Group 7
ALIGHTING GEAR CONTROLS

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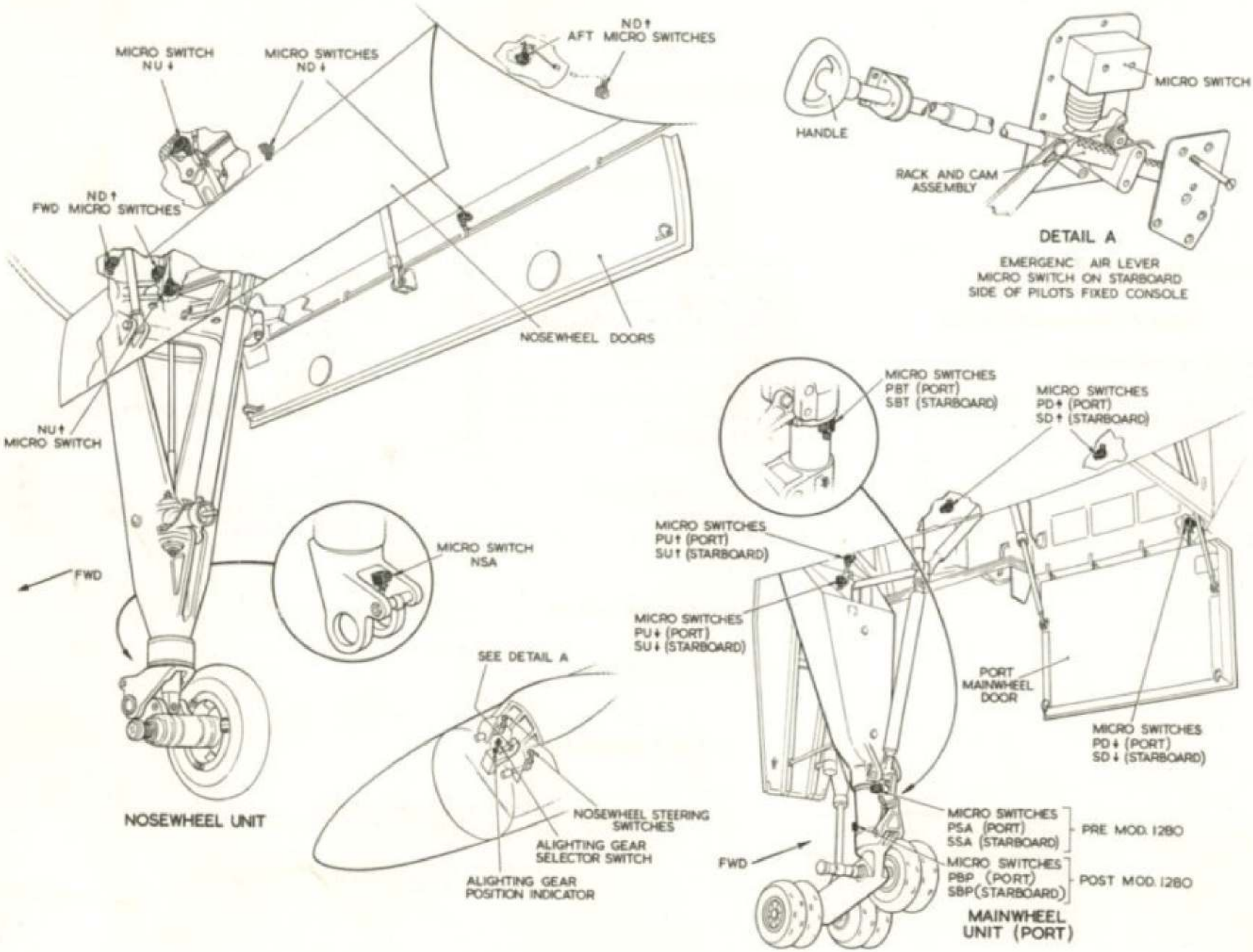

Fig. 1. Alighting gear details.

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Introduction

1. Normal operation of the alighting gear and nosewheel steering is controlled by a series of electrically-operated valves in the main hydraulic system. A description of each electrical control circuit is contained in this Group. Theoretical circuit diagrams are given in fig.2 and 3, and routing charts for the circuits will be found at the end of the text. Component location is contained in fig.1, and micro switch setting details are shown in Book 1, Sect.3, Chap.5. Descriptive and servicing information for the hydraulic system is given in Book 1, Sect.3, Chap.6. Information on the Dowty electro-hydraulic equipment will be found in A.P.1803D, Vol.1.

DESCRIPTION AND OPERATION

ALIGHTING GEAR CONTROL

General

2. The alighting gear comprises two main wheel units retracting forwards and upwards into the main plane, and a single nose wheel unit, retracting rearwards into the fuselage aft of the crew's compartment. The units, operated by hydraulic jacks, are controlled by a push-button selector switch on the pilots' centre instrument panel. An alighting gear position indicator is fitted to the panel adjacent to the selector switch.

3. When fully extended, all wheel units are secured in the down position by hydraulically-operated downlock jacks. To enclose the wheel units in their bays, fairing doors are provided, also operated by hydraulic jacks. Micro switches are employed to harmonize movement of the door jacks with that of the alighting gear to complete or break the electrical supply to the electrically-operated control valves in the hydraulic system.

4. The nose wheel unit is a rearward-retracting, lever-suspension unit, incorporating a steering system providing power steering for 47 deg. 15 min. to either port or starboard. The nose wheel unit retracts into a compartment in the front fuselage section of the aircraft.

Controls

5. As stated in para.2, operation of the electrically-operated valves for the alighting gear units, down locks, and doors, is controlled by a push-button selector switch, labelled UP - DOWN on the centre portion of the pilots' instrument panel. The sequence of operations is determined by the various micro switches detailed in para.11. Two push-switches fitted one to each pilot's control column, control the supply via relay contacts to the nose wheel steering control valve and stop valve solenoids.

6. Embodied in the alighting gear selector switch is a mechanical locking device to prevent inadvertent selection of the alighting gear UP when the aircraft is on the ground. The lock is electrically released when the weight of the aircraft is relieved from the main wheel units (i.e., on take-off, or when jacked up), by the action of two micro switches operated by the main wheel shock absorber links.

Emergency retraction

7. For emergency retraction of the alighting gear (Sect.1, Chap.3, Book 1 of this publication), the up button lock may be overcome by rotating the up button flange, marked EMERGENCY, in a clockwise direction. This will allow the up button to be depressed using normal finger pressure. After the up button has been pressed, the flange can only be returned to its original position by the use of the Dowty service tool, Part No. S.T.1157.

Emergency lowering

8. The main electrical supply to the alighting gear circuits is fed through the normally closed contacts of a micro switch adjacent to, and operated by (fig.1) the emergency air valve control lever on the starboard side of the fixed portion of the pilots' console.

9. Should emergency lowering of the alighting gear become necessary, the movement of the lever to the EMERGENCY position will, by the action of a spring-loaded cam and rack assembly, operate the micro switch to cut off the electrical supply to all the electro-hydraulic valves, and also energise a control relay (No.8). The contacts of this relay will maintain supply to the nose wheel steering circuit so that steering facilities will be available when the aircraft has landed.

Micro switches

10. Twenty-three micro switches are employed in the alighting gear control and indication circuits, and they are illustrated in fig.1. The micro switches are all of the Dowmic type C1831Y series, and are described in A.P.4343C, Vol.1, Sect.1, Chap.25. Details of these micro switches, their markings, function and location are given in para.11. It should be noted that operation implies depressed, making contacts 2-3 and 5-6. When the switches are released, the contacts change over to make contacts 2-1 and 5-4.

Mod.1638

11. Mod.1638 provides for the embodiment of Dowty Mod.AC/5673, which replaces the existing Dowmic micro switches

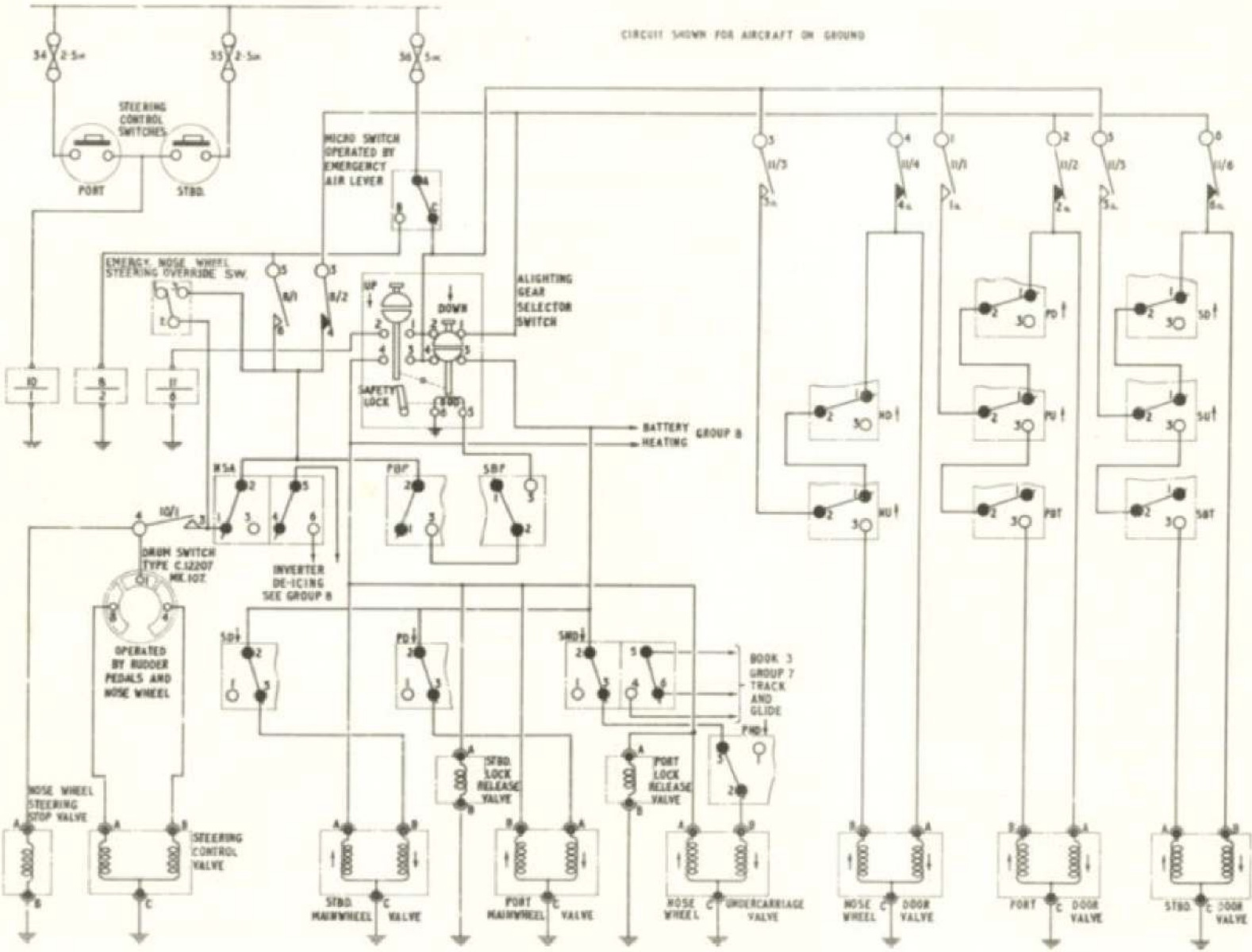

Fig.2 Alighting gear control circuit

on the main and nose wheel units by Dowty microseal micro switches (Ref.No.5CW/7412).

12. Details of the micro switches are as follows:-

PBT (1) - Port bogie trim

This switch is located on the outboard face at the bottom of the port main leg. The switch is operated when the bogie is correctly aligned.

SBT (1) - Starboard bogie trim

As for port bogie trim.

PSA (1) - Port shock absorber (pre Mod.1280)

This switch is located on the lower forward face of the port main leg. The switch is operated when the shock absorber is extended (i.e., when the weight of the aircraft is relieved from the main wheels).

SSA (1) - Starboard shock absorber (pre Mod.1280)

As for port shock absorber.

NSA (1) Nose shock absorber

This switch is located on the lower forward face of the nose wheel unit leg. The switch is operated when the shock absorber is extended, i.e., when the weight of the aircraft is relieved from the nose wheel, one half of the switch is connected to the nose wheel steering circuit, the other half is connected to the inverter de-icing circuit (Group 8).

PU ↓ (1) - Port unit down switch

This switch is located on the port main wheel unit downlock assembly, and is operated when the port main leg is locked down. The switch is connected in the indicator circuit.

SU ↓ (1) - Starboard unit down switch

As for port unit down switch.

NU ↓ (1) - Nose unit down switch

As for port unit down switch.

PU ↑ (1) - Port main wheel unit up switch

This switch is located on the pivot tube of the port main wheel leg and is cam operated. The switch is operated when the port unit is fully retracted.

SU ↑ (1) - Starboard main wheel unit up switch

As for port main wheel unit up switch

NU ↑ (1) - Nose wheel unit up switch

This switch is located on the aft face of the front pressure bulkhead in the nose wheel bay, and is operated when the nose wheel is fully retracted.

PD ↑ (2) - Port main wheel door up switches

These two switches are located one at each door catch hook on the inboard wall of the port main wheel bay. The switches are operated when the port door is fully closed.

SD ↑ (2) - Starboard main wheel door up switches

As for port main wheel door up switches.

ND ↑ (4) - Nose wheel doors up switches

These four switches are located in pairs, in the nose wheel bay. One pair is located adjacent to the NU ↑ micro switch, the other pair on the bulkhead at former 75. All four switches are operated when the nose wheel bay doors are fully closed.

PD ↓ (1) - Port main wheel door down switch

This switch is located on the forward outboard hinge bracket in the port main wheel bay, and is operated when the door is fully open.

SD ↓ (1) - Starboard main wheel door down switch.

As for port main wheel door down switch.

PND ↓ (1) - Port nose wheel door down switch

This switch is located towards the rear end of the port door hinge in the nose wheel bay. It is operated when the port door is fully open.

SND ↓ (1) - Starboard nose wheel door down switch

As for port nose wheel door down switch.

Mod.1280

13. With the introduction of Mod.1280, the two main wheel shock absorber switches PSA and SSA are deleted and replaced by two bogie position switches. These switches, designated PBP - Port bogie position and SBP - Starboard bogie position, are fitted lower down on the main legs and are operated by a lever when the weight of the aircraft is relieved from the main wheels, and the bogies are extended. The switches have the same function in the circuit operation as the shock absorber switches, and are included in the description given in the following paragraphs.

Mod.1906

13A. With Mod.1906 embodied, the fifteen Dowty micro switches fitted to the aircraft structure are replaced by Honeywell micro switches, Ref.No. 5CW/9108. The eight Dowty micro switches on the main and nose wheel units remain unchanged.

Circuit operation

14. The circuit operation for the alighting gear control circuit is contained in the following paragraphs, and reference should be made to the theoretical circuit diagram fig.2. The indication circuit is contained in fig.3.

Circuit conditions - aircraft on ground

15. Fig.2 shows aircraft on ground circuit conditions. It will be seen that 28 volt supply to the alighting gear control circuit is fed from fuse 36, via the normally made contacts A-C of the emergency air lever micro switch. Referring to fig.2, it will also be seen that:-

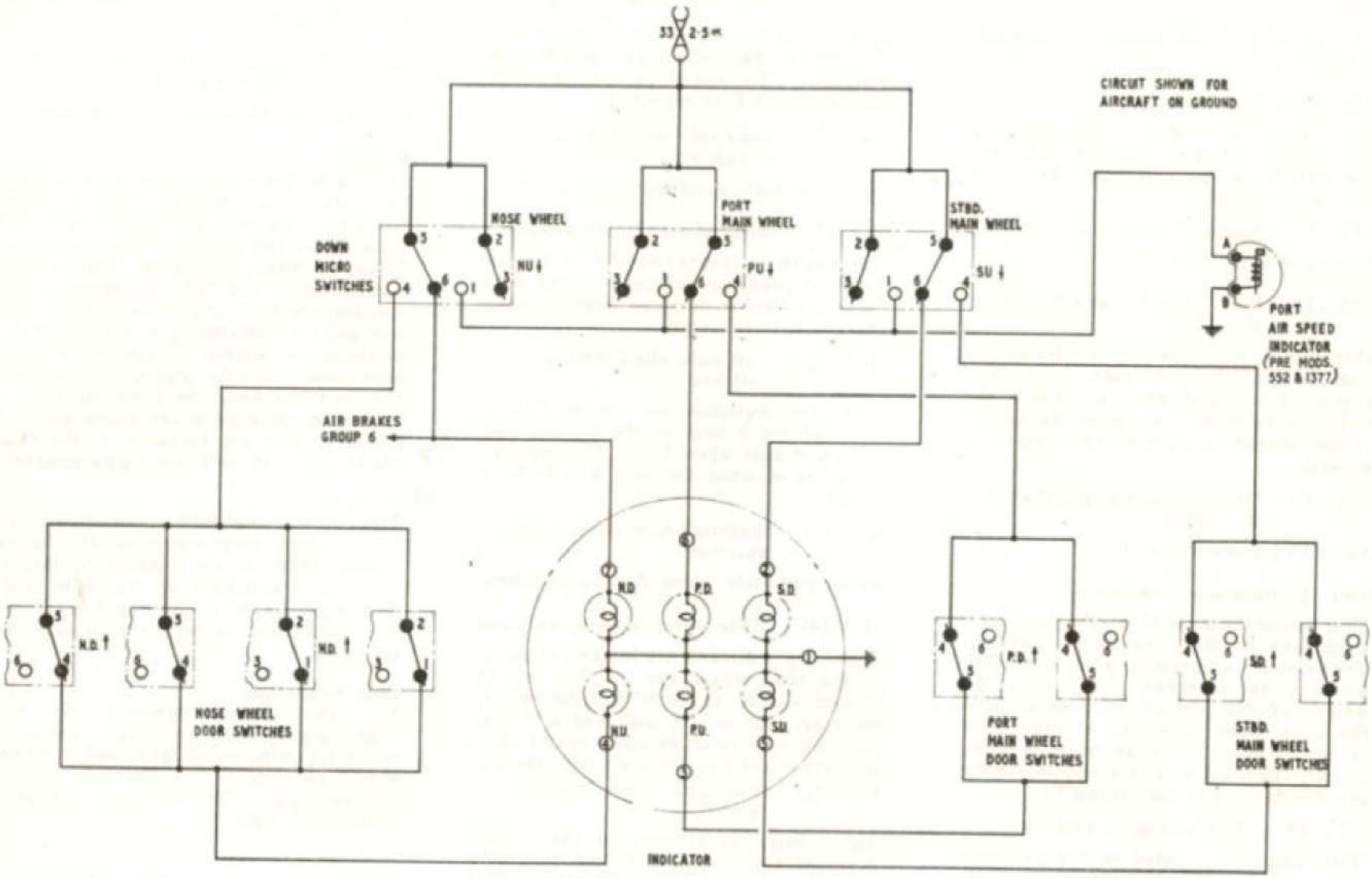

Fig. 3 Alighting gear indication circuit

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(1) The up selector button cannot be depressed because the safety lock solenoid within the selector switch is isolated from the supply. (Circuit is isolated by the PBP and SBP micro switches).

(2) The port main wheel down valve solenoid is energised via the supply fuse, contacts A-C of the emergency air micro switch, the down selector switch contacts 4-3, and contacts 2-3 of micro switch PD ↓ .

(3) Similarly, the starboard main wheel down valve solenoid is energised via the same supply circuit, and contacts 2-3 of micro switch SD ↓ .

(4) Also, the nose wheel down valve solenoid is energised by the same supply circuit and contacts 2-3 of micro switch PND ↓ and SND ↓ (in series).

(5) The port, starboard and nose wheel door open valve solenoids are energised with a supply from fuse 36, via the emergency air micro switch contacts A-C, the selector switch down button contacts 2-1, and normally closed relay contacts 11/2, 11/4 and 11/6.

(6) A supply is available for the nose wheel steering circuit from fuse 36, via the emergency air micro switch, contacts 2-1 of the down button, normally closed relay contacts 8/2, and contacts 2-1 of micro switch NSA.

Alighting gear retraction

16. As soon as the weight of the aircraft is relieved from the main wheels, and each main leg is fully extended, the strikers on each upper torque link will operate the micro switches PBP and SBP to make contacts 2-3. This action will connect a supply from the fuse, via the emergency air micro switch, the selector switch down contacts, contacts 2-3 of switches PBP and SBP in series, to energise the lock release solenoid in the selector switch.

17. This action will permit selection of alighting gear up, and when the up button is pressed the following circuit action will take place:-

(1) The coil of relay 11 will be energised.

(2) The port and starboard down-lock release valve solenoids will be energised to release the down locks.

(3) The port, starboard and nose wheel up valve solenoids will be energised via the up button contacts of the selector switch.

It will be seen (fig.2) that relay contacts 11/1, 11/3 and 11/5 will have operated to close, whilst contacts 11/2, 11/4 and 11/6 will have operated to open. Although the opening of the even-numbered contacts of relay 11 has cut off direct supplies to the doors open valve solenoids, supplies will still be available via the now closed odd-numbered contacts and the appropriate up-lock and door micro switches.

18. Meanwhile, as the main wheels are being retracted, the bogie trimmer jack is shortened. The sliding tube is consequently raised, and the main wheel bogies are each pulled almost into line with each main wheel leg to facilitate stowage. At the end of each bogie travel into its respective main fitting, micro switches PBT and SBT will operate to make contacts 2-3. These switches are wired in series with the up lock micro switches (PU↑ and SU↑) and the door close micro switches (PD↑ and SD↑). The sequencing of the micro switches ensures that a supply to the door open valve solenoids is maintained until the bogie is correctly trimmed and the main wheels are fully retracted and stowed.

19. When the main wheels are fully retracted the up lock micro switches PU↑ and SU↑ will operate to make contacts 2-3. This action will interrupt the feed to the door open valve solenoids, and connect the supplies via relay contacts 11/1 and 11/5, contacts 2-3 of switches PU↑ and SU↑ and contacts 2-3 of switches PBT and SBT to energise the port and starboard main wheel doors closed valve solenoids.

20. As the main wheel doors begin to close micro switches SD ↓ and PD ↓ will be released to make contacts 2-1, this action will prepare the sequence circuit for down selection. When the doors are fully closed micro switches PD↑ and SD↑ will operate to make contacts 2-3 and 5-6, the latter contacts being used in the indicator circuit. The alighting gear main wheel up valve solenoids and the main wheels door valve solenoids will remain energised as long as the alighting gear remains selected UP.

21. In the case of the nose wheel unit, as soon as the weight of the aircraft is relieved from the nose wheel, micro switch NSA will operate to make contacts 2-3 and 5-6; contacts 2-3 will isolate the nose wheel steering circuit, contacts 5-6 are connected to the inverter de-icing system (Group 8). The nose wheel unit will commence to retract, the up valve solenoid being energised via the up contacts of the selector switch (para.17, sub para.(3)).

22. When the nose wheel unit is fully retracted, the up lock micro switch NU↑ will be operated to make contacts 2-3. This action will break the supply to the nose wheel doors open valve solenoid, and connect the supply to the nose wheel doors close valve solenoid, thus closing the nose wheel doors.

23. As the nose wheel doors begin to close, micro switches PND↓ and SND↓, which are wired in series, will be released to make contacts 2-1, isolating the nose wheel down valve, and preparing the circuit for down selection. When the nose wheel doors are fully closed micro switches ND↑ will operate to make contacts 2-3. The nose wheel unit up valve and doors closed valve will remain energised as long as the selector switch remains in the UP position.

Alighting gear down selection

24. Selection of the alighting gear DOWN will de-energise relay 11, and its contacts will revert to their normal positions. It will be seen (fig. 2) that the even-numbered contacts 11/2, 11/4 and 11/6), will connect the supply direct to the main and nose wheel doors open valve solenoids. As the doors commence to open micro switches PD↑, SD↑ and ND↑ will be released to make contacts 2-1, thus preparing the sequencing circuit for future UP selection.

25. When the nose wheel doors are fully opened, micro switches PND↓, SND↓ on the nose wheel door hinges will be operated to make contacts 2-3, thus connecting supply to the nose wheel unit down valve, Similarly, when the main wheel doors are fully opened, micro switches SD↓ and PD↓ will be operated to make contacts 2-3, thus connecting supply to each main wheel unit down valve. Note that the down lock valves will have been re-energised when the selector down button was depressed.

26. When all wheel units are fully extended and locked down, micro switches PU↑, SU↑ and NU↑ will have reverted to their normal positions and as soon as the weight of the aircraft is taken on the main wheels, the safety lock in the selector switch will become effective. When the nose wheel unit shock absorber is compressed, micro switch NSA will revert to its released position, and a supply will again be available for nose wheel steering.

NOSE WHEEL STEERING CONTROL

27. The nose wheel steering stop valve solenoid can be energised to allow nose wheel steering, only when the aircraft is on the ground, and the weight of the aircraft is on the nose wheel unit. The control for this circuit is provided by two push-switches situated one on each pilot's control column.

28. Reference to fig. 2 will show that when either push-switch is depressed, relay No. 10 will be energised to close contacts 10/1. A supply will now be fed from fuse 36, via the emergency air micro switch, the down side of the alighting gear selector switch, relay contacts 8/2, contacts 2-1 of micro switch NSA, and thence via contacts 10/1 to the nose wheel steering stop valve. The same supply will be fed to terminal 1 of the drum switch.

Drum switch operation

29. The nose wheel steering drum switch, Type C1220Y, Mk. 107, is located on the aft face of the rear pressure bulkhead. The switch is attached to a bracket which permits both the switch body and the spindle to be rotated. The body of the drum switch is connected by a suitable rod to the rudder push-pull control tubes, and the switch spindle is moved by a follow-up rod connected to the nose wheel.

30. Movement of the rudder pedals in either direction from the control axis will cause the drum switch body to move, thus energising the appropriate steering valve solenoid in the nose wheel selector unit. As the nose wheel turns, the follow-up rod will rotate the drum switch spindle to follow-up the switch body, causing the selector valve to be de-energised. This action will give the correct amount of nose wheel turn in proportion to rudder pedal movement.

Mod. 1747

31. Mod. 1747 introduces a single-pole switch as an override control for micro switch NSA in the event of micro switch failure. The override switch, labelled NORMAL - EMERGENCY, is fitted with a guard and is mounted on the side of panel 3P. Selection of the switch to EMERGENCY will short out contacts 2-1 of micro switch NSA to energise the nose wheel steering stop valve.

ALIGHTING GEAR INDICATION

32. Indication of the position of the main and nose wheel units is given by a position indicator, Type D, fitted to the pilots' central instrument panel. The position of the wheel unit is given by red or green lights as outlined in the following paragraphs. The indicator is equipped with a day/night screen, and a duplicate set of green lamps which can be brought into use by operating the switch on the front cover.

33. The action of the indicator should be interpreted in the following manner:-

(1) Three green lights - all wheels locked down.

(2) Three red lights - all wheels unlocked.

(3) No lights - all wheels retracted and locked up.

34. Circuit conditions for all wheel units down and locked are shown in fig. 3. The indicator green lamps are made by a supply from fuse 33 on the port fuse and relay panel 3P, through contacts 5-6 of the three down micro switches NU↓, PU↓ and SU↓ The other contacts of these switches (1-2-3) are connected to the

built-in warning indicator of the airspeed indicator (para.36).

35. When the alighting gear is selected up, the action of the down locks will release the micro switches NU↑, PU↑ and SU↑, and this will extinguish the green lights; the red lights will be switched on via the 5-4 contacts of these switches, and the door switches (ND↑, PD↑ and SD↑), contacts 3-5. As soon as the wheel units are fully retracted, and the doors are closed, the red light will be extinguished by the operation of the door switches.

A.S.I. warning

36. Fitted as an integral part of the first pilot's air speed indicator, is a pressure switch and magnetic indicator. The indicator will provide a warning should the aircraft speed fall below 160 knots I.A.S. when the alighting gear is retracted.

37. The indicator is in the form of a flag, labelled U/C, which when operated obscures part of the upper portion of the face of the A.S.I., thus providing a warning to the pilot that the alighting gear is retracted at a low flying speed.

Mods.552 and 1377

38. Mods. 552 and 1377 replace the 1st and 2nd pilots' air speed indicators as follows:-

(1) Mod.552 changes the 1st pilot's A.S.I., Ref.No.6A/4378, to Ref.No. 6A/3360, and the 2nd pilot's A.S.I., Ref.No.6A/4379, to Ref.No.6A/4378. The circuit for the magnetic indicator of the 1st pilot's A.S.I. is thus transferred to the 2nd pilot's instrument, which is now connected from plug 232 instead of plug 236.

(2) Mod.1377 changes the 2nd pilot's A.S.I., Ref.No.6A/4378 to Ref.No. 6A/3360. Each pilot is now provided with the same type instrument and the A.S.I. magnetic indicator circuit is deleted. Pre and post mod. circuit conditions are shown in fig.5 and 6 respectively.

SERVICING

General

39. In view of the dual functioning of the electro-hydraulic valves used in the alighting gear circuits, it is essential that the closest co-operation is maintained between the electrical and airframe tradesmen in order to maintain a high degree of serviceability. This applies to operational tests on the aircraft, and bench testing of the components. Electrical testing is dealt with in the following paragraphs, system testing of the hydraulics in the alighting gear is contained in Sect.3, Chap.6, Book 1 of this publication. Component testing is contained in A.P.1803D, Vol.1.

Functional test

40. A functional test of the alighting gear should be carried out at the times laid down in A.P.4505A & C, Vol.4. The aircraft should be jacked up in accordance with the instructions given in Sect.2, Chap.4, and tests carried out as laid down in Sect.3, Chap.4, Book 1 of this publication.

41. The pressure switch contained within the 1st pilot's air speed indicator (pre Mod.552) or 2nd pilot's air speed indicator (pre Mod.1377) should be checked in conjunction with the instrument tradesman. A test should be carried out to ensure that the switch operates at the pressure corresponding to that normally obtained at an A.S.I. reading of 160 knots, decreasing. Details of this test will be found in Chap.2, Group 2 of this Section.

Alighting gear position indicator

42. This indicator requires no servicing, but to replace a burnt-out lamp, the procedure is as follows:-

(1) Slacken off the knurled screw in the centre of the indicator front face, and withdraw the complete front face and lampholder assembly.

(2) Extract the defective lamp by pulling the screwed cap.

(3) Press the new lamp into its pocket in the lampholder assembly. During this operation ensure that the lamp does not jam. It may be necessary in extreme cases to carefully reduce the small soldered pip at the side of the lamp using a fine file.

(4) Replace the lampholder assembly in the indicator case and secure it with the knurled screw.

Continuity test

43. A continuity test of the alighting gear and nose wheel steering circuit wiring, which will also prove the operation of the micro switches, should be carried out at inspection periods when the air-

craft is jacked up. The procedure is contained in the following paragraphs.

Control circuit testing

44. To line test the alighting gear control circuits, the following procedure should be adopted:-

(1) Disconnect the supply cables from each of the following control valves, and connect suitable low wattage test lamps across each of the disconnected cables:-

(a) Nose door valve

(b) Nose wheel unit valve

(c) Nose wheel selector valves

(d) Nose wheel stop valve

(e) Port main wheel unit valve

(f) Port main wheel door valve

(g) Port main wheel down lock release valve

(h) Starboard main wheel unit valve

(i) Starboard main wheel door valve

(k) Starboard main wheel down lock release valve

(2) Remove the following micro switches from their attachment points, leaving the cables connected, and secure the micro switch plungers in the operated position.

(a) Both ND↓ and NU↓ switches in the nose wheel bay

(b) Both PD↓ and PU↓ switches in the port main wheel bay

(c) Both SD↓ and SU↓ switches in the starboard main wheel bay

(d) The NSA, PBP and SBP switches at each leg.

(3) Ensure that the alighting gear emergency air lever micro switch on the starboard side of the engine control box in the cabin is in the normal position (i.e., depressed).

(4) Select DOWN on the alighting gear selector switch. The following test lamps should now light.

(a) Nose wheel down door valve

(b) Nose wheel unit down valve (controlled by ND↓ switches)

(c) Port wheel down door valve

(d) Port wheel unit down valve (controlled by switch PD↓)

(e) Starboard wheel down door valve

(f) Starboard wheel unit down valve (controlled by switch SD↓).

(5) Depress the up button of the alighting gear selector switch. Note that both the PBP and SBP micro switches must be depressed before the up button will operate.

(6) With the up button depressed the following test lamps should light.

(a) Nose unit up valve

(b) Nose door down valve. Note that the test lamp should be extinguished by pressing the ND↑ switch (port forward only). By depressing the NU↑ switch, the nose door up valve test lamp should be lit.

(c) Port main wheel unit up valve

(d) Port down lock release valve

(e) Port door down valve. Note that the test lamp should be extinguished by pressing the PD↓ switch (aft only). Depress the PU↓ switch and the test lamp should be extinguished. Depress the PBT switch and the test lamp across the port door up valve connections should light.

(7) With the up selector button still depressed, the tests laid down in sub-para. (6)(c) to (e) should be carried out on the starboard main wheel system.

(8) Select DOWN on the alighting gear selector switch, release micro switch NSA and check the nose wheel steering circuit as follows:-

(a) Depress the nose wheel steering push-button on the first pilot's control handle. The test lamp connected to the nose wheel steering stop valve cable should light.

(b) Keeping the push-button depressed, rotate the drum switch body on the rear pressure bulkhead in an anti-clockwise direction, check that the test lamp across pins B and C on the steering selector valve is lit.

(c) Rotate the drum switch spindle in an anti-clockwise direction, and the test lamp should be extinguished.

(d) Repeat tests (b) and (c) rotation clockwise with the test lamp across pins A and C.

(9) Repeat the tests outlined in sub-para. (9) using the second pilot's nose wheel steering push-button.

Indication circuit testing

45. Continuity tests of the indicator circuits should be carried out as outlined in the following sub-paragraphs:-

(1) Remove and secure in the operated positions, the following micro switches:-

NU↓

PU↓

SU↓

(2) Check that all green lamps in the alighting gear position indicator are lit.

(3) Release switch NU↓ , check that the nose wheel green lamp is extinguished and the red lamp is alight.

(4) Operate the four switches ND↑ , check that the nose wheel red lamp is extinguished.

(5) Release switch PU↓ on the port main wheel unit, check that the port wheel green lamp on the indicator is extinguished and the red lamp is alight.

(6) Operate the two micro switches PD↑ and check that the red lamp is extinguished.

(7) Release switch SU↓ on the starboard main wheel unit and check that the starboard wheel green lamp on the indicator is extinguished and the red lamp is lit.

(8) Operate the two micro switches SD↑ and check that the red lamp is extinguished.

46. At the conclusion of the tests contained in the foregoing paragraphs, refit all the micro switches to their attachment points, and reconnect the disconnected valve cables.

Micro switch settings

47. General information for the correct amount of override on the Dowmic series of micro switches is contained in A.P. 4343C, Vol.1, Sect.1, Chap.25. Setting details for the individual switches for the main and nose wheel legs and doors are given in Book 1. It should be noted that during any retraction tests after a micro switch has been changed or disturbed for any reason, cables that are attached to movable portions of the alighting gear structure should be checked for freedom of movement and signs of chafing and/or possible trapping.

REMOVAL AND INSTALLATION

General

48. No attempt should be made to remove any item of electrical equipment in the alighting gear system unless the power supply is switched OFF. When it is necessary to remove any of the electro-hydraulic valve units, this task should be carried out in conjunction with the airframe tradesman.

Alighting gear selector switch

49. No difficulty should be experienced in removing the selector switch. The pilot's centre instrument panel is secured at each side to an attachment bracket on each pilot's flight instrument panel. Access to the rear of the selector switch can be made by unfastening the two studs securing the control panel, and allowing the panel to hinge forward.

Alighting gear indicator

50. Removal of the indicator is carried out in a similar manner to that given in para.49 for the selector switch.

Micro switches

51. No removal instructions are necessary for the micro switches. Access panels are provided for those micro switches fitted in door assemblies.

TABLE 1

Location of electro-hydraulic valves

Unit	Location
Nose doors valve	Nosewheel bay - aft bulkhead - port inboard
Nosewheel U/C valve	Nosewheel bay - aft bulkhead - port centre
Nosewheel steering stop valve	Nosewheel bay - aft bulkhead - port outboard
Nosewheel selector valve	Top of nosewheel leg
Port main wheel U/C valve	Port wheel bay - on inboard wall
Port main wheel down lock release valve	Port wheel bay - top of main leg
Port main wheel door valve	Port wheel bay - outboard wall
Starboard main wheel U/C valve	Starboard wheel bay - inboard wall
Starboard main wheel down lock release valve	Starboard wheel bay - top of main leg
Starboard main wheel door valve	Starboard wheel bay - outboard wall

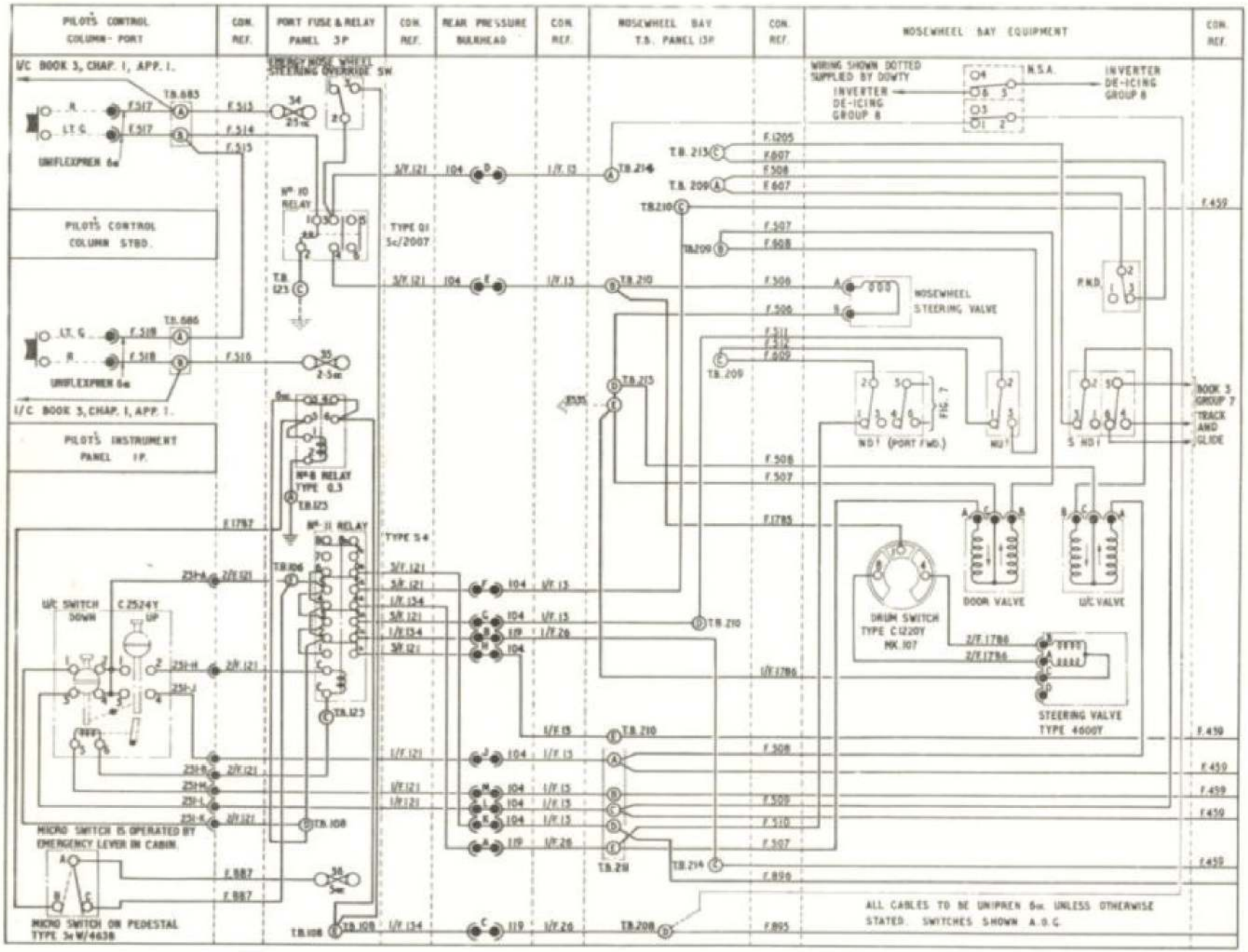

Fig.4 (1) Alighting gear control

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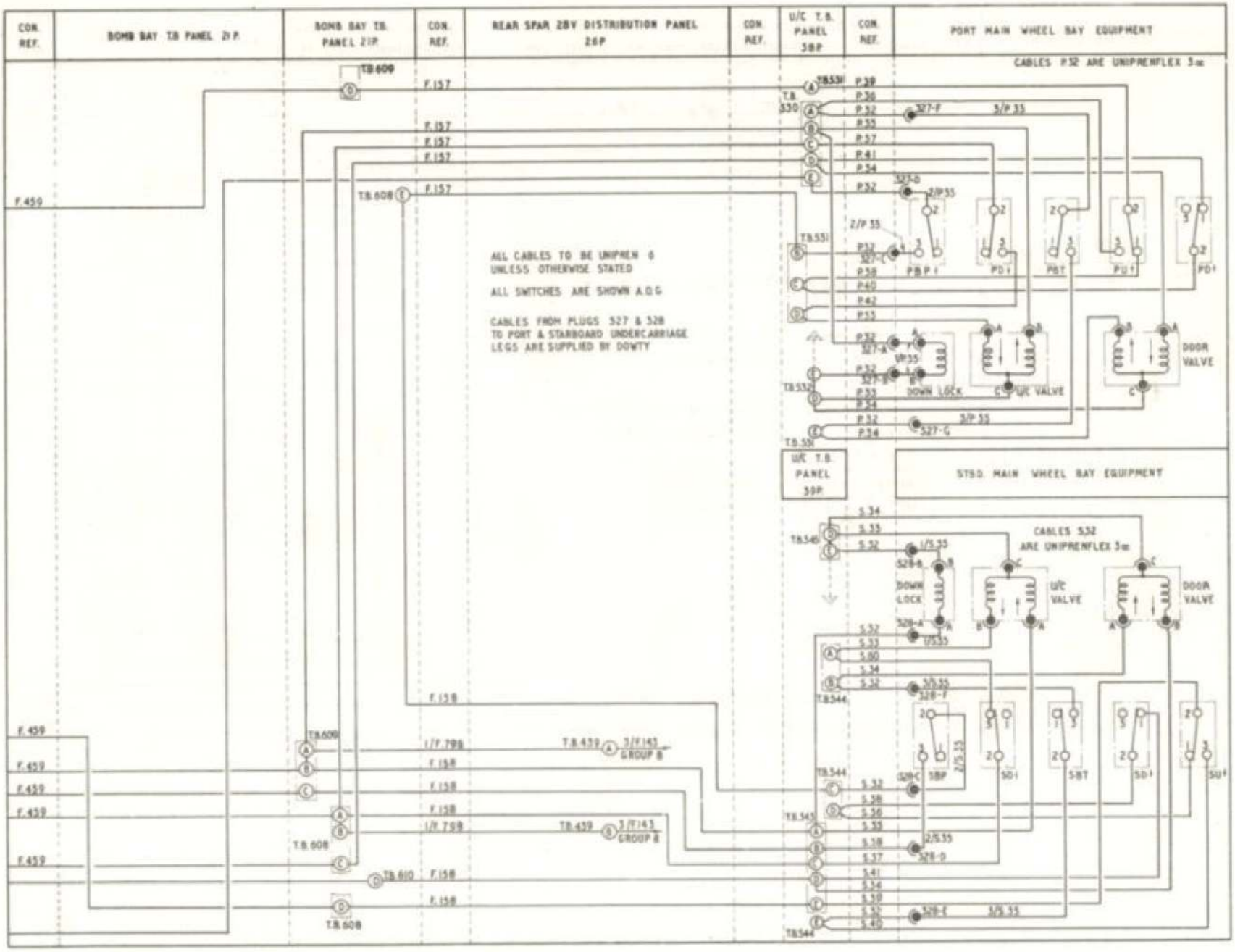

Fig.4 (2) Alighting gear control

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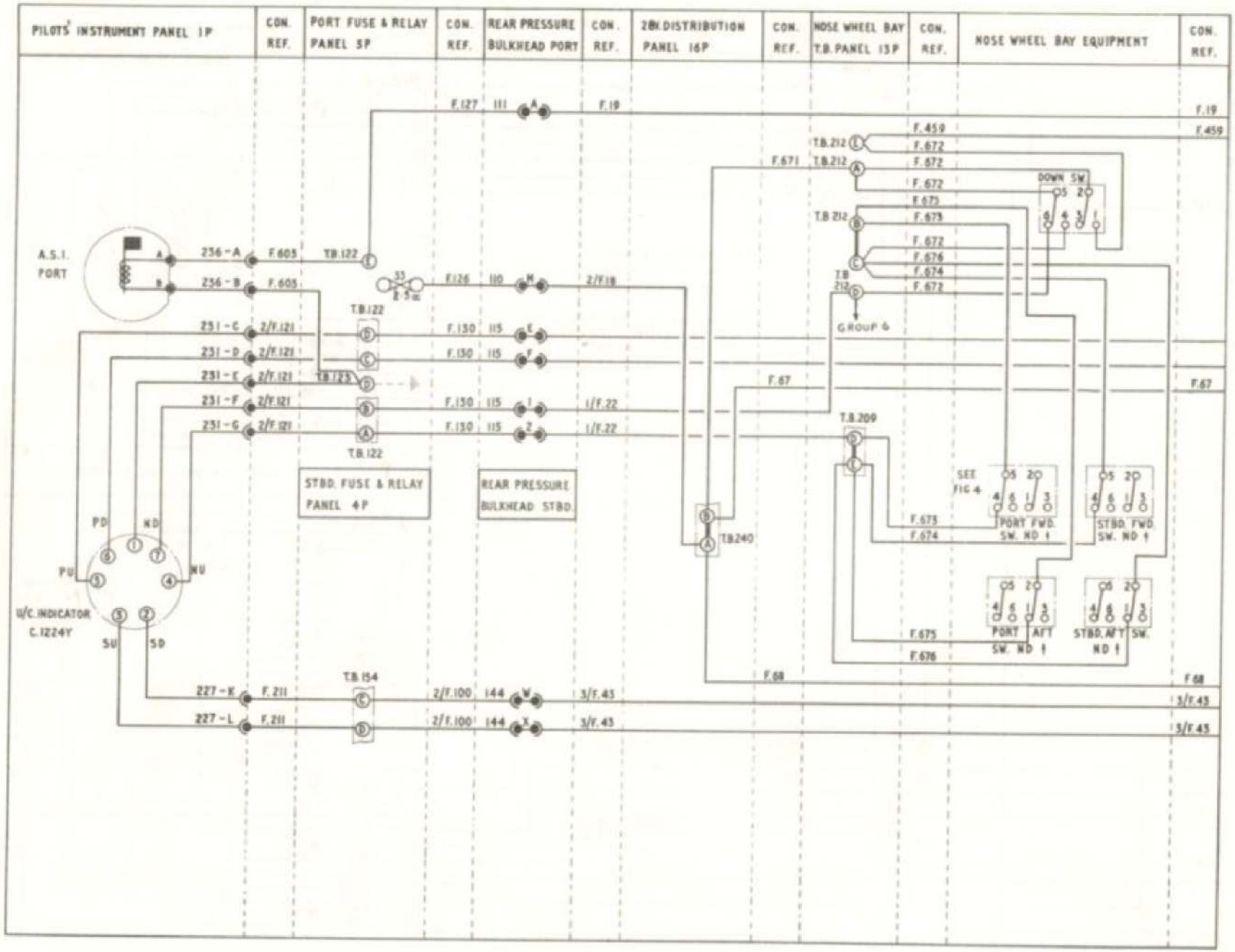

Fig. 5 (1) Alighting gear indication (pre. Mods. 552 and 1377)

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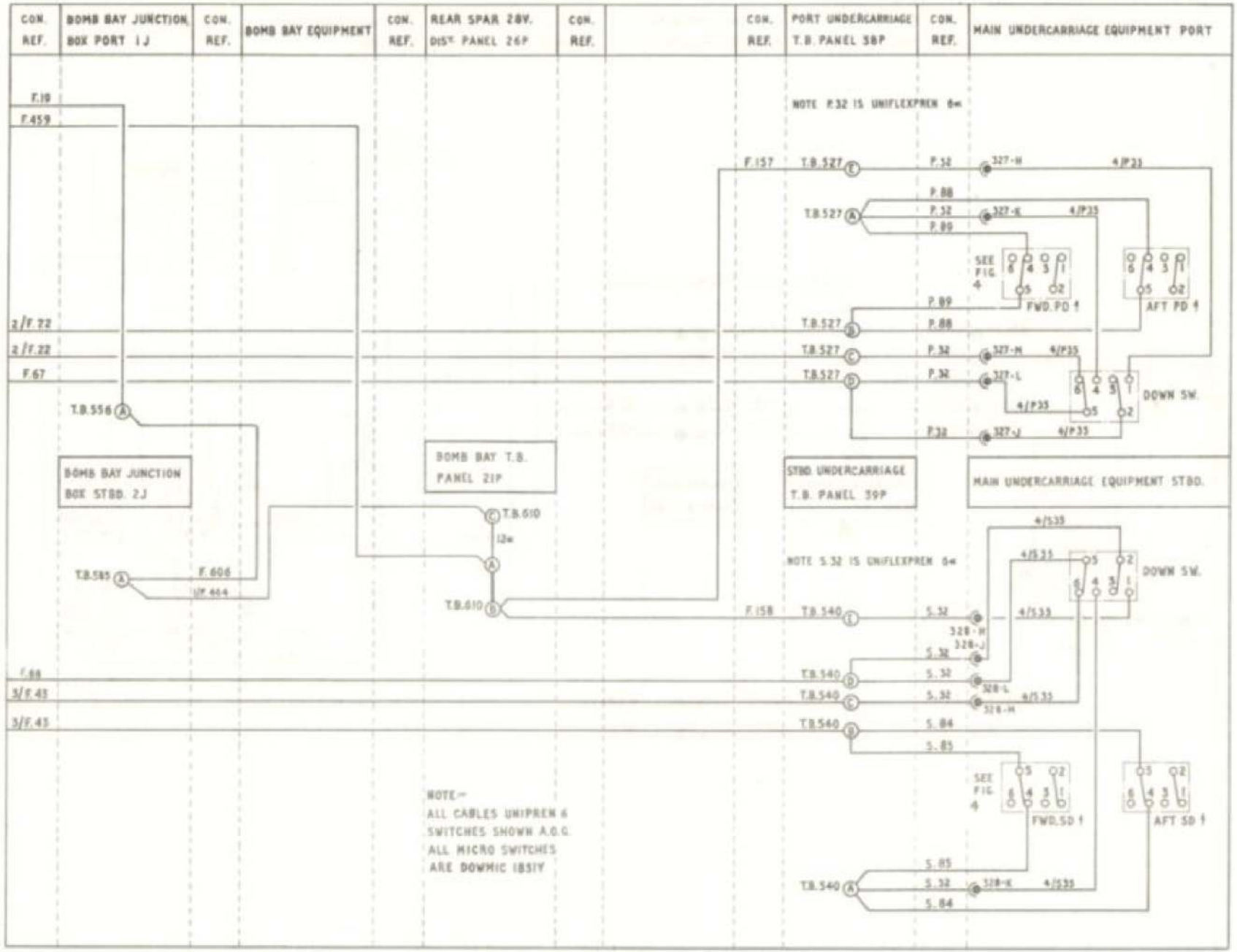

Fig.5 (2) Alighting gear indication (pre. Mods. 552 and 1377)

RESTRICTED

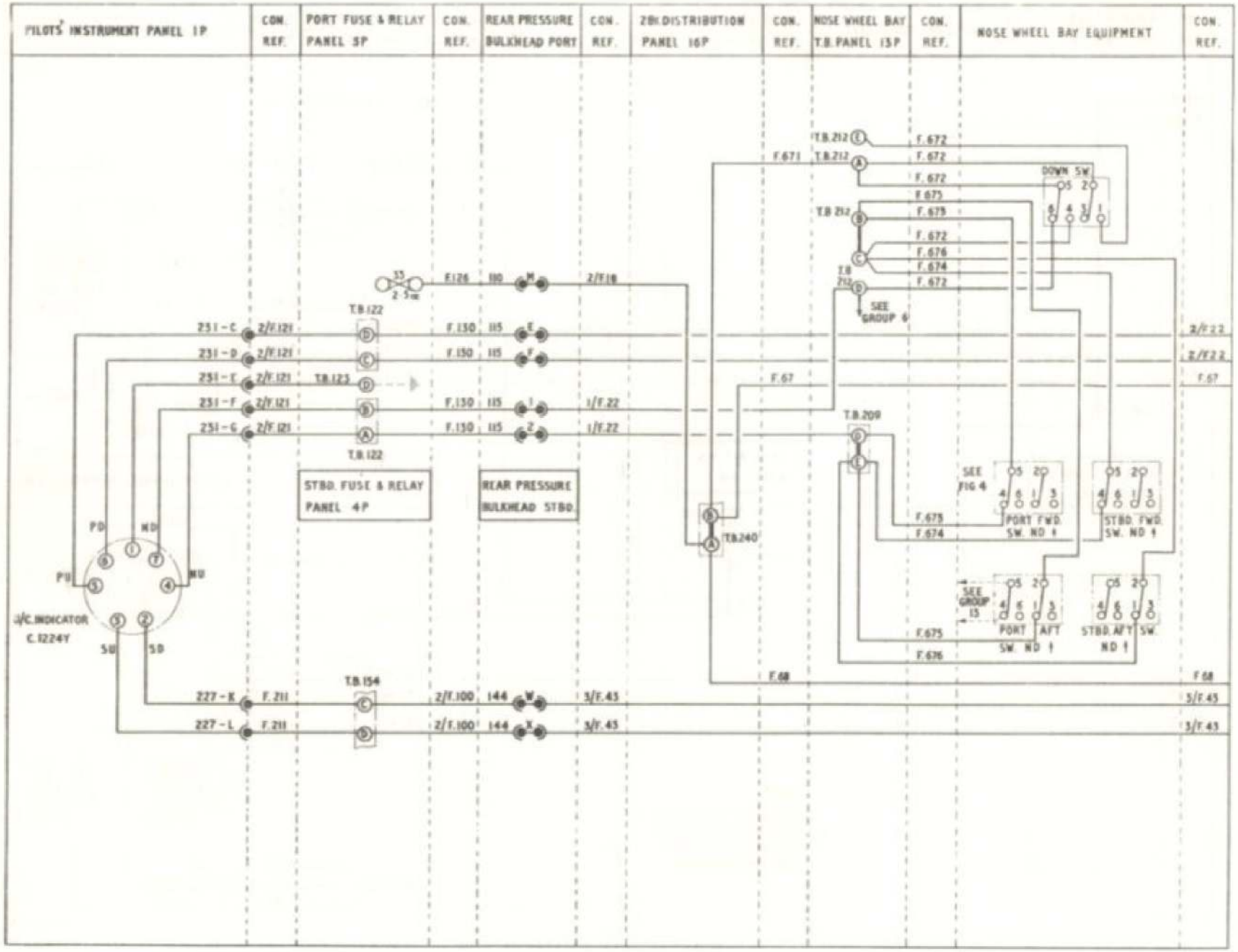

Fig.6(1). Alighting gear indication (post Mods. 552 and 1377)

RESTRICTED

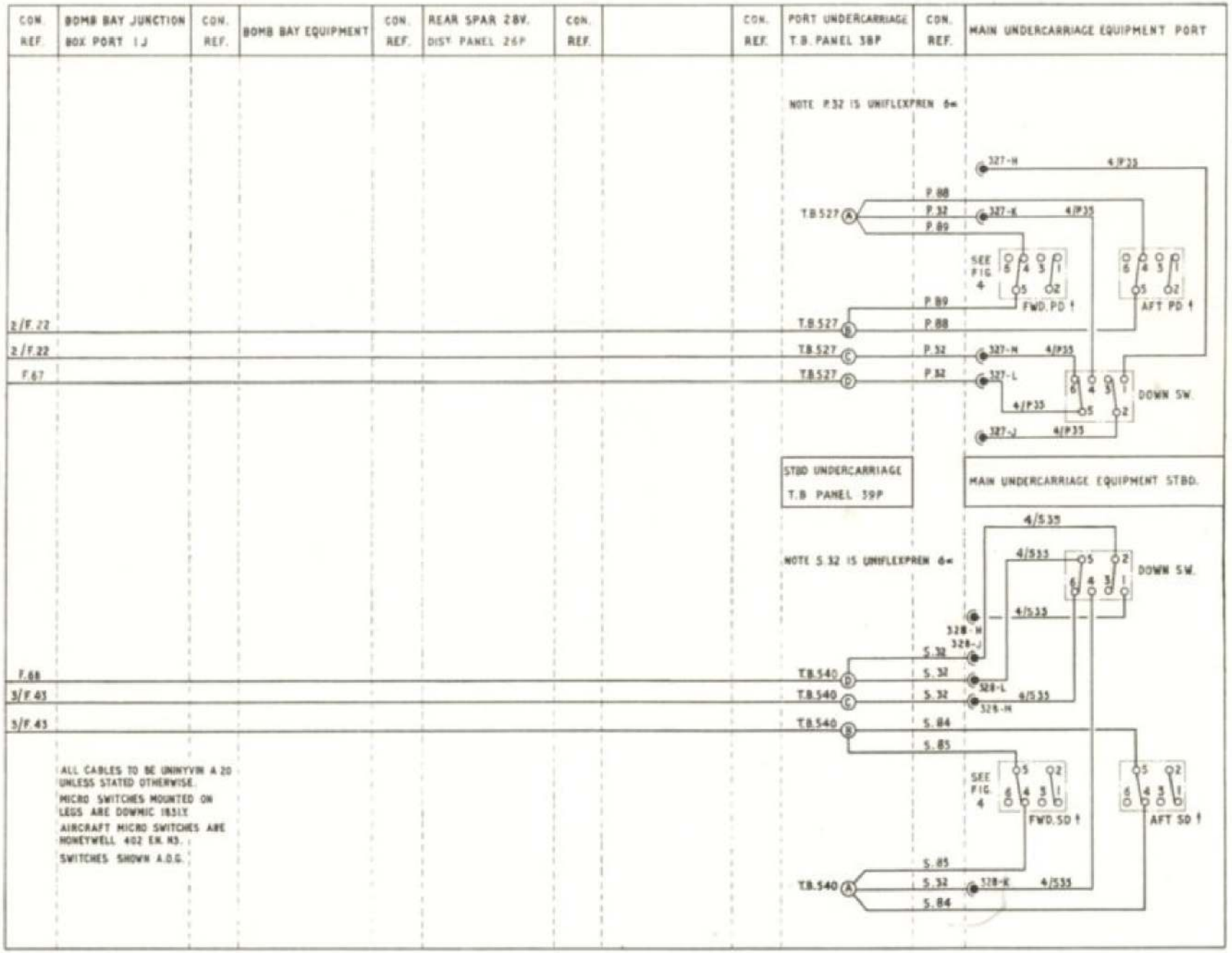

Fig. 6 (2). Alighting gear indication (post Mods. 552 and 1377).
(◄Mod 1906►)

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