CHAPTER 1

PILOTS CONTROLS AND EQUIPMENT

LIST OF CONTENTS

ILLUSTRATIONS

WARNING

An aircrew ejection seat is fitted to this aircraft. Before attempting to enter the cabin, therefore, ensure that the instructions given in the Ejection Seat Warning, following the Introduction at the beginning of this volume, have been carried out. In the interests of safety, this is very important.

Introduction

1. This chapter gives the location of the cabin controls and instruments used by the pilot, the items being grouped as indicated in the illustrations. It will be found that certain items are not referenced as they are regarded as standard features of all cabins. Where the operation of a control or any feature of an instrument is not obvious, the necessary information is given in the key to the illustration. For more detailed information of the operation of certain controls and the manner in which they are to be used, reference should be made to A.P.4347F, Pilot's Notes.

Emergency controls

General

2. The function and operation of the emergency controls and instruments indicated in the illustrations are described in detail in Sect.1, Chap.3 of this volume.

Cabin sliding hood

Operation from inside

3. The cabin sliding hood is normally operated by an electric actuator, but provision is made for manual operation if desired. The actuator is controlled by a three-position switch marked OPEN, OFF and SHUT, which is contained in a combined hood and clutch control box mounted on the port side of the cabin above the throttle lever. The clutch lever moves in a gate marked FREE and LOCKED. When in the FREE position, the actuator clutch is disengaged by a Bowden cable interconnection and the hood control switch is moved to the OFF position by a mechanical linkage within the control box. With the actuator de-clutched, the hood may be moved in the required direction by the handgrips, and as the control switch is in the OFF position, the actuator cannot be operated under no-load conditions.

WARNING ...

When the aircraft is ready for take-off, a check must always be made to ensure that the hood rail lock indicators, which are located two on each side of the cabin and marked LOCKED, are pointing to the centres of the lock pins, thus indicating that the hood rail locks are correctly set to lock the rails and hood to the airframe.

Operation from outside

4. Before leaving the cabin, the actuator clutch should be left in the FREE position, thus leaving the hood free to slide. The hood may then be pushed open or closed from the outside as desired. For details of the emergency operation of the hood, reference should be made to Sect.1, Chap.3 of this volume.

NOTE...

The cabin hood must NOT be opened or closed by pushing on the transparent plastic.

Operation by external control switch

5. A three-position, centre-off switch located at the bottom of the forward face of the first fuselage frame inside the fuselage nose piece, necessitating removal of the nose piece for access, is used for external operation of the hood during cabin pressurization checks. This switch is normally OFF and disconnected from the aircraft's electrical system. To use the switch, it is first necessary to disconnect the cabin control from the plug and socket break on the cabin port shelf, remove the external control switch socket from its stowage above the shelf and connect it to the plug on the shelf. The actuator clutch should then be placed in the LOCKED position and the fuselage nose

piece removed, as described in Sect.3, Chap.1 to gain access to the external switch.

WARNING....

Before using the switch, ensure that the hood is clear, and after use, reconnect the cabin switch to the plug on the shelf and return the external switch socket to its stowage.

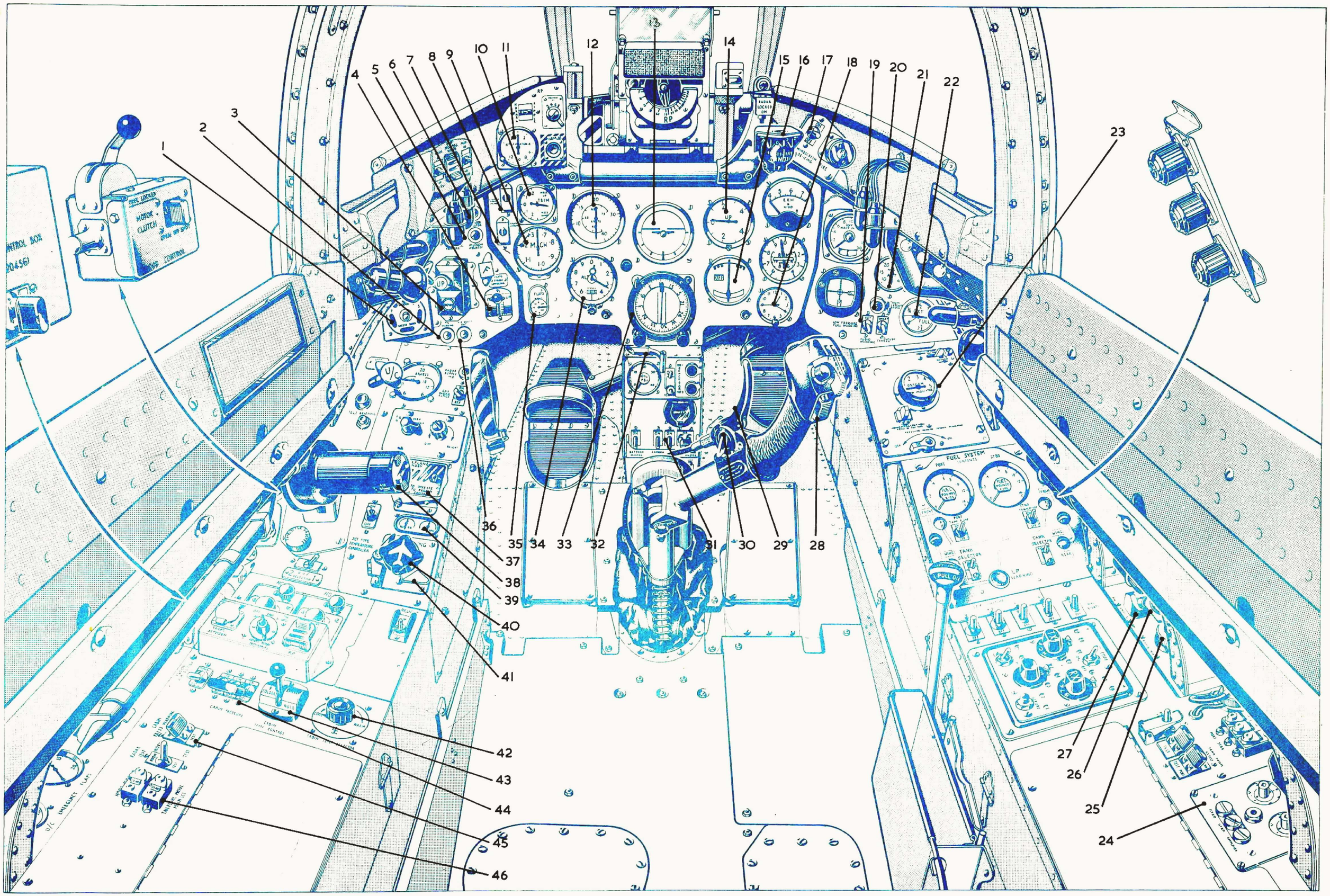

FIG. 1 FLYING CONTROLS AND INSTRUMENTS

FLYING CONTROL AND INSTRUMENTS

1. UNDERCARRIAGE INDICATOR
   Light sequence:-
   GREEN Undercarriage locked down
   RED Undercarriage in process of retraction or extension.
2. UNDERCARRIAGE WARNING LIGHT
   Light when throttle is approx. 1/3 open and undercarriage not locked down.
3. UNDERCARRIAGE CONTROL
   Interlocking push-switches. Top for UP bottom for DOWN. Note - Clockwise rotation of outer wing of UP button overrides safety lock.
4. FLAP CONTROL
5. AILERON POWER ASSISTANCE INDICATOR
   Indicates power off
6. ELEVATOR POWER ASSISTANCE INDICATOR
   Indicates power off
7. AILERON POWER ASSISTANCE SWITCH
   Use to disengage power.
8. ELEVATOR POWER ASSISTANCE SWITCH
9. MACH METER
10. TAIL PLANE POSITION INDICATOR
11. ACCELEROMETER
12. AIRSPEED INDICATOR
13. ARTIFICIAL HORIZON
14. RATE OF CLIMB
15. TRIM AND SLIP INDICATOR
16. STANDBY COMPASS
17. WINDSCREEN DE-ICING PUMP SWITCH Deleted by mods 81
18. CLOCK.
19. CABIN ← HYDRAULIC PRESSURE AUDIO WARNING SWITCH Use to cut out Audio warning
20. CABIN PRESSURE WARNING LIGHT
21. CABIN ALTIMETER
22. H.P. OXYGEN CONTENTS GAUGE
23. OXYGEN DEMAND REGULATOR
24. COMPASS CONTROL UNIT Ground use only. Light indicates installation inoperative
25. TEST BUTTON ON ANTI-G SUIT VALVE
    Depress to test installation
26. ANTI-G PRESSURE GAUGE
27. ANTI-G SUIT CONTROL
28. TAIL PLANE INCIDENCE CONTROL (NORMAL)
    Nose up to increase tailplane incidence and down to decrease.
29. HYDRAULIC BRAKE CONTROL
30. BRAKE PARKING LOCK
    For temporary parking
31. PRESSURE HEAD HEATER SWITCH
32. RUDDER BAR CONTROL
    For adjustment of rudder bar.
33. GYRO COMPASS
34. ALTIMETER
35. FLAP POSITION INDICATOR
36. AIR BRAKE INDICATOR
    Indicates brake out
37. TAIL PLANE STANDBY CONTROL
38. AIRBRAKE CONTROL
39. AILERON AND RUDDER TAB POSITION INDICATORS
40. AILERON AND RUDDER TRIM TAB CONTROL SWITCH
    Operation in natural sense i.e. the aircraft responds to the altitude of the silhouette on the switch knob.
41. TRIM SWITCH LOCK
    Engage when flying with ailerons power operated.
42. CABIN TEMPERATURE SELECTOR
43. CABIN TEMPERATURE CONTROL
44. CABIN PRESSURE SWITCH
45. CABIN PRESSURE WARNING TEST
46. TAIL PLANE MOTOR CIRCUIT BREAKER

KEY TO FIG. 1.

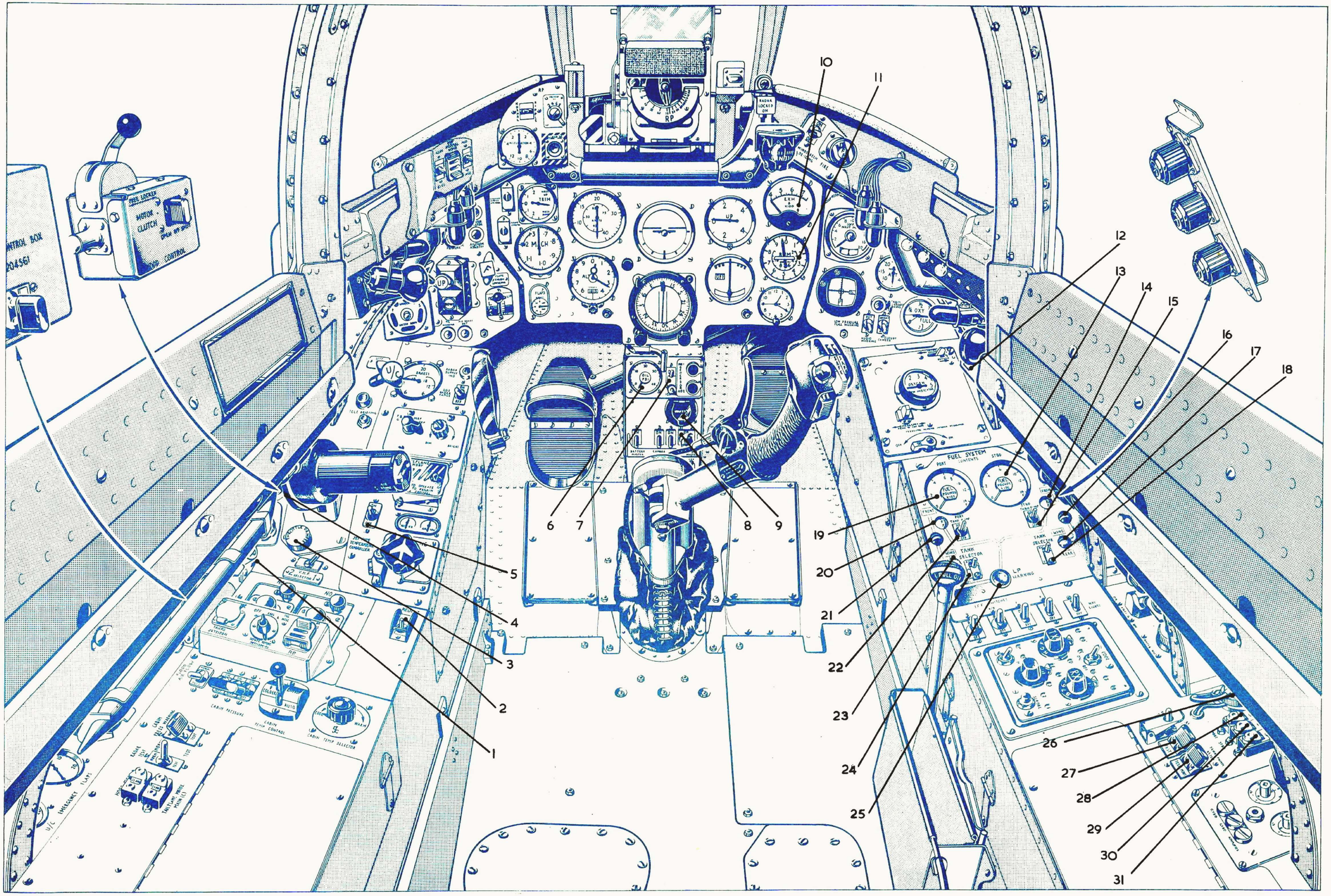

FIG. 2 ENGINE CONTROLS AND INSTRUMENTS

ENGINE CONTROLS AND INSTRUMENTS

1. LOWER PRESSURE FUEL COCK CONTROL
   Moved forward from OFF to ON
2. RELIGHT SWITCH
   Press with ignition switch (Item 7) on for relight.
3. THROTTLE DAMPER
4. THROTTLE
   Aft for idling, forward for full throttle.
5. JET PIPE TEMPERATURE CONTROLLER
6. OIL PRESSURE GAUGE
7. IGNITION SWITCH
   When off, isolates igniter units.
8. ENGINE MASTER SWITCH
   Controls flight instruments, tank pumps, fuel pressure and emergency fuel pump circuits.
9. STARTER PUSH SWITCH
   Actuates engine starting cycle.
10. EXHAUST GAS THERMOMETER
11. TACHOMETER
12. ENGINE ANT-ICING SWITCH AND INDICATOR
13. FUEL GAUGE - STARBOARD TANKS
14. FUEL PUMP MAGNETIC INDICATOR - STARBOARD TANKS
15. FUEL PUMP SWITCH - STARBOARD TANKS
16. FUEL TRANSFER MAGNETIC INDICATOR - STARBOARD
17. FUEL COCK POSITION MAGNETIC INDICATOR - STARBOARD TANKS.
18. TANK SELECTOR SWITCH - STARBOARD TANKS.
19. FUEL GAUGE - PORT TANKS
20. FUEL PUMP MAGNETIC INDICATOR - PORT TANKS
21. FUEL TRANSFER MAGNETIC INDICATOR - PORT TANKS
22. FUEL PUMP SWITCH - PORT TANKS
23. FUEL COCK POSITION MAGNETIC INDICATOR - PORT TANKS.
24. TANK SELECTOR SWITCH - PORT TANKS
25. FUEL PRESSURE WARNING INDICATOR
26. AMMETER TEST SOCKET
    Used for test prior to flight.
27. FIRE WARNING TEST SWITCH
28. CIRCUIT BREAKER, BOOSTER PUMP - PORT
29. TANK PUMPS TEST SWITCH
    Used for test prior to flight.
30. CIRCUIT BREAKER, BOOSTER PUMP - STARBOARD
31. CIRCUIT BREAKER, STARTER

KEY TO FIG. 2.

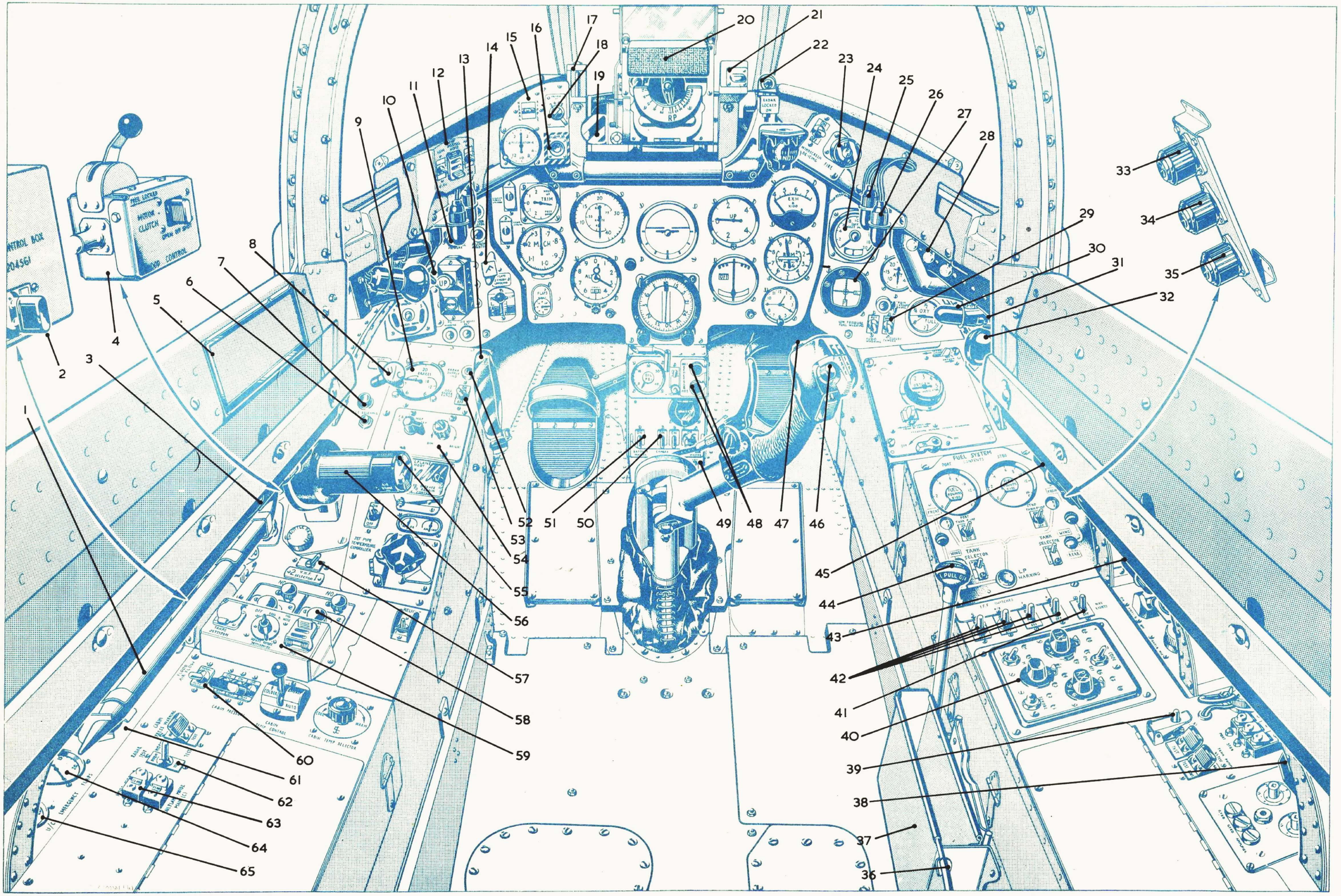

FIG. 3 ARMAMENT NAVIGATION, SIGNALLING, RADIO AND MISCELLANEOUS

1. CROWBAR
2. AIRBRAKE RELAY BOX AND TEST SWITCH
3. HOOD RAIL LOCK INDICATORS, PORT AND STARBOARD
4. HOOD CONTROL AND CLUTCH LEVER
   When clutch lever is in FREE position to to de-clutch motor, hood control switch is moved to the OFF position automatically.
5. MULTI-CHANNEL CARD HOLDER
6. TELE-BRIEFING PUSH SWITCH
7. TELE-BRIEFING LIGHT
8. EMERGENCY UNDERCARRIAGE CONTROL
   Grasp the control between the fingers, press the centre button with thumb and pull control to operate.
9. TRIPLE PRESSURE GAUGE
   Brake and main hydraulic system pressure.
10. TARGET REJECTION SWITCH
11. HYDRAULIC FAILURE WARNING LIGHT
12. A.R.I. 18085 CONTROL SWITCHES
13. HOOD JETTISON CONTROL
    Refer to Sect.1, Chap.3.
14. EMERGENCY FLAPS CONTROL
    Grasp the control between the fingers, press the centre button with thumb and pull control to operate.
15. RP. RIPPLE SWITCH
16. CLEAR A/C PUSH SWITCH.
17. RETRACTABLE GYRO GUN SIGHT MOUNTING
18. RP. SELECTOR SWITCH
19. EMERGENCY GYRO GUN SIGHT MANUAL RETRACTION CONTROL.
20. GYRO GUN SIGHT
21. GYRO GUN SIGHT AND MOUNTING CONTROL SWITCH
22. RADAR LOCKED ON INDICATOR LIGHT
23. FIRE WARNING LIGHT AND EXTINGUISHER PUSH SWITCH
    Pull knob to test bulb before take-off.
    Light indicates when temperature in engine bay and accessories bay exceeds 300 ± 30 deg.C.
    Pushing the knob will operate the fire extinguisher. The flame switches are of the re-setting type and indicate temporary surges of excessive heat, thus, flickering of the light in flight and during engine run on the ground may occur. Refer to Sect.4, Chap.5.
24. D.M.E. INDICATOR
25. RED INSTRUMENT LIGHTS, Port and Starboard
26. RED INSTRUMENT STANDBY LIGHTS, Port and Starboard.
27. A.R.I. 18085 INDICATOR
28. SPARE BULB HOLDER
29. CAMERA EXPOSURE SWITCH
30. RED INSTRUMENT LIGHTS, Port and Starboard
31. RED STANDBY LIGHT SWITCH.
32. ULTRA VIOLET INSTRUMENT LIGHTS, Port and Starboard.
33. ULTRA VIOLET INSTRUMENT LIGHTS, DIMMER SWITCH
34. RED INSTRUMENT LIGHTS, DIMMER SWITCH
35. RED SHELF LIGHTS, DIMMER SWITCH
36. GYRO GUN SIGHT RECORDER STOWAGE
37. MAP AND NOTECASE
38. EMERGENCY COCKPIT LIGHTS ACCUMULATOR
39. BUTT TEST SWITCH
40. D.M.E. CONTROL UNIT
41. NAVIGATION LIGHTS SWITCH
42. I.F.F. SWITCHES
43. AFT RED SHELF LIGHTS - Port and Starboard
44. EMERGENCY OXYGEN RELEASE
45. FORWARD RED SHELF LIGHTS - Port and Starboard
46. CAMERA GUN PUSH SWITCH
47. GUN FIRING TRIGGER
48. GENERATOR WARNING LIGHTS
49. GYRO GUN SIGHT CIRCUIT BREAKER
50. CAMERA MASTER SWITCH
51. BATTERY MASTER SWITCH
    On for flight, switch off to isolate all electrical services except fire extinguisher.

KEY TO FIG.3.

ARMAMENT, NAVIGATION SIGNALLING, RADIO AND MISCELLANEOUS - Contd.

52. RADAR SUPPLY INDICATOR
53. GYRO GUN SIGHT MANUAL/AUTOMATIC SWITCH
54. GYRO GUN SIGHT CONTROL UNIT
55. PRESS TO TRANSMIT SWITCH
56. GYRO GUN SIGHT RANGE CONTROL
57. V.H.F. SELECTOR SWITCH
58. V.H.F. RADIO CONTROL UNITS
59. BOMB/RP CONTROL PANEL
60. FLOOD AIR FLOW SWITCH
61. BRAKE ACCUMULATOR PRESSURE GAUGE
62. RADAR TEST SWITCH
63. HOOD CIRCUIT BREAK
64. EMERGENCY AIR GAUGE- FLAPS
65. EMERGENCY AIR GAUGE - UNDERCARRIAGE

KEY TO FIG.3