



PORTER MANUALS

TIPO AND TEMPRA

**REPAIR MANUAL • SERVICE GUIDE
& Owner Reference Information**



**HATCHBACKS, SALOONS AND ESTATES
1988 - 1996
F reg - P reg in the UK**



PORTER PUBLISHING

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**SELENIA
MOTOR OIL**



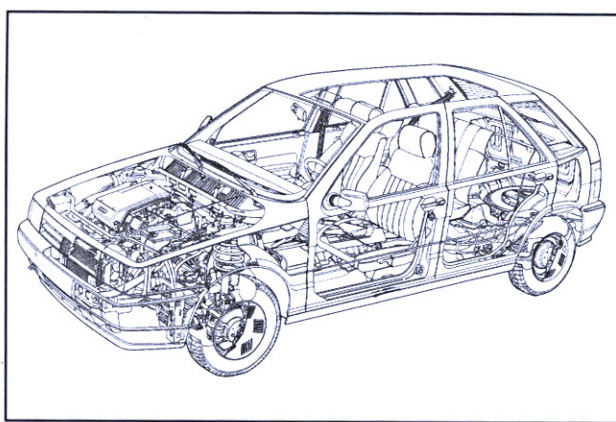
FIAT Tipo and Tempra

Repair Manual and Service Guide



by
Lindsay Porter
and **Roy Stenning**

Every care has been taken to ensure that the material in this book is correct. However, should any matter not be clear after reading this book, you are advised to consult your nearest franchised dealer. Liability cannot be accepted for damage, loss, accidents or injury, due to failure to follow instructions or to consult expert advice if this is required.



Detailed Contents are shown at the start of each chapter.

CONTENTS

	Auto-Biography	1
CHAPTER 1:	Safety First!	5
CHAPTER 2:	Using Your Car	9
CHAPTER 3:	Facts and Figures	17
CHAPTER 4:	Getting Through the MoT	28
CHAPTER 5:	Servicing Your Car	32
CHAPTER 6:	Repairs and Replacements	64
	Spark Plug Conditions and Recommended Lubricants ..	154
CHAPTER 7:	Wiring Diagrams	155
	Index	176

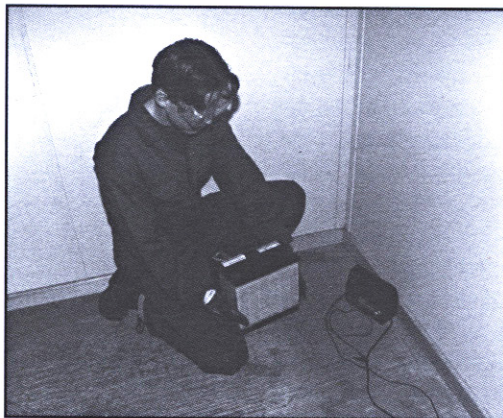


FACT FILE: 'LEFT AND 'RIGHT' SIDES OF THE CAR

- Throughout this manual, we refer to the 'left' and 'right' sides of the car. They refer to the sides of the car that you would see if you were sitting in the driver's seat, looking forwards.

CHAPTER 1 SAFETY FIRST!

You must always ensure that safety is the first consideration in any job you carry out. A slight lack of concentration, or a rush to finish the job quickly can easily result in an accident, as can failure to follow the precautions outlined in this manual.



Be sure to consult the suppliers of any materials and equipment you may use, and to obtain and read carefully any operating and health and safety instructions that may be available on packaging or from manufacturers and suppliers.

GENERAL

Raising the Car Safely

ALWAYS ensure that the vehicle is properly supported when raised off the ground. Don't work on, around, or underneath a raised vehicle unless axle stands are positioned under secure, load bearing underbody areas, or the vehicle is driven onto ramps, with the wheels remaining on the ground securely chocked to prevent movement.

NEVER work on a vehicle supported on a jack. Jacks are made for lifting the vehicle only, not for holding it off the ground while it is being worked on.

ALWAYS ensure that the safe working load rating of any jacks, hoists or lifting gear used is sufficient for the job, and that lifting gear is used only as recommended by the manufacturer.

NEVER attempt to loosen or tighten nuts that require a lot of force to turn (e.g. a tight oil drain plug) with the vehicle raised, unless it is safely supported. Take care not to pull the vehicle off its supports when applying force to a spanner. Wherever possible, initially slacken tight fastenings before raising the car off the ground.

ALWAYS wear eye protection when working under the vehicle and when using power tools.

Working On The Vehicle

ALWAYS seek specialist advice unless you are justifiably confident about carrying out each job. The safety of your vehicle affects you, your passengers and other road users.

DON'T lean over, or work on, a running engine unless it is strictly necessary, and keep long hair and loose clothing well out of the way of moving mechanical parts. Note that it is theoretically possible for fluorescent striplighting to make an engine fan appear to be stationary - double check whether it is spinning or not! This is the sort of error that happens when you're really tired and not thinking straight. So...

...DON'T work on your car when you're over tired.

ALWAYS work in a well ventilated area and don't inhale dust - it may contain asbestos or other harmful substances.

NEVER run the engine indoors, in a confined space or over a pit.

REMOVE your wrist watch, rings and all other jewellery before doing any work on the vehicle - and especially when working on the electrical system.

DON'T remove the radiator or expansion tank filler cap when the cooling system is hot, or you may get scalded by escaping coolant or steam. Let the system cool down first and even then, if the engine is not completely cold, cover the cap with a cloth and gradually release the pressure.

NEVER drain oil, coolant or automatic transmission fluid when the engine is hot. Allow time for it to cool sufficiently to avoid scalding you.

ALWAYS keep antifreeze, brake and clutch fluid away from vehicle paintwork. Wash off any spills immediately.

TAKE CARE to avoid touching any engine or exhaust system component unless it is cool enough not to burn you.

Running The Vehicle

NEVER start the engine unless the gearbox is in neutral (or 'Park' in the case of automatic transmission) and the hand brake is fully applied.

NEVER run catalytic converter equipped vehicles without the exhaust system heat shields in place.

TAKE CARE when parking vehicles fitted with catalytic converters. The 'cat' reaches extremely high temperatures and any combustible materials under the car, such as long dry grass, could be ignited.

Personal Safety

NEVER siphon fuel, antifreeze, brake fluid or other such toxic liquids by mouth, or allow contact with your skin. Use a suitable hand pump and wear gloves.

BEFORE undertaking dirty jobs, use a barrier cream on your hands as a protection against infection. Preferably, wear suitable gloves, available from DIY outlets.

WEAR IMPERVIOUS GLOVES for sure when there is a risk of used engine oil coming into contact with your skin. It can cause cancer.

WIPE UP any spilt oil, grease or water off the floor immediately.

MAKE SURE that spanners and all other tools are the right size for the job and are not likely to slip. Never try to 'double-up' spanners to gain more leverage.

SEEK HELP if you need to lift something heavy which may be beyond your capability. Don't forget that when lifting a heavy weight, you should keep your back straight and bend your knees to avoid injuring your back.

NEVER take risky short-cuts or rush to finish a job. Plan ahead and allow plenty of time.

BE METICULOUS and keep the work area tidy - you'll avoid frustration, work better and lose less.

KEEP children and animals right-away from the work area and from unattended vehicles.

ALWAYS tell someone what you're doing and have them regularly check that all is well, especially when working alone on, or under, the vehicle.

HAZARDS

Fire!

Petrol (gasoline) is a dangerous and highly flammable liquid requiring special precautions. When working on the fuel system, disconnect the vehicle battery earth (ground) terminal whenever possible and always work outside, or in a very well ventilated area. Any form of spark, such as that caused by an electrical fault, by two metal surfaces striking against each other, by a central heating boiler in the garage 'firing up', or

even by static electricity built up in your clothing can, in a confined space, ignite petrol vapour causing an explosion. Take great care not to spill petrol on to the engine or exhaust system, never allow any naked flame anywhere near the work area and, above all, don't smoke.



Invest in a workshop-sized fire extinguisher. Choose the carbon dioxide type or preferably, dry powder but NEVER a water type extinguisher for workshop use.

DON'T disconnect any fuel pipes on a fuel injected engine without following the advice in this manual. The fuel in the line is under very high pressure - sufficient to cause serious injury. Remember that many injection systems have residual pressure in the pipes for days after switching off. If necessary seek specialist advice.

Fumes

Petrol (gasoline) vapour and that given off by many solvents, thinners, and adhesives are highly toxic and under certain conditions can lead to unconsciousness or even death, if inhaled. The risks are increased if such fluids are used in a confined space so always ensure adequate ventilation. Always read the maker's instructions and follow them with care.

Never drain petrol (gasoline) or use solvents, thinners adhesives or other toxic substances in an inspection pit. It is also dangerous to park a vehicle for any length of time over an inspection pit. The fumes from even a slight fuel leak can cause an explosion when the engine is started.

Mains Electricity



Avoid the use of mains electricity when working on the vehicle, whenever possible. Use rechargeable tools and a DC inspection lamp, powered from a remote 12V battery - both are much safer. However, if you do use mains-powered equipment, ensure that the appliance is wired correctly to its plug, that where necessary it is properly earthed (grounded), and that the fuse is of the correct rating for the appliance. Do not use any mains powered equipment in damp conditions or in the vicinity of fuel, fuel vapour or the vehicle battery.

Always use an RCD (Residual Current Device) circuit breaker with mains electricity. Then, if there is a short, the RCD circuit breaker minimises the risk of electrocution by instantly cutting the power supply.

Ignition System

Never work on the ignition system with the ignition switched on, or with the engine being turned over on the starter, or running and you are recommended never to do so.

Touching certain parts of the ignition system, such as the HT leads, distributor cap, ignition coil etc., can result in a severe electric shock or physical injury as a hand is pulled sharply away. Voltages produced by electronic ignition systems are much higher than those produced by conventional systems and could prove fatal, particularly to people with cardiac pacemaker implants. Consult your handbook or main dealer if in any doubt.

Cooling Fan

On many vehicles, the electric cooling fan can switch itself on even with the ignition turned off. This is especially likely after driving the car and parking it before turning off, after which heat rises to the top of the engine and turns the fan on, suddenly and without warning. If you intend working in the engine bay, it's best to do so when the engine is cold, to disconnect the battery, or keep away from the fan, if neither of these are possible.

Battery

Never cause a spark, smoke, or allow a naked light near the vehicle's battery, even in a well ventilated area. Highly explosive hydrogen gas is given off as part of the charging process.

Battery terminals on the car should be shielded, since a spark can be caused by any metal object which touches the battery's terminals or connecting straps.

IMPORTANT NOTE: Before disconnecting the battery earth (ground) terminal read the relevant FACT FILE in Chapter 5 regarding saving computer and radio settings.)

When using a battery charger, switch off the power supply before the battery charger leads are connected or disconnected. If the battery is not of the 'sealed-for-life' type, loosen the filler plugs or remove the cover before charging. For best results the battery should be given a low rate trickle charge overnight. Do not charge at an excessive rate or the battery may burst.

Always wear gloves and goggles when carrying or when topping up the battery. Acid electrolyte is extremely corrosive and must not be allowed to contact the eyes, skin or clothes.

Brakes and Asbestos

Obviously, a car's brakes are among its most important safety related items. ONLY work on your vehicle's braking system if you are trained and competent to do so. If you have not been trained in this work, but wish to carry out the jobs described in this book, we strongly recommend that you have a garage or qualified mechanic check your work before using the car.

Whenever you work on the braking system components, or remove front or rear brake pads or shoes: i) wear an efficient particle mask; ii) wipe off all brake dust from the brakes after spraying on a proprietary brand of brake cleaner (never blow dust off with compressed air); iii) dispose of brake dust and discarded shoes or pads in a sealed plastic bag; iv) wash your hands thoroughly after you have finished working on the brakes and certainly before you eat or smoke; v) replace shoes and pads only with asbestos-free shoes or pads. Note that asbestos brake dust can cause cancer if inhaled; vi) always replace brake pads and/or shoes in complete 'axle' sets of four - never replace the pads/shoes on one wheel only.

Brake Fluid

Brake fluid absorbs moisture rapidly from the air and can become dangerous resulting in brake failure. You should change the fluid in accordance with your vehicle manufacturer's recommendations or as advised in this book. Never store (or use) an opened container of brake fluid. Dispose of the remainder at your Local Authority Waste Disposal Site, in the designated disposal unit, not with general waste or with waste oil.

Engine Oils

Always wear disposable plastic or rubber gloves when draining the oil from your engine. i) Note that the drain plug and the oil are often hotter than you expect. Wear gloves if the plug is too hot to touch and keep your hand to one side so that you are not scalded by the spurt of oil as the plug comes away; ii) There are very real health hazards associated with used engine oil. In the words of one manufacturer's handbook "Prolonged and repeated contact may cause serious skin disorders, including dermatitis and cancer." Use a barrier cream on your hands and try not to get oil on them. Always wear gloves and wash your hands with hand cleaner soon after carrying out the work. Keep oil out of the reach of children; iii) NEVER, EVER dispose of old engine oil into the ground or down a drain. In the UK, and in most EC countries, every local authority must provide a safe means of oil disposal. In the UK, try your local Environmental Health Department for advice on waste disposal facilities.

Plastic Materials

Many of the materials used (polymers, resins, adhesives and materials acting as catalysts and accelerators) contain dangers in the form of poisonous fumes, skin irritants, and the risk of fire

and explosions. Do not allow resin or 2-pack adhesive hardener, or that supplied with filler or 2-pack stopper, to come into contact with skin or eyes. Read carefully the safety notes supplied on the can, tube or packaging and always wear impervious gloves and goggles when working with them.

Fluoroelastomers

Fluoroelastomers are commonly used for oil seals, wiring and cabling, bearing surfaces, gaskets, diaphragms, hoses and 'O' rings. If they are subjected to temperatures greater than 315 degrees C, they will decompose and can be potentially hazardous. Some decomposition may occur at temperatures above 200 degrees C, and it is obvious that when a car has been in a fire or has been dismantled with the assistance of a cutting torch or blow torch, the fluoroelastomers can decompose in the manner indicated above.

According to the Health and Safety Executive, "Skin contact with this liquid or decomposition residues can cause painful and penetrating burns. Permanent irreversible skin and tissue damage can occur". Damage can also be caused to eyes or by the inhalation of fumes created as fluoroelastomers are burned or heated.

After a vehicle has been exposed to fire or high temperatures:

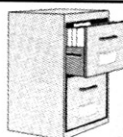
1. Do not touch blackened or charred seals or equipment.
2. Preferably, don't handle parts containing decomposed fluoroelastomers, but if you must, wear goggles and PVC (polyvinyl chloride) or neoprene protective gloves whilst doing so. Never handle such parts unless they are completely cool.
3. Contaminated parts, residues, materials and clothing, including protective clothing and gloves, should be disposed of by an approved contractor to landfill or by incineration according to national or local regulations. Oil seals, gaskets and 'O' rings, along with contaminated material, must not be burned.

WORKSHOP



1. Always have a fire extinguisher of the correct type at arm's length when working on the fuel system. If you do have a fire, DON'T PANIC. Use the extinguisher effectively by directing it at the base of the fire.
2. NEVER use a naked flame anywhere in the workplace.

3. KEEP your inspection lamp well away from any source of petrol (gasoline) such as when disconnecting a carburettor float bowl or fuel line.
4. NEVER use petrol (gasoline) to clean parts. Use paraffin (kerosene), white spirits, or, a proprietary degreaser.
5. NO SMOKING. There's a risk of fire or of transferring dangerous substances to your mouth and, in any case, ash falling into mechanical components is to be avoided.



FACT FILE: FOUR WHEEL DRIVE CARS

- Whenever you have to raise a wheel off the ground and turn it by hand, always ensure that the opposite-side's wheel to the one being lifted is also off the ground and free to turn and that both wheels remaining on the ground are held by the parking brake (if possible) and securely chocked in both directions.
- ALWAYS have the gearbox in neutral (or 'N' in the case of automatics). In the case of some 4 wheel drive automatics and those with permanent 4WD, it is necessary to disengage the 4WD system by special means.
- Consult your handbook or seek advice from your main dealer.

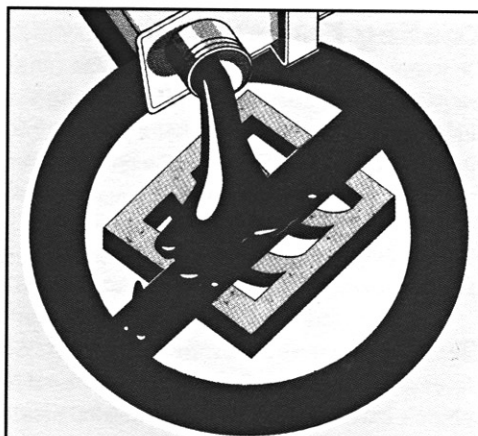
6. BE METHODICAL in everything you do, use common sense, and think of safety at all times.

ENVIRONMENT FIRST!

The used oil from the sump of just one car can cover an area of water the size of two football pitches, cutting off the oxygen supply and harming swans, ducks, fish and other river life.

When you drain your engine oil - don't oil the drain!

Pouring oil down the drain will cause pollution. It is also an offense. Don't mix used oil with other materials, such as paint and solvents, because this makes recycling difficult. Take used oil to an oil recycling bank. Telephone



**OIL POLLUTES WATER
USE YOUR BRAIN-
NOT THE DRAIN!**

FREE on 0800 663366 to find the location of your nearest oil bank, or contact your local authority recycling officer.

CHAPTER 2 USING YOUR CAR



We recommend that you read this chapter carefully, so that you will become familiar with your vehicle's controls and instruments.

This Chapter is taken from FIAT's own official Handbooks on the Tipo and Tempra. It contains important and helpful information for the operation of your FIAT Tipo or Tempra.

KEYS AND LOCKS

1. DOORS AND BONNET

DOOR LOCKS

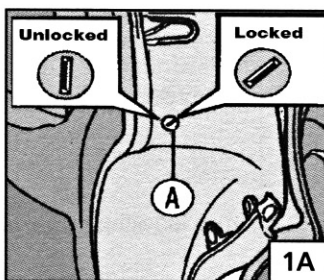
Most FIAT Tipos and Tempras have manual locking. You turn the key in the lock in the normal way to lock and unlock the door.

CHILDPROOF LOCKS

1A. Some models are fitted with childproof locks. You will find them in the ends of the rear doors, when open.

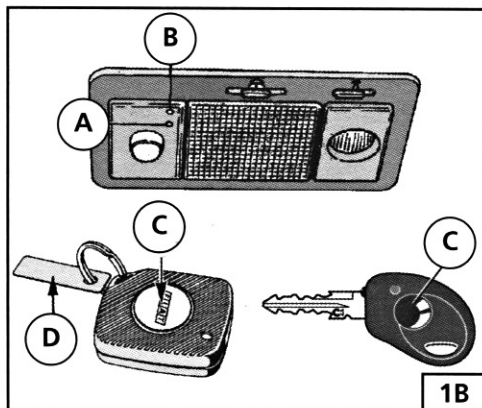
- Place your ignition key in notch **A**, in the end of the door, when open.

- Turn to the right to lock the childproof rear door locks; turn to the left to unlock.



REMOTE LOCKING/UNLOCKING

1B. A directional signal is emitted when you press button **A** on your remote unit (early models) or on your ignition key (later models).



Receiving Unit In Car: The receiving unit can store up to 6 codes. Tag **D**, supplied with every receiver, has a code number stamped on it. **Keep this tag in a safe place - replacements are very expensive.**

To Store the Code of Your Transmitter:

- Press and hold down button **A** with a ball-point pen. The red LED **B** illuminates, indicating that the receiving unit is ready to store the code.
- Hold down button **C** on your remote unit/ignition key.
- The LED at **B** turns off, indicating that the receiver has stored the code.
- Release Button **A**. Red LED **B** flashes for about 8 seconds to confirm that the code has been stored.

If you press button **A** again within 8 seconds, the red LED **B** illuminates indicating that the receiving unit is ready to store another code. Repeat the procedure.

If you lose a remote unit there are two ways to store a new code:

Using a Remote Unit With Code Already Stored:

- Press and hold down button **A**. After about 2 seconds red LED **B** flashes once.
- Press button **C** on the remote whose code has been stored. Red LED **B** illuminates.
- Release button **A**. Red LED **B** flashes for 8 seconds indicating new code has been stored.

Manual Operation: Have tag **D** ready. The four numbers stamped on the tag will be used in this procedure:

- Press Button **A** twice. Red LED **B** flashes 3 times and then turns off for about 2 seconds.
- When LED **B** lights up again, press button **A** the number of times indicated by the first code number on tag **D** (if 0 do not press the button). Two seconds after pressing button **A**, LED **B** will turn off for 2 seconds.

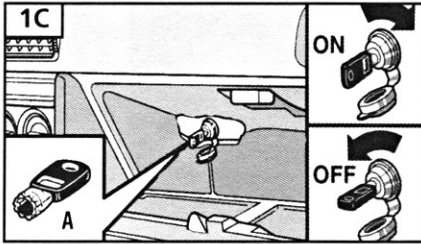
IMPORTANT NOTE: The presence of dirt, snow or ice on the side windows may prevent operation.

- Repeat this operation three more times until the complete code number has been entered, if the code has been entered in correctly LED **B** will start flashing.
- Release button **A** (see illustration **1B**). Red LED **B** flashes for 8 seconds indicating the new remote unit's code has been stored.

IMPORTANT NOTE: If the LED does not illuminate when remote unit button (illustration **1B**, button **C**) is pressed, change the remote unit's battery.

SWITCHING OFF THE ALARM

1C. Some models are fitted with an alarm exclusion switch, which can be found inside the glove compartment. If the alarm is faulty or the remote control batteries are flat:



- Insert the emergency key **A** into the emergency switch slot in the glove compartment turn the key to the left to switch the alarm off (see inset).
- Turn the key back towards its original position to switch the alarm system back on.

IMPORTANT NOTE: As the alarm system absorbs energy, if you are not planning on using the car for a long period of time, turn the alarm exclusion key to the off position, so as not to run the vehicle battery down.

2. IGNITION SWITCH AND STEERING COLUMN LOCK

IGNITION SWITCH

2. The ignition/steering column lock key, once inserted in the ignition lock, can be placed in any of the following four positions:



- **PARK** - With the key in this position the side and tail lights can be turned on, the steering column locked and the keys can be removed. Press button **A** to turn the key to PARK.
- **STOP** - When the key is turned to the STOP position the steering column will be locked, and the keys can be removed.
- **MAR** - This is the driving position. When the key is in this position all the electrical devices are energised.
- **AVV** - Turning the key to this position starts the engine.

STEERING COLUMN LOCK

- **LOCKING** - To apply the steering wheel lock turn the steering wheel slightly to the left or right when the key is at STOP or PARK.

UNLOCKING - Rocking the steering wheel gently back and forth while turning the ignition key to MAR unlocks the steering wheel.

SAFETY FIRST!

- *Never remove the key when the car is moving. If you do, the steering wheel will lock the first time you turn it.*
- *If the ignition lock has been tampered with or shows any sign of damage (e.g. attempted theft), have the lock checked at your nearest FIAT Service Centre.*

DASHBOARD

3. PANEL INDICATORS

INSTRUMENT DISPLAY PANEL

3. These are the instrument panel warning LED indicators for all FIAT Tipo/Tempra models. Your vehicle will only have Panel Indicators relevant to your particular car.

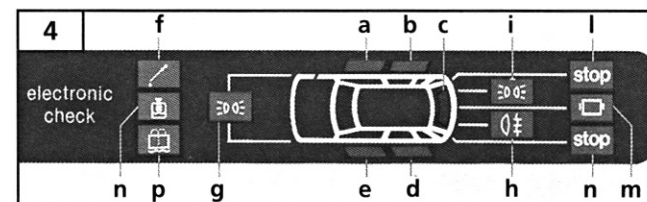
	Choke		Oil pressure warning
	Direction indicators		Handbrake engaged
	Side lights		Rear window defroster
	High beam head lights		Injection system warning light
	Rear fog lights		Battery warning
	Hazard warning lights		Seat belts not buckled
	ABS brake warning		Automatic transmission fluid warning
	Brake pad wear warning		Doors not properly closed
	Turbo pressure warning		Trailer direction indicators
	Front fog lights		Diesel fuel filter condensate warning
	Diesel heater/glow plugs		

3

4. ELECTRONIC CHECK PANEL

4. The electronic check panel is not fitted to models with basic trim.

IMPORTANT NOTE: The check panel will not indicate if the tail light fuses blow at the same time, or if there is a circuit failure within the panel display.



SIDE AND HATCHBACK DOORS

When the ignition key is at MAR, the check panel LEDs **g, h, i, l, m** and **n** monitor the light bulbs and fuses. LEDs **a, b, c, d,** and **e** monitor incomplete closure of the side doors and hatchback.

Fluid levels (if included) are monitored by LEDs **g** and **p**, indicating the levels of the fluid reservoirs.

A red LED illuminates at the position on the check panel corresponding to a side door or a hatchback/tailgate that is not properly closed.

LED **p** illuminates (key at MAR) when the level in the windscreen or rear screen wash reservoirs are low.

- The LED also indicates when a circuit or sensor malfunction occurs.

SIDE AND TAIL LIGHTS

When the side and tail lights are turned on, the check panel monitors the light bulbs, fuses and circuits.

- LED **g** monitors the front side lights.
- LED **i** monitors the tail lights.

If one of the two fuses protecting the following bulbs blows, LEDs **g**, **i**, and **m** illuminate.

NUMBER PLATE LIGHTS

- LED **m** indicates when one or both of the number plate light bulbs have burnt out.

REAR FOG LIGHTS

- When the fog-guard lights are turned on, LED **h** monitors the light bulbs.
- When the fuse blows or a circuit malfunction occurs, LED **h** illuminates, but not the panel indicator.

STOP LIGHTS

If one or both stop lights burn out, the fuse blows or a circuit malfunction occurs, LED **l** or **n** illuminates when braking.

- LED **n** monitors the left stop light.
- LED **l** monitors the right stop light.

If both bulbs burn out at the same time or brake pedal switch malfunction occurs, both LEDs **l** and **n** illuminate.

ENGINE OIL LEVEL

- LED **f** illuminates when the engine oil level is low (key at MAR, engine not running).

The oil level monitoring system does not operate when the engine is running. If the oil level warning LED illuminates when driving, a circuit sensor malfunction has occurred.

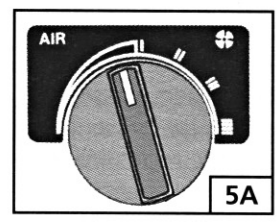
When starting the car on a hill or within 10 minutes of switching off the engine the warning light may illuminate (event will be stored in system memory). Start the engine again on level ground to ensure the oil level is sufficient.

COOLANT

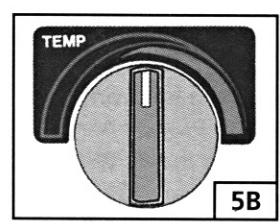
A low coolant level is indicated by LED **o** (key at MAR). The LED also illuminates when a sensor or circuit malfunction occurs.

5. HEATING AND VENTILATION CONTROLS

5A. Air volume control - Adjust the dynamic air flow (fan OFF) by turning the knob up to **I**. Continue turning the knob to the right to increase the air flow (i.e. fan ON).



5B. Air temperature control - The temperature will increase the further you turn the air temperature knob to the right (red zone).

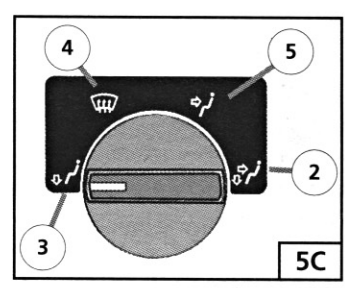


The temperature decreases the further you turn the temperature control knob to the left (blue zone).

HEATING

HEAT DISTRIBUTION

With the air temperature knob (**5B**) turned to the red zone and the air volume control knob (**5A**) turned to the desired fan speed, turn the air distribution knob (**5C**) to:



- **2** - In sunny, cold weather.
- **3** - For heating to footwell vents.
- **4** - Demist the windows.
- Also, turn the air volume control knob (**5A**) to level **II** or **III**.

VENTILATION

- Turn the air distribution control to **5**.
- Turn the air temperature adjustment knob fully anti-clockwise to the blue zone.
- Turn the air volume control knob to the desired fan speed.
- Turn the air distribution control to **5**.

When the car is moving the volume of the air entering the passenger compartment can be reduced by turning the fan knob to the left of **1**.

DUAL TEMPERATURE

- Turn the air temperature adjustment knob to an intermediate position.
- Turn the air distribution control knob to **2**.

Warmer air is delivered to the footwell vents and cooler air to the dashboard vents.