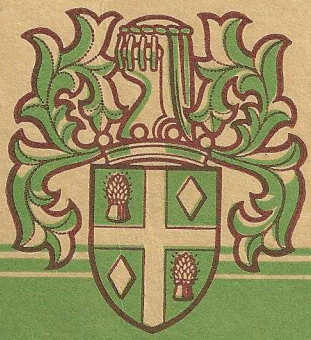
AUSTIN
A40 MODELS

RUNNING AND MAINTENANCE INSTRUCTIONS



THE AUSTIN MOTOR Co LTD
LONGBRIDGE
BIRMINGHAM

AUSTIN

A40

MODELS

RUNNING AND MAINTENANCE INSTRUCTIONS

APRIL 1954

THE AUSTIN MOTOR CO. LTD.

LONGBRIDGE, BIRMINGHAM

BOX 41 G.P.O.

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INTRODUCTION

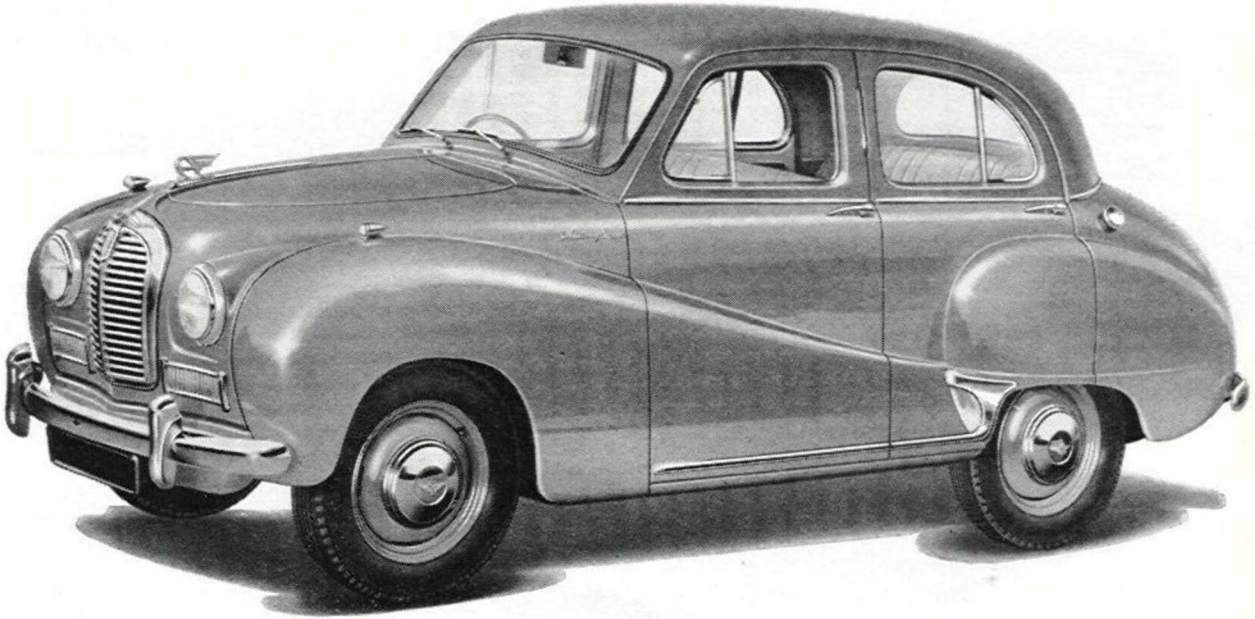
THIS booklet gives the running instructions necessary to ensure satisfactory operation of the 'A40' Somerset Saloon, Coupé, Countryman, Pick-up and Delivery Van.

It does **not** include major maintenance attentions, which should be entrusted to the local Austin dealer, who will use only genuine Austin parts as replacements.

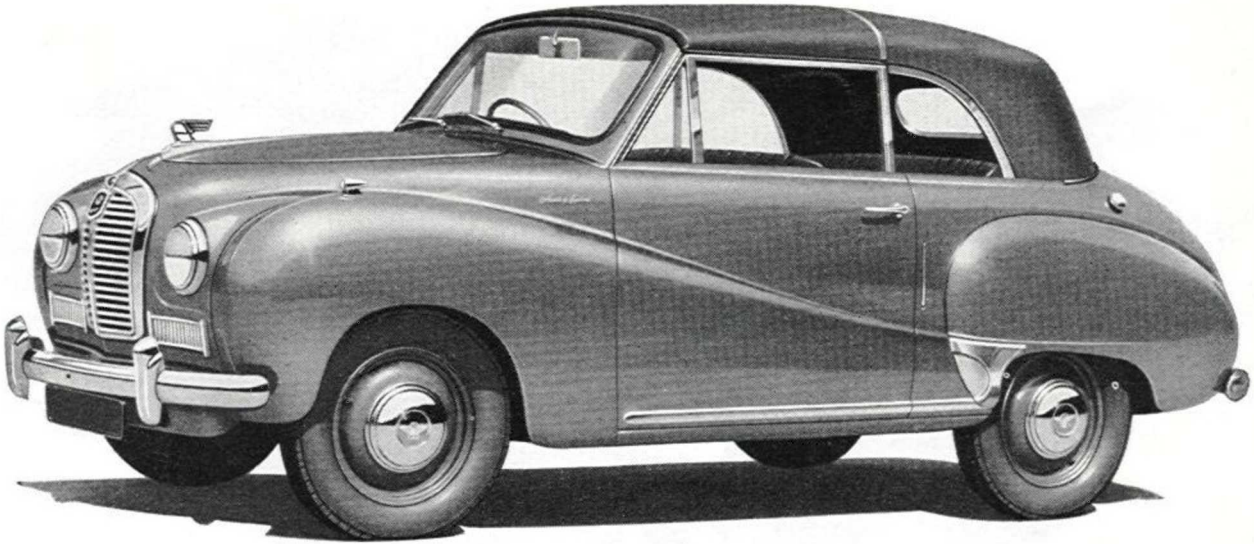
The owner should bear in mind that the warranty does not cover any failure due to inadequate maintenance, nor is it extended or varied in any way by the following recommendations.

Accessories and equipment are subject to the warranties issued by their makers, a list of whom appears at the end of this booklet.

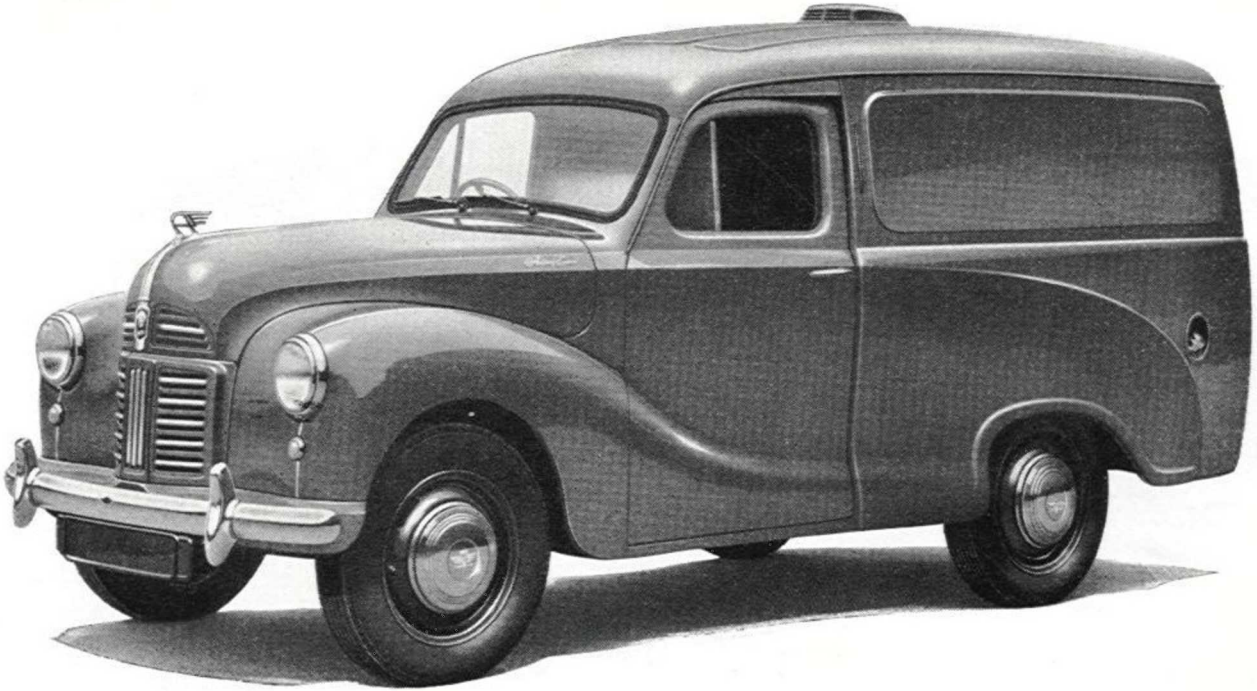
Alterations in design may sometimes occur which entails additional or varied maintenance work. It is not always immediately possible to include such details in the handbook, therefore operators are advised to keep in touch with their local Austin dealer's service department.



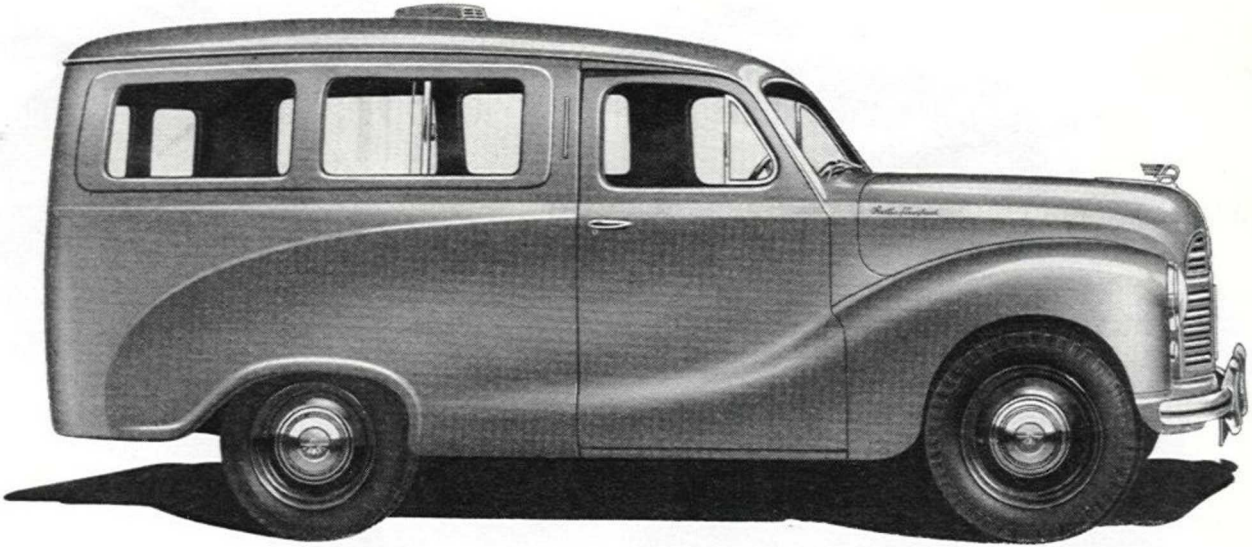
THE AUSTIN 'A40' SOMERSET SALOON



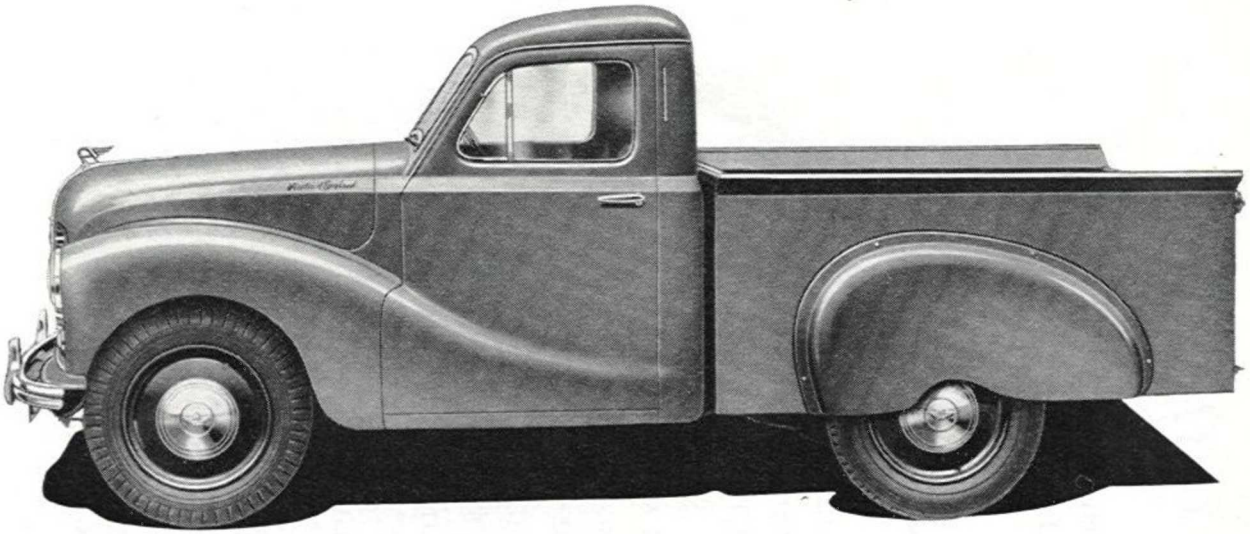
THE AUSTIN A40' COUPÉ



THE AUSTIN 'A40' DELIVERY VAN



THE AUSTIN 'A40' COUNTRYMAN



THE AUSTIN 'A40' PICK-UP

CONTENTS

GENERAL INFORMATION

General Dimensions

Saloon: Overall length—13 ft. 3½ ins. (4m. 4 cm.). Overall width—5 ft. 3 ins. (1 m. 60 cm.). Overall height—5 ft. 4 ins. (1 m. 62 cm.). Wheelbase—7 ft. 8½ ins. (2 m. 35 cm.). Track (front)—4 ft. 0½ ins. (1 m. 22 cm.). Track (rear)—4 ft. 2 ins. (1 m. 26 cm.). Ground clearance—6¾ ins. (17 cm.). Turning circle—37 ft. (11.27 m.). Weight—19 cwts. 14 lbs. (972 kgs.).

Coupé: Overall height—5 ft. 3½ ins. (1 m. 61 cm.). Weight—19 cwt. 56 lbs. (991 kgs.). Other dimensions as Saloon.

Van and Countryman: Overall length—13 ft. 3⅜ ins. (4 m. 4 cm.). Overall width—5 ft. 2¾ ins. (1 m. 59 cm.). Overall height—6 ft. 1½ ins. (1 m. 85 cm.). Wheelbase—7 ft. 8½ ins. (2 m. 35 cm.). Track (front)—4 ft. 0 13/16 ins. (1 m. 22 cm.). Track (rear)—4 ft. 2¾ ins. (1 m. 26 cm.). Ground clearance—6¾ ins. (17 cm.). Turning circle—38 ft. (11.58 m.). Body capacity **(Van)**—116 cu. ft. Load capacity—10 cwts. Unladen weight **(Van)**—19 cwts. (965 kgs.). Unladen weight **(Countryman)**—20 cwts. 28 lbs. (1029 kgs.).

Pick-up: Overall length—13 ft. 2 ins. (4 m. 1 cm.). Overall width—5 ft. 4½ ins. (1 m. 64 cm.). Overall height—5 ft. 6¾ ins. (1 m. 70 cm.). Load capacity—10 cwts. Unladen weight—18 cwts. 44 lbs. (934 kgs.). Chassis dimensions as Van and Countryman.

Engine

Number of cylinders—4. Bore—2.578 ins. (65.48 mm.). Stroke—3.5 ins. (89 mm.). Cubic capacity—73.17 cu. in. (1,200 c.c.). B.H.P.—42 at 4,500 r.p.m.; Max. torque—58 lbs. ft. (8.02 mkg.) at 2,400 r.p.m. Compression ratio—7.2 to 1. Firing order—1–3–4–2. Valves—Overhead, push-rod operated. Timing—Inlet opens 5° B.T.D.C., closes 45° A.B.D.C.; exhaust opens 40° B.B.D.C., closes 10° A.T.D.C. Inlet and exhaust clearances (hot or cold)—.015 in. (.381 mm.). Engine No.—Located on right side of cylinder block, adjacent to cylinder head.

Lubrication

Pump—Gear type. Pressure (hot)—40–45 lbs. per sq. in. (2.8–3.2 kg./cm²). Filter—By-pass type. Sump capacity—7 Imp. pints (4 litres).

Fuel System

Pump—A.C. Sphinx mechanical type "U". Carburetter—Zenith downdraught, model No. 30 VIG-8. Choke tube—25. Main jet—90. Compensating jet—65. Slow running jet—50. Needle and seating—1.5. Pump jet—50. Tank capacity—8¾ Imp. gallons (37 litres).

Cooling System

Circulation—Centrifugal pump and fan. Temperature control—Thermostat. Normal operating temperature—164° F. (73° C.). Capacity—12½ Imp. pints (7 litres).

Ignition

Type—Lucas 12 volt. Coil—Lucas, type Q.12. Distributor—Lucas, type DM2. Contact breaker gap—.014–.016 in. (.356–.406 mm.). Timing—7° before T.D.C. fully retarded. Sparking plugs—Champion N.8.B. Long Reach. Plug gap—.018 in. (.457 mm.).

Clutch

Type—Borg & Beck single dry plate. Diameter—7¼ ins. (18.42 cm.). Pedal free movement—¾ in. (19.05 mm.).

Gearbox

Type—4-speed synchromesh (on 2nd, 3rd and top) with steering column mounted gear lever. Gear ratios—1st, 3.89 to 1; 2nd, 2.44 to 1; 3rd, 1.54 to 1; top, 1 to 1; reverse, 5.39 to 1. Oil capacity—3 Imp. pints (2 litres).

Propeller Shaft

Type—Hardy Spicer open shaft with needle roller bearing universal joints.

Rear Axle

Type—Spiral bevel three-quarter floating. Oil capacity—2¼ Imp. pints (1.28 litres). Overall gear ratios **(Saloon and Coupé)**—1st, 20.54 to 1; 2nd, 12.88 to 1; 3rd, 8.13 to 1; top 5.28 to 1; reverse, 28.46 to 1. **(Commercial Vehicles**—1st, 23.89 to 1; 2nd, 14.95 to 1; 3rd, 9.43 to 1; top, 6.14 to 1; reverse, 33.09 to 1. Road speeds in m.p.h. at 1,000 r.p.m. **(Saloon and Coupé)**—1st, 3.67; 2nd, 5.85; 3rd, 9.26; top, 14.26; **(Commercial Vehicles)**—1st, 3.34; 2nd, 5.33; 3rd, 8.45; top, 12.99.

Steering

Type—Cam and Lever with 14 to 1 ratio. Adjustment—Screw and shim.

Suspension

Front: Type—Independent by coil springs and wishbones. Castor angle—2¼°. Camber angle—1°. Swivel pin inclination—6½°. Track toe-in—1/16th to 1/8th in. (1.59–3.18 mm.).

Rear: Type—Semi-elliptic underslung reverse camber leaf springs.

Shock Absorbers

Type—Armstrong double-acting hydraulic piston.

Brakes

Foot Brake: Type—Girling Hydraulic with two leading shoes on front wheels. Drum diameter—9 ins. (22.86 cm.). Pedal free movement—⅛ in. (3.18 cms.).

Handbrake: Type—Pistol grip operating mechanically on rear wheels.

Wheels

Saloon and Coupé: Type—16 × 3.00 pressed steel disc.

Commercial Vehicles: Type—17 × 3.25 pressed steel disc.

Tyres

Saloon and Coupé: Type—Dunlop 5.25–16 Extra Low Pressure. Pressures (2 passengers only)—22 lbs. per sq. in. (1.55 kg./cm.^{2}) front; 24 lbs. per sq. in. (1.69 kg./cm.^{2}) rear. Pressures (full load)—24 lbs. per sq. in. (1.69 kg./cm.^{2}) front; 26 lbs. per sq. in. (1.83 kg./cm.^{2}) rear.

Commercial Vehicles: Type—Dunlop 5.00–17. Pressures—24 lbs. per sq. in. (1.69 kg./cm.^{2}) front; 36 lbs. per sq. in. (2.53 kg./cm.^{2}) rear.

Jacking System

Saloon and Coupé: Type—Stevenson, operated by wheelbrace from inside car.

Commercial Vehicles: Type—Screw jack to individual wheels.

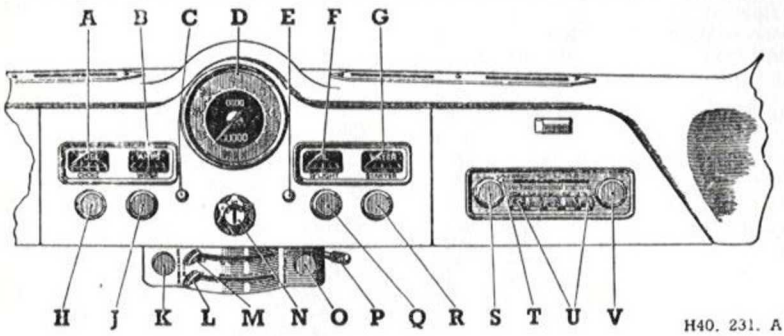
Chassis Frame

Type—Welded pressed steel with full length box section side, front and rear cross members, stiffened by cross bracing. Chassis No.—Located on frame, adjacent to the engine front mounting bracket on the side opposite to the steering gear.

Electrical Equipment

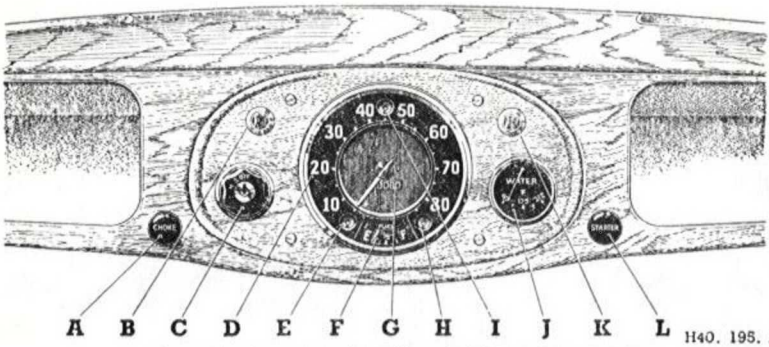
Type—Lucas 12 Volt. Battery—Lucas G.T.W. 7A. Capacity—38 amp, hrs. at 10 hr. rate. Dynamo—Lucas type C39PV/2. Starter Motor—Lucas type M35G. Cut-out and Regulator—Lucas, type RB106. Fuse unit—Lucas, type SF6. Horns—Lucas Windtone, type WT614. Direction Indicators—Lucas, type SF80. Windscreen wipers—Lucas, type CRT. Heating and Ventilating System—Smiths 3½ K.W. "Series III".

INSTRUMENTS AND CONTROLS



THE SALOON AND COUPE INSTRUMENT PANEL

A—Fuel gauge.
B—Ammeter.
C—Headlight beam warning light.
D—Speedometer.
E—Ignition warning light.
F—Oil pressure gauge.
G—Water temperature gauge.
H—Choke control.
J—Windscreen wiper control.
K—Extra air control.
L—Air control
M—Demister/defroster control
N—Ignition and lighting switch.
O—Heater motor switch.
P—Speedometer trip control.
Q—Panel light switch.
R—Starter control.
S—Radio on/off switch.
T—Tone control.
U—Tuning push-buttons.
V—Manual tuning control.



THE COMMERCIAL VEHICLE INSTRUMENT PANEL

A—Choke control.
B—Windscreen wiper switch.
C—Ignition and lighting switch.
D—Speedometer.
E—Oil pressure warning light.
F—Fuel gauge.
G—Mileage recorder.
H—Ignition light.
I—Headlight warning light.
J—Thermometer.
K—Panel light switch.
L—Starter control.

INSTRUMENTS

Speedometer: Registers the vehicle speed and total mileage. The trip figures at the top of the speedometer can be set to zero by pushing in the spring-loaded knob on the right-hand side of the heater control panel, and turning it in an anti-clockwise direction.

Oil Pressure Gauge (Saloon and Coupé): Indicates the oil pressure in the engine. It does not show the quantity of oil in the sump. Should the gauge fail to register any pressure, stop the engine immediately and investigate the cause.

Oil Pressure Warning Light (Commercial Vehicles): Glows red when the ignition is switched on and fades out after

the engine has been started. Low oil pressure or insufficient oil in the sump is indicated by a red glow when the engine is running.

Ammeter (Saloon and Coupé): Indicates the flow of current into or out of the battery. With the automatic voltage control system very little charge is shown when the battery is well charged.

Ignition Warning Light: Should glow red when the ignition is switched on and fade out when the dynamo is charging the battery. Failure to do so should be investigated immediately.

Headlight Beam Warning Light: A red glow appears when the full headlights are switched on, with the two beams full ahead. The light goes out when the headlights are dipped.

Fuel Gauge: The fuel gauge indicates the contents of the tank when the ignition switch is "on".

When the tank is being filled, switch off to stop the engine and then switch on again, when the needle will record the amount of fuel entering the tank.

Water Temperature Gauge (optional extra on Commercial Vehicles): This records the temperature of the cooling water circulating in the cylinder block and radiator. The correct operating temperature under normal conditions should not be below 164° F. (73° C.).

FOOT CONTROLS

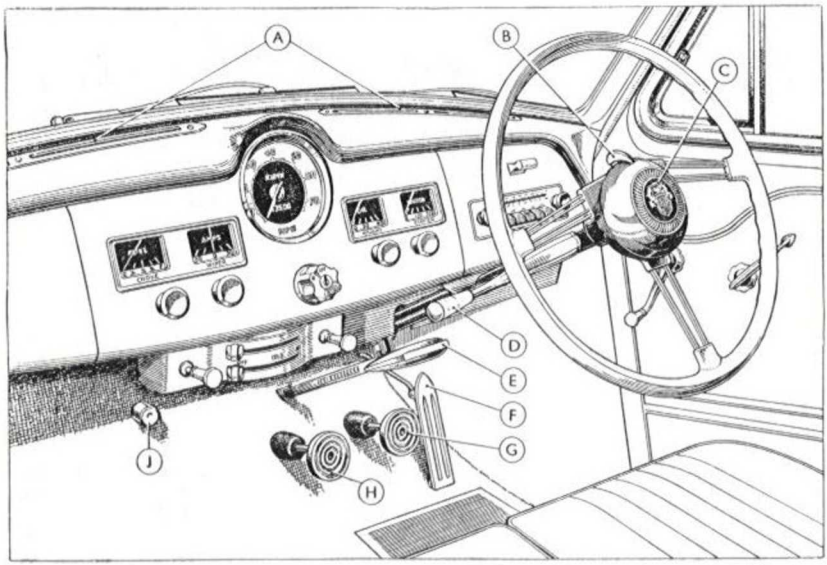
Accelerator: The small right-hand pedal which operates the carburetter throttle.

Brake: The centre pedal which operates the brakes on all four wheels.

Clutch: The left-hand pedal. The foot should be kept clear of this pedal except when engagement or disengagement of any gear is intended, or when in heavy traffic. Press to the floor for complete disengagement.

HAND CONTROLS

Handbrake: Pistol grip type, situated under the fascia panel, and fixed to the left side of the steering column. Operates mechanically on the rear wheels only.



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DRIVING CONTROLS

A—Demisting vents.
B—Trafficator switch.
C—Horn button.
D—Gear lever.
E—Handbrake.
F—Accelerator pedal.
G—Brake pedal.
H—Clutch pedal.
J—Dip switch.

Gear Lever: Should always be in neutral when starting the engine. The lever is mounted on the left side of the steering column. To engage a gear, depress the clutch and move the lever to the required position as described on page 16.

Choke Control: Pull the control to its limit when starting the engine from cold. Once the engine is running, push in the choke control completely as soon as the engine will run evenly without its use.

Ignition Switch: Turn the key clockwise to switch on. Do not leave the switch "on" when the vehicle is stationary—the red warning lamp is a reminder. The ignition key may also be used for locking the driver's door and the luggage or load compartment.

Lights Switch: The central moulding which surrounds the ignition switch. Turn clockwise to the first notch to put on the sidelights, and to the second to put on the headlights. The headlights are dipped by foot operation.

Starter Switch Knob: Pull out the control knob to start, and release as soon as the engine fires. If the engine fails to start after a few revolutions, do not operate the starter again until the engine is stationary.

Direction Indicators: The indicators are controlled from the centre of the steering wheel. Normally, after the vehicle has turned a corner, they return automatically, but when only a slight turn has been made it may be necessary to return them manually with the switch.

Heater and Demister Controls (Saloon and Coupé): These are situated centrally below the fascia and provide the means for regulating the heating and demisting system. Full operating instructions are given on page 33.

Extra Air Control (Saloon and Coupé): A supply of cold air, entirely independent of the heating system, can be admitted to the car interior for ventilation purposes by pulling out the control located on the left-hand side of the heater panel.

Heater Control Switch (Commercial Vehicles): Turn to the right until a click is heard. This starts the heater fan. The further the control is turned the less will be the speed of the fan, due to the fact that a rheostat is incorporated.

Windscreen Wipers: To start the electric wipers pull out the wipers control. To park, switch off by pressing the control inwards when the arms are at the end of the stroke. Do not try to push the arms across the windscreen by hand.

In the case of the Commercial Vehicles, the wipers are controlled by a rotary switch situated at the top left-hand side of the instrument panel.

Panel Light Switch: Pull out the switch control knob to illuminate the instruments. Only operates when the sidelamps are "on."

In the case of the Commercial Vehicles the panel lights are controlled by a rotary switch situated at the top right-hand side of the instrument panel.

Horn Button: Mounted at the centre of the steering wheel, and can be operated when the ignition switch is off.

Interior Light: Combined with a switch in the roof.

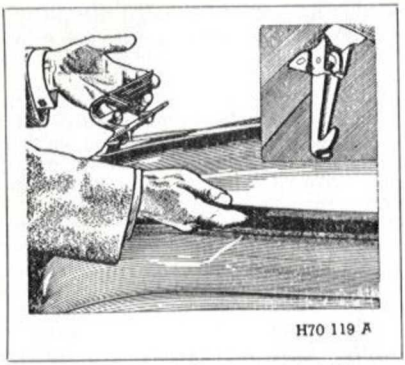
Spare Wheel: Secured at the rear of the Saloon in the luggage compartment, and under the load platform of the Commercial Vehicles.

Seating: Adjustable front seats or bench type seat in Saloon and Coupé, single adjustable seat in Delivery Van and full width bench type seat in Pick-up. The Countryman driver's seat may be adjusted and the front passenger seat squab and cushion both hinge forward to give access to rear seating.

Doors: The right side front door, the luggage compartment of the Saloon and Coupé and the rear doors of the Countryman and Delivery van may be locked with the ignition key. The other doors may be locked by lifting the inside door handles.

An additional safety lock is fitted to the rear door interior locking handles of the Saloon. This device is intended to prevent inadvertent opening of the doors, particularly by children, when the vehicle is in motion.

To lock the doors, turn the escutcheon in a clockwise direction on the left door handle and anti-clockwise on the right door handle. This can only be effected, however, when the handles are in the unlocked position.



THE SALOON BONNET CATCH
Insert the fingers and push back the safety catch

Bonnet Catch (Saloon and Coupé): To open the bonnet unlock the barrel type anti-theft lock with the ignition key, and pull diagonally upwards on the handle formed by the "flying A" motif. This will have the effect of releasing the locking catch and it will then be possible to raise the bonnet an inch or so until held by a spring-loaded safety catch. Insert the fingers and push back this safety catch, when the bonnet may be lifted right up. The bonnet is held open by a stay clipped to the surrounding apron, and a small locating cup is provided in the radiator top tank to keep the stay secure when in use.

The spring-loaded safety catch is designed to hold down the bonnet while driving in the event of the bonnet not having been properly locked. When closing the bonnet a slight pressure exerted downwards on the bonnet top will help the locking catch to engage positively.

Bonnet Catch (Commercial Vehicles): To open the bonnet pull the control knob situated below the fascia panel, on the extreme right-hand side. The bonnet will rise an inch or so and will then be held by a spring-loaded safety catch, after which the procedure is exactly the same as that given for the Saloon and Coupé.

STARTING

BEFORE starting the engine check the oil level in the sump and the water level in the radiator. Ensure that the gear lever is in neutral and that the hand-brake is applied. If the engine is cold pull out the choke control. In cold weather the engine should first be rotated several times with the starting handle. Do *not* work the accelerator pedal rapidly up and down as the carburetter incorporates an accelerator pump.

Switch on the ignition; ensure that the ignition warning light glows and that the fuel gauge registers; then pull the starter control firmly. Release it if the engine fails to start within five or six seconds, wait for the engine to stop rotating and then pull the starter again.

Should the engine not start after a reasonable number of attempts, check up on possible causes. Do not persist in operating the starter, as a great strain is imposed on the battery by so doing. As soon as the engine starts, release the starter and warm the engine up at a fairly fast idling speed.

Should the oil gauge fail to register any pressure or if the pressure is very low, stop the engine immediately and investigate the cause. Failure to do so may result in serious damage to the engine. Also check that the ignition warning light goes out when the engine is running above idling speed, as this indicates that the generator is charging the battery.

A thermostat is incorporated in the cooling system to assist the engine in warming up from cold, but do not, under any circumstances, race the engine in an attempt to speed up the process.

Push in the choke control completely as soon as the engine will run evenly without its use.

When the vehicle has been out of action for several days, the fuel in the carburetter may have evaporated. In these circumstances, before attempting to start the engine refill the carburetter by operating the priming lever on the fuel pump, this being located low down on the left side of the engine.

The pumping action should be distinctly felt until the carburetter bowl is full. If this pumping action is not in evidence, turn the engine with the starting handle about one full turn, whereupon the priming lever should then be free to pump.

RUNNING-IN THE NEW VEHICLE

THE Austin 'A40' is designed and built with great care to high quality standards. For that reason the owner will find that considerate treatment during the all-important running-in period will be well repaid by trouble free running and maximum efficiency throughout its life.

The following speeds should not be exceeded in the gears for the first 500 miles (800 kilometres):—

1st	2nd	3rd	Top	
7	12	18	30	m.p.h.
10	18	28	48	k.p.h.

It is most important to remember that at no time during the running-in period must the engine be over-loaded, as in attempting to ascend hills in top gear at low vehicle speed. The load should be eased by changing down to a lower gear.

Fierce acceleration must also be avoided, and remember that the engine should never be raced in neutral.

On completion of the first 500 miles (800 km.), the running-in speed in each gear may be progressively increased, but full power should not be used until at least 1,500 miles (2,400 km.) have been covered, and even then only for short periods at a time. During this mileage a slight falling-off in engine power may develop, in which case it is beneficial to lightly grind-in the valves and re-set the valve clearances. No engine or complete vehicle can be considered fully run-in until it achieves 2–3,000 miles (4–5,000 km.).

The use of upper cylinder lubricant is recommended at all times, but most particularly during the running-in period. See centre pages for recommended brands.

DRIVING

THE gearbox has four forward speeds and a reverse. Start only in first gear, which is engaged by depressing the clutch pedal and moving the gear lever away from the steering wheel and then upwards. Should the gear not readily engage, momentarily release the clutch pedal; after which, with the clutch again depressed, it should be possible to engage the gear. Gradually release the clutch pedal, at the same time gently depressing the accelerator and releasing the handbrake. The vehicle will move forward, gathering speed in accordance with the amount the accelerator is depressed.

Second gear is engaged by depressing the clutch pedal, moving the gear lever straight downwards and then releasing the clutch pedal. Ease up on the accelerator whilst changing to a higher gear, and gradually depress the accelerator when the higher gear is engaged.

To engage third gear, move the gear lever upwards into neutral, then towards the steering wheel, and finally upwards again.

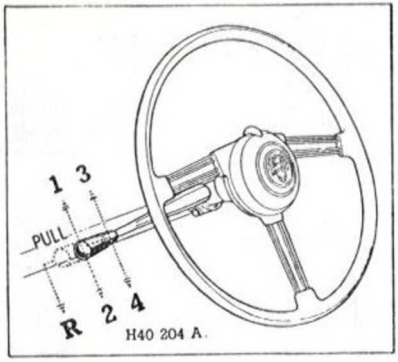
Engage top gear by moving the lever straight downwards, parallel to the steering wheel.

Changing down is an exact reversal of the above procedure, except that the accelerator must be kept depressed whilst the gear is being changed, in order to speed up the engine in accordance with the lower gear.

To stop the vehicle, release the accelerator, apply the footbrake and depress the clutch pedal before the vehicle comes to a standstill. After applying the handbrake and moving the gear lever into neutral release the clutch and footbrake.

To engage reverse, which must only be done when the vehicle is stationary, move the gear lever towards the instrument panel as far as it will go, at the same time pulling outwards on the lever knob, and then move the lever downwards. Remember, however, that the gearing is now lower than first gear. Consequently release the clutch slowly until the vehicle just begins to move, and then gently depress the accelerator to give the speed desired.

Do not slip the clutch instead of using the handbrake when temporarily halted on an ascent.



THE GEAR POSITIONS

Before descending a steep hill, it is advisable to engage an intermediate or first gear. The engine will then provide a useful braking action.

Driving Hints

Never operate the starter control when the vehicle is in gear.

Remember to switch on the ignition before attempting to start the engine.

Do not persist in pulling the starter control if the engine will not fire.

Release the choke control as soon as the engine will run evenly without its use.

Do not leave the ignition switched on when the engine is not running.

Never leave the vehicle in gear with the handbrake unapplied.

Do not engage reverse gear when the vehicle is moving forwards or forward gear when the vehicle is moving backwards. Serious damage may result.

Avoid slipping the clutch in traffic or on an ascent.

Never coast the vehicle with a gear engaged and the clutch pedal depressed.

Do not race the engine in neutral at any time.

Never run the vehicle with the radiator completely blanked off.

Avoid running the engine at high speeds for the first 500 miles (800 km.).

Never fill the radiator with cold water when the engine is hot.

Do not, under any circumstances, run the engine in a closed garage or similar restricted atmosphere. The exhaust fumes are highly poisonous and if inhaled will quickly produce grave, if not fatal results.

Skidding.

Skidding is usually due to sudden acceleration, braking or change of direction on an icy, greasy or loose road surface. If the rear wheels skid, release the accelerator or brake pedal (as the case may be) and turn the steering wheel towards the direction of the skid to regain wheel grip on the road.

Wet Brakes.

After the vehicle has been washed or driven through water the brake linings may become wet. To dry them, apply the brakes several times with the vehicle moving slowly. Emergency braking with wet brakes is extremely dangerous and is to be avoided at all costs.

REGULAR ATTENTIONS

THE following is a summary of the regular attentions required to maintain the Austin 'A40' in perfect running order. These instructions should be closely followed, whether the attentions are undertaken by the operator or by an Austin agent.

Under arduous conditions, as, for instance, very dusty or muddy roads and tracks, or heavy loads, it will be advisable to attend to chassis lubrication more frequently than every 1,000 miles (1,600 km.).

During the first 500 miles (800 km.), Austin Agents are under agreement to carry out a "Post Delivery Check" and a list of the maintenance attentions covered by this service is given on page 47.

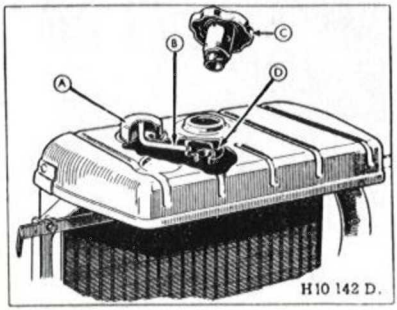
DAILY

Engine: Check the level of oil in the sump and top up if necessary to the "FULL" mark on the dipstick. The oil filler is in the valve rocker cover and the dipstick is on the right side of the engine.

After adding oil, allow a few seconds to elapse for the oil to reach the sump from the valve rocker cover before checking the level.

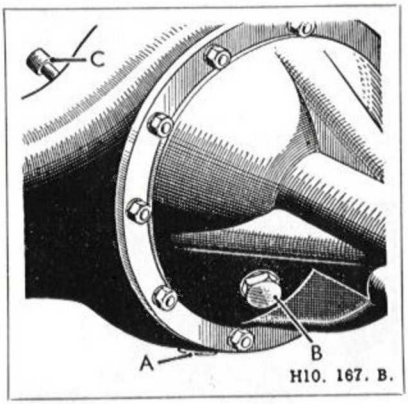
Radiator: Check the level of water in the radiator and top up if necessary. Fill to just below the top of the filler plug threads, when the engine is cold.

Tyres: Check all tyre pressures, using a tyre gauge, and inflate, if necessary, to the recommended pressures. Ensure the valves are fitted with screw caps and inspect the tyres for possible damage. Remove any flints or nails from the treads and see that there is no oil or grease on the tyres. See section on tyres for correct pressures.



THE RADIATOR HEADER TANK

A—Expansion chamber. B—Overflow pipe. C—Filler cap. D—Filler cap well



THE REAR AXLE

A is the drain plug, B the filler plug, and C the breather.

FIRST 500 MILES (800 km.)

Engine: On new and reconditioned engines the sump should be drained and refilled with new oil after the first 500 miles (800 km.). At the same time as these changes are made, the cylinder head nuts should be checked and tightened, if necessary. Always check the centre cylinder head nuts first and work gradually to the outside, tightening each nut a little at a time. This ensures that the pressure on the cylinder head is equalised.

Gearbox and Rear Axle: After the first 500 miles (800 km.), drain the gearbox and rear axle and refill with new oil.

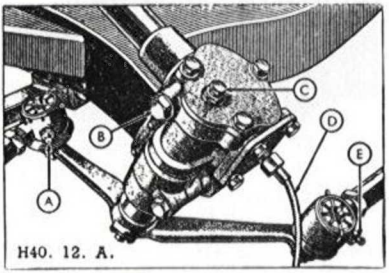
Always drain the oil after a run, since it will then flow more easily.

EVERY 1,000 MILES (1,600 km.)

Gearbox: Check the level and top up if necessary. To reach the filler plug lift the carpet and remove the access plate on the right side of the gearbox covering.

Remove the plug and fill up to the bottom of the threads. This gives the correct level.

Rear Axle: Check the level and top up if necessary, using the oil gun adapter. The filler plug is located on the forward side of the axle and also serves as an oil level indicator. After topping-up allow time for any surplus oil to run out should too much have been injected. This is most important as if the axle is overfilled, the lubricant may leak through to the brake linings and lessen their efficiency.



H40. 12. A.

THE STEERING BOX

A—Steering side tube. B—Filler plug. C—Adjusting screw. D—Horn cable. E—Steering cross tube.

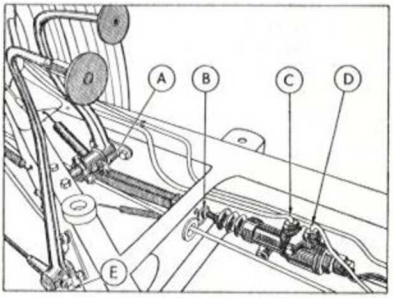
Steering Box: Check the level and top-up if necessary, using the adapter on the oil gun. Take care to ensure that no dirt or grit enters the steering box when removing or replacing the filler plug.

Clutch Pedal: With the oil gun, lubricate the nipple on the pedal lever pivot.

Brakes: Apply the oil gun to the brake balance lever on the rear axle, the handbrake pivot, and the brake pedal pivot nipple.

Shackle Pins: These are on the rear ends of the rear road springs and should be given a charge of oil. There are two nipples, one on each top shackle.

Front Suspension: Apply the oil gun to the lower arm joints where they meet the swivel axle housings (C).



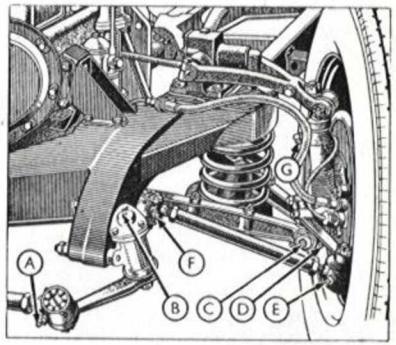
H70. 113. C.

THE PEDALS

A—Brake pedal nipple. B—Adjusting nut. C—Master cylinder inlet union. D—Master cylinder outlet union. E—Clutch pedal nipple.

Swivel Axle Pins: Apply the oil gun to the two nipples on each swivel pin housing. This is best done when the vehicle is partly jacked up, since the oil is then able to penetrate to the thrust side of the bearings (G and D).

In the case of Commercial Vehicles, which are supplied with a screw type



H40. 8. B.

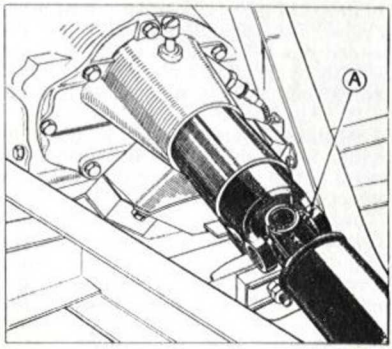
OILING POINTS ON FRONT SUSPENSION

A—Steering cross tube. B—Steering idler. C—Suspension lower joint. D—Swivel pin lower bush. E—Steering side tube. F—Steering side tube. G—Swivel pin upper bush.

lifting jack, the load on the front suspension should be relieved by placing the jack under the lowest point of the frame front cross member, with the lipped end of the lifting platform firmly against the forward side, and then partly raising the vehicle.

Steering Connections: Apply the oil gun to the steering cross tube nipples (2) (A) and the steering side tube nipples (4) (E and F) and top up the steering idler (B) via the oil plug orifice.

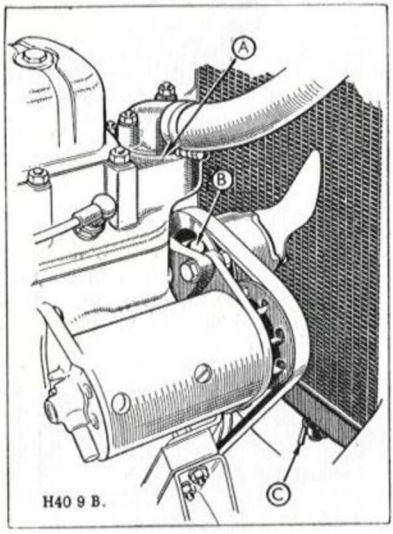
N.B.—On no account should the steering idler be overlooked, as lack of lubricant in this component may cause a serious breakdown due to the additional load imposed on the steering box.



H40. 207. A

THE PROPELLER SHAFT

A is the universal joint nipple.



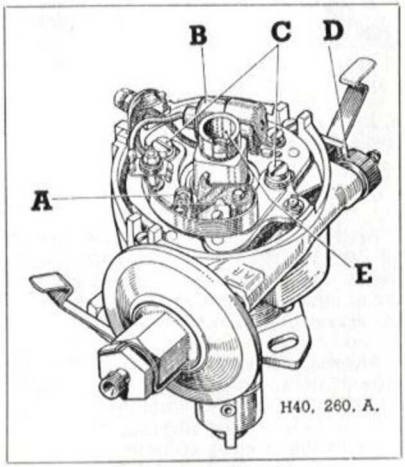
THE COOLING SYSTEM

A—Thermostat. B—Water pump oiling plug. C—Drain cock.

Propeller Shaft Universal Joints: Lubricate the universal joint at each end of the propeller shaft. The front joint can be lubricated from inside the vehicle after removing the rubber ferrule on the top of the propeller shaft tunnel. The rear joint must be lubricated from below. Move the vehicle to expose the two nipples.

Water Pump: Remove the oiling plug on the water pump casing and add a small quantity of oil with the gun. The oiling of the pump must be done very sparingly otherwise oil will flow past the bearings on to the face of the carbon sealing ring and impair its efficiency.

Distributor Cam- and Drive-Shaft Bearings: Lubricate the distributor cam-shaft bearings by withdrawing the moulded rotating arm from the top of the distributor spindle and carefully adding a



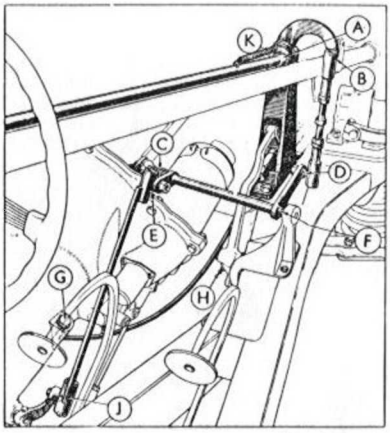
THE DISTRIBUTOR

A—Contact points. B—Condenser. C—Contact adjusting screws. D—Micrometer adjuster. E—Cam and drive-shaft oiling point.

few drops of oil round the screw exposed to view. See pages 25 and 28 for recommended oils. Take care to refit the arm correctly by pushing it on to the shaft and turning until the key is properly located.

Distributor Cam: Apply a trace of engine oil to the distributor cam. Be careful not to let any oil or dirt reach the contact breaker points.

Distributor Automatic Advance: Remove the distributor cap and add a few drops of engine oil through the hole in the contact breaker base through which the cam passes.



H70. 158. A.

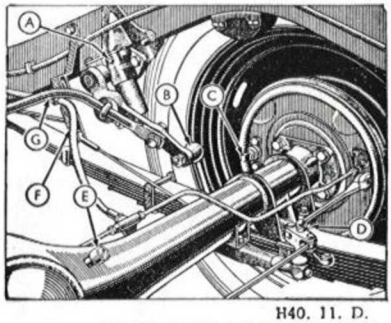
THE GEAR CHANGE

A, B, C, D, E, F and J are oiling points, G is the gearbox filler plug, and H the handbrake lever pivot nipple.

Brakes and Controls: With the oil can, oil all the handbrake linkage joints, brake and clutch pedal linkages and carburetter control joints. Also oil all the gear change control joints.

Steering Column: Lubricate the felt bush at the top of the steering column by adding a few drops of engine oil through the oil hole in the steering wheel hub close to the steering column.

Shock Absorbers: Ensure that there are no visible signs of leakage and that the rubber bushes are undamaged.



H40. 11. D.

REAR SUSPENSION

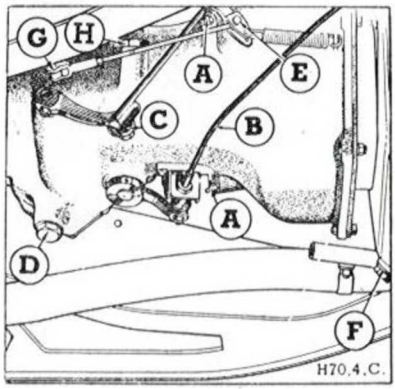
A—Shock absorber filler plug. B—Rubber ball joint. C—Brake adjuster. D—Brake balance lever. E—Rear axle breather. F—Brake linkage. G—Anti-roll torsion bar.

Braking System: Check the braking system and adjust if necessary.

Also ascertain that the fluid level in the brake supply tank, attached to the right-hand side front engine mounting bracket, is not more than three-quarters of an inch from the top of the tank. Top up if necessary, using only the recommended fluid.

Battery: Ascertain the state of charge of the battery by taking hydrometer readings (see p. 39).

Check that the electrolyte in the cells is just level with the tops of the separators. If necessary add distilled water. Never



H70.4.C.

THE GEARBOX

A—Clutch operating shaft. B—Speed selector cable. C and G—Oiling points. D—Gearbox drain plug. F—Engine drain plug. H—Gearbox filler plug.

use tap water as it may contain impurities detrimental to the battery.

Never leave the battery in a discharged condition. If the vehicle is to be out of use for any length of time, have the battery removed and charged about once a fortnight.

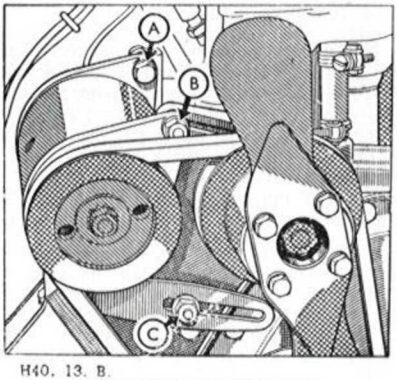
Wheels: Check the security of the wheel nuts and tighten them if necessary.

Air Cleaner: Remove the air cleaner, clean in petrol and re-oil the gauze mesh. See page 30. An oil-bath type of filter is fitted to export vehicles, in which case the gauze mesh should be thoroughly cleaned and the oil changed.

EVERY 3,000 MILES (5,000 km.)

Engine: Drain the oil in the engine sump while it is warm (i.e. immediately after using the vehicle) and re-fill with new oil to the "FULL" mark on the dipstick. The drain plug is located at the rear right-hand extremity of the sump and care should be taken to ensure that no dirt or grit enters the sump when replacing the plug. Capacity is 7 pints (4 litres).

Bonnet Lock: Apply a few drops of engine oil to the bonnet lock and safety catch.



H40. 13. B.

FAN BELT ADJUSTMENT

A and B are the hinges and C is the adjusting link

Fan Belt: Check the adjustment of the fan belt. It should be sufficiently tight to prevent slip at the dynamo and water pump, yet at the same time it should be possible to move it laterally about 1 inch (2.54 cm.) each way.

To make any necessary adjustment slacken the bolts and raise or lower the dynamo until the desired tension of the belt is obtained. Then securely lock the dynamo in that position.

Wheels: Change over the wheels diagonally (including the spare wheel) in order to obtain maximum service with even wear from each tyre (see page 38).

EVERY 6,000 MILES (10,000 km.)

Gearbox: Drain when the oil is warm (i.e. after using the vehicle) and refill to the level of the filler plug with new oil. Capacity, 3 pints (1.7 litres).

Rear Axle: Drain when the oil is warm, and refill to the level of the filler plug with new oil. Capacity, 2¼ pints (1.28 litres).

Front Road Wheel Hubs: Unscrew the hub cap and recharge with grease. It is important that the hubs are not given too much grease, as it may penetrate to the brake shoes.

Sparking Plugs: Remove the plugs and clean off all carbon deposit from the electrodes, insulators and plug threads.

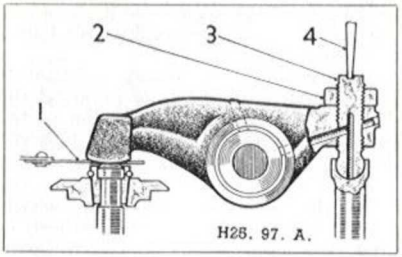
Re-set the plug points to the correct gap of .018 in. (.457 mm.) (see p. 31).

Renewal of sparking plugs is left to the owner's discretion as their efficient working life varies. Use only Champion N.8.B Long Reach Plugs.

Contact Breaker Points: Clean the contact breaker points. Cleaning of the contacts is made easier if the contact breaker lever carrying the moving contact is removed. Before replacing smear the pivot on which the contact breaker operates with engine oil.

Check and reset the contact breaker points to the correct gap of .014–.016 in. (.356–.406 mm.) (see page 31).

Dynamo Bearing: Apply a few drops of S.A.E. 30 engine oil to the commutator end dynamo bearing via the oil hole provided in the bearing housing.

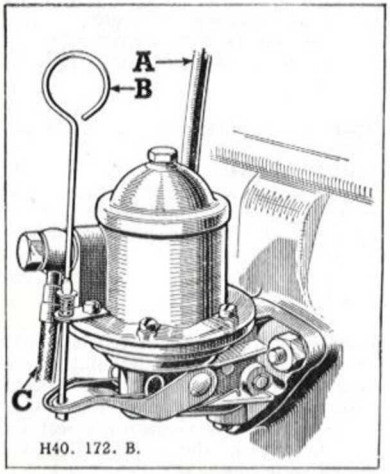


TAPPET ADJUSTMENT

1—.015 in. (.381 mm.) feeler gauge. 2—Locknut 3—Adjusting screw. 4—Screwdriver blade.

Tappet Adjustment: Check the tappet clearances and adjust if necessary. The correct clearance is .015 in. (.381 mm.) with the engine hot or cold.

Fuel System: Ascertain that there is an adequate and uninterrupted flow of fuel at the carburetter inlet union. If necessary the filter in the fuel pump should be cleaned as described on page 29.



THE AC PETROL PUMP

A is the delivery pipe, B the priming lever, and C the supply pipe.

Clean out the fuel pump sediment chamber and the carburetter float chamber. Remove the carburetter jets for inspection and clean if necessary. See page 30.

Laminated Rear Road Springs: Thoroughly clean the springs and then apply some oil to the leaves by means of a brush or spray gun. See pages 25 and 28 for recommended oils.

Bodywork: With the oil can, lubricate the door locks and hinges, and other moving joints on the bodywork.

General: Examine and tighten if necessary, all nuts, bolts, unions, connections and linkage joints, especially after the vehicle has completed its first 6,000 miles (10,000 km.).

EVERY 9,000–12,000 MILES (15,000–20,000 km.)

Cooling System: Flush out the cooling system in accordance with the instructions given on page 32. Normally this operation is carried out twice annually upon the addition and removal of anti-freeze. In countries where anti-freeze is not required, however, the cooling system should be flushed out every 9,000 miles (15,000 km.).

Clutch Operating Shaft: Lubricate the two nipples sparingly, as any excess may find its way into the clutch.

Speedometer Drive: Disconnect the cable from the speedometer end and pull the inner member out of the casing. This should be lubricated sparingly by smearing it with light grease. It is important that the drive is NOT over-lubricated, otherwise damage will be caused to the speedometer head should the lubricant find its way into the head.

To re-assemble, thread the cable with a twisting movement into the casing, since this will help the cable to engage easily with its union at the gearbox end. When this engagement is felt the cable can be pushed home so that the square end stands out approximately ⅜ inch (9.53 mm.) from the casing.

SERVICE ATTENTIONS

THE following additional inspections and operations should be carried out by an Austin Agent at the mileages indicated below. These attentions are not normally dealt with by the owner or operator, as the tools supplied with the vehicle are not sufficient for the work entailed.

EVERY 3,000 MILES (5,000 km.)

Clutch Pedal: Check the pedal clearance and adjust if necessary. There should be $\frac{3}{4}$ in. (19.1 mm.) free pedal movement before the clutch commences to operate.

EVERY 6,000 MILES (10,000 km.)

Front Shock Absorbers: Check the fluid levels and top up, if necessary. The correct level is just below the filler plug threads. See page 28 for recommended fluid. Carefully clear away all road dirt and grit from the vicinity of the filler plug before removal.

Rear Shock Absorbers: Check the fluid levels and top up, if necessary. The correct level is at the bottom of the filler opening.

N.B.—Where the recommended fluid is not available, the following brands are acceptable alternatives:—Shell Donax A2, Wakefield's Castrolite, Mobiloil Arctic, Esso Hydraulic (Medium), Duckham's N.P.20, Price's Energol S.A.E.20.

Ignition Timing: Check the ignition timing and reset if necessary. Make certain that the screw in the distributor body securing clip is fully tightened.

Front Wheel Alignment: Check the alignment of the front wheels. This is correct when there is $\frac{1}{16}$ to $\frac{1}{8}$ in. (1.59–3.18 mm.) toe-in.

EVERY 9,000–12,000 MILES (15,000–20,000 km.)

Front and Rear Hub Bearings: Check for signs of wear.

Dynamo and Starter Commutators: Clean and check condition and freedom of brushes in their holders.

Steering Box: Check for wear. This can be felt if the front wheels can be moved without creating any movement of the steering wheel.

External Oil Filter: Take off the old filter, and replace with a new unit. Use only "A.C. Sphinx." Type AR1C or Purolator Micronic Type MF2001.

Decarbonising, Valve Grinding and Tappet Adjustment: This attention may not be needed so frequently on vehicles used for long journeys. As a general guide, a falling off in engine power indicates when decarbonising is due.

EVERY 30,000 MILES (50,000 km.)

Oil Sump: Drain the oil, remove the sump, and clean it thoroughly with petrol. Also clean the oil pump strainer gauze. Replace sump and refill with new oil.

General Check

The vehicle should be subjected to a thorough examination for wear at least every 30,000 miles (50,000 km.). Particular attention should be given to the steering gear and connections, front and rear suspension, brake linkages, shoe linings and flexible hoses, propeller shaft universals and wheel hub bearings. If necessary replace any worn parts.

GENERAL MAINTENANCE

THE following information covers those attentions which are essential to the efficient operation of the vehicle, and is additional to or more detailed than that given in "Regular Attentions" or "Service Attentions".

ENGINE

Lubrication: Correct lubrication is of the utmost importance to the engine, which may have to operate at sustained high temperatures and speeds, and it is therefore essential that only oils of the highest quality and correct grade are used. Inferior oils will cause excessive wear in an unduly short time.

Additives which dilute the oil or otherwise impair its efficiency must *not* be used, neither should graphite compounds be mixed with the oil as they may interfere with the efficient working of the system which employs very fine jets for the lubrication of certain parts of the engine: also premature choking of the oil filter may result.

Choice of lubricants: The colour or appearance of an oil at atmospheric temperatures gives no indication as to its efficiency under operating conditions and owners are advised to use only the officially recommended lubricants as listed on pages 25 and 28. It is appreciated that in some areas these oils are not available, in which case, only good quality oils conforming with the S.A.E. numbers listed should be used.

The letters S.A.E. followed by a number constitute a classification of the lubricant in terms of viscosity or fluidity.

For instance, a low S.A.E. number indicates that the oil is of low viscosity, which means that it flows more readily than oil with a high viscosity rating.

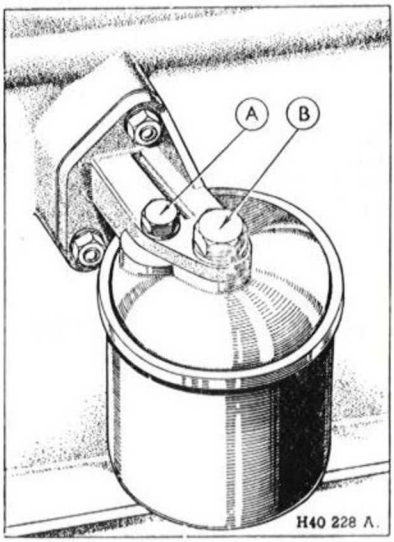
It will be appreciated, therefore, that oil with a low S.A.E. number is essential if easy starting is to be obtained in cold weather, whereas in hot weather a higher viscosity oil is desirable in order to keep oil consumption within normal limits.

Upper Cylinder Lubrication: The use of upper cylinder lubricant is recommended at all times, but most particularly during the running-in period. See pages 25 and 28 for recommended brands.

Impurities: Even the best oils in the engine become contaminated during use, with unburnt fuel, carbon, metallic particles, and moisture, and it is therefore most important that the oil is changed at the recommended mileages.

Oil Level: The oil should never be allowed to fall more than ½ inch (12.7 mm.) from the "FULL" mark on the dipstick. It is advisable to wipe the dipstick before taking the reading, which must only be taken when the engine is stationary and the vehicle on level ground if a true result is to be obtained.

Oil Pressure: The oil pressure gauge indicates whether the oiling system is working properly. It should be looked at occasionally while the engine is running.



THE OIL FILTER

A—Oil inlet union. B—Oil outlet union.

RECOMMENDED LUBRICANTS—OVERSEAS

		'Esso'	'B.P.'	'Duckhams'	'Vacuum'	'Shell'	'Wakefield'
Engine *	From 90° F. (32° C) down to 32° F. (0° C.)	Essolube 30	Energol Motor Oil S.A.E. 30	Duckham's NOL 'Thirty'	Mobiloil A.	Shell X. 100 30	Castrol XL
	32° F. (0° C.) down to + 10° F. (− 12° C.)	Essolube 20	Energol Motor Oil S.A.E. 20 W	Duckham's NOL 'Twenty'	Mobiloil Arctic	Shell X.100 20	Castrolite
	Below + 10° F. (− 12° C.)	Essolube 10	Energol Motor Oil S.A.E. 10 W	Duckham's NOL 'Ten'	Mobiloil 10 W	Shell X.100 10 W	Castrol Z
Transmission †		Esso Gear Oil S.A.E. 90	Energol Transmission Oil S.A.E. 90	Duckham's C.G. 90	Mobilube C 90	Shell Dentax 90	Castrol S.T.
Rear Axle ‡	Down to 32° F. (0° C.)	Esso XP Compound S.A.E. 140	Energol Transmission Oil E.P. S.A.E. 140	Duckham's NOL E.P.T. 140	Mobilube G.X. 140	Shell Spirax 140 E.P.	Castrol Hi-Press
	32° F. (0° C.)to +10°F. (−12° C.)	Esso XP Compound S.A.E. 90	Energol Transmission Oil E.P. S.A.E. 90	Duckham's NOL. E.P.T. 90	Mobilube G.X. 90	Shell Spirax 90 E.P.	Castrol Hypoy
‡Steering Box, Water Pump and Oil Nipples		Esso XP Compound S.A.E. 140	Energol Transmission Oil E.P. S.A.E. 140	Duckham's NOL E.P.T. 140	Mobilube G.X. 140	Shell Spirax 140 E.P.	Castrol Hi-Press
Front Wheel Hubs		Esso Bearing Grease	Energrease C3	Duckham's H.B.B. Grease	Mobil Hub Grease	Shell Retinax A	Castrolease Heavy
Distributor and Oil Can . .		Esso Handy Oil	Energol Motor Oil S.A.E. 20 W	Duckham's NOL 'Twenty'	Mobil Handy Oil	Shell X.100 20	Wakefield Oilit
Upper Cylinder Lubrication . .		Esso Upper Motor Lubricant	Energol U.C.L.	Duckham's Adcoids	Mobil Upperlube	Shell Donax U	Wakefield Castrollo
Laminated Springs		Esso Penetrating Oil	Energol Penetrating Oil	Duckham's Laminoid Liquid	Mobil Spring Oil	Shell Donax P	Castrol Penetrating Oil

* Engine:—Above 90° F. (32° C.) or for high-speed driving at high temperatures use next heavier grade of oil.

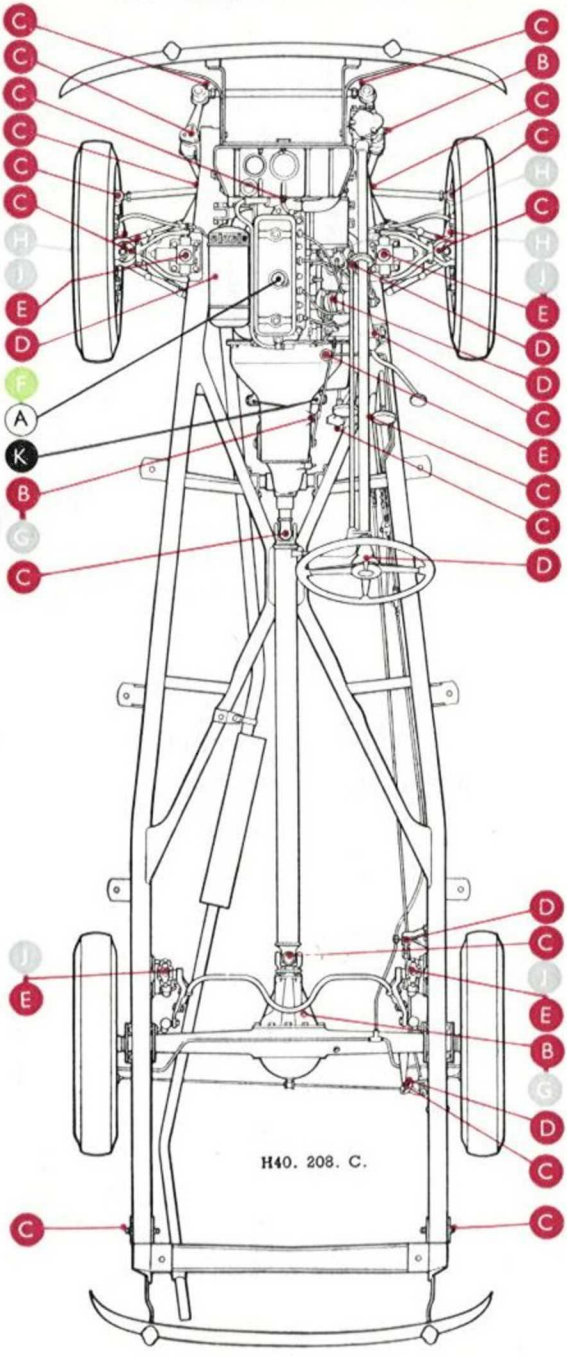
† Transmission:—For prevailing sub-zero (° F) (− 18° C.) temperatures use S.A.E. 80 Lubricant.

‡ Rear Axle and Steering:—For prevailing sub-zero (° F.) (− 18° C.) temperatures use S.A.E. 80 E.P. Lubricant.

‡ Oil-Nipples:—For high temperature climates the grease as shown for hubs can be used.

Use only the best Standard Fluids for Hydraulic Brakes and Shock Absorbers.

LUBRICATION CHART



REGULAR ATTENTIONS

		DAILY ○	Page No.
Oil	A	Engine Sump. Check oil level and top-up if necessary	17
		1,000 MILES (1,600 km.) ●	
Oil	B	Gearbox, Rear Axle and Steering Box. Check oil levels and top-up if necessary	18
Oil Gun	C	Propeller Shaft Universal Joints (2)	19
		Swivel Axles (4). Suspension Lower Joints (2) ..	18
		Steering Connections (6)	19
		Steering Idler	19
		Rear Spring Shackle Pins (2)	18
		Brake and Clutch Pedal Pivots (2)	18
		Brake Balance Lever (1). Handbrake Pivot (1) ..	18
		Water Pump	19
Oil Can	D	Handbrake, Pedal, Gear Change and Carburetter Control Linkage Joints	20
		Steering Column Felt Bush	20
		Distributor	19, 20
Examine	E	Brake Tank Fluid. Check level	20
		Shock Absorbers. Check for leakage	20
		3,000 MILES (5,000 km.) ●	
Oil	F	Engine Sump. Drain and refill	21
		6,000 MILES (10,000 km.) ●	
Oil	G	Gearbox and Rear Axle. Drain and refill	21
Oil Can	H	Dynamo Bearing with S.A.E. 30 oil	21
Grease	H	Front Hubs	21
Examine	J	Shock Absorbers. Check levels and top-up if necessary	23
		9,000–12,000 MILES (15,000–20,000 km.) ●	
Oil Gun	K	Clutch Operating Shaft (2)	22

RECOMMENDED LUBRICANTS—HOME

		'Esso'	'B.P.'	'Duckham's'	'Vacuum'	'Shell'	'Wakefield'
Engine	Winter	Essolube 20	Energol S.A.E. 20 W	Duckham's NOL 'Twenty'	Mobiloil Arctic	Shell X.100 20	Castrolite
	Summer	Essolube 30	Energol S.A.E. 30	Duckham's NOL 'Thirty'	Mobiloil A	Shell X.100 30	Castrol XL
Gear Box		Essolube 40	Energol S.A.E. 40	Duckham's NOL 'Forty'	Mobiloil B.B.	Shell X.100 40	Castrol XXL
Rear Axle, Steering Box, Water Pump and Oil Nipples		Esso Expee Compound 140	Energol E.P. S.A.E. 140	Duckham's NOL E.P.T. 140	Mobilube G.X. 140	Shell Spirax 140 E.P.	Castrol Hi-Press
Front Wheel Hubs		Esso Grease	Energrease C 3	Duckham's H.B.B. Grease	Mobil Hub Grease	Shell Retinax A	Castrolease Heavy
Distributor and Oil Can		Esso Handy Oil	Energol S.A.E. 20 W	Duckham's NOL 'Twenty'	Mobil Handy Oil	Shell X.100 20	Wakefield Oilit
Upper Cylinder Lubrication ..		Essomix	Energol U.C.L.	Duckham's Adcoids	Mobil Upperlube	Shell Donax U	Wakefield Castrollo
Laminated Springs		Esso Penetrating Oil	Energol Penetrating Oil	Duckham's Laminoid Liquid	Mobil Spring Oil	Shell Donax P	Castrol Penetrating Oil

Hydraulic Brakes:—Use Girling Brake Fluid (Crimson) only.

Shock Absorbers:—Use Armstrong's Super (Thin) Shock Absorber Oil.

The normal oil pressure during ordinary running should be 40–45 lbs. per sq. in. (2.8–3.2 kg./cm²) with a proportionately lower pressure when idling.

Never run the engine if the oil gauge fails to register any pressure. Serious damage to the engine will result.

External Oil Filter: Renew the filter complete every 9,000–12,000 miles (15,000-20,000 km.). Use only "A.C. Sphinx," Type AR1C or Purolator Micronic Type MF2001. Scratch the mileage of the vehicle on to the casing of the new filter as a guide for renewal.

FUEL SYSTEM

FUEL is stored in a large rear mounted tank of 8¾ gallons (37 litres) capacity. An A.C. mechanical "U" type fuel pump, operated by the engine camshaft, draws fuel from the tank and delivers it under pressure to a single down-draught type Zenith carburetter. An efficient A.C. "T" type air cleaner filters the air to the carburetter intake.

Fuel Pump: This is bolted on the left-hand forward side of the engine crankcase and has an inlet pipe from the rear tank and an outlet pipe to the carburetter. A priming lever is fitted to enable the carburetter to be primed by hand, should the float chamber become dry due to evaporation. If petrol appears to be leaking from the edge of the diaphragm, tighten the cover screws alternately. Sometimes such leakage may actually come from one of the pipe unions causing the fuel to run down to the pump and collect around the diaphragm flange.

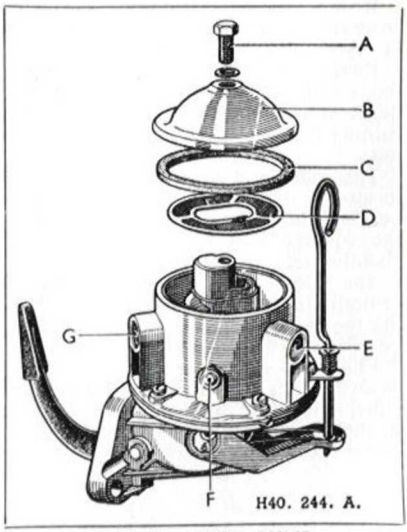
The pump filter should be examined and cleaned if necessary. Access to it is gained by removing the dome cover, after unscrewing the retaining screw, when the filter gauze itself may be lifted off its seating. Remove the drain plug and clean out the sediment chamber. Clean the filter gauze in an air jet or petrol. The cork gasket under the filter cover should be replaced if broken or if it has hardened.

When refitting the cover, make certain that the fibre washer is replaced under the head of the screw.

Check pump engine mounting set-screws and fuel pipe unions for tightness.

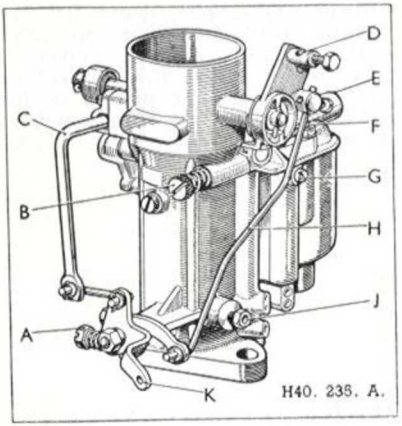
Fuel pump service is available at all Austin dealers and A.C. service stations. They are stocked with parts and fittings for any repairs and adjustments that may become necessary.

Carburetter: The carburetter fitted to the Austin "A40" engine is a Zenith type 30 VIG-8, and, providing that the under-mentioned attentions are carried out at the recommended mileage, it will be found to give efficient and trouble free service.



THE A.C. FUEL PUMP

A—Retaining setscrew. B—Top cover. C—Cork joint washer. D—Filter. E—Fuel inlet. F—Drain plug. G—Fuel outlet.



THE ZENITH CARBURETTER

A—Throttle stop adjusting screw. B—Air mixture screw. C—Accelerating pump operating rod. D—Choke control spindle arm. E—Fuel inlet. F—Float chamber securing screw. G—Accelerating pump stop screw. H—Choke inter-connection to throttle. J—Vacuum timing control connection. K—Throttle control spindle arm.

Every 6,000 miles (10,000 km.), check the flow of fuel at the carburetter inlet union.

Remove the carburetter inlet union and operate the pump hand priming lever.

If the pump is operating correctly, there should be a well-defined spurt of fuel at every pumping stroke of the lever.

Remove the bowl of the carburetter for cleaning, by taking out the two hexagon-headed retaining bolts. On turning the bowl over the float will slide out.

The main and compensating jets are located at the bottom of the float chamber, and they may be unscrewed by using the squared end of one of the float chamber retaining bolts.

The slow running jet is situated centrally in the float chamber rim adjoining the emulsion block, and is slotted to permit easy removal with a screwdriver.

Flush the chamber with petrol and clean the jets by blowing through them either with a tyre pump or with the mouth in the reverse direction to the fuel flow. Never use wire for clearing an obstruction in a jet. Before replacing the jets ensure that the fibre washers are correctly positioned and in good condition.

Replace the float and refit the assembly to the carburetter body.

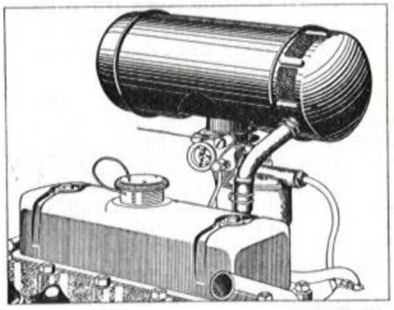
Start the engine and if necessary, re-adjust the slow running controls to give the correct idling speed when the engine is warm.

In the interests of fuel economy, during the summer months, the owner may alter the carburetter setting by shortening the pump stroke, i.e., moving the pump control link rod to the lower hole in the throttle lever. However, if cold weather is encountered, the owner must be prepared for "flat-spots" when accelerating.

Air Cleaner: Release the air cleaner clamping bolt, slacken the hose clip between the cleaner and the valve cover, lift off the air cleaner and then thoroughly rinse the louvred end in a shallow dish of petrol.

After drying, the metal gauze mesh should be re-oiled with clean engine oil, allowing the surplus oil to drain off before refitting the cleaner to the carburetter.

There is an oil-bath type of filter fitted to vehicles for export instead of the air cleaner as illustrated. The oil should be changed and the filter gauze thoroughly cleaned.



THE AIR CLEANER

Note the connection for fume extraction from the valve cover.

IGNITION SYSTEM

A 12 volt battery provides the current necessary to operate the ignition system. A high voltage is induced by the coil, and the distributor, as its name implies, distributes this voltage to the sparking plugs in the correct firing sequence.

Distributor: The DM2 type Lucas distributor is fitted with an automatic timing control operated by centrifugal force together with a vacuum timing control operated by the depression in the engine induction manifold. The combined effects of the two controls gives added efficiency over the full engine operating range, with a corresponding economy in fuel consumption.

A micrometer adjuster is also provided in order that fine adjustments to timing may be made to allow for changes in running conditions, e.g. state of carbonisation, change of fuel, etc.

To gain access to the distributor contacts for cleaning and refacing, first remove the distributor cover and rotor arm. Next, unscrew the nut on the terminal post, lift off the spring and remove the contact adjusting screws C, after which both contacts may be removed (see page 19).

Examine the contacts, which must be free from grease or oil. If they are burned or blackened, clean them with a very fine carborundum stone or with very fine emery cloth. Afterwards wipe away any trace of dirt or metal dust with a petrol moistened cloth.

If the contacts are badly burned, they should be renewed. Replacement contacts must only be fitted in pairs.

When refitting the contacts take care that the fibre insulating washer is replaced in its correct position.

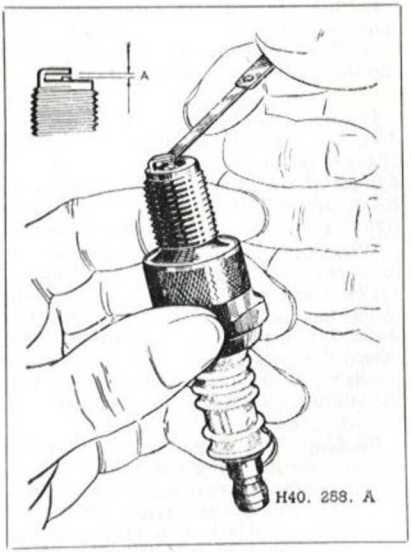
To adjust the contact breaker points, turn the engine with the starting handle until the contacts are fully open. Slacken the fixed contact plate securing screws C. Move the plate until the gap gauge is a sliding fit between the contacts (.014—.016 in. or .356—.406 mm.) and then fully tighten the securing screws. Finally recheck the gap and replace the rotor arm. Before replacing the distributor cap wipe the inside and outside with a soft dry cloth, paying particular attention to the space between the terminals. Ascertain that the small carbon brush on the inside of the cap works freely in its holder and that the terminals are secure.

Coil: The Q.12 type Lucas ignition coil requires no attention beyond checking that the terminal connections are tight and that the exterior is kept clean, particularly between the terminals.

H.T. Cables: The high tension cables must be carefully examined and any which have the insulation cracked, perished or damaged in any way must be replaced.

Sparking Plugs: The sparking plugs fitted to the Austin "A40" are of the Champion N.8.B. Long Reach type, and as they are of great importance to satisfactory engine performance, every care should be taken to fit only the recommended type when replacements become necessary.

Every 6,000 miles (10,000 km.), remove the plugs and clean off all carbon deposit from the electrodes and plug threads with a stiff brush dipped in paraffin.



SPARKING PLUG GAP

The clearance A should be set at .018 in. (.457 mm.)

Alternatively the plugs may be taken to the local Austin dealer for cleaning and testing on a special "Air Blast" service unit.

Check the plug gaps with the gauge provided and reset if necessary to the recommended clearance of .018 in. (.457 mm.). When resetting, bend the side electrode only. Never bend the centre electrode as this may split the insulator tip.

When refitting the plugs, make sure that the copper washers are not defective in any way. If they have become worn and flattened, fit new ones to ensure obtaining a gastight joint. Screw the plug down by hand as far as possible, then use a spanner for tightening only. Always use a tubular box spanner to avoid possible damage to the insulator, and do not under any circumstances use a movable wrench. Never over-tighten a plug, but ensure that a good joint is made between the plug body, washer and cylinder head.

The sparking plugs should be wiped frequently with a clean rag, as paint splashes, accumulation of oil and dust etc., on the insulator are often responsible for poor plug performance.

COOLING SYSTEM

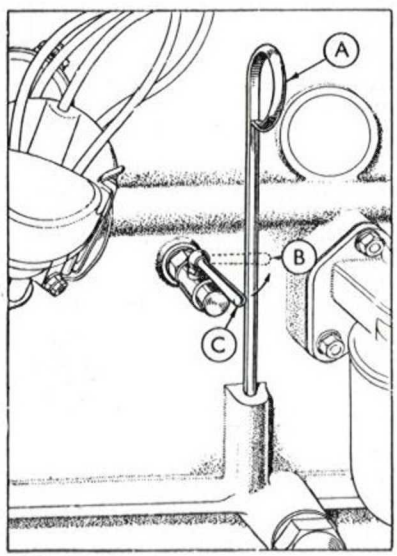
THE cooling of the engine is maintained by a radiator incorporating an expansion chamber, which prevents the loss of cooling water through splash or expansion. Circulation is by a centrifugal pump, and temperature is controlled by a thermostat.

Topping-Up: This should only be necessary very occasionally to replace water lost through evaporation. Use only rain water, if available, or clean soft water, and fill to just below the top of the filler cap threads when the engine is cold.

Draining the System: There are two drain cocks; one positioned at the bottom of the radiator, and the other on the right side of the cylinder block. Open both cocks and ascertain that the vehicle is standing on level ground while draining.

When draining in freezing weather, do so when the engine is hot. Run the engine slowly for one minute when the water has ceased flowing to clear any water left in the pump and other places where it might collect. Finally, leave a reminder on the vehicle to the effect that the cooling system has been drained.

Flushing the Radiator: To ensure efficient circulation of the coolant and to reduce the formation of scale and sediment in the radiator, the system should be periodically flushed with clean running water, preferably before putting in anti-freeze in the Autumn and again when taking it out in the Spring.



H40. 230. A.
CYLINDER BLOCK DRAIN TAP

A—Dipstick. B—Cylinder block drain tap in open position. C—Cylinder block drain tap in closed position.

The water should be allowed to run through until it comes out clean from the drain cocks.

A stiff piece of wire should be inserted into the cocks during flushing to ensure that they are not becoming clogged with sediment.

Frost Precautions: During freezing weather an anti-freeze compound should be added to the coolant in the radiator.

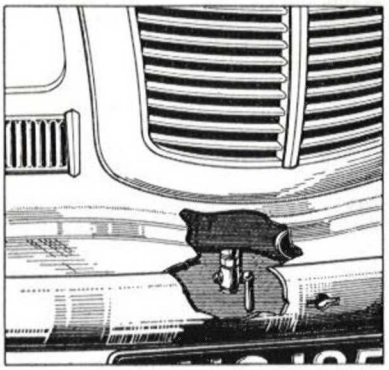
Always flush the cooling system before adding an anti-freeze solution, and again when removing it in the Spring.

The manufacturers of anti-freeze will provide a table indicating the quantity to be used in providing full protection against any degree of frost.

The strength of the solution must be maintained by topping up with anti-freeze solution as necessary. Excessive topping up with water will reduce the degree of frost protection.

The following are officially approved anti-freeze compounds: Smith's 'Bluecol'; County Chemical Co's. 'Chemico Anti-Freeze'; and Johnson's 'Velvol Anti-Freeze'.

N.B.—Under no circumstances resor to draining the cooling system as an alternative to the use of anti-freeze, due to the fact that it is not possible to drain the heater unit completely by means of the cylinder block and radiator drain cocks.



H40. 229. A.

THE RADIATOR DRAIN COCK

Use a stiff piece of wire if the cock is blocked.

HEATING AND DEMISTING

THE Smith built-in heating and demisting unit, as fitted to the Saloon and Coupé, utilises the water in the engine cooling system to heat air for circulation in the car interior and over the windscreen for demisting and defrosting. The engine thermostat maintains a temperature of 70° to 75° C. (158° to 167° F.) in the cylinder block, and since the thermostat enables the engine to warm up very rapidly heat is available for the car interior soon after starting.

Description: An electrically driven booster fan, bolted to the left-hand side of the radiator mounting, draws air through the front grille and forces it along a large diameter flexible pipe into the heater unit situated centrally on the bulkhead. Here it passes through a water heated radiator into a distribution chamber where shutters, operated from the heater control panel, regulate its flow into the vehicle interior.

Even without the fan switched on, air will be forced into the vehicle and on to the windscreen by ram effect due to the vehicle's motion, provided the appropriate shutter in the Heating and Demisting Unit is opened; but at low vehicle speeds, particularly if maximum heating or ventilation is required, the fan should be switched on. If necessary, the air supply to the vehicle interior can be entirely shut off, as, for instance, when in dense traffic, to prevent the entry of exhaust fumes, dust, etc.

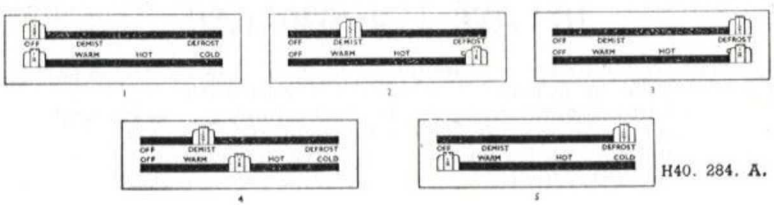
Controls: The heating and demisting unit is controlled by two levers operating in a quadrant mounted beneath the

instrument panel. The upper lever regulates the flow of air to the windscreen for demisting or defrosting, whilst the lower lever regulates the flow of air to the vehicle interior for heating or ventilating. The booster fan is controlled by a pull-out type switch situated on the right-hand side of the heater control panel.

A pull-out type control knob is situated on the left-hand side of the control panel, but this is not connected to the heating and demisting unit. When operated, it opens a shutter which allows extra fresh air into the vehicle interior, the volume admitted being dependent on the vehicle's forward speed and the amount the shutter is open.

The following table summarises the various control positions available for dealing with all types of weather conditions.

Conditions	Heating/Ventilating Control Lever Position	Demisting/Defrosting Control Lever Position
1. No air supply to vehicle interior	"Off"	"Off"
2. Warm weather—cold ventilating air, cold air to windscreen	"Cold"	"Demist"
3. Warm weather—cold ventilating air, maximum air to windscreen	"Cold"	"Defrost"
4. Cold weather—hot ventilating air, warm air to windscreen	Between "Warm" and "Hot" according to heat required	"Demist"
5. Freezing weather—maximum hot air to windscreen ..	"Off"	"Defrost"



THE HEATER CONTROL POSITIONS

Heater Unit (Commercial Vehicles): The Smith Heater as fitted to the Commercial Vehicles is of the re-circulation type, i.e., its function is to heat and re-circulate the air within the vehicle, and therefore differs considerably from the type fitted to the Saloon.

The heater consists of a small water radiator, through which air is drawn, heated and re-circulated by means of a fan driven by a small electric motor; this being operated by a rheostat switch on the control panel.

The heater is situated behind and below the instrument panel, and warm air is directed towards the feet. At the same time a constant stream of warm air is passed across the windscreen via a duct and nozzle built into the screen rail, which ensures clear vision in conditions

when misting of the screen is liable.

The heater radiator is supplied with hot water from the engine cooling system by means of a supply and return pipe, and the water flow can be turned on or off at will, by operating the cock situated on the right-hand side of the cylinder block at the point where the water supply pipe is connected.

This means that in winter, warm air can be circulated by use of the cooling water, and in summer with the water supply turned off, cool air can be circulated by the same means.

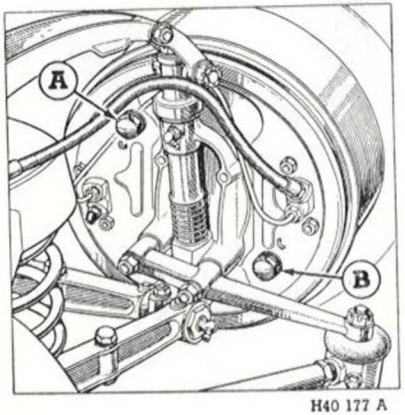
BRAKING SYSTEM

THE Girling hydraulic braking system employs two-leading shoe brakes at the front, with a dual purpose expander unit on the rear brake shoes, enabling them to be operated hydraulically or mechanically. A pistol grip handbrake mounted under the fascia operates the mechanical linkage to the rear brakes, while the pedal operates hydraulically on all four wheels.

Adjustment: The adjustment for taking up wear in the brake shoe linings is effected at each brake back plate; the brake rods and linkage system should in no circumstances be altered. No attempt should be made to adjust the brakes with the handbrake on.

Front Brakes: Firmly chock one of the wheels and then jack the vehicle until the front wheel to be adjusted is clear of the ground. Fully release both the hexagon-headed adjuster bolts on the brake backing plate by turning them in an anti-clockwise direction. Then turn one of the adjuster bolts in a clockwise direction until the brake shoe concerned rubs against the drum. Release the adjuster one notch, or until the brake shoe is just free of the drum and then repeat the procedure for the second adjuster as on the front brake assembly a separate adjuster is provided for each shoe. Repeat the adjustment for the other front wheel.

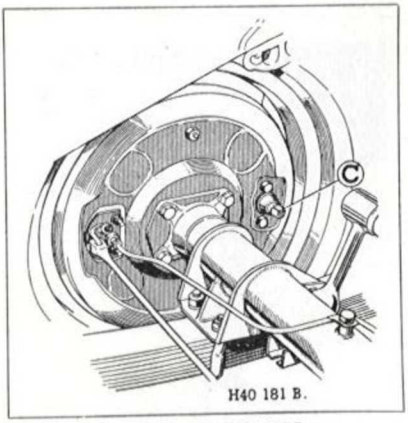
The adjusters operate snail type cams which bear against the shoes. These cams are notched in order to hold them in position and thus require no locking device.



H40 177 A

THE FRONT BRAKES

A and B are the two hexagon-shaped adjusting points to be found on each front backing plate.



H40 181 B.

THE REAR BRAKES

C is the square-ended adjuster to be found on the forward side of the axle on each rear backing plate.

Rear Brakes: Adjustment is made by turning the square-ended adjuster on each rear brake backing plate in a clockwise direction as far as it will go. The brake shoes are then hard on, and the adjuster should be turned back two full notches to give the shoes the correct clearance from the drum.

The adjuster can be turned a notch at a time, and the engagement, which can be heard and felt, is caused by the flat sides of the cone on the inner end of the adjuster engaging with the plungers supporting the ends of the shoes.

One common adjuster is provided for both shoes in the rear brake assembly and the adjustment for both rear wheels is identical. After adjustment the brake pedal should be applied hard two or three times to centralise the brake shoes in their drums.

Bleeding the Brakes: If any part of the hydraulic brake system has been disconnected, it will be necessary to bleed the system when the connections have been reassembled, to ensure that the hydraulic fluid is free of air bubbles.

There is one bleed nipple fitted on the brake back plate assembly at each wheel.

Connect a rubber drain tube to one of the brake bleed nipples and immerse the open end of the tube in a jar partly filled with genuine braking fluid. Then fit a spanner on the hexagon sides of the bleed nipple and unscrew the nipple one full turn. The brake pedal should now be applied repeatedly with slow, full strokes until the fluid entering the jar from the drain tube is completely free of air bubbles. The bleed nipple should now be tightened with the spanner during a down stroke of the brake pedal. Repeat the whole operation on the other wheels.

It is important when bleeding the brakes to check the fluid level in the supply tank at frequent intervals and to top-up as necessary to ensure that the master cylinder is never starved of fluid. Should air reach the master cylinder from the supply tank it will be necessary to bleed the whole of the system again.

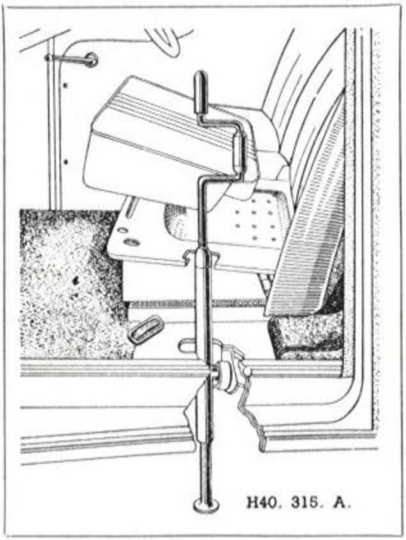
Fluid which has just been bled from the system should never be used for topping-up the supply tank immediately, since it will be to some extent aerated. It must therefore be allowed to stand for an hour or two before it can safely be used again. Dirty fluid must be discarded since grit or other foreign matter in the system will seriously affect braking efficiency, and cause unnecessary wear.

JACKING SYSTEM

THE jacking of the Saloon and Coupé is effected by a Stevenson telescopic jack which operates from a central body mounting bracket on the chassis frame. There are two positions for the jack, enabling either the right or left side of the vehicle to be raised.

Operation: Before jacking up the Saloon or Coupé apply the handbrake firmly. Remove the front seat cushion, peel back the carpet at the side of the seat and lift out the rubber cover in the body floor. Lower the jack through the opening in the seat frame and floor and insert the jack lug into the socket provided on the chassis frame.

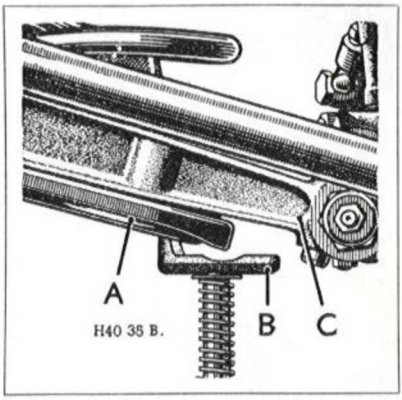
Ensure that the jack lug fully engages with the socket on the frame member and that the base of the jack has a firm footing on the ground; then proceed to wind the jack nut in a clockwise direction, using the wheel nut brace supplied in the tool kit.



THE STEVENSON JACK

The boss on the jack body locates in the socket in the body-mounting bracket

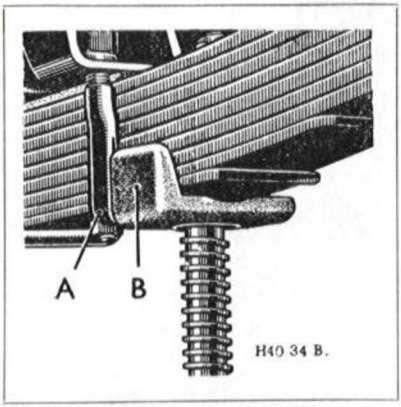
Jacking Points for Under-Axle Type Jack: This type of jack is issued with the Van, Countryman, and Pick-up and only the following illustrated positions should be used when jacking one of the above vehicles. For the front wheels the lifting



JACKING A FRONT WHEEL

A is the spring lower plate, B the jack platform, and C the front wishbone link.

platform of the jack should be placed across the outer rim of the spring lower plate, so that the lipped end projects into the recess in the spring plate, and the flat end is between the two bottom wishbone links.



JACKING A REAR WHEEL

The lip of the jack (B) should be on the outside of the spring, and against the U-bolt (A).

There is a recess across the jack lifting platform, which allows the strengthening ring on the spring plate to locate.

For lifting the rear wheels, place the lifting platform across the lowest spring leaf, to the rear of the axle, with the lipped end on the outside of the spring and up against the spring U-bolt; this avoids any turning movement.

The jack is operated with the vehicle starting handle, an intermediate length of rod being provided with the jack to allow it to reach the described positions easily.

Changing a Wheel: Before removing a wheel ensure that the vehicle is securely jacked with the handbrake firmly on and if on a hill it may be advisable to scotch one or both of the wheels.

For access to the wheelnuts lever out the wheel centre by inserting either a coin or a screwdriver in one of the slots under its rim.

When refitting the wheel, tighten the nuts alternately and securely before removing the jack. Finally test the nuts with the wheel on the ground.

TYRES

A TYRE that loses more than three to four pounds per square inch (.211–.281 kg./cm.^{2}) in a week should be suspected of a slow puncture, but first make sure that the valve is not the cause. The pressures given below should be maintained to ensure long life to the tyres and best running and riding conditions for the vehicles.

N.B.—The front and rear tyres, on the side nearer to the curb, should be inflated to a pressure of 2/3 lbs. per sq. in. (.141/.211 kg./cm.^{2}) above the pressure in the tyres on the opposite side.

The benefit of this differential pressure will be found in easier handling and less tyre wear, particularly in countries where roads are winding and heavily, or only moderately, cambered.

Model	Rim Sizes	Tyre Sizes	2 Passengers only		Full Load	
			Front	Rear	Front	Rear
Saloon & Coupé	16–3.00	5.25–16	22 lbs./sq. in. 1.55 kg./cm.^{2}	24 lbs./sq. in. 1.69 kg./cm.^{2}	24 lbs./sq. in. 1.69 kg./cm.^{2}	26 lbs./sq. in. 1.82 kg./cm.^{2}
Countryman Pick-up & Van	17–3.25	5.00–17			24 lbs./sq. in. 1.69 kg./cm.^{2}	36 lbs./sq. in. 2.53 kg./cm.^{2}

The tyres should be changed over at regular intervals to give each tyre the chance of giving the maximum service with even wear. To do this, every 3,000 miles (5,000 km.) with the left side jacked up, place the spare on the left side rear. Move left side rear to left side front.

Jack up the right side. Move left side front to right side front, right side front to right side rear, and right side rear to spare.

This gives each tyre a new position each move, and includes a period of rest during one full circuit.

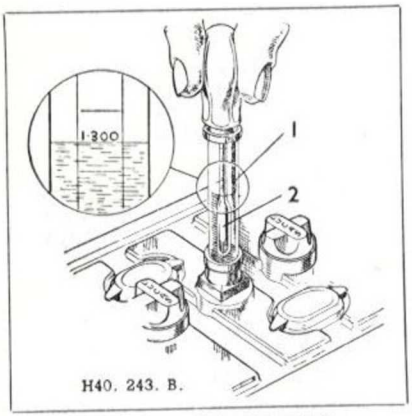
ELECTRICAL EQUIPMENT

IN the event of any fault developing in the electrical equipment the owner is advised to contact the nearest Austin dealer or Lucas Service Depot.

Those attentions and replacements which the owner should be able to undertake are described below.

Battery: Keep the battery top clean and the terminals tight and well smeared with petroleum jelly. Also check the security and good electrical contact of the battery earthing clip on the engine rear mounting plate.

Ascertain the state of charge of the battery by taking hydrometer readings. The specific gravity readings should be:—



USING A HYDROMETER

1—*Fully charged reading.* 2—*Hydrometer float*

Fully charged	1.280—1.300
Half charged	Approx. 1.210
Discharged	Below 1.150

These figures are for an assumed electrolyte temperature of 60° F. (15.6° C.).

Headlights: Each headlight consists of a combined reflector and front glass assembly provided with a mounting flange by means of which it is secured in the body housing. The bulb, which is of Lucas pre-focus type, is located accurately in the reflector and is secured by a bayonet fixed backshell which also provides the contact to the bulb. The design of the bulb and holder is such that the bulb is correctly positioned in relation to the reflector and no focusing is required when a replacement bulb is fitted.

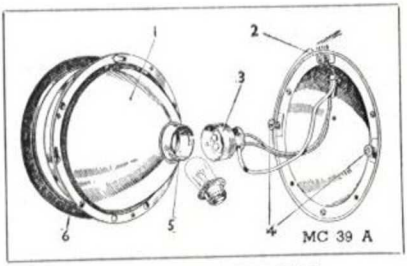
Headlight Alignment: The headlights must be set correctly in relation to the road and to each other. Should adjustment become necessary proceed as follows :—

Remove the front rim by unscrewing the rim securing screw and lifting off the rim. Next remove the rubber dust excluder, when three spring-loaded adjustment screws will be visible, by means of which the setting can be altered as desired.

If vertical adjustment is required, set the light unit to the required position by means of the vertical adjustment screw at the top of the reflector unit. Turn the screw in a clockwise direction to raise the beam and in an anti-clockwise direction to lower it. If horizontal adjustment is required, set by means of the two adjustment screws (one on each side of the light unit).

Bulb Fitting: *Headlights*: Remove the light unit from the body housing by pressing it in against the tension of the adjustment screw springs and turning it in an anti-clockwise direction until the heads of the screws can be disengaged from the slotted holes in the light unit rim. Do not disturb the setting of the screws when removing the light unit or the alignment will be altered.

Twist the backshell of the light unit in an anti-clockwise direction and pull off. The bulb can then be removed.



HEADLIGHT ASSEMBLY

1—*Light unit.* 2—*Vertical adjustment screw.* 3—*Backshell.* 4—*Horizontal adjustment screws.* 5—*Bulb holder.* 6—*Dust excluding rubber.*

Place the replacement bulb in the holder, taking care to locate it correctly. Engage the projections on the inside of the backshell with the slots in the holder, press on and secure by twisting it to the right. Replace the light unit in the body housing by reversing the removal procedure.

Sidelights: Remove the screw at the back of the sidelight and withdraw the lamp front. The bulb is now accessible and can be released from its holder.

BULBS

	Volts	Watts	Lucas No.
Headlights:—			
HOME: ..	12	42/36	354
EXPORT:			
(R.H.) ..	12	42/36	354
(L.H.) ..	12	42/36	355
EUROPE (except France) ..	12	35/35	350
Sidelights ..	12	6	989
Stop- and Tail-Lights (Saloon & Coupé)	12	18/6	361
Stop- and Tail-Light (Commercial Vehicles) ..	12	6	207
Number Plate Illumination Light ..	12	6	989
Panel Lights ..	12	2.2	987
Ignition, Oil Pressure and Headlight Beam Warning Lights ..	12	2.2	987
Trafficators ..	12	3	256
Roof Light ..	12	6	254

FUSES

Accessories (Aux.)	50 amps.
Accessories (Aux. Ign.)	35 amps.

Stop- and Tail-lights: Move back the rubber lip, insert a coin or screwdriver blade under the glass retaining collar and gently lever the collar out from the lamp body. This will enable the lamp glass to be completely removed, leaving the bulb accessible in its socket.

Stop- and Tail-Light (Commercial Vehicles): Bulb replacement in the combined stop- and tail-light can be effected by unscrewing the single fixing screw and swinging aside the cover.

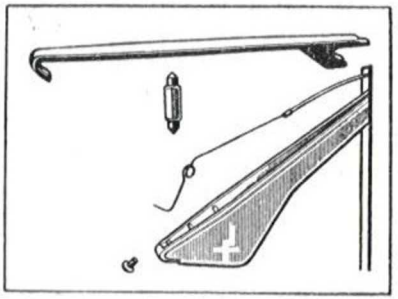
Rear Number Plate Light (Saloon and Coupé): Undo the one bolt and the cover can be removed to give access to the bulb.

Panel Lights: The holders can be pulled from their fittings at the back of the instrument panel and the bulbs are then easily removed.

Roof Light: To gain access to the bulb press in the sides of the plastic light cover and pull downwards. This will release the cover from its fastenings and expose the bulb.

Ignition, Oil Pressure and Headlight Beam Warning Lights: The bulbs can be unscrewed from their holders when pulled out from the back of the warning light panel.

Direction Indicators: To remove a bulb, switch on the indicator, hold it in the out position and then switch off. Withdraw the screw on the underside of the arm and slide off the metal plate, when the bulb can be renewed. When replacing the metal plate, slide it in an upward direction so that the plate engages with the slots on the underside of the spindle bearing.



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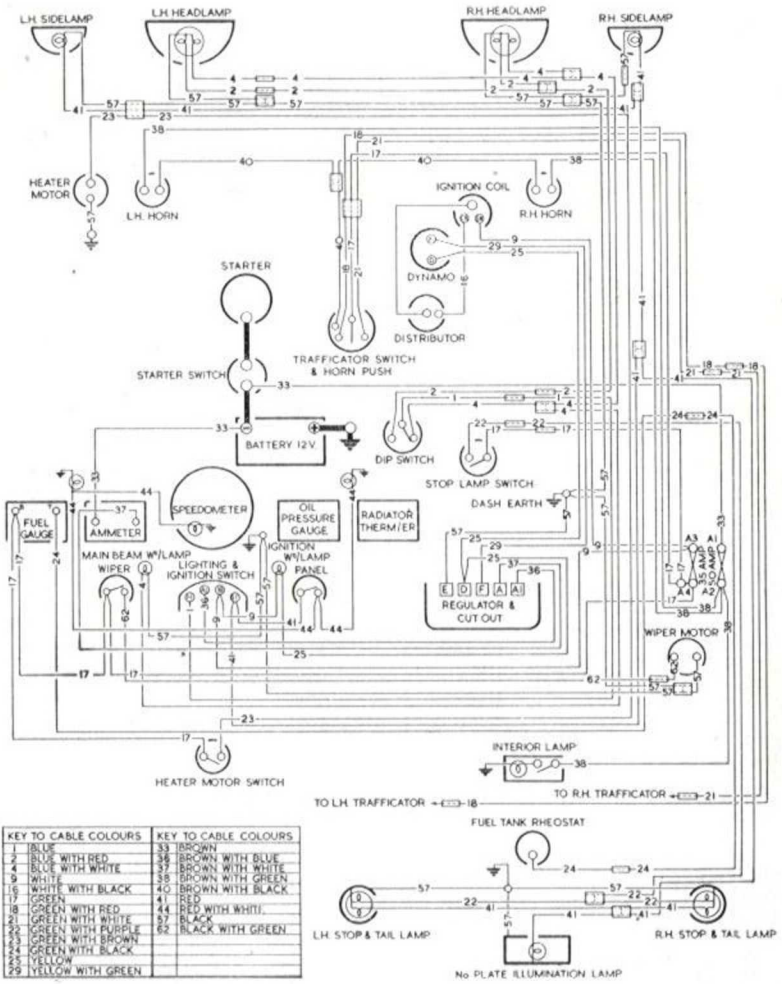
THE DIRECTION INDICATOR

Do not lift the arm. Switch on and let the arm go up, hold the arm out and switch off.

WIRING DIAGRAM

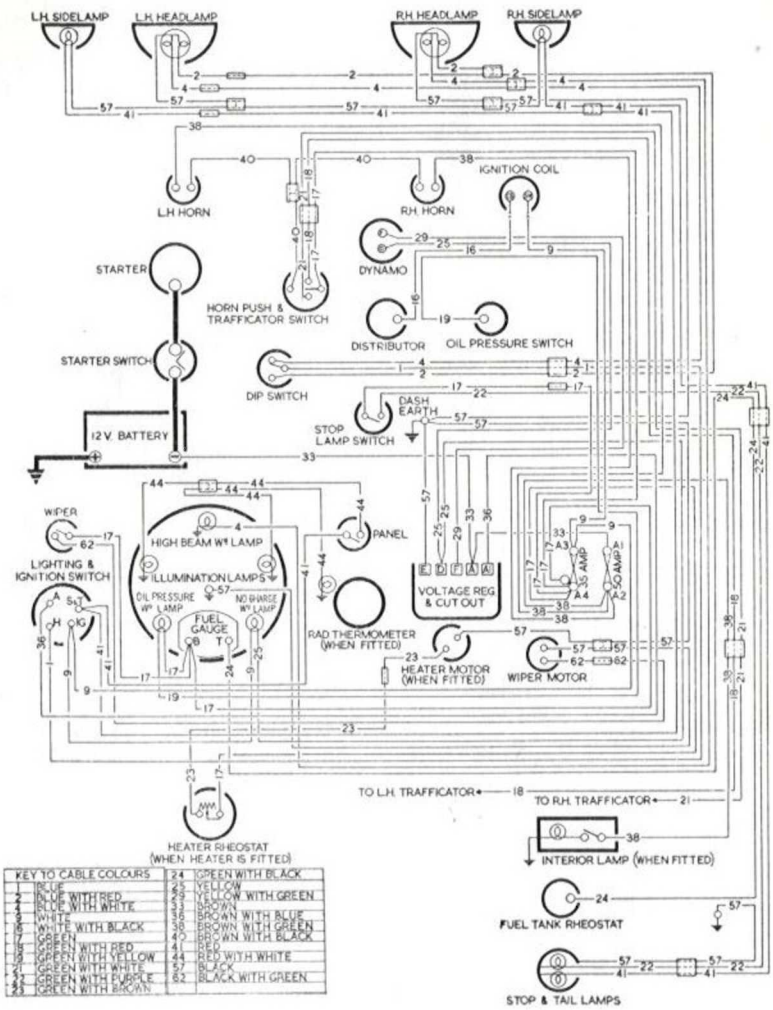


KEY TO CABLE COLOURS		KEY TO CABLE COLOURS	
1	BLUE	33	BROWN
2	BLUE WITH RED	36	BROWN WITH BLUE
4	BLUE WITH WHITE	37	BROWN WITH WHITE
9	WHITE	38	BROWN WITH GREEN
16	WHITE WITH BLACK	40	BROWN WITH BLACK
17	GREEN	41	RED
18	GREEN WITH RED	44	RED WITH WHITE
21	GREEN WITH WHITE	57	BLACK
22	GREEN WITH PURPLE	62	BLACK WITH GREEN
23	GREEN WITH BROWN		
24	GREEN WITH BLACK		
25	YELLOW		
29	YELLOW WITH GREEN		

E 1265

THE 'A40' SOMERSET SALOON AND COUPÉ

WIRING DIAGRAM



KEY TO CABLE COLOURS			
1	BLUE	24	GREEN WITH BLACK
2	BLUE WITH RED	25	YELLOW
3	BLUE WITH WHITE	29	YELLOW WITH GREEN
4	BROWN	33	BROWN
9	WHITE	36	BROWN WITH BLUE
16	WHITE WITH BLACK	38	BROWN WITH GREEN
17	GREEN	40	BROWN WITH BLACK
18	GREEN WITH RED	41	RED
19	GREEN WITH YELLOW	44	RED WITH WHITE
21	GREEN WITH WHITE	57	BLACK
22	GREEN WITH PURPLE	62	BLACK WITH GREEN
23	GREEN WITH BROWN		

E1255

THE 'A40' VAN, COUNTRYMAN AND PICK-UP

Fuses: The fuse unit is situated adjacent to the voltage regulator on the right-hand side of the engine bulkhead and contains two fuses and two spare.

One fuse protects the accessories which are operative only when the ignition is switched on (e.g., stop-lights, fuel gauge, and direction indicators). The other fuse protects those accessories which can be operated independently of the ignition. If a new fuse blows, the cause of the trouble must be found.

RADIO

THREE models are available as optional extras, Radiomobile Model 4300, 4260 or 4262. All are actuated via flexible cables by controls mounted on the fascia in front of the driver. The loud speaker is located centrally in the roof lining above the windscreen.

Operation

To switch on the receiver, turn the combined on/off switch and volume control knob, situated on the left of the push-buttons, in a clockwise direction. Progressive rotation of the knob increases the volume as required. The control concentric with this knob provides four separate tone settings, anti-clockwise for speech and clockwise for music.

Manual tuning is obtained with the control knob on the right of the push-buttons and provides completely variable station selection. A spring loaded clutch prevents accidental disturbance of a selected station and for this reason it is necessary to press in the tuning control while turning it.

Wave Band Changing and Tuning Push-buttons (*Model* 4300) *:*

Wave band changing is effected with the larger control concentric with the manual tuning control. The particular wave band in use is indicated in an aperture located above this control. Wave ranges are as follows:—Long Wave, 1,000–2,000 metres; Medium Wave, 190–570 metres; Short Wave, 40—90 metres, 31 metre band, 25 metre band, 19 metre band and 16 metre band. Electrical 'Bandspreading' is provided on the 31, 25, 19 and 16 metre bands.

The five tuning push buttons provide automatic tuning for five stations selected from the Long, Medium or 'Bandspread' Short Wave Bands (it is not advisable to use these push-buttons on the Short Wave 40—90 metre band).

When using the push-buttons to pre-select a station, remember that the wave change switch must first be set to the appropriate band. All push-buttons may be easily re-set to any five stations by simple means to suit individual requirements. Full instructions are given in the pamphlet issued by the makers with each set.

Wave Band Changing and Tuning Push-buttons (*Model* 4260) *:*

Wave band changing for manual tuning is effected by pushing in either a Medium Wave or the Long Wave push-button as required. Wave ranges are as follows:—Long Wave, 1,000—2,000 metres; Medium Wave, 190—570 metres.

The five tuning push-buttons provide automatic tuning for one Long and four Medium Wave band stations.

Tuning Push-buttons (*Model* 4262) *:*

The five tuning push-buttons provide automatic tuning for any five stations selected from the Medium Wave band.

The wave range is 190—570 metres.

Aerial

The external aerial should always be extended prior to using the radio. It is recommended that it is retracted when not in use.

BODYWORK

DUST on the vehicle may be lightly flicked off with a duster, but on all other occasions the vehicles should be thoroughly washed and dried before a non-abrasive polish is used. Any attempt to rub dirt off the vehicle will result in severe scratching of the smooth surface of the high lustre enamel. Grease and tar splashes must be very carefully removed with a soft rag dipped in petrol.

The Coupé Hood: Opening or closing the hood of the coupé is a simple operation, involving only a few seconds either way.

By unscrewing the two cantrail knobs, one at each side of the hood, the knee-action cantrails can be unlocked and pulled inwards. The hood can then be rolled up tightly until it nests on the peak-rail, in which position it can be strapped. This gives a partly open "de ville" position exposing only the front two seats.

For complete opening, depress the waist controls, one at each side of the rear seat, hinge the rear seat squab forward, and lower the hood into the well provided.

Before raising the hood it is essential to lower the rear quarter windows. Grasp the hood pillars firmly, raise the hood, **slam** the pillars into the vertical "de ville" position and, *this is most important*, ascertain that they are both securely locked. Finally, unstrap the hood front, push out the cantrails, locate the guide pins in the screen plates, and securely screw up the cantrail knobs.

N.B.—Very great care must be exercised when pushing out the cantrails to ensure that the hands are kept well clear of the knee-action joints, otherwise the sudden straightening action may cause a severe injury.

The hood should be cleaned regularly, particularly when it is new, to combat any initial chemical reaction which may occur during its early life.

To clean the hood, it is only necessary to use soap and water, with a soft brush to remove any ingrained dirt. Frequent washing with soap and water considerably improves the appearance and wearing qualities of the hood, and it should be washed at least as often as the rest of the car.

If dust and grime have been allowed to remain on the hood for a long time so that it has become really dirty, and the ordinary soap and water method is not completely effective, then benzine may be used with the same type of brush.

The interior of the hood can be cleaned by the sparing use of trichlorethylene or a reputable brand of proprietary clothes cleaner. On no account should spirit cleaners be used inside the hood as their use would damage the proofing and wearing qualities of the fabric.

It will be found that by cleaning by the methods outlined, the hood will continue to look as good as new.

Washing and Polishing (*All Models*): Frequent washing with clean cold water will greatly assist in maintaining the high lustre finish of the paintwork.

When washing the vehicle, start at the top and work downward, using a slow flow of water and a sponge free from grit and oil. Leather off all surplus moisture.

Should the finish become dull after several months, the use of an emulsion polish of reputable manufacture will restore it to its original condition.

Chromium plated parts should be washed with soap and warm water and cleaned with a damp leather. On no account should metal polish or any kind of abrasive substance be used.

The leather upholstery and trimming may be cleaned with a damp cloth and polished when dry with furniture cream.

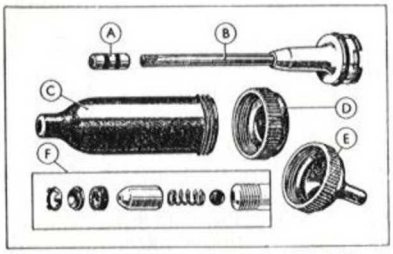
The roof lining can be kept in good condition by light brushing or by using a vacuum cleaner if available.

The carpets should be kept free from dust and grit by vigorous brushing with a stiff brush or by using a vacuum cleaner. Periodically the carpets and felts should be removed and thoroughly beaten.

Other attentions: Door locks, hinges, and other small working parts should be given a drop of oil occasionally and checked for security. Sliding seat runners will benefit if very lightly smeared with grease periodically, but never grease the runners of the sliding roof.

THE OIL GUN

THE gun supplied with the tool kit is for charging the various chassis lubricating nipples with oil. An adaptor is also supplied to enable the rear axle and steering box to be topped up with oil when necessary.



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THE OIL GUN AND ADAPTOR

A—Oil gun nozzle. B—Piston and telescopic ram. C—Outer case. D—End cap. E—Adaptor. F—Components of the nozzle.

Filling the Gun: Unscrew the end cap, extend the telescopic ram as far as possible, fill the gun with the recommended oil and replace the cap loosely. Gently push the ram into the gun body, in order to displace any air that may have been included in the filling process, and when oil begins to emerge from the end cap threads, the cap should be tightened.

It is important to ensure that all air is eliminated from the gun during the filling process, as otherwise difficulty may be experienced in operating the gun due to the formation of air locks.

Using the Gun: Always make sure that the nipple about to be lubricated is clean before applying the oil gun. Push the gun body hard, release and push again, repeating the strokes according to the amount of lubricant required in the component. Wherever possible, watch for the old oil exuding from the component concerned, as this is proof that the new oil is being forced in.

A nipple that refuses to pass oil should be removed and cleaned. This is best achieved by soaking it for a short time in paraffin.

When removing the oil gun after lubricating a point, take care to avoid extending the telescopic ram, as otherwise air will be sucked into the gun, subsequently causing an air lock.

Using the Adaptor: To enable the rear axle and steering box to be topped up as and when necessary, there is a special adaptor provided.

The procedure is as follows:—Remove the end cap and extend the telescopic ram as far as possible, fill the gun with the recommended oil and then screw on the adaptor in place of the end cap.

Remove the filler plug on the component, insert the adaptor nozzle into the filler orifice and force the telescopic ram into the gun body. This will quickly empty the gun's contents into the component concerned.

Replace the filler plug after ascertaining that the component has been topped up to its correct level.

POST DELIVERY CHECK

AUSTIN Agents are under agreement to carry out a "Post Delivery Check" once during the period of the first 500 miles (800 km.) running, or as soon as possible afterwards, on Austin vehicles purchased from them when they will, without charge, except for materials used :—

Change the oil in the engine, gearbox and rear axle, and check the oil level in the steering box.

Lubricate all chassis points.

Check the tightness of cylinder head and manifold nuts. Tighten the fan belt if necessary.

Check tappet clearances and ignition timing.

Clean out the carburetter float chamber and check the slow running ajustment.

Examine and adjust, if necessary, the sparking plug and distributor points and verify the working of the automatic ignition control.

Check the front wheel alignment and steering connections.

Check the clutch pedal clearance.

Examine and adjust the braking system.

Check the tightness of nuts and bolts, body and bonnet cowl to chassis, spring clips, etc.

Lubricate the door locks, bolts, hinge pins and seat runners.

Test the lamps, check the charging rate, wiring and terminals.

Examine the battery and bring up to the proper level with distilled water or diluted acid.

Test the tyres for correct pressure.

SERVICE FACILITIES

THE following are the official addresses of the Austin Motor Company Limited to whom all Service correspondence in those areas should be addressed.

England:

The Austin Motor Company Ltd.,
Service Department,
Longbridge,
Birmingham 31.

Telephone: PRIory 2101. *Telegrams*: Speedily, Telex, Northfield.
Cables: Speedily, Birmingham.

London:

The Austin Motor Company Ltd.,
Holland Park Hall,
Holland Park,
London, W.11.

Telephone: PARk 8001. *Telegrams*: Austinserv., Nottarch.

U.S.A.:

The Austin Motor Company Limited (England),
Central Parts Division,
2227–9 Webster Avenue,
Bronx 57,
New York, N.Y.

Telephone: CYpress 7–4500. *Cables*: Austinmoto, Newyork.

Canada:

The Austin Motor Company (Canada), Ltd.,
Service Division,
Kenilworth Avenue N.,
Hamilton,
Ontario.

Telephone: 4–2816. *Cables*: Austinette, Hamilton.

Australia:

The Austin Motor Company (Australia), Ltd.,
109, Dudley Street,
West Melbourne,
Victoria.

Telephone: FJ 1131. *Cables*: Austinette, Melbourne.

In all instances, the enquirer is asked, first of all, to contact his nearest appointed Austin Distributor or Dealer before writing to one of the above addresses. The Service Departments of those Distributors or Dealers will offer all the help and information at their disposal.

EQUIPMENT

THE AUSTIN MOTOR CO. LTD. accept no liability under the terms of their Warranty for Tyres, Speedometers, Electrical Equipment or other Goods including Coachwork not of their own manufacture.

All claims relating to any of these parts or fittings or orders for repairs to them should be addressed to their manufacturers.

For owners' convenience, we give below the names and addresses of the manufacturers or suppliers of the goods in question. Further information may be obtained on application to them.

IMPORTANT: When claims under guarantee are being made, it is absolutely essential to quote the type and number of vehicle (which will be found on a plate attached to the back of the right side sun visor), and the commissioning date.

Electrical
Horn, Dynamo, Starter, Cut-out Regulator and Fuse Unit, Direction Indicators, Switchboard, Lamps, Battery, Windscreen Wiper, Ammeter.
Joseph Lucas Limited,
Great Hampton Street, Birmingham, 18

Instruments and Heater Unit
Speedometer, Petrol Gauge, Oil Gauge.
S. Smith & Sons (M.A.) Ltd.,
Cricklewood Works,
London, N.W.2.

Adjustable Seat Mechanism
A. W. Chapman Ltd.,
Ranelagh Gardens,
Fulham, London, S.W.6.

Lifting Jack
Smith's Jacking Systems Ltd.,
Edgware Road,
London, N.W.2.

Tyres and Tubes
Dunlop Rubber Co. Ltd.,
Fort Dunlop, Birmingham, 24.

Carburetter
Zenith Carburetter Co. Ltd.,
Honeypot Lane,
Stanmore, Middlesex.

Sparking Plugs
Champion Sparking Plug Co. Ltd.,
Feltham, Middlesex.

Fuel Pump and Air Cleaner
"A.C." Sphinx Sparking Plug Co. Ltd.,
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Oil Filter
Automotive Products Co. Ltd.,
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Leamington Spa.
"A.C." Sphinx Sparking Plug Co. Ltd.,
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Driving Mirror
John Morgan & Co.,
521 Lichfield Road,
Aston, Birmingham, 6.
Eversure Accessories Ltd.,
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Birmingham, 9.
Wingard (M.A.) Ltd.,
Kingsham Rd.,
Chichester, Sussex.

Girling Brakes
Girling Limited,
Tyseley,
Birmingham, 11.

Armstrong Shock Absorbers
Armstrong Patents Ltd.,
Beverley, Yorks.

Oil Gun and Nipples
"Tecalemit",
Great West Road,
Brentford, London.

Door Handles and Locks, Door and Ignition Keys and Bumpers
Wilmot Breeden Ltd.,
Eastern Works,
Camden Street, Birmingham, 1.

Radio
Radiomobile, Ltd.,
179–185 Great Portland Street,
London, W.1.

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