

## PART IV

### HANDLING

#### STARTING, TAXYING AND TAKE-OFF

##### 57. External checks

###### (a) *Before checking aircraft:—*

Form 700	Check and sign
Starting area	Clear and safe
Chocking	Correct
Fire extinguishers	In position
Starter trolley acc. of correct voltage	Available.

###### (b) *At the aircraft*

Firing safety pins of both ejection seats	Engaged through straps at front of blind.
MASTER SWITCH	On
Undercarriage	U/c lever down—Three green lights.
Master switch	OFF.
Brake pressure	Not below 200 lb./sq. in.
Canopy and windscreen wiper	Condition.

NOTE.—If being flown solo the safety equipment in the starboard seat should be secured or removed and the starboard harness securely fastened, with the leg restraining straps in position and pulled tight in the snubbing units. The safety pin should be left in the front position to avoid fouling the canopy.

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(c) *Starboard intake*

Boundary layer fairing	Condition.
Air intake	Condition, loose objects, compressor undamaged, check for oil leak from front bearing.
Upper starboard rear fuselage	Condition, cowlings fastened, ammo. bay doors.
Generator cooling, gun heating and B.P.C. intake	Clear, B.P.C. pipe undamaged.
Lower starboard rear fuselage	Condition, cowlings fastened.
Fuel and oil vents	Condition.

(d) *Starboard undercarriage*

Fairing and door	Condition and security, check door knuckle pads for signs of damage.
Oleo leg	Condition and extension.
Tyre	Cuts, cracks, creep, condition of tread, inflation, freedom of valve, walls for signs of rubbing.
Brake pipes	Condition and security.
Undercarriage bay	Clean, no oil leaks from hydraulic pipe and jack, micro switch clean, hydraulic pipe wrapping for chafing. <del>Drift blocks and radius rod attachment bolts condition.</del> <span style="float: right;">R/L</span> Door locking pin not showing.
Ground lock	Removed.
Flaps	Condition of lower skin.

(e) *Starboard mainplane*

Lower surface	Condition, panels secure
I.F.F. aerial	Secure.

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Leading edge	Condition.
Upper wings	Condition and panels.
D.M.E. aerials	Secure.
Navigation light and wing tip	Condition.
Aileron	Condition of surfaces, hinge and linkage. Full and free movement, position of balance tab, reset aileron to neutral. Check for distortion.
Fuel filler caps	Secure.
Airbrakes	Condition.
Flaps (outboard of boom)	Condition of upper skin, security, lines and jacks for leaks and interconnection of inboard and outboard sections. Aileron control cables—position and condition.
(f) <i>Starboard boom</i>	
Boom	Condition.
V.H.F. Aerial	Security.
(g) <i>Tail unit</i>	
Fins and tailplane	Condition and surfaces.
Tail fairing covering rudder mass balance	Condition.
Tail bumpers	Undamaged.
Elevator and rudders	Condition of surfaces, hinges and linkages. Full and free movement of each control surface, check free position of rudders and bias tabs for security. Check clearance between the rudder and elevator with the elevator neutral.
Elevator mass balance	Condition and security.

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- |   |   |
|---|---|
| (h) <i>Engine</i>   |   |
| Engine cowlings   | Condition and secure.   |
| Centre fuel tank panel  | Secure.   |
| Jet pipe and pyrometer  | Condition.  |
| Turbine   | Condition.  |
| (j) <i>Flaps</i>  |   |
| Flaps (inboard of boom)                                       | Condition, security, check fire extinguisher bottle for security and connections. |
| (k) <i>Tail unit—continued</i>                                |   |
| Tail navigation lights  | Condition.  |
| Pressur   | Cover off and secure.   |
|   | Condition.  |
| (l) <i>Port boom</i>  |   |
| As for starboard.   |   |
| (m) <i>Port mainplane</i>                                     |   |
| As for starboard, with Landing lamp                           | Condition and fitting.  |
| (n) <i>Port undercarriage</i>                                 |   |
| As for starboard, with Undercarriage safety lock micro switch | Condition and clean.  |
| (o) <i>Port intake</i>  |   |
| As for starboard with Cold air unit                           | Condition and clear.  |
| Cold air unit panel   | Secure, dipstick secure.  |
| (p) <i>Front fuselage (Port)</i>                              |   |
| Rear hood perspex fairing                                     | Condition.  |
| Gun bay panel   | Secure.   |
| Fuel vent pipe  | Condition.  |
| Hinged nose fairing   | Secure, thumb press locks flush, condition of cine camera or nose light window.   |

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(q) *Nose wheel bay*

Nose wheel	Cuts, cracks, creep, inflation, freedom of valve and wear of tyre.
Hinged leg fairing	Condition and security.
Nose oleo	Condition and extension (approximately 3½ in.)
Bay	Clean, no oil leaks from hydraulic pipes or jack.
Nose wheel door	Condition, secure.

(r) *Front fuselage (Starboard)*

As for front fuselage, port.

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(s) *In cockpit*

Check

Hydraulic filler cap, first aid kit, servicing manual (if required), crowbar and fire extinguishers—Secure. No loose articles.

(t) *Ejection seats*

On each:—

Check that the drogue gun safety lock has been removed. Ensure that the drogue line shackle is securely attached to the drogue gun piston and that the static rod is securely attached to the guide rail. See that the drogue withdrawal line is not trapped under the lifting line.

Check that the pin attaching the time release unit static line to the guide rail is fitted.

Ensure that the red line on the top latch is not showing, or, on modified seats, that the yellow painted top latch is flush, or, if Martin Baker Mod. 655 is embodied, that the safety pin is in.

Check that the blind cable is attached to the sear.

Check that the scissor shackle is lying flat.

Check that the leg restraining straps are correctly connected to the floor.

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### (u) Parachute and dinghy assembly

In each seat:—

- Check both rip cord handles are secure in their pockets.
- Ensure that the parachute and dinghy assembly is correctly fitted in the seat.
- Ensure that the emergency oxygen bottle does not overlap the seat pan.

### 58. Cockpit checks

- (a) When flying solo ensure all straps, harnesses and quick release boxes in the 2nd pilot's seat are secured and that the emergency oxygen quick release cable is secured against detachment from the seat unit.
- (b) After completing the ejection seat checks on entering the cockpit, strap in and adjust the seat and rudder pedals. Check that the parachute harness shoulder straps pass under the inflatable lobes and that the CO<sub>2</sub> cylinder operating head is accessible. Ensure that the harness release box is below the parachute quick release box. Connect main and emergency oxygen tubes, ~~threading the latter through the quick release retaining strap loop on the parachute harness and~~ under the left shoulder strap of the safety harness, ensuring that it is clear of the elevator quadrant. Secure the locating chain to the small D-ring of the l.s.w. ensuring that there is no danger of the safety harness, when released, entangling with the oxygen tube locating chain. Check the oxygen seat pan connections. Pre-mod. 3620 check that the safety harness and parachute straps are clear of the oxygen quick release connection on the side of the seat. Have the mic. tel. plug connected and the seat safety pin(s) removed and stowed. Check the hood closed and locked with seal inflated.
- (c) Check flying controls for full and correct movement and check the brakes with parking brake on for max. delivery to each wheel and equal pressures with the rudder bar central. Then:—

Ground/Flight MASTER  
SWITCH

On—Rate of turn indicator  
functioning.

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Begin the checks at the extreme left of the cockpit and work from left to right:—

Cockpit pressure control	OFF.
Oxygen auto-line valve switch	ON.
Cockpit air ventilator	As required.
Undercarriage selector lever	Fully DOWN.
Flap selector lever	UP.
Airbrakes	OFF selected.
Throttle	Full and free movement, synchronised with centre pedestal throttle, set SHUT.
H.P. cock	Press the relight button with the cock in the open position (if serviceable an irregular clicking sound is audible). Set closed.
Elevator trim	Full and free movement, synchronised with centre pedestal control. Set neutral.
L.P. cock	ON.
Oxygen	Wired on, check contents, emergency switch OFF, check high flow, both flow Ind. showing connections and supply at mask.
Cockpit lighting switches	As required.
U/C override switch	Down and guarded.
Windscreen wiper control	In "Parked" position.
Brake gauge	Total pressure above 200 lb./sq. in.
Accelerometer	Set to + 1G.
Second altimeter	Serviceability. Set airfield height for subsequent check against QNH.
D.M.E. range meter	OFF
R.p.m. indicator	Serviceability.
J.p.t. gauge.	Serviceability.

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G.G.S. selector dimmer	As required.
Clock	Correct and working.
Fuel gauge	Contents and serviceability.
Fuel pressure warning light	On.
Guns/R.P. selector switches	As required.
Inverter circuit breakers	Closed.
R/T mute switch	As required.
E.2 compass	Serviceability.
Cabin altimeter	Zero.
Machmeter	Serviceability.
Fire warning light	Out, test with FIL. Test button.
Port G.G.S. switch	Test if required, switch OFF.
Undercarriage position indicator	Three green lights on, Check bulb changeover.
Cabin pressure warning light	Out.
Generator warning light	On.
Flap position indicator	Note flap position.
Starboard G.G.S. switch	Test if required, switch OFF.
Undercarriage warning light	Out.
Flight instruments	Check serviceability, set airfield height on altimeter for subsequent check against Q.N.H. Set approximate heading on Mk. 4F compass.
No. 1 R/T set	Off.
Hood jettison handle	Wired in.
V.H.F. changeover switch	As required.
WINDSCREEN DE-ICER PUMP	In.
No. 2 R/T set	Off.
Undercarriage override switch	Down and guarded.

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Starter master switch	ON.
Flight instruments switch	ON. Check artificial horizon. OFF. Flag disappears.
Inverter magnetic indicator	White.
Booster pump switch	On, check fuel pressure warning light goes out.
F.p.i. switch	OFF.
Downward identification and emergency cockpit light switches	As required.
Pitot head heater	ON.
Navigation lights	As required.
Starter circuit breaker	Closed.
D.M.E. control panel	As required.
Landing lamp	OFF.
G.45 camera switches	As required.
G.G.S. circuit breakers	Closed.
Bomb and R.P. switches	As required.
G.45 camera test switches	Test if required.
Instructor/pupil G.G.S. changeover switch	As required.
Oxygen	Check emergency switch OFF, check high flow, both flow indicators showing, connections and supply at mask.
Cockpit ventilator	As required.
Undercarriage selector lever	Fully DOWN.
Flap selector lever	UP.
I.F.F. switches	As required.
Clear vision panels	As required.
Hood locking handle	Locked and secured by catch.
Hydraulic handpump	Check operation against flap gauge. Return lever to uppermost position.

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Pass the hand between the seats to ensure that they are not inter-connected.

Drop tank jettison lever      Forward.

Emergency hydraulics lever      Forward.

### 59. Starting the engine

Check that the area around the aircraft is clear, and that the fire extinguishers are available.

Have the controls set as in the check lists, i.e.:

Parking brake      On.

Ground/Flight MASTER SWITCH      On.

H.P. cock      Set closed.

Throttle      SHUT.

L.P. cock      ON.

STARTER and FLIGHT INST. Circuit breakers      Closed.

STARTER MASTER and FLIGHT INST. switches      On.      Mk. 4F compass and Art. hor. erecting. Magnetic indicator white.

Booster pump switch      ON.      Check aurally—Fuel pressure warning light out.

H.P. pump isolating switch      Off.

(a) Press the starter button for two seconds, then release.

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(b) After 15 seconds open the H.P. cock fully and allow the engine to accelerate to  $3,000 \pm 200$  r.p.m. Check that the j.p.t. does not exceed  $710^{\circ}$  C. (except momentarily) and settles below  $600^{\circ}$  C. max. Constantly check fire warning light during start up. If F.T.C. Mod. 101 is embodied check that the inverter indicator goes black.

(c) When the engine is running smoothly switch off the STARTER MASTER switch and have the ground supply battery disconnected.

(d) Should the engine fail to light up, or accelerate to the idling r.p.m. or should the j.p.t. exceed  $710^{\circ}$  C. (except momentarily) SHUT the H.P. cock. Ensure that all surplus fuel is drained before attempting a further start.

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Should excessive fuel have drained onto the ground, have the aircraft moved. Wait until the impeller has stopped rotating before attempting a restart.

- (e) If after a second attempt the engine fails to start, the cause should be investigated before any further attempts are made.

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### 60. Checks after starting

- |  |   |  |
|--|---|--|
| (a)  | Fire warning light<br>Idling r.p.m.<br>J.p.t.<br>Inverter indicator   | Out<br>3,000 $\pm$ 200.<br>600° C. Max.<br>Black (post mod. F.T.C.<br>101).  |
| <hr/>  |   |  |
| (b)  | R.p.m.<br>F.P.I. switch<br>R.p.m. increase  | Increase to 4,000.<br>ON.<br>1,000 r.p.m. pre-mod. 1130.<br>800–900 r.p.m. post-mod.<br>1130.  |
| <p>If the desired increase is not achieved the system is unserviceable and the aircraft must not be flown.</p> |   |  |
| (c)  | Inverter magnetic indicator<br>If the indicator remains white, engine r.p.m. should be increased to above the generator cut-in speed. Automatic changeover to No. 1 inverter should then occur and the indicator change to black.<br>Generator failure warning light<br>F.P.I. switch<br>V.H.F.<br>Artificial horizon<br>Mk. 4F compass<br>D.M.E. | Black.<br><br>Out.<br>Off and check r.p.m. drop to original figure.<br>Select Set/Frequency as required.<br>Erect if necessary.<br>Synchronise and compare with E.2.<br>As required. |
| (d)  | Flaps<br>Airbrakes<br>Brake pressure  | Up, indicated up.<br>Test.<br>Min. 200 lb./Max. 450 lb.<br>sq. in.   |

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### 61. Taxying

- (a) The brakes are very effective and the nose wheel is self centring. Consistent with safety, it is better to taxi the aircraft boldly, moderate use of brakes then giving good steering qualities.
- (b) Rapid throttle opening at low r.p.m. should be avoided as it may cause excessive j.p.t. and resonance. Use of excessive power when the aircraft is stationary may melt tarmac surfaces due to the downward inclination of the jet efflux.

### 62. Checks before take-off

Trim	Neutral.
Airbrakes	In.
Fuel	H.P./L.P. cocks fully ON. Fuel pressure warning light out. Contents. Booster pump ON. F.P.I. switch OFF (but see para. 53 (c)).
Flaps	Up, indicated up (or 30° if drop tanks are fitted).
Instruments	A/H Off flag away, erected, Mk. 4F compass synchronised, annunciating. T. & S. OFF flag away, correct functioning Magnetic indicator—Black, Pitot head heater—ON.
Oxygen	Fully ON. Contents. Emergency OFF. High flow. Connections checked.
Hood	Closed and locked. D.V. Panels shut.
Harness	Tight and locked.



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64. **Climbing**

- (a) Climb within the j.p.t. limitations at 10,600 r.p.m. up to 25,000 ft. and at 10,500 thereafter. With or without drop tanks fitted climb at 250 knots until 0.63M is obtained, then 0.63M for the remainder of the climb.
- (b) If maximum rate of climb is not essential climb at 10,250 r.p.m. using the same airspeeds.
- (c) During the climb the r.p.m. will increase slowly, and it is necessary to reduce power to avoid exceeding the climbing r.p.m. It may also be necessary to reduce r.p.m. in order not to exceed the maximum permissible j.p.t.

65. **General flying**

- (a) At all loads the aircraft is pleasant to fly. The ailerons are light and remain effective down to the stall. The elevator is light but comes more sensitive at high speed and should be used with care. Up to 25,000 ft. the aircraft is easy to trim, but above this height the trimmer is less effective. The airbrakes are moderately effective and produce a general airframe buffet at all speeds.

(b) *Changes of trim*

Undercarriage UP or DOWN	No change.
Flaps DOWN	Marked nose-up.
Flaps UP	Nose-down.
Airbrakes out	Nose-up.
Airbrakes in	Nose-down.

The nose-up change of trim on selecting airbrakes out becomes more pronounced with increase of speed. When wing drop tanks or 1,000 lb. bombs are carried the change of trim is very pronounced.

66. **Flying at reduced speed**

Reduce speed to approximately 140 knots. Flaps may be lowered 30° if desired. The D.V. panels can be opened up to a recommended maximum speed of 240 knots.

67. **Flying in conditions of severe turbulence**

The recommended speed is 230 knots.

68. **Pre-stall, spinning and aerobatic checks**

Height	Sufficient.
Harness	Tight and locked.
Hydraulics	Flaps UP, undercarriage UP, airbrakes check operation, leave IN.
Fuel asymmetry gauge (if fitted)	Bottom needle in green sector.
R.p.m.	Above recommended minimum (pre Goblin Mod. 1130).
Equipment	Secure. No loose articles.
Look-out	Well clear of airfields, towns, other aircraft and clouds.

69. **Stalling**

(a) Due to the positioning of the pitot head there is considerable fluctuation of the airspeed indicator at the stall. The following table of stalling speeds is therefore only approximate.

	Typical Service Load	Max. A.U.W.
	Knots	Knots
Undercarriage and flaps UP	95	105
Undercarriage and flaps down	85	95

(b) Warning of the approach of the stall is given by slight elevator buffeting commencing about 15 to 20 knots before the stall and increasing as speed is reduced. At the stall the nose drops gently. There is little tendency for a wing to drop at lower altitudes, but at heights above 20,000 feet this tendency becomes more marked and if the aircraft is held in the stall it will roll in either direction into an inverted position.

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- (c) The position of the airbrakes or the presence of external stores makes no noticeable difference to the stalling characteristics.
- (d) In a steep turn warning of a stall is given by elevator buffeting which occurs immediately before the stall. At the stall the aircraft may drop a wing suddenly.

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### 70. Spinning

- (a) The aircraft is cleared for practice spinning up to four turns. The minimum recommended entry height is 25,000 ft. above ground level.
- (b) To ensure positive entry into the spin, yaw in the required direction should be induced at about 105–110 knots, i.e. slightly in excess of the stalling speed, by applying full rudder and stick hard back. The elevator trimmer should be neutral.
- (c) With the control column held fully back and full rudder applied, the aircraft will then spin or flick-roll for one or two turns before adopting a nose-down attitude. For several turns there is marked yawing and pitching with variations in the rate of rotation. After about four turns a further steepening in attitude occurs accompanied by a reduction of the yawing and pitching tendencies and an increase in the rate of rotation.
- (d) The standard recovery action is:—
  1. Check throttle closed, apply full opposite rudder followed by a short pause.
  2. Ailerons neutral.
  3. Stick steadily forward until the spin stops. This may require full forward movement of the stick.
  4. Centralise all controls immediately.
  5. Recover to normal flight.The spin will sometimes continue for up to three turns after taking full recovery action; allowance must be made for this lag. If, however, the aircraft still continues to spin, the following actions are recommended.
- (e) Supplementary recovery action is:—
  1. Check full opposite rudder is applied; that the stick has been moved fully forward and that the ailerons are neutral.
  2. Apply full pro-spin control and hold for two turns of spin.
  3. If the aircraft still spins, re-apply standard spin recovery action, with the addition of full in-spin aileron (aileron in the direction of roll). Aileron to be applied when stick is fully forward.
  4. If at 15,000 feet the aircraft has failed to respond to recovery action—jettison the canopy. This should aid recovery.
  5. If the spin is not under control by 10,000 feet, the aircraft must be abandoned. The altimeter error of up to 2,000 ft. coupled with the fast rate of descent (approx. 30,000 ft./min.) of the fully developed spin leave no time for hesitation.
- (f) Intentional inverted spinning is prohibited. Recovery action from an inverted spin is:—
  - (i) Check throttle closed, then full rudder (in the direction of the roll) to oppose yaw.

- (ii) Ailerons neutral.
  - (iii) Stick steadily back until the spin stops.
  - (iv) Centralise the controls immediately.
  - (v) Stop the roll (if any) and recover from the dive.
- (g) If an unintentional spin is entered:—
- (i) Centralise the controls and close the throttle in an attempt to recover in the incipient stage.
  - (ii) Should the spin continue for three turns, apply full pro- (normal) spin control. If the spin is an inverted one this action will stop the spin. Further action is as in (f) (iv) and (v) above. If the spin continues, after two turns with full pro- (normal) spin control applied, take standard recovery action as in (d) and (e) above.
- (h) Extended wheels or flaps should be raised and external stores jettisoned on entering an unintentional spin, as their presence will adversely effect recovery.
- (j) The risk of disorientation can be reduced by looking at the horizon through the canopy instead of watching the ground rotate through the windscreen.
- (k) In no circumstances should full spin recovery action be taken before the spin has developed in a downward direction and pro-spin control has been applied for two turns.

## 71. Aerobatics

- (a) Until experience is gained, the following speeds, in knots, are recommended:—

Roll	.. ..	250–270
Loop	.. ..	300–320
Roll off the top	.. ..	340–360
Vertical roll		370 and above

- (b) The centre tank collector box should ensure a supply of fuel for approximately 15 seconds flight under negative G conditions.
- (c) Aerobatics are not permitted when carrying external stores.

## 72. High speed flying

- (a) The high speed characteristics vary with altitude and individual aircraft, and machmeter errors may be considerable. The following compressibility effects are therefore quoted against approximate indicated mach numbers and reliance should be placed more on the behaviour of the aircraft than on machmeter readings. It is recommended that the performance of the aircraft

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is investigated with care until pilots are aware of the high speed characteristics.

### (b) *Clean aircraft or with RP's*

At high altitudes the first sign of compressibility is given by a slight lateral rocking at about 0.78M. At this speed there is generally slight airframe buffet and the ailerons are very sensitive. Compressibility effects are, however, not marked, but as speed is further increased porpoising commences reaching a maximum at 0.84M giving considerable stick force as the nose rises. Below 20,000 ft. the symptoms are similar but occur at slightly lower mach numbers and are less marked. When flying with RP's the high mach number characteristics are similar, but become apparent at lower speeds. At high indicated airspeeds the controls become noticeably heavier, and the aircraft must be trimmed into the dive.

### (c) *With drop tanks or bombs*

The onset of compressibility is denoted by lateral unsteadiness at about 0.74M and may be accompanied by rudder buffet. As speed is further increased a general airframe buffet becomes apparent. When 1,000 lb. bombs are carried there is a noticeable aileron buffet and increased lateral rocking. Porpoising commences at about 0.76M. Lateral rocking and aileron buffeting is also encountered at indicated airspeeds in excess of 360 knots when aiming 1,000 lb. bombs.

### (d) *Recovery*

Recovery is effected by extending the airbrakes and throttling back. Use of airbrakes at high mach numbers or airspeeds produces a sudden nose-up change of trim and an increase in general airframe buffet. When drop tanks are carried the airbrakes are not to be extended above 0.70M.

## CIRCUIT PROCEDURE AND LANDING

### 73. **Circuit procedure**

- (a) Join the circuit with sufficient fuel for a landing and possible overshoot, i.e. approx. 450 lb. Select the correct V.H.F. frequency and unmute. Airspeed should be

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below 175 knots. A setting of approximately 7,000 r.p.m. will give a circuit speed of 170–175 knots with undercarriage and flaps UP. Synchronise Mk. 4F compass ~~and check harness tight and locked.~~

### (b) *Downwind vital actions*

Airbrakes	IN.
Undercarriage	DOWN (below 175 knots).
Fuel	Contents.
Flaps	As required (below 155 knots for 30°, below 145 knots for full flap).
Harness	Tight and locked.
Brakes	Check U/C—3 green lights. Pressure — On — Off — Exhausting.

### (c) *Finals checks*

Airbrakes	In.
Undercarriage	3 green lights

NOTE.—These checks should be completed as soon as possible after starting the final turn, after which the R/T call “Finals, three green” should be made. The call should be completed by the 90° position. Lower flaps as required.

## 74. **Approach and landing**

### (a) *Approach*

- (i) The approach should be commenced at 140 knots with approximately 6,000 r.p.m. depending on prevailing wind conditions.
- (ii) Lower full flap when required.
- (iii) At 400 ft. the airspeed should not be less than 125 knots, and to ensure rapid engine response should it be necessary to increase power, r.p.m. should not be reduced below 5,500 until it is certain that the runway can be reached.

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- (iv) The roundout should be commenced at the following speeds:—

Typical service load . . . . . 100 knots

Maximum landing weight . . . . . 105 knots

NOTE.—When lowering full flap a marked nose-up change of trim occurs necessitating a large forward movement of the control column. The counter-acting force required is not great and should be provided by movement of the control column rather than by retrimming, as the nose-up tendency largely disappears when the flaps are fully down and speed is reduced on the final part of the approach.

### (b) *Landing*

The aircraft should not be stalled onto the ground, but the rate of descent checked, and when the main wheels touch, the control column moved gently backwards to keep the nose-wheel off the ground and to provide maximum aerodynamic braking. The elevator remains sensitive at low speeds and coarse movements of this control must be avoided. When the nose-wheel is firmly on the ground, the brakes should be used gently at first as it is possible to cause nose-wheel shimmy by harsh usage. Continuous or intermittent braking may be effected.

NOTE.—Should it be necessary to land with the isolating switch ON the landing run will be longer as the idling r.p.m. will be higher.

### 75. **Going round again**

- (a) Open the throttle fully. Application of power produces a nose-up change of trim, which can be held without retrimming.
- (b) Retract the undercarriage.

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- (c) Climb at 130 knots. The aircraft has a tendency to sink as the flaps are raised and they should not be retracted below 200 ft.

### 76. Instrument approach

Instrument approach settings:—

Stage	Approx. engine settings (r.p.m.)	Airspeed (knots)	Action
Q.G.H. ..	7,000	250	Airbrakes out.
Level ..	8,200	140	One-third flap
Glide path	8,200	120/130	One-half flap

} Undercarriage down

### 77. Checks after landing

When well clear of the runway:—

Stop the aircraft and check:—

Pressurisation	OFF.
Flaps	UP.
Brake pressure	Sufficient for taxiing.
No. 2 radio	OFF.
Pitot head heater	OFF.
D.M.E.	OFF.

### 78. Stopping the engine

Allow the engine to idle for 30 seconds to stabilise engine temperatures. During this period check:—

Booster pump	OFF.
Flight instrument switch	OFF.
Oxygen	OFF, or line valve (if fitted) OFF.

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After 30 seconds:—

H.P. cock	OFF.
Flaps	Lower fully when engine r.p.m. are less than 1,000.
Radio sets	Off.
Ground/Flight switch	Ground.
Ejection seats	Firing handles safe.
Chocks	In position.
Brakes	Off.

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