pilot's services circuit breaker set
Instruments	Align Mk. 4B compass and set Compass—Gyro switch to COMPASS
	NORMAL—TEST and NORMAL—EMERGENCY switches to NORMAL
Hydraulic system	Test by lowering and raising flaps
Wheels brakes	Pressure 2,500 lb./sq. in.
Bomb doors	Closed

NOTE.—The electrical load is high while carrying out these checks and therefore they should be kept

as short as possible. If necessary the engines should be run at 4,500-5,000 r.p.m. so that the generators relieve the battery of load.

37. **Testing the engines**

After repair, inspection or at the pilot's discretion, the testing of the compressor bleeds, variable swirl vanes and fuel pumps isolating valves should be carried out as follows:—

(a) Increase r.p.m. to 6,000 and switch the isolating switches to ISOL. A slight alteration in r.p.m. should be apparent. Return the switch to NORMAL.

(b) Increase r.p.m. slowly to about 6,600—6,800. In this range the swirl vanes change angle and the bleeds open causing a drop of about 300 r.p.m. When throttling back to 6,300—6,100 r.p.m. a corresponding increase occurs.

(c) Close the throttles to the idling position.

38. **Taxying**

(i) Checks before taxying:—

Radio	Test V.H.F. and other radio aids
	Check altimeter setting with control
Instruments	Check for serviceability
D.V. panel demisting	ON
Pressure-head heater	ON (if required)
Wheel brakes	Operation as soon as possible

(ii) The hydraulic brakes are very powerful and when taxying in strong winds rudder foot loads are very high. Throttle manipulation should always be smooth and progressive.

(iii) The fuel consumption when taxying is high, approximately 2 gallons per minute for each engine.

39. **Take-off**

(i) Checks before take-off:—

Trimmers	All neutral
Fuel	Contents
	All L.P. cocks and pumps on
	H.P. cocks on and tightened
	Fuel pressure warning lights out
	Depress the circuit breaker plate
Fuel pump isolating switches	NORMAL
Flaps	UP
	Air brakes—OFF
	Bomb doors—CLOSED
Instruments	Jet pipe temperature normal
	Oil pressure normal
Oxygen	On (check with crew)
	Cabin pressurisation and heating as required
	Ventilators as required
Canopy and hatch	Safety jettison switches ON
	Direct vision panel closed
	Entrance door closed, handle locked

(ii) Align the aircraft on the runway and apply the brakes.

(iii) At weights above 37,000 lb. open up the engines against the brakes to 6,000 r.p.m. and set the fuel pump isolating switches to ISOL.

(iv) Open up the engines to 7,000 r.p.m. checking that the swirl vanes operate correctly.

(v) Release the brakes and move the throttles to the fully open position. There is no tendency to swing.

(vi) There is a tendency for the nose wheel to rise early in the take-off run. It should be held just clear of the ground by a slight push force on the control column.

(vii) The aircraft should be eased off the ground at 95-110 knots depending upon weight.

(viii) The safety speed is 140 knots.

(ix) When comfortably airborne brake the wheels and retract the undercarriage. There is little change of trim but care should be taken to avoid exceeding 180 knots until the wheels are locked up.

(x) *SET THE FUEL PUMP ISOLATING SWITCHES TO NORMAL*, if used.

(xi) The aircraft accelerates rapidly and above 120 knots there is an increasing nose-up change of trim, which should be countered by adjusting the tailplane incidence control.

(xii) If a climb to altitude is to be made the engines should be throttled to give 7,600 r.p.m. and the speed allowed to build up to 280 knots. For circuit practice it is recommended that speed is not increased above 200 knots during the climb to circuit height and therefore the engines should be throttled to 7,000 r.p.m., or below, for this climb.

40. **Climbing**

(i) The aircraft is easy to trim on the climb and holds its trimmed speed well.

(ii) The recommended climbing speed is 280 knots until .70 M is reached at approximately 20,000 feet. Thereafter, maintain .70 M to the desired altitude.

(iii) R.p.m. tend to increase with altitude and this tendency should be countered by careful throttling. At high altitudes some difficulty may be experienced in setting the desired r.p.m. precisely. Jet pipe temperatures tend to remain constant up to 30,000 feet after which they may increase slightly at constant r.p.m.

(iv) If the cabin pressurisation control has not been set before take-off, pressurise at 10,000 feet by holding the control switch to HOT until indicator needle is vertical.

41. **General flying**

(i) The aircraft is easy to trim and pleasant to fly at all altitudes. Lateral trim is very sensitive to asymmetric thrust and rudder trim.

(ii) *Controls*

The controls are well harmonised and responsive at all altitudes. The rudder is very light and sensitive for small deflections but becomes progressively heavier with

increase of movement. It should be used with care at high I.A.S. The ailerons are light and effective at low speeds and at high altitudes but become increasingly heavy with increase of I.A.S. The elevator is light and effective but becomes progressively heavier at high I.A.S. All controls become heavier and therefore slower in response at high I.A.S.

(iii) *Trimmers*

The tailplane incidence control is sensitive, the speed of operation being adequate at speeds down to the stall. At high I.A.S. however, the control must be used in short 'blips' as at these speeds it is very powerful. The rudder trimmer is powerful and quick to operate and should be used with care at all times. The aileron bias is effective at all speeds.

(iv) *Air brakes*

The air brakes are effective at high I.A.S. but below 300 knots they are ineffective and do not help to reduce speed for the approach and landing. At high Mach numbers their use promotes increased buffeting with little decelerating effect and at .81 M a slight nose down change of trim. Their use above .82 M therefore is not recommended.

(v) *Changes of trim*

Undercarriage down	Slight nose up
Undercarriage up	Little change
Flaps down	Strong nose up
Flaps up	Strong nose down
Air brakes out	Little change except at high Mach numbers when a slight nose down change occurs
Air brakes in	Little change
Bomb doors open or closed	No change

(vi) (a) When lowering flaps, slight buffeting occurs which decreases as the speed is reduced.

(b) Buffeting is most pronounced when the bomb doors are opened at the I.A.S. limitation of 300 knots if this speed corresponds to .75 M. At lower combinations of Mach number and airspeed, buffeting is less marked.

(vii) *Flying at reduced airspeed*

Reduce speed to approximately 150 knots and keep the flaps up. The stalling speed under these conditions is 90-110 knots depending on weight.

(viii) *Flying in conditions of severe turbulence*

The recommended speed is 240 knots up to 35,000 feet.

42. **Stalling**

(i) The approximate stalling speeds in knots are:—

	32,000 lb. Without drop tanks	42,000 lb. With wing drop tanks
Power off		
Undercarriage and flaps up	85–90	105–110
Undercarriage and flaps down	75	
Power on		
Typical approach conditions undercarriage and flaps down ...	75	

(ii) Warning of the approach of the stall is given by a slight buffeting some 10 knots above the stall which increases as the stall is approached. At the stall the nose drops gently and either wing may drop gently. Aileron control is effective in raising the dropped wing and the recovery from the stall is straightforward. The height lost in recovery is comparatively small. The stalling speed is not noticeably affected by opening the air brakes or bomb doors, but a slight increase in buffeting is apparent.

(iii) *High-speed stall*

Ample warning of the approach of a high-speed stall is given by buffeting with, in some instances, a tendency to drop a wing. Recovery is immediate upon releasing the pull force on the control column.

(iv) *With wing drop tanks*

When wing drop tanks are fitted the pre-stall buffeting is more marked and at the stall slight aileron snatch occurs accompanied by mild wing dropping. If ailerons are used in an attempt to hold up the wing the aileron snatching becomes more marked and the wing drops sharply. The aileron snatching and wing dropping may

occur approximately 5 knots above the stalling speeds at 32,000 lb. quoted above.

43. **Engine handling**

(i) *Fuel pump isolating switches*

(a) Except at take-off at weights above 37,000 lb., it is recommended that the engines be operated with the fuel pump isolating switches set to NORMAL. If a rapid and unaccountable loss in r.p.m., which may be due to an H.P. fuel pump defect, occurs, the engine must be throttled back immediately and the fuel pump isolating switch set to ISOL. If the engine then idles normally an attempt may be made to accelerate it to the desired r.p.m. If it fails to idle normally, the H.P. cock should be closed and the engine relit as recommended in para. 45. In these circumstances it will normally not be possible at low altitudes to obtain more than 60% of the maximum r.p.m.

(b) With a fuel pump isolating switch set to ISOL, considerable care must be exercised when the engine is opened up from idling r.p.m. If the throttle is mis-handled at engine speeds below 5,000 r.p.m., the engine is liable to surge giving rise to excessively high jet pipe temperatures and a possibility of fire. While opening the throttle a close check should be made on jet pipe temperature. Should it rise rapidly and reach the limit, the r.p.m. remaining constant, the throttle should be closed immediately and a slower acceleration attempted.

(ii) *General*

(a) Above approximately 3,000 feet the effect of the acceleration control units is reduced, therefore, rapid acceleration of the engine up to 5,000 r.p.m. will promote overheating and surging. Engine acceleration deteriorates progressively with altitude and care is required at higher altitudes to prevent surging.

(b) Above 35,000 feet, r.p.m. below 6,500 should be avoided except during a normal descent when an engine should not be opened up again above 28,000 feet. Below 6,500 r.p.m. an idling surge may result giving rise to excessive jet pipe temperatures. This

effect may only be apparent when the throttle is opened.

44. **Single-engine flying**

(i) An engine should be stopped by closing the throttle and then shutting the H.P. cock; at least one L.P. cock should be left on.

(ii) The aircraft has a very good single-engine performance and the rudder trimmers are powerful enough to trim out all foot load at normal cruising speeds. At 7,400 r.p.m. on one engine the aircraft will maintain a speed of approximately 330 knots in level flight below 5,000 feet.

45. **Relighting an engine in flight**

(i) Engine relighting is practicable at heights up to 20,000 feet and at speeds up to 200 knots. Relighting becomes progressively easier with reduction of altitude and airspeed.

(ii) Ensure that the H.P. cock is closed, then:—

(a) Reduce speed to 200 knots or less so that the windmilling r.p.m. are 1,000-1,200.

(b) Ensure that at least one L.P. cock and L.P. pump switch is on and that the fuel pressure warning light is out

(c) Check that the ignition switch is on.

(d) Set the throttle fully closed.

(e) With the H.P. cock closed press the relight push-button.

(f) After 3 seconds move the H.P. cock to the fully open position.

(g) When the r.p.m. start to rise, release the relight button.

(h) When the r.p.m. have stabilized at the correct idling r.p.m. for the particular altitude the engine may be opened up slowly to the desired figure.

(i) If the engine r.p.m. fail to build up within 30 seconds after opening the H.P. cock the relight button should be released and the H.P. cock closed immediately.

(j) Another attempt may be made after descending to a lower altitude which will also allow time for the engine to dry out.

46. **High speed flying**

(i) *Limitations*

(a) The aircraft is easily capable of exceeding its airspeed and Mach number limitations even in level flight and care is needed to avoid exceeding the overriding I.A.S. limitation of 450 knots which is imposed for structural reasons. At altitudes up to 15,000 feet the Mach number limitation of .75 should not be exceeded. At these low altitudes buffeting, together with a rapid fuselage oscillation which may be severe and commence suddenly, can be detrimental to the airframe, particularly if sustained, owing to the high corresponding airspeed.

(b) Between 15,000 and 25,000 feet a Mach number limitation of .79 applies but at this, or even higher Mach numbers overstressing of the airframe is less liable to result in this height band unless buffeting is severe.

(c) Above 25,000 feet no Mach number limitation is imposed but see paragraph (ii) (e).

(ii) *Characteristics*

(a) Sea level—15,000 feet. As speed increases there may be a slight change of longitudinal trim and at the maximum speed or Mach number slight intermittent buffeting may occur. If a rapid fuselage oscillation develops at or near the I.A.S. or Mach number limitation, speed should be reduced as soon as possible until the oscillation stops.

(b) The air brakes are most effective at high I.A.S. but their use is accompanied by noticeable buffeting.

(c) When throttling back at 450 knots a nose down trim change occurs which can be easily held.

(d) 15,000—25,000 feet. As the Mach number is increased, steady buffeting occurs above about .77 M. If the Mach number is increased beyond the limitation of .79 a progressive increase in buffeting occurs and there is a tendency for lateral unsteadiness to develop.

(e) 25,000 feet and above. No Mach number limitation is imposed but speed should not be increased beyond that at which the nose up change of trim or the wing heaviness described below becomes apparent.

(i) At about .81 M buffeting increases and at .83 a slight nose down trim change occurs followed by a nose up trim change at .85.

(ii) Between 35,000 and 40,000 feet lateral unsteadiness occurs at .83 with a tendency for the right wing to become heavy as the Mach number increases to .84.

(iii) Above 40,000 feet the right wing low tendency occurs at .83.

47. **Cruising**

(i) *Engine handling*

When maximum range is required it is essential to operate the engines at r.p.m. which ensure that the swirl vanes are at the correct angle and that the compressor bleeds are closed. An engine will normally be in this condition if it has accelerated to about 6,800 r.p.m. and a drop of 300-400 r.p.m. has been observed. If less power is desired the engines may be throttled back but not sufficiently to operate the swirl vanes and re-open the bleed valves. The r.p.m. at which the swirl vanes and bleed valves operate decrease with altitude.

(ii) *Flying for range*

(a) Climb as recommended in paragraph 40 to an altitude at which the rate of climb has fallen to about 300 ft./min. Speed should then be increased to .74 M and r.p.m. reduced to 7,400. If height is not maintained at this speed or r.p.m. the aircraft should be allowed to find its own cruising ceiling by permitting it to gain or lose height without changing speed or r.p.m.

(b) For extreme range the above speed and r.p.m. should be maintained, and as the weight of the aircraft decreases with the use of fuel, it should be allowed to climb. In these conditions the aircraft should gain height at approximately 1,500 feet per hour.

(c) If extreme range is not essential, the loss of range resulting from restricting the height to 48,000 feet is not large. When the aircraft reaches this altitude, any further tendency to gain height should be countered by reducing r.p.m., level flight being maintained at .74 M as shown on the flight planning chart —Fig. 6.

(d) The loss in range due to cruising at altitudes below 40,000 ft. is considerable as will be seen from the chart. If, however, operational considerations necessitate this, the maximum obtainable range will be achieved by flying at the Mach numbers shown on the chart. When cruising height is reached 6,700 r.p.m. should be selected and the resulting speed in level flight accepted. At the commencement of the cruise, this speed may, depending upon the weight of the aircraft and atmospheric conditions, be below that shown on the chart, but will increase slightly as fuel is used. The mean speeds should, however, approximate to the figures shown. It should be noted that the speeds recommended for cruising below 40,000 ft. are above the theoretical optimum speeds for range. This is due to the necessity for keeping the r.p.m. above the range of operation of the swirl vanes and bleed valves. The apparently inconsistent drop and subsequent rise in speed between 30,000 and 48,000 feet is also due to this fact.

(e) If, due to operational considerations, it is desired to cruise at 20,000 ft. or below, some increase in range is obtainable by flying on one engine. An indicated airspeed of 240 knots should be maintained and all non-essential electrical load must be switched off (see para. 11 (ii) (b)). Above 20,000 ft. no worthwhile advantage is gained by flying on one engine. Below this height the advantage increases progressively provided a minimum of 6,700 r.p.m. is maintained the resulting airspeed being accepted. At 10,000 ft. the gain in range is of the order of 50 miles.

(f) The descent should be made with the throttles fully closed at .75 M down to 20,000 ft. and at 350 knots below this height. The r.p.m. will decrease gradually, but should be prevented from falling below 4,500 by adjusting the throttles as necessary.

(g) The distance covered on the descent is appreciable due to the relatively low rate of descent in the initial stages, this distance therefore should be included in the overall cruising range.

(iii) *Maximum endurance*

(a) The speed for maximum endurance varies between 165 knots at sea level to 180 knots at 45,000 feet. At any required altitude the endurance speed may be

found by flying at the speed which requires minimum r.p.m. to maintain level flight.

(b) Endurance increases progressively with increase of altitude up to 40,000 feet. Above this altitude little or no increase results.

(c) The climb to altitude should be carried out at the speeds recommended in para. 40.

(d) At medium and low altitudes an increase in endurance will result from flying on one engine at the speeds recommended above.

48. **Pressure error corrections**

From		150	200	350	Knots
To		200	350	450	I.A.S.
At 26,000 lb.	Add	3	2	1	Knots
At 40,000 lb.	Add	5	4	3	

Large errors in both the airspeed indicator and altimeter are induced if the aircraft is yawed, these instruments tending to read low.

49. **Approach and landing**

(i) Checks before landing

Reduce speed to 150 knots and check:—

Fuel	Contents Correct L.P. cocks and pumps ON Fuel pressure warning lights out
Fuel pump isolating switches	NORMAL
Undercarriage	Down and locked check three green lights
Brakes	Check pressure 2,500 lb./sq. in.
Flaps	Down on final Air brakes in Bomb doors closed

(ii) The flaps may be lowered on the cross wind leg and the turn into the final approach made at 120 knots.

(iii) When lined up on the final approach the speed should be reduced to 105-110 knots as soon as possible as

the aircraft loses speed very slowly. If higher speeds are used the approach becomes unnecessarily flat. Speed should be reduced progressively until the airfield boundary is crossed at 90-95 knots. On throttling back the thrust decreases slowly; the engines therefore should be throttled fully back before reaching the airfield boundary so that the touch-down is made with the least amount of residual thrust. The use of higher landing speeds will greatly increase the landing run but this is inevitable if landing at a forward C. of G., when the speed should be increased by approximately ten knots.

(iv) After lowering the nosewheel onto the ground the brakes should be applied very lightly in the initial stages, the pressure being increased progressively as speed falls off to a value not exceeding half of the maximum pressure available until the speed drops to 40 knots. Pressure may then be increased up to the maximum but care is still necessary to avoid locking the wheels.

NOTE.—If a landing is made with an engine fuel pump isolating switch set to ISOL., great care is necessary if the engine has to be opened up again from r.p.m. below 5,000 (see para. 43 (i) (b)).

50. Instrument approach

The following are recommended for use during an instrument approach with the undercarriage down:—

	R.p.m.*	Flaps	Airspeed
Pattern	6,300	UP	140
Final	6,100	UP	125
Glide Path	6,100	DOWN	105

* With the bleed valves open.

NOTE.—When the glide path is intersected and flap is selected down the aircraft tends to maintain height unless the airspeed is maintained at 125 knots until the flaps are fully down.

51. Mislanding and going round again

(i) A minimum of 250 gallons of fuel which allows ten to twelve minutes flying should be available for mislanding.

(ii) Open the throttles smoothly to the take-off r.p.m. and select undercarriage UP. There is a slight nose up change of trim.

(iii) Increase speed to 130 knots and at a safe height select flaps UP. Reduce engine r.p.m. as necessary to avoid exceeding the speed limitation for flaps of 145 knots, while they are coming up. There is a strong nose down change of trim as the flaps approach the up position.

52. Checks after landing

After landing carry out the following checks:—

Flaps	Up
Brakes	Pressure sufficient for taxying
L.P. cocks and pumps	Switch OFF except one for each engine
Pressure-head heater	OFF
Canopy demisting	OFF
D.V. panel demisting	OFF
Oxygen	OFF
Cabin pressurising	OFF

53. Stopping the engines

(i) The engines should be stopped by closing the H.P. cock while the engines are at idling r.p.m. At least one L.P. cock for each engine should be left on until the engines have stopped rotating.

(ii) Carry out the following checks:—

Canopy and hatch jettison safety switches	OFF
*Battery isolating switch	OFF
*L.P. cocks and pump switches	All OFF
Chocks	In position
Brakes	OFF
Master starting switch	OFF
Ignition switches	OFF
All electrical services	OFF
Ejection seat safety pins	In position

*This sequence will ensure that the battery is relieved of all electrical load as quickly as possible but the two L.P. cocks will remain open irrespective of the position of their switches.