CHAPTER 7

N.B.S. INSTALLATION

Chapter 7 N.B.S. INSTALLATIONS

LIST OF CONTENTS

LIST OF TABLES

LIST OF ILLUSTRATIONS

DESCRIPTION

General

1. The Navigation and Bombing System Mk. 1, described in A.P.2894K, Vol. 1, is an airborne equipment for use in medium and long range aircraft operating beyond the range of ground-based aids and comprises a navigation and bombing computor (N.B.C. Mk. 2) a range-finding radar (H2S Mk. 9A), and a visual sight attachment (V.S.A.), the latter on aircraft pre Mod. 1673 only.

2. It is convenient in detailing the facilities which this equipment offers, to consider it progressively in the various roles to which it can be adapted. First, the equipment can be considered as a navigation aid consisting of dead-reckoning navigation computing combined with the radar. The addition of ballistic computing to this arrangement provides facilities for "blind" bombing. Additional facilities become available by the addition, to the navigation and "blind" bombing arrangement, of a visual bomb sight and its allied computing. In this latter arrangement the "blind" and "visual" systems are synchronized and operate under a common system of control. Finally the equipment can be used as a purely "visual" bombing arrangement permitting "visual" bombing in which the radar takes no part.

3. This conception of the equipment is adopted merely for convenience of description although in actual operation there may be no such well defined division of operation roles.

4. The air milage unit (A.M.U.) and the gyro-magnetic compass GM.4B are used to feed information into the equipment. Control of the aircraft can be either manual or automatic as the automatic pilot, Mk. 10, can be coupled directly to the system.

Navigation computing

5. The dead-reckoning navigation computing performs the functions of a ground position indicator. It is designed to relieve the navigator of the calculations involved in the usual D.R. methods, by providing a continuous and automatic ground plot of

the aircraft's present position in flight and also an indication of its current motion.

6. The navigation computor is fed with inputs representing true air speed from an A.M.U. and compass heading from the GM4B. From this information and from N/S and E/W components of wind velocity, set into the equipment either manually or semi-automatically, aircraft track and ground speed are computed and displayed. From the N/S and E/W components of ground velocity, the aircraft's ground displacement (N/S and E/W) from a starting point is also calculated. The present position is recorded on position numerators in terms of latitude and longitude, except in position fixing when the position recorded is that of the fixing point.

Ballistic computing

7. The ballistic computing is that part of the equipment which calculates the likely behaviour of a falling bomb from information relating to the bomb characteristics and the current motion of the aircraft.

8. Ballistic information relevant to the type of bomb to be dropped is fed, from a short length of 35 mm. cine film, into the calculator, Type 3, Mk. 1, which incorporates a height capsule, the casing of which is connected to the static air line for the cabin pressure controller. The equipment then calculates the required track to the release point and provides steering signals to the pilot's heading indicator Mk. 1 and, through a bombing coupling unit, to the automatic pilot Mk. 10. Signals to open the bomb doors and initiate bomb release are also provided.

9. During the bombing run, a camera will photograph the P.P.I. display at intervals of 8 seconds. At bomb release the film is marked automatically and the P.P.I. will continue to be photographed until the bombing run is terminated by switching off BOMB.

Visual navigation facilities (pre. mod. 1673)

10. The navigation facilities available with the "blind" system can, in conditions of suitable visibility, be supplemented by the inclusion of "visual" computing and a visual sighting head (V.S.A.). In this arrangement wind finding and position fixing are possible using visually selected ground aiming points.

11. The visual sighting head incorporates a reflector glass through which the operator can view the ground and from which is reflected the collumated image of a graticule. The graticule takes the form of a dagger with its long arm pointed along the aircraft's track, the point of reference being the intersection of the arms of the dagger. The sighting head is suitably stabilized against the pitch and roll motion of the aircraft and the reflector glass can be rotated to adjust the line of sight.

(1) about a vertical axis passing through the aircraft, for the drift angle.
(2) about a horizontal axis passing through the aircraft and parallel to the horizontal projection of the long arm of the graticule, for the tilt angle, and
(3) about an axis passing through the aircraft and perpendicular to the tilted plane, for sighting angle.

Post Mod. 1673, the visual sighting aid will not be fitted. This consists of the following units.

Calculator, Type 4	Head sighting unit
Calculator, Type 6	Control unit Mk. 1
Amplifier	Control, emergency.

INSTALLATION AND REMOVAL

Introduction

12. For the purpose of description, the equipment will be divided into its two major components, N.B.C. Mk. 2 and H2S Mk. 9. The location of the units is given in Tables 1 and 2 and in figure 1. The interconnection of the units is shown on the routing charts together with the schedule of connectors. Only the power supplies to the equipment and controls that are part of the aircraft wiring will be described.

N.B.C. Mk. 2. equipment

13. The equipment is as given in Table 1.

TABLE 1
N.B.C. Mk. 2 equipment

Unit	No. off	Type, Mk. or A.M. ref.	Location
Junction box	1	Type 343, 9D/15	Radio crate
Navigation panel	1	Mk. 1, 9D/10	Radio crate
Power Unit	1	Mk. 1, 9D/11	Radar crate
Amplifier	1	Mk. 1, 9D/1	Radar crate
Calculator	1	Type, 1, 9D/2	Radar crate
Calculator	1	Type 2, 9D/3	Behind pilot's floor
Calculator	1	Type 3, 9D/4	Behind pilot's floor
Calculator	1	Type 4, 9D/5	Under pilot's floor
Calculator	1	Type 6, 9D/14	Behind pilot's floor
Resistance unit	1	9D/12	Radar crate
Directional indicator	1	9D/8	Port blind flying panel
Head sighting unit	1	9D/9	Bomb aimer's position
Bracket, head sighting	1	9D/13	Bomb aimer's position
Control emergency	1	9D/7	Bomb aimer's position
Control unit	1	Mk. 1, 9D/6	Bomb aimer's position
A.M.U. control unit	1	6B/471	Radio crate
A.M.U.	1	Mk. 4, 6B/555	Under battery floor
Suppressor	1	Type G5, 5CY/5151	Radio crate
Junction box	1	Vickers, Ref.67399 Sht. 111	Radio crate

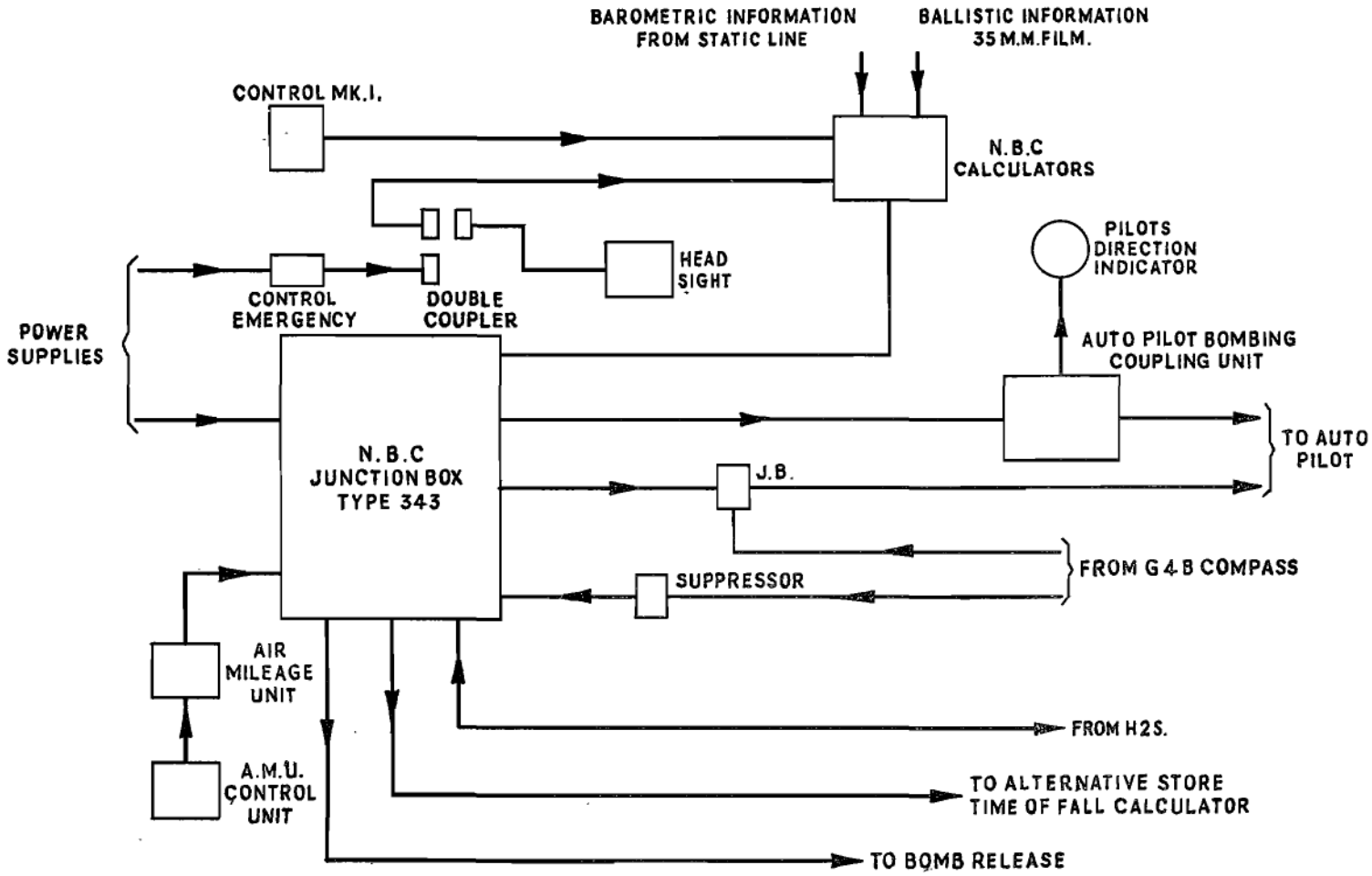

Fig. 1. N.B.C. Mk. 2. interconnections

N.B.C. Mk. 2. power supplies

14. A.C. power for this system is supplied by No. 1 radar inverter, Type 350, mounted in the compartment above the nosewheel bay. In case of failure of this inverter, No. 3 inverter can be switched to supply the faulty machine's load. The control of the inverters is described in A.P.4377A, Vol 1, Book 2, Sect. 5, Chap. 1.

15. There are three supplies required by the N.B.C. equipment, 115-volts, 400 c/s, 3-phase a.c., 115 volts, 1,600 c.p.s., single-phase a.c. and 28-volts d.c. The control emergency is supplied separately at 28 volts d.c. and is not switched.

16. All three supplies are controlled by the N.B.C. switch on the front of the power distribution box on the radio crate. With the switch at ON, phases A and C of the 400 c.p.s. supply are connected via fuses 3 and 4 respectively in the power distribution box to the junction box, Type 343, via the red plug on the back of the power distribution box. Phase B is not switched but is connected to earth at the 3-phase neutral busbar in the power distribution box.

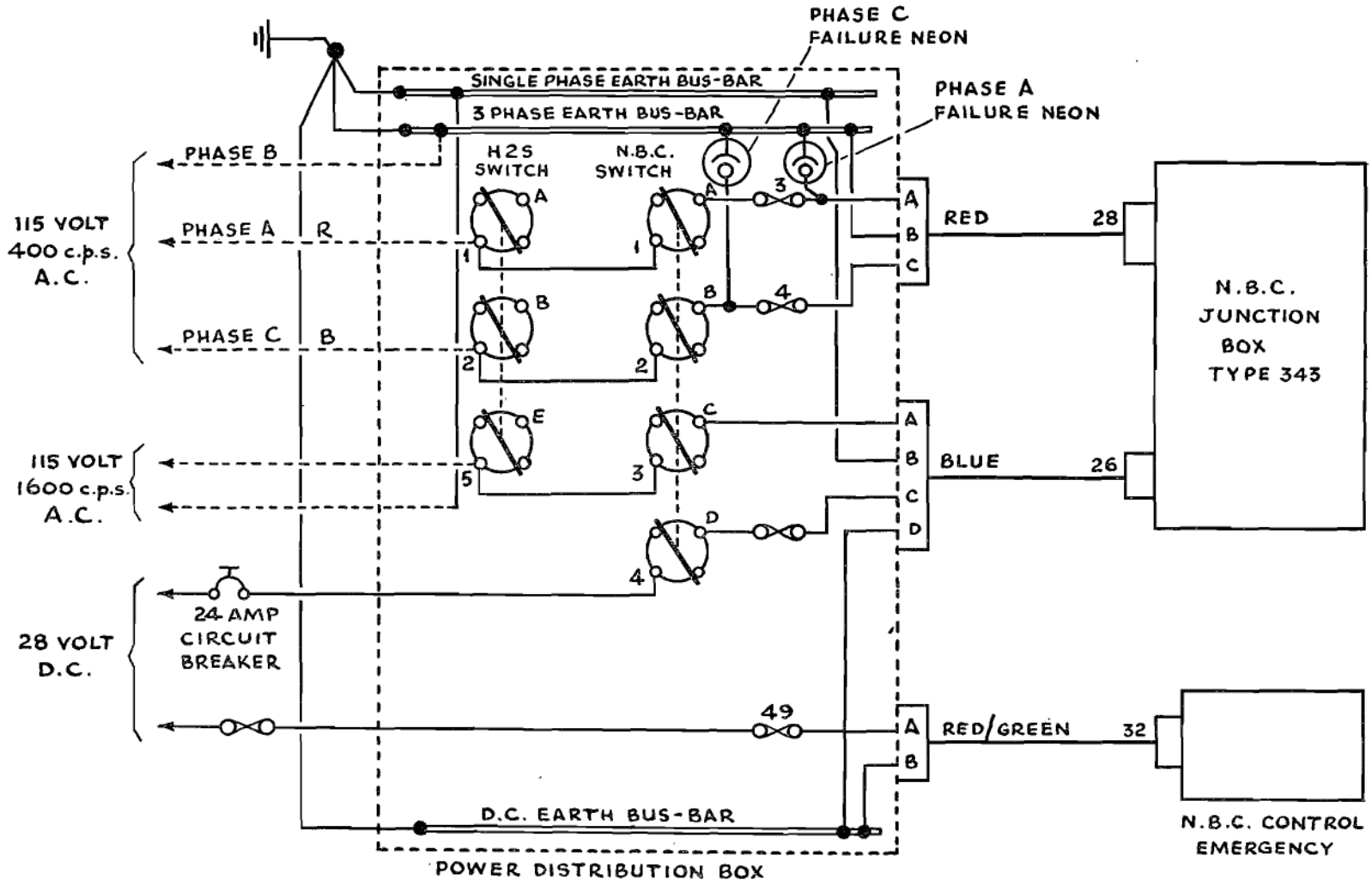

Fig. 2. N.B.C. Mk. 2 power supplies

17. With the switch at ON, the live phase of the 1,600 c/s supply is connected to the junction box, Type 343, via the blue plug on the back of the power distribution box. The neutral phase is not switched but is connected to earth at the single-phase neutral bus-bar in the power distribution box.

18. With the switch at ON, the 28-volt d.c. supply from the 24-amp. circuit breaker on the front of panel G is connected, via a fuse in a separate fuse block in the power distribution box and the blue plug at the rear of the box, to the junction box Type 343. The negative return from the junction box is not switched but is connected to the d.c. earth bus-bar in the power distribution box.

19. The supply to the control emergency is at 28-volts d.c. and is taken via fuse No. 49 in the power distribution box. The supply is not switched. The supply originates from the W/T No. 2 80 amp. H.R.C. fuse on panel Z.

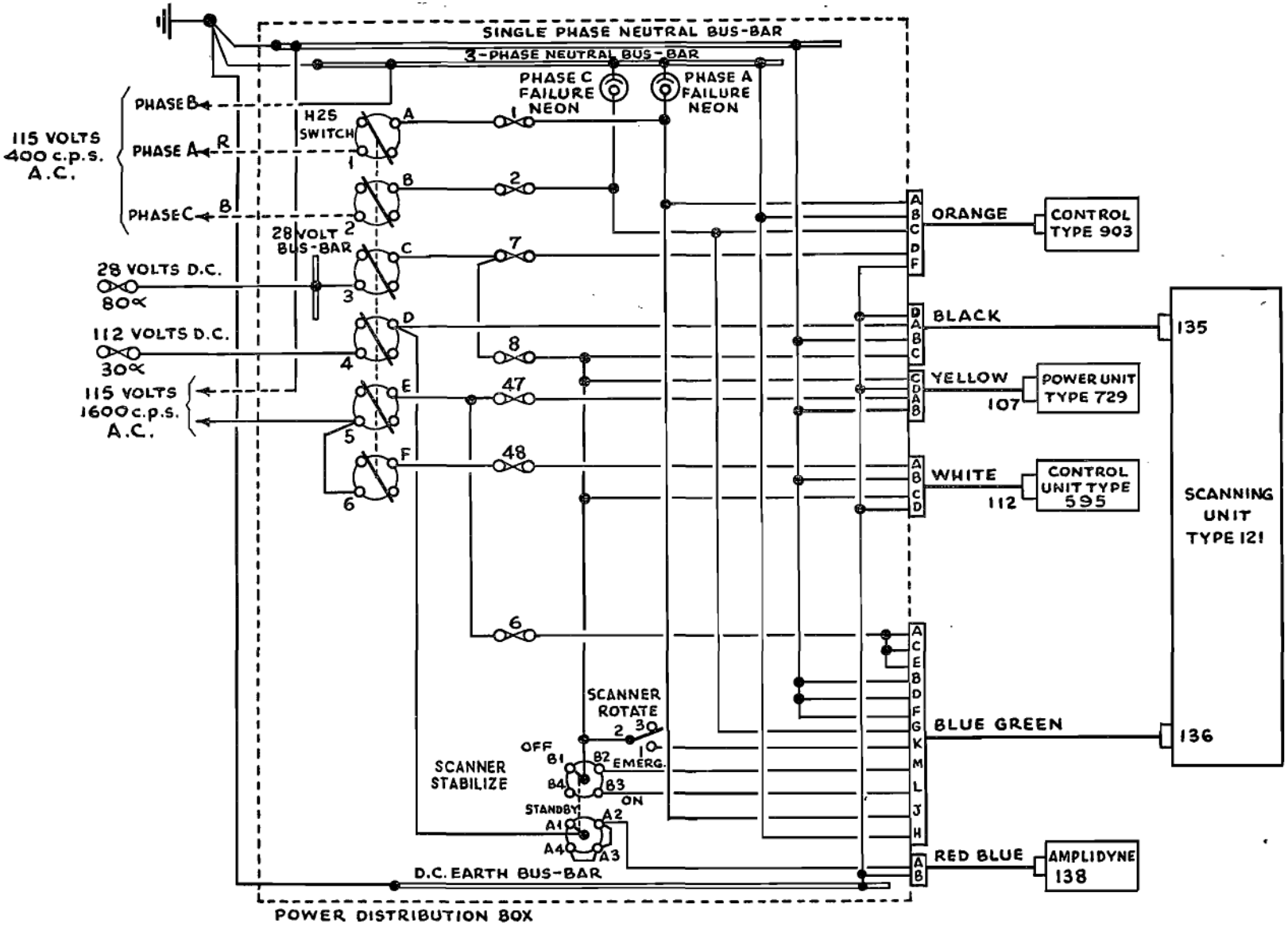

Fig. 3. H2S Mk. 9 power supplies

H2S Mk. 9 power equipment

20. The equipment is as given in Table 2.

TABLE 2

H2S Mk. 9 equipment

Unit	No. off	Type, Mk. or A.M. ref.	Location
Amplidyne	1	M6, 5UB/5748	Nose radome
Control unit	1	Type 626, 10L/16060	Radio crate
Control unit	1	Type 595, 10LB/6376	Radio crate
Control unit	1	Type 585, 10LB/6366	Radio crate
Control unit	1	Type 903, 10L/16154	Radio crate behind Type 595
Waveform generator	1	Type 68, 10VB/6250	Radar crate
Power unit	1	Type 729, 10DB/8811	Radar crate
Calculator	1	Type 5, 10D/18640	Radar crate
Indicating unit	1	Type 301, 10QB/6493	Radio crate
Camera	1	Type Rx88, 14A/4260	On indicating unit
Scanning unit	1	Type 121, 10B/16327	Nose radome
Azimuth repeater unit	1	—	on scanning unit
Amplifier	1	Type A3703, 10D/16761	on scanning unit
Modulator	1	Type 2, 10D/18638	on scanning unit
Transmitter-receiver	1	Type 3702, 10D/18637	on scanning unit
Gyro unit	1	Mk. 6, 6W5	on scanning unit

H2S Mk. 9 power supplies

21. A.C. power for this system is supplied by No. 1 radar inverter, Type 350, mounted in the compartment above the nosewheel bay. In case of failure of this inverter, No. 3 inverter can be switched to supply the faulty machine's load. The control of the inverters is described in A.P.4377A, Vol. 1, Book 2, Sect. 5, Chap. 1.

22. There are four supplies required by the equipment, 115-volts, 400 c/s, 3-phase, a.c., 115-volts, 1,600 c/s, single-phase, a.c., 28 volts d.c. and 112 volts d.c. All supplies are controlled by the H2S switch on the front of the power distribution box. Two further switches are provided, one for scanner rotation and the other for scanner stabilization.

23. With the H2S switch at ON, phases A and C of the 400 c.p.s. supply are connected via fuses 1 and 2 respectively in the power distribution box to the control unit, Type 903, via the orange plug and to the scanning unit Type 121 via the blue/green plug. Both plugs are on the back of the power distribution box. Phase B is not switched, but is connected to earth at the 3-phase neutral bus-bar in the power distribution box.

24. With the H2S switch at ON, the live phase of the 1,600 c/s supply is connected via fuses 47, 48 and 6 to the power unit Type 729, via the yellow plug; to the control unit Type 595 via the white plug and to the scanning unit Type 121 via the blue/green plug respectively. The neutral phase is not switched but is connected to earth at the single-phase neutral bus-bar in the power distribution box.

25. With the H2S switch at ON, the 28-volt d.c. supply, from the 80-amp., W/T No. 1, H.R.C. fuse on panel Z, is connected, via fuse 7, to the control unit, Type 903; via the orange plug and via fuse 8 to the scanning unit via the black plug, to the control unit Type 595 via the white plug and to the scanner stabilize switch (pole B) and scanner rotate switch. Fuses 7 and 8 are in the power distribution box. The negative return is not switched but is connected to the d.c. earth bus-bar in the power distribution box.

26. With the H2S switch at ON, the 112-volt d.c. supply from the 30-amp., H2S, H.R.C. fuse on panel J is connected via the black plug to the scanning unit and to the scanner stabilize switch (pole A). The negative return is not switched but is connected to earth at the main power distribution box earth connector.

'Scanner stabilize' switch

27. This switch has two poles A and B, has four positions OFF/STAND-BY/ON/EMERGENCY and is mounted on the front of the power distribution box. With the switch at STAND-BY, pole A connects its 112-volt supply via the red/blue plug to the amplidyne, whilst pole B makes no connection. With the switch at ON, pole A maintains the same supply to the amplidyne whilst pole B connects its 28-volt supply to the scanning unit via the blue/green plug. With the switch at EMERGENCY, pole A maintains its supply whilst pole B connects its 28-volt supply to the scanning unit emergency circuit, via the blue/green plug.

'Scanner rotate' switch

28. This is a single-pole switch with ON and OFF positions and is mounted on the front of the power distribution box. With the switch at ON, its 28-volt supply is connected to the scanning unit via the blue/green plug at the back of the box.

Power failure

29. There is a neon indicator in phases A and C of the 400 c/s supply to the N.B.C. and the H2S equipment. These are connected on the output side of the relative control switches.

Removal of N.B.C. units

30. The method of removing all units is given in Table 3. Reference should also be made to fig. 4 to 6.

TABLE 3

Removal of N.B.C. units

Unit	Removal
J.B. Type 343	Mounted at the back of the radio crate. Remove the connectors and the four screws and distance pieces. Withdraw aft.
Navigation panel	Secured by 4 screws to two brackets, each equiflex mounted, at the front of the radio crate. Remove the connectors and the 4 screws and washers. Withdraw from the crate.
Power unit	Mounted on four equiflex mountings to a tray on the radar crate. Remove the connectors. Remove the six wing-headed bolts and washers securing the tray. Attach webbing lifting straps through handles. Attach Type A, ¼ ton, tackle to slinging rail eye (para. 32). Attach tackle hook to webbing straps. Swing the unit towards the pressure bulkhead complete with cooling sleeve. Raise up to the aircraft roof and move the unit on slinging rail to access hatch from nosewheel bay and lower onto rig under the aircraft.
Amplifier (pre Mod. 1673)	Mounted and removed as power unit except that it has no cooling sleeve.
Calculator, Type 1	Mounted and removed as power unit.
Calculator, Type 2	Held by four equiflex mountings on the crate behind the 2nd pilot's seat. Remove the connectors and the 4 wing nuts and washers. Withdraw upwards. Remove from aircraft using the special steps.
Calculator, Type 3	Mounted on four equiflex mountings to sliding tray in the crate behind the 2nd pilot's seat. Remove the connectors and the six ' pip ' pins securing the tray. Slide the tray and unit aft and remove from cabin using the special steps marked ' for entry into the cabin with N.B.C. units'.
Calculator, Type 4 (pre Mod. 1673)	Held by four screws and two retaining straps to a trolley on slides at the bomb aimer's visual position. The trolley is retained by two ' pip ' pins. Remove the connectors and the ' pip ' pins. Slide the trolley aft to clear the rails and remove trolley and unit together from aircraft, using special steps. The calculator is removed from the trolley by removing the four screws and slackening the retaining straps.
Calculator, Type 6 (pre Mod. 1673)	Held by four screws and two retaining straps to a trolley on slides below the crate behind the 2nd pilot's seat. Remove as calculator, Type 4.
Resistance unit	Held by four equiflex mountings on the radar crate. Remove the connectors and the four nuts and washers. Lift away.
Directional indicator	Held by four nuts and screws to the port blind flying panel. Remove the connector and the four nuts, screws and washers. Withdraw from the back of the panel.
Head sighting unit (pre Mod. 1673)	Held by a dowel pin at the forward end and by a quick-release fastener at the aft end. Remove the connectors and release the quick-release fastener. Withdraw the unit aft.
Control emergency (pre Mod. 1673)	Held by four screws. Remove the connector and the four screws and washers. Lift away.
Control unit, Mk. 1 (pre Mod. 1673)	Held by four screws. Remove the connector and the four screws and washers. Lift away.
Calculator, Type 7 (time of fall) used for alternative bomb installation	Held by three nuts and screws in radio crate table. Remove the connectors from underneath the table and connect them to the stowages provided. Remove the sliding panel on the table top and the three nuts, screws and washers. Lift away.
Remove control unit used for alternative bomb installation	Held by four nuts and screws to a hinged bracket on the starboard side of the instrument panel coaming. Remove the connector and the four nuts, screws and washers. Lift away.

Removal of H2S units

31. Most of the units are mounted in a straightforward manner. Table 4 covers the removal of all units except the scanning unit.

TABLE 4

Removal of H2S units

Unit	Removal
Control unit, Type 626	Held by four screws to the radio crate table top. Remove the connectors from underneath the table. Remove the four screws and lift unit away.
Control unit, Type 595	Held by three screws to the face of the radio crate. Remove the connectors and the three screws and washers. Withdraw into the cabin.
Control unit, Type 585	Held by two nuts to the tray in the radio crate and by retaining wires to the crate structure. Remove the connectors. Remove the retaining wire by withdrawing the pin from the eye at the top front of the unit. Remove the two knurled nuts and withdraw the unit on to the table.
Control unit, Type 903	Held by three screws to the structure behind control unit Type 595. Remove Type 595 unit and the connectors. Remove the three screws and lift the unit away.
Waveform generator	Held by two knurled nuts to a resiliently mounted tray in the radar crate. Remove the connectors and the two nuts. Withdraw the unit towards the pressure bulkhead.
Power unit	Held by two knurled nuts to a resiliently mounted tray in the radar crate. Remove the connectors and the two nuts. Withdraw the unit towards the pressure bulkhead.
Calculator	Held by two knurled nuts to a resiliently mounted tray in the radar crate. Remove the connectors and the two nuts. Withdraw the unit towards the pressure bulkhead.
Indicating unit	Held by two knurled nuts to the tray in the radio crate and by retaining wires to the crate structure. Remove the connectors. Swing the camera unit to one side on its hinge, after releasing the screw on the right-hand side. Remove the retaining wire by withdrawing the pin from the eye at the top front of the unit. Remove the two knurled nuts and withdraw the unit onto the table.

32. A lifting rail is fitted to the aircraft from station 350 to station 370. This rail is fitted with a ring and eye, for supporting hoist. This can be used for lowering the units down through the nosewheel bay to the ground.

Removal of H2S scanning unit

33. The following procedure should be carried out for removing the scanner unit.

(1) With trestles on each side, obtain access through the hatch on the starboard side of the scanner bonnet.

(2) Disconnect the cooling intake duct, the air line from the pressurizing bottle and the electrical connectors at the scanning unit.

(3) Attach the sling, scanner bonnet (26 SR/95128) to the bonnet.

(4) Release the shear pins and fasteners of bonnet to structure with tool (25 SR/9534). Using the screwdriver end of the tool rotate sheer pin about ½ turn either way when the shear pin will spring out exposing its mushroom head. Wind the tool handle until its extractor end is clear of its shroud. Place the extractor end over the shear pin head and wind the tool handle until the shear pin is out of engagement.

(5) With an operator on each side of the bonnet, lift by means of the hand holds provided and move forward approximately 8 inches.

(6) Remove davit eyebolt from its stowage on the davit and screw hard home into the bulkhead (starboard side). turn back to align with hole in diaphragm.

(7) Engage the davit with the eyebolt and drop ball foot into the hole in diaphragm. Attach hoist to the outermost eye fitting of the davit.

(8) With the operator on the starboard trestle, attach the hoist lug to the bonnet sling and raise until the bonnet is clear of the structure.

(9) Rotate the davit until the bonnet is clear of the aircraft and lower it to the ground. Carry the bonnet clear.

(10) Place the scanner servicing ladder in the radome (see para. 35).

(11) Remove the starboard trestle and wheel the scanner unit maintenance rig into position. The side nearest the aircraft is to be not more than 18 inches away and not less than 12 inches away.

(12) Remove the three portions of the cooling system ducting which are suitably marked and lash the electric cables out of the way.

(13) Attach the sling, scanner (26 SR/95129) to the scanner chassis with the four 'pip' pins provided and fit the hoist to the innermost eye fitting of the davit. Attach the hoist to the sling and take the strain on the hoist.

(14) Remove the 'pip' pins from the feet of the mounting spider.

(15) Raise the unit until the bottom of the aerial is clear of the diaphragm, care being taken not to damage the aerial whilst lifting.

(16) Rotate the davit, swinging the scanner unit clear of the aircraft with the forward feet of the spider outermost.

(17) Dismantle the sides of the scanner maintenance rig.

(18) Lower the scanning unit sufficiently to allow the side of the maintenance rig nearest the aircraft to engage the support, be re-assembled and stayed into position.

(19) Bolt the side of the maintenance rig temporarily into position.

(20) Re-assemble the side of the maintenance rig furthest away from the aircraft, carefully threading the forward feet of the spider through the cross tubes. Stay into position.

(21) Lower the scanning unit on to the support brackets and lock the four retaining bolts.

(22) Remove the slinging equipment from the scanning unit chassis. The unit can now be wheeled away.

To re-assemble the scanning unit into the aircraft the above procedure should be reversed.

SERVICING

General

34. The servicing of the equipment is described in the relevant publication. On the aircraft, all connectors should be checked periodically for continuity (pin-to-pin), for short circuits and for soundness of insulation. All fittings should be checked for mechanical soundness and security.

Scanning unit servicing ladder

35. A maintenance ladder (26 SR/95201) is designed to assist servicing of the scanning unit in situ. The ladder is curved to suit the inside of the radome and is fitted in two ways, according to whether the scanner bonnet is on or off the aircraft.

36. When the scanner bonnet is on, the ladder is pushed through the access hatch with its curved bracket pinned at its inner position. The top of the ladder is pinned to the brackets below the access hatch with the 'pip' pins provided. It is important that the support hooks behind the lifting handle are in engagement with the nose structure diaphragm.

37. When the scanner bonnet is off, the ladder is placed in the radome with its curved bracket pinned at its outer position. The ladder rests on the support hooks behind the lifting handles and the curved bracket.

Power supplies

38. The a.c. and d.c. supplies at the power distribution box can be checked from four test sockets on the voltage trimmer panel on the port wall of the cabin. The testing of these supplies is described in A.P.4377A, Vol. 1, Book 2, Sect. 5, Chap. 1. In addition, the following checks can be made.

39. With the radar inverters running, switch the H2S and N.B.C. switches to ON and check that the four neon indicators light. Switch the inverter emergency switch to NO. 1 FAIL and check that the four neons remain on. Switch off the inverters and the d.c. supplies. Check the following fuses in the power distribution box:—

A.C. fuses	*D.C. fuses*
1, 2, 3, 4 and 6	47, 48 and 49
	and one fuse in the separate holder.

Check the H.R.C. fuses on panels J and Z.

Panel J	*Panel Z*
H2S supply	W/T No. 1
	W/T No. 2.

5270 571539 1/56 375 C.B.&S.Ltd., Gp. 999/124

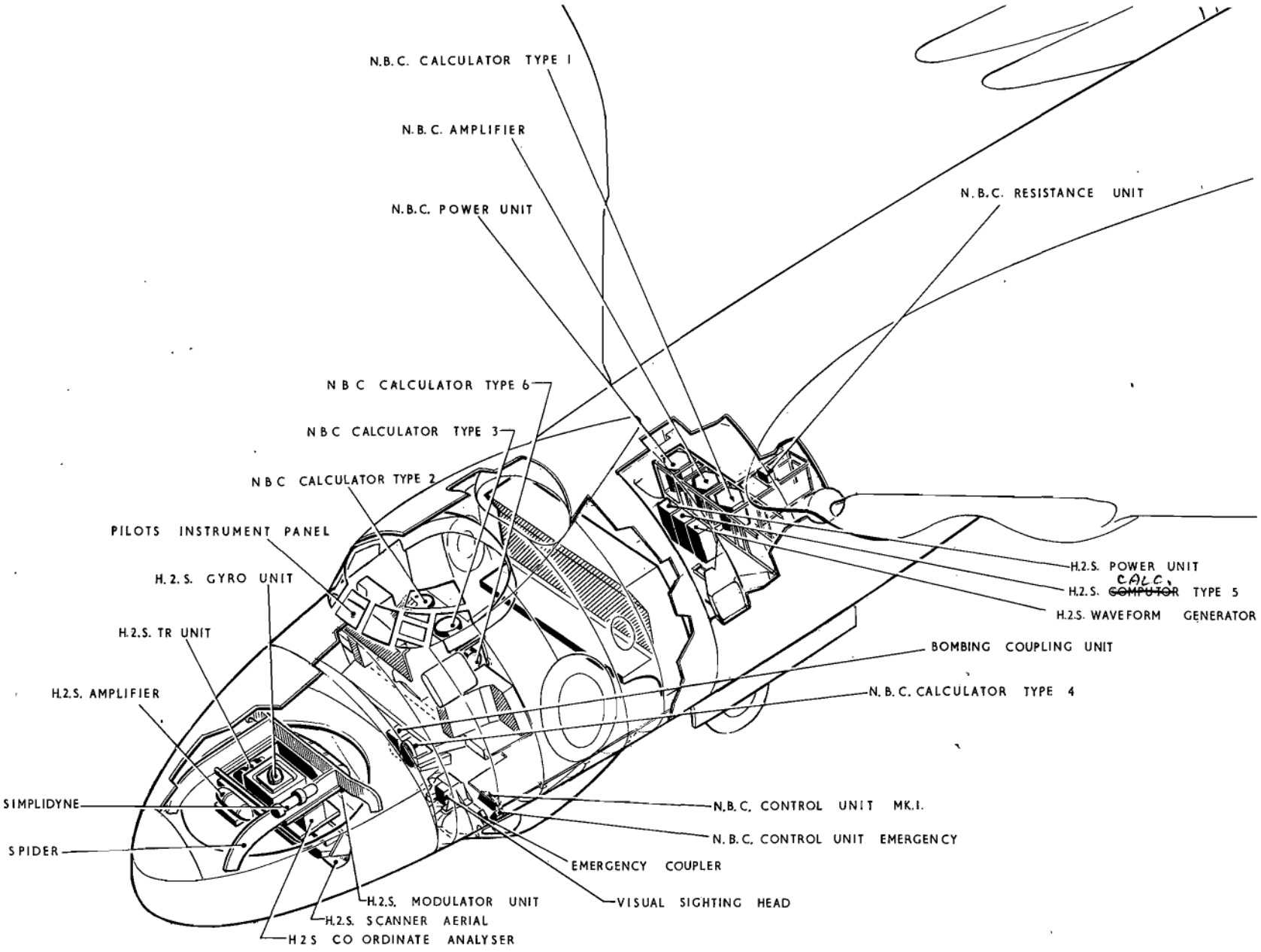

Fig. 4. Location of equipment

6271 571540 1/86 375 C.B&S.LTD. GP.55.

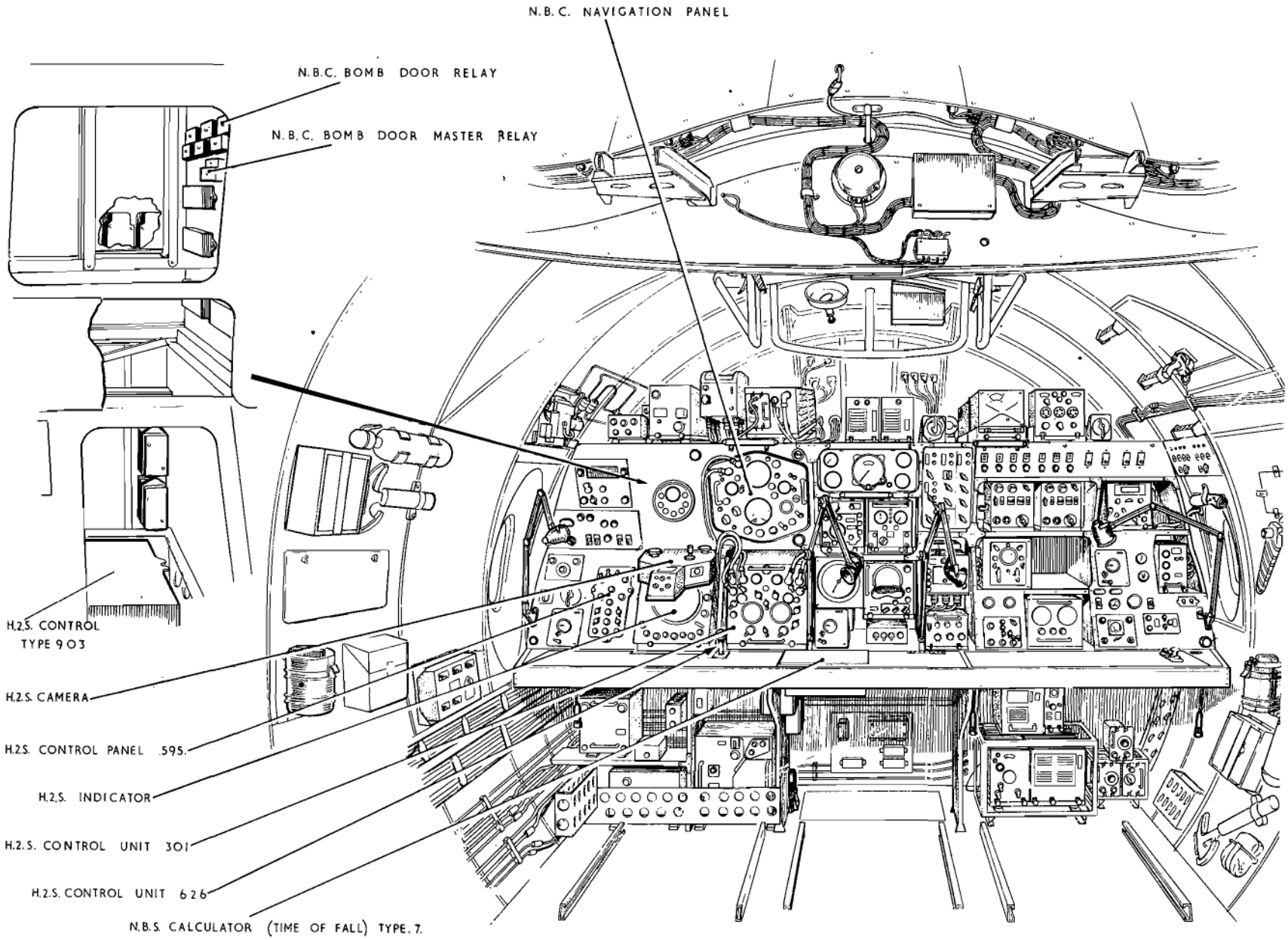

Fig. 5. Equipment in radio crate

(A.L. 18, Dec. 55)

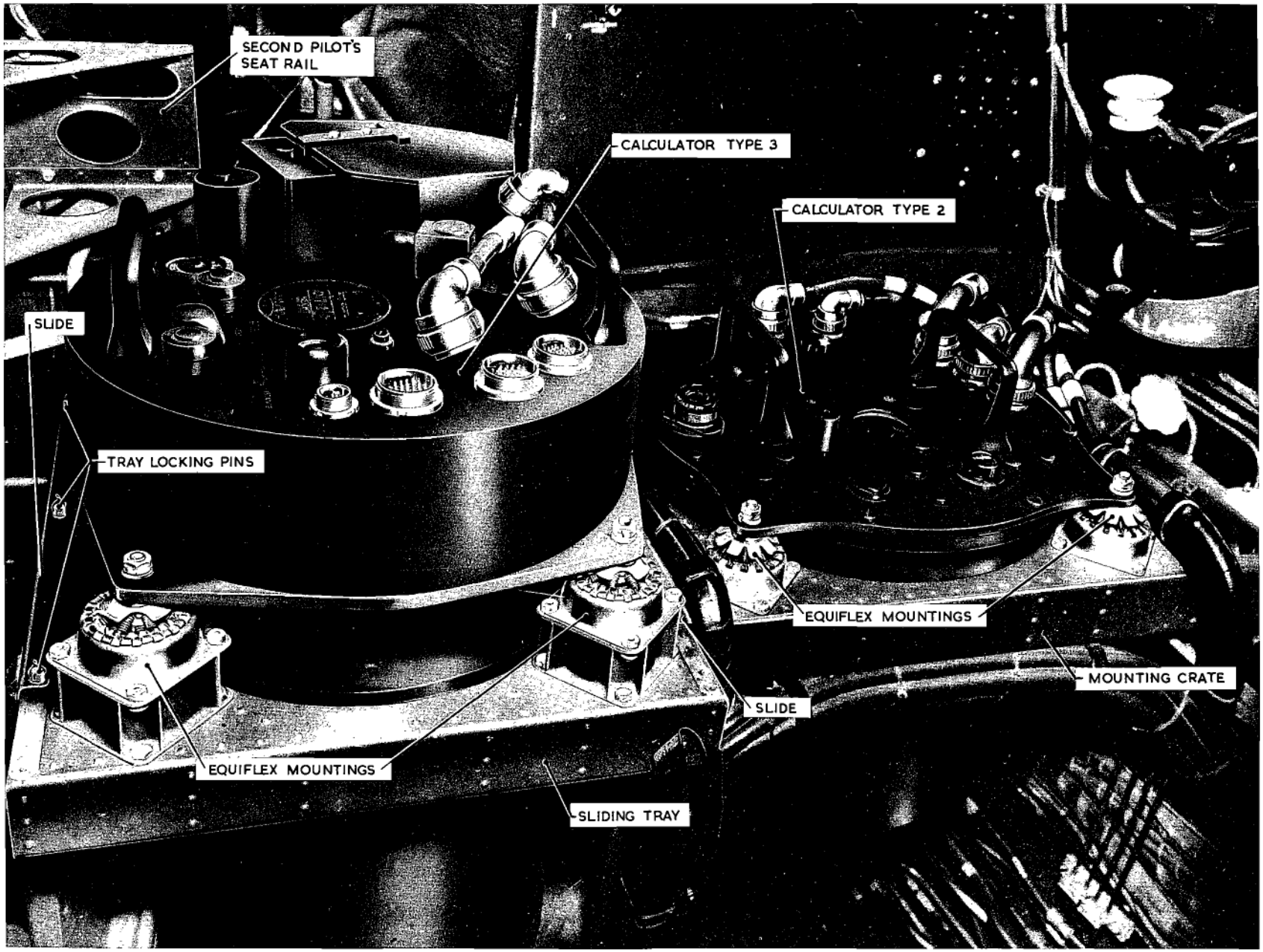

Fig. 6 Typical mounting of N.B.C. units

5271 571540 1/56 375 C.B&S.LTD. GP.55.

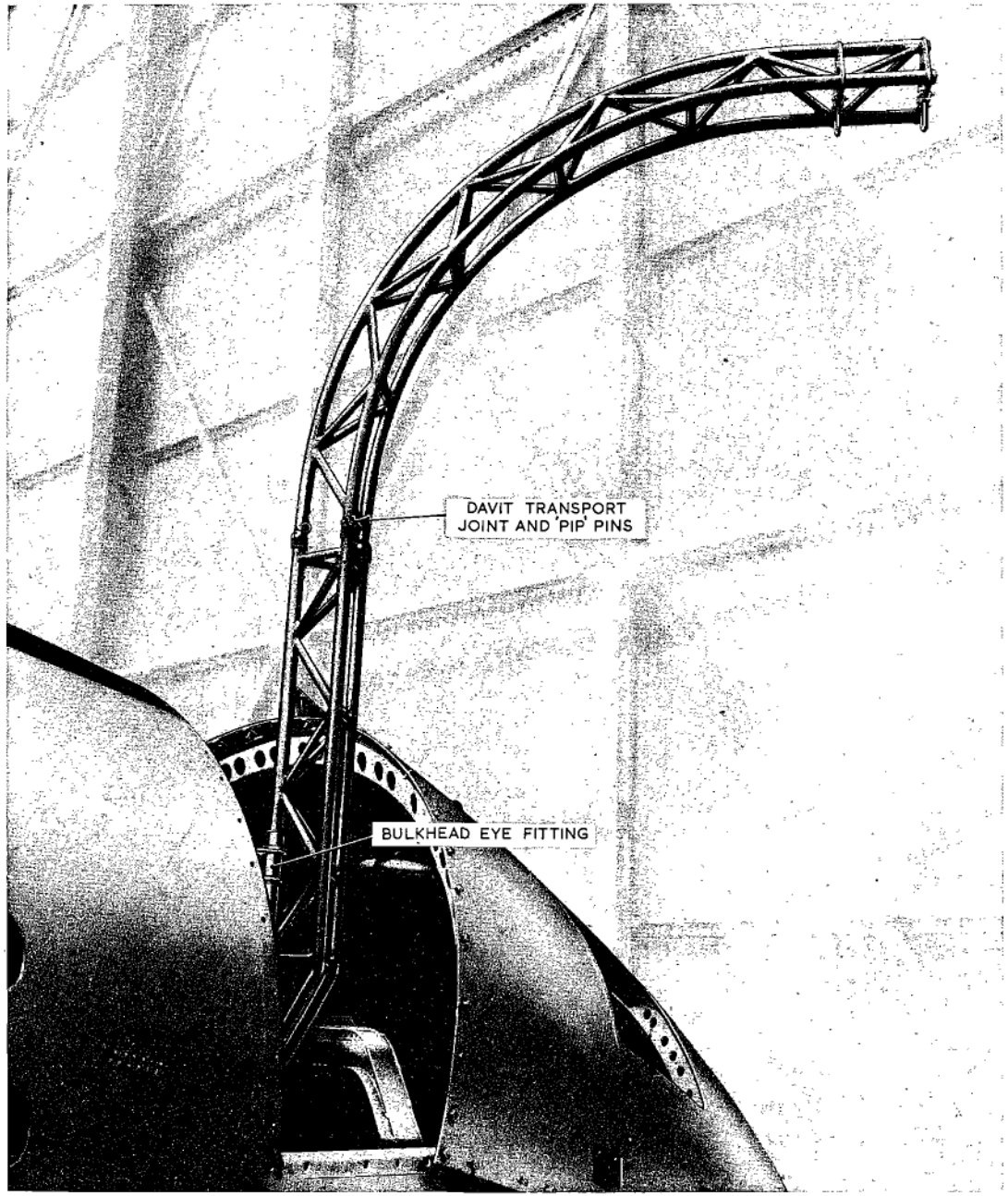

Fig.7 H 2 S Scanner removal davit in position

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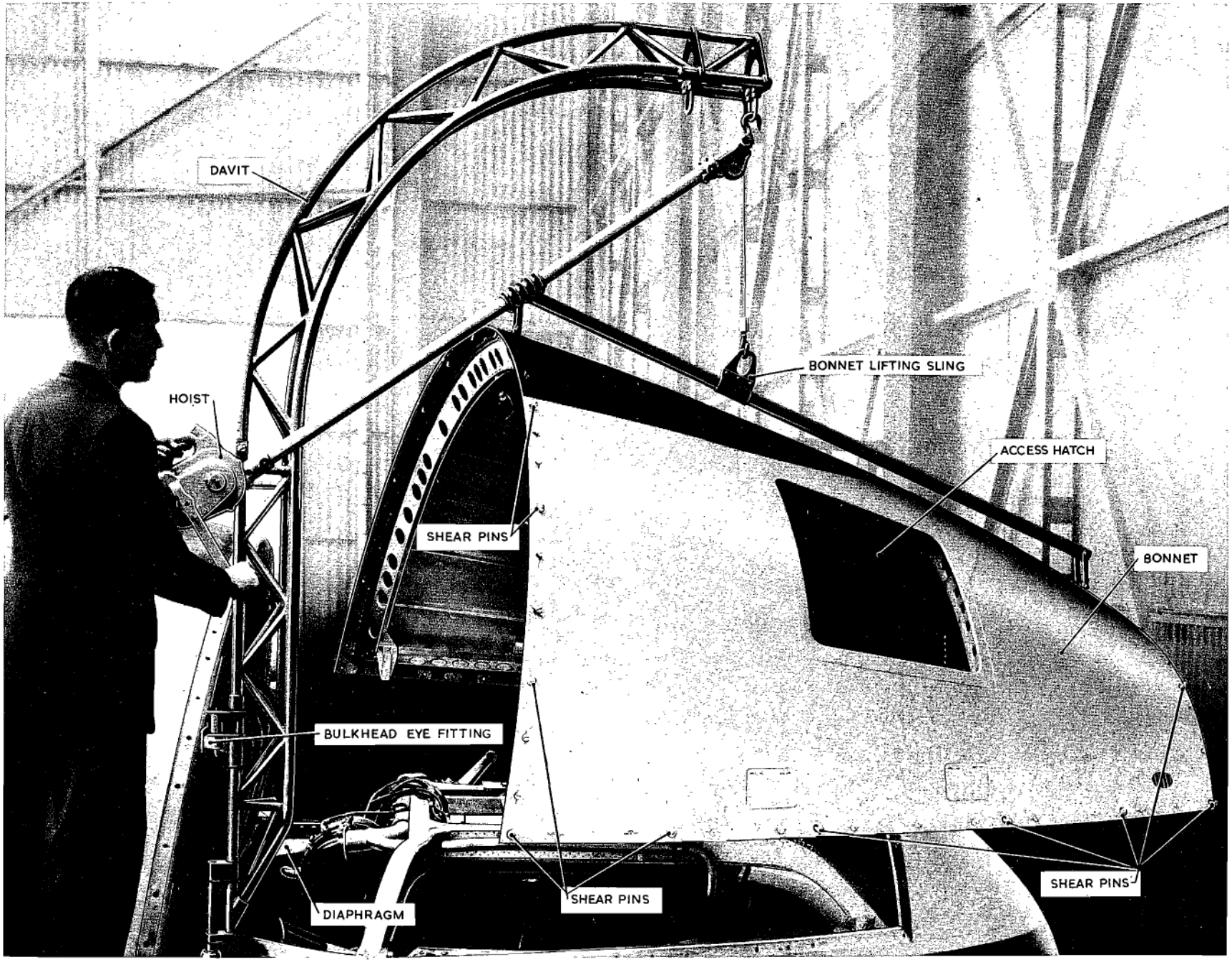


Fig. 8 Removal of scanner bonnet

5271 571540 1/56 375 C.B&S.LTD. GP.85.

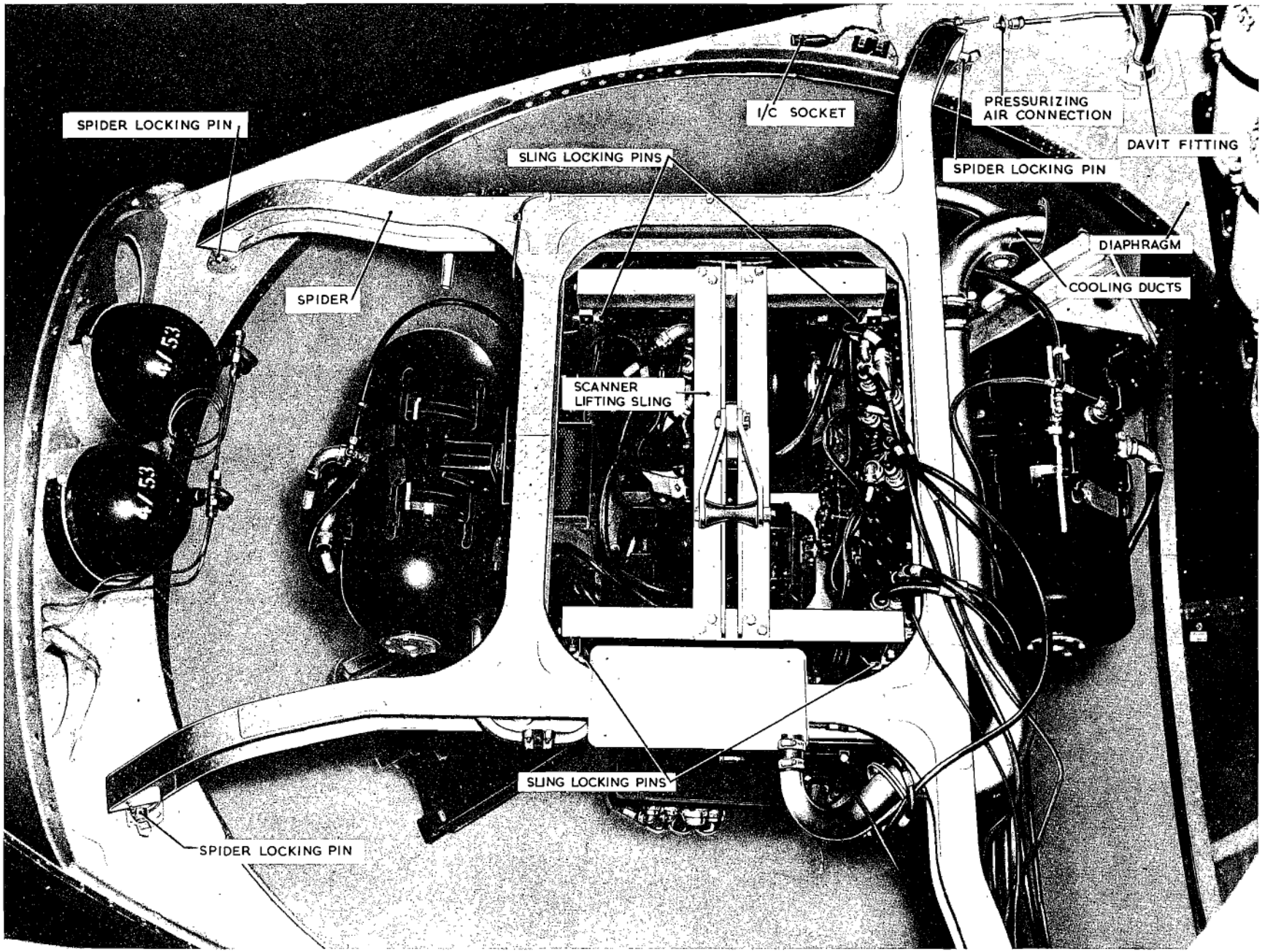


Fig. 9 H2S scanner unit in position

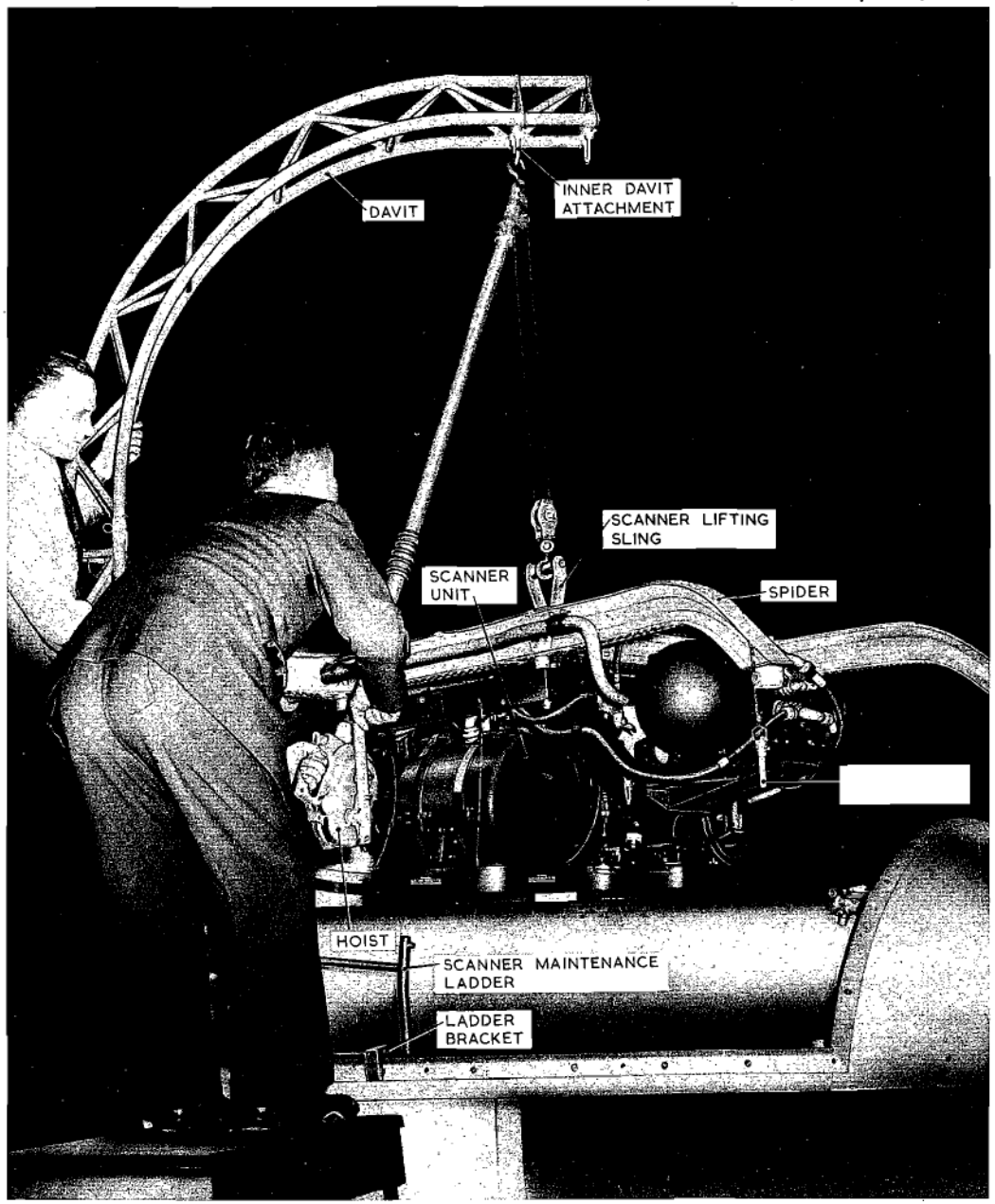
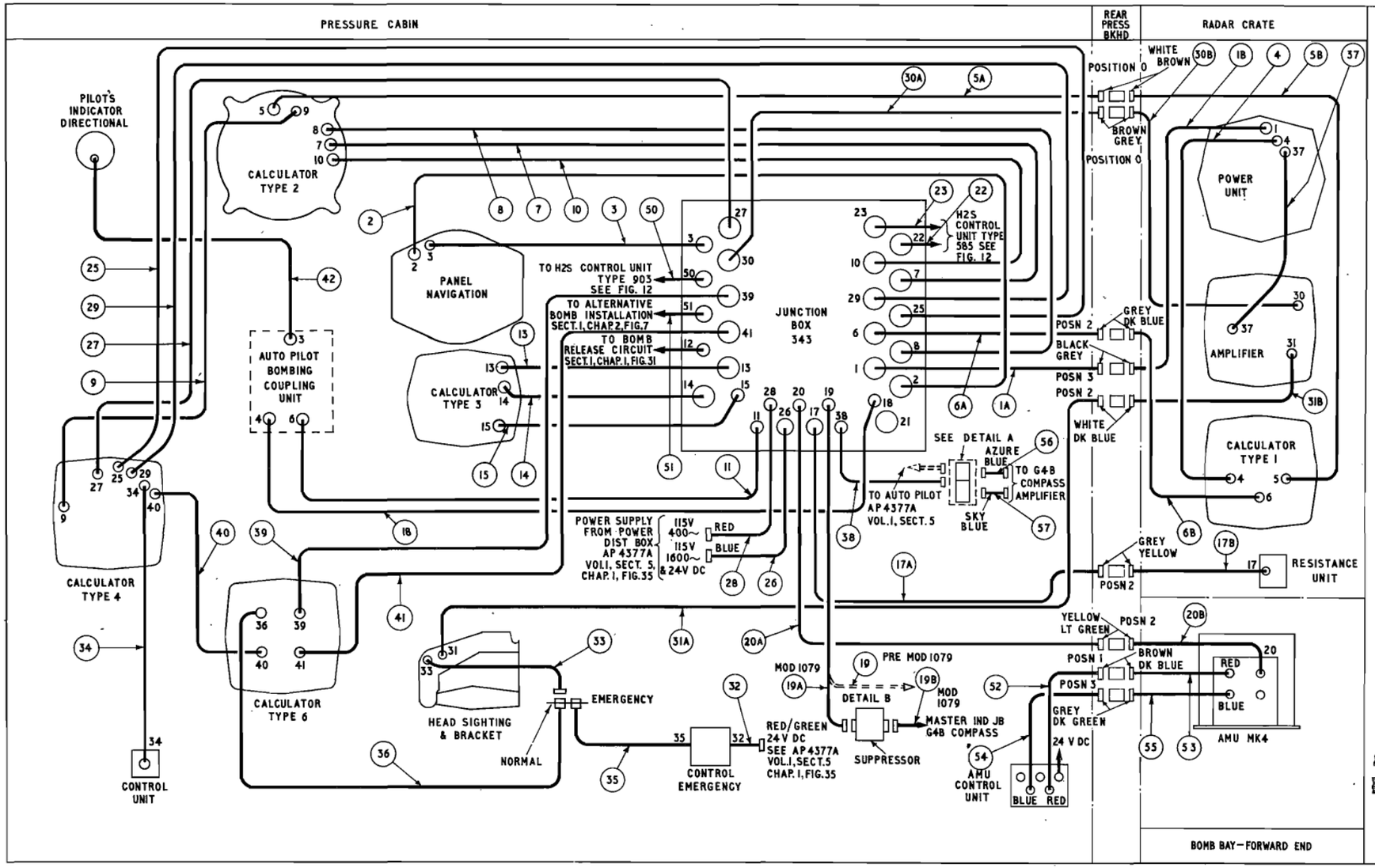
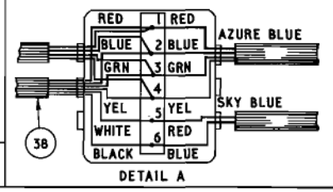
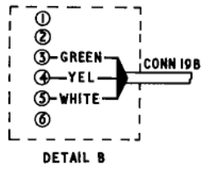


Fig. 10 Removal of scanner unit

8271 871540 1/58 376 C.B.&S. LTD. GR 55.





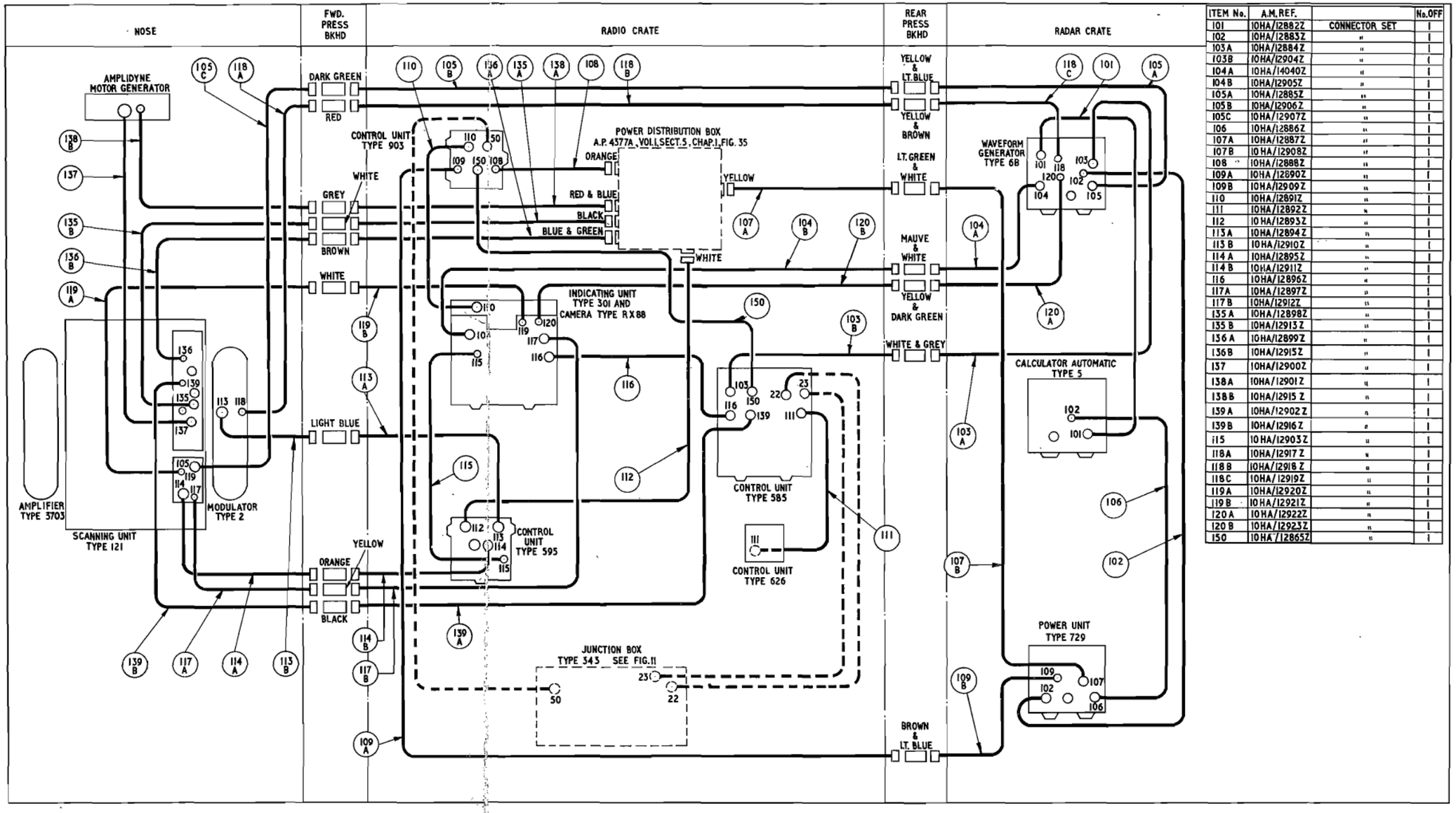


	ITEM No.	CONNECTOR SET	
	1A	CONN TYPE 10HA/12835Z	1
	1B	" 10HA/12836Z	1
	2	" 10HA/12837Z	1
	3	" 10HA/12838Z	1
	4	" 10HA/12839Z	1
	5A	" 10HA/12840Z	1
	5B	" 10HA/12841Z	1
	6A	" 10HA/12842Z	1
	6B	" 10HA/12843Z	1
	7	" 10HA/12844Z	1
	8	" 10HA/12845Z	1
	9	" 10HA/12846Z	1
	10	" 10HA/12849Z	1
	11	" 10HA/12850Z	1
	13	CONN TYPE 10HA/12852Z	1
	14	" 10HA/12853Z	1
	15	" 10HA/12854Z	1
	17A	" 10HA/12855Z	1
	17B	" 10HA/12847Z	1
	18	" 10HA/12856Z	1
PRE MOD 1079	19	" 10HA/151692	1
	20A	" 10HA/12858Z	1
	20B	" 10HA/12848Z	1
	22	" 10HA/12859Z	1
	23	" 10HA/12860Z	1
	25	" 10HA/12866Z	1
	26	" 10HA/12861Z	1
	27	" 10HA/12867Z	1
	28	" 10HA/12862Z	1
	29	" 10HA/12868Z	1
	30A	" 10HA/12869Z	1
	30B	" 10HA/12873Z	1
	31A	" 10HA/12874Z	1
	31B	" 10HA/12870Z	1
	32	" 10HA/12871Z	1
	33	" 10HA/12872Z	1
	34	" 10HA/12875Z	1
	35	" 10HA/12876Z	1
	36	" 10HA/12881Z	1
	37	" 10HA/12877Z	1
	38	" 10HA/12863Z	1
	39	" 10HA/12878Z	1
	40	" 10HA/12879Z	1
	41	" 10HA/12880Z	1
	50	" 10HA/12864Z	1
	51	" 10HA/158287	1
	42	" 10HA/14961Z	1
MOD 1079	19A	" 10HA/12857Z	1
MOD 1079	19B	" 10HA/14962Z	1

5271 871640 1/86 375 C.B&S.LTD. GP88.

Fig. 11 N. B. C. Mk. 2 installation

RESTRICTED



ITEM No.	A.M.REF.		No.OFF
101	10HA/12882Z	CONNECTOR SET	1
102	10HA/12883Z	"	1
103A	10HA/12884Z	"	1
103B	10HA/12904Z	"	1
104A	10HA/14040Z	"	1
104B	10HA/12905Z	"	1
105A	10HA/12885Z	"	1
105B	10HA/12906Z	"	1
105C	10HA/12907Z	"	1
106	10HA/12886Z	"	1
107A	10HA/12887Z	"	1
107B	10HA/12908Z	"	1
108	10HA/12888Z	"	1
109A	10HA/12890Z	"	1
109B	10HA/12909Z	"	1
110	10HA/12891Z	"	1
111	10HA/12892Z	"	1
112	10HA/12893Z	"	1
113A	10HA/12894Z	"	1
113B	10HA/12910Z	"	1
114A	10HA/12895Z	"	1
114B	10HA/12911Z	"	1
116	10HA/12896Z	"	1
117A	10HA/12897Z	"	1
117B	10HA/12912Z	"	1
135A	10HA/12898Z	"	1
135B	10HA/12913Z	"	1
136A	10HA/12899Z	"	1
136B	10HA/12915Z	"	1
137	10HA/12900Z	"	1
138A	10HA/12901Z	"	1
138B	10HA/12915Z	"	1
139A	10HA/12902Z	"	1
139B	10HA/12916Z	"	1
115	10HA/12903Z	"	1
118A	10HA/12917Z	"	1
118B	10HA/12918Z	"	1
118C	10HA/12919Z	"	1
119A	10HA/12920Z	"	1
119B	10HA/12921Z	"	1
120A	10HA/12922Z	"	1
120B	10HA/12923Z	"	1
150	10HA/12865Z	"	1

Fig.12 H 2S Mk. 9 installation

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