

# DRIVING INSTRUCTIONS FOR SILVER GHOST

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## Prior To Running

Note - turn mascot 90° prior to opening bonnet.

Check engine oil.

Operate lever on left hand chassis side to open tap on engine sump.

Oil should flow from stand pipe in engine sump.

Do not be misled by the initial amount of oil in the stand pipe, the oil must flow.

If it does not, top up with oil until just flowing and close tap.

If long distance motoring, install a further one or two pints of oil for more range.

Fill with engine oil using funnel in filler at right hand side towards rear of engine - see notes re spare oil tank.

Check coolant level.

Level should be approximately 4"(10cm) from top face of filler neck (if overfull, leakage from cap will occur).

Check tyre pressures and adjust if necessary.

Ensure battery master switch (if fitted) is on.

Ensure sufficient fuel.

Use 4-star leaded fuel whenever possible otherwise use unleaded fuel with a good quality lead replacement additive such as Castrol Valvemaster. Fuel is installed by removing large hexagon head cap on centre boss of fuel tank. Ensure cap is firmly nipped or air leakage will occur.

**Note** - late cars have separate filler with winged air release nut.

Ensure winged nut tight.

Unchock clutch pedal.

Carry out 250 mile maintenance or that considered necessary if engine has not been run for more than 1 week.

## **Starting Engine When Cold**

If very cold or if engine has stood for long period, engage starting handle and turn engine over by hand at least one revolution.

Ensure chassis fuel taps are set correctly.

Fuel tap on right hand side of chassis set on.

Air pump tap on left hand side of chassis set to both pumps.

Note - late cars ensure fuel tap on Autovac is on.

Ensure fuel filler cap is tight.

Pump hand air pump on bulkhead or dashboard until at least 1lb registers on gauge.

### **Pre-War Cars**

Set steering column controls.

Ignition lever full down (retarded).

Governor/hand throttle lever approx. 1/3rd to 1/2 way up quadrant.

Mixture quadrant full rich.

Open right hand side of bonnet.

Flood carburettor by pressing flooder knob on top of float chamber until fuel flows from overflow pipe.

Engage starting handle and turn engine over by hand six compressions to suck in.

Re-flood carburettor and wait for fuel to stop flowing.

**Note** - to assist starting in very cold weather inject a small quantity of petrol directly into the inlet

manifold, via the small tap provided.

Check gear lever in neutral and handbrake on.

Switch magneto and trembler coil switches or switch to on.

Start engine from handle using correct technique or operate starter motor if fitted.

### **Post-War Cars Fitted With Priming Tap**

Set steering column controls.

Ignition lever full down (retarded).

Governor/hand throttle lever approx. 1/3rd to ½ way up quadrant.

Mixture quadrant full rich.

Switch priming tap on inside of bulkhead to priming.

Operate hand air pump approx. 10 full strokes.

Switch priming tap off to running position.

**Note** - to assist starting in very cold weather flood carburettor and leave priming tap open until engine is running so that engine can be primed while running if necessary.

**Note** - do not forget to close the priming tap (set to running position) otherwise engine will run badly.

Check gear lever in neutral and handbrake on.

Switch ignition switch on steering column to battery and magneto position.

Operate starter from button on bulkhead with left foot.

### **Post-War Cars Fitted With Starting Carburettor**

Set steering column controls.

Ignition lever full down (retarded).

Governor/hand throttle lever full down (fully closed).

Mixture quadrant lever full rich.

Switch starting carburettor control lever on dashboard to starting position.

**Note** - the starting carburettor will not operate correctly unless the throttle is fully closed.

Check gear lever in neutral and handbrake on.

Switch ignition switch to battery and magneto position or separate switches both on.

Operate starter from button on bulkhead with left foot.

Allow engine to run for approx. 30 seconds and then increase speed slightly with governor control.

As soon as will allow engine to run sweetly switch starting carburettor off to running position.

Note - in very cold weather it can be beneficial to flood the carburettor.

As Soon As Engine Starts

Advance ignition control approx.  $\frac{3}{4}$  way up quadrant.

Adjust governor/hand throttle to give slow but steady speed.

Monitor oil pressure.

Once oil pressure is established operate extra oil device on engine side bulkhead under right hand bonnet for approx. 30 seconds.

If possible, allow five minutes for engine to warm up before driving car.

Reduce mixture strength on quadrant as engine warms up.

Normal running position for mixture quadrant is with lever dead central in quadrant when engine is warm.

## **Starting Engine When Warm**

Ensure chassis fuel taps are correctly set or autovac tap is on.

Ensure fuel filler cap is tight.

Ensure at least 1lb air pressure.

Set steering quadrant controls.

Ignition lever full retard.

Governor/hand throttle lever approx.  $\frac{1}{3}$ rd way up quadrant.

Set mixture quadrant lever as considered necessary - normally to central position but depends on how warm engine is.

Check gear lever in neutral and handbrake on.

Switch ignition switch to magneto and battery position or separate switches both on.

Switch magneto on first.

Operate starter.

As soon as engine starts advance ignition lever approximately  $\frac{3}{4}$  way up quadrant towards advance position.

Adjust engine speed on hand throttle as required.

Monitor oil pressure.

Adjust mixture control as required.

**Note** - the engine can stay semi-warm for several hours. Take care not to get mixture too rich when starting with a warm engine. If the engine does not start and mixture is suspected of being too rich, set quadrant full weak, give full throttle and operate starter. As soon as engine starts adjust mixture as required.

## General Driving

Cars fitted with trembler coil. Switch to magneto only for normal running. Use trembler coil only for starting or slow running. Cars fitted with normal coil. Operate on both ignitions. The mag only and battery only are mainly for testing and should be tried occasionally.

### **Constantly check:**

Oil pressure - 15lbs to 20lbs normal running.

Fuel pressure between 1 to 3 psi, normal 2lbs (may go slightly higher when fuel tank is totally full for a short period).

Coolant temperature 75° to 80°C normal. Must not exceed 90°C.

Under certain conditions if prolonged hill climbing may be allowed to reach 95°C for a short period. It is important engine runs at correct temperature. In cold weather it may be necessary to blank the lower part of the radiator. Monitor charging system.

### **Pre-War CAV System.**

Switch system on with far left hand switch on CAV switchbox. Switch up for on.

Ammeter shows charging rate, should be approx. 4 amps.

Volt meter shows battery voltage.

Battery voltage should not fall below 12 volts.

If showing 15 volts or more switch off for a period to prevent overcharging battery.

**Note** - the early CAV system has a free wheel device instead of a cut out. This system is deliberately noisy so that the driver can hear it operating and to remind him to switch off when leaving the car.

### **Post-War Lucas System.**

Press switch D battery (dynamo) on switchbox in to charge battery.

Always charge battery after starting engine.

Ammeter shows rate of charge. Normally between 4 to 10 amps.

If long distance driving with little electrical use, occasionally switch off charging system to prevent overcharging battery.

**Note** - both systems do not charge when the clutch pedal is depressed.

Do not use excessive revs when manoeuvring the car or in intermediate gears. The engine is designed to perform from very low rpm.

Recommended maximum cruising speed 55 mph.

## **Controls**

### **For general running with warm engine, set:**

Ignition lever  $\frac{3}{4}$  way up quadrant.

Governor/hand throttle lever to produce good steady slow running (not too slow).

Mixture quadrant lever in central position.

For cruising and good fuel consumption on flat roads, ignition lever can be set to full advance and mixture quadrant lever 1 or 2 notches to left from centre to weaker position.

For extra power when hill climbing, mixture can be enriched slightly 1 or 2 notches to right of

centre position.

**For good slow running:**

Set ignition lever ½ way in quadrant.

Governor/hand throttle lever as desired.

Mixture lever central to 1 notch rich.

Sometimes beneficial to operate on battery ignition only.

## **Gearbox**

If unfamiliar with the car, study gear quadrant operation prior to driving.

There are 3 and 4 speed variants with normal H pattern layout. Care must be taken to disengage lever from locking segments before moving lever from one gear to another. This should be practiced until it becomes second nature.

In all cases it is necessary to operate the small secondary lever on the main lever to be able to select reverse. When engaging gear from stationary wait several seconds prior to engaging. If gear lever will not engage release clutch pedal and try again or allow car to roll slightly (there is no excuse for crashing a gear while stationary). It is considered good practice to use 1st gear when moving off from rest although there are times when this is not necessary or desirable.

Do not rev engine as with a modern car - only a slight increase in engine revs is required to pull away. Use normal double de-clutching procedures when changing gear. Ensure governor/hand throttle is set in normal idling position otherwise difficult gear changing may be caused.

## **Brakes**

Apart from very late cars with 4-wheel brakes the braking is on the rear wheels only and stopping power in the wet is extremely poor.

### **Cars With Transmission Brake**

The handbrake is the primary brake for general driving.

The foot brake operates the transmission brake and should be used at low speeds only

when manoeuvring or in an emergency.

Due to the transmission brakes high rotational speed it will overheat very quickly.

In emergency use both brakes.

### **Cars With Concentric Rear Brakes**

The foot brake is the primary brake but the handbrake is a driving brake also.

In emergency use both brakes.

### **Cars With Four Wheel Brakes**

The foot brake is the primary brake and is servo assisted.

The handbrake may also be used in emergency.

## **Leaving The Car**

Switch off charging system (particularly early CAV systems).

Chock out clutch pedal.

Leave controls neatly, ignition and governor full down, mixture central.

Release fuel tank pressure from tap on left hand side of chassis or fuel cap on late cars.

Switch fuel off from tap on right hand side of chassis.

Switch battery master switch off if fitted.

## **General Notes**

### **Engine**

Check engine oil regularly. The engine uses oil and the capacity is only eight pints. If long periods



of running between stops are envisaged overfill engine oil level by one or two pints. Fill with oil through filler at rear right hand side of engine. The spare oil tank is located on the nearside chassis frame and is operational but time consuming to use. It is normally preferred to top up by hand, however, if required to use, operate tap under tank and pressurise tank with hand pump. If operating in very hilly conditions ensure engine oil is well topped up as oil can surge in the sump on steep inclines and when braking with intermittent loss of oil pressure.

## **Running temperature.**

When steep hill climbing in hot weather, running temperature does tend to increase - under these circumstances, reduce speed and change down to allow engine to rev freely. If necessary, set ignition quadrant to full advance but do not allow engine to pink.

Starting engine from handle. Ensure controls are correctly set and in particular ignition lever is fully retarded. Ensure handbrake is on and gear lever in neutral. Switch ignition on. Stand with feet apart and legs clear of handle arc. Engage handle at approx. 7 o'clock position, keep fingers and thumbs behind handle and pull upwards. Never push downwards and only pull one compression at a time. It is not necessary to try to turn engine quickly. A Silver Ghost will start quite easily by carefully pulling one compression at a time.

**Note** - if these instructions are carried out there should be no risk of getting hurt.

Starting engine off switch. This is starting the engine without the use of starter motor by causing an ignition spark in a cylinder with pre-compressed mixture. If it is desired to achieve this assistance can be given by the way in which the engine is switched off. With the engine warm increase idle speed slightly to a light purr. Set mixture quadrant lever 1 or 2 notches rich. Switch off engine from both ignitions. Return controls to a neat and tidy position. Governor and ignition full down. Mixture central.

### **To start.**

Check gear lever in neutral and handbrake on. Set steering column controls for starting as normal. Switch ignition switch or switches for both ignitions on. On trembler coil cars switch magneto on before trembler coil. Very often engine will start on switching trembler coil on. If not and on non-trembler cars, move ignition control smartly to full advance and back again, when, if all is well, engine will start. This is a very imprecise method and depends entirely on the engine stopping in the right place when switched off and on conditions remaining right for the period of time standing. Some cars are better than others and in particular cars fitted with trembler coils.

## **Transmission**

When idling in traffic do not keep clutch pedal depressed longer than necessary. Oil is pumped into

the clutch when the pedal is depressed and the clutch will become over-oiled. If gear changing becomes difficult or the clutch starts to slip it is likely too much oil has entered clutch. To rectify consult maintenance instructions.

If the clutch starts to squeak when operating there will be insufficient oil in clutch. To rectify consult maintenance instructions. To maintain refinement of clutch operation always ensure that the clutch is chocked out when the car is stationary. If unfamiliar with the car study operation of gear quadrant and gear positions prior to driving.

## **Fuel**

Use 4-star leaded fuel whenever possible otherwise use unleaded fuel with a good quality lead replacement additive such as Castrol Valvemaster.

**Note** - modern petrol's are more volatile than those on which these cars were designed to run. In very hot weather this can cause problems and affect the running of the car. This becomes apparent by an excessive richness in carburetion after idling causing a flat spot on acceleration. It also causes poor starting when hot and poor running after initial start when hot. If experienced run engine on both ignitions. Adjust mixture quadrant as considered necessary for best running.

## **Lights**

Lighting systems vary to some extent from car to car. There are two common systems, CAV and Lucas.

### **CAV Types. Pre-War.**

The light switches are mounted on the CAV switch box and clearly marked.

The switches operate individual lights and are switched up for on.

### **Lucas Types. Post-War.**

Two light switches are mounted on the Lucas switch box. 'H' for headlights and 'S' for sidelights.

Press switch for on and pull for off.

Both types of switch box have charging system fuses in them, also a socket for lead light or other auxiliary equipment.