

A two-pin plug socket is provided on the panel for an inspection lamp, and a fuse board is also located on the panel.

## CONTROLS FOR AUXILIARY PETROL DRIVEN GENERATOR

The ignition switch for this unit is on the side of the battery recess, together with its warning light: The warning light remains alight all the time the ignition switch is on. Both the choke control and the starter switch are on the unit.

## CONTROL OF VISION DEVICES

### The Driver's Vision Port

The driver's vision port is a heavy B.P. steel assembly, consisting of a large vision door, to which is clamped a thick Triplex glass, and a small vision door—the wicket door—which is situated in a recess in the centre of the large door.

Both doors swing on a common hinge pin, but, if desired, the wicket door can be made to open independently of the large vision door.

The complete unit—the large vision door (with Triplex) and the wicket door—is held in the closed position by means of a locking handle which is fixed to the inside of the main door. When turned into the horizontal position the handle slides over and presses against a fixed bracket on the inside of the hull and so locks the door. The wicket door is locked to the main door by a spring-loaded locking plunger. Operation of this plunger releases the wicket door from the main door.

The vision door assembly can be opened after turning the locking handle from its locked position. The handle is retained by snapping it over the top of the wicket door lock plunger. The vision port can then be swung on the hinge pin into the fully open position, where it is firmly held by the vision door catch.

To close the port it is necessary first to push the spring-loaded catch release button (which is inside facing the driver, on a line and to the right of the vision port), thereby releasing the door catch. Then by operating a lever placed adjacent to the driver's right knee, the complete unit is returned to the closed position, and finally locked in place by turning the locking handle.

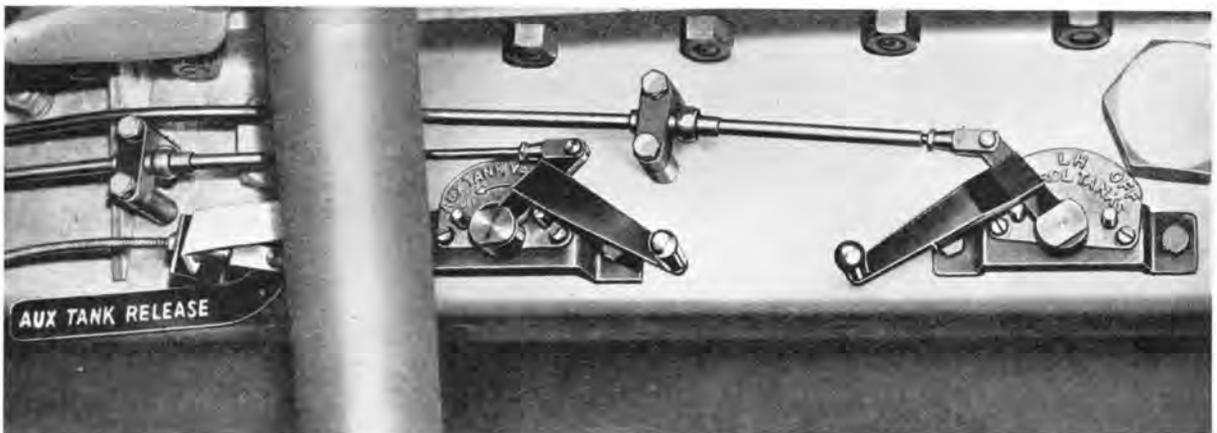


Fig. 12. Petrol tank controls. The auxiliary control is shown in the centre, the jettison lever on the left, and the main tank control lever on the right.

# ENGINE ELECTRICAL SYSTEM

## GENERAL DATA

Distributors	...	...	Two. Lucas. Six lobe cam with two sets of contact breakers. Automatic advance. Contact breaker gap—.012 in.
Coils	...	...	Right-hand filter resistance unit—Lucas C.H.12-0 Left-hand filter resistance unit—Lucas C.H.11-0 Ignition coils (four)—Lucas B.6-0
Sparking Plugs	...	...	Twenty-four. (Two per cylinder.) 18 mm. thread A.C. type. Gap .018 in. Connection of H.T. lead by screwed cap
High Tension Leads	...	...	Special. Fully screened. Carried in conduits. One each side of the engine. Special screw terminals
Starter	...	...	C.A.V. Axial type with Solenoid control
Dynamo	...	...	Constant voltage control type. C.A.V. Belt driven from crankshaft. Belt tension is adjustable. Belt "V" type. Ratio—dynamo to engine speed—1.34 to 1
Voltage Control Unit	...	...	12 v.—C.A.V.

## DESCRIPTION

### Ignition System

Coil and distributor dual ignition is used, two distributors supplying current to two sparking plugs per cylinder. Each distributor, with its attendant coils, supplies one plug in each cylinder. The engine will therefore continue to run satisfactorily if one distributor or its coils should fail completely.

### Distributors

Each distributor is spigot-mounted on the top of the crankcase, and is driven at half engine speed by a spiral gear on the corresponding camshaft.

Each distributor incorporates two six-cam circuit breakers and a centrifugal governor for automatic control of the spark advance. A pressure oil feed is provided for the distributor drive gears.

### Ignition Coils

Four ignition coils of the six-volt type are used, and each of these is connected in series with a six-volt ballast resistance coil. The four resistance coils are assembled in pairs, in two containers, and the main coils and containers are all attached to the front bulkhead of the engine compartment. In addition to two resistance coils, one of the container units incorporates a solenoid, connected to the starter button. When the starter button is depressed, the solenoid automatically cuts out the two resistance coils in the unit, so that the current from the twelve-volt battery is passed direct to two of the main coils and provides an intensified spark for starting purposes only.

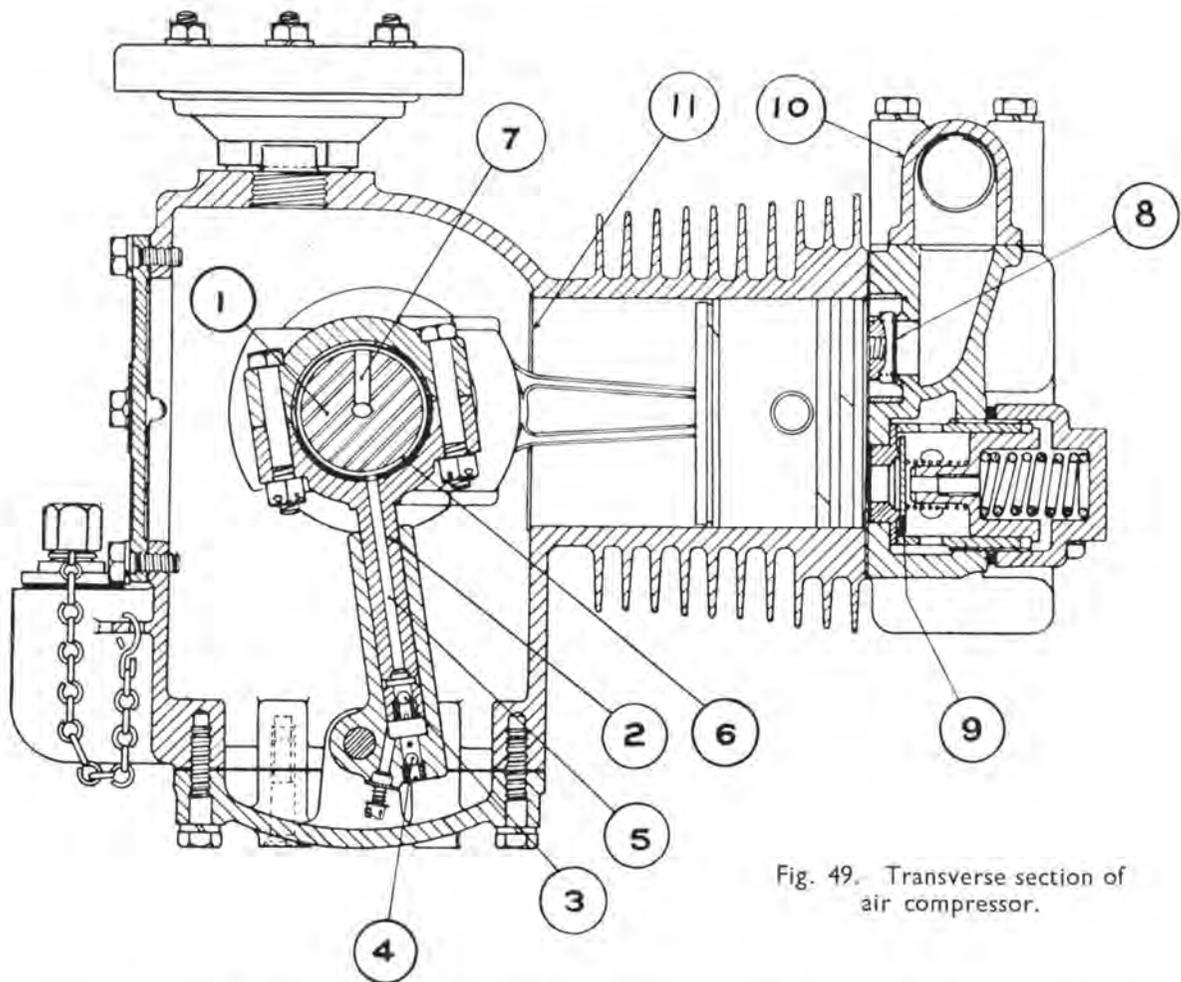


Fig. 49. Transverse section of air compressor.

1. Crankshaft. 2. Oil pump plunger. 3. Outlet valve. 4. Inlet valve. 5. Oil-way in plunger. 6. Annular oil groove round crankshaft. 7. Oil-way from No. 6 to crank pins. 8. Air inlet valve. 9. Air outlet valve. 10. Air inlet manifold. 11. Baffle plate across bottom of cylinders.

clean air enters the compressor. A length of piping connects this filter to the air compressor.

From the outlet valves the compressed air is taken by piping to a reservoir, but is cleaned on its way by being passed through an air filter.

### Main Air Filter

An air filter is provided, bolted to the top cross-member of the gearbox compartment, to clean the air passing from the compressor to the air reservoir. It consists of felt discs, supported by perforated steel plates, contained within a brass die-cast body with a steel top cover.

Air from the compressor enters the bottom of the filter, is cleaned on its way through the felt discs, and passes out to the reservoir at the top.

Two arrows cast on the body indicate the air flow through the filter, and care should always be taken to see that the air inlet and outlet pipes are connected to the correct ports.

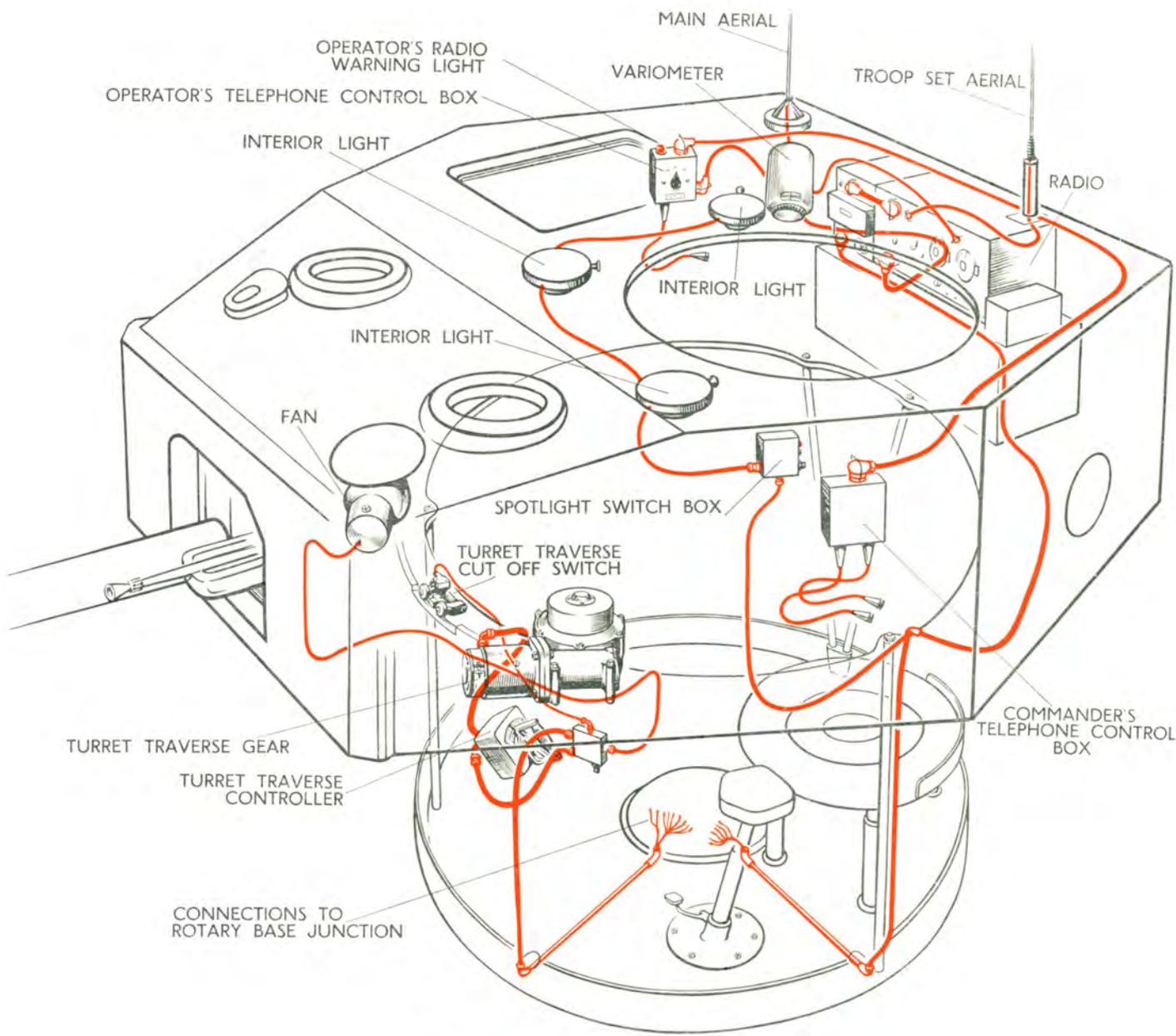


Fig. 62. Diagram of turret wiring layout.

To face page 96.