

## Chapter I. PILOTS' CONTROLS AND EQUIPMENT

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#### General

1. This Chapter serves as a general guide to the location of controls, instruments and equipment in the cockpit, with the method of operation wherever this is not obvious. For ease of reference the illustrations are grouped under four main headings. Capital letters in the text and in the instructions under various items in the keys to the illustrations, indicate the markings in the cockpit. Items for emergency use are also included, but reference should be made to Chapter 3 for details of this equipment.

#### Entry to cockpit

2. The normal means of entry and exit is through the canopy hatch, for which a special

telescopic ladder is available. The ladder, which is not carried in the aircraft, is locked in the ferrule on either the port or starboard side of the fuselage when in use. Care must be taken to avoid damaging equipment when entering or leaving the cockpit.

#### Canopy hatch locking mechanism

3. The hatch locking mechanism is operated by handles from either inside or outside the cockpit. The internal handle is shown in fig. 4 and the external handle is shown in Sect. 3, Chap. 1, fig. 4. The hatch is supported in the open position by a spring-loaded strut and can be locked by rotating the barrel of the strut until the pin slides into the bottom groove.

#### Pilots' seats

4. Each seat is provided with a lever on the right-hand side for adjusting the height. Attached to each seat is the harness release catch and the mic-tel socket stowage; the oxygen supply pipe is clipped to the harness. The rudder pedals are adjustable for reach by lifting them against the tension of the springs and then sliding them fore or aft into the required ratchet slot.

#### Flap selector lever

5. The quadrant of the flap selector lever, fig. 1, is marked FLAPS UP—NEUTRAL—DOWN. Any flap position up to 80 deg. can be obtained by returning the selector lever to the NEUTRAL position when the desired angle is shown on the flap position indicator. After selecting flaps DOWN (80 deg.) the selector lever must be returned to the NEUTRAL or locked position on completion of the flap movement. The lever should, however, be left in the UP position for flaps UP.

#### Redundant controls

6. Some of the instruments and switches in the illustrations are not annotated because the panels have been standardised and some items are inoperative on this aircraft. Blanking plates are fitted over the redundant instrument holes and the switches not in use are labelled SPARE.

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KEY TO FIG. 1 (FLYING CONTROLS)

- |    |   |    |  |    |  |
|----|---|----|--|----|--|
| 1  | FLAP SELECTOR LEVER<br>FLAPS UP—NEUTRAL—DOWN<br>Operates in the natural sense | 11 | RATE OF CLIMB INDICATORS   | 24 | BRAKE LEVER WITH PARKING CATCH   |
| 2  | ALIGHTING GEAR SELECTOR LEVER<br>UP—DOWN<br>Operates in the natural sense     | 12 | G.4B COMPASS SWITCH  | 25 | G.4B COMPASS CIRCUIT BREAKER   |
| 3  | ELEVATOR TRIM TAB CONTROL WHEEL   | 13 | G.G.S. CONTROL UNIT  | 26 | CABIN ALTIMETER  |
| 4  | DIVE BRAKE SELECTOR LEVER<br>ON—OFF (Up)                                      | 14 | FIRE EXTINGUISHING PUSH-BUTTON   | 27 | SECOND PILOT'S CONTROL COLUMN  |
| 5  | BEAM APPROACH CONTROL PANEL   | 15 | FIRE WARNING LAMP  | 28 | CLOCK  |
| 6  | ALTIMETER   | 16 | COMPASS TYPE E2A   | 29 | ALIGHTING GEAR EMERGENCY RETRACTION SWITCH   |
| 7  | ELEVATOR TRIM TAB POSITION INDICATOR  | 17 | MACHMETER  | 30 | ELECTRICAL SERVICES MASTER SWITCH<br>GROUND—FLIGHT<br>Set to GROUND for ground testing and to FLIGHT for engine starting |
| 8  | AIR SPEED INDICATOR   | 18 | DOWNWARD IDENTIFICATION LAMP SWITCHES<br>Colour selector switch and operating switch | 31 | WINDSCREEN DE-ICING PUMP   |
| 9  | ARTIFICIAL HORIZON  | 19 | GENERATOR WARNING LAMP   | 32 | ALIGHTING GEAR POSITION INDICATOR  |
| 10 | TURN AND SLIP INDICATORS  | 20 | PITOT HEAD AND NAVIGATION LAMP SWITCHES  | 33 | FLAP POSITION INDICATOR  |
|    |   | 21 | BRAKE PRESSURE GAUGE   | 34 | FIRST PILOT'S CONTROL COLUMN   |
|    |   | 22 | G.4B COMPASS INDICATORS  | 35 | RUDDER PEDALS  |
|    |   | 23 | CONTROL COLUMN HANDGRIP  |    |  |

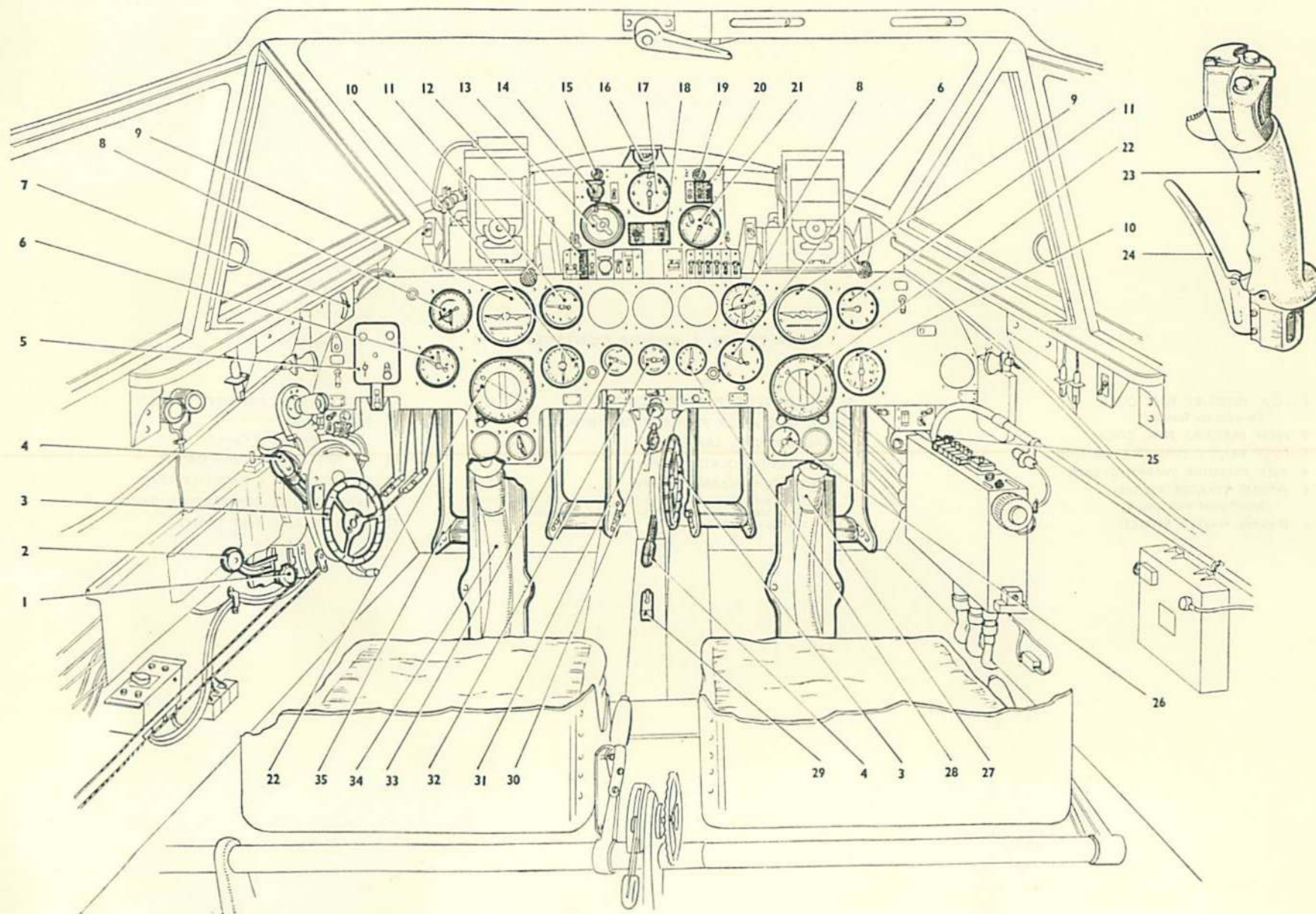


Fig. 1. Flying controls

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KEY TO FIG. 2 (ENGINE CONTROLS)

- 1 LOW PRESSURE FUEL COCK  
Forward for fuel ON
- 2 HIGH PRESSURE FUEL COCK
- 3 FIRST PILOT'S THROTTLE CONTROL
- 4 FUEL PRESSURE WARNING LAMP
- 5 ENGINE STARTER SWITCH  
Interlinked with item 6
- 6 ENGINE MASTER SWITCH

- 7 FUEL BOOSTER PUMP SWITCH
- 8 ENGINE STARTER PUSH-BUTTON SWITCH
- 9 FIRE WARNING LAMP
- 10 FUEL PUMP ISOLATING SWITCH
- 11 GENERATOR WARNING LAMP  
The lamp lights when generator voltage falls below accumulator voltage. Light is on continually when aircraft is parked.

- 12 PACITOR FUEL CONTENTS GAUGE
- 13 TACHOMETER  
Indicates engine r.p.m.
- 14 JET PIPE TEMPERATURE GAUGE
- 15 SECOND PILOT'S THROTTLE LEVER
- 16 REAR BEARING TEMPERATURE GAUGE
- 17 BOOSTER COIL TEST SWITCH

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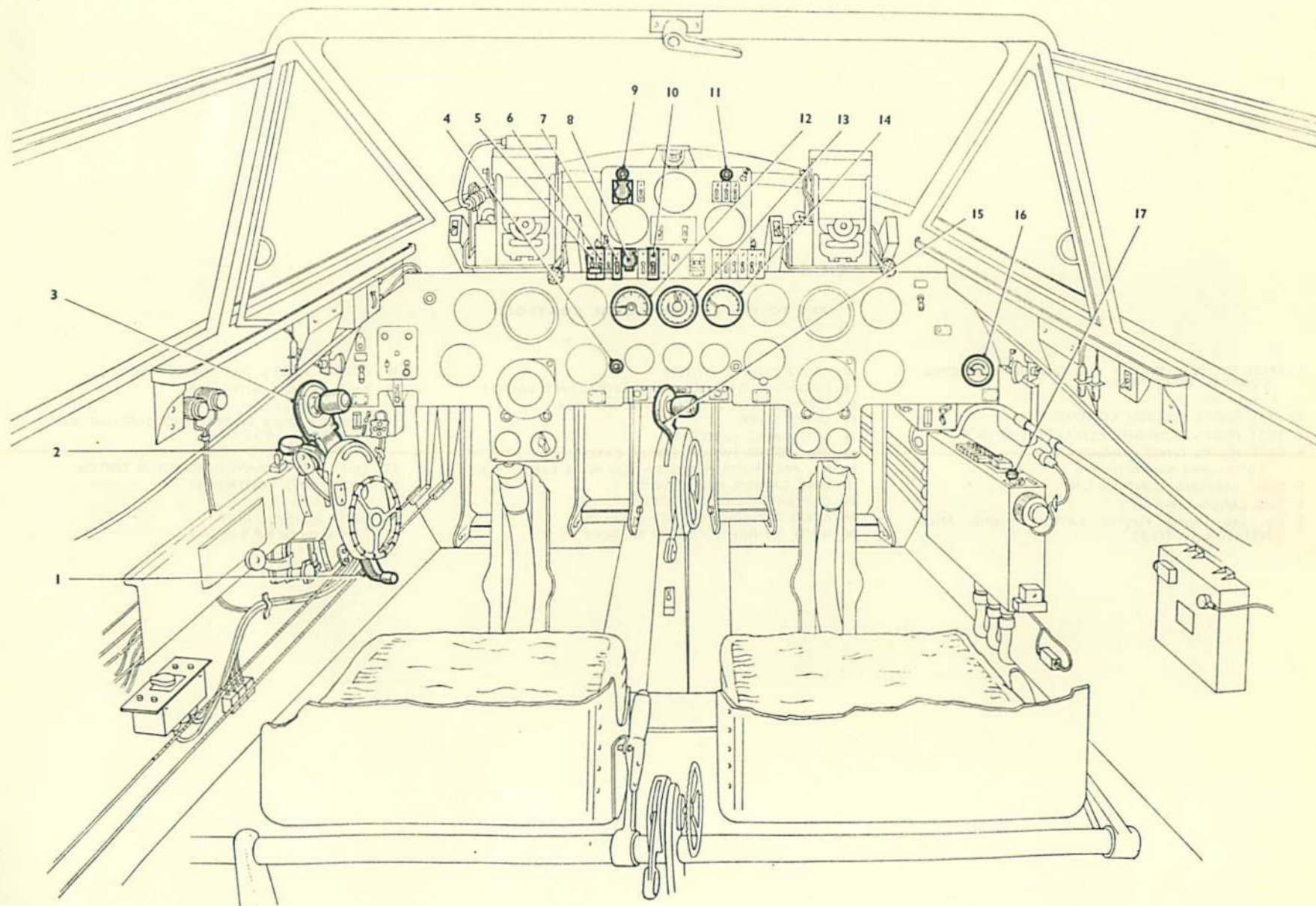


Fig. 2. Engine controls

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KEY TO FIG. 3 (OPERATIONAL CONTROLS)

- |   |  |    |  |    |   |
|---|--|----|--|----|---|
| 1 | PRESS TO SPEAK SWITCH AND GUNSIGHT RANGING CONTROL TWIST GRIP<br>First Pilot | 8  | RADIO MUTING SWITCH                          | 19 | SECOND PILOT'S OXYGEN CONTROL   |
| 2 | FIRST PILOT'S OXYGEN CONTROL   | 9  | SECOND PILOT'S GUNSIGHT RETRACTING SWITCH    | 20 | V.H.F. RADIO CONTROLLER<br>No. 2 set  |
| 3 | FIRST PILOT'S GUNSIGHT RETRACTING SWITCH                                     | 10 | SECOND PILOT'S GYRO GUNSIGHT Mk.5            | 21 | PRESS TO SPEAK SWITCH AND GUNSIGHT RANGING CONTROL TWIST GRIP<br>Second pilot |
| 4 | FIRST PILOT'S GYRO GUNSIGHT Mk.5<br>With camera recorder attached            | 11 | BRAKE LEVER                                  | 22 | V.H.F. RADIO CHANNEL SELECTOR SWITCH  |
| 5 | C.G.S. LIGHTING CONTROL UNIT   | 12 | GUN FIRING SWITCH                            | 23 | V.H.F. RADIO CONTROLLER<br>No. 1 set  |
| 6 | G.45 CAMERA SWITCH   | 13 | GUN FIRING SWITCH SAFETY CATCH               | 24 | G.G.S. CONTROL UNIT<br>Selector for R.P.'s or Guns                            |
| 7 | R.P. AND BOMB MASTER SWITCH, FUSING AND SELECTOR SWITCHES                    | 14 | R.P. AND BOMB FIRING SWITCH WITH SAFETY FLAP |    |   |
|   |  | 15 | CINÉ CAMERA PUSH SWITCH                      |    |   |
|   |  | 16 | CAMERA EXPOSURE SWITCH                       |    |   |
|   |  | 17 | GYRO GUNSIGHT CIRCUIT BREAKER                |    |   |
|   |  | 18 | GYRO GUNSIGHT CIRCUIT BREAKER                |    |   |

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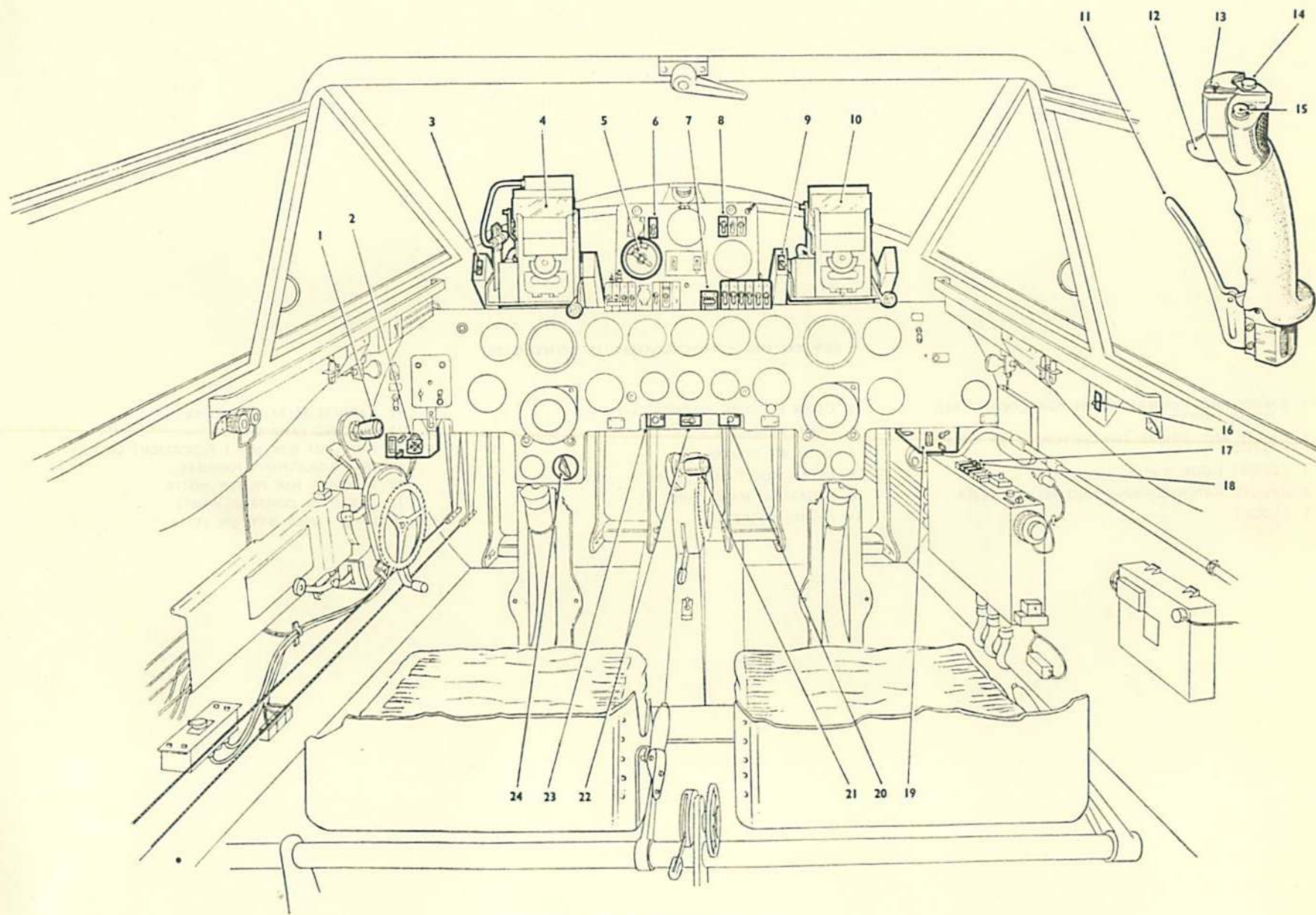


Fig. 3. Operational controls

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KEY TO FIG. 4 (MISCELLANEOUS CONTROLS)

- 1 ON-OFF AND DIMMER SWITCH FOR COCKPIT RED FLOOD LAMPS
- 2 ON-OFF AND DIMMER SWITCH FOR ULTRA VIOLET LAMPS
- 3 COCKPIT LIGHT (9 off)
- 4 CANOPY HATCH LOCKING AND RELEASE LEVER
- 5 CLOCK

- 6 CABIN PRESSURE WARNING LAMP
- 7 CABIN ALTIMETER
- 8 COLD AIR LOUVRE
- 9 ULTRA VIOLET LAMP (4 off)
- 10 HYDRAULIC HAND PUMP
- 11 MIC-TEL SOCKETS

- 12 HARNESS RELEASE CATCHES
- 13 LANDING LAMP SWITCH
- 14 JUNCTION BOX No. 1 FLOODLIGHT SWITCH
- 15 SEAT ADJUSTMENT HANDLES
- 16 STOWAGE FOR PILOT'S NOTES
- 17 CABIN AIR CONTROL WHEEL
- 18 DROP TANKS JETTISON LEVER

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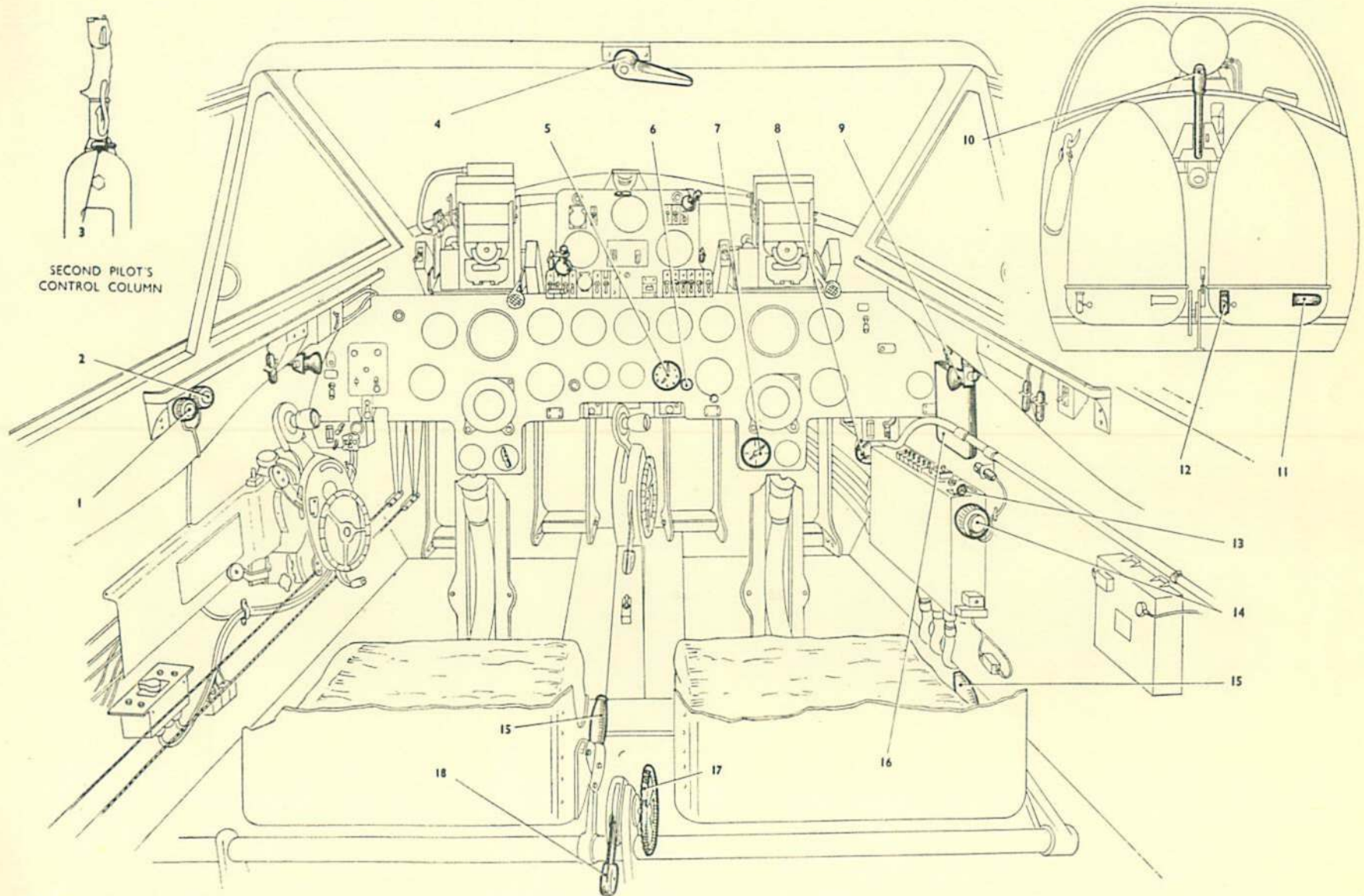


Fig. 4. Miscellaneous controls

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28 SEP 1959  
R.N.A.S.  
LEE-ON-SOLENT

Chapter 1

PILOTS' CONTROLS AND EQUIPMENT

(Completely revised)

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**General**

1. This Chapter serves as a general guide to the location of controls, instruments and equipment in the cabin, with the method of operation wherever this is not obvious. For ease of reference the illustrations are grouped under four main headings. Capital letters in the text and in the instructions under various items in the keys to the illustrations, indicate the markings in the cabin. Items for emergency use are also included, but reference

should be made to Chapter 3 for details of this equipment.

**Entry to cabin**

2. The normal means of entry and exit is through the canopy hatch, for which a special telescopic ladder is available. The ladder, which is not carried in the aircraft, is locked in the ferrule on either the port or starboard side of the fuselage when in use. Care must be taken to avoid damaging equipment when entering or leaving the cabin.

**Canopy hatch locking mechanism**

3. The hatch may be opened or closed from inside or outside the cabin by an internal or external handle (*fig. 4*). The hatch is supported in the fully open position by a telescopic strut which is pneumatically extended by pressing the button (*fig. 3*). A description of the operation of the strut is given in Sect. 3, Chap. 1, para. 10.

**Pilots' seats**

4. The aircraft is equipped with Mk.3B ejection seats, a full description of which, together with servicing instructions, is given in A.P.4288C, Vol. 1.

**Flap selector levers**

5. The quadrant of the flap selector lever (*fig. 1*), is marked FLAPS UP—NEUTRAL—DOWN. Any flap position up to 80 deg. can be obtained by returning the selector lever to the NEUTRAL position when the desired angle is shown on the flap position indicator. After selecting flaps DOWN (80 deg.) the selector lever must be returned to the NEUTRAL or locked position on completion of the flap movement. The lever should, however, be left in the UP position for flaps up. The flap control is duplicated for the second pilot (*fig. 1*) and the lever operates identically to that for the first pilot.

KEY TO FIG. 1 (FLYING CONTROLS)

- |   |                                      |  |
|---|--------------------------------------|--|
| 1 FIRST PILOT'S RUDDER PEDAL                                    | 10 MACHMETER                         | 19 FLIGHT INSTRUMENTS MASTER SWITCH                |
| 2 FIRST PILOT'S CONTROL COLUMN                                  | 11 GYRO COMPASS                      | 20 PITOT HEAD AND NAVIGATION LAMP SWITCHES         |
| 3 FIRST PILOT'S ALIGHTING GEAR SELECTOR LEVER<br><i>UP-DOWN</i> | 12 AIRSPEED INDICATOR                | 21 SECOND PILOT'S RUDDER PEDALS                    |
| 4 FIRST PILOT'S FLAP SELECTOR LEVER                             | 13 ALIGHTING GEAR POSITION INDICATOR | 22 SECOND PILOT'S ALIGHTING GEAR SELECTOR<br>LEVER |
| 5 FIRST PILOT'S TRIM TAB CONTROL WHEEL                          | 14 ARTIFICIAL HORIZON                | 23 SECOND PILOT'S FLAP SELECTOR LEVER              |
| 6 FIRST PILOT'S DIVE BRAKE SELECTOR LEVER<br><i>IN-OUT</i>      | 15 FLAP POSITION INDICATOR           | 24 SECOND PILOT'S CONTROL COLUMN                   |
| 7 FIRST PILOT'S CONTROL COLUMN HANDGRIP                         | 16 RATE OF CLIMB INDICATOR           | 25 SECOND PILOT'S TRIM TAB CONTROL WHEEL           |
| 8 WHEEL BRAKES PRESSURE GAUGE                                   | 17 TURN AND SLIP INDICATOR           | 26 SECOND PILOT'S DIVE BRAKE SELECTOR LEVER        |
| 9 ALTIMETER   | 18 SECOND PILOT'S RT/BEACON SWITCH   |  |

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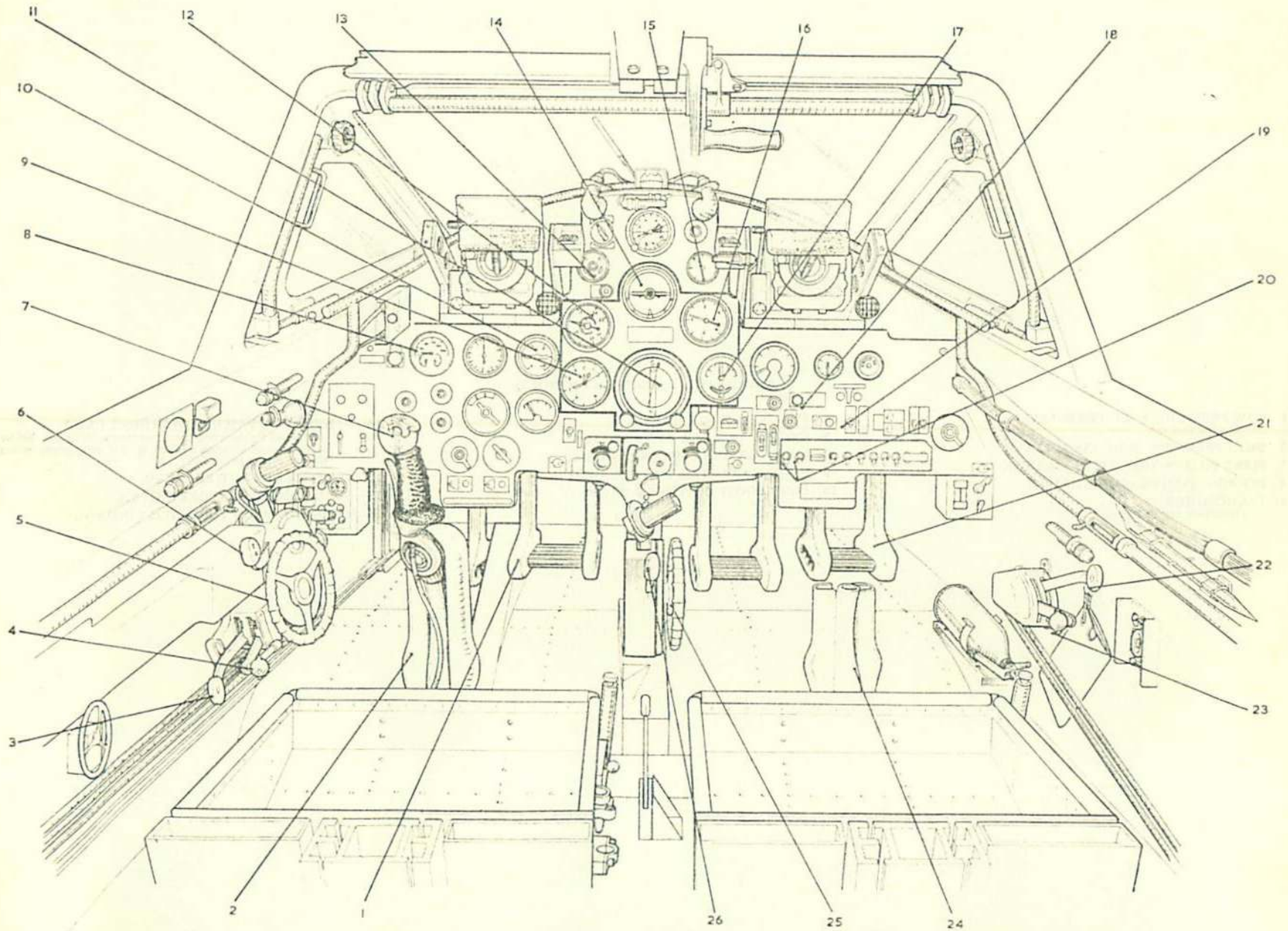


Fig. 1. Flying controls

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KEY TO FIG. 2 (ENGINE CONTROLS)

- 1 LOW-PRESSURE FUEL COCK LEVER  
Up for fuel *ON*
- 2 HIGH-PRESSURE FUEL COCK LEVER
- 3 FIRST PILOT'S THROTTLE CONTROL
- 4 JET PIPE TEMPERATURE GAUGE
- 5 TACHOMETER  
Indicates engine r.p.m.

- 6 FUEL CONTENTS GAUGE
- 7 ENGINE STARTER PUSH BUTTON
- 8 FUEL PRESSURE WARNING LAMP
- 9 ENGINE STARTER MASTER SWITCH
- 10 FUEL BOOSTER PUMP SWITCH

- 11 GENERATOR FAILURE WARNING LAMP  
The lamp lights when the generator voltage falls below accumulator voltage. Light is *ON* continually when the aircraft is parked.
- 12 STARTER CIRCUIT BREAKER
- 13 FUEL PUMP ISOLATING SWITCH
- 14 SECOND PILOT'S THROTTLE CONTROL

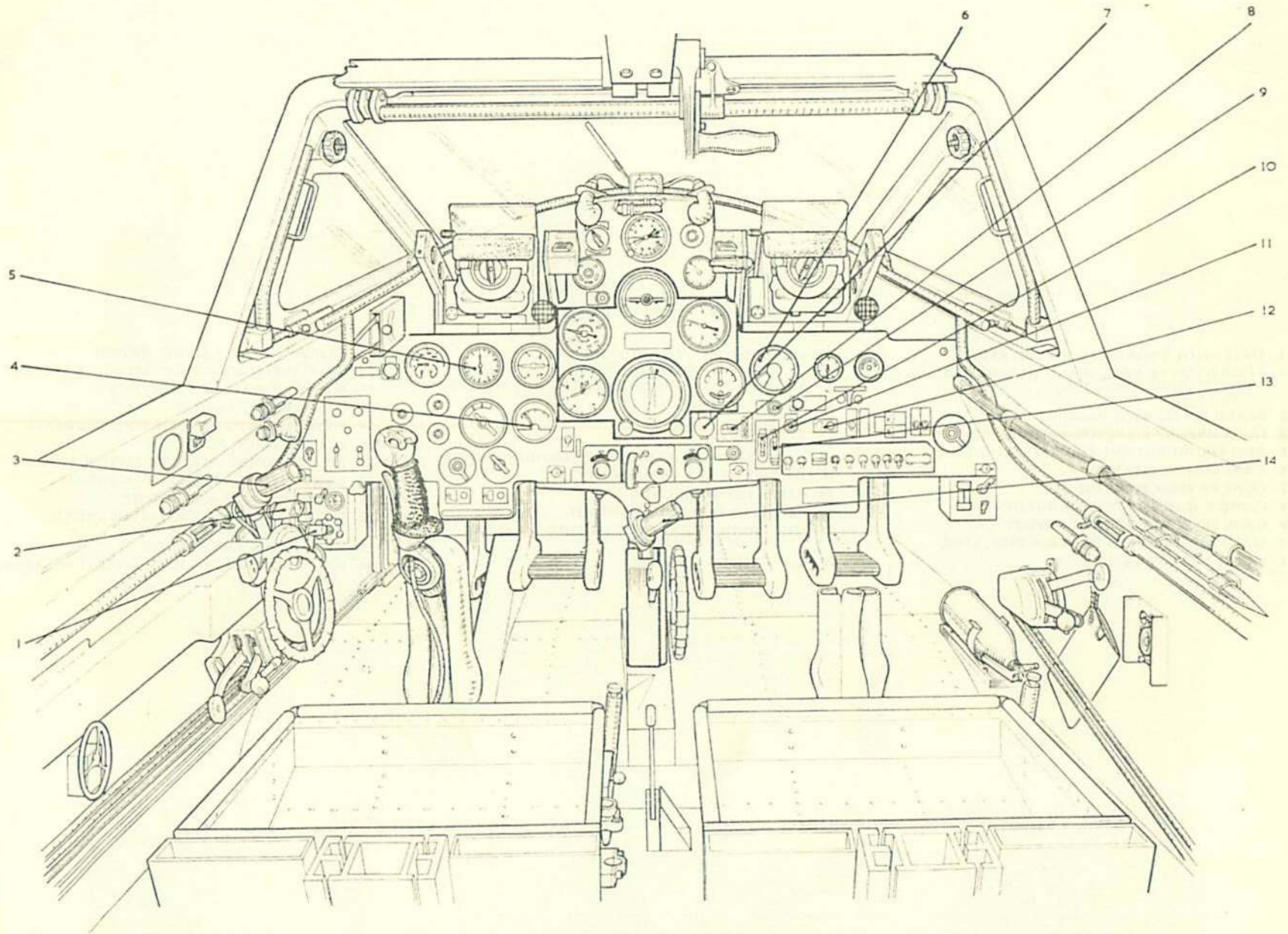


Fig. 2. Engine controls

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KEY TO FIG. 3 (OPERATIONAL CONTROLS)

- |    |   |    |   |    |  |
|----|---|----|---|----|--|
| 1  | FIRST PILOT'S OXYGEN CONTROL PANEL  | 12 | FIRST PILOT'S GYRO GUNSIGHT<br>With camera recorder attached  | 23 | CAMERA SUNNY/CLOUDY SWITCH                         |
| 2  | PRESS-TO-SPEAK SWITCH AND GUNSIGHT RANG-<br>ING CONTROL TWIST GRIP<br>First Pilot | 13 | FIRST PILOT'S GUNSIGHT RETRACTION SWITCH                      | 24 | G.G.S. INSTRUCTOR/PUPIL SELECTOR SWITCH            |
| 3  | BRAKE LEVER WITH PARKING CATCH  | 14 | LANDING LAMP SWITCH   | 25 | BOMBS/RP SELECTOR SWITCHES                         |
| 4  | GUNS/MRP/SRP SELECTOR SWITCH  | 15 | ACCELEROMETER   | 26 | CAMERA TEST SWITCH                                 |
| 5  | GUN FIRING BUTTON AND SAFETY CATCH  | 16 | E2A COMPASS   | 27 | SECOND PILOT'S OXYGEN CONTROL PANEL                |
| 6  | Z.B.X. CONTROL PANEL  | 17 | SECOND PILOT'S GUNSIGHT RETRACTION SWITCH                     | 28 | I.F.F. CONTROL PANEL                               |
| 7  | GUNS/RP SELECTOR SWITCH   | 18 | SECOND PILOT'S GYRO GUNSIGHT                                  | 29 | RP AND BOMBS SELECTOR MASTER SWITCH                |
| 8  | CANOPY HATCH-LIFT PUSH BUTTON   | 19 | CABIN PRESSURE GAUGE  | 30 | Z.B.X. BEACON MIX/SELECTOR SWITCH                  |
| 9  | G.G.S. SELECTOR DIMMER SWITCH   | 20 | INVERTER RESET PUSH SWITCH                                    | 31 | WINDSCREEN DE-ICING PUMP                           |
| 10 | ELEVATOR TRIM TAB POSITION INDICATOR  | 21 | G.G.S. RETRACTION UNIT CIRCUIT BREAKERS<br>Port and starboard | 32 | ELECTRICAL SERVICES MASTER SWITCH<br>GROUND/FLIGHT |
| 11 | RADIO MUTING SWITCH   | 22 | G.45 CAMERA SWITCH  | 33 | V.H.F. RADIO CONTROLLER                            |
|    |   |    |   | 34 | No. 1 AND No. 2 INVERTER CIRCUIT BREAKERS          |

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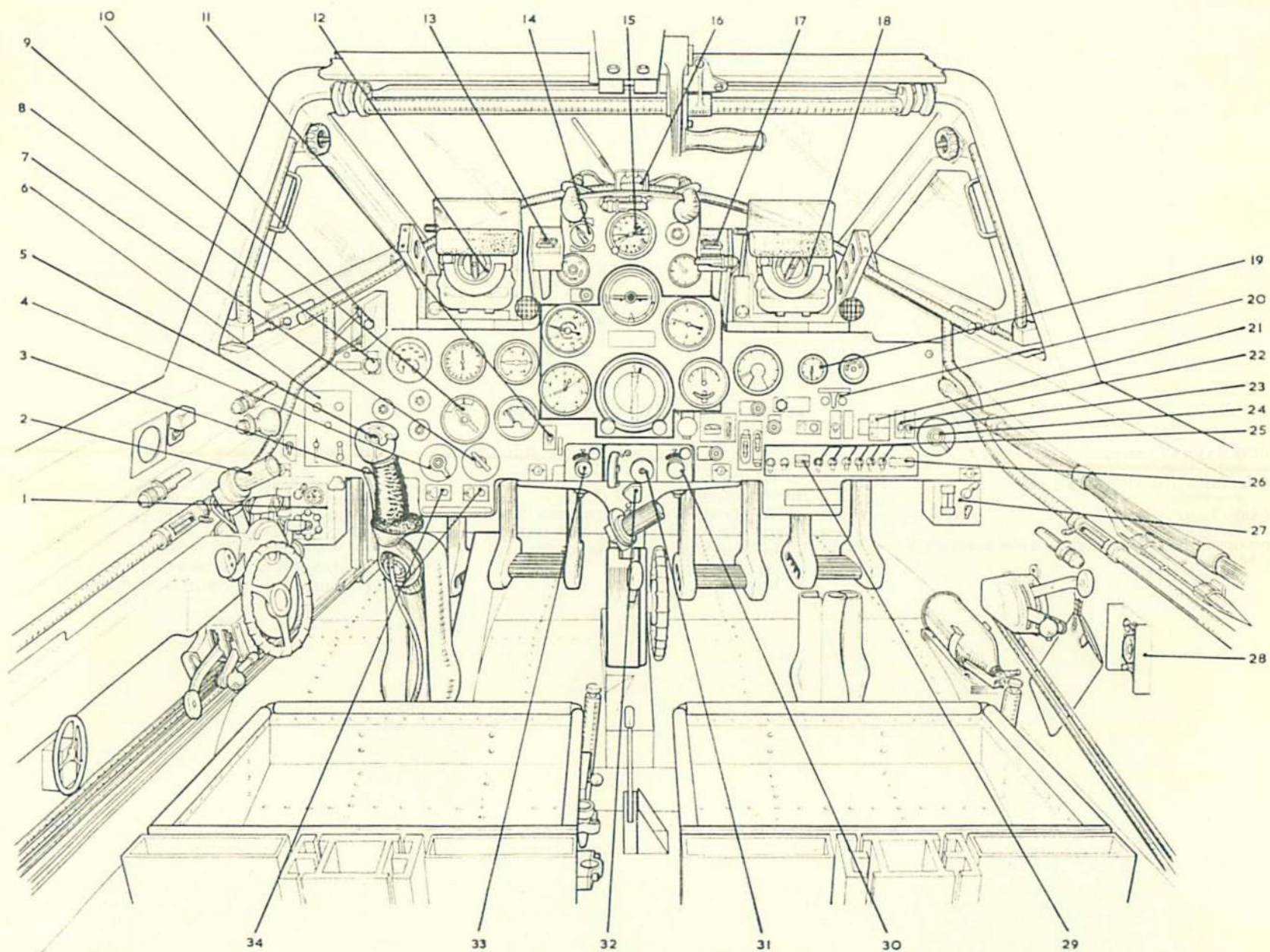


Fig. 3. Operational controls

KEY TO FIG. 4 (MISCELLANEOUS CONTROLS)

- |   |   |    |  |    |   |
|---|---|----|--|----|---|
| 1 | ULTRA-VIOLET LAMPS<br>Sect. 5, Chap. 1                                | 5  | ON-OFF AND DIMMER SWITCHES FOR ULTRA<br>VIOLET LAMPS<br>Sect. 5, Chap. 1 | 11 | MIC-TEL. SOCKET<br>Seat                 |
| 2 | HOT AND COLD AIR GRILLE<br>First Pilot                                | 6  | DIRECT VISION WINDOWS (2 off)  | 12 | HARNES RELEASE                          |
| 3 | CABIN LAMPS<br>Sect. 5, Chap. 1                                       | 7  | HATCH LOCKING AND UNLOCKING HANDLE                                       | 13 | SEAT ADJUSTMENT HANDLES                 |
| 4 | ON-OFF AND DIMMER SWITCHES FOR RED FLOOD<br>LAMPS<br>Sect. 5, Chap. 1 | 8  | HATCH SUPPORT STRUT RELEASE HANDLE                                       | 14 | HOT AND COLD AIR GRILLE<br>Second Pilot |
|   |   | 9  | HYDRAULIC HAND PUMP HANDLE   | 15 | "PILOT'S NOTES" STOWAGE                 |
|   |   | 10 | MIC-TEL. SOCKET<br>Harness   | 16 | HARNES ADJUSTMENT HANDLE                |
|   |   |    |  | 17 | CABIN AIR CONTROL HAND WHEEL            |

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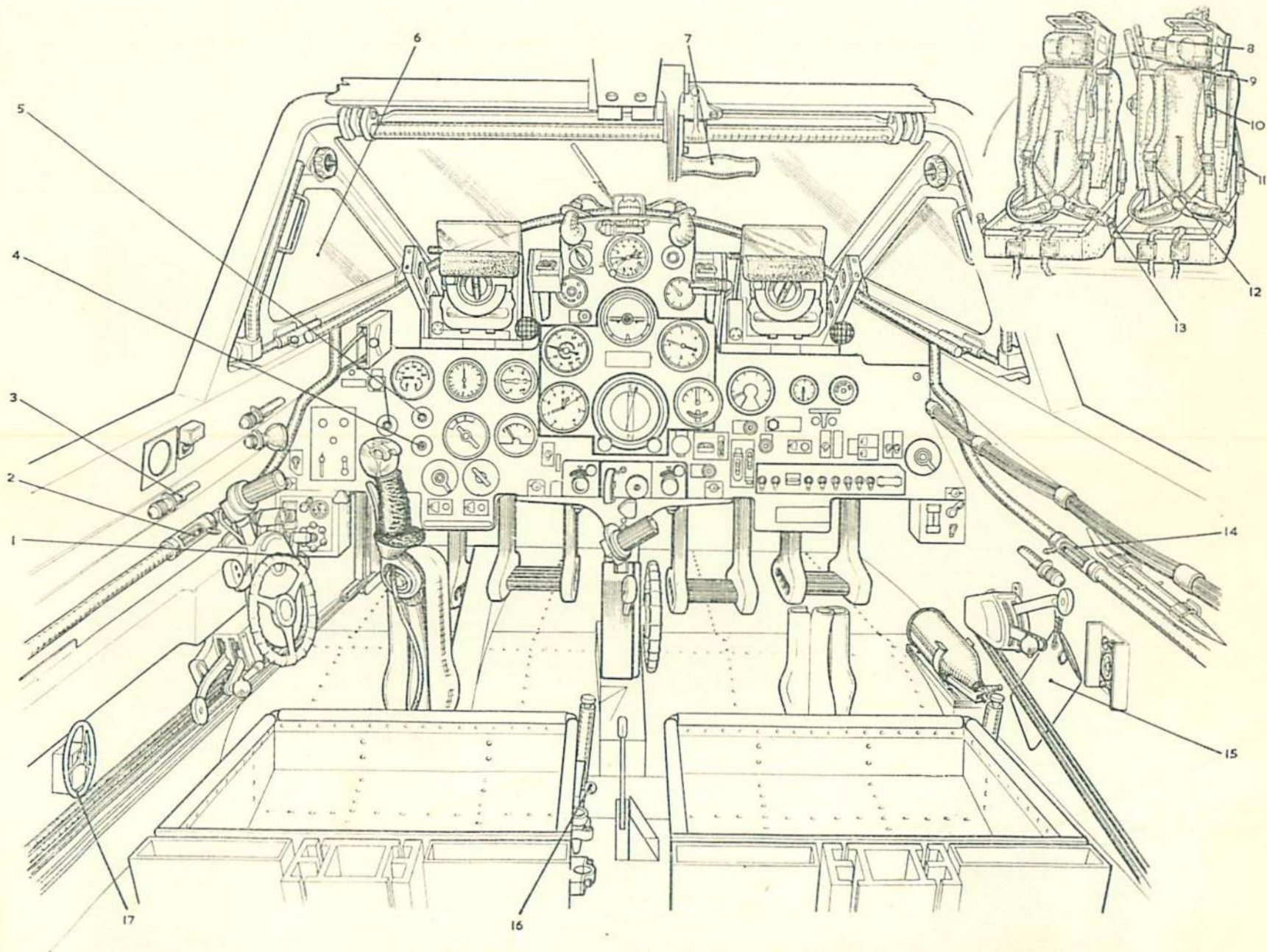


Fig. 4. Miscellaneous controls

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