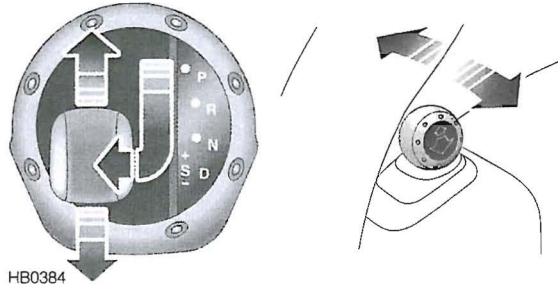


# Automatic Transmission

## MANUAL GEAR SELECTION



There are six predetermined gear ratios, all of which can be selected sequentially by a single forward or rearward movement of the selector lever, or by similar forward/rearward movements of either of the steering wheel switches:

- With 'D' selected, move the lever sideways towards the left side of the car (the same as selecting Sport mode).
- The transmission selects the ratio most appropriate to the car's road speed and accelerator depression.
- A single forward movement of the selector lever (or steering wheel switch) will change the transmission to a higher gear. A rearward movement changes down to a lower gear. Repeated forward or rearward movements can be made until the desired ratio has been selected (the selected gear will be indicated in the display, see 'INSTRUMENT PANEL', page 20).
- To deselect manual mode return the selector lever to the 'D' (Drive) position.

*NOTE: Stepspeed protects the transmission by disallowing gear changes that could damage the power unit and by preventing gear changes that may be dangerous to the occupants (e.g. changing into 1st gear at high speed). To further protect the transmission, up-changes occur automatically whenever a predetermined engine speed is reached. Similar down-changes occur at low speeds to prevent the engine from stalling.*

# Automatic Transmission

## USING THE AUTOMATIC GEARBOX

The following information is important for driver's who are unfamiliar with automatic transmission.

### Starting

The engine can only be started with the selector in the 'P' or 'N' positions.

- Apply handbrake and foot brake before starting the engine, and keep both brakes applied while selecting a drive gear.
- Do not 'rev' the engine while selecting 'D' or 'R', or while the car is stationary with 'D' or 'R' already selected.
- Keep the brakes applied until you are ready to move - with a drive gear selected, an 'automatic' will creep forward (or back).
- Do not allow the engine to idle for any length of time with a drive gear selected (select 'N' if the engine is to idle for a prolonged period).

### Cold weather operation

If the car has been standing overnight in very cold temperatures, a delay may occur between gear selection and engagement of the gearbox. This characteristic will only be evident when making the initial gear selection after a cold start, and will disappear once the car is driven.

During this delay, allow the engine to idle WITHOUT any operation of the throttle. Pressing the accelerator before the gears have engaged will cause a jolt and may damage the transmission.

### Driving

The transmission automatically adjusts to the most appropriate ratio, according to accelerator position, road speed and terrain.

When accelerating, engine speed increases disproportionately to the road speed while the transmission adjusts to the most appropriate ratio. When the accelerator is released, engine speed will drop independently of road speed.

### Parking

Always apply the handbrake and select 'P', before releasing the foot brake and switching off the engine.

### Emergency starting



***Cars with automatic transmission CANNOT be 'push' or 'tow' started.***

# Environmental Driving

## PROTECTING THE ENVIRONMENT

Environmental issues are increasingly influencing our lives, and the motor car is sometimes seen as a major source of air pollution. However, few industries have done more to reduce pollution than the motor industry and MG Rover is no exception. Your car has been designed with the latest technology in order to minimise the environmental impact of exhaust emissions. Even so, any further reduction in emissions is in everyone's interest and there are a number of ways in which you can make a contribution.

### Starting the engine

The majority of poisonous emissions are produced immediately following a cold start and while the engine is warming up. Because the car warms up much faster while it is being driven, it is less harmful to the environment to drive away immediately after starting rather than allowing the engine to idle.

### Driving style

Driving style has a significant bearing on environmental pollution and also affects the amount of fuel you use:

- **Avoid full throttle acceleration**  
Steady, rather than rapid, acceleration uses considerably less fuel, reduces exhaust pollutants and minimises engine wear.
- **Avoid driving at maximum speed**  
Fuel consumption, exhaust emissions and noise levels all increase significantly at high speeds, e.g: driving at 60 mph (100 km/h) uses up to 20% less fuel than 70 mph (112 km/h).
- **Do not drive in a low gear for longer than necessary**  
Driving in lower gears uses more fuel. Change to a higher gear as soon as possible, but DO NOT cause the engine to labour.

- **Drive smoothly**

Anticipate obstructions and slow down well in advance to avoid the need for unnecessary acceleration and harsh braking. A smooth driving style reduces fuel consumption and poisonous gas emissions by two thirds or more.

- **Switch off the engine when waiting in traffic**

If the car will be stationary for several minutes, switch off the engine (provided it is safe to do so). Starting the engine again will be less damaging to the environment than allowing the engine to idle for 45 seconds or more.

## Maintenance

- **Have the car regularly serviced**

Regular servicing from a qualified technician will ensure optimum fuel economy and minimise exhaust pollutants, as well as extending the life of the car.

- **Check the tyre pressures regularly**

Under-inflated tyres increase the rolling resistance of the car which, in turn, increases fuel consumption. Over or under-inflated tyres wear out more rapidly and also have a detrimental effect on the car's handling characteristics.

# Brakes

## HANDBRAKE AND BRAKE SYSTEM WARNING LIGHT

The warning light is described under 'WARNING LIGHT FUNCTIONS', page 22.

**!** *If the light illuminates while driving, bring the car to a halt as quickly as safety permits and seek qualified assistance before continuing. Do not drive with the warning light illuminated.*

## FOOT BRAKE

The hydraulic braking system operates through dual circuits; if one circuit should fail, the other will continue to function. However, in the event of a brake failure where only one circuit is operational, the car should ONLY be driven at slow speed to the nearest MG Rover Authorised Repairer. In these circumstances, exercise EXTREME CAUTION and be aware that much greater pedal effort and longer stopping distances will be required.

### Servo assistance

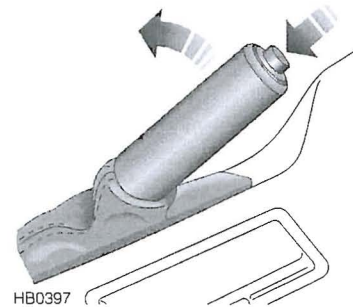
The braking system is servo assisted, but ONLY while the engine is running. Without servo assistance greater brake pedal effort is necessary to control the car, resulting in longer stopping distances.

If the engine stops while driving, bring the car to a halt as soon as traffic conditions allow, and DO NOT pump the brake pedal! lest any remaining servo-assistance be lost.

**!** ***NEVER** move the car, or allow the car to freewheel without the engine running because brake servo assistance will not be available. The brakes will still function, but more pedal pressure will be required.*

## HANDBRAKE

**!** ***DO NOT** drive with the handbrake applied, or apply the handbrake while moving; this could result in loss of control, prevent the antilock braking system\* from functioning correctly, and may damage the rear brakes.*



The handbrake operates on the rear wheels only. Apply the handbrake FULLY whenever you park the car.

### Parking on slopes


Do not rely on the handbrake alone to hold the car.

*Manual gearbox cars:* Apply the handbrake and leave the car with a low forward gear selected when facing uphill and reverse gear selected when facing downhill.

*Automatic gearbox cars:* Apply the handbrake and leave the car with 'P' (Park) selected to lock the transmission.

# Brakes

## ANTILOCK BRAKING SYSTEM (ABS)

 **ABS cannot overcome the physical limitations of stopping the car in too short a distance, cornering at too high a speed, or the danger of aquaplaning, i.e. where a layer of water prevents adequate contact between the tyres and the road surface.**

The antilock braking system (ABS) is designed to prevent the wheels from locking while braking, thereby enabling steering control to be retained.

Under normal braking ABS will not be activated. However, if the braking force exceeds the available adhesion between tyres and road causing the wheels to lock, then ABS will automatically come into operation. This will be recognisable by a rapid pulsation felt through the brake pedal.


The ABS monitoring system checks that all electrical components (including the warning light, see 'WARNING LIGHT FUNCTIONS', page 22) are working correctly as soon as the starter switch is turned on, and also at frequent intervals during a journey.


**NOTE:** When starting the engine, a single 'knock' may be heard and slight movement felt at the brake pedal. Both are normal symptoms of the ABS self checking process.

If the system detects a fault the ABS warning light will illuminate and the ABS system will be shut down.

**NOTE:** The normal braking system remains fully operational and is not affected by any loss of the ABS. However, braking distances may increase.

## Emergency braking

 **DO NOT pump the brake pedal; this will interrupt operation of the ABS and may increase braking distance.**

 In an emergency apply full pedal effort even when the road surface is slippery. ABS will monitor the rotational speed of the wheels and vary braking pressure to each according to the amount of traction available, thereby ensuring that the wheels do not lock and that the car is brought to a halt in the shortest possible distance.

Normal steering control will be maintained no matter how hard you brake. However, always remember that antilock braking operates only AFTER the driver has already lost control and cannot compensate for driver error or inexperience.

**NOTE:** On soft surfaces (powdery snow, sand or gravel), the braking distance required by the ABS may be greater than for non-ABS braking, even though improved steering would be experienced. This is because the action of locked wheels on soft surfaces is to build up a wedge of surface material in front which assists the car to stop.



# Fuel System

## TYPE OF FUEL

**!** *Use only the recommended fuel! Serious damage to the catalytic converter will occur if the wrong fuel is used.*

**Specification:** 95 RON unleaded petrol to EN 228.

This is a MINIMUM requirement for cars built for the United Kingdom and most European markets and can be safely exceeded.

Before a new car is delivered to the first owner, the engine is tuned to suit the fuel supplies commonly available in the market in which the car is to be purchased. However, if the car is later exported to a different country, or is used to travel between different territories, you should be aware that the available fuel supplies may not be compatible with the engine specification. For further information, refer to an MG Rover Authorised Repairer for advice.

In an emergency, lower octane fuel can be used, at the risk of catalyst damage, for very limited periods of low speed driving, provided engine 'knocking' does not occur.

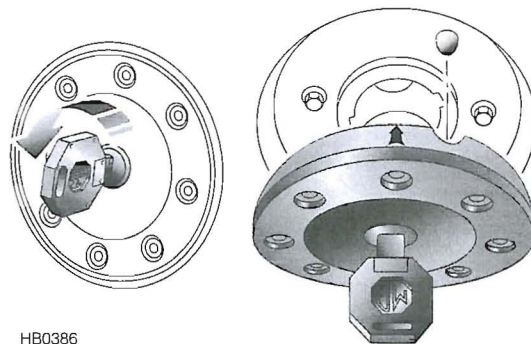
## FUEL FILLING

**!** *DO NOT fully fill the tank if the car is to be parked in direct sunlight, or high ambient temperature - fuel expansion could cause spillage.*

The filler tube accepts a narrow filler nozzle of the type found on pumps that deliver unleaded fuel. A flap lies across the filler neck; insert the nozzle sufficiently to fully open the flap before filling.

Fill the tank SLOWLY until the filler nozzle cuts-off the fuel supply. DO NOT attempt to fill the tank beyond this point, or spillage could result due to expansion of the fuel.

## Fuel filler cap



HB0386

Replace the cap with the semi-circular cut-out and arrow uppermost (see illustration).

# Fuel System

## SAFETY ON THE FORECOURT

**!** *Petroleum gases are highly inflammable and, in confined spaces, are also extremely explosive.*

- *Switch off the engine.*
- *Do not smoke or use a naked flame.*
- *Avoid spilling fuel.*
- *Do not overfill the tank.*
- *Do not use mobile phones.*

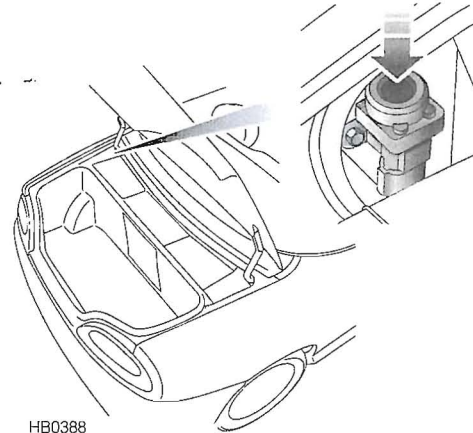
## EMPTY FUEL TANK

**!** *Never allow the car to run out of fuel - the resultant misfire could destroy the catalytic converter.*

In the event of the fuel tank running dry, start the engine carefully after refuelling. If the engine runs unevenly, switch off and seek qualified assistance before attempting to restart the engine.

## FUEL CUT-OFF SWITCH

**!** *ALWAYS check for fuel leaks before resetting the switch.*



HB0388

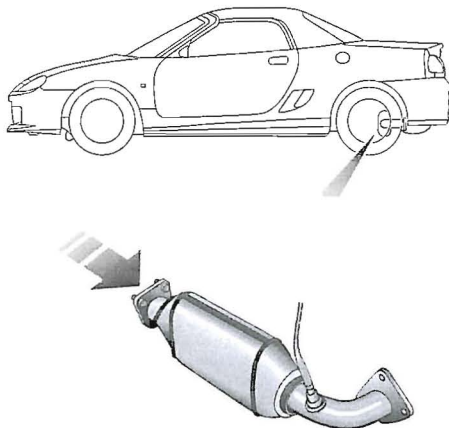
In the event of a collision or sudden impact, the switch cuts off the fuel supply to the engine, all the doors unlock and the hazard warning lights flash.

If the switch has been activated, it must be reset by pressing the rubber top before the engine can be started.

# Catalytic Converter

## CATALYTIC CONVERTER

**!** *Exhaust temperatures can be very high; do not park on ground where combustible materials (dry grass or leaves) could make contact with the exhaust - a fire could result!*



HB0381

The exhaust system incorporates a catalytic converter, which converts poisonous exhaust emissions into environmentally less harmful gases. Catalytic converters are easily damaged through improper use. Observe the following precautions:

### Fuel

- Use ONLY recommended fuel.
- Never run out of fuel - this could cause a misfire which could damage the catalyst.

### Starting

- Do not continue operating the starter after a few failed attempts, seek qualified assistance.
- Do not operate the starter if an engine misfire is suspected, nor attempt to clear a misfire by pressing the accelerator.
- Do not attempt to push or tow start the car.

### Driving

Any engine misfire, loss of engine performance or engine run-on, could seriously damage the catalytic converter. For this reason, it is vital that unqualified persons do not tamper with the engine, and that regular maintenance is carried out in accordance with the service interval plan in the 'Service History' section.

- Do not overload or excessively 'rev' the engine, or turn off the engine when the car is moving with a drive gear selected.
- Seek qualified assistance if you think your car is burning too much oil, as this will progressively reduce catalyst efficiency.
- If a misfire is suspected, or the car lacks power while driving, provided the engine has reached its normal operating temperature, it may be driven SLOWLY (at risk of catalyst damage) to an MG Rover Authorised Repairer or suitably equipped servicing garage.
- Do not run the engine with a spark plug or lead removed or use any device that requires an insert into a spark plug hole.
- Do not drive on terrain likely to subject the underside of the car to heavy impacts.



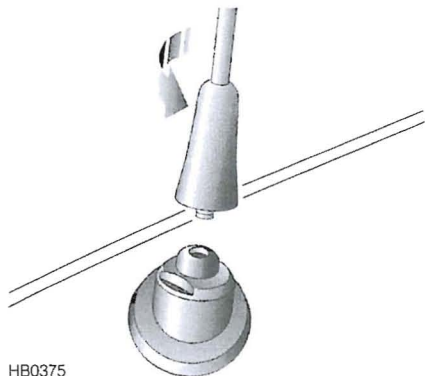
# Audio System

## AUDIO SYSTEM

The instructions for the audio system fitted to your car, as standard are contained within a separate Supplement included in your literature pack.

If a different audio system was specified at the time the car was ordered, it will have been fitted by your MG Rover Distributor before the car was delivered, and a separate audio system operating manual will have been supplied.

### Radio aerial



HB0375



***In the case of cars fitted with hard-tops, always unscrew and remove the aerial before entering an automatic car wash (cars with hoods should not be washed in automatic car washes at any time!).***

# Load Carrying

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## **PLEASE BE AWARE THAT....**

Your car is not designed as a load carrying vehicle, and the following restrictions should be observed:

- DO NOT fit a tow bar, or use the rear towing eyes for towing a luggage trailer or similar vehicle (the towing eyes fitted to the car are for vehicle recovery and lashing purposes only).
- DO NOT exceed loads of 20 kg (45 lb) either inside the luggage compartment, on an approved accessory luggage rack secured to the boot lid, or a combination of both. Loads exceeding this figure will affect the height of the headlight beams, possibly dazzling other road users.
- DO NOT use the underbonnet compartment for carrying luggage; this area of the car is specifically designed to absorb impacts in road accident situations. Carrying items of luggage or loads of any kind in the underbonnet compartment could impair the crash worthiness of the car and also affect the safe operation of airbag SRS equipment.
- DO NOT obstruct the wire engine guard when loading the luggage compartment.

## ***Hood & Hard top***

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8. 8.

**62** Hood

**66** Hard-top

2. 2.

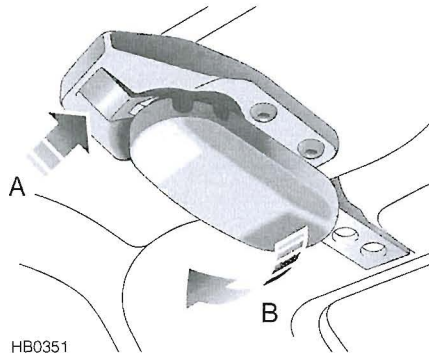
8. 8.

# Hood

## HOOD

**⚠ Do not lower or raise the hood while the car is moving, or drive with the hood closed but with either or both header catches released. Failure to secure the catches could result in the hood opening accidentally whilst driving.**

### Lowering the hood



1. Release both header catches securing the hood to the top of the windscreen:
  - Press and hold the release buttons 'A'.
  - With the release buttons pressed, pull down the levers 'B'.
2. If the hood is being lowered to fit a hard top, disconnect the heated rear screen cable and place in an accessible position for connecting to the hard top.

3. Lift the leading edge of the hood and push steadily back towards the rear of the car until the hood lies flat behind the seats. DO NOT drop the hood as this may cause damage to the canopy, frame or glass.

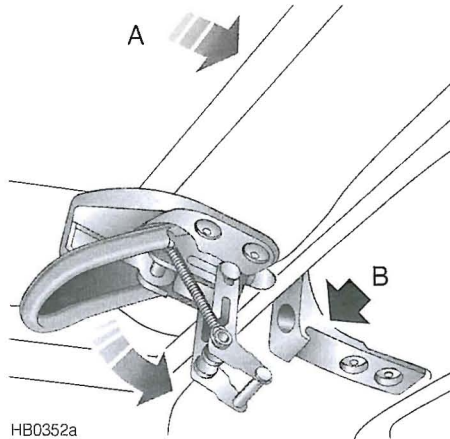
*NOTE: To reduce the likelihood of damage to heater elements or breakage of the glass, remove all articles from behind the seats before the hood is lowered.*

4. Fold the header catches flat and fit the hood cover (see 'HOOD COVER\*', page 63).

# Hood

## Raising the hood

1. Release both header catches.
2. Pull the hood fully forward.



HB0352a

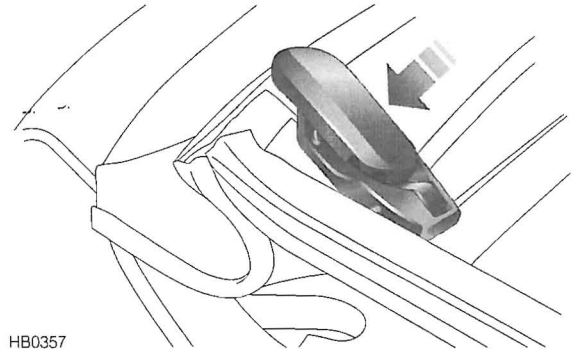
3. Holding the centre of the hood header rail 'A', pull the hood down to meet the windscreen, then push each lever, in turn, forwards. Ensure that the lever has engaged the striker 'B'. As the levers are pushed forward, the hood will be drawn towards the windscreen.

**NOTE:** *If the header catches are secured correctly, the catch levers will lie flat and the release buttons will be reset (as they appear in the first picture in this section).*

4. Connect the heated rear screen cable.

## HOOD COVER\*

### Fitting



HB0357

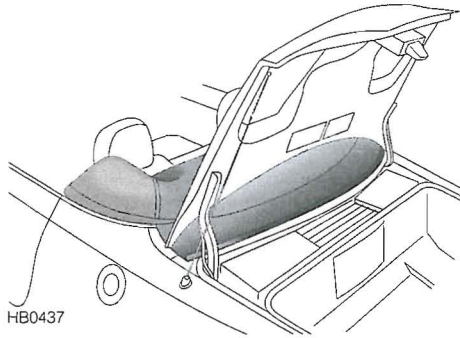
1. With the hood lowered, ensure both header catches are folded flat, then lay the hood cover loosely over the hood.



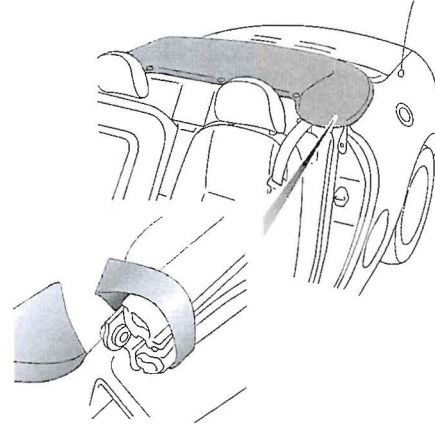
**If a wind deflector is fitted, it should always be folded on top of the hood; never underneath. If it is folded beneath the hood, damage will result.**



# Hood

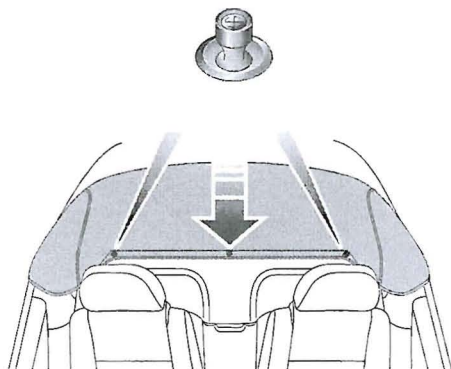


2. Open the boot, locate the padded roll at the rear of the cover, and position it in the drain channel. Closing the boot holds the rear of the cover securely in place.



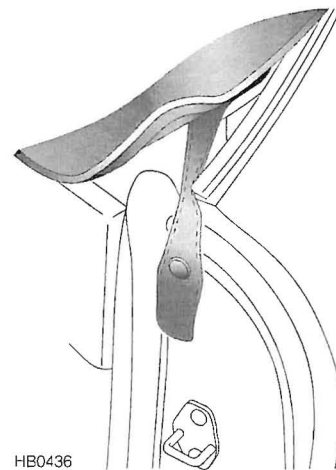
3. Pull the loops from the underside of the cover over the folded struts on each side of the hood assembly.
4. Position the triangular pads (attached to the hood cover) to cover the exposed ends of the folded struts.

# Hood



HB0354

5. Attach the fastener in the centre of the cover to the centrally mounted press stud (arrowed in illustration).
6. Stretch each side of the cover sufficient to hook the eyes over the shoulder studs on each side of the car.



HB0436

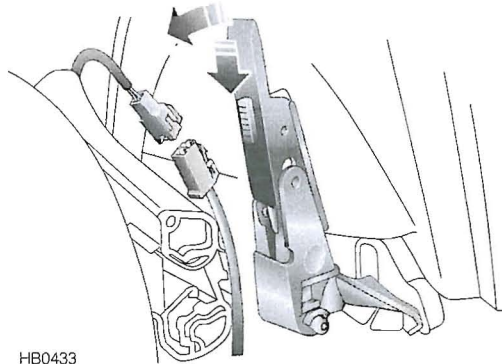
7. With doors open, secure the fasteners on each of the outer 'wings' of the cover to the studs on the inside of the door shuts.

# Hard-top

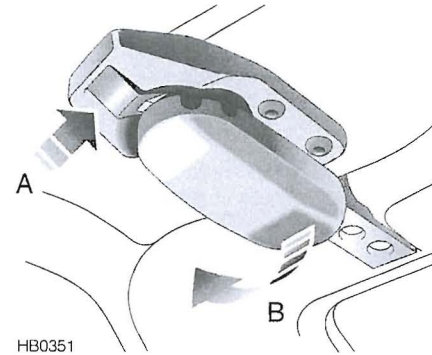
## HARD-TOP\*

### Removing the hard-top

*NOTE: Because of its weight, the hard-top should only be removed or replaced when a second person is available to assist.*

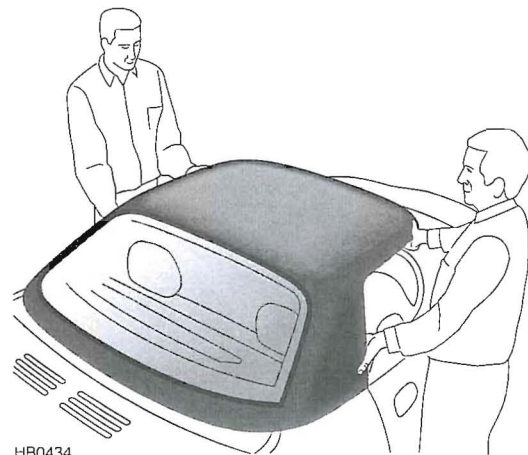


1. From inside the car, disconnect the heated rear screen cable and place in an accessible position for connecting to the hood.
2. Release the two side catches (push the release buttons down and pull the levers away from the side of the car).



3. Release both header catches securing the hard-top to the top of the windscreen:
  - Press and hold the release buttons 'A'.
  - With the release buttons pressed, pull down the levers 'B'.

## Hard-top



HB0434

4. Lift the hard-top from the car.



***If a wind deflector is fitted, it should always be folded on top of the hood; never underneath. If it is folded beneath the hood, damage will result.***

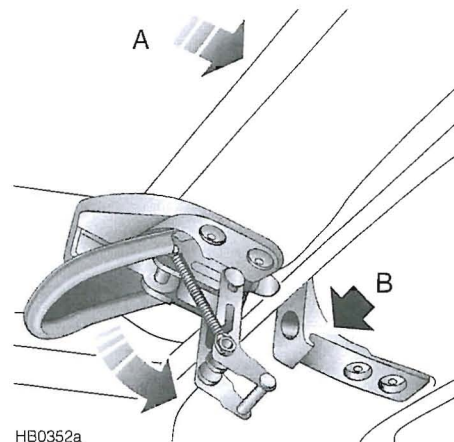
# Hard-top

## Fitting the hard-top

**NOTE:** The hood must be lowered with the hood cover removed before fitting the hard-top.

**!** If a wind deflector is fitted, it should always be folded on top of the hood; never underneath. If it is folded beneath the hood, damage will result.

1. Locate the heated rear screen cable and place it in an accessible position on top of the hood.
2. With the header catches released, place the front of the hard-top onto the windscreen, then lower the rear of the hard-top onto the car.



3. Holding the centre of the hard top header rail 'A', pull the hard top down to meet the windscreen, then push each lever, in turn, forwards. Ensure that the lever has engaged the striker 'B'. As the levers are pushed forward, the hard top will be drawn towards the windscreen.

**NOTE:** If the header catches are secured correctly, the catch levers will lie flat and the release buttons will be reset (as they appear in the first picture in this section).

4. Attach the two side catches.
5. Connect the heated rear screen cable.

**Note:** If water ingress or excessive buffeting, when driving, is experienced consult your MG Rover Authorised Repairer regarding the need to adjust the hard top.



## **Maintenance**

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- 70** *Maintenance*
- 73** *Bonnet Opening*
- 74** *Underbonnet Compartment*
- 75** *Engine Compartment*
- 76** *Engine*
- 77** *Cooling System*
- 78** *Brakes & Clutch*
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- 92** *Identification Numbers*
- 94** *Parts & Accessories*

# Maintenance

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## ROUTINE SERVICING

The safety, reliability and performance of your car depends on good maintenance.

Maintenance is the owner's responsibility, and you must ensure that all routine services (these are listed in the 'Service History' section), owner maintenance operations, brake fluid and coolant changes are carried out when required and according to the manufacturer's recommendations.

### Service History

This handbook includes a Service History section, which enables a record to be kept of all routine services that are carried out on the car. This section of the book also provides a facility to record brake fluid and coolant changes, as well as the fitting of replacement airbag modules and seat belt pre-tensioners.

Ensure the appropriate Service Record form is signed and stamped after each service.

### Brake fluid replacement

Brake fluid requires replacement every two years, irrespective of the distance the car has travelled.

*NOTE: Brake fluid replacement will be an additional cost.*

### Coolant replacement

The engine coolant (anti-freeze and water solution) needs to be replaced every four years regardless of the distance the car has travelled. Your MG Rover Authorised Repairer or servicing garage will replace the coolant at the scheduled oil service or inspection nearest to the conclusion of each four year period.

*NOTE: Coolant replacement will be an additional cost.*

## SERVICING AND REPAIR

In various places throughout this Handbook, you are advised to seek advice from your nearest MG Rover Authorised Repairer.

The reason for this is that to benefit from the MG Rover warranty any necessary warranty work must be carried out by an MG Rover Authorised Repairer. This restriction also applies to recall work or complimentary servicing (if any).

You are, of course, free to use an independent repairer for any non warranty repair or servicing work provided that this work is completed in accordance with the manufacturer's servicing and repair schedule. You may lose the benefit of your warranty where faulty repair or servicing work is carried out by an independent repairer during the warranty period.

## EMISSION CONTROL

Your car is fitted with emission and evaporative control equipment designed to meet specific territorial and legal requirements. Unauthorised replacement, modification or tampering with this equipment by an owner or motor vehicle repairer could be unlawful and subject to legal penalties.

In addition, engine settings must not be tampered with. These have been established to ensure that your car complies with stringent exhaust emission regulations. Incorrect engine settings may adversely affect exhaust emissions, engine performance and fuel consumption, as well as causing high temperatures, which could result in damage to the catalytic converter and the engine.

# Maintenance

## OWNER MAINTENANCE

In addition to routine services, the following checks must be carried out regularly. Advice is given on the pages that follow.



**Any significant or sudden drop in fluid levels, or uneven tyre wear, should be reported without delay to an MG Rover Authorised Repairer.**

*Daily checks:*

- Operation of lights, horn, direction indicators, wipers, washers and warning lights.
- Operation of seat belts and brakes.
- Look for fluid deposits under the car that might indicate a leak.

*Weekly checks:*

- Engine oil level.

*NOTE: Check the oil level more frequently if the car is driven at high speeds for long periods.*

- Coolant level.
- Brake and clutch fluid levels.
- Screen washer fluid level.
- Tyre pressures and condition.
- Battery condition indicator.
- Operate air conditioning\* (see 'Maintenance', page 44).

## SPECIAL OPERATING CONDITIONS

If your car is frequently used in dusty conditions, or operated in extreme climates where sub-zero or very high ambient temperatures are normal, more frequent attention may need to be paid to servicing requirements.

# Maintenance

## SAFETY IN THE GARAGE



**Cooling fans may continue or commence operating after the engine is switched off. Keep clear of all fans while working in the engine compartment.**

Observe the following safety precautions at all times:

- Keep hands and clothing away from drive belts and pulleys.
- DO NOT TOUCH exhaust and cooling system components until the engine has cooled.
- DO NOT TOUCH electrical leads or components while the engine is running, or with the starter switch turned on.
- NEVER leave the engine running in an unventilated area - exhaust gases are poisonous and extremely dangerous.
- DO NOT work underneath the car with a wheel changing jack as the only means of support.
- Ensure sparks and naked lights are kept away from the engine and battery compartments.
- Wear protective clothing including, where practicable, gloves made from an impervious material.
- Remove metal wrist bands and jewellery before working in the engine compartment.
- DO NOT allow tools or metal parts of the car to make contact with battery leads or terminals.

## Poisonous fluids



*It is illegal to pollute drains, water courses or soil. Use authorised waste disposal sites to dispose of used oil and toxic chemicals.*

Automotive fluids are poisonous and should not be consumed or brought into contact with open wounds. These include: battery acid, antifreeze, brake fluid, petrol, engine oil and windscreen washer additives.

Obey all instructions printed on labels and containers.

## Used engine oil

Prolonged contact with engine oil may cause skin disorders, including dermatitis and cancer. Wash thoroughly after contact.