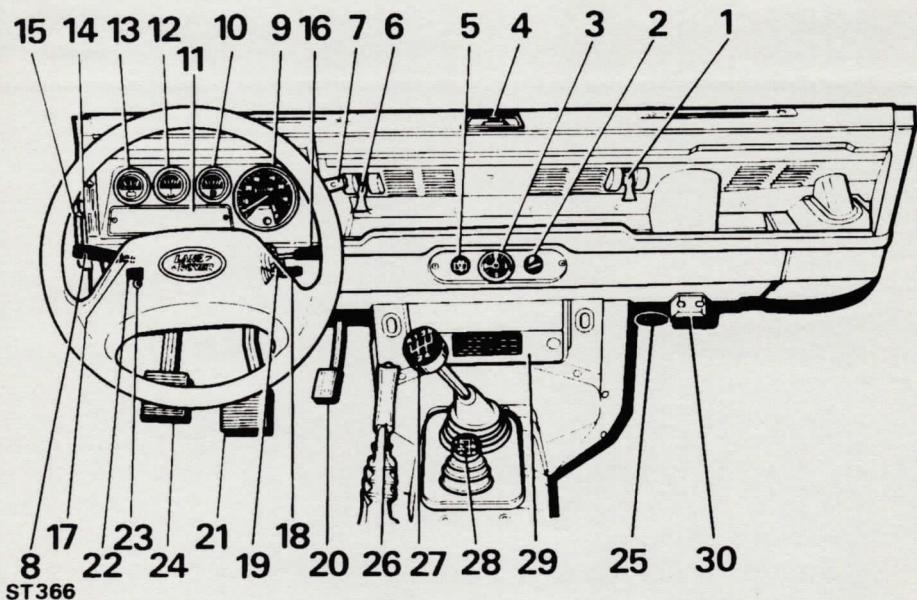

CONTROLS

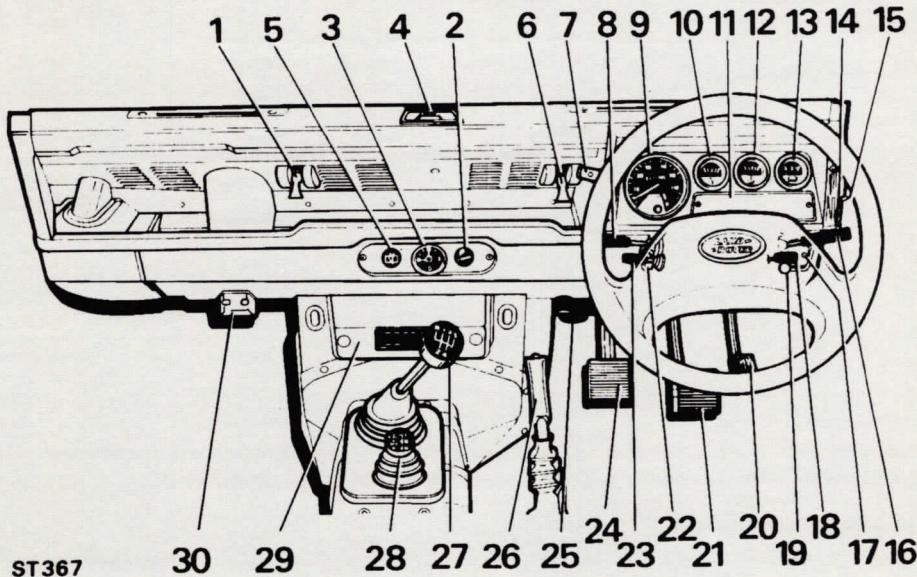
2

2 CONTROLS



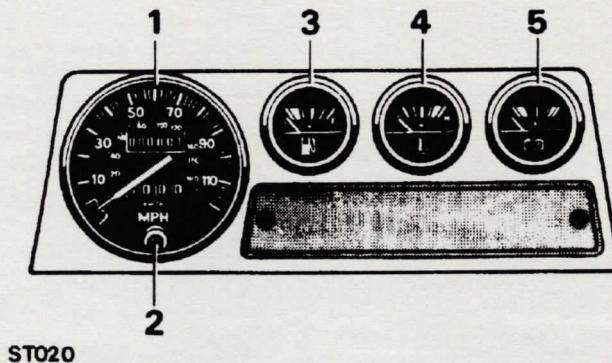
DRIVING CONTROLS - LEFT HAND STEERING

- | | |
|--|--|
| 1 Ventilator control | 17 Switch panel for hazard warning,
instrument and interior lighting and
heated rear screen (option) |
| 2 Cigar lighter (option) | 18 Rear fog guard lighting switch |
| 3 Clock (option) | 19 Cold start control (Petrol models) |
| 4 Ash tray | 20 Accelerator pedal |
| 5 Rear screen wash/wipe switch
(option) | 21 Footbrake pedal |
| 6 Ventilator control | 22 Starter and steering lock switch |
| 7 Heater fan control | 23 Main lighting switch |
| 8 Headlamp dip, direction indicators,
horn and flasher switch | 24 Clutch pedal |
| 9 Speedometer | 25 Bonnet release handle |
| 10 Fuel gauge | 26 Transmission handbrake lever |
| 11 Warning light cluster | 27 Main gearchange lever |
| 12 Water temperature gauge | 28 Transfer gear/differential lock lever |
| 13 Voltmeter (option) | 29 Fuse box |
| 14 Heat temperature control | 30 Footwell vent |
| 15 Heat distribution control | |
| 16 Windscreen washer and wiper
switch | |



DRIVING CONTROLS - RIGHT HAND STEERING

- 1 Ventilator control
- 2 Cigar lighter (option)
- 3 Clock (option)
- 4 Ash tray
- 5 Rear screen wash/wipe switch (option)
- 6 Ventilator control
- 7 Heater fan control
- 8 Headlamp dip, direction indicators, horn and flasher switch
- 9 Speedometer
- 10 Fuel gauge
- 11 Warning light cluster
- 12 Water temperature gauge
- 13 Voltmeter (option)
- 14 Heat temperature control
- 15 Heat distribution control
- 16 Windscreen washer and wiper switch
- 17 Switch panel for hazard warning, instrument and interior lighting and heated rear screen (option)
- 18 Rear fog guard lighting switch
- 19 Cold start control (Petrol models)
- 20 Accelerator pedal
- 21 Footbrake pedal
- 22 Starter and steering lock switch
- 23 Main lighting switch
- 24 Clutch pedal
- 25 Bonnet release handle
- 26 Transmission handbrake lever
- 27 Main gearchange lever
- 28 Transfer gear/differential lock lever
- 29 Fuse box
- 30 Footwell vent



SPEEDOMETER

The speedometer (1) incorporates a total mileage indicator. Speedometers with trip mileage indicators are available as optional equipment and have a trip reset button fitted.

SPEEDOMETER TRIP SETTING

Reset trip back to zero by pushing the small black knob (2) on the front of the speedometer.

FUEL LEVEL INDICATOR

The fuel indicator (3) shows the approximate contents of the tank.

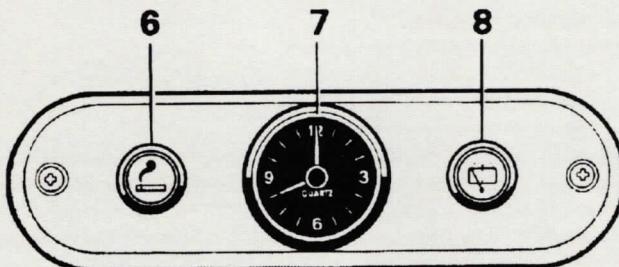
COOLANT TEMPERATURE INDICATOR

Under normal running conditions the temperature indicator needle (4) should register in the black band. If the needle moves to the red band during normal running, the vehicle should be stopped and the cause investigated.

The design of the fuel level and water temperature indicators ensures that the needle does not fluctuate, but there is a time lag of a few seconds before they register after the ignition, or electrical services, are switched on.

VOLTMETER (option)

The voltmeter (5) measures the vehicle system voltage. With the engine running above idling speed the indicator should register within the black central band. A reading above this in the high red band which continues after 10 minutes running is too high and should be investigated. A reading in the low red band with the engine running at high idle speed, with no electrical loads switched on, after 10 minutes is too low and should be investigated.

**ST 215**

NOTE: A Right-Hand steering panel is illustrated, Left-Hand Steering is symmetrically opposite.

CIGAR LIGHTER (option) Fig. ST215

The cigar lighter (6) is operated by pushing the extended knob inwards to heat the element. When a predetermined temperature is reached, the knob will eject from the heat position, permitting the lighter to be withdrawn for use.

A small pilot lamp is incorporated within the socket surround to facilitate replacement of the element during darkness. The pilot lamp bulb is automatically lit when the vehicle sidelights are on.

CLOCK (option)

The hands of the electrically operated clock (7) may be set by pushing in and turning the black knob in the centre of the face.

REAR SCREEN WIPER AND WASHER SWITCH (option)

The rear screen washer/wiper switch (8) is only operative with the engine starter key in the engine running position.

- Rotate the switch to the right to activate the rear screen wiper.
- To wash the rear screen, press the spring loaded switch knob until sufficient water is on the rear screen. Releasing the knob will shut off the rear screen washer water. This operation may be carried out with the screen wiper switch ON or OFF.

OIL PRESSURE GAUGE Fig. ST021 (option)

Under normal running the oil pressure indicator (9) should show the following pressure:

4-cylinder petrol and diesel models-

2,5 to 4,5 kgf/cm² (35 to 65 lbf/in²) 240 to 440 kPa

V8-cylinder petrol models-

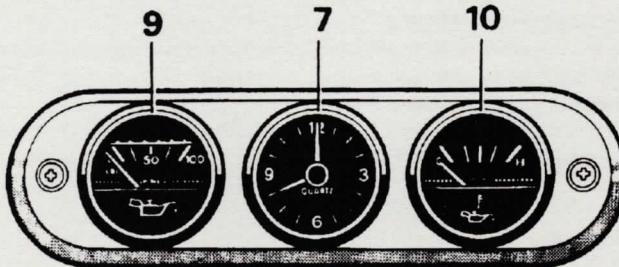
2,1 to 2,8 kgf/cm² (30 to 40 lbf/in²) 200 to 275 kPa.

The needle may drop below these figures when the engine is idling but providing the oil pressure rises to within the specified figures immediately the engine speed is increased, the oil pressure can be considered to be satisfactory.

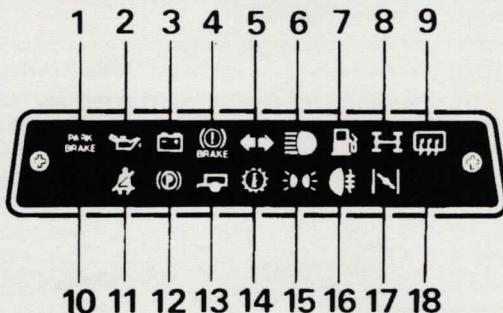
If the needle moves to the zero position during normal running the vehicle should be stopped immediately and the cause investigated.

OIL TEMPERATURE GAUGE (option)

The oil temperature gauge (10) provides a continuous indication of the oil temperature. When the engine oil reaches its normal operating temperature, the gauge indicator needle should register in the mid-way area. Should the needle travel to the 'H' (hot) red block during normal running, the vehicle must be stopped and the cause investigated.



ST021



ST364

KEY TO WARNING LIGHT PANEL - Fig. ST364

1. Park brake (Australia only)	Red
2. Oil pressure	Red
3. Ignition/no charge	Red
4. Brake circuit	Red
5. Direction indicators	Green
6. Main beam	Blue
7. Low fuel	Amber
8. Differential lock	Amber
9. Heated rear window	Amber
10. Not used	
11. Seat belt warning (Saudi Arabia)	Red
12. Park brake - option	Red
13. Trailer - option	Green
14. Transmission oil temperature	Red
15. Side lights on	Green
16. Rear fog - (certain markets)	Amber
17. Cold start	Amber
18. Not used	

OIL PRESSURE WARNING LIGHT

The red warning light illustrated must glow when the ignition is switched on.

IGNITION/NO CHARGE WARNING LIGHT

The red warning light illustrated should glow when the engine starter switch is turned on.

NOTE: Ignition/no charge and oil warning lights should be checked when starting the vehicle from cold; they should light up immediately the ignition is switched on and extinguish when the engine is running. The warning lights may flicker when the engine is running at idling speed but provided they fade out as the engine speed increases, the charging rate and oil pressure are satisfactory. If the oil pressure warning light comes on during normal running, the vehicle should be stopped immediately and the cause investigated. The ignition warning light is connected in series with the alternator field circuit. Bulb failure would prevent the alternator charging, therefore the bulb should be checked before suspecting an alternator fault. A failed bulb should be changed with the minimum of delay otherwise the battery will become discharged.

BRAKE CIRCUIT CHECK WARNING LIGHT

This red warning light is most important and is arranged to warn if there is a fluid leakage from either the front or rear braking system when the engine is running. If leakage occurs the warning light will come on when brakes are applied. The brake circuit warning light will operate momentarily when the starter is actuated. This confirms that the warning circuit is functioning correctly. If the light comes on during normal running or braking, the vehicle should be stopped immediately, and the cause investigated.



WARNING: DO NOT drive the vehicle while the brake warning light is illuminated.

DIRECTION INDICATOR ARROWS

Both direction indicator arrows flash in conjunction with the direction indicator lamps, when operated by the switch on the steering column. If the direction indicator arrows do not operate as described, there may be a bulb failure in the warning lamp panel or one of the direction indicator lamps.

MAIN BEAM WARNING LIGHT

The blue light glows when the headlamp main beams are in use. Its purpose is to remind you to dip the headlamps when entering a brightly lit area, or when approaching other traffic.

The warning light will also glow when the headlamp flasher switch is used.

FUEL LEVEL WARNING LIGHT

The amber warning light will be illuminated when there is approximately 9 litres (2 gallons) left in the fuel tank. The light will remain on until the fuel supply is replenished. Intermittent flashing may occur when cornering, etc. before the fuel level drops below two gallons. If a diesel model is allowed to run out of fuel, the fuel system must be primed when the tank is replenished.

DIFFERENTIAL LOCK WARNING LIGHT

The amber warning light will be illuminated when the gearbox differential lock control is operated.

HEATED REAR SCREEN WARNING LIGHT

The amber warning light will be illuminated when the heated rear screen switch is in the ON position, acting as a reminder to the driver that the switch and heated rear screen are switched ON.

TRAILER WARNING LIGHT

The trailer warning light is operative when a trailer is connected to the vehicle via a seven-pin socket (optional equipment). It will flash in conjunction with the vehicle indicator warning lights, thus ensuring that the trailer indicator lamps are functioning correctly. In the event of an indicator bulb failure on the trailer, the warning light will flash once only and then remain extinguished. Where a trailer is not used or connected, the trailer warning light will only operate when the hazard warning system is in use.

TRANSMISSION OIL TEMPERATURE WARNING LIGHT

The red warning light illuminate when a high oil temperature is sensed in either the main gearbox or transfer .

It will also illuminate as a bulb check when the handbrake level is applied with the starter switch turned to position 'II'.

The warning light may also illuminate in high ambient temperatures under the following conditions.

- * Driving continuously at high speeds for long periods.
- * Towing heavy loads up long inclines for sustained periods.

Should the warning light illuminate, reduce speed and select a lower gear. If the light remains on, stop the vehicle when it is safe and practical to do so, until the light extinguishes. When towing heavy loads, it may be necessary to select low range (L) on the transfer gearbox.

NOTE: The warning light should only illuminate under very hot conditions. If it illuminates under reasonable conditions, the cause should be investigated by your dealer.

SIDE LIGHTS WARNING LIGHT

The green warning light (with symbol) will be illuminated when the side lights are switched on.

REAR FOG GUARD LAMPS WARNING LIGHT

The amber warning light will be illuminated when the rear fog guard lamps are operating.

COLD START WARNING LIGHT**- PETROL MODELS**

When the cold start control is pulled out, an amber warning light with this symbol is illuminated to remind the driver that the cold start control is still out and should be returned to the 'off' position as soon as possible, consistent with even running.

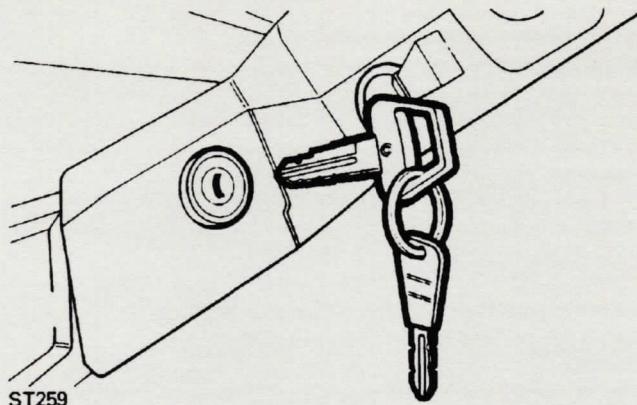
- DIESEL MODELS

On diesel models the amber warning light will glow when the engine starter key is turned to the heater plugs 'on' position and will go off after a few seconds when the starting temperature is correct. If the light remains on with the engine running there is a fault that should be investigated. When operating in ambient temperatures of below -28°C, the use of a coolant heater is recommended.

HAZARD WARNING LIGHT

When the hazard warning light switch is pressed at the lower end, all four flasher lights operate simultaneously. The red warning light (with triangular symbol) in the switch will flash in conjunction with the exterior flasher lights.

Use the hazard warning system to warn following or oncoming traffic of any hazard, that is, breakdown on fast road, or an accident to your own or other vehicles.

**STEERING COLUMN LOCK (WHERE APPLICABLE) - Fig. ST259**

On models fitted with a steering column lock, the lock is an integral part of the ignition and starter switch on petrol models and the heater plug and starter switch on diesel vehicles. The following instructions should be studied in conjunction with the engine starter switch operation overleaf.

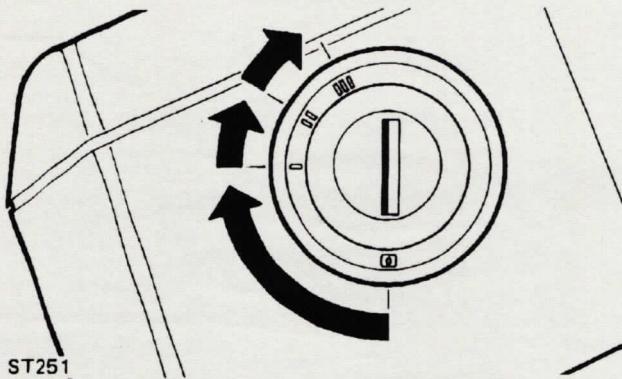
To unlock the steering, insert the key and turn it forward to the first position. If the steering lock has been engaged, slight movement of the steering wheel will assist in its disengagement. To lock the steering, turn the key fully back, and withdraw it from the lock.



WARNING: If for any reason the (ignition) engine is switched off while the vehicle is in motion, do not attempt under any circumstances to remove the key, otherwise the steering lock will be engaged.



WARNING: To prevent the steering column lock engaging it is most important that before the vehicle is moved in any way, for example, being towed or coasting, the key must be inserted in the lock and turned to the first position. If, due to an accident or electrical fault it is not considered safe to turn the key, the battery must first be disconnected, then turn the key.

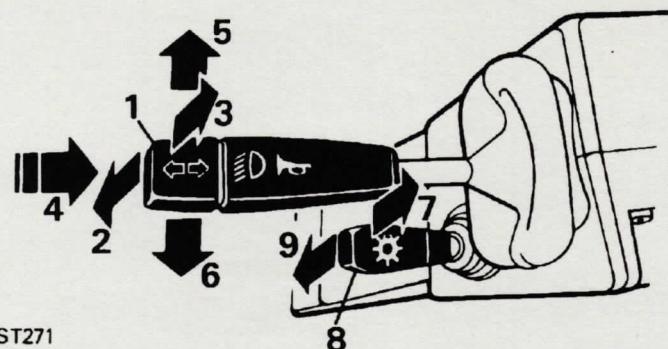
**STEERING LOCK AND ENGINE STARTER SWITCH - Fig. ST251**

The engine starter switch is combined with the steering column lock. The switch is key operated and has four positions.

- 'O' Steering locked. All electrical circuits (except lights) switched off.
- 'I' Steering unlocked. Auxiliary position: heater blower motor and accessories, such as radio can be used.
- 'II' Ignition switched on (Petrol models).
Heater plugs switched on (Diesel models).

CAUTION: Petrol models - DO NOT leave the ignition switched on without the engine running, as the battery could become discharged and would not start the engine.

- 'III' Starter motor operates. Release the key immediately the engine starts; the key will automatically return to the 'run' mode with oil and charge lights and accessories.

**HEADLAMP DIPPER SWITCH, COMBINING DIRECTION INDICATORS, HORN AND HEADLAMP FLASHER - Fig. ST271**

The switch has six positions:

Switch in central position (1): dipped headlamps.

Switch pushed away from driver (2): main beam

Switch pulled towards driver (3): headlamp flash. The headlamps can be flashed at any time, irrespective of other switch positions.

Press dipper switch knob inwards (4) to operate horn.

Move switch to upper position (5) to indicate a right-hand turn.

Move switch to lower position (6) to indicate a left-hand turn.

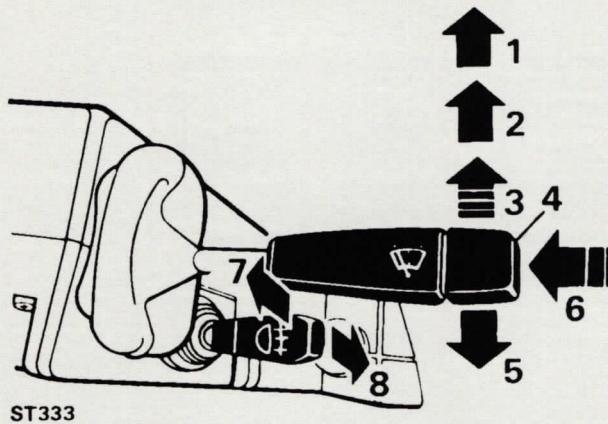
MAIN LIGHT SWITCH - Fig. ST271

The main light switch has three positions:

Switch pulled towards driver (7): all lamps off.

Switch in centre position (8): side lamps on. (U.K. only: side lamps and dim dip headlamps on).

Switch pushed away from driver (9): with the engine starter key in the run (II) position, side and headlamps on.



WINDSCREEN WIPER SWITCH AND SCREEN WASH - Fig. ST333

The windscreen wiper switch has five positions and is only operative when the engine starter key is in the engine running position.

Switch in upper position (1): fast-speed wiper.

Switch in second position (2): slow-speed wiper.

Switch in third position (3): 'flick wipe': wipers will operate at slow speed until switch is released.

Switch in fourth position (4): wipers off.

Switch in lowest position (5): intermittent wipe. Approximately five seconds delay between each wipe.

Switch pressed in (6): screen wash position. Hold the switch until sufficient water is ejected on to the screen, then release. This can be done with the wiper switch on or off.

HEADLAMP WASH

If the headlamp washer facility is fitted (optional), this will operate in conjunction with the windscreen washer when the headlamps are switched on in the dipped position.

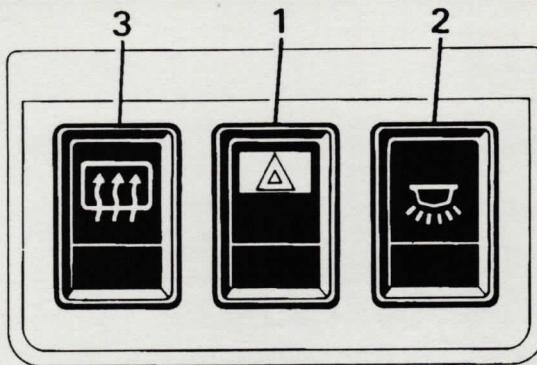
The headlamp washer jet units are fitted on the front bumper, one in front of each headlamp. The jet direction can be adjusted with the aid of a needle inserted into the orifice which can also be cleared with a fine needle or wire when necessary.

REAR FOG GUARD LAMPS SWITCH (fitted in certain markets) - Fig. ST333

The switch has two positions and can be operated with or without the ignition on but is effective only with the headlamps on.

(A) Switch pulled towards driver (7): fog lamps off.

(B) Switch pushed away from driver (8): fog lamps on.



ST342

Fig.ST342**HAZARD WARNING SWITCH (1)**

The switch has a rocker action and the following positions:

- (a) Press the upper end of the switch: hazard warning system off.
- (b) Press the lower end of the switch: all flasher lights operate simultaneously.

Use the hazard warning system to warn following or oncoming traffic of any hazard, that is, breakdown on fast road, or an accident to your own or other vehicles.

INTERIOR LIGHT SWITCH (2) where fitted

The switch has a rocker action and the following positions:

- (a) Press the upper end of the switch: interior lights comes on when either front door is opened, and goes off when the door is closed.
- (b) With the switch in the centre position: the interior light will come on, and remain on, with the doors closed or open.
- (c) Press the lower end of the switch: the interior light will remain off in all conditions.

HEATED REAR SCREEN SWITCH (WHEN FITTED) (3)

The switch has a rocker action and the following positions:

- (a) Press the upper end of the switch: heated rear screen switched off.
- (b) Press the lower end of the switch: to operate the rear screen demisting heater. This position will only be operative whilst the starter key is in the engine running position, and sufficient current is available. The integral warning lamp is lit when the switch is in the ON position, acting as a reminder to the driver that the switch and screen are on.

A voltage sensitive switch is incorporated in the circuit to allow the heated rear screen and other equipment to be used simultaneously under normal conditions

However, should the total electrical loadings be such that the alternator cannot maintain adequate charge, for instance, when using all electrical services in a traffic jam, the voltage sensitive switch, will cut-out, rendering the heated rear screen inoperative. The switch will automatically cut-in again restoring the heated screen function as soon as conditions are favourable.

ENGINE HAND THROTTLE (optional) - Fig. LR2099

This control will be found useful in conjunction with power take-off equipment and is used to over-ride the accelerator pedal linkage and set the throttle. This is suitable for all installations where precise speed control is not required, and where the engine load is light or relatively constant.

Place the transfer gear lever in Neutral (N) then, pull the hand throttle control out and twist it to lock it in the required position.

Operation of the accelerator will over-ride the hand throttle setting when increasing the engine speed. When the accelerator is released, the engine will return to the speed set by the hand throttle.

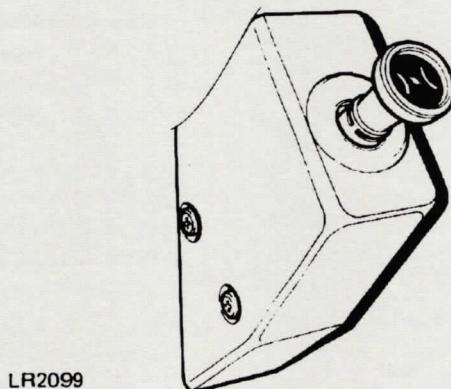
Before normal road driving is contemplated, check and ensure that the hand throttle is pushed fully down to the closed position.



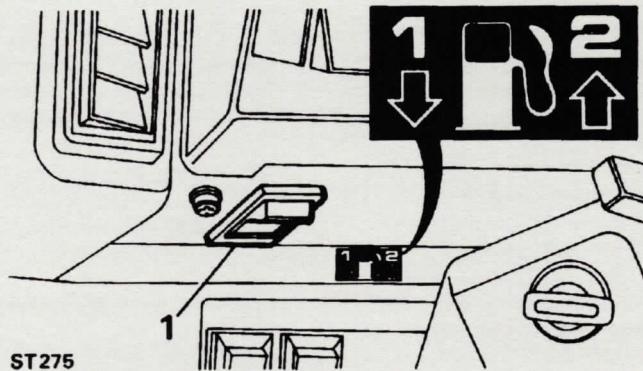
WARNING: DO NOT use the hand throttle while the vehicle is being driven.

Because the hand throttle is used to run the engine under load with the vehicle stationary, it may be necessary to fit an engine oil cooler system when used in hot climates.

NOTE: Always release the locking mechanism before returning the control to the 'OFF' position.



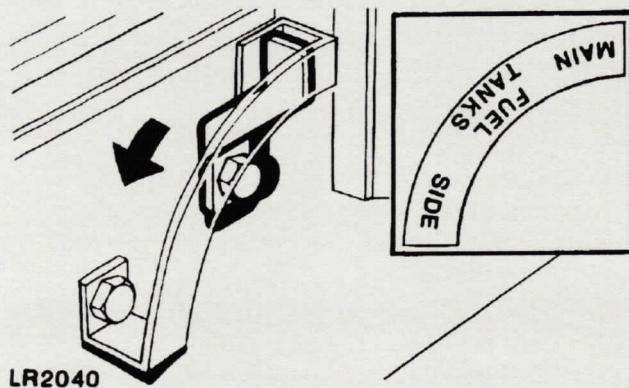
LR2099



FUEL TANK CHANGEOVER SWITCH - PETROL MODELS. Fig. ST275

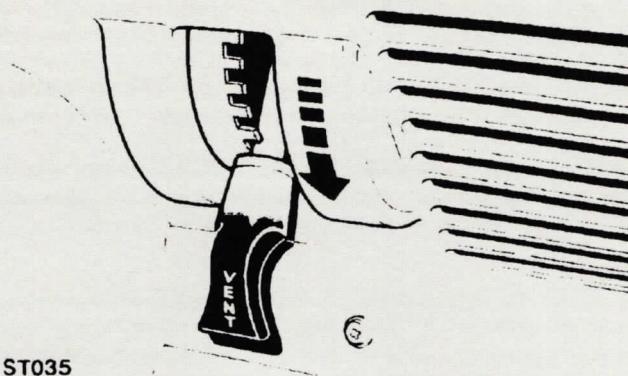
If the vehicle is fitted with an extra fuel tank (option) a changeover switch (1) is located under the dash below the instrument panel, to enable the driver to select the supply from either tank.

Each tank is fitted with an electric fuel pump and a sender unit for the fuel contents gauge. The supply from either tank can be selected, and the contents checked, by operating the changeover switch with the ignition switched on.



FUEL TANK CHANGEOVER SWITCH - DIESEL MODELS. Fig. LR2040

If the vehicle is fitted with an extra fuel tank (option) a combined changeover tap and switch is located on the heelboard. Movement of the tap lever brings into use either the rear or the side tank, and switches the fuel level indicator to show the approximate contents of the tank in use. When the lever is in the horizontal position the side tank is in use, in the vertical position the main tank is in use.



ST035

WINDSCREEN VENTILATORS - Fig. ST035

The two ventilators in the windscreen frame may be opened independently by pushing the lever downwards until each ventilator is open to the desired position. Use of the ventilators will be found advantageous when traversing dusty roads, as they greatly reduce the amount of dust sucked into the vehicle from the rear.

TRANSMISSION HANDBRAKE - Fig. ST092

A drum-type handbrake, well protected from dirt and water, operates directly on the transfer box rear output shaft and is designed for parking use only. When parking the vehicle on steep gradients and, or on slippery surfaces, the differential lock must also be engaged to ensure maximum effect.

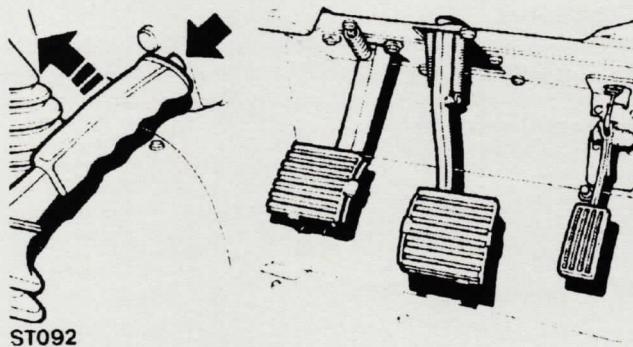
The brake is applied by pulling back the lever. To release, pull the lever slightly back, depress and hold the release button while pushing the lever down to the limit of its travel.



WARNING: DO NOT apply the handbrake while the vehicle is in motion as this could result in loss of vehicle control and damage to the transmission.

PEDALS - Fig. ST092

Brake, clutch and accelerator pedals are the pendant type and function in the normal way. The brake and clutch operate hydraulically, with servo assistance for the brakes. The accelerator pedal has a mechanical linkage. To avoid needless wear of the clutch withdrawal mechanism do not rest the foot on the clutch pedal while driving.



ST092

STEERING

Manual or Power assisted steering is fitted, depending on vehicle specification.

CAUTION: Power assisted steering - under no circumstances must the steering wheel be held on full lock for more than thirty seconds in one minute, otherwise there will be a tendency for the oil to overheat and damage to the seals may result.

GEARBOX CONTROLS AND RANGES

The main gearbox of the Land Rover is augmented by a two-speed transfer box giving high and low ranges. Therefore the five-speed manual gearbox used in conjunction with the transfer gearing produces ten forward and two reverse ratios.

MAIN GEARCHANGE LEVER - Fig. LR2014

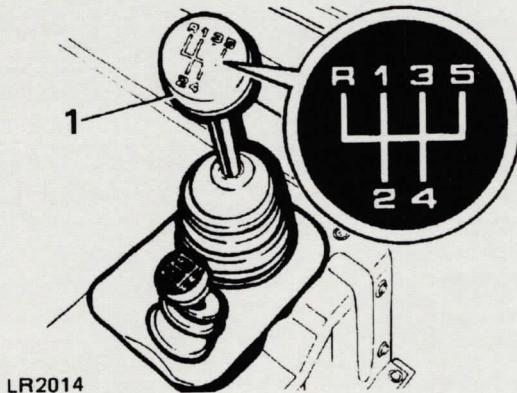
In neutral, light spring loads align the main gear lever (1) with the third/fourth gear positions to assist smooth gearchanging and to ensure selection of the required gear.

To select first or second gear, move the lever to the left against the spring and select the required ratio as normal. When changing between first and second gears, remember to continue to hold against the spring or the lever will return to the third/fourth position.

When changing from second to third gear, as second gear is disengaged, allow the spring to align the lever with the third position before engaging third gear.

To engage fifth gear, move the lever to the right against the spring and select the gear as normal. When changing from fifth to third or fourth gears, as fifth gear is disengaged, allow the spring to align the lever with the third/fourth positions before engaging the required gear.

To change from fifth to second or first gear, allow the lever to return to the third/fourth position and move the lever towards the left against the spring as already described. Note that fifth gear is designed to reduce engine speed and thus improve fuel economy when cruising. Ensure that while it is in use the engine runs easily without labouring, otherwise use a lower gear.



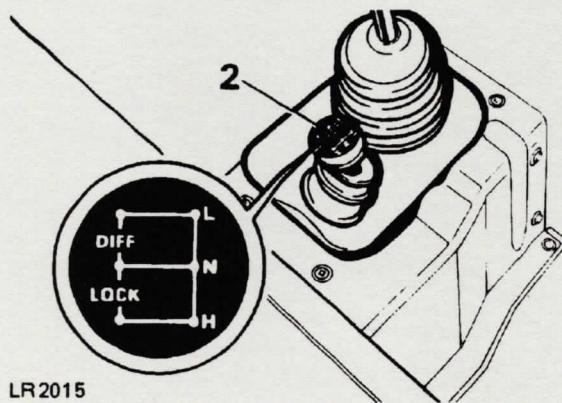
Reverse is protected against inadvertent selection by an additional 'knock-over' spring load. To engage reverse, strike the lever as far as possible towards the left using the palm of the hand and move it forward to engage the gear. To disengage, pull the lever rearwards and allow the spring load to return to its normal position in neutral. It is recommended that, before driving away for the first time, the driver becomes familiar with the operation of the gear change by changing up and down through all ratios several times.

COMBINED TRANSFER GEAR AND CENTRE DIFFERENTIAL LOCK LEVER - Fig. LR2015

The transfer gear lever (2) controls the selection of the high or low gear ranges and the engagement of the centre differential lock. The lever, which is located immediately behind the main gear lever, has the following positions: **Central right, Position N.** Transfer box in neutral, centre differential unlocked. In this position drive cannot be transmitted to the road wheels regardless of the position of the main gear selector. Use this position for winching or power take-off (pto) and when being towed. **Fully forward and right, Position L.** Transfer gearbox low range engaged. **Fully forward and left, Position L + Diff lock.** Transfer gearbox low range engaged AND centre differential locked (warning light illuminated). **Fully rearwards and right, Position H.** Transfer gearbox high range engaged. This position is used for normal driving. **Fully rearwards and left, Position H + Diff lock.** Transfer gearbox high range engaged AND centre differential locked (warning light illuminated). **Centre left.** Transfer box in neutral, Position N, centre differential locked. (This position should not be used).

USE OF THE TRANSFER GEAR LEVER

CAUTION: Changing from high (H) to low (L), should only be attempted when the vehicle is stationary. Depress the clutch pedal and push the lever fully forward, release the clutch. Should there be any hesitation in the gear engaging, do not force the lever. With the engine running, engage a gear with the main gear lever and release the clutch momentarily, then return the main gear lever to neutral and try the transfer control again.



LR2015

Changes from low (L) to high (H) can easily be made as follows without stopping the vehicle. Depress the clutch pedal and release the accelerator pedal as for a normal gearchange. Move the transfer lever into neutral. Release the clutch pedal for 3 seconds. Depress the clutch pedal and move the transfer lever firmly to the 'high' (H) position. Then move the main gear lever to second gear and release the clutch pedal while depressing the accelerator to take up the drive smoothly. As the vehicle accelerates, change gear in the main gearbox in the normal way. This operation can be carried out smoothly and quickly after a little practice. Proper use of the gearbox range will ensure optimum efficiency and transmission component life.

GEARBOX DIFFERENTIAL LOCK

To allow the necessary variation of wheel speeds during cornering with permanent four-wheel drive, the Land Rover incorporates a third (centre) differential between the drives to front and rear axles.

In conditions requiring maximum traction to both axles, the gearbox differential unit can be locked so that both output shafts rotate at the same speed.

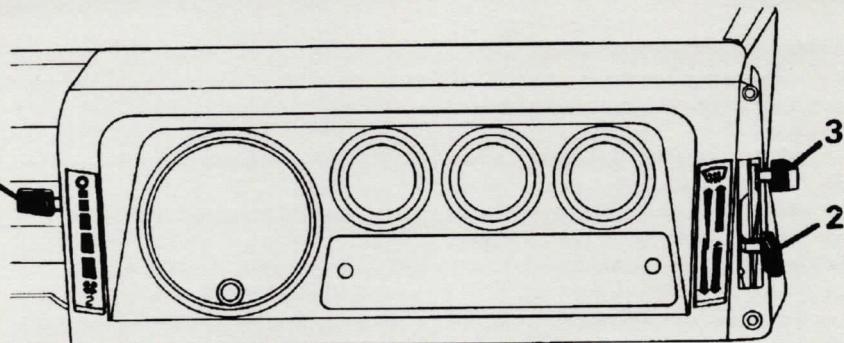
The centre differential is controlled through the combined transfer gear and differential locklever described on the previous page.

The control can be operated while the vehicle is travelling without wheel slip and in a straightline, or while it is stationary. The differential should be locked before slippery or doubtful surface conditions are encountered. Move the lever to the left to lock the differential, and to the right to unlock it.

CAUTION: Engagement of the lock with one or more wheels slipping will cause damage to the transmission.

Under certain conditions a slight delay may be experienced before the differential becomes locked, with subsequent warning light illumination. This delay is a built-in safety precaution and ensures that gears are correctly aligned before differential locking occurs.

On disengagement of the lock there may be a short delay before the warning light goes out indicating differential unlocked. If the warning light remains on, this indicates that the transmission is 'wound-up'. The vehicle must be stopped and reversed for a few metres to 'unwind' the transmission; the warning light will then be extinguished and the vehicle can proceed.



ST276

FRESH AIR/HEATING SYSTEM - Fig. ST276

The heating system delivers fresh air to the windscreens for demisting and to the driving cab interior in variable temperature proportions, between cold and hot according to the setting of the controls. Warm or hot air will be available once the engine has attained normal working temperatures.

The heater has three controls:

1. Three speed blower switch.
2. Temperature control.
3. Air distribution control.

CAUTION: Ensure that the front grille and the air intake grille on the top of the front wing are clear of obstruction, including snow and ice.



WARNING: To reduce the risk of accidents caused by poor visibility always scrape frost and snow from all glass surfaces and clean snow from bonnet and roof panel before moving.

BLOWER SWITCH

Air supply volume is controlled by the blower switch (1) as follows:

SWITCH OFF - TOP POSITION

- System inoperative

SWITCH IN MID-POSITION

- Air supply by warm effect of the vehicle moving forward

SWITCH IN LOWER POSITIONS

- The blower motor will only operate with the engine running or the starter key turned to the first position. Move the lever down to the first or second stop, this will give slow or fast blower motor speed to boost the air flow into the vehicle.

TEMPERATURE CONTROL LEVER

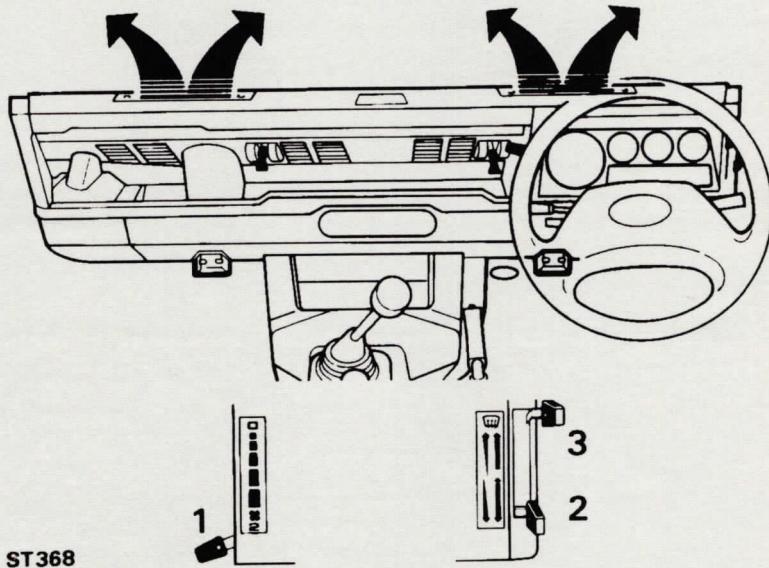
The temperature control lever (2) controls the temperature of the air from the heater unit.

- Move in direction of blue arrow to cut off heat.
- Move in direction of red arrow to increase heat.
- Action is progressive between the two.

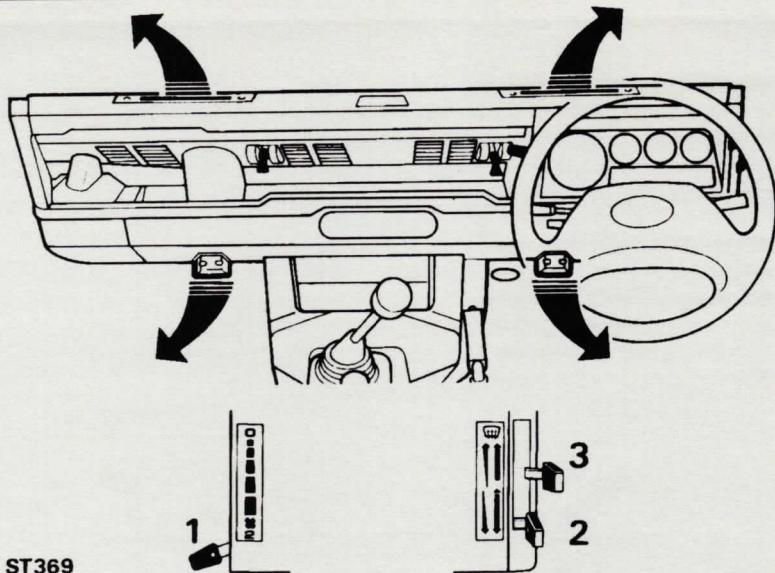
DISTRIBUTION CONTROL LEVER

Distribution control lever (3) controls direction of air flow.

- Lever fully up, all air is directed on to the screen through the demister vents.
- Lever mid-way position, air is directed to the foot level vents and to the screen.
- Lever fully down, air is directed to the foot level vents although a certain amount will continue to pass through the demister vents.

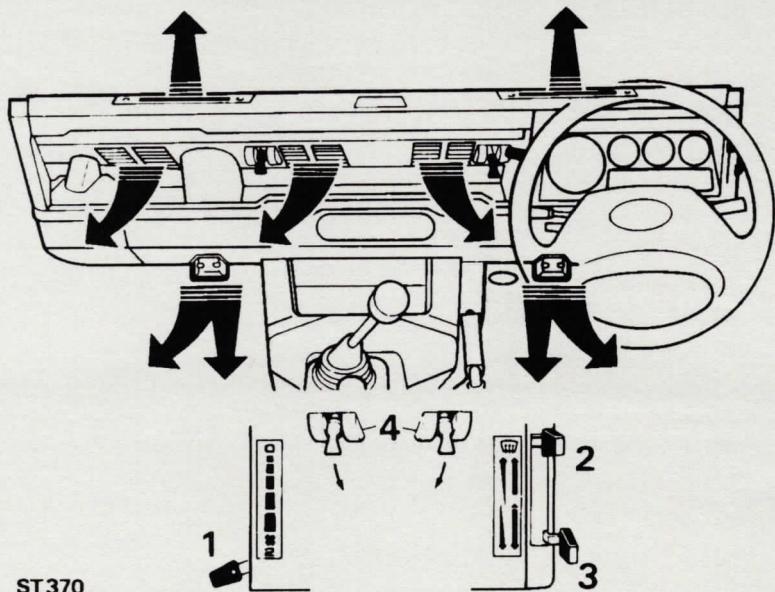
**MAXIMUM DEMISTING AND DEFROSTING Fig. ST368**

Set the distribution control (3) to the top position. Set the temperature control (2) to the lowest (Red) position. Push the blower motor switch (1) to the fast speed (lowest) position.



MAXIMUM HEATING Fig. ST369

Set the distribution control (3) in the mid position. Set the temperature control (2) to the lowest (Red) position. Push the blower motor switch (1) to the fast speed (lowest) position.

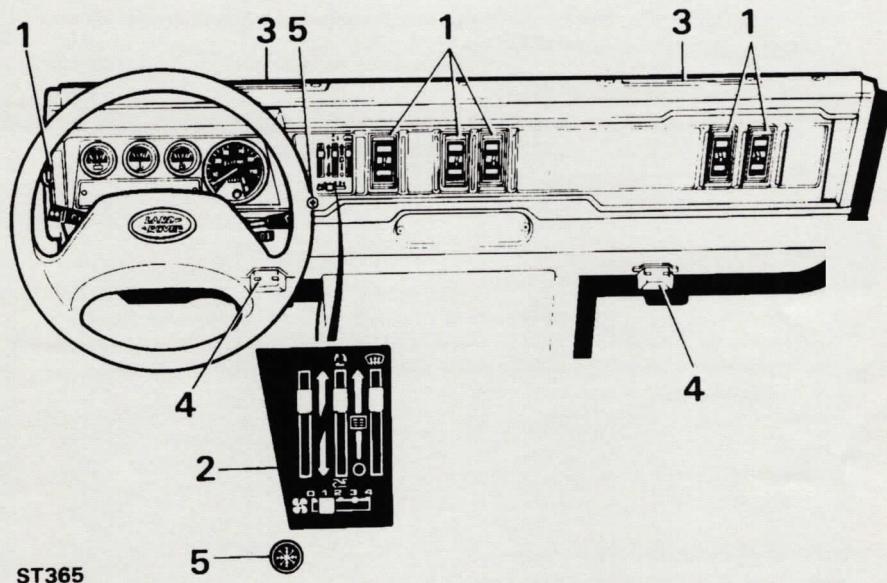


MAXIMUM FRESH AIR VENTILATION Fig. ST370

Set the distribution control (3) in the lowest position. Set the temperature control (2) to the top (Blue) position. Push the blower motor switch (1) to the fast speed (lowest) position. Push both ventilator controls (4) to the lowest (fully open) position.

AIR CONDITIONING SYSTEM (option) LEFT-HAND STEERING - Fig. ST365

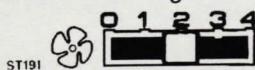
The air conditioning system operates in conjunction with the vehicle heater to provide cooled and dried recirculated or fresh air.



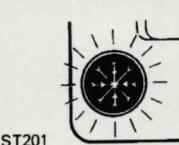
- ST365
- 1 Fascia mounted louvres
 - 2 Air conditioning control panel
 - 3 Windscreen demister vents
 - 4 Footwell vents
 - 5 Air conditioning switch

AIR AND HEAT CONTROL - LH STEERING MODELS**FASCIA-MOUNTED LOUVRES**

The six fascia-mounted louvres can be set to blow cooled, fresh or recirculated air, the vanes may be opened and adjusted to control the direction of airflow.

FAN CONTROL Fig. ST191

The fan control should be adjusted to regulate the volume of air required.

AIR CONDITIONING CONTROL Fig. ST201

The air conditioning pushbutton control is pressed to switch on the air conditioning and is illuminated when operative.

TEMPERATURE CONTROL Fig. ST193

The temperature of air flowing from the footwell and windscreen may be regulated between cold (blue) and hot (red) by moving the control as required. For effective air conditioning, this control should be maintained in the cold (blue) position.

**AIR DISTRIBUTION CONTROL Fig. ST194**

The distribution control has three positions.

- Fully up.
Air is directed to the windscreen with a bleed to the footwell.
 - Central position.
This position is used to direct air from the fascia-mounted louvres, with a bleed to the footwell.
 - Lower position.
Air is directed to the footwells, although a certain amount will continue to flow through the demister vents to the windscreen.
- Any of the air distribution positions may be used in conjunction with the temperature fan and air conditioning controls.

RECIRCULATION/FRESH AIR CONTROL Fig. ST195

The vehicle has a combined fresh air, or recirculating air system, designed to enable either system to be used separately. The air fed through the air distribution control can be either fresh air drawn from outside the vehicle or internally recirculated air. The recirculating heater is normally used in heavy traffic conditions to avoid obnoxious fumes entering the vehicle, also for rapid heat build up inside the vehicle during cold conditions. The recirculating control is used with air conditioning to achieve maximum cooling. It is also recommended that the recirculating control is used in dusty conditions to prevent dust entering the vehicle.

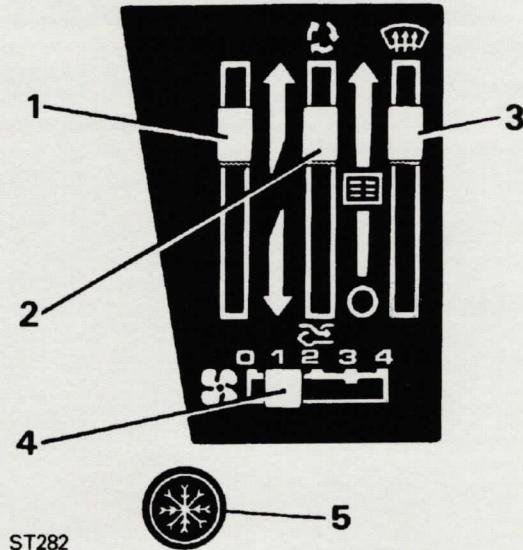


AIR AND HEAT CONTROL - LH STEERING MODELS**USING THE AIR CONDITIONING - Fig. ST282**

Set the controls as follows:

1. Temperature control to blue zone - Fully down (cold).
2. Recirculation control - Fully up (recirculation).
3. Distribution control to mid position (fascia).
4. Fan control set between positions 1 to 4 as desired, to regulate the volume of airflow desired.
5. Air conditioning control pushed in to illuminate the pushbutton legend.

When the temperature inside the vehicle becomes comfortable, move the temperature control up slightly. This will prevent the evaporator cooling coils from becoming too cold and freezing up.

**RAPID COOLING**

Open a window.

Move the fan control to position 4.

Move the temperature control down to the coldest position.

Set the distribution control to mid position (fascia).

Recirculation control set to recirculation (fully up). After driving for several minutes, the hot air inside the vehicle will be expelled. Close the window, move the temperature control down slightly and adjust the fan speed as desired. **DO NOT** operate the air conditioning for long periods with the windows or sun roof (option) open, as the system would be working ineffectually at maximum output which could result in component damage.

Highway Driving

During a long journey when the ambient temperature and humidity are extremely high and the air conditioning is in use, frost may form on the cooling coils of the evaporator. The unit is equipped with an automatic defrost system which normally will prevent this. However if the temperature control is maintained in its coldest position for extended periods, the defrost system will not operate and the unit will not function correctly. Therefore, whenever possible, move the temperature control slightly up from extreme (cold) position.

DEMISTING

Mist often forms on windows when the humidity is very high. To remove the mist, move the temperature and fan controls to their low positions. If the interior temperature is too low, use the heater in conjunction with the air conditioning. It is not necessary to use the system continuously, only when misting persists.

NOTE: For maximum demist effectiveness, use the fresh air supply (described earlier). Used in conjunction with the maximum heater setting, the air conditioning system will produce an air drying effect which will assist demisting.

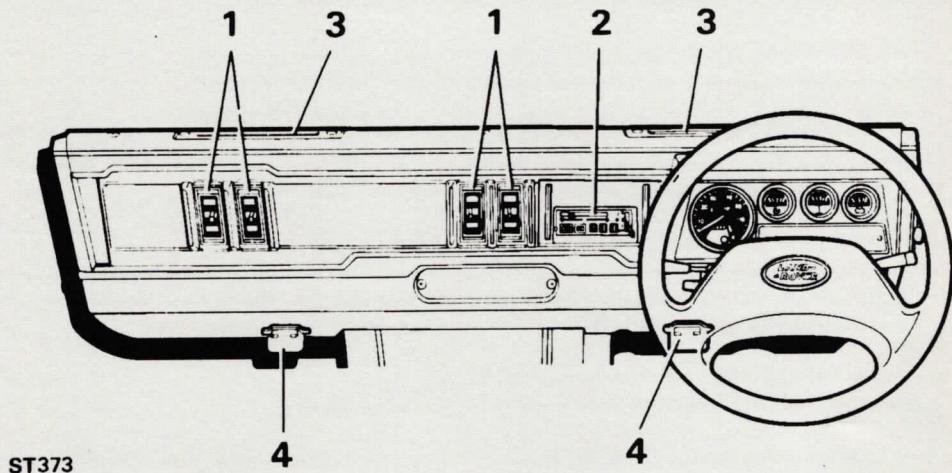
HEATING

During cold weather the fan can be used to circulate warm air from the heater.

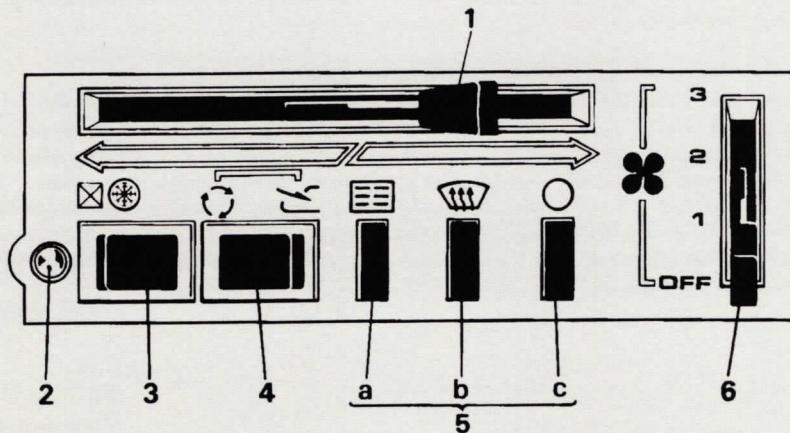
Move both the fan and temperature controls to the desired setting.

AIR CONDITIONING SYSTEM (option) RIGHT-HAND STEERING - Fig. ST373

The air conditioning system operates in conjunction with the vehicle heater to provide cooled and dried recirculated or fresh air.



- 1 Fascia mounted louvres
- 2 Air conditioning control panel
- 3 Windscreen demister vents
- 4 Footwell vents

AIR AND HEAT CONTROL - RH STEERING MODELS Fig. ST230

ST230

- 1 Temperature control
- 2 Air conditioning warning light
- 3 Air conditioning control switch
- 4 Recirculation/fresh air control switch
- 5 Air distribution controls
- 6 Fan control

AIR AND HEAT CONTROL - RH STEERING MODELS**FASCIA MOUNTED LOUVRES - Fig. ST281**

The five fascia-mounted louvres can be set to blow cooled, fresh or recirculated air, the vanes may be opened and adjusted to control the direction of airflow.

FAN CONTROL - Fig. ST230

The fan control should be adjusted to regulate the volume of air required.

AIR CONDITIONING CONTROL SWITCH - Fig. ST230

To switch on the air conditioning, push in the right side of the switch. The warning light will be illuminated and remain on until the air conditioning is switched off.

TEMPERATURE CONTROL - Fig. ST230

The temperature of air flowing from the footwell and windscreens may be regulated between cold (blue) and hot (red) by moving the control as required. For effective air conditioning, this control should be maintained in the cold (blue) position.

AIR DISTRIBUTION CONTROLS - Fig. ST230

The air distribution is controlled by three push button switches.

(a) LH button in

This position is used to direct air from the fascia-mounted louvres, with a bleed to the footwell.

(b) Centre button in

Air is directed to the windscreens with a bleed to the footwell.

(c) RH button in

Air is directed to the footwells, although a certain amount will continue to flow through the demister vents to the windscreens.

Any of the air distribution controls may be used in conjunction with the temperature fan and air conditioning controls.

RECIRCULATION/FRESH AIR CONTROL SWITCH - Fig. ST230

The vehicle has a combined fresh air, or recirculating air system, designed to enable either system to be used separately. The air fed through the air distribution control can be either fresh air drawn from outside the vehicle or internally recirculated air. The recirculating heater is normally used in heavy traffic conditions to avoid obnoxious fumes entering the vehicle, also for rapid heat build up inside the vehicle during cold conditions. The recirculation control is also used with air conditioning to achieve maximum cooling. It is also recommended that the recirculating control is used in dusty conditions to prevent dust entering the vehicle. Push the switch to the left for recirculating air. Press the switch to the right for fresh air.

AIR AND HEAT CONTROL - RH STEERING MODELS**USING THE AIR CONDITIONING - Fig. ST232**

Set the heater controls as follows:

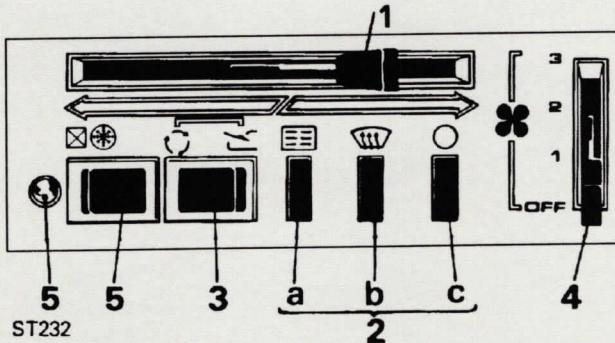
Temperature control (1) to blue zone - Fully left (cold). Distribution control (2) - Push in buttons 'a' to 'c' as required. Recirculation control (3) - Push in left side of switch. Fan control (4) set between positions 1 to 3 as desired, to regulate the volume of airflow desired. Air conditioning control (5) - Push in right side of switch to switch air conditioning on and illuminate warning light. When the temperature inside the vehicle becomes comfortable, slide the temperature control to the right slightly. This will prevent the evaporator cooling coils from becoming too cold and freezing up.

RAPID COOLING

Open a window. Move the fan control to position 3. Move the temperature control to the left to the coldest position. Push in the distribution control, as required. Recirculation control set to recirculation - Push in left side of switch. After driving for several minutes, the hot air inside the vehicle will be expelled. Close the window, move the temperature control to the right slightly and adjust the fan speed as desired. DO NOT operate the air conditioning for long periods with the windows or sun roof (option) open, as the system would be working ineffectually at maximum output which could result in component damage.

HEATING

During cold weather the fan can be used to circulate warm air from the heater. Move both the fan and temperature controls to the desired setting.



DEMISTING

Mist often forms on windows when the humidity is very high. To remove the mist, move the temperature and fan controls to their low positions. If the interior temperature is too low, use the heater in conjunction with the air conditioning. It is not necessary to use the system continuously, only when misting persists.

NOTE: For maximum demist effectiveness, use the fresh air supply (described earlier). Used in conjunction with the maximum heater setting, the air conditioning system will produce an air drying effect which will assist demisting.

Highway Driving

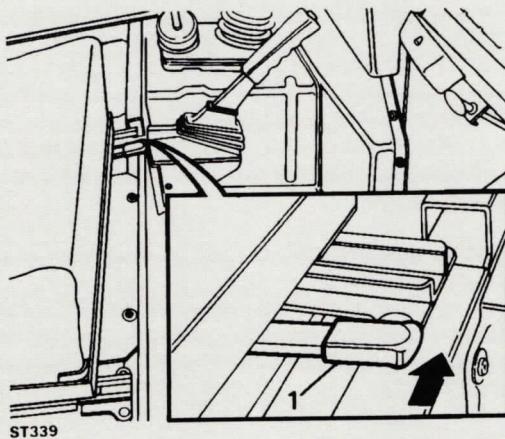
During a long journey when the ambient temperature and humidity are extremely high and the air conditioning is in use, frost may form on the cooling coils of the evaporator. The unit is equipped with an automatic defrost system which normally will prevent this. However if the temperature control is maintained in its coldest position for extended periods, the defrost system will not operate and the unit will not function correctly. Therefore, whenever possible, move the temperature control slightly up from extreme (cold) position.



WARNING: DO NOT adjust the seats while the vehicle is in motion, as this could cause loss of control.

STANDARD FRONT SEATS WITH ADJUSTABLE CUSHION - Fig. ST339

The fore and aft movement is adjusted by pushing to the side the lever (1) at the base of the seat and moving the seat into the required position.



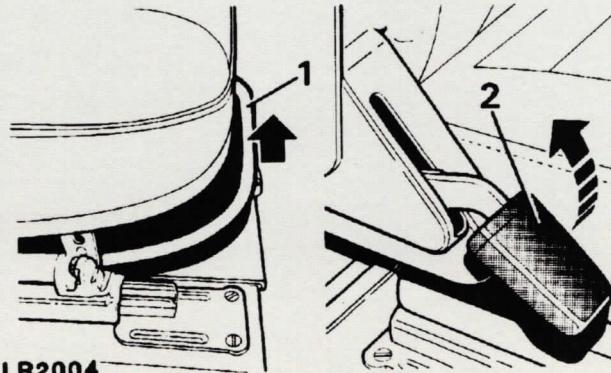
ST339

COUNTY FRONT SEATS - Fig. LR2004

Fore and aft adjustment. Lift the bar (1) at the front of the seat and slide the seat to the required position. Release the bar and ensure the seat guide catches have located the seat.

BACK REST ANGLE ADJUSTMENT (option)

Ease the body from the back rest and lift the locking handle (2). Apply body pressure to move the back rest to the required rake, then press the handle down to lock. The back rest return is spring assisted.



LR2004

HEAD RESTRAINTS

Head restraints can be fitted to seats with adjustable back rests on all models. Where fitted, each head restraint should be adjusted properly, to provide maximum effectiveness in the event of a collision.

REAR COMPARTMENT SEATS - ONE TEN STATION WAGONS

WARNING: DO NOT carry unsecured equipment, tools or luggage which could move and cause personal injury in the event of an accident or emergency manoeuvre either on or off-road.

By folding the separate sections of the rear seats, loads of various sizes and shape can be carried. Long items can be accommodated while still retaining some rear seating capacity.

PROTECTION OF REAR SEAT BELTS (where fitted)

Before folding down the rear seat backrests, first ensure that the outer inertia type belts are correctly stowed in their clip holders. Also, keep the centre lap belt fastened when not in use. To avoid damage to the inner sections of the inertia type belts and the centre lap belt mounted on the floor behind the rear seat, pass the four belts between the bottom of the seat backs and the seat to the rear floor.

Before erecting the rear seat, ensure that all inner seat belts are extended rearwards to prevent them from being trapped beneath the seatbase.

If the vehicle payload is likely to damage or chafe the belts in the rear floor area, they should be removed temporarily. In this event, unhook the belts from their respective floor mounted brackets by holding open the spring loaded safety catch. After reconnection, ensure that the safety catch returns to the closed position.

NOTE: Australia only - The belts are bolted to the rear floor.

The forward facing seats in the rear compartment can also be folded to provide increased luggage space. Two types of seat and retainers are in use, as follows:

VEHICLES WITH THREE INDIVIDUAL SEATS

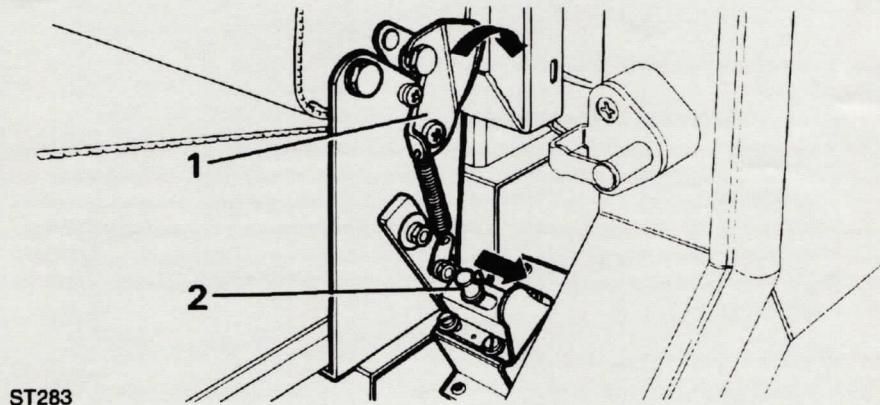
The two outer seats are retained by sliding bolts at the body sides, the centre seat is held in position by flanges which locate under the outer seats.

CARRYING BULKY LOADS Fig. ST283

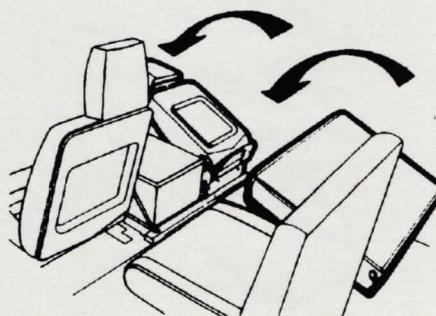
Slide the front seats forward sufficiently to allow the rear seat backrests to be folded. Push back the catch (1) at the side of the seat to be folded and fold the backrest forward. Pull back the seat base retaining bolt (2) and tip the folded seat forward. When returning the seats to the normal position, check that the bolts and catches are engaged.



WARNING: When the seat is erected, the latching mechanism should be visually checked and physically tested to ensure that the latch is secure.

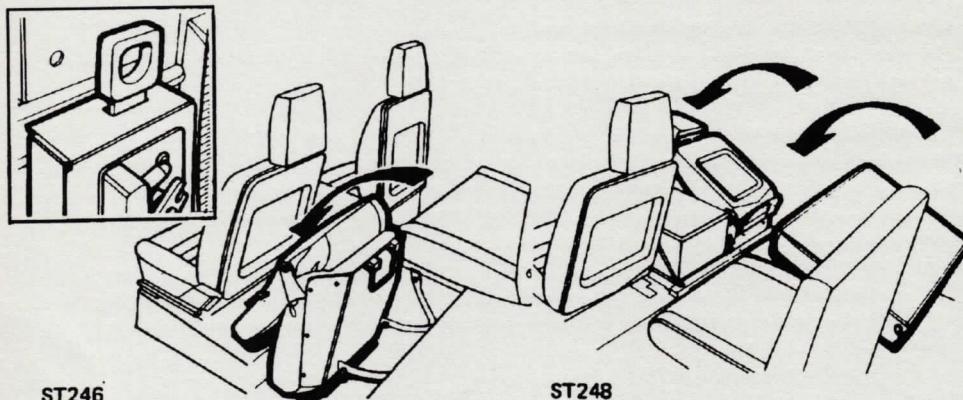


To accommodate extra long loads, fold the appropriate section of the backrest forward and incline the front passenger seat fully forward - Fig. ST248



MAXIMUM FLOOR SPACE

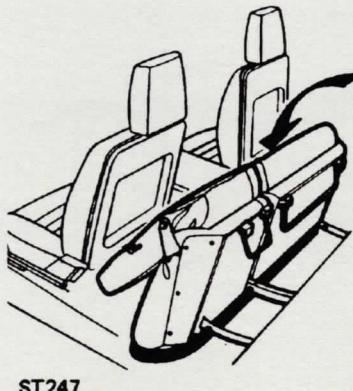
Slide the front seats forward sufficiently to allow the rear seat backrests to be folded. Fold the rear seat backrests and tip all three seats forward.

**VEHICLES WITH TWO ASSYMETRICALLY SPLIT SEATS****CARRYING BULKY LOADS Figs. ST246 AND ST248**

Slide the front seats forward sufficiently to allow the rear seat backrests to be folded. Pull up the ring-type release handle (inset Fig. ST246) located on the window ledge behind each backrest. Fold the appropriate section of the backrest and tip the folded seat forward. When returning the seats to the normal position, check that the rear support legs are pulled fully back, and that both backrest locks are correctly engaged. To accommodate extra long loads, fold the appropriate section of the backrest forward and incline the front passenger seat fully forward - Fig. ST248

MAXIMUM FLOOR SPACE - Fig. ST247

Slide the front seats forward sufficiently to allow the rear seat backrests to be folded. Pull the release handles upward, fold the rear seat backrests and tip both sections of the seat assembly forward.

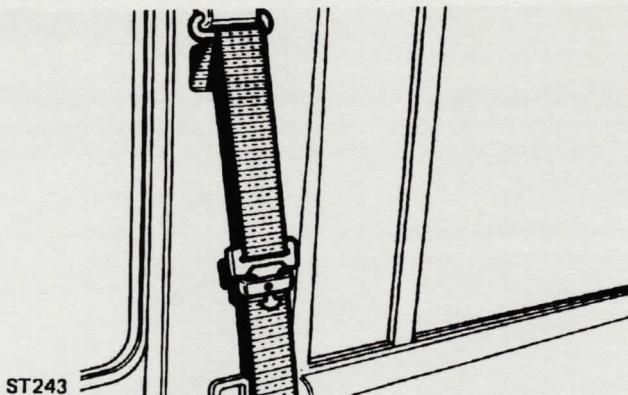


ROOF RACKS

Land Rover vehicles incorporating roofs with aluminium cantrails (rain water gutter) require the use of an approved roof rack. Information concerning suitable roof racks is available through the Land Rover parts service. These should be fitted very carefully following the manufacturers' instructions.

WARNING: DO NOT overload the roof rack or the stability of the vehicle will be affected. See further instructions in Section 3.





SEAT BELTS

General



WARNING: Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

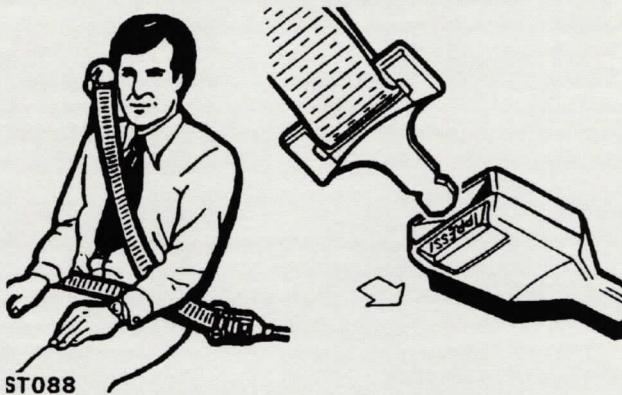
All seat belts must be fitted to the anchorage points provided at both the drivers and passenger's position to comply with the United Kingdom or other territorial legal requirements.

In your interests, always use the seat belt provided, even for the shortest journeys. Alterations and additions must NOT be made to any type of seat belt fitted to this vehicle.

Two types of seat belt are in use, inertia reel (automatic) for the driver and outer passenger(s), lap type for all other passengers. The number and type of seat belts fitted is dependent on the specification of the vehicle.

Always ensure that the belt is lying flat and is not twisted either on the wearer's body or between the wearer and the anchorage point.

Never attempt to use a seat belt for more than one person, not even for small children. Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

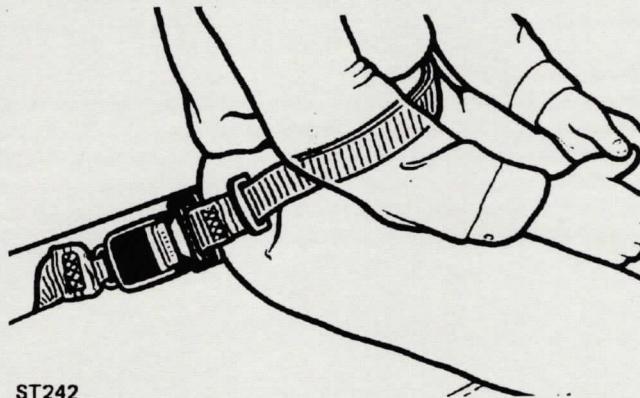


ST088

INERTIA REEL SEAT BELT - Fig. ST088

To fasten, draw the tongue of the belt over the shoulder and across the chest, then push it into the engagement/release slot. A positive click indicates that the belt is safely locked. To release, press the release button which will automatically disengage the buckle; this allows the belt to retract. Position the moveable clip as high as possible so that the tongue is accessible when the belt is next required.

NOTE: If a vehicle is parked on unlevel ground, the seat belt mechanism may lock. This is not a fault, ease the belt from its attachment to fit.



ST242

LAP SEAT BELT - Fig. ST242

The lap belt is fastened and released in the same way as the inertia reel type. To adjust, slide the adjuster along the belt and feed the webbing through the buckle until the belt is comfortably tight. When not in use, lap belts should be fastened.

TESTING INERTIA REEL TYPE SEAT BELT

WARNING: This test must be carried out under safe road conditions, that is, level dry road with no following or oncoming traffic.

With the seat belt in use, drive the vehicle at 8 kph (5 mph) 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 the braking must not be anticipated. If the belt fails to lock on test, consult a Land Rover Dealer.

CARE OF THE SEAT BELT

The seat belts fitted to this vehicle represent valuable and possible life saving equipment, which should be regarded with the same importance as steering and brake systems. Frequent inspection is advised to ensure continued effectiveness in the event of an accident.

Inspect the belt webbing periodically for signs of abrasion or wear, paying particular attention to the fixing points. DO NOT attempt to make any alterations or additions to the belts or their fixings as this could impair their efficiency.

If correctly worn and stowed when not in use, on the stowage points provided, deterioration will be kept to a minimum and protection to a maximum.

Seat belt assemblies must be replaced if the vehicle has been involved in an accident or if upon inspection, there is evidence of cutting or fraying of the webbing, incorrect buckle or tongue locking function; and/or any damage to the buckle stalk cabling.

SEAT BELT CLEANING

DO NOT attempt to bleach the belt webbing or re-dye it. If the webbing becomes soiled: sponge with warm water using a non-detergent soap and allow to dry naturally. DO NOT use caustic soap, chemical cleaners or detergents for cleaning; do not dry with artificial heat or by direct exposure to the sun.

Infant and child restraints - Estate models

When installing and using any infant or child restraint system, always follow the instructions provided by the manufacturer concerning its installation and use.

The failure to properly secure the child restraint system in the vehicle can endanger the child in the event of a collision or sudden stop and cause injury to other passengers. The centre rear seating position is fitted with lap belts which can be manually tightened to secure the infant or child restraint system. Older children should use the lap/shoulder belt.

CHILD RESTRAINT UPPER ANCHORAGES - FORWARD FACING REAR SEATS. AUSTRALIAN DESIGN RULE NUMBER 34A - Fig. ST1895

WARNING: Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints.

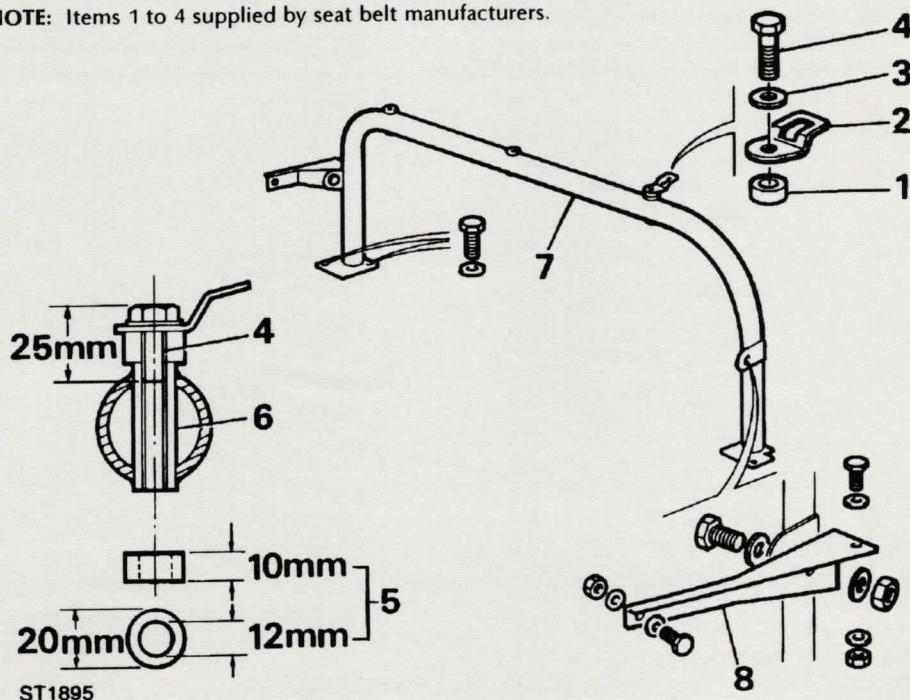
Under no circumstances are they to be used for adult seat belts or harnesses.

Child restraints are designed to bear upon the bony structure of the body as they are the seat belts for adults.

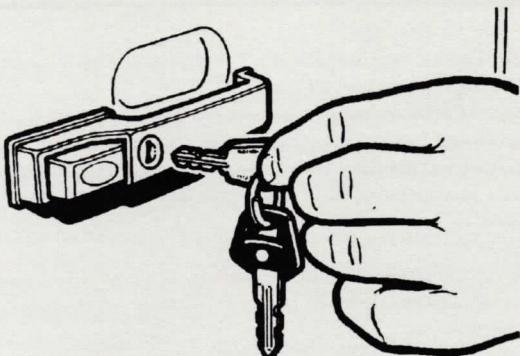
The method of fixing the upper anchorage fittings, dimensions of spacers required and length of bolts are shown opposite. The child restraint must be fitted in accordance with the seat belt manufacturer's instructions.

1. Spacer.
2. Upper anchorage fitting.
3. Plain washer.
4. Securing bolt, minimum length.
5. Spacer dimensions.
6. 5/16-18 UNC-2B threaded tube welded into mounting bar.
7. Seat belt mounting bar.
8. Mounting bar fixing to vehicle.

NOTE: Items 1 to 4 supplied by seat belt manufacturers.



ST1895

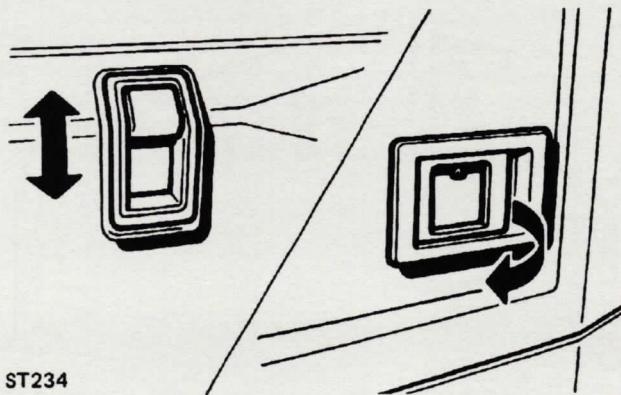


ST233

DOOR LOCK OPERATION

FROM OUTSIDE - Fig. ST233

To lock a front door, turn the key rearward a quarter of a turn, return the key to the vertical position and remove it. To lock a front door without using a key (Take care not to leave the keys inside the vehicle). Hold the external release button in and depress the interior locking button, release the external button and close the door. To unlock a front door, insert the key and turn it forward a quarter of a turn, return the key to the vertical position and remove it. To lock a rear side door - One Ten Station Wagons - push down the interior locking button. This can be done with door open or closed.



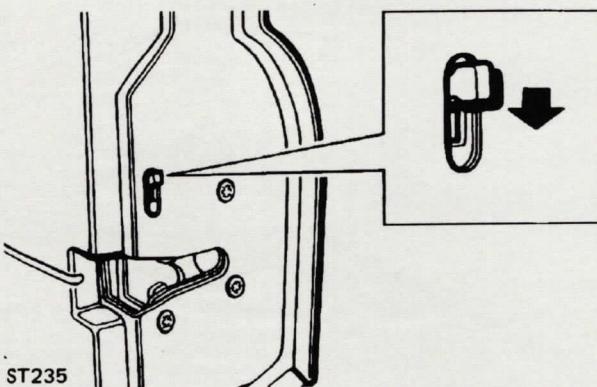
ST234

FROM INSIDE - Fig. ST234

To lock any door, push down the interior locking button. To unlock any door, pull the interior locking button.

WINDOWS (SIDE DOORS)

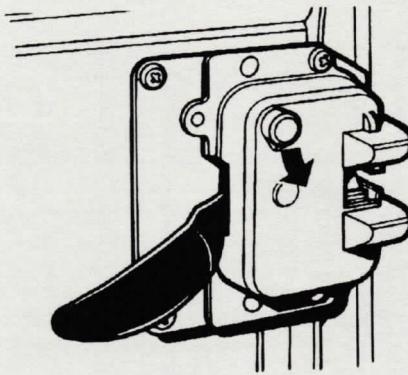
To raise or lower the door windows turn the handle either to the right or left in a circular motion, as required.



CHILD PROOF LOCKING - 'ONE TEN' STATION WAGON REAR SIDE DOORS - Fig. ST235
Each rear side door is fitted with a child proof lock. Move the setting lever down to prevent the door being opened from inside the vehicle.

REAR DOOR - HARD TOP MODELS AND STATION WAGONS - FROM OUTSIDE

To unlock the door, insert the key and turn it clockwise a quarter of a turn, return the key to the vertical position and remove it. To open the door, simply lift the outside handle. When the door is fully opened, a catch automatically retains the check strap and holds the door in the open position. To close the door, simply pull it towards the closed position (the check strap automatically releases). To lock the door, insert the key and turn it anti-clockwise a quarter of a turn, return the key to the vertical position and remove it.

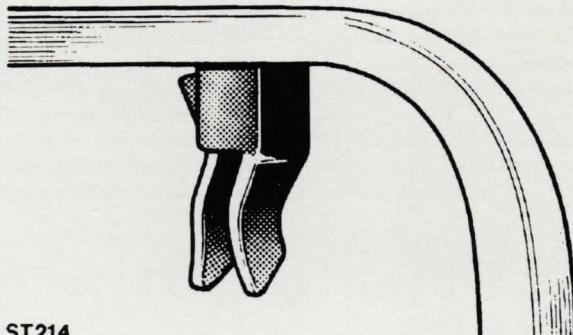


ST237

DOOR LOCK OPERATION - HARD TOP MODELS AND STATION WAGONS

FROM INSIDE - Fig. ST237

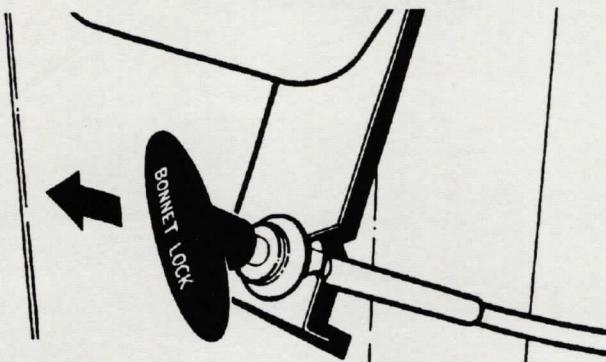
To unlock the door move the knob on the lock case downwards. Open the door using the inside handle. To lock the door, move the knob on the lock case upwards after closing the door.



ST214

REAR SIDE WINDOWS - SLIDING TYPE (option) - Fig. ST214

The forward section of the sliding type rear side windows can be opened as required for rear passenger ventilation. Each window is controlled by a single catch. To open, press the catch tongues together, slide the window to the desired aperture position and release the catch which will automatically lock the windows in position.

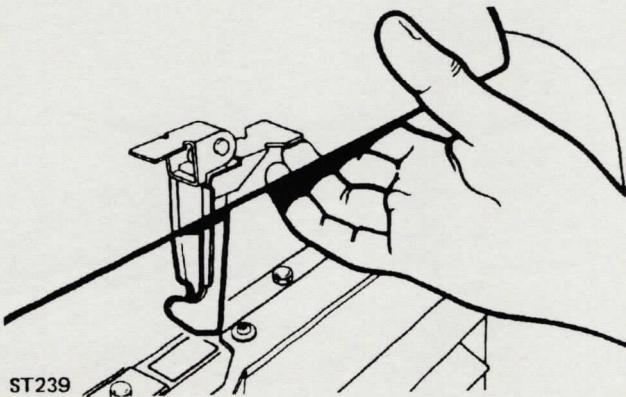


ST238

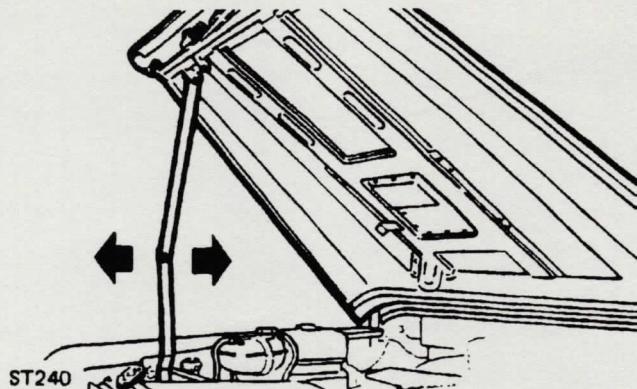
BONNET Figs. ST238, ST239 AND ST240

WARNING: If the spare wheel is fitted on the bonnet, it will be heavy to lift; DO NOT allow it to drop.

The bonnet release is located under the dash, to the right of the gearbox tunnel - Fig. ST238. To release the bonnet catch, pull the bonnet release handle. From outside the front of the vehicle, lift the safety catch lever and raise the bonnet - Fig. ST239. Pull the support stay forward to secure the bonnet in the open position - Fig. ST240. Ensure that the stay has locked in position, to prevent the bonnet accidentally falling down. To close, raise the bonnet slightly, support it while pushing back the support stay, and lower the bonnet. Press down on the forward edge of the bonnet with the hands to engage the lock.



ST239

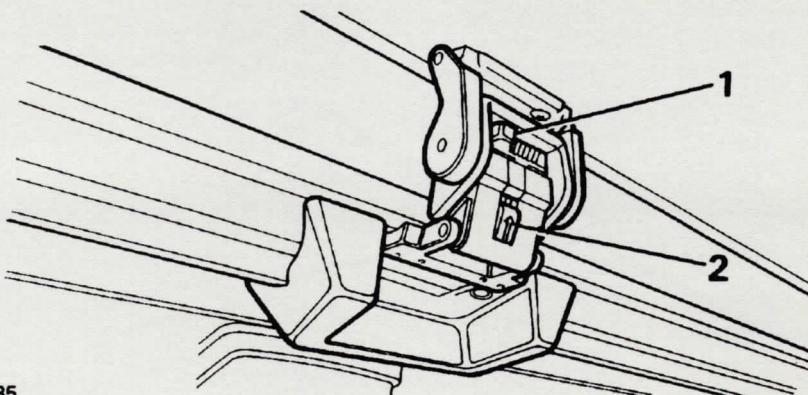
**SUN ROOF - Option**

The sun roof can be partially opened in three different positions for varying amounts of ventilation or, it can be removed completely for maximum effect.

CAUTION: DO NOT store the sun roof loose in the vehicle.

TO OPEN THE SUN ROOF - Fig. ST285

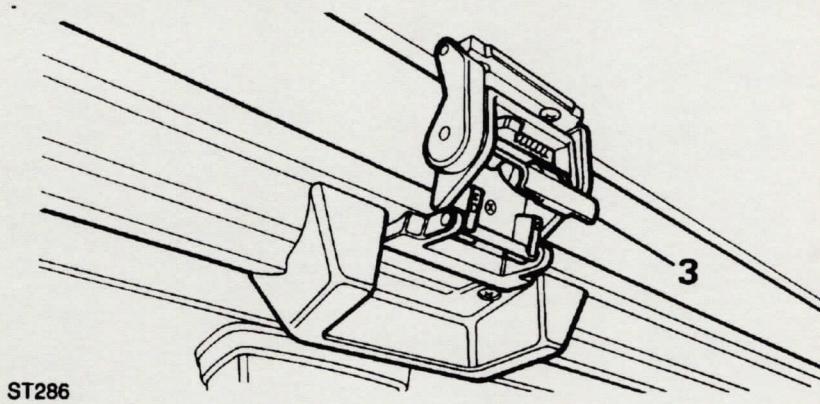
Pull the handle forward until it locks in the first position. By pressing the green knob (1) sideways, the handle can be pulled further forward to the second and third positions. To close the sun roof, press the green knob sideways and push the handle fully back.



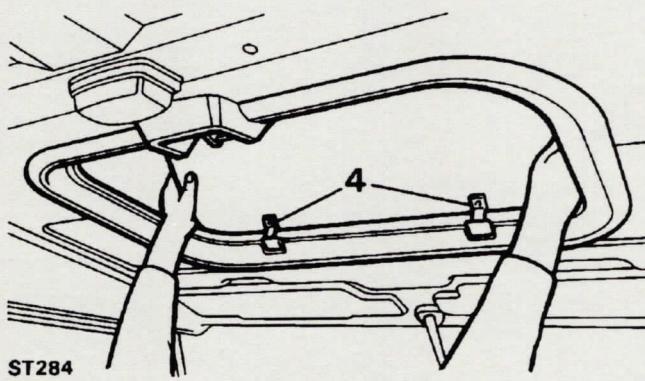
TO REMOVE THE SUN ROOF - Fig. ST286 and ST284

Open the sun roof to the third position, then push the red knob (2) up and pull the base of the handle (3) forward to unclip it from its mounting. Lift the sun roof forwards until the two locating lugs (4) are clear of the roof.

To refit, locate the two lugs in the roof, connect the handle to its mounting and pull the handle rearwards to close the roof.



ST286



ST284

