

Specification (continued).

Correctional air jet	..	..	110.
Oil Reservoir capacity	..	..	16 pints.
Distributor rotation	..	..	Anti-clockwise.
Ignition timing	..	..	8° B.T.D.C. (rotor retarded).
Breaker gap	..	..	.012".
Sparking plug	..	..	14 m/m. Lodge C.B.14.
" " gap	..	..	.020".
Battery type	..	..	Lucas 12 v., 63 A.H., W.D. Spec. : MC.232.
Battery earth	..	..	Negative.

Section 3. Lubrication System of Power Unit.

The lubrication is of the dry sump forced feed type. The main and big end bearings, also rocker gear and timing chain being supplied with oil under pressure, whilst the cylinder walls and gudgeon pins are splash fed.

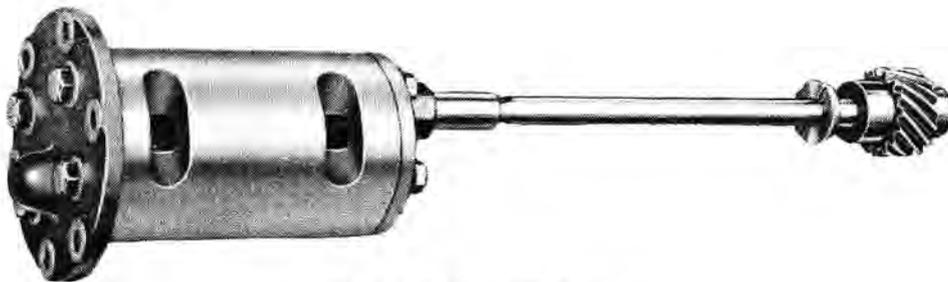


Fig. 3 The Oil Pump.

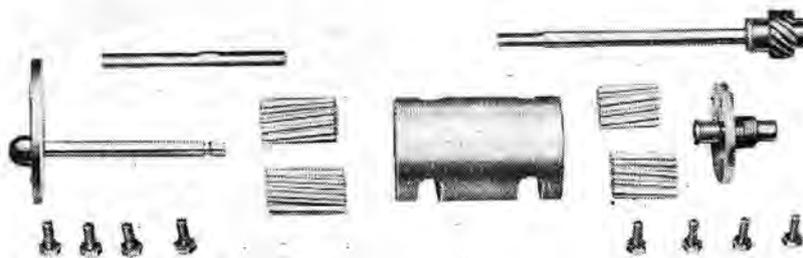


Fig. 4 The Oil Pump dismantled.

There are two oil pumps combined in one casting, see illustrations 3 and 4, one being used to pump the oil through the bearings, whilst the other is used to scavenge the oil from the sump back to the 2 gallon oil canister situated alongside the engine. A Vokes oil filter is fitted at the front of the nearside of the engine: this receives the oil from the pressure pump and filters it before passing it through the bearings.

Inside the master plate is the master lever which is connected at its centre point to the linkage from a normal Marles steering box, steering column, and steering wheel. One end of the master lever is connected to the rear wheel steering linkage and the other to the steering linkage of the front wheels.

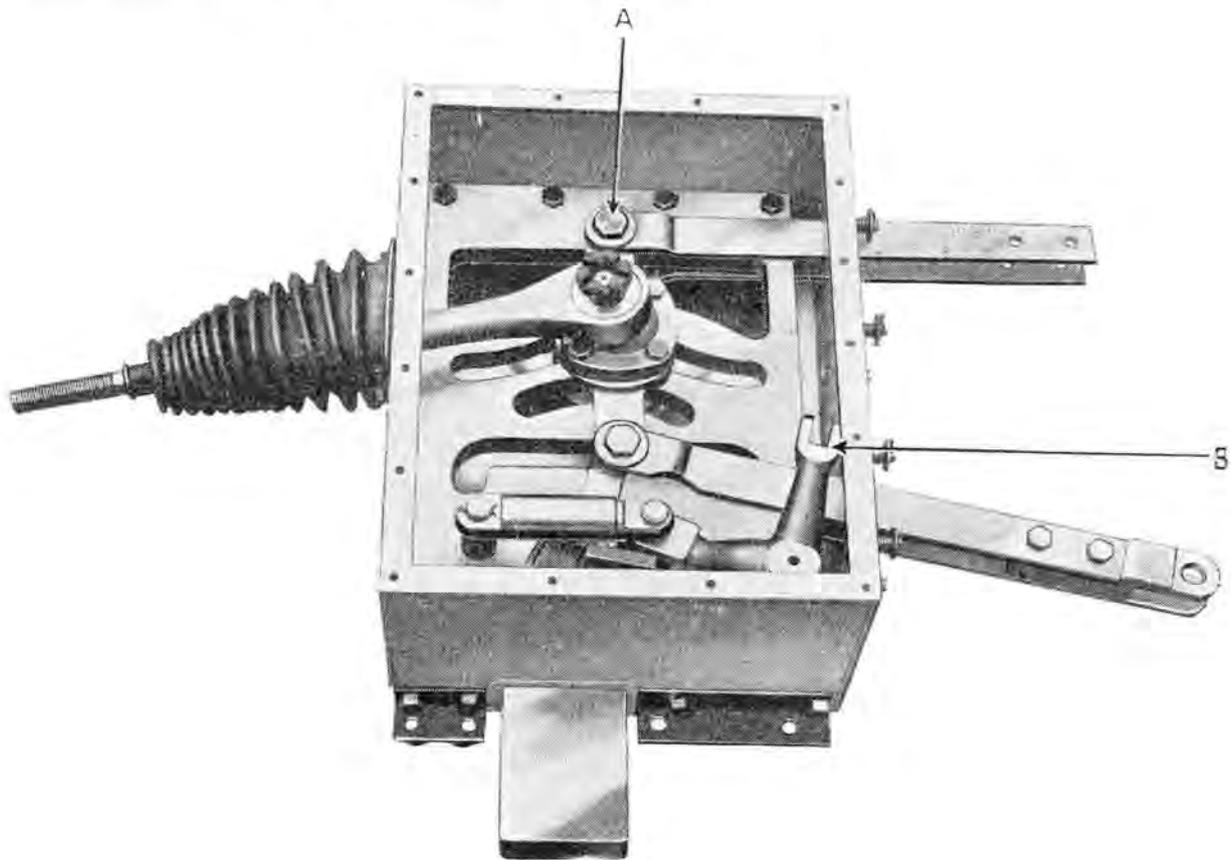


Fig. 16

- A. Shows master lever held in position for travelling in forward direction.**
- B. Spring loaded actuating lever.**

When the vehicle is travelling in the forward direction the master lever is held at one end in a slot in the master plate and the pivots about the slot, this operating the steering linkage to the front wheels, see illustration 16. When the front wheels come on to full lock, the end of the master lever slides out of the slot and then pivots about its other end, thus operating the steering linkage to the rear wheels. In this manner the "progressive" steering already mentioned is achieved in the forward direction.

When changing into reverse, the action of the reversing lever operates a spring loaded mechanism which moves the opposite end of the master lever into a slot, thus transferring the steering operation to the linkage of the rear wheels, see illustration 17. Before this transfer can take place, the front wheel steering must pass through the straight ahead position, therefore the reverse mechanism is spring loaded.

Section 20. Lubrication and Maintenance.

Daily.

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|------------|--------|--|
| 1. Engine. | M.160. | Check level immediately after stopping engine. Change oil every 3000 miles, capacity 16 pints, and clean filter. |
|------------|--------|--|

Every 750 Miles (or Fortnightly).

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|--|---------------|---|
| 4. Gearbox. | M.160. | Top up (dipstick on top of box). Change oil every 3000 miles, capacity 5 pts. |
| 5. Differential Box. | M.220. | Top up (plug hole indicates level). Change oil every 6000 miles, capacity 3 pints. |
| 6. Bevel Boxes. | C.600. | Top up (plug hole indicates level). Change oil every 6000 miles, capacity 2½ pints. |
| 8. Steering Box. | C.600. | Top up (plug hole indicates level). |
| 13. Suspension Links. | Grease G.S. | Nipples. 8 off per axle. |
| 14. Steering Pivots. | " " | Nipples grouped on off-side of Chassis Frame. |
| 15. Side Steering Rods. | " " | Nipples 8 off. |
| 17. Swivel Pins. | " " | Nipples, 8 off. |
| 18. Drop Arm Lever. | " " | Nipple, 1 off. |
| 19. Hand Brake Cables. | " " | Nipples, 1 off each cable (Lubricate sparingly). |
| 20. Observer's Seat Pivot.
Control Joints, etc.
Distributor Oiler. | " "
M.160. | Nipple, 1 off.
Oil Can.
One or two drops. |

Brakes	Foot brake—Lockheed hydraulic. Hand brake—mechanical.
Steering	David Brown, type 3", 24-1 ratio.
Armament	Bren machine gun. Rifle.
Ammunition	750 rounds, Bren. 50 rounds, rifle.
Smoke weapons	Discharger, smoke grenade, right, No. 1, Mk. I. Discharger, smoke grenade, left, No. 1, Mk. I.
Ammunition	12—Grenade, No. 80, W.P. Mk. I. 12—Fuze, electric, No. F103.
Grenades	12—Hand.
Wireless	Station, No. 19.

MAIN DIFFERENCES BETWEEN THE CAR, SCOUT, DAIMLER, MKS. II, II W/T AND CAR, SCOUT, DAIMLER, MK. III

The following improvements have been incorporated in Mk. III vehicles:

Ignition. Distributor (Lucas, Type DCH6A) (see Fig. 5).

The new type is sealed for waterproofing as are all the ends of the ignition H.T. wiring. Ventilation pipes in the distributor pass over the engine to the air intake pipe. The coil and filter units are sealed.

Carburettor. A modified type of Solex carburettor is fitted which is fully waterproofed and dustproofed (see Fig. 4).

Charging. Two-speed dynamo (C.A.V. Type MO-16X).

Two batteries (see Fig. 19).

Control box mounted on the manifold (see Figs. 4 and 5).

Control mounted behind the driver on his left (see Fig. 19).

Control board (C.A.V. Type 155/4).

Bevel Box. Extended fillers fitted to rear bevel boxes (see Figs. 4 and 5).

Radiator Drain Tap. Extended drain tap fitted (see Fig. 4).

Chapter I—Power Unit

Maintenance

To Top Up the Coolant:

- (1) Remove the engine cover and radiator cap. A special key is provided for the engine cover fasteners.
- (2) Open the tap on the thermostat. As soon as coolant begins to run out, close the tap.
- (3) Add coolant until the system is full.

To Drain the System:

- (1) Remove the engine cover and radiator cap.
- (2) Open the radiator drain tap situated at the bottom left corner of the radiator on Mk. II vehicles. The extended tap on Mk. III vehicles is operated near the upper left corner of the radiator. Open the water jacket drain tap, situated on the left side of the cylinder block by No. 5 cylinder.
- (3) When water has ceased to run from the two taps, start and run the engine for about 30 seconds at a fast tick-over.
- (4) Turn both taps to closed position in order to be ready for next filling.

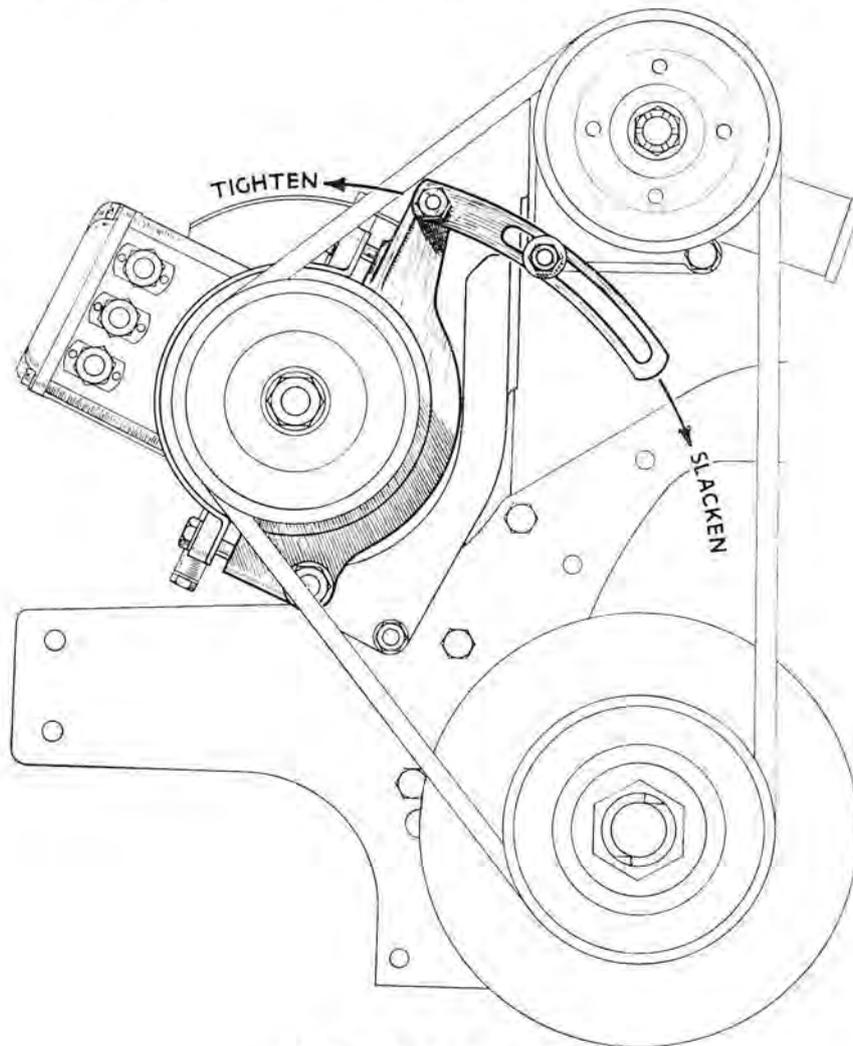


Fig. 14. Fan belt adjustment.

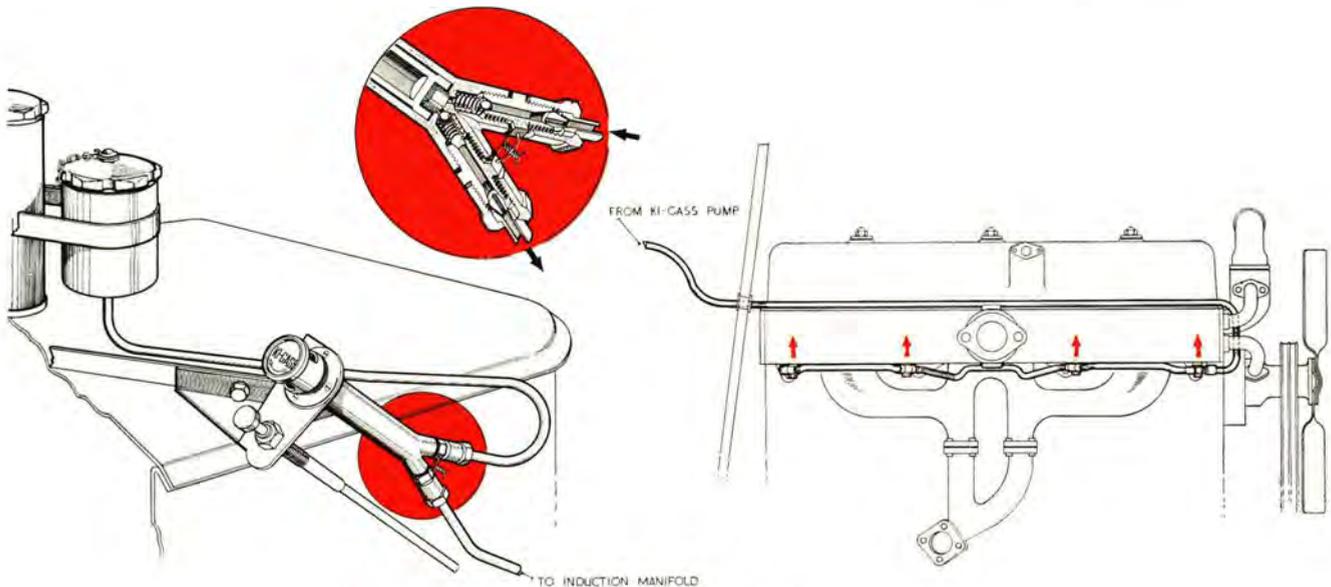


Fig. 27. Layout of Ki-gass fuel system, semi-diagrammatic.

Spring (S) is merely for the purpose of keeping rocker arm (D) in constant contact with eccentric (H) to eliminate noise.

A pipe runs from the Ki-gass fuel container to the hand priming pump, and from there to the induction manifold (see Fig. 27).

An atomiser (see Fig. 28), incorporating a small filter, is screwed into each connection of the fuel pipe to the induction pipe.

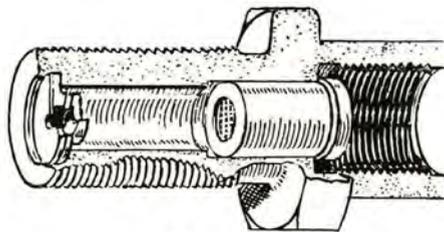


Fig. 28. Ki-gass Atomiser.

CARBURETTER (*Solex, 40 WNHPO or 40 ZNHPO*)

The 40 WNHPO Solex carburetter supersedes 40 ZNHPO, the later pattern having the zero starter valve redesigned so that the carburetter is waterproofed.

The carburetter has been designed to suit the needs of that class of vehicle which operates in dusty surroundings and on very steep inclines.

It is of the three-stage order and is equipped with a non-mechanical acceleration pump.

The object of this carburetter is to provide, in addition to the idling and maximum output stages of the carburetter, a midway economic stage, and the manner in which this is accomplished is described later (page 38).