

TAXI AND HIRE CAR



**EXAS**

**DRIVER'S HANDBOOK**

---

# TAXI AND HIRE CAR

This handbook contains information on FX4S models fitted with Land Rover Diesel and Petrol engines.

---

<b>CONTENTS</b>	Page
Control & Operation	3
Maintenance	19
Replacement & Data	43

---

Publication Part No. LTISS340 0986

---

Published by London Taxis International Limited  
Holyhead Road, Coventry CV5 8JJ  
© LONDON TAXIS INTERNATIONAL LIMITED 1986

---

# Foreword

This handbook introduces you to the various controls, switches and components of the London Taxis International Taxi and Hire Car and explains their function and the procedure by which they are designed to operate.

Care and regular maintenance during usage will prolong the useful life of the vehicle and it is strongly recommended that the maintenance scheduled at regular intervals in the centre section of this handbook is never overlooked and is carried out by qualified personnel in a suitably equipped garage or workshop. Care and planned maintenance will be rewarded by continued reliability and economy.

Information and instructions to facilitate the speedy replacement of consumable items is given with useful general forecourt data in the final section of the handbook.

The following meanings are ascribed to the words in bold type which precede notices.

**WARNING:** *The procedure must be followed precisely to avoid the possibility of personal injury.*

**CAUTION:** *Follow this procedure to avoid damage to components.*

**Note:** *This method makes the job easier.*



# Controls & Operation

## Getting to know your vehicle

### Controls

Accelerator	7
Brake pedal	7
Clutch pedal	7
Gear lever – manual gearbox	7
Gear lever – automatic gearbox	12
Handbrake	7
Mixture control (choke)	7
Steering lock/starter switch	9
Steering lock/starter switch keys	9

### Doors and locks

Bonnet	18
Front door	16
Keys	16
Luggage compartment	18
Rear doors	17
Rear door security locking	17
Windows	17

### Instruments

#### Switches

Fascia switches	5
Column switch	6
Direction indicator	6
Headlamp dip	6
Headlamp flash	6
Horn	6
Interior lamps	6

## Driving information

### Automatic transmission

12

### Brakes

Brake system	8
Fluid level warning light	8
Wet brakes	8

### Fuel consumption

12

### Heating and ventilating

Air intake	11
Air distribution	11
Air temperature	11
Blower switch	11
Passenger's heater	11

### Mirrors

14

### No-charge warning

10

### Oil pressure

10

### Seats

Seat adjustment	14
Seat belts	15
Rear seat belts	16

### Starting

Starting – diesel engine	10
Starting – petrol engine	10

### Warming-up

10

### Warning lights

4

# Controls & Operation

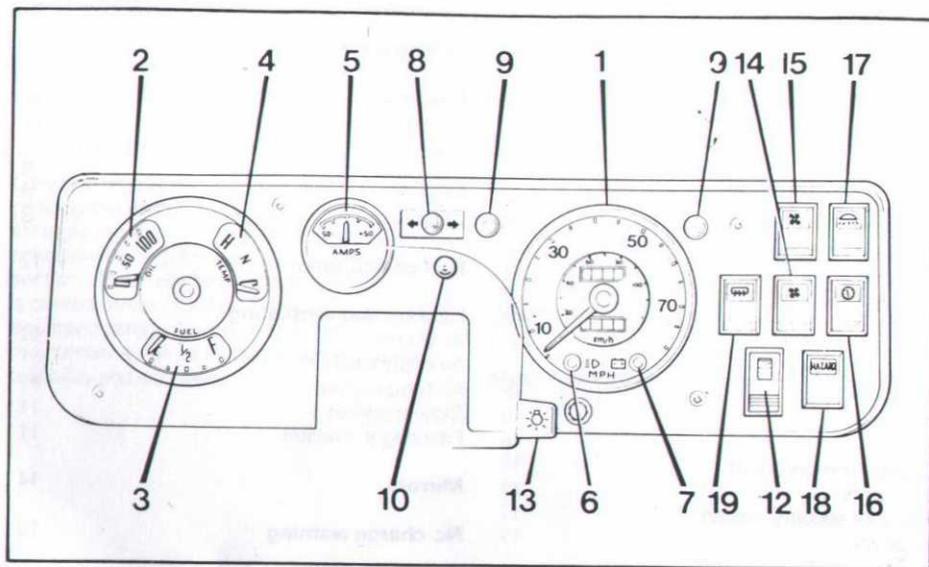


Fig. 1 Left-hand drive

## INSTRUMENTS – Figs 1 and 2

**1. Speedometer.** Indicates the road speed in m.p.h. or in km/h and also records the trip and total distance the vehicle has travelled. The trip recorder enables the distance of a particular journey to be recorded and is reset to zero by turning the knurled knob on the fascia anti-clockwise until the figures return to zero.

**2. Oil pressure gauge.** Indicates the pressures (in lbf<sup>2</sup>) of oil being delivered by the pump. The gauge should register within 30 seconds of starting the engine.

**3. Fuel gauge.** Indicates the approximate amount of fuel in the tank, 'E' indicating empty and 'F' full. The gauge operates only when the auxiliary circuits are switched on.

**4. Temperature gauge.** Indicates the temperature of the coolant in the engine when the auxiliary circuits are switched on. 'C' indicates cold, 'N' indicates normal, and 'H' indicates hot.

**5. Ammeter.** Indicates the rate at which the battery is being charged (+) or discharged (-).

## WARNING LIGHTS – Figs. 1 and 2

**6. Main beam warning.** Glows blue when the high beam is being used.

**7. No-charge warning.** Glows red when the auxiliary circuits are switched on. The light should go out as the engine is started and its speed increases.

**8. Direction indicator warning.** Flashes green when the direction indicators are flashing. The light goes out when the indicator switch is returned to the 'OFF' position.

**9. Door warning.** The left-hand light glows orange when the left-hand rear door is not closed and the right-hand light glows orange when the right-hand rear door is not closed.

**10. Door lock warning.** While the ignition is switched on this red light will glow if the rear doors are not locked and can be opened from inside by a passenger. (See also page 17).

**12. Brake failure warning.** (See also page 8).

**NB:** On later models the 3 in 1 and speedometer have changed positions.

# Controls & Operation

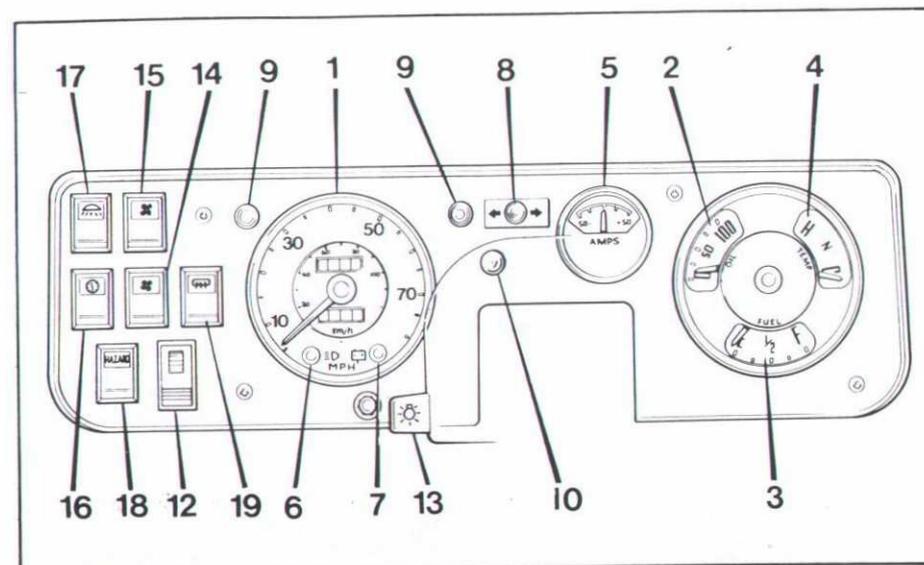


Fig. 2 Right-hand drive

## FASCIA SWITCHES – Figs. 1 and 2

**13. Lighting switch.** When the switch is pressed downwards to the first position the side and tail lamps are switched on, and when pressed to the next position the headlamps are also switched on.

**14. Driver's blower switch.** Press the switch  downwards to operate the blower motor and increase the circulation of air in the driver's compartment.

**15. Passenger's blower switch.** The switch  can be used to switch the passenger's compartment blower on or off irrespective of whether the push-button type switch in the passenger's compartment is on or off.

**16. Panel lamp switch.** Press the switch  downwards to operate the panel and switch illuminations. These will only light when the side lights are on.

**17. Passenger's interior lamp switch.** The switch  can be used to switch the passenger's compartment lamps on or off irrespective of whether the push-button type switch in the passenger's compartment is on or off.

**18. Hazard warning switch.** Press the switch marked HAZARD downwards to operate the direction indicator lamps as a hazard warning. The lamps on both sides of the vehicle and the warning lamp in the switch will operate in unison irrespective of whether the auxiliary circuits are switched on or off.

**19. Heated rear window.** Press the switch  downwards to operate the heated rear window. The switch will illuminate as a warning light. For details of the care to be taken of the heated rear window see CLEANING.

**NB:** Switches 14, 15 & 19 can only be operated when the auxiliary circuits are switched on.

# Controls & Operation

## COLUMN SWITCH – Fig. 3

**Direction indicator.** The self-cancelling switch operates the indicators when the auxiliary circuits are switched on. Move the switch to position (1) to operate the right-hand indicators and to position (2) to operate the left-hand indicators; the warning light will flash.

**Headlamp flasher.** Lift the lever towards the steering-wheel (3) to flash the headlamps. The lever will return to its normal position when released.

**Headlamp main beam.** Push left hand lever forward – blue warning light will illuminate in speedometer. To cancel lift lever towards steering wheel returning to original position.

**Horn.** Press the end of the lever inwards (4) to sound the horn.

**Windscreen washer.** Push button at end of right-hand lever.

**Windscreen wiper switch.** Move right-hand lever upwards for two speed wipe as required. Move right-hand lever down for flick wipe.

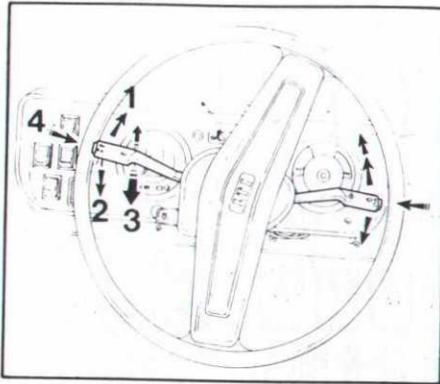


Fig. 3

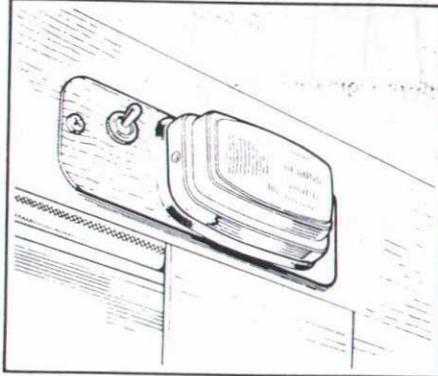


Fig. 4

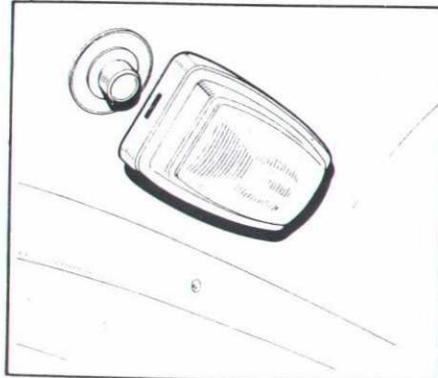


Fig. 5

## DRIVERS INTERIOR LAMP – Fig. 4

Press down the switch adjacent to the lamp on the partition behind the driver to switch on.

## PASSENGER'S COMPARTMENT LAMP – Fig. 5

Press the push-button type switch in the passenger's compartment adjacent to the right-hand interior lamp to switch on or off.

The operation of the passengers interior light can be overridden by the switch  on the fascia panel.

# Controls & Operation

## CONTROLS – Figs. 6 and 7

**1. Handbrake.** Pull the lever upwards to apply the rear brakes. To release the brakes pull the lever upwards slightly, depress the button on the end of the lever and push downwards.

**2. Accelerator pedal.**

**3. Brake pedal.**

**4. Clutch pedal.**

**5. Gear lever.** Lift and move the lever to the left before engaging reverse gear. For operation with automatic transmission see page 12.

**6. Cigar lighter (if fitted).** Press the knob in to operate. When heated and ready for use the element will partly eject and can then be withdrawn for use.

## Petrol engine mixture control (choke) – Fig. 8

When starting the engine from cold, pull out the control and turn it clockwise to lock it in position. The further out the control is pulled, the richer will be the fuel mixture to assist starting a cold engine.

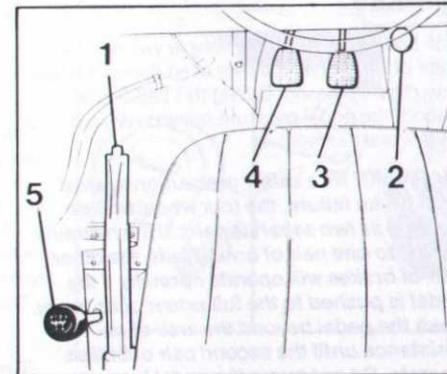


Fig. 6 Right-hand drive – diesel – manual

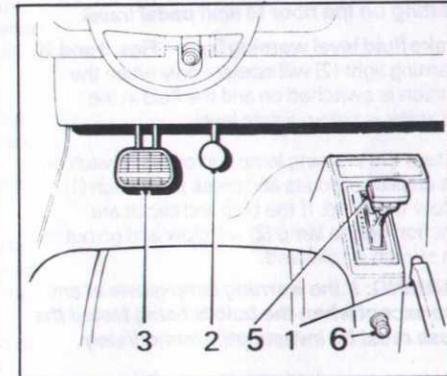


Fig. 7 Left-hand drive – petrol – auto

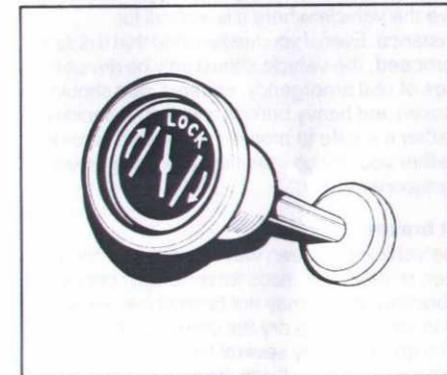


Fig. 8

# Controls & Operation

## BRAKES

The brakes on your new vehicle will increase their efficiency as they are used during the first few days of driving. During this bedding-in period, the pedal pressure required will diminish as the brakes improve.

**WARNING:** As a safety precaution against total brake failure, the four wheel brakes operate as two separate pairs. If the hydraulic circuit to one pair of brakes fails, the other pair of brakes will operate normally if the pedal is pushed to the full extent of its travel. Push the pedal beyond the area of no resistance until the second pair of brakes operate. Do not pump the pedal in an attempt to restore pressure. Do not allow extra thick matting on the floor to limit pedal travel.

**Brake fluid level warning light – Figs. 9 and 10**  
Warning light (2) will operate only when the ignition is switched on and the fluid in the reservoir is below a safe level.

To test the warning lamp and circuit, switch on the auxiliary circuits and press the switch (1) below the lamp. If the bulb and circuit are functioning the lamp (2) will glow and go out as the switch is released.

**WARNING:** If the warning lamp glows at any time except when the bulb is being tested the cause must be investigated immediately.

Unless as a result of your investigating you are satisfied that it is safe to proceed, you should leave the vehicle where it is and call for assistance. Even if you are satisfied that it is safe to proceed, the vehicle should only be driven in cases of real emergency, extreme care should be taken and heavy braking avoided. In deciding whether it is safe to proceed you should consider whether you will be infringing any Government Regulations.

### Wet brakes

If the vehicle has been washed, driven through water, or over wet roads for prolonged periods, full braking power may not be available. As soon as it is safe to do so dry the brakes by applying the footbrake lightly several times while the vehicle is in motion. Keep the handbrake applied while using pressure washing equipment.

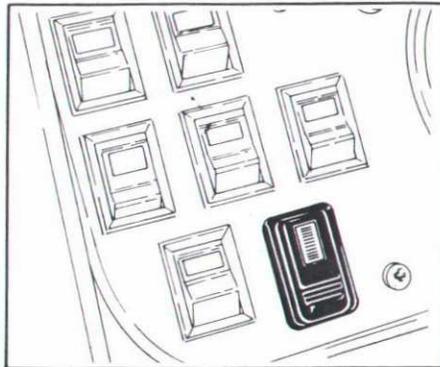


Fig. 9 Right-hand drive

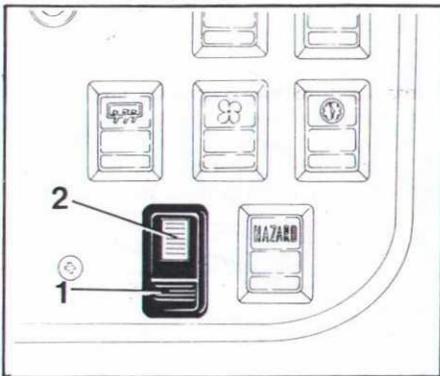


Fig. 10 Left-hand drive

# Controls & Operation

## Steering lock and starter switch – Fig. 11

The switch has four positions marked '0', 'I', 'II' and 'III'. The switch key can only be withdrawn or inserted when the key is at the '0' position.

### Diesel switch

Insert the key and turn it towards position 'I' to unlock the steering. If the steering lock remains engaged, slight movement of the steering wheel will release it. Further movement of the key to position 'II' will switch on the auxiliary circuits. Turn the key against spring pressure to the 'III' position to switch on. Turn the key further to the 'III' position to operate the starter motor. The key will return to the 'I' position when it is released.

### Petrol switch

Insert key as diesel and turn towards position 'I'. Further movement of the key towards position 'II' is required before auxiliary circuits operate, then turn the key towards position 'III' to operate the starter motor. The key when released will return to position 'II'.

To lock the steering and withdraw the key. Turn the key to the '0' position and withdraw the key.

Never turn the key to the '0' position while the vehicle is in motion.

**WARNING:** The steering-column lock/starter switch and its electrical circuits are designed to prevent the engine being started while the steering lock is engaged. Serious consequences could result from alteration or substitution of the steering-column lock/starter switch or its wiring. In no circumstances must the starter switch be separated from the anti-theft device.

**CAUTION:** Do not lubricate the steering lock.

### Keys

To reduce the possibility of theft, locks are not marked with a number. It is important that owners **MAKE A NOTE OF THE KEY NUMBERS IMMEDIATELY** on taking delivery of the vehicle. The number of the steering-column lock and starter switch key is stamped on the label attached to the key ring. It is advisable for owners to consult their Dealer regarding steering lock and starter switch key replacements.

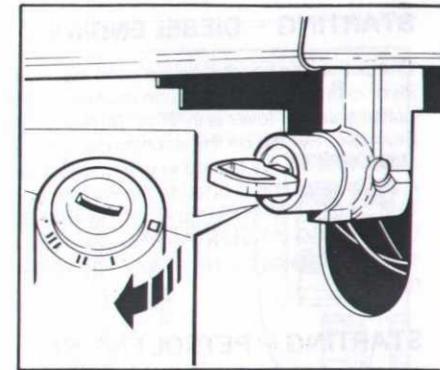


Fig. 11

# Controls & Operation

## STARTING – DIESEL ENGINE

Check that the handbrake is on and that the gear lever is in the neutral position (manual gearbox) or the selector lever is in 'P' or 'N' (Automatic gearbox). Switch on the auxiliary circuits and check that the no-charge warning light glows. A DPS fuel pump is fitted to the 2.5 litre engine. THE ACCELERATOR PEDAL MUST NOT BE DEPRESSED WHEN STARTING. Operate the starter, releasing the key as soon as the engine is running.

## STARTING – PETROL ENGINE

Check that the handbrake is on and that the gear lever is in neutral or at 'P' or 'N'.

If the engine is cold, pull out the mixture control, turn it clockwise to lock.

Insert and turn the starter switch key to position 'III' to operate the starter and as soon as the engine starts release the key. The RED no charge warning light will go out when the engine is running.

If the mixture control has been used to assist starting, unlock the control by turning it anti-clockwise and push it in until about 13mm (1/2 in) of travel remains and re-lock.

Approximately one minute after the engine has started, unlock and push the mixture control right in.

### Starter

Operate the starter for up to five or six seconds at a time. If the engine fails to start the first time, do not use the starter again until the engine has stopped turning. Release the key immediately the engine fires and run.

**Note:** The starter motor may have to be operated for more than five or six seconds in cold weather conditions.

### No-charge warning

If the no-charge warning light fails to go out, stop the engine, check the alternator driving belt, and adjust if necessary. If the adjustment is correct or adjustment fails to correct the fault, consult your Dealer or Agent as soon as possible. Use of the starter and/or lamps in these circumstances will exhaust the battery quickly.

### Oil pressure

If the oil pressure gauge fails to show any pressure while the engine is running, stop the engine, check the oil level is not excessively low, consult your Dealer before re-starting the engine.

### Warming-up

Do not allow the engine to idle slowly while warming-up. The vehicle can be driven on the road immediately after starting-up, in which case hard acceleration or allowing the engine to labour must be avoided until normal working temperature is obtained.

### Running-in

The following instructions must be strictly adhered to with a new vehicle or engine during the first 500 miles (800 km).

Do not exceed 40 m.p.h. (65 km/h) on a light throttle.

Do not operate at full throttle in any gear.

Do not allow the engine to labour in any gear.

Progressively increase the maximum speed and throttle opening of vehicles over the first 1,500 miles (2,500 km).

### Filling with fuel

Do not fill the fuel tank to the extent that fuel is visible in the filler neck. If this happens, and the vehicle is parked in the sun, expansion will cause both loss of fuel and danger of fire from exposed fuel. Park the vehicle in the shade with the filler cap in as high a position as possible.

**WARNING: The fuel tank is fitted with a vented filler cap. It is essential that a replacement cap is of the correct type.**

**Do not use oxygenated fuels such as blends of methanol/gasoline or ethanol/gasoline (e.g. GASHOL).**

### Empty fuel tank – diesel

In the event of the diesel fuel tank becoming completely empty, before the engine will start the fuel tank must be replenished and the fuel system must be primed to exclude all air (see page 33).

# Controls & Operation

## HEATING AND VENTILATING – Fig. 12

The system will provide fresh air for heating or ventilating the driver's compartment and for demisting or defrosting the windscreen. The air will be heated by the engine water system according to the position of the air temperature control.

### Air intake control

Push the lever (1) in the centre of the fascia to the right, and then downwards to open the scuttle ventilator and allow fresh air on to the windscreen via the heater unit.

### Air distribution control

Open the door (2) which is below the centre of the fascia over the gearbox cover to allow air to enter the driver's compartment at foot level. Close the door completely to direct the maximum amount of air to the windscreen.

### Air temperature control

To increase the temperature of the air entering the driver's compartment move the lever (3) sideways from the 'MIN' position towards the 'MAX' position. If cool air is required, leave the lever at the 'MIN' position.

### Blower switch

To increase the amount of air entering the driver's compartment press the switch (4) to operate the blower motor.

### Passenger's heater

The system heats and recirculates the air in the passenger's compartment. The temperature of the air, heated by the engine cooling system, is controlled by the lever (3) in the driver's compartment. The heater blower motor is controlled by a push-button type switch (5) located at the top of the right-hand rear door pillar in the passenger's compartment.

The operation of the passenger's heater blower motor can be overridden by switch (6) on the fascia panel.

### Rear fog guard switch

With the headlamps switched on, press the switch (7) to operate the rear fog lamp; the warning lamp will illuminate the switch. Press the switch again to switch off the fog lamp.

## AIR CONDITIONING (if fitted)

Refer to the separate information provided.

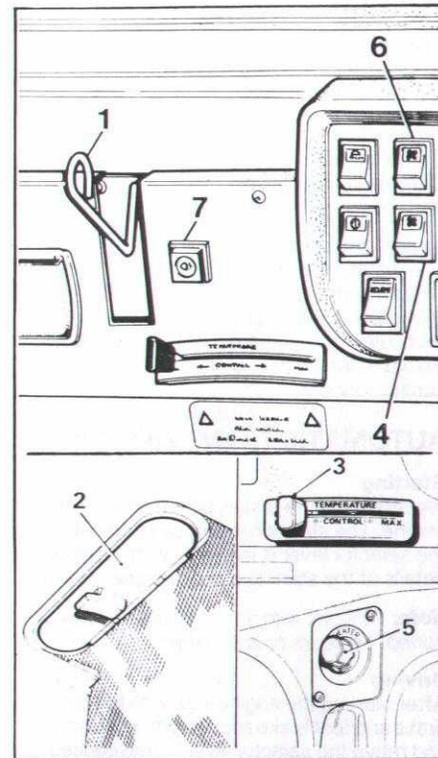


Fig. 12 Right-hand drive panel shown

# Controls & Operation

## FUEL CONSUMPTION

This information is taken from the officially approved tests as required by the Passenger Car Fuel Consumption Order 1977.S.I. 1603.

	Simulated Urban Driving		Constant Speed 56 mp.h. (90 km/h)	
	mp.g.	litre/100km	m.p.g.	litre/100km
<b>FX4'S' Model</b>				
<b>Manual transmission</b>	27.4	10.3	37.3	7.4
<b>Automatic transmission</b>	28.6	9.9	31.5	9.0

### Important note

The results given here do not express or imply any guarantee of the fuel consumption of the particular vehicle with which this information is supplied. The vehicle itself has not been tested and there are inevitably differences between vehicles of the same model. In addition this vehicle may incorporate particular modifications. Furthermore the driver's style and road and traffic conditions, as well as the extent to which the vehicle has been driven and the standard of maintenance, will all affect the fuel consumption.

## AUTOMATIC TRANSMISSION

### Starting

Always apply the brakes before starting the engine. The starter can only be operated when the selector lever is in the 'P' or 'N' position. For details of the starting procedure see page 10.

**Note:** Vehicles with an automatic gearbox cannot be push- or tow-started.

### Driving

After starting the engine and, with the hand brake and foot brake applied, lift the selector lock and move the selector lever to the required position. Release the brakes and press the accelerator.

**CAUTION:** Do not run the engine above idle speed with a drive position selected while the car is stationary. Select 'N' or 'P' for prolonged periods of idling.

### Increased acceleration

To change down quickly for overtaking or hill climbing, press the accelerator beyond its normal travel. The down-change cannot take place above 40 mp.h. (65 km/h).

### Engine braking

Reduce the road speed to below 45 m.p.h. (72 km/h) by use of the foot brake and select 'L'. To give maximum engine braking, further reduce the road speed to below 5 to 11 mp.h. (8 to 17 km/h).

### Soft surfaces

When the wheels fail to grip, rock the vehicle backwards and forwards by alternately selecting 'R' and 'D' with a small throttle opening.

# Controls & Operation

## AUTOMATIC TRANSMISSION

**WARNING:** When selecting any gear with the vehicle stationary the brakes must be applied until gear selection has taken place.

### Selector positions – Fig. 13

The selector lever and accelerator pedal control the operation of the automatic gearbox.

**'P' – Park.** When the vehicle is parked, apply the handbrake and select 'P' to lock the transmission mechanically. No power is transmitted to the rear wheels.

**'R' – Reverse.** Select only when the vehicle is stationary. If a reversing light is fitted it will operate while the ignition is switched on.

**'N' – Neutral.** Apply the brake and select 'N' when the vehicle comes to rest. No power is transmitted to the rear wheels.

**'D' – Drive.** Select this position for normal driving. Gears will change automatically both upwards and downwards through the three ratios according to the vehicle road speed and accelerator pedal position.

**'L' – Lock-up.** Automatic changes are confined to the first and second ratios. Select when rapid acceleration or engine braking is required, also when:

- descending a steep hill.
- driving up a long hill to prevent frequent changes of ratio.
- negotiating bends or gradients, particularly when heavily laden.

When selected while stationary, the transmission will remain in the first ratio during driving.

If selected while driving in third ratio, the gearbox will change down to second ratio and give engine braking should the road speed fall between 16-27 m.p.h. (26-43 km/h) or when the accelerator is pressed quickly to the floor below 35-43 m.p.h. (56-70 km/h). First ratio will be selected automatically when the road speed falls below 5 to 11 m.p.h. (8 to 17 km/h) and will give maximum engine braking.

### DO NOT

Select 'P' when the vehicle is moving.

Select 'R' when the vehicle is moving forwards.

Select 'L' above 45 m.p.h. (70 km/h)

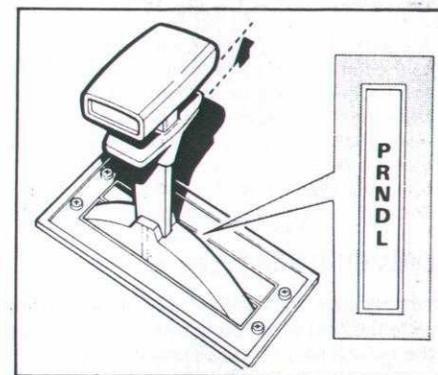


Fig. 13 Right-hand drive

## Controls & Operation

### DRIVER'S SEAT – Fig. 14

Move the lever (1) at the front of the seat frame to the right to adjust the location of the seat on the floor. Lift the forward lever (2) at the side to raise the seat against spring pressure with the lever lifted to lower the front of the seat. Ensure that the catch has engaged when the lever is released. Press down the rear lever (3) to adjust the angle and height of the rear of the seat.

### DRIVER'S SEAT – Fig. 15

Lift the lower rail (1) at the front of the seat and slide the seat to the preferred position. Release the rail and move the seat until it locks.

With the body weight raised from the seat, lift the upper rail (2) to raise or lower the seat.

Pull upwards on the lever (3) to the left of the seat to incline the back rest in the most comfortable position.

## MIRRORS

### Exterior

The door-mounted mirror may be adjusted from the seat position when the window is opened.

To adjust a wing mirror, slacken the retaining nut and adjust the mirror head to the desired position. Tighten the retaining nut.

### Interior – Fig. 16

The mirror stem with anti-dazzle head is designed to break away from the mounting bracket on impact. The stem may be refitted in the mounting bracket as follows. Align the stem ball (1) with the bracket cup (2), ensuring that the small protrusion (3) on the stem aligns with the indent of the mounting bracket. Give them a smart tap with a soft instrument to join the two components.

### Anti-dazzle

To reduce mirror dazzle, press the lever (4) towards the windscreen.

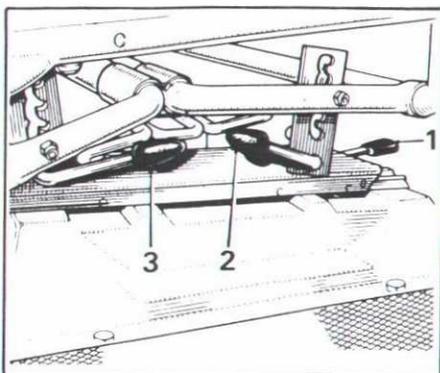


Fig. 14 Right-hand drive

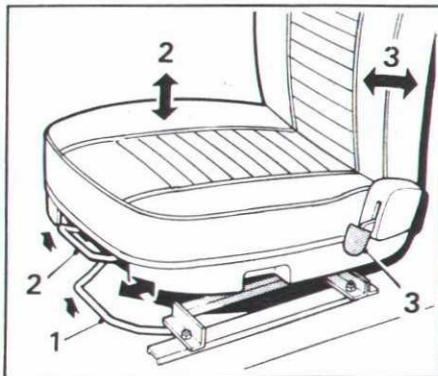


Fig. 15 Left-hand drive

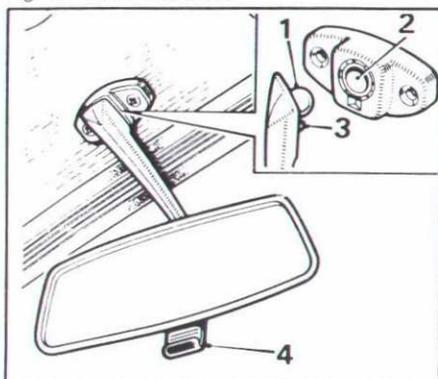


Fig. 16

## Controls & Operation

### AUTOMATIC SEAT BELTS – Fig. 17

#### Wearing

The belt fastener or buckle must be at the side of the hip, never at the front. The lap section of the belt must always lie across the hip bones, never across the soft parts of the abdomen. Wear the belt as tightly across the body as possible without undue discomfort. Ensure that the belt webbing is lying flat and is not twisted.

#### Fastening

Pull the locking tongue (1) and belt across the body gently, and insert the tongue into the locking unit (2). Press the tongue into the unit until the locking mechanism is heard to click into position. Do not pull the belt across the body quickly, or the locking device in the automatic reel will operate.

#### Releasing

Lean forwards against the belt and press the release catch (3) of the locking unit marked 'PRESS' until the tongue is detached from the unit. Allow the return spring of the belt reel (4) to assert itself and return the belt to its parked position. It may be necessary to feed the last few inches of belt onto the reel by hand.

#### Care of seat belts

Inspect the belt webbing periodically for signs of abrasion or wear, paying particular attention to the fixing points and adjusters. Do not attempt to make any alterations or additions to the seat belts or their fixings as this could impair their efficiency. Renew a seat belt that has withstood the strain of a severe impact or shows signs of severe fraying or has been cut.

Before cleaning the seat belts see page 20.

#### Testing

**WARNING: This test must be carried out under safe road conditions, i.e. level, dry road with no following or oncoming vehicles.**

With the belts in use, drive the vehicle at 5m p.h. (8km/h) and brake sharply. The automatic locking device should operate and lock the belt. It is essential that the driver and passenger are sitting in a normal relaxed position when making the test. The retarding effect of braking must not be anticipated.

If a belt fails to lock, consult your Dealer.

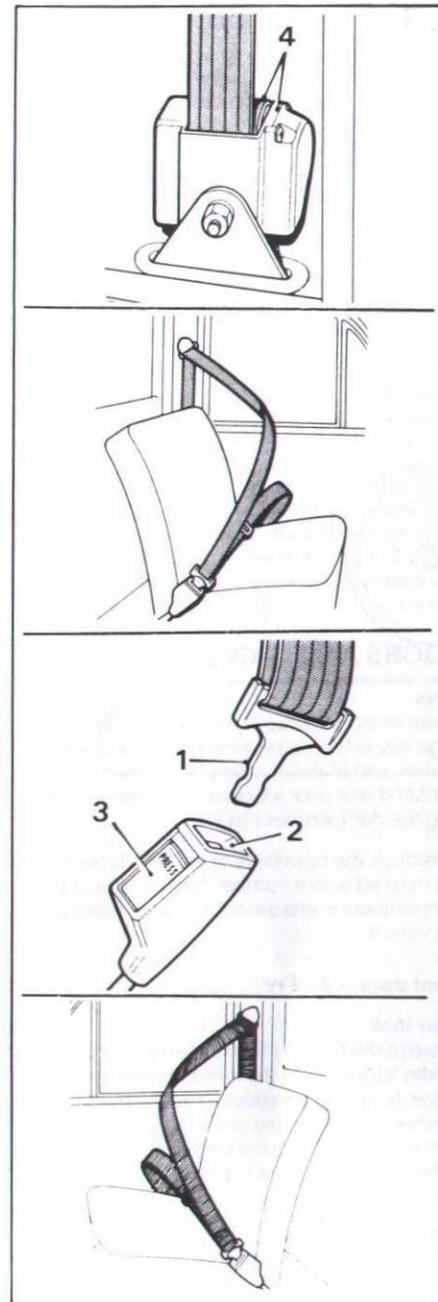


Fig. 17

# Controls & Operation

## Rear seat belts – Fig. 18

Provision is made for the attachment of two belts for rear seat passengers.

The anchorage point for the short locking strap for each belt, which should lay on the centre of the rear seat cushion, is reached from the luggage compartment. Remove the jack and spare wheel, pass the end of each strap between the seat cushion and back rest and secure to the tapped holes in the spare wheel well with the special seat belt bolts.

The long belt on each side is secured at the top by the reel which is bolted to the rear parcel shelf after removing the sealing plug.

The tab at the lower end of each long belt is bolted to the fixing point in the wheel arch and this too is easily accessible when the seat cushion is lifted forward.

Each belt is intended for use by an adult occupant only and is fastened by pulling the tongue over the shoulder from the reel until it crosses the chest and can be pushed into the lock nearest the wearer. A click will indicate that the belt is locked.

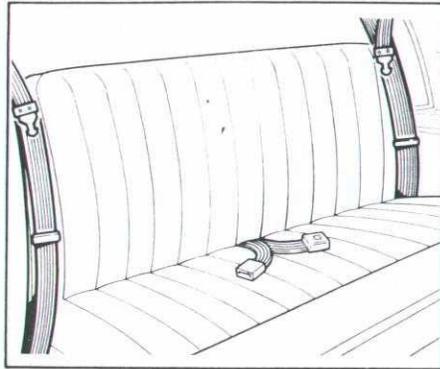


Fig. 18

## DOORS AND LOCKS

### Keys

Three keys, with duplicates, are provided. The large key is for the steering lock and starter switch, and of the two small keys one is for the front and rear door locks and the other is for the luggage compartment lid lock.

To reduce the possibility of theft the locks are not marked with a number. Make a note of the key numbers immediately on taking delivery of the vehicle.

## Front door – Fig. 19

### Door lock

Depress the button (1) on the exterior door handle to open. Pull the interior handle (2) upwards to open the door, push the handle downwards to lock the door. To lock the door from the outside turn the key (3) towards the rear of the vehicle; to unlock, turn towards the front of the vehicle.

### Window lock

The window may be locked in the closed position by moving the lever (4) forwards.

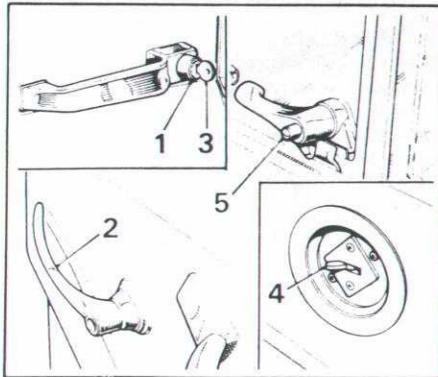


Fig. 19

### Quarter-light

To open the quarter-light, press in the plunger (5) in the centre of the catch and pivot the catch lever towards the rear of the quarter-light.

## Rear door – Fig. 20

### Door lock

Depress the button (1) on the exterior door handle to open. Pull the interior handle (2) upwards towards the grab handle to open. No provision is made for locking the door from the inside. To lock the door from the outside turn the key (3) towards the front of the vehicle; to unlock, turn towards the rear of the vehicle.

### Window lock

The window may be locked in the closed position by moving the lever (4) rearwards.

### Window opening –

To open or close the window, move the locking lever forwards and slide the glass up or down to the desired position.

### Rear door security locking – Fig. 21

When the electronic rear door security system is fitted the rear door locks are made to operate by the motion of the vehicle or the driver applying the footbrake.

If the ignition is switched on while the vehicle is stationary the red warning light (1) on the instrument panel will glow and the rear doors can be opened.

As soon as the footbrake is applied the locks will operate automatically, the warning light will be switched off and the doors will remain locked from the inside until the footbrake is released.

As soon as the vehicle moves the rear doors will lock automatically, the warning light will go off and the doors will remain locked until the vehicle comes to rest. If the vehicle comes to rest without the footbrake being applied there will be a delay of two seconds before the locks release.

If the vehicle comes to rest with the footbrake applied the locks will not release until a few seconds after the handbrake is applied and the footbrake is released. The locks will release immediately the ignition is switched-off.

When the automatic locks are applied, the rear doors can be opened only from the outside. This safety feature enables occupants to be released in case of accident either by someone outside the vehicle or by the occupant themselves lowering the window and pressing the button on the external handle.

When the red light mounted on the door goes off the door lock is released.

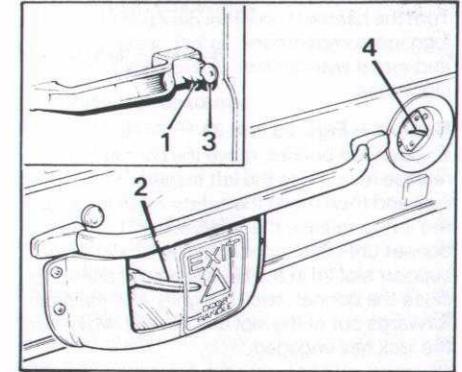


Fig. 20

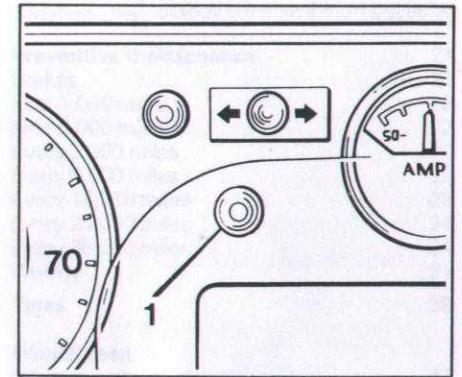


Fig. 21

# Controls & Operation

## Luggage compartment – Fig. 22

Turn the handle (1) in either direction to open the luggage compartment. To lock, insert the key (2) and turn it anti-clockwise; to unlock turn clockwise.

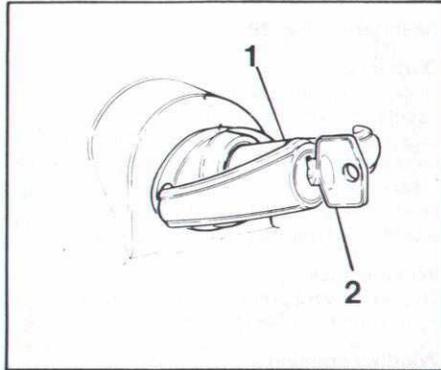


Fig. 22

## Bonnet – Figs. 23 and 24

To open the bonnet, move the bonnet lock release lever (1) to the left to release the bonnet lock and then move the safety-catch lever (2) to the left to release the safety-catch. Lift the bonnet until the bonnet prop (3) locates in the support slot (4) in the bonnet prop channel. To close the bonnet, raise it slightly, pull the prop forwards out of the slot and lower it. Make sure the lock has engaged.

On later export models the bonnet lock is released from inside the vehicle.

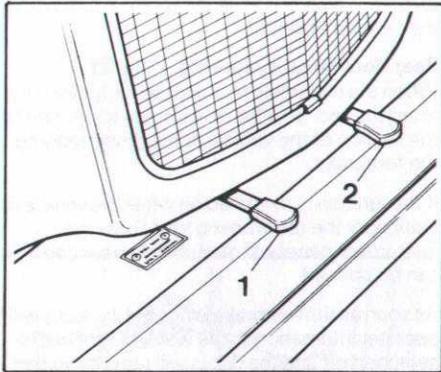


Fig. 23

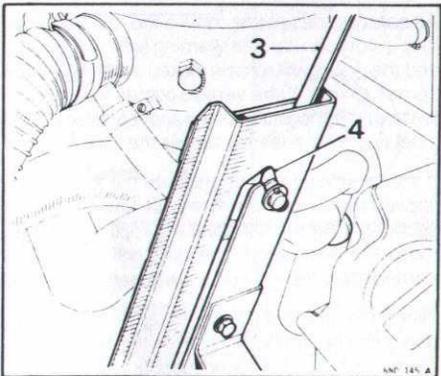


Fig. 24 Right-hand drive

# Maintenance

<b>Automatic gearbox</b>		<b>Lubricant specifications</b>	25
Parking pawl check	28		
Oil filter	42	<b>Lubricants – service</b>	26
<b>Battery top-up</b>	41	<b>Lubrication procedures</b>	
<b>Brakes</b>		Automatic gearbox	28
Adjustment	38	Distributor	36
Fluid reservoir	36	Engine oil change	27
Lining inspection	37	Engine oil check	27
Replacing brake shoes	37	Engine oil filter change	27
<b>Cleaning</b>		Handbrake linkage	37
Exterior	20	Locks, hinges and catches	31
Interior	20	Manual gearbox	28
Materials	21	Power steering	30
<b>Clutch fluid reservoir</b>	36	Propeller shaft	30
<b>Cooling system</b>		Rear axle	29
Frost precautions	40	Steering connections	30
Topping up	40	Steering idler	29
<b>Engine</b>		<b>Preventive maintenance</b>	21
Air cleaner element	34	Brakes	23
Belt tension:		First 1,000 miles	22
– alternator	41	First 6,000 miles	22
– power steering	30	Every 3,000 miles	22
Diesel fuel – bleeding air	33	Every 6,000 miles	22
Diesel fuel filter	34	Every 18,000 miles	23
Diesel fuel injection	32	Every 24,000 miles	24
Diesel heater plugs	32	Every 36,000 miles	24
Fuel sediment bowl – petrol	34	Weekly	21
Sparking plugs	36	<b>Tyres</b>	39
Valve rocker clearance	31	<b>Windscreen</b>	
		Washer reservoir check	42
		Wiper arm	42
		Wiper blade	42

# Maintenance

## CLEANING – DO's AND DON'Ts

### Interior

#### Do:

Clean plastic-faced upholstery with diluted upholstery cleaner

Clean nylon-faced upholstery with a brush or vacuum cleaner, and remove stains with nylon cleaner, using a patting action.

Clean seat belts by sponging with warm water, using a non-detergent soap and allowing them to dry naturally.

Clean carpets with a brush or vacuum cleaner. Occasionally clean carpets with diluted upholstery cleaner.

Use only a clean soft cloth or chamois leather to clean the interior of the rear window and the direction of cleaning should be in line with the heating elements and not across them.

#### Don't

Use a rubbing action when removing stains from nylon-faced upholstery.

Use upholstery cleaner on painted surfaces.

Bleach or re-dye seat belts.

Clean seat belts by using caustic soap, chemical cleaners or detergents.

Dry seat belts with artificial heat or direct exposure to sunlight after cleaning.

'Dry-clean' carpets.

Damage the heating element in the rear window by scratching, wiping with a ringed hand, stoving hard objects against the glass, or cleaning with anything harsh.

### Exterior

#### Do:

Wash the bodywork frequently with a soft sponge and plenty of water containing car shampoo.

Use chrome cleaner to remove tarnish from bright metal.

Use glass cleaner to remove windscreen smears.

Use petrol or white spirit to remove spots of grease or tar from the paintwork and bright trim.

Use car polish to retain the new appearance of your vehicle.

#### Don't

Use abrasives or metal polish on bright metal parts.

# Maintenance

## CAB CARE

use of the following products selected from the UNIPART range will ensure maximum effectiveness in maintaining the appearance and condition of your vehicle.

Carpets	GAC 214 UNIPART Nylon Upholstery Cleaner
Seats and trim (vinyl and leather cloth)	GAC 109 UNIPART Upholstery Cleaner
Seats (nylon) and headlining	GAC 214 UNIPART Nylon Upholstery Cleaner
Washing	GAC 198 UNIPART Luxury Car Shampoo
	GAC 112 UNIPART Car Sponge – cellulose
	GAC 283/4 UNIPART Car Sponge – synthetic
	GAC 232 UNIPART Chamois-leather – large
	(GAC 233 – standard)
Glass	GAC 102 UNIPART Glass Cleaner
Bodywork	GAC 106 Hi-Shine Car Polish
Chrome and bright trim	GAC 108 UNIPART Chrome Cleaner
Engine grime and grease	GAC 176 UNIPART Engine Degreasant (Aerosol)

### Winter aids

Washer reservoir ..... GAC 313 UNIPART 'All Seasons' Screenwash

A **UNIPART** Tool Kit is obtainable in a waterproof roll and contains the following tools:

8 combination spanners	2 screwdrivers
1 adjustable spanner	1 feeler gauge
2 pairs of pliers	

This kit can be supplemented from a comprehensive range of **UNIPART** quality hand tools which are also available.

### Preventive maintenance

Preventive maintenance, together with the use of Genuine London Taxi International parts is the key to economy, safety and reliability for your vehicle. It is in your interest to have maintenance carried out regularly by a specialist Taxi Dealer or Agent. He has qualified personnel and the required facilities. He can offer a maintenance service scheme to cover systematic maintenance in accordance with our recommendations and standards. The following pages include a summary of the various checks, lubrication and maintenance procedures which should be completed at the prescribed intervals on a regular basis.

Take the advice of your Dealer or Agent on the need for more frequent oil changes and additional brake maintenance or special servicing which may be desirable if the vehicle is operating in dusty conditions or driven hard in arduous conditions and subjected to high levels of tyre and brake wear.

### Every WEEK or before a long journey

Check/top-up engine oil.  
Check/top-up power steering fluid.  
Check/top-up automatic transmission fluid.  
Check/top-up brake and clutch fluid reservoirs.  
Check/top-up cooling system.  
Check/adjust operation of windscreen washer, and top-up reservoir.  
Check/top-up battery electrolyte.  
Check function of exterior lamps, wipers and warning indicators.  
Check tyres for tread depth, visually for external cuts in fabric, exposure of ply or cord structure, lumps and bulges.  
Check/adjust tyre pressures, including spare.  
Check tightness of wheel fastenings.

# Maintenance

## First 1,000 miles (1500km)

Free Service – adjustments and checks.

## First 6,000 miles (10 000km)

### Automatic gearbox

Renew external oil filter (where fitted).

## Every 3,000 miles (5 000km)

### Engine – petrol and diesel

Renew engine oil.

Renew engine oil filter.

Check alternator driving belt; adjust or renew.

Check power steering pump driving belt; adjust or renew.

### Gearbox

Check/top-up gearbox oil.

### Automatic gearbox

Check/top-up gearbox fluid.

### Propeller shaft

Lubricate all grease points.

### Steering

Check/top-up steering idler oil.

Check/top-up power steering reservoir.

Lubricate all grease points excluding hubs.

### Rear axle

Check/top-up rear axle.

### Brakes

Grease handbrake mechanical linkage.

Check security and operation of handbrake.

Check/adjust brakes.

Check/top-up brake fluid reservoir.

Check operation of footbrake with engine running.

Inspect brake linings for wear and drums for condition.

Check visually hydraulic pipes and unions for chafing, cracks, leaks and corrosion.

### Cooling system

Check cooling and heater system for leaks and hoses for security and condition.

Check/top-up cooling system.

### Clutch

Check/top-up clutch fluid reservoir.

### Windscreen washer

Check/adjust operation of windscreen washer, and top-up reservoir.

### Electrical

Check/renew windscreen wiper blades.

Check function of interior and exterior lamps, horns, windscreen wipers and warning indicators.

Check/top-up battery electrolyte.

Clean and grease battery connections.

### Wheels and tyres

Check/adjust tyre pressures, including spare.

Check tightness of wheel fastenings.

### Body

Check condition and security of seats and seat belts.

Check operation of seat belt inertia reel mechanism.

## Every 6,000 miles (10 000km) or 3 months, whichever occurs first

### Engine – petrol and diesel

Check/adjust valve clearances.

Renew engine oil.

Renew engine oil filter.

Clean/rotate air cleaner element.

Check alternator driving belt; adjust or renew.

Check power steering pump driving belt; adjust or renew.

Check exhaust for leakage and security.

### Petrol engine

Clean/adjust sparking plugs.

Check/adjust distributor points.

Lubricate and clean distributor.

Check voltage drop between coil CB and earth.

Check/adjust ignition timing and distributor characteristics using electronic equipment.

### Gearbox

Check/top-up gearbox oil.

### Automatic gearbox

Check/top-up automatic gearbox fluid.

Check parking pawl engagement.

### Propeller shaft

Lubricate all grease points.

# Maintenance

### Steering

Check/top-up steering idler oil.

Check/top-up power steering reservoir.

Lubricate all grease points, excluding hubs.

Check condition and security of steering unit, joints and gaiters.

Check/adjust steering box.

Check/adjust front wheel alignment.

Check/adjust front hub bearing end-float.

### Rear axle

Check/top-up rear axle.

### Brakes

Grease handbrake mechanical linkage.

Check security and operation of handbrake.

Check/adjust brakes.

Check/top-up brake fluid reservoir.

Check brake servo hose for security and condition.

Check operation of footbrake with engine running.

Inspect brake linings for wear and drums for condition.

Check visually hydraulic pipes and unions for chafing, cracks, leaks and corrosion.

### Cooling system

Check cooling and heater system for leaks and hoses for security and condition.

Check/top-up cooling system.

### Clutch

Check/top-up clutch fluid reservoir.

### Windscreen washer

Check/adjust operation of windscreen washer, and top-up reservoir.

### Electrical

Check/renew windscreen wiper blades.

Check function of interior and exterior lamps, horns, windscreen wipers and warning indicators.

Check/top-up battery electrolyte.

Clean and grease battery connections.

Check/adjust headlamp alignment.

### Wheels and tyres

Check tyres for tread depth, visually for external cuts in fabric, exposure of ply or cord structure, lumps and bulges.

Check/adjust tyre pressures, including spare.

Check tightness of wheel fastenings.

### Body

Lubricate all locks and hinges (not steering lock). Check condition and security of seats and seat belts.

Check operation of seat belt inertia reel mechanism.

Check rear-view mirrors for cracks and crazing.

## Every 12,000 miles (20 000km) or 6 months whichever occurs first

### Engine – petrol or diesel

Check/adjust valve clearances.

Renew engine oil.

Renew engine oil filter.

Renew air cleaner element.

Check alternator driving belt; adjust or renew.

Check power steering pump driving belt; adjust or renew.

Clean engine breather filter.

Check exhaust for leakage and security.

### Diesel engine

Renew fuel filter element.

Check injectors for burst pressure and test for spray.

Check heater plug wiring for condition.

Decarbonise heater plug holes.

### Petrol engine

Clean fuel pump sediment bowl.

Renew sparking plugs.

Renew distributor points.

Lubricate and clean distributor.

Check ignition wiring and H.T. leads for fraying, chafing and deterioration.

Check voltage drop between coil CB and earth.

Check/adjust ignition timing and distributor characteristics using electronic equipment.

### Gearbox

Check/top-up gearbox oil.

### Automatic gearbox

Check/top-up automatic gearbox fluid.

Check parking pawl engagement.

### Propeller shaft

Lubricate all grease points.

# Maintenance

## Steering

Check/top-up steering idler oil.  
Check/top-up power steering reservoir.  
Lubricate all grease points, excluding hubs.  
Check condition and security of steering unit, joints and gaiters.  
Check/adjust steering box.  
Check/adjust front wheel alignment.  
Check/adjust front hub bearing end-float.

## Rear axle

Check/top-up rear axle oil.

## Brakes

Grease handbrake mechanical linkage.  
Check security and operation of handbrake.  
Check/adjust brakes.  
Check/top-up brake fluid reservoir.  
Check brake servo hose for security and condition.  
Check operation of footbrake with engine running.

Inspect brake linings for wear and drums for condition. Check visually hydraulic pipes and unions for chafing, cracks, leaks and corrosion.

## Cooling system

Check cooling and heater system for leaks and hoses for security and condition.  
Check/top-up cooling system.

## Clutch

Check/top-up clutch fluid reservoir.

## Windscreen washer

Check/adjust operation of windscreen washer and top-up reservoir.

## Electrical

Check/renew windscreen wiper blades.  
Check function of interior and exterior lamps, horns, windscreen wipers and warning indicators.  
Check/top-up battery electrolyte.  
Clean and grease battery connections.  
Check/adjust headlamp alignment.

## Wheels and tyres

Check tyres for tread depth, visually for external cuts in fabric, exposure of ply or cord structure, lumps and bulges.  
Check/adjust tyre pressures, including spare.  
Check tightness of wheel fastenings.

## Body

Lubricate all locks and hinges (not steering lock).  
Check condition and security of seats and seat belts.

Check operation of seat belt inertia reel mechanism.  
Check rear-view mirrors for cracks and crazing.

## Every 18,000 miles (30,000km) or 9 months whichever occurs first

In addition to the 6,000 mile (10 000km) service it is recommended that the brake and clutch fluids are changed due to deterioration under normal operating conditions.

## Every 24,000 miles (40,000km) or 12 months whichever occurs first

In addition to the 12,000 miles (20 000km) service.

## Automatic gearbox

Adjust front and rear brake bands.

## Wheels and tyres

Repack front wheel bearings with grease.

## Corrective maintenance

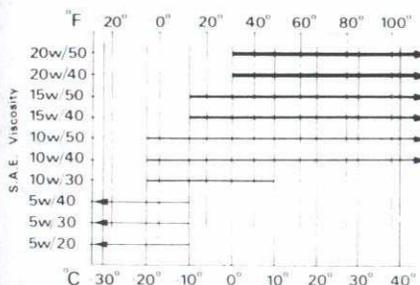
Take the advice of our Dealer on the need for additional brake maintenance – see page 39.

## Every 36,000 miles (60 000km) or 18 months whichever occurs first

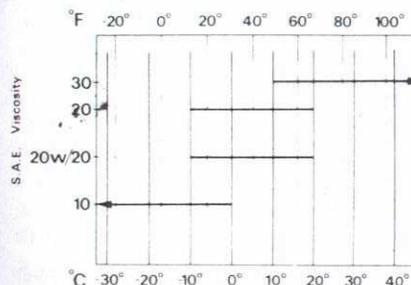
In addition to the 18,000 mile (30 000km) service it is recommended that all fluid seals in the hydraulic system and all flexible hoses should be renewed. At the same time the working surfaces of the pistons and bores of the master cylinders, wheel cylinders and other slave cylinders should be examined and new parts fitted where necessary.

**WARNING: Timing belt must be replaced at 60,000 miles maximum.**

# Maintenance



Multigrade engine oil viscosity/ambient temperature ranges



Monograde engine oil viscosity/ambient temperature ranges

## Engine

Use a well-known brand of oil to B.L.S.O.L.02 or MIL-L-46152 or A.P.I. SE/CC quality, with a viscosity band spanning the temperature range of your locality.

## Automatic gearbox and power steering

Use Automatic Transmission Fluid Type G.

## Manual gearbox

No routine change is required. If a complete refill is necessary Shell E3766 gearbox oil should be used and this is available under part number RTC 1896. When the recommended oil is not obtainable an SAE 75W hypoid oil may be used. An SAE 80W hypoid oil may be used for topping-up but SAE 80W hypoid oil must NOT be used for a complete refill.

## Rear axle

Top-up and refill with H.D. 90 (MIL-L-2105B) above -10°C (15°F) or H.D. 80 (MIL-L-2105B) below -10°C (15°F).

## LUBRICATION

A new engine is filled with special oil to protect it during the running-in period. The engine must be drained after 1000 miles (1500 km) and refilled with a Service Lubricant before driving at high speed.

Other lubricating systems are filled with high performance oil giving prolonged life.

You should always use a high quality oil of the correct viscosity range in the engine, gearbox and rear axle during maintenance and when topping-up. The use of oil not to the correct specification can lead to high oil and fuel consumption and ultimately to damaged components.

Oil to the correct specification contains additives which disperse the corrosive acids formed by combustion and prevent the formation of sludge which can block the oilways. Additional oil additives should not be used. Always adhere to the recommended servicing intervals.

**WARNING: Many liquids and other substances used in motor vehicles are poisonous and should under no circumstances be consumed and should so far as possible be kept away from open wounds. These substances among others include anti-freeze, brake fluid, fuel, windscreen washer additives, lubricants and various adhesives.**

## Idler

Top-up with H.D. 90 (MIL-L-2105B) above -10°C (15°F) or H.D. 80 (MIL-L-2105B) below -10°C (15°F).

## Grease points

Use Multipurpose Lithium Grease N.L.G.I. Consistency No. 2

## Monograde oil

The use of a monograde oil is permissible, providing that it is of the correct viscosity for the air temperature. It should also be of the same quality (MIL-L-46152) as the preferred multigrade oils.

For sustained high speed operation or operation for long periods in an elevated air temperature, the use of a multigrade oil of the correct viscosity and quality is recommended.

Component	Petrol and Diesel Engine and Oil-can Points	Rear Axle and Idler	Manual Gearbox	Automatic Gearbox and Power Steering	Grease Points
Minimum performance level	MIL-L-46152 or BLS 22 OL 02 or A.P.I. SE/CC	MIL-L-2105B			Multipurpose Lithium Grease NLGI Consistency No. 2
Unipart	Unipart Super Multigrade or Unipart Sureflow or Unipart Ultima	Unipart Hypoid E.P. 90	RTC 1896		
Shell	Super Motor Oil 15W/40 or 10W/40 or Rimula X 15W/40	Shell Spirax Heavy Duty 90	E3766	Shell ATF Dexron II D®	Shell Retinax A
Duckhams	Hypergrade 15W/50 or Fleetol Multi-V 20W/50 or Fleetmaster 15W/40 or Castrolite 10W/40	Duckhams Hypoid 90S		Duckhams D-Matic	Duckhams LB 10 Grease
Castrol	GTX 15W/50 or Deusol RX Super 15W/40	Castrol Hypoid B.E.P. 90		Castrol TQ Dexron II D®	Castrol LM Grease
Texaco	Havoline 15W/40 or URSA Super Plus 15W/40 or Eurotex 15W/50	Multigear Lubricant E.P. 90		Texamatic Fluid 9226	Marfak All Purpose
Petrofina	Fina Supergrade 15W/40 or 10W/40	Fina Pontonic MP 80W/90			Fina Marson HTL2
Mobil	Super 10W/40 or 15W/40 or Delvac Super 15W/40	Mobilube HD 90		Mobil ATF 220D	Mobilgrease MP or Super
Esso	Esso Superlube 15W/40 or Essolube XD-3 15W/40	Esso Gear Oil GX85W/90		Esso ATF Dexron II D®	Esso Multipurpose Grease H
BP	Visco 2000 15W/40 or Visconova 10W/40 or Vanellus C3 Multigrade 15W/40	Bp Hypogear 90 E.P.		Bp Autran DX II	Bp Energ grease L2

**Engine oil level check – Fig. 1**

Withdraw the dipstick (1) from the left hand side of the engine and wipe the blade clean.

Re-insert the dipstick fully then withdraw it and check the oil level indication. The level should register between the 'H' and 'L' marks.

If the oil level is below the 'H' mark, remove the filler cap (2), pour in new oil and repeat the procedure until the level is correct. Do not overfill.

Replace and secure the filler cap.

**Engine oil drain and refill**

Drain the oil while the engine is warm and change the oil filter element while the oil is draining. Place under the engine a container that has at least 8 litres (14 pints) capacity and unscrew the drain plug from the right hand side of the sump to allow the oil to drain. Clean the drain plug, use a new sealing washer if necessary and refit the drain plug.

Fill the engine with the correct quality of new oil and check that the level is at the 'H' on the dipstick.

**Oil filter replacement – Fig. 2**

The oil filter element must be renewed at the same time that the engine oil is changed.

Clean the area around the filter head and place a receptacle beneath the engine.

**Cartridge type –**

**Element Part No. GFE 175/ETC 6599**

Unscrew the oil filter (4) and discard it. Smear the seal (5) of the new element with oil and screw into position by hand only. Do not tighten. Start the engine after filling with new oil and check for leaks. Finally, top-up the oil to the 'H' mark on the dipstick.

**Engine breather filter – Fig. 3**

To clean the filter first detach the hose (1) and lift the filter (2) from the rocker cover.

Wash the gauze, dip in clean oil and, after shaking off the surplus oil, refit the filter to the rocker cover.

Reconnect the hose.

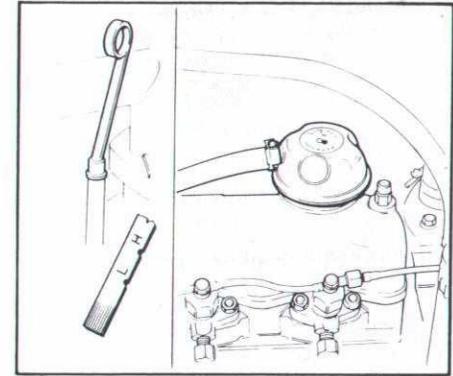


Fig. 1

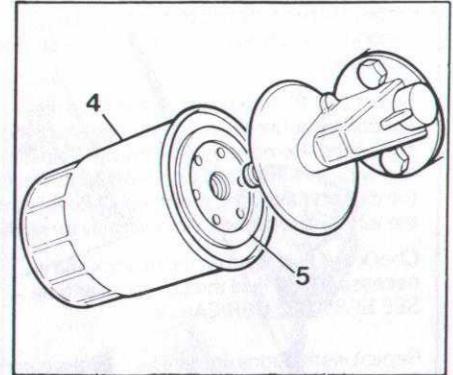


Fig. 2

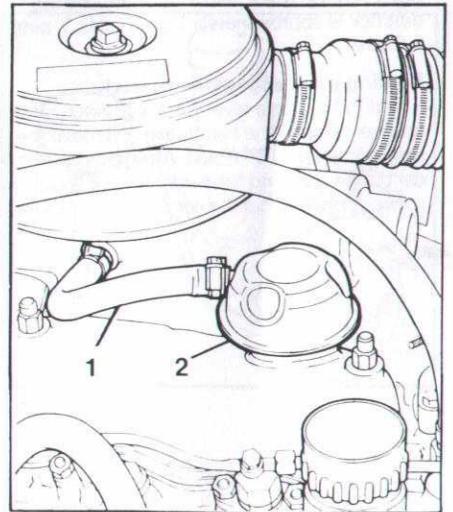


Fig. 3

## Maintenance

### Manual gearbox – Fig. 4

With the vehicle standing on level ground remove the oil level plug (arrowed) and, using a suitable dispenser such as a pump-type oil can with flexible nozzle, top-up the gearbox until the oil is level with the bottom of the filler plug threads.

Allow surplus oil to drain away before refitting the level plug and wiping clean.

### Automatic gearbox – Fig. 5

Check the fluid level as follows: Stand the vehicle on level ground and apply the handbrake firmly. Start the engine from cold and, with the footbrake firmly applied, run the engine at idle speed for 2 to 3 minutes, passing selector lever through the complete range of positions two or three times and pausing for about 10 seconds in each, to ensure that the transmission is primed.

Select the 'P' (Park) position and keep the handbrake applied. Leave the engine running at idle speed. Remove the transmission dipstick and wipe it with a clean, non-fluffy cloth. Replace the dipstick, ensuring that it is pushed fully into the tube and withdraw it immediately for reading.

Check the fluid level on the dipstick and if necessary, add fluid through the filler tube. SEE SERVICE LUBRICANTS.

Repeat instructions until the fluid level is correct. Do not overfill the gearbox. The difference between the MAX. and MIN. marks on the dipstick is approximately 1 pint (1.2 U.S. pints, 0.6 litre).

### Parking pawl engagement check

Stand the car on a level surface. Switch off the engine, release the handbrake and move the selector lever to 'P' (Park). Attempt to push the car backwards and forwards; the car should not move. Consult your Dealer if the car does move.

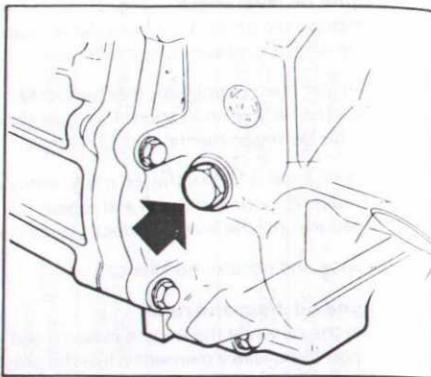


Fig. 4

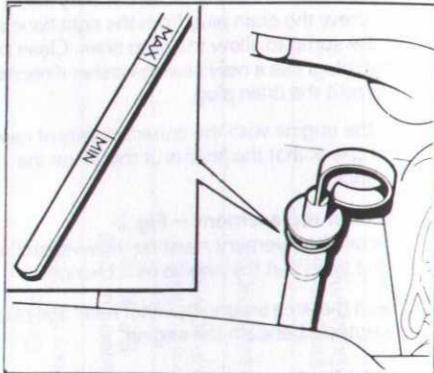


Fig. 5

## Maintenance

### Rear axle oil level – Fig. 6

With the vehicle standing on level ground, clean all dirt from around the oil filter and level plug (1) and remove the plug. Top up the oil until it is level with the bottom of the filler hole threads. Allow surplus oil to drain before refitting the plug and wiping clean.

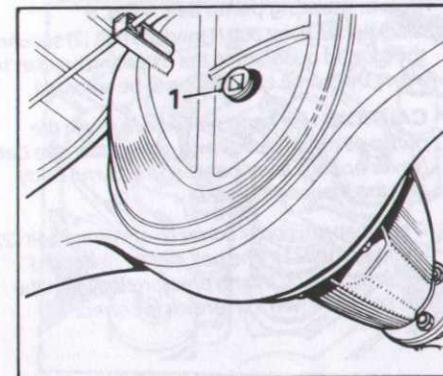


Fig. 6

### Steering idler – Fig. 7

Wipe away all dirt from around the oil filler plug (1) and inject oil to bring the level up to the filler plug aperture.

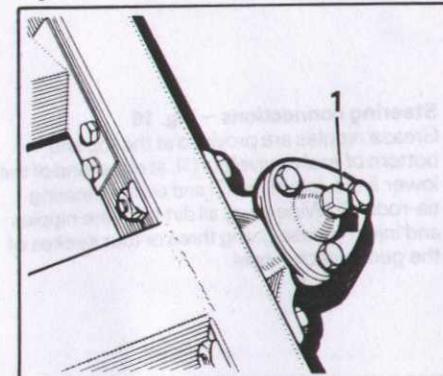


Fig. 7

### Power steering fluid level – Fig. 8

The power steering unit is lubricated by the operating fluid.

Remove the cap/dipstick from the fluid reservoir on the pump and top-up the fluid if necessary to the MAX. level shown on the dipstick if the fluid is hot. If cold the level should be approx. 1/2 in below the MAX. level.

DO NOT OVERFILL.

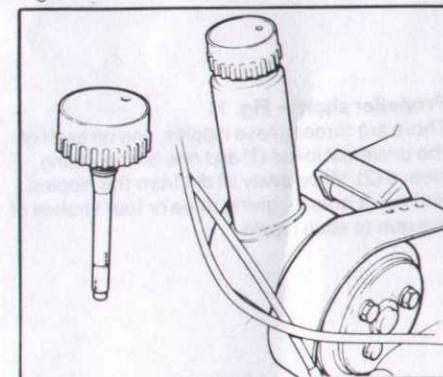


Fig. 8

## Maintenance

### Power steering pump belt – Fig. 9

Slacken the pivot bolt (1) and the bolt (2) securing the slotted quadrant to the mounting bracket to allow the pump belt tension to be adjusted.

**CAUTION:** Use hand pressure to rotate the pump assembly clockwise and tension the belt. Never apply a lever between the pump body and the mounting bracket.

When belt tension is correct first tighten bolt (2) and then bolt (1). The belt can be deflected 10cm (0.5in) by thumb pressure between the two pulleys when the tension is correct.

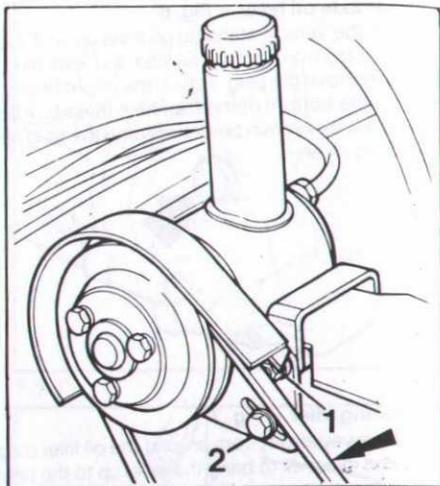


Fig. 9

### Steering connections – Fig. 10

Grease nipples are provided at the top and bottom of each swivel pin (1), at either end of the lower link fulcrum pin (2) and on the steering tie-rods (3). Wipe away all dirt from the nipples and inject grease giving three or four strokes of the gun to each nipple.

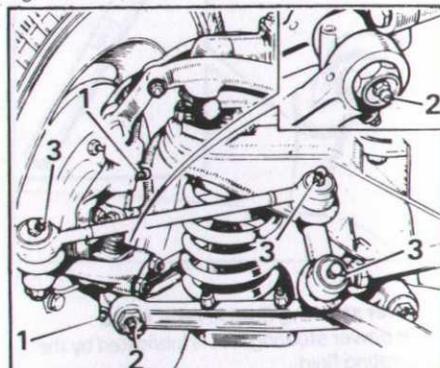


Fig. 10

### Propeller shaft – Fig. 11

There are three grease nipples, one on each of the universal joints (1) and one on the sliding sleeve (2). Wipe away all dirt from the nipples and inject grease, giving three or four strokes of the gun to each nipple.

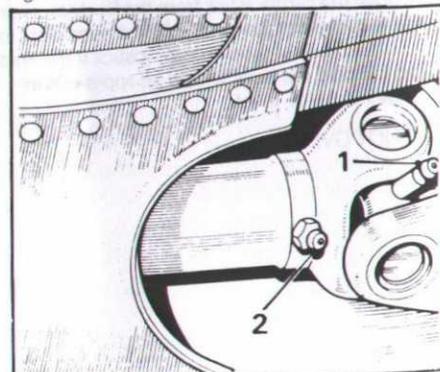


Fig. 11

## Maintenance

### Valve rocker clearance – Fig. 12

To check and adjust the clearance first remove the air cleaner, engine breather filter and rocker cover.

If the clearance is correct a 0.010in (0.25mm) feeler gauge (1) should be a sliding fit between the rocker arm and each inlet or exhaust valve stem while the engine is hot.

Check each clearance in the following order:

Check No. 1 valve with No. 8 fully open.

..	..	3	..	..	6	..	..
..	..	5	..	..	4	..	..
..	..	2	..	..	7	..	..
..	..	8	..	..	1	..	..
..	..	6	..	..	3	..	..
..	..	4	..	..	5	..	..
..	..	7	..	..	2	..	..

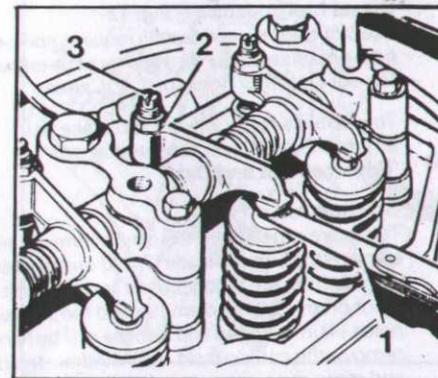


Fig. 12

### Adjusting

Slacken the adjusting screw locknut (2) on the end of the rocker shaft and rotate the screw (3) clockwise to decrease the clearance or anti-clockwise to increase the clearance.

Re-tighten the locknut when the clearance is correct, holding the screw against rotation with a screwdriver. Re-check the clearance. Clean the rocker cover gasket sealing face and renew the gasket if it is damaged.

Refit the rocker cover, breather filter and air cleaner.

### Locks, hinges and catches

To ensure trouble-free operation, it is essential that the door locks, hinges, and catches are adequately lubricated.

#### Locks

Inject a small quantity of thin oil, preferably **UNIPART Lockspray**, through key slots, around the push-buttons. **Do not oil the steering lock.**

**Hinges.** Apply grease or oil to the moving joints of the hinges.

**Bonnet catches.** Apply grease to the moving surfaces of the bonnet release mechanism and oil to the release lever and safety catch pivot points.

## Maintenance

### Diesel fuel injectors – Fig. 13

Injector cleaning and testing requires specialised high pressure equipment and must be entrusted to your Dealer or Agent or C.A.V. agent.

To identify a faulty injector and make an emergency roadside substitution, see 'Replacement and Data'.

### Starting Aid – Fig. 14

Take care not to twist the centre terminal and remove the electric leads (1) and unscrew each plug (2) from the cylinder head. Insert a twist drill (3) of 6mm ( $1^5/64$  in) diameter into the screwed holes (4) in the head and turn the drill by hand to remove the carbon build-up. Withdraw the drill and remove any particles of carbon from the conical seatings in the cylinder head. Do not use a wire brush. Refit the starting aid and electrical leads.

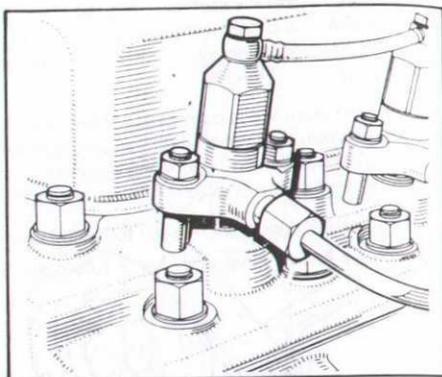


Fig. 13

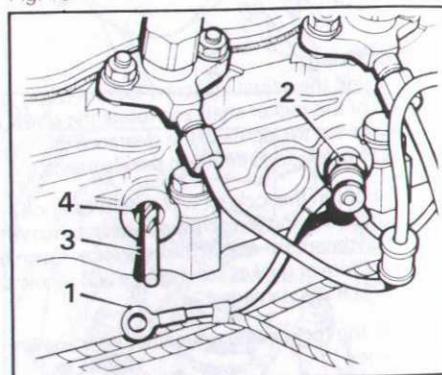


Fig. 14

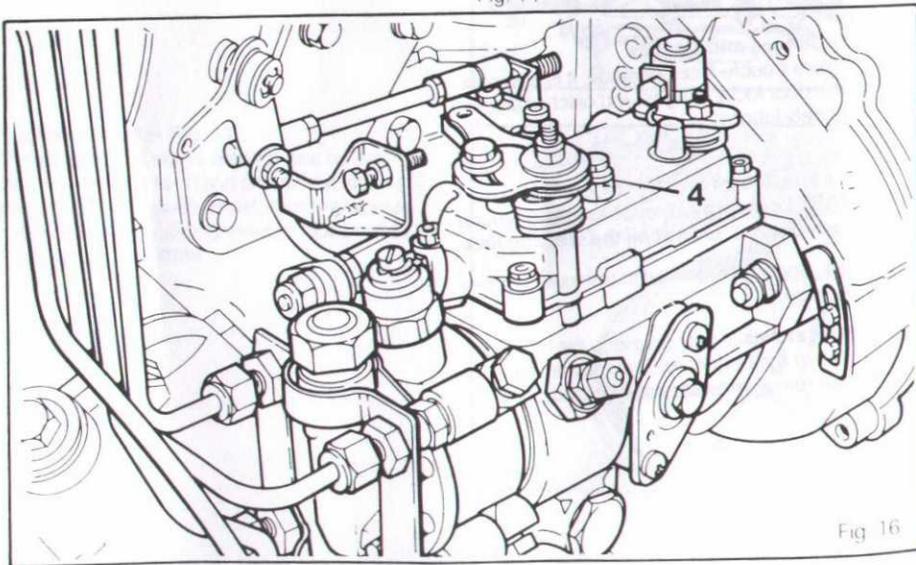


Fig. 16

## Maintenance

### Bleeding air from the diesel fuel system – Figs. 15 and 16

Failure to start or erratic acceleration may be the result of air entering the fuel system. If the fuel tank becomes completely empty or there is a leaking joint, or a new fuel filter element or injector has been fitted, the system must be primed as follows to exclude all air.

- Ensure that the fuel cut-off tap (1) is turned on and slacken the blanking plug (2) and the union screw (3) on the filter-head.
- Release air vent screw on distributor body (4) Fig. 16.
- Operate the fuel pump hand priming lever until fuel free of air emerges.
- Retighten the air vent screw.
- Operate the starter motor and when the fuel issuing from at least two of the high pressure pipes is free from air bubbles tighten all four union nuts.
- Start the engine and allow it to run until it is firing on all cylinders, checking for leaks.

After renewing the main fuel filter element, providing the engine is not cranked during this operation, it is only necessary to bleed the fuel filter at points (2), (3) and (4) by operating the lift pump before starting the engine.

### Procedure when distributor pump has been drained

Carry out instructions (b) to (f) inclusive.

**CAUTION:** Lubrication of the injection pump mechanism is effected by fuel oil under pressure, therefore no attempt should be made to bleed the fuel system by towing the vehicle in gear as this may result in serious damage to the injection pump.

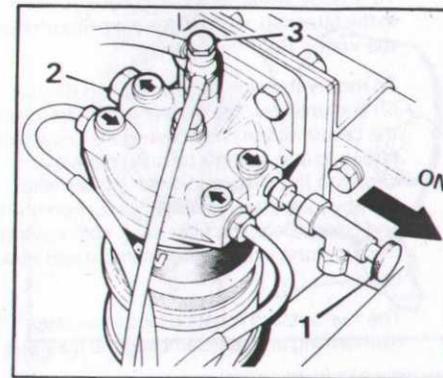


Fig. 15

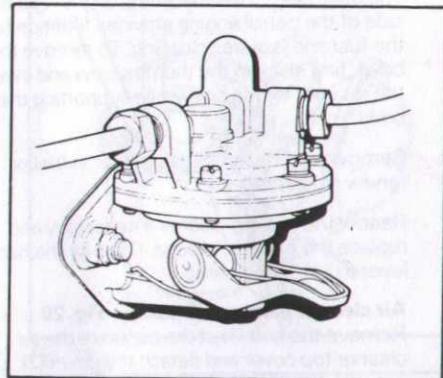


Fig. 17

# Maintenance

## Main diesel fuel filter – Fig. 18

To release water which may have accumulated in the filter cup, remove the plug (6) and drain off the water. Refit the plug.

To renew the element (1), support the filter cup (2) and unscrew the retaining bolt (3) located in the centre of the head casting (4). Detach the filter cup and, using a twisting movement, separate the element from the filter head. Remove the three sealing rings (5) from the head and base. Clean the filter base, and reassemble the filter unit using a filter element and sealing rings.

The fuel system must be bled of air after dismantling and reassembling the filter unit.

## Fuel sediment bowl – petrol – Fig. 19

The bowl next to the fuel pump on the right hand side of the petrol engine provides filtration for the fuel and requires cleaning. To remove the bowl, first slacken the thumb screw and swing the retainer to one side while supporting the bowl.

Remove and clean the gauze filter in fuel or renew it if damaged.

Renew the sealing washer if necessary and replace the gauze and bowl. Operate the hand lever to prime the pump.

## Air cleaner element (Diesel) – Fig. 20

Remove the bolt (1) at the centre of the air cleaner top cover and detach the cover (2). Lift out and discard the element (3), clean out the container and fit a new element. Refit the top cover, fibre washer (4) and bolt.

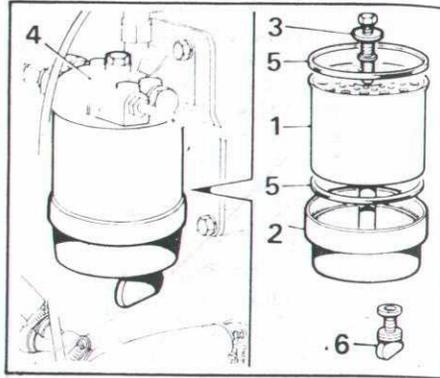


Fig. 18

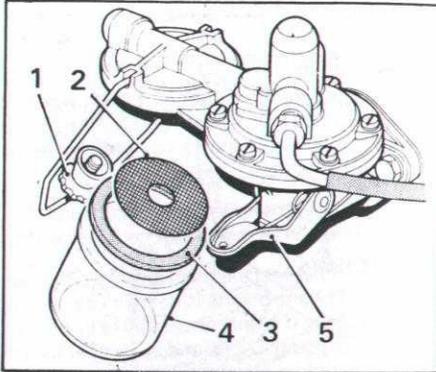


Fig. 19

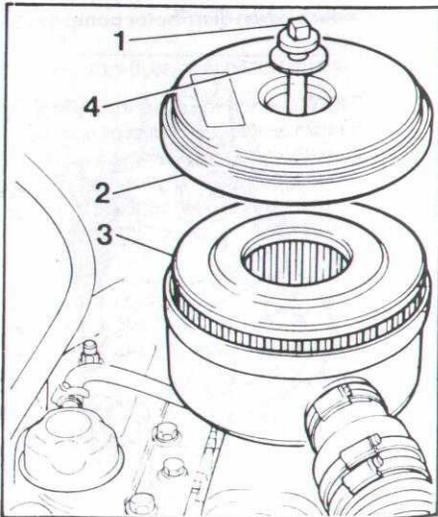


Fig. 20

# Maintenance

## Air cleaner element (Petrol) – Fig. 21

Release the hose from the air cleaner and remove the air cleaner from the engine. Remove the end cover (1), undo the wing nut (2) and carefully withdraw the element. Note that the vane unit is attached to the element and cannot be removed.

Wipe all dust from the cover and cleaner body and ensure the valve (3) is clear. Blow dust from the element, or fit a new one, and reassemble before replacing it on the engine.

## Adjusting distributor points (Petrol) – Fig. 22

Release the retaining clips and remove the distributor cap. Remove the dust shield and rotor arm.

If the points are burnt or worn, new ones should be fitted by your Dealer who has the electronic equipment necessary to set the points correctly. In an emergency, to adjust the gap between the contacts, turn the engine until the contact points are wide open.

The clearance should be 0.014 to 0.016 in (0.35 to 0.40mm) with a feeler gauge. The gauge should be a sliding fit between the contacts (1).

If necessary, slacken screw (2) which secures the adjustable contact, adjust the gap and tighten the screw.

Replace the dust shield, rotor arm, distributor cap and retaining clips.

## Distributor lubrication – Fig. 23

Remove the distributor cover and lift off the rotor arm (1) and anti-dust shield.

Inspect the contact breaker points (2); if burnt or worn they should be renewed by your Dealer.

Very lightly smear the cam (3) with grease and lubricate the pressure pad (4) with grease also. Add a few drops of oil to the felt pad (5) in the top of the cam spindle.

Turn the crankshaft until the distributor centrifugal weight pivot post is visible through the cut-out in the base plate (6) and lubricate the pivot post with a drop of oil. Repeat for the opposite pivot post.

Carefully wipe away all surplus lubricant and ensure that the contact breaker points are clean and dry.

Refit the anti-dust shield

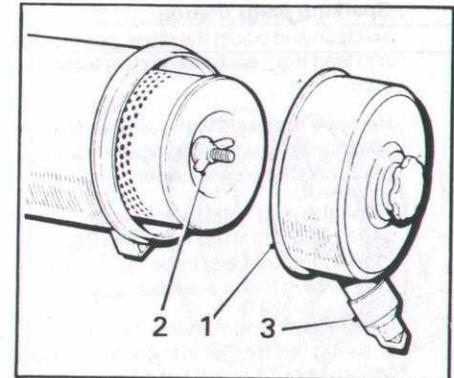


Fig. 21

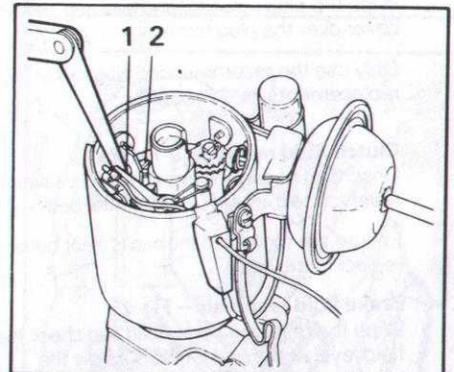


Fig. 22

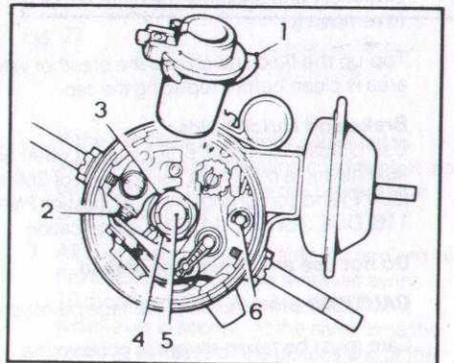


Fig. 23

Refit the rotor arm, engage the slot in the spindle and push down firmly.

Wipe clean the inside and outside of the distributor cover, particularly between the electrodes, refit the distributor cover and secure it with the clips.

# Maintenance

## Sparking plugs (Petrol)

To clean and adjust the plugs, pull the plug cover and lead from each plug and clean the immediate area.

Remove the plugs with a Unipart Sleeveplug spanner to avoid damaging the hexagon or fracturing the plug insulator.

Clean the plug with an air blast unit and set the gap to 0.029 to 0.032 in (0.75 to 0.80mm) by moving the side electrode. A Champion spark plug setting tool is available.

Clean the plug seat, insert the plug finger tight, ensuring the washer is in good condition, and tighten about a quarter of a turn only.

Wipe the plug insulator and lead and press the cover over the plug terminal.

Only use the recommended plugs as replacements (see page 56).

## Clutch fluid reservoir – Fig. 24

Unscrew the cap and top-up the fluid level in the reservoir to the MAX. mark on the body.

Ensure the air vent in the cap is clear before replacing the cap.

## Brake fluid reservoir – Fig. 25

Wipe the reservoir body clean and check the fluid level. If the brake fluid is below the 'maximum' mark, hold the centre terminal block stationary and unscrew the outer rim of the cap to remove it.

Top-up the fluid and ensure the breather valve area is clean before replacing the cap.

## Brake and clutch fluids

Use Unipart Universal Brake Fluid or other brake fluid having a minimum boiling point of 260°C (500°F) and complying with specification FMVSS 116, DOT 3 or SAE J 1703cc specification.

## Do not use any other type of fluid.

**CAUTION:** Brake fluid will damage paintwork.

Care must be taken always to observe the following points:

- At all times use the recommended brake fluid
- Never leave fluid in unsealed containers. It absorbs moisture quickly and can be dangerous if used in your braking system in this condition

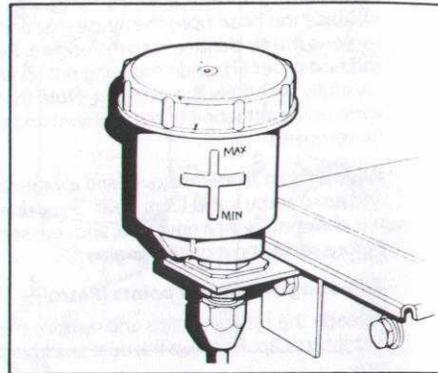


Fig. 24

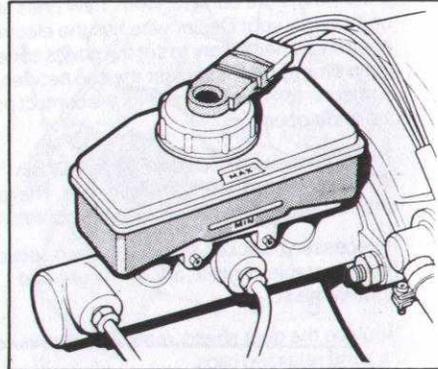


Fig. 25

- Fluid drained from the system or used for bleeding is best discarded.
- The necessity for absolute cleanliness throughout cannot be over-emphasized.

# Maintenance

## Lining inspection – Fig. 26

Jack-up each wheel in turn.

Jacking instructions and precautions are detailed on page 44. Remove the road wheel and slacken the brake adjuster(s) fully. Remove the two countersunk screws (1) and withdraw the brake drum (2). Inspect the linings (3) for wear and carefully wipe the dust from the backplate assembly and drum, preferably using methylated spirits (denatured alcohol).

**WARNING:** Brake lining dust is dangerous to health if inhaled.

If the lining thickness is less than 1/8 in (3.0mm) it is not sufficient to allow the vehicle to be driven safely until the next inspection and new linings must be fitted. Refit the drum and road wheel and adjust the brakes.

## Replacing brake shoes

When it becomes necessary to renew the brake shoes, it is essential that only the correct grade of lining is used. Always fit new shoes as complete axle sets, never individually or as a single wheel set. Serious consequences could result from out-of-balance braking due to a mixture of linings.

## Handbrake linkage – Fig. 27

Grease the pivot pins (1).

Wipe dirt from the nipple (2) on the brake rod compensator on the rear axle and give three or four strokes with a grease gun.

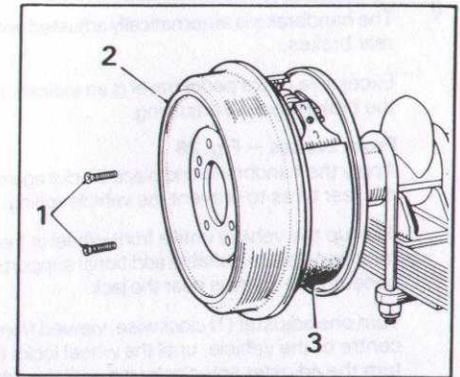


Fig. 26

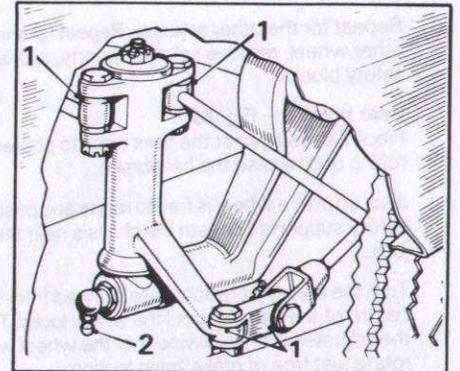


Fig. 27

If the vehicle is frequently subjected to severe driving or operating conditions, it may be necessary to change the brake fluid at shorter intervals.

3. All fluid seals in the hydraulic system and all flexible hoses should be renewed every 18 months or 36,000 miles (60,000 km) whichever is sooner. At the same time the working surfaces of the pistons and of the bores of the master cylinder, wheel cylinders, and other slave cylinders should be examined and new parts fitted where necessary.

## CLUTCH AND BRAKE HYDRAULIC SYSTEMS

### Corrective maintenance

In addition to the recommended periodical inspection of brake components it is advisable as the vehicle ages, and as a precaution against the effects of wear and deterioration, to make a more searching inspection and renew parts as necessary.

It is recommended that:

1. Brake linings, hoses and pipes should be examined at intervals no greater than those laid down in the Preventive Maintenance summary in the Handbook
2. Under normal operating conditions, hydraulic fluid should be changed completely every 9 months or 18,000 miles (30,000 km), whichever is the sooner

# Maintenance

## BRAKE ADJUSTMENT

The handbrake is automatically adjusted with the rear brakes.

Excessive brake pedal travel is an indication that the brakes require adjusting.

### Front brakes – Fig. 28

Apply the handbrake and place blocks against the rear tyres to prevent the vehicle rolling.

Jack up the vehicle until a front wheel is free to rotate and place suitable additional supports beneath the chassis near the jack.

Turn one adjuster (1) clockwise, viewed from the centre of the vehicle, until the wheel locks then turn the adjuster anti-clockwise until the wheel is just free to rotate.

Repeat for the other adjuster. Repeat for the other wheel, remove safety supports, jack and safety blocks.

### Rear brakes – Fig. 29

Place blocks against the front tyres to prevent rolling and release the handbrake.

Jack up until a wheel is free to rotate and position safety supports beneath the chassis near the jack.

Turn the adjuster (1) clockwise, viewed from the centre of the vehicle, until the wheel locks. Turn the adjuster anti-clockwise until the wheel will rotate just free of brake lining friction.

Apply the footbrake to centralise the brake shoes and check that the wheel remains free to rotate.

Lubricate the adjuster stem, repeat for the other wheel, remove the safety supports and jack. Apply the handbrake and remove the safety blocks.

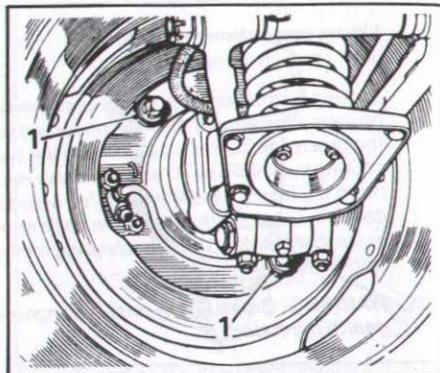


Fig. 28

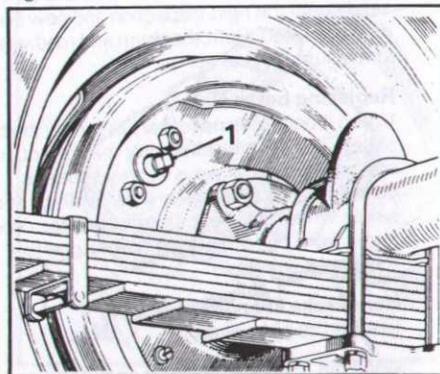


Fig. 29

# Maintenance

## TYRES

**WARNING: Driving with under-inflated tyres can be hazardous and causes rapid tyre wear and possible permanent damage to the cords of the tyre casing.**

Owners are reminded that tyre wear and inflation pressures are subject to legal requirements. Check the tyre pressure weekly, including the spare, and adjust if necessary to the recommendations given at the back of this Handbook. The spare tyre should be maintained at the highest recommended pressure and adjusted before use.

Pressures should be checked with a UNIPART Tyre Pressure Gauge when the tyres are cold, and should not be reduced in warm tyres where the increases above normal pressure is due to temperature. Tyres are permeable and a natural pressure loss will occur with time; any unusual pressure loss should be investigated. If necessary, use a UNIPART Foot Pump to increase the pressure.

### Valves and caps

Screw the valve caps down firmly by hand. Do not use tools as too much force will damage the cap. The cap prevents the entry of dirt into the valve mechanism and forms an additional seal on the valve.

### Tyre care

The tyres should be inspected at frequent intervals for damage and wear. Excessive local distortion as a result of striking a kerb, a loose brick, a deep pot-hole, etc., may cause the casing cords to fracture. Every effort should be made to avoid such obstacles.

Any oil or grease which may get onto the tyres should be cleaned off by using petrol (gasoline) sparingly. Do not use paraffin (kerosene), which has a detrimental effect on rubber.

Flints and other sharp objects should be removed with a penknife or similar tool. If neglected, they may work through the tyre.

### Tubeless tyres

Normally a tubeless tyre will not leak as a result of penetration by a nail or other puncturing object, provided it is left in the tyre. At a convenient time have the tyre removed for vulcanizing.

# Maintenance

## COOLING SYSTEM

**WARNING:** To avoid injury from escaping steam, the radiator cap and the pressure relief cap on the expansion tank must not be removed while the system is hot.

### Topping-up – Fig. 30

To check that the cooling system is full, remove the pressure relief cap (2) from the expansion tank. Squeeze the top radiator hose and observe the movement of the coolant within the expansion tank.

If necessary, add coolant to bring the level up to the mark indicated. Refit the pressure relief cap.

If the level has fallen appreciably, suspect leakage or overheating.

### Radiator filler cap

The radiator cap (1) can be removed while the engine is cold and after the expansion tank cap has been removed to release pressure in the system.

The radiator should always be completely filled with coolant and is fitted with a plain cap.

Do not fit the radiator cap to the expansion tank.

### Frost precautions

We recommend that the cooling system always contains anti-freeze to protect the radiator, cylinder block and heater against damage during freezing weather conditions. Have the specific gravity of the coolant (water mixed with anti-freeze solution) checked by your Distributor or Dealer at the beginning of autumn. When topping-up the cooling system use an anti-freeze solution.

The overall anti-freeze concentration should not fall below 30% by volume, to ensure that the anti-corrosion properties of the coolant are maintained.

Use UNIPART Universal Anti-freeze. If this is not available, use an ethylene glycol based anti-freeze (containing no methanol) with non-phosphate corrosion inhibitors suitable for use in engines to ensure the protection of the cooling system against frost and corrosion.

**CAUTION:** No other 'universal' anti-freeze should be used with UNIPART Universal Anti-freeze.

Every two years the cooling system should be drained, flushed and refilled with the correct amount of anti-freeze solution.

Do not use anti-freeze solution in the screen washing equipment.

The recommended quantities of anti-freeze solution are given below.

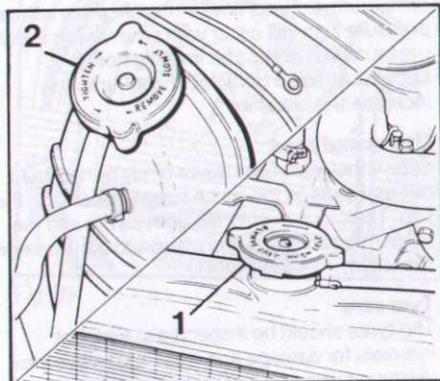


Fig. 30

# Maintenance

## BATTERY

### Topping-up the electrolyte – Fig. 31

Do not use a naked light when checking the electrolyte level.

Remove the sealing plugs and check that the electrolyte covers the plate dividers in each cell.

If necessary pour distilled water into each cell until the plates are covered.

Ensure the sealing plug vents are clear and replace the plugs.

**Note:** No attempt must be made to top up sealed for life batteries. Refer to makers instructions on battery.

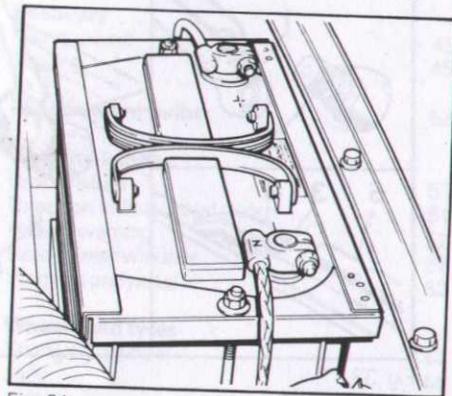


Fig. 31

### Alternator drive belt tension – Fig. 32

The pulley should slip when a torque 11 lbf ft (1.5 kgf m) is applied to the pulley nut and should deflect 0.25 in (6mm) sideways under a load of 7.5 lbf (3.3 kgf) midway between the pulleys.

Failure to set the belt tension correctly will allow the alternator pulley to slip when driving and the battery will become discharged.

To increase the belt tension slacken the pivot securing bolts (1) and the tension adjusting bracket pivot bolt (2). Slacken the adjusting bracket bolt (3).

Pivot the alternator away from the engine to increase the belt tension and tighten the adjusting bracket bolt (3). Tighten the pivot bolts and recheck the drive belt tension.

If leverage is necessary use wood or soft metal only against the drive-end bracket.

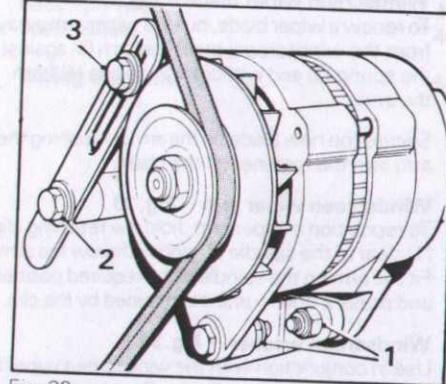


Fig. 32

Solution %	Amount of anti-freeze		Commences freezing		Frozen solid	
	Litres	Pts	°C	°F	°C	°F
33 1/3	2.75	6.0	-19	-2	-36	-33
50	4.12	7.25	-36	-33	-48	-53

# Maintenance

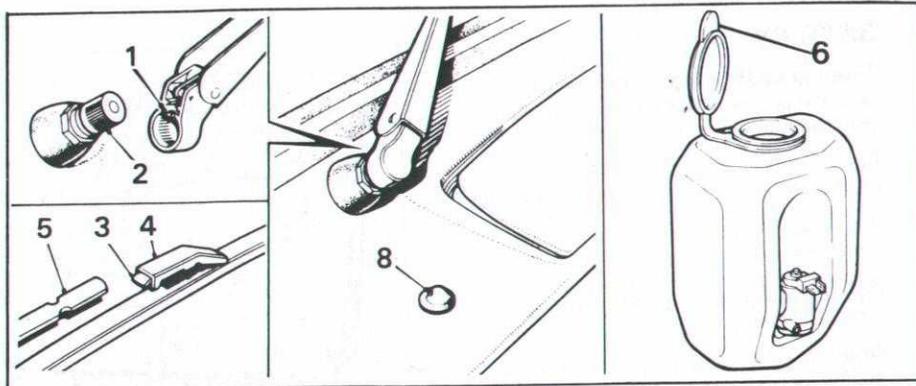


Fig. 33

### Windscreen wiper blade – Fig. 33

To renew a wiper blade, pull the wiper arm away from the windscreen, press the arm (5) against the spring (3) and withdraw the blade (4) from the arm.

Secure the new blade on the arm by pushing the arm into the fastener on the blade.

### Windscreen wiper arm – Fig. 33

To reposition a wiper arm, hold the retaining clip (1) clear of the spindle (2), and withdraw the arm. Fit the arm on the spindle in the required position and press it down until it is retained by the clip.

### Windscreen washer – Fig. 33

Use in conjunction with the windscreen wiper in dusty and muddy conditions. Replenish the fluid through the filler (6) in the top of the plastic container (7). The washer reservoir should be filled with a mixture of water and UNIPART Screenwash. In freezing conditions use UNIPART 'All Seasons' Screenwash. Do not use radiator anti-freeze.

To adjust the washer jets (8), insert a thin needle in the orifice of the jet and swivel the jet ball to the required position. The water jet should strike the windscreen at the centre and highest point of the windscreen wiper blade arc. Take care not to damage the jet orifice when carrying out adjustments.

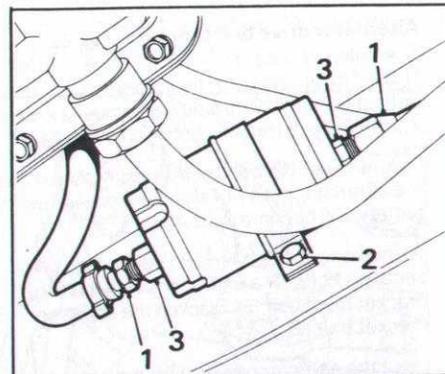


Fig. 34

### Automatic gearbox external oil filter (when fitted) – Fig. 34

The oil filter must be changed after the first 6,000 miles (10 000 km) and subsequently only after a major gearbox failure or overhaul.

Thoroughly clean the area around the filter and its pipe connections. Unscrew the tube nuts (1) at either end of the filter and remove the nut and bolt (2) securing the filter mounting bracket to the chassis. Detach the mounting bracket from the filter and discard the filter. Fit the mounting bracket to the new filter and attach the bracket to the chassis, tightening the nut and bolt (2) finger-tight. Connect the pipes to the filter, holding the hexagons (3) on the filter body securely while tightening the tube nuts (1). Finally, tighten the mounting bracket nut and bolt (2).

Top-up the gearbox fluid level (see page 28) and check the filter connections for leaks.

# Replacement & Data

<b>Battery</b>		
Boosting	46	
Charging	46	
Polarity	47	
<b>Cooling system</b>		
Draining	46	
Filling	46	
<b>Data</b>	56	
<b>Distributor points</b>	45	
<b>Fuel injectors</b>	45	
<b>Fuses</b>	47	
<b>Identification</b>	58	
<b>Lamps</b>		
Direction indicators – front	49	
Direction indicator repeater	49	
Headlamps	48	
Interior – driver's	50	
Interior – passenger's	50	
Number plate	50	
Rear fog guard	53	
Sidelamps	49	
Stop, tail, indicator – rear	49	
Taxi sign/roof lamp	51	
<b>Recovery</b>		
Being towed		45
Towing		45
<b>Replacement bulbs</b>		53
<b>Warning lamps</b>		
Brake failure		51
Direction indicator and door		51
Hazard warning		52
Heated rear window		52
Warning and panel		52
<b>Wheels and tyres</b>		
Changing a wheel		44
Jack		44
Jacking		44
Radial-ply tyres		44
Spare wheel		44
<b>Wiring diagram</b>		54

## Replacement & Data

### Spare wheel and jack – Fig. 1

The spare wheel and jack are retained in the luggage compartment by a plate (1) and nut. The wheelbrace is secured by clips to the underside of the rear parcel shelf.

Neglecting the jack may lead to difficulty in a road-side emergency. Examine it occasionally and clean and lightly oil the thread to prevent rust.

### Jacking – Fig. 2

Apply the handbrake and place blocks at one of the wheels to stop it rolling when the vehicle is being jacked up.

There are two jacking sockets (1), one on each side of the vehicle below the running-board and the front door. Ensure that the spigot of the jack is pushed well into the socket before screwing up the jack with the handle provided.

**WARNING: Do not work beneath the vehicle with the jack as the sole means of support. Place suitable additional supports beneath the chassis at a point near to the jack.**

### Changing a wheel – Fig. 3

Apply the handbrake and block one of the wheels. Prise off the hub cover, using the flattened end of the wheelbrace. Do not lever the cover from the wheel centre but give a sideways twist with the tool provided.

Slacken the wheel nuts half a turn, i.e. turn anti-clockwise to loosen. Jack up the vehicle sufficiently to enable a wheel with a fully inflated tyre to be removed. Remove the wheel nuts and lift off the wheel.

When replacing the wheel, first lightly screw on the nuts ensuring that their conical faces seat correctly in the recesses of the wheel stud holes. Lower the jack and fully tighten the wheel nuts in the order shown.

A torque wrench set to 65 lbf ft (9.0 kgf m) should be used to tighten the wheel nuts whenever possible. Place the rim of the hub cover over two of the studs on the wheel centre and give the outer face of it a sharp blow with the fist over the third stud. Remove the jack and blocks

### Cross-ply tyres

Cross-ply tyres should be fitted only in sets of four, although in certain circumstances it is permissible to fit a pair on the front wheels only. Tyres of different construction must not be used on the same axle. A pair must never be fitted to

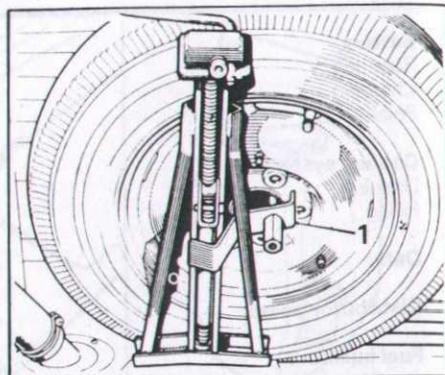


Fig. 1

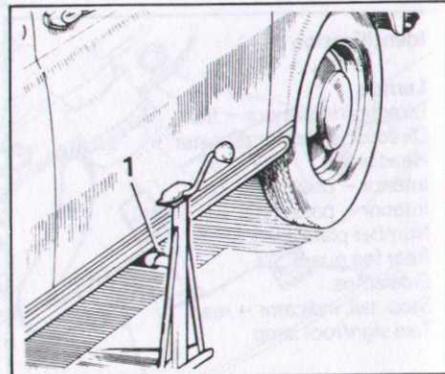


Fig. 2

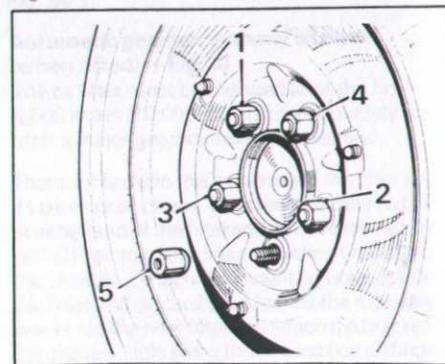


Fig. 3

the rear wheels with conventional tyres at the front

Positional changing of wheels must not be undertaken if cross-ply tyres have been fitted to the front wheels only

## Replacement & Data

### BEING TOWED FOR RECOVERY

**WARNING: To ensure that the steering does not lock up when the vehicle is being towed, it is essential that the steering lock starter key is turned to position 'I' and remains there whilst the vehicle is moving.**

**WARNING: When the vehicle is being towed without the engine running, greater pedal effort than normal will be necessary to apply the footbrake.**

### Being towed – manual gearbox

**CAUTION: The vehicle must not be towed with the rear wheels on the road unless the propeller shaft is disconnected or the engine is running to operate the gearbox oil pump and lubricate the mainshaft bearing.**

### Being towed – automatic gearbox

Before being towed add an extra 3 pints (3.6 U.S. pints, 1.7 litres) to the transmission and move the selector lever to 'N'.

A vehicle fitted with automatic transmission must not be towed at speeds higher than 30 m.p.h. (48 km/h) or for a distance greater than 30 miles (48 km).

If the transmission is faulty, remove the propeller shaft or tow with the rear wheels lifted.

**CAUTION: When the vehicle is being transported, 'P' must be selected, except if the vehicle is being carried as rail freight, when 'N' must be selected. The handbrake must always be applied.**

### Towing – automatic gearbox

When towing another vehicle, always select 'L' before ascending or descending steep gradients. Driving in these conditions with 'D' selected can give rise to dangerous overheating of the transmission fluid.

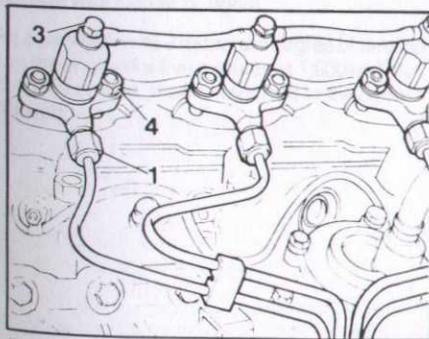


Fig. 4

### Diesel fuel injectors – Fig. 4

Do not attempt to dismantle any of the injectors or the injection pump at the roadside. The only servicing which is possible at the roadside is the replacement of a faulty fuel injector.

To locate a faulty injector, slacken the feed pipe union nut (1) on the first injector and run the engine slowly. Repeat this on each injector in turn. If there is no change in the engine performance or if a faulty condition, such as a smoky exhaust, has disappeared, it can be assumed that the injector was faulty.

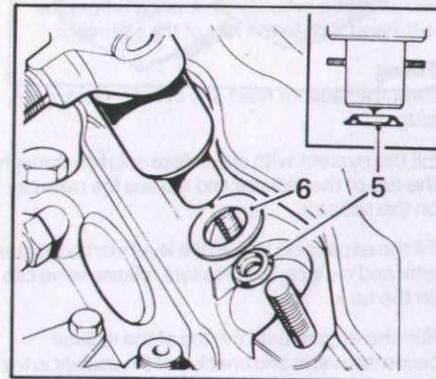


Fig. 5

### Changing a diesel fuel injector – Fig. 4

To remove an injector, disconnect the high pressure pipe from the individual injector (1) and the pump (2) and the leak-off pipe unions (3) from all the injectors. Never bend the pipes to release a union or banjo from the injector. Note the seal washer either side each banjo.

Remove the two injector retaining nuts (4) and withdraw the injector. Extract the corrugated sealing washer (5) from inside the nozzle heat shield – Fig. 5.

Before refitting an injector fit a new sealing washer (5) as illustrated, and inspect the injector copper seal (6) for serviceability.

Tighten the two injector retaining nuts evenly and to the correct torque tightness of 6 to 8 lbf ft (0.8 to 1.0 kgf m). Refit the high pressure feed pipe and leak-off pipes

### Renewing distributor points (Ducellier)

The replacement and adjustment of the contact points requires accurate setting with electronic equipment and should be entrusted to your Dealer or Agent

# Replacement & Data

## COOLING SYSTEM

### Draining — Fig. 6

Remove the expansion tank filler cap (protecting hands against escaping steam if the system is hot) to release pressure from the system. (See page 42).

Place a container in position to collect the coolant.

Remove the radiator filler cap and detach the hose from the bottom of the radiator.

Remove the cylinder block plug (1) from the left-hand side to the rear of the alternator.

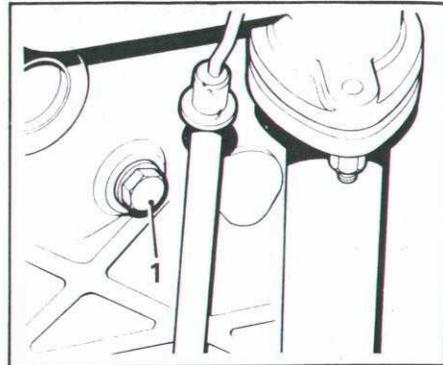


Fig. 6

### Filling

Refit the radiator hose and cylinder block drain plug.

Fill the system with anti-freeze solution through the top of the radiator and replace the plain cap on the radiator.

Fill the expansion tank to the level marked on the tank and replace the pressure release valve cap on the tank.

Run the engine until the top of the radiator becomes warm and check that the coolant in the expansion tank has remained at the correct level. If necessary, protect the hands, release the cap slowly and add coolant to bring it up to the level mark. Replace the cap.

## BATTERY BOOST STARTING AND CHARGING

### Battery boosting — Fig. 7

A high-speed battery charger must not be used as a starting aid.

**CAUTION:** The following precautions must be observed to avoid the possibility of serious damage to the charging system or electrical components of the vehicle.

When connecting an additional battery to boost a discharged battery in the vehicle, ensure that:

- the booster battery is of the same nominal voltage as the vehicle battery;
- the interconnecting cables are of sufficient capacity to carry starting current;
- the cables are interconnected one at a time to the booster battery first;

# Replacement & Data

When charging a battery in the vehicle from an outside source such as a trickle charger, ensure that:

- the charger output voltage is the same as the nominal voltage of the battery;
- the charger + (positive) lead is connected to the + (positive) terminal of the battery;
- the charger - (negative) lead is connected to the - (negative) terminal of the battery.

### Polarity

The electrical installation on the vehicle is NEGATIVE (-) earth return and the correct polarity must be maintained at all times. Reversed polarity will permanently damage semi-conductor devices in the alternator and radio (when fitted).

Before fitting a radio or any other electrical equipment, make certain that it has the correct earth-return polarity for installation in this vehicle.

### Alternator

The following precautions must be observed to avoid damage to the alternator and its ancillary components.

Ensure that the correct battery polarity is maintained at all times; reversed battery or charger connections will damage the alternator rectifiers.

The battery must never be disconnected while the engine is running.

Never use an ohmmeter of the type incorporating a hand-driven generator for checking the rectifiers of the transistors.

It is important that the belt tension is set correctly; if the correct tools are not available consult your Dealer or Agent.

Fit a new belt with a moderate degree of tension, run the engine for five minutes at 1,000 rev/min, stop the engine, then set the belt to the correct tension.

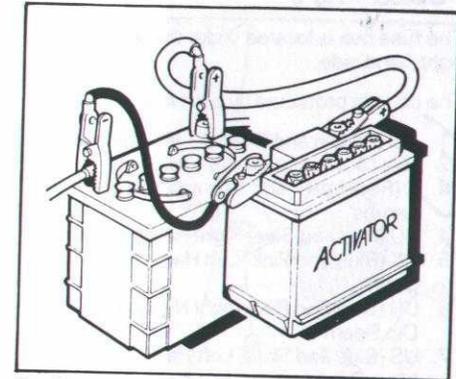


Fig. 7

# Replacement & Data

## FUSES – Fig. 8

The fuse box is located under the bonnet on the right-hand side.

The circuits protected by each fuse are:

- ✓ 1. NG (Brown and Green) – Interior Lights
- ✓ 2. NW (Brown and White) – Hazard
- ✓ 3. R (Red) Left Hand Side and Number Plate Lamps
- ✓ 4. RU (Red and Blue) Right Hand Side Lamp
- ✓ 5. UK (Blue and Pink) Left Hand Headlamp Dip Beam
- ✓ 6. UR (Blue and Red) Right Hand Headlamp Dip Beam
7. US (Blue and Slate) Left Hand Headlamp Main Beam
8. UW (Blue and White) Right Hand Headlamp Main Beam
- ✓ 9. G (Green) Wiper Motor, Passenger Heater, PDWA, Indicators
- ✓ 10. WB (White and Black) Heated Rear Window
- ✓ 11. GY (Green and Yellow) Drivers Heater, Instruments, Brake Light Switch
- ✓ 12. K (Pink) Drivers Radio

### Spare fuses

Spare fuses are provided in the fusebox covers and it is important to use only the correct replacement fuse. The fusing value is marked on a coloured paper slip inside the glass tube of the fuse. If the new fuse blows immediately and the cause of the trouble cannot be found, have the equipment examined by a Dealer.

## LAMPS

### Headlamps – RH steering – Fig. 9

The headlamps are of the sealed-beam type, and incorporate the sidelamps.

To renew a light unit remove the headlamp rim (1), remove the three screws (2) retaining the light unit plate (3), detach the plate and lift out the unit (4). Detach the plug (5) from the rear of the light unit. Pilot bulb (8).

When refitting a light unit, ensure that the lugs moulded on the back of the unit engage in the slots in the lamp back-shell before refitting the headlamp rim.

### Headlamps – LH steering – Fig. 10

To renew a headlamp bulb remove the headlamp rim (1) and the three screws (2) retaining the light unit plate (3). Detach the plate and lift out the unit (4). Pull the socket (5) from the back of the unit and release the bulb (8) by disengaging the retaining spring (9) from the reflector. Fit the

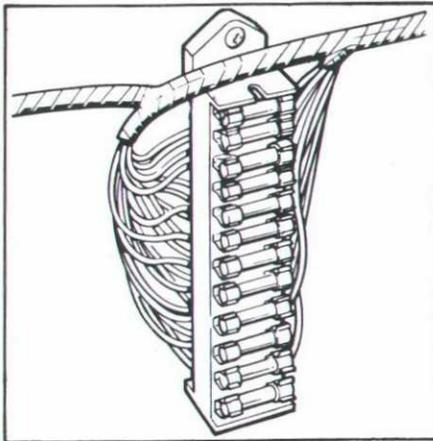


Fig. 8

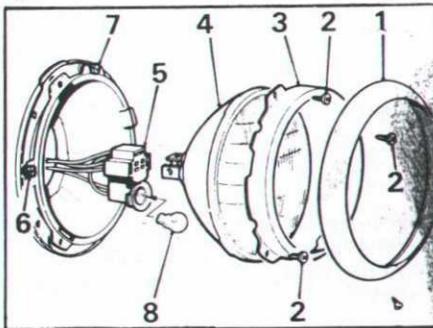


Fig. 9

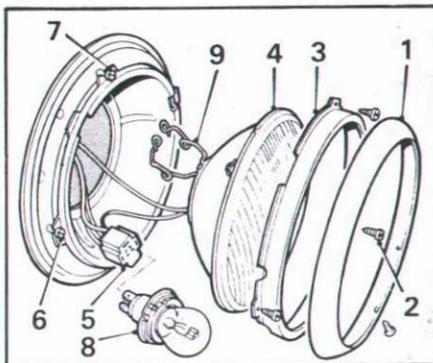


Fig. 10

new bulb with the location tabs and retaining spring correctly engaged with the reflector unit.

### RH and LH Steering

Horizontal and vertical adjustment of the light beam is controlled by screws (6) and (7).

# Replacement & Data

### Sidelamps –

The sidelamps are incorporated in the headlamps.

Remove the headlamp rim and detach the light unit.

Pull off the plug at the back of the light unit.

Pull the sidelamp bulb out of its holder in the plug.

### Front direction indicator lamps – Fig. 11

To replace a bulb remove the two fixing screws (2) and remove the lens. The bulb (3) can then be withdrawn.

Ensure that the lens is secured correctly when refitting.

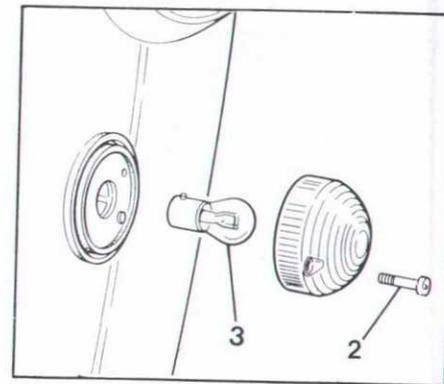


Fig. 11

### Direction indicator repeater lamps – Fig. 12

To renew a bulb, remove the lens retaining screw (1) and lift out the lens (2). The bayonet-cap type bulb (3) can then be removed.

When replacing the lens, ensure the moulded recess in the end of the lens engages under the tag on the lamp base.

### Stop, tail and direction indicator lamps – Fig. 13

To renew a bulb, remove the two screws (1) retaining the lens. The bayonet-cap type bulbs (2) and (3) can then be removed.

**Note:** The double-filament stop tail bulb (3) has offset locating pins to ensure correct replacement in the bulb holder.

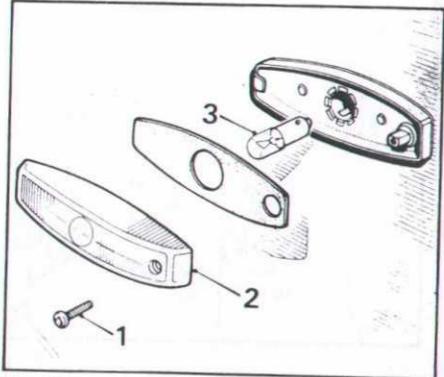


Fig. 12

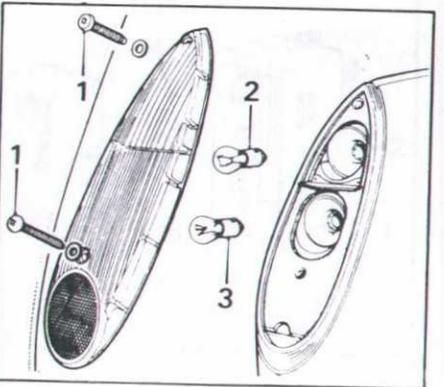


Fig. 13

## Replacement & Data

### Number-plate lamp — Fig. 14

The number-plate lamp only operates when the sidelamps and tail lamps are switched on. Twin-bayonet-fixing bulbs (1) are fitted and the cover (2) and glass (3) may be removed after slackening the small retaining screw (4).

### Driver's interior lamp — Fig. 15

A double-filament bayonet-fixing bulb (1) is fitted and the glass and bezel (2) may be removed after screwing the small retaining screw (3) out of the bezel.

### Passenger's interior lamp — Fig. 16

A double-filament bayonet-fixing bulb (1) is fitted and the glass and bezel (2) may be removed after screwing the small retaining screw (3) out of the bezel.

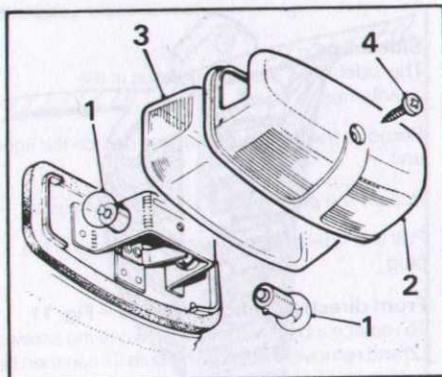


Fig. 14

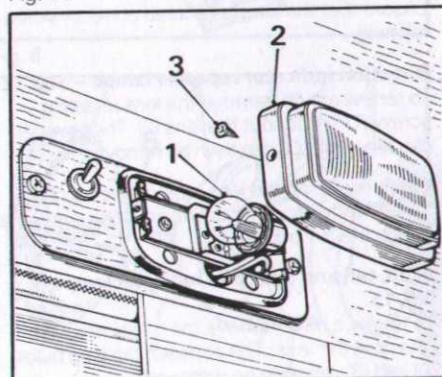


Fig. 15

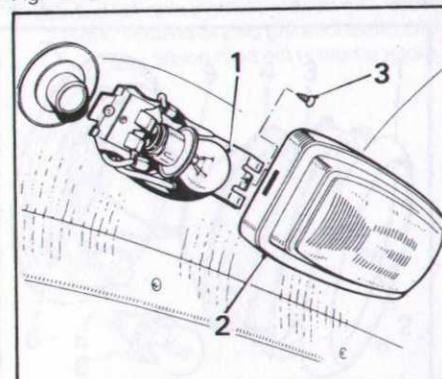


Fig. 16

## Replacement & Data

### Taxi-sign roof lamp — Fig. 17

To renew a bulb, prise out the centre disc (1) of the lamp and remove the bayonet-cap type bulb (2) from its holder.

Ensure that the spring retainers (3) on the centre disc engage correctly when refitting.

### Direction indicator and door warning lamps — Fig. 18

To renew a bulb, unscrew the lens and front of the lamp body (1). Withdraw the bulb and unscrew the collar (2) from the bulb (3).

Ensure that the flange of the collar is at the end of the bulb when refitting.

### Brake failure warning lamp — Fig. 19

Remove the assembly from the panel by depressing the four retaining tongues (1). Through the two pivot holes in the holder (2) depress the pivot legs (3) and remove the switch from its holder. Unscrew and remove the bulb (4).

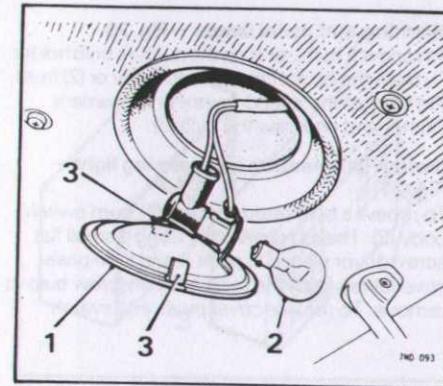


Fig. 17

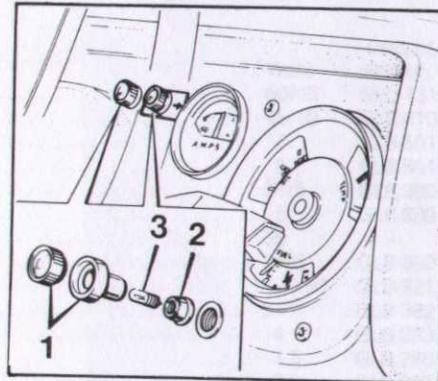


Fig. 18

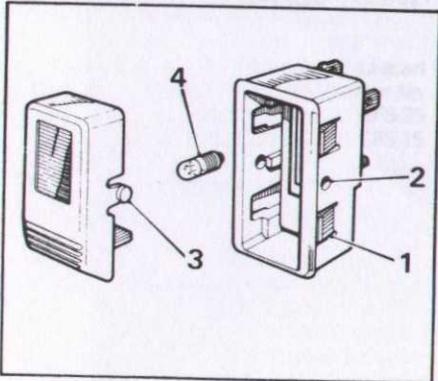


Fig. 19

## Replacement & Data

### Warning and panel lamps – Fig. 20

To renew a bulb, remove the push-fit bulb holder (1) from the back of the speedometer or (2) from the back of the speedometer or instrument cluster and unscrew the bulb (3).

### Switch illumination and warning light – Fig. 21

To renew a bulb remove cover (1) from switch body (2). This is achieved by using a small flat screwdriver placed at point A and then prise cover away from the main body unscrew bulb to remove. To replace cover press into switch.

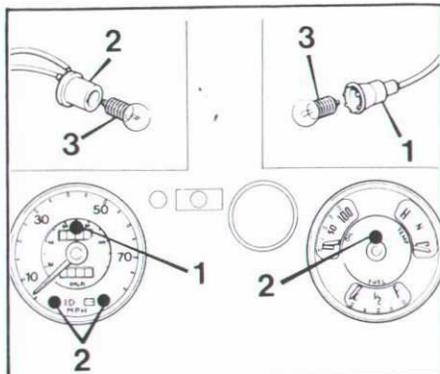


Fig. 20

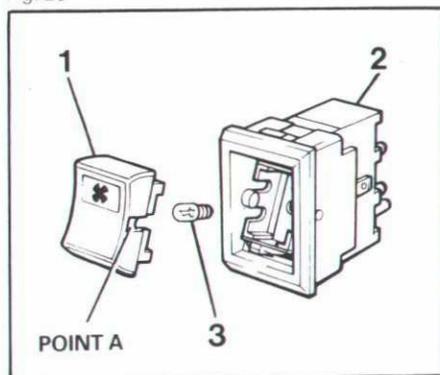


Fig. 21

## Replacement & Data

### Rear-fog guard lamp – Fig. 23

To gain access to the bulb, release the two screws (1) and remove the lamp lens (2). Press in and turn the bulb (3) to remove it.

Fit a new bulb, then fit the lens and tighten the retaining screws.

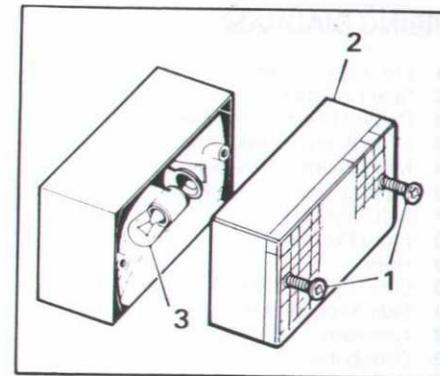


Fig. 23

### Replacement bulbs

	Watts	Unipart Part No.
Sealed beam unit (RH Stg.)	60/45	GLU 131
Headlamp (LH Stg.)	45/40	GLB 410
Pilot lamp (RH Stg.)	5	GLB 501
Pilot lamp (LH Stg.)	5	GLB 501
Tail and stop lamps	21/5	GLB 380
Rear number-plate lamp	5	GLB 989
Taxi-sign roof lamp	36	–
Interior lamps	21/5	GLB 380
Direction indicator and door warning lamps	14v 0.56	GLB 921
Direction indicator lamps	21	GLB 382
Direction indicator repeater lamps	4	GLB 233
Brake failure warning lamp	1.5	GLB 280
Warning and panel lamps	2.2	GLB 987
Switch illumination	14v 0.56	GLB 921

### Replacement fuses

Circuits (as Fig. 8 Page 48)	Unipart Part No.
1, 8, 9, 10, 11 – 17 amp (White)	GFS 35
2, 3, 4, 5, 6, 7 – 8 amp (Light Brown)	GFS 15

# Replacement & Data

## WIRING DIAGRAM

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| 1 Front Flasher RH                       | 59 Windscreen Washer Switch              |
| 2 Side Light RH                          | 60 Windscreen Wiper Switch               |
| 3 Dipped Beam - Headlamp RH              | 61 Head/Side Lamp Switch                 |
| 4 Main Beam - Headlamp RH                | 62 Main/Dip Beam & Flash Switch          |
| 5 Main Beam - Headlamp LH                | 63 Horn Switch                           |
| 6 Dipped Beam - Headlamp LH              | 64 Direction Indicator Switch            |
| 7 Side Light LH                          | 65 Control Box (Electronic Door Locking) |
| 8 Front Flasher LH                       | 66 Proximity Sensor                      |
| 9 Horn                                   | 67 Ignition Switch                       |
| 10 Side Repeater RH                      | 68 Auto Gear Selector Illumination       |
| 11 Side Repeater LH                      | 69 Hire Sign                             |
| 12 Alternator                            | 70 Fog Guard Switch                      |
| 13 Distributor                           | 71 Drivers Interior Light                |
| 14 Carburettor (Cut-Off) Solenoid        | 72 Taximeter Junction Box                |
| 15 Engine Temperature Transmitter        | 73 Interior Light Switch                 |
| 16 Battery                               | 74 Front Door Light Switch               |
| 17 Pre-Engaged Starter                   | 75 Door Locking Solenoid                 |
| 18 Diesel Heater Plugs                   | 76 Rear Door Light Switch                |
| 20 Spark Plugs                           | 77 Rear Interior Light Switch            |
| 21 Ignition Coil                         | 78 Passenger Interior Light Switch       |
| 22 Flasher Unit 8fl                      | 79 Taximeter Switch                      |
| 23 Brake Switch                          | 80 Passenger Heater Switch               |
| 24 Flasher Unit 9fl                      | 81 Passenger Heater                      |
| 25 Drivers Heater                        | 82 Tail Lamp Assembly                    |
| 26 Fluid Level                           | 83 Rear Fog Guard                        |
| 27 Neutral Interlock Switch (auto only)  | 84 Number Plate Illumination             |
| 28 Windscreen Wiper Motor                | 85 Heated Backlight                      |
| 29 Electric Windscreen Washer            | 86 Fuel Tank Unit                        |
| 30 Electronic Door Locking Warning Light | 87 Speedometer Illumination              |
| 31 Temperature Gauge                     | 88 CAV Control Unit                      |
| 32 Fuel Gauge                            | 89 Solenoid Micro Switch                 |
| 33 Oil Pressure Gauge                    | 90 Door Locking Warning Light            |
| 34 3 in 1 Instrument Illumination        |                                          |
| 35 Ammeter                               |                                          |
| 36 Ammeter Illumination                  |                                          |
| 37 Door Indicator Warning Light          |                                          |
| 38 RH Door Warning Light                 |                                          |
| 39 Ignition Warning Light                |                                          |
| 40 Speedometer                           |                                          |
| 41 Main Beam Indicator Light             |                                          |
| 42 Voltage Stabilizer                    |                                          |
| 43 LH Door Warning                       |                                          |
| 44 Heated Backlight Switch               |                                          |
| 45 Fluid Level Warning/Test Light        |                                          |
| 46 2 Way Heater Switch                   |                                          |
| 47 Heater Switch                         |                                          |
| 48 Hazard Switch                         |                                          |
| 49 Interior Light Switch                 |                                          |
| 50 Panel Light Switch                    |                                          |
| 51 Fuse Box                              |                                          |
| 52 9 Way Column Switch Terminal Block    |                                          |
| 53 5 Way Column Switch Terminal Block    |                                          |
| 54-58 —                                  |                                          |

## COLOUR KEY

- |    |             |
|----|-------------|
| LG | Light Green |
| K  | Pink        |
| P  | Purple      |
| U  | Blue        |
| N  | Brown       |
| B  | Black       |
| R  | Red         |
| W  | White       |
| Y  | Yellow      |
| O  | Orange      |
| G  | Green       |
| S  | Slate       |

When two colours appear together the first letter represents the main colour and the second the tracer.

## WIRING DIAGRAM



# Replacement & Data

## GENERAL SPECIFICATION DATA

The vehicle specification may vary according to market requirements and from model to model. The manufacturers reserve the right to alter specifications with or without notice at any time. The policy of constant product improvement by the manufacturers may involve major or minor changes to the vehicle specification. Whilst every effort is made to ensure accuracy of the particulars contained in this Handbook, no liabilities for inaccuracies or the consequences thereof can be accepted by the manufacturer or the Dealer who supplied the Handbook. During running-in from new, certain adjustments vary from the specification figures detailed. They will be set to specification by your Dealer at the After-Sales Free Service and should thereafter be maintained throughout the vehicle's life.

### Engine

Type .....	Petrol Diesel
Number of cylinders .....	4
Bore .....	3.562 in (90.57mm)
Stroke .....	3.819 in
Capacity .....	2495cc
Valve/rocker clearance (hot or cold) .....	0.010 in (0.25mm)
Compression ratio .....	Petrol 8.0:1 Diesel 21:1
Firing order .....	1, 3, 4, 2

### Petrol ignition system

Sparking plug .....	Champion N12Y, Unipart GSP 121
Sparking plug gap .....	0.029 to 0.032 in (0.75 to 0.80mm)
Distributor .....	Ducellier 525232A
Distributor gap .....	0.014 to 0.022 in (0.35 to 0.55mm)

### Diesel fuel system

Fuel filter .....	CAV FAS 583
Fuel injection pump .....	CAV DPS with mechanical governor
Fuel injection nozzles .....	CAV Pintaux BDN OSPC 6209
Fuel injector nozzle holders .....	CAV BKB 35S 5283
Nozzle opening pressures .....	135 atmospheres
Heater plugs .....	CAV MICRONOVA starting Aid
Injector nut torque .....	6 to 8 lbf ft (0.8 to 1.0 kgf m)

# Replacement & Data

## Steering

Ratio .....	24:1
Turning circle (kerb to kerb) .....	25 ft (7.62m)
Front wheel toe-in: Cross-ply tyres .....	1/16 in (1.6mm)
Radial tyres .....	1/16 in (1.6mm) - 1/8 in (3.2mm)
Front hub bearing end-float .....	.002-.004 in (.05-.10mm)

## Tyres

Size .....	5.75 - 16 cross-ply (6 ply) or 175 - 16 radial
Recommended pressures:	
Cross-ply tyres .....	2.2 bar, 32 lbf/in <sup>2</sup> , 2.3 kgf/cm <sup>2</sup>
Radial tyres: 175 - 16 .....	Front 2.6 bar 38 lbf/in <sup>2</sup> 2.6 kgf/cm <sup>2</sup> Rear 2.4 bar 34 lbf/in <sup>2</sup> 2.4 kgf/cm <sup>2</sup>

## Principal dimensions

Length overall .....	14 ft 11 <sup>7</sup> / <sub>16</sub> in (4.558m)
Width overall .....	5 ft 8 <sup>5</sup> / <sub>8</sub> in (1.743m)
Height overall .....	5 ft 9 <sup>1</sup> / <sub>2</sub> in (1/765m)

## Capacities

Engine oil (including filter) .....	12 <sup>1</sup> / <sub>2</sub> pints (7.1 litres)
Engine oil filter .....	1 <sup>1</sup> / <sub>2</sub> pints (0.8 litre)
Fuel tank .....	12 gal (54.5 litres)
Cooling system (with heaters):	
Dry system .....	14 <sup>1</sup> / <sub>2</sub> pints (8.25 litres)
Refill after draining (from drain plug only) .....	13 pints (7.4 litres)
Heater .....	1 <sup>1</sup> / <sub>2</sub> pints (0.9 litre)
Expansion tank .....	1 pint (0.6 litre)
Kerb Weight (Manual gearbox) .....	3541 lb (1606 kg)
(Automatic gearbox) .....	3548 lb (1609 kg)

$$\begin{array}{r}
 112 = 1 \text{ cwt} \\
 1120 = 10 \text{ cwt} \\
 \hline
 3360 = 30 \text{ cwt} \\
 \phantom{3360} + 112 \\
 \hline
 3548 \\
 \phantom{3548} + 188 \\
 \hline
 3736 \\
 \phantom{3736} - 188 \\
 \hline
 3548
 \end{array}$$

1 TON 11<sup>1</sup>/<sub>2</sub> cwt.

# Replacement & Data

## SERVICE PARTS AND ACCESSORIES

Genuine London Taxis International parts and accessories are designed and tested for your vehicle and have full backing of the Vehicle Service Statement. Only when genuine London Taxis International parts are used can responsibility be considered under the terms of the statement.

Safety features embodied in the vehicle may be impaired if other than genuine parts are fitted. In certain territories, legislation prohibits the fitting of parts not to the vehicle manufacturer's specification. Owners purchasing accessories while travelling abroad should ensure that the accessory and its fitted location on the vehicle conform to mandatory requirements existing in their country of origin.

## IDENTIFICATION

When communicating with your Dealer or Agent always quote the chassis, car (body), and engine numbers. When the communication concerns a transmission unit it is also necessary to quote the unit casing number.

**Chassis number.** Stamped on a plate fixed to the chassis side-member adjacent to the right-hand front mudwing valance.

**Car (Body) number.** Stamped on a plate fixed to the scuttle drain channel.

**Engine number.** Stamped on the right-hand side of the cylinder block.

**Gearbox number.** Stamped on the side face of the gearbox case.

**Automatic gearbox number.** Stamped on a plate fixed to the left-hand side of the gearbox.

**Vehicle identification number.** Stamped on a plate attached to the left-hand valance panel adjacent to the cooling system header tank.

London Taxis International Limited  
Holyhead Road  
Coventry CV5 8JJ  
Telephone: Coventry (0203) 595001

# Notes

Invoice No. 123456789  
Invoice Date: 12/31/2023  
Invoice Period: 12/01/2023 - 12/31/2023  
Invoice Amount: \$1,234.56

Customer Name: John Doe  
Customer Address: 123 Main St  
City: New York, NY 10001  
Phone: (212) 555-1234  
Email: john.doe@example.com

Notes

Notes

Notes

Notes

Notes

Notes

