

# Fuses

## FUSES

Fuses are simple circuit devices which protect electrical equipment against the effects of excess current.

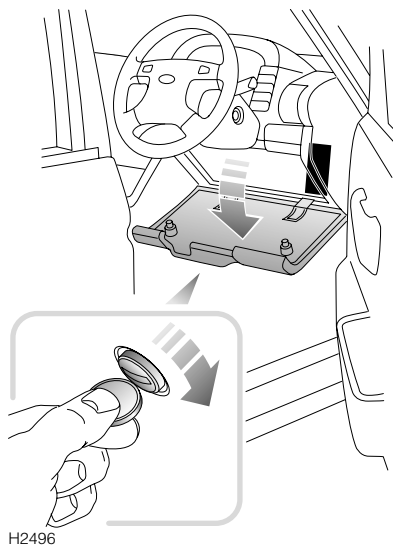
A 'blown' fuse is indicated when the electrical equipment it protects becomes inoperative.

Fuses are colour coded to help identify their amperage, as follows:

### Fuse colours

VIOLET	3 amp
TAN	5 amp
BROWN	7.5 amp
RED	10 amp
BLUE	15 amp
YELLOW	20 amp
WHITE	25 amp
GREEN	30 amp
ORANGE	40 amp

## MAIN FUSE BOX



The main fuse box is fitted below and to one side of the steering column; to access the fuses, remove the cover by releasing the fixing screws using a coin or small screwdriver to twist the turnbuckle screw through 90 degrees.

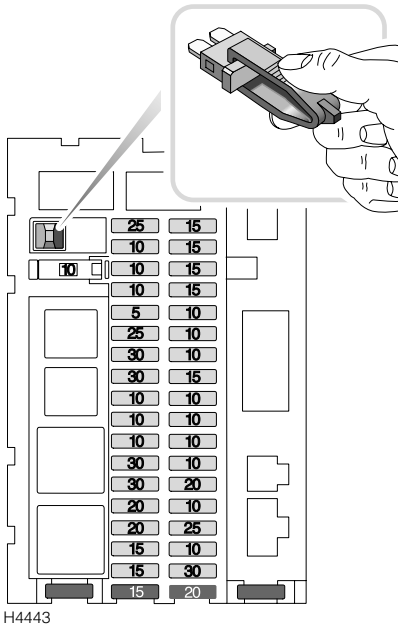
### Checking or renewing a fuse

Always turn the starter switch to position '0' and switch off the affected electrical circuit before removing a fuse.

### WARNING

***Fit only replacement fuses of the same rating and type. Always rectify the cause of the failure before replacing a fuse. Seek qualified assistance if necessary.***

# Fuses



Press the fuse removal tweezers onto the head of the suspect fuse (as shown) and pull to remove. A break in the wire inside the fuse indicates that the fuse has 'blown' and must be replaced.

Always replace a fuse with another of the same value, however, if the replacement fuse blows immediately the circuit **MUST** be checked by a qualified dealer.

**NOTE:** There are a number of spare fuses included within the fuse box (see fuse box label).

A label in the fuse box cover shows the circuits protected, the fuse values and their locations. They are also listed on the following page.

# Fuses

## Fuse specification

Fuse number	Rating (amps)	Circuit protected
1	25	Central door locking
2	10	Fuel flap release
3	10	Instrument pack & switch illumination
4	10	Fog guard lights - rear
5	10	Headlight main beam - LH
6	25	Air conditioning blower - rear
7	30	Heater blower - front
8	30	Heated rear window Heated mirrors
9	10	Headlight dipped beam - LH
10	10	Headlight dipped beam - RH
11	10	Side & tail lights - LH Number plate light Headlight levelling motors Switch illumination Trailer socket Sunroof
12	30	Sunroof
13	30	Electric windows - rear
14	20	Ignition coils (Petrol models)
15	20	Cigar lighter Interior lights Seat heaters Vanity mirror illumination
16	15	Clock Radio Parking aid system Rear headphones
17	15	Radio amplifier Speakers
18	15	Wiper motor - rear
19	15	Wiper motor - front Screen washer - front

# Fuses

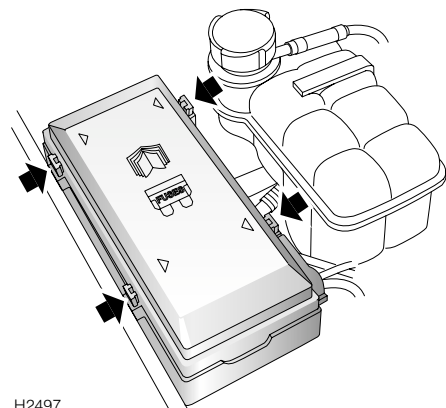
Fuse number	Rating (amps)	Circuit protected
20	15	Interior lights Clock/radio memory Engine remobilisation Compact disc player * Key i/lock Diagnostics
21	15	Transfer box Alarm audible warning Shift i-lock
22	10	Headlight main beam - RH
23	10	Starter motor
24	10	Alternator Auto transmission Engine management
25	15	Brake lights Reverse lights
26	10	Auxiliary circuits relays
27	10	Instruments Hill descent control
28	10	Self levelling suspension Anti-lock braking
29	10	Active cornering enhancement (ACE)
30	20	Cruise control Electric mirrors Screen washer - rear Diesel ECU
31	10	Air conditioning blower - front Power-fold mirrors
32	25	Accessory socket
33	10	Side & tail lights - RH Headlight levelling switch Radio Trailer socket Switch illumination
34	30	Electric windows - front
35	10	<b>Airbag SRS - DO NOT REMOVE</b>

# Fuses

## ENGINE COMPARTMENT FUSE BOX

### WARNING

**Batteries emit explosive hydrogen gas; ensure that sparks, flames and other ignition sources are kept away from the engine compartment.**



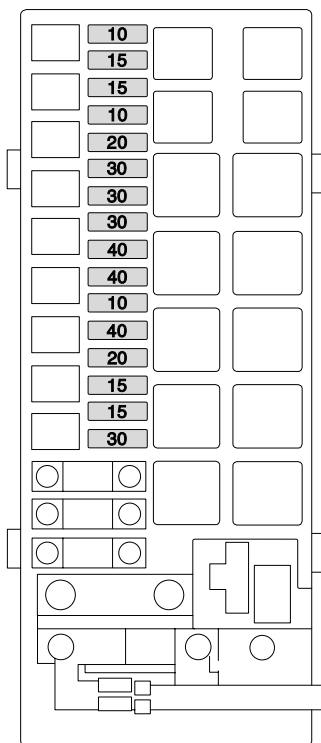
H2497

A second fuse box is located on the right side of the engine compartment adjacent to the coolant reservoir.

Press all four latches in the direction of the arrows shown on the illustration to release the fuse box cover.

Information on the underside of the cover identifies the fuses and their ratings. This information is also listed on the following page.

When replacing, the cover, locate the four latches, then push firmly downwards until the latches can be heard to 'snap' closed.



H2498

**Owners are advised against removing or replacing the relays (identified as R1-R14) and fusible links (FL1-FL13). Failure of any of these items should be investigated by a qualified technician.**

# Fuses

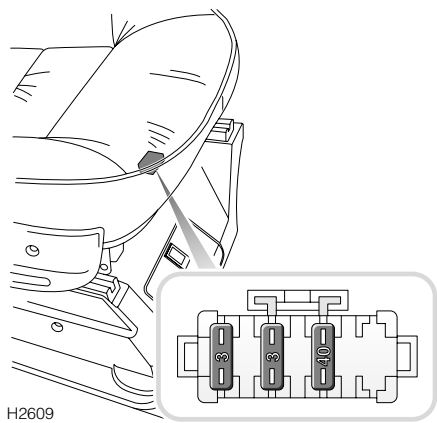
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## Fuse specification

Fuse number	Rating (amps)	Circuit protected
1	30	Fuel injectors (Petrol models) Engine control module (Diesel models)
2	15	Engine management system
3	15	Front fog lights
4	20	Headlight washers
5	40	Cooling fans
6	10	Air conditioning
7	40	Heated front screen - LH
8	40	Heated front screen - RH
9	30	Trailer lights Fuel burning heater
10	30	Fuel pump
11	30	ABS valve
12	20	Automatic gearbox
13	10	Body Control Unit (BCU)
14	15	Direction indicators Hazard lights
15	15	Active cornering enhancement (ACE)
16	10	Horn

# Fuses

## UNDERSEAT FUSES



H2609

Two identical small fuse blocks are situated one beneath each front seat.

### Fuse specification

Fuse number	Rating (amps)	Circuit protected
1	40	Seat electrics
2	3	Lumbar support - pump
3	3	Lumbar support - solenoid

# Bulb Replacement

## REPLACING BULBS

Check the operation of all exterior lights before you drive the vehicle.

### IMPORTANT INFORMATION

Before replacing a bulb, always switch off the starter switch and appropriate lighting switch to prevent any possibility of a short circuit. Only replace bulbs with the same type and specification.

## Replacement bulbs

**NOTE:** All bulbs must be rated at 12 volts

Bulb	Watts
Headlights dipped beam	55 (H7)
Headlights main beam	55 (H7)
Front side lights	5
Direction indicators	21
Front fog lights	55 (H7)
Side repeater lights	5
Reverse lights	6 (H6)
Rear fog guard lights	21
Tail lights	5
Number plate lights	5
Door/puddle lights	5
Interior lights	6
Luggage/footwell lights	5
Luggage/tailgate lights	6
Glovebox light	5
Vanity mirror light	1.2

**NOTE:** In certain territories it is a legal requirement to carry spare bulbs, in case of bulb failure. A replacement bulb kit is available as an approved accessory from your Land Rover dealer.

## Halogen bulbs

Halogen bulbs are used for main beam, dipped beam, front fog and reverse lights. Take care NOT to touch this type of bulb with your fingers; always use a cloth to handle them. If necessary, clean the bulb with methylated spirits to remove fingerprints.

## Xenon light units\*

Some vehicles are fitted with Xenon dipped beam headlight units. Xenon lights provide significantly improved visibility, especially during adverse weather and driving conditions.

The operational life of a Xenon light is significantly longer than that of a conventional or Halogen bulb. However, the very high voltage required to ignite the gas and metal vapour used to power Xenon lights could cause very serious injury. Replacement or maintenance of Xenon lights should only be carried out by qualified personnel.

*Used Xenon light units contain mercury, which is hazardous and can be injurious to health. Seek advice about the proper disposal of Xenon light units from a Land Rover dealer or your local authority.*

## Light emitting diodes (LEDs)

Controls, displays and some lights and other equipment items inside your vehicle have light emitting diodes (LEDs) behind a cover as their light source. These LEDs resemble conventional lasers and are classified by law as "Class 1 light emitting diodes". Replacement LEDs should be fitted only by qualified personnel.

## WARNING

**DO NOT remove the cover or expose the eyes directly to the unfiltered light source for several hours at a time, as this could cause irritation to the iris.**

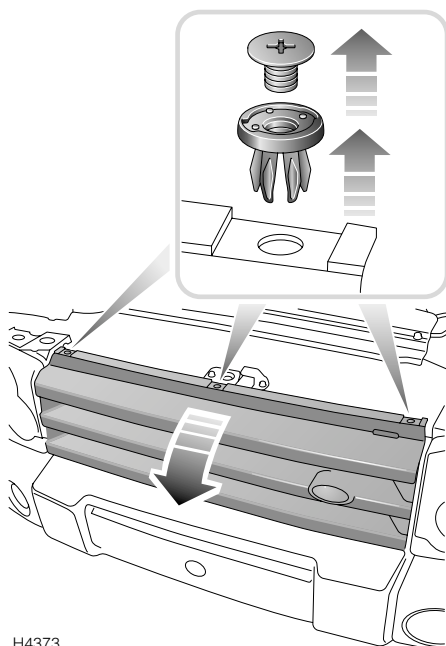


# Bulb Replacement

## FRONT LIGHT UNIT

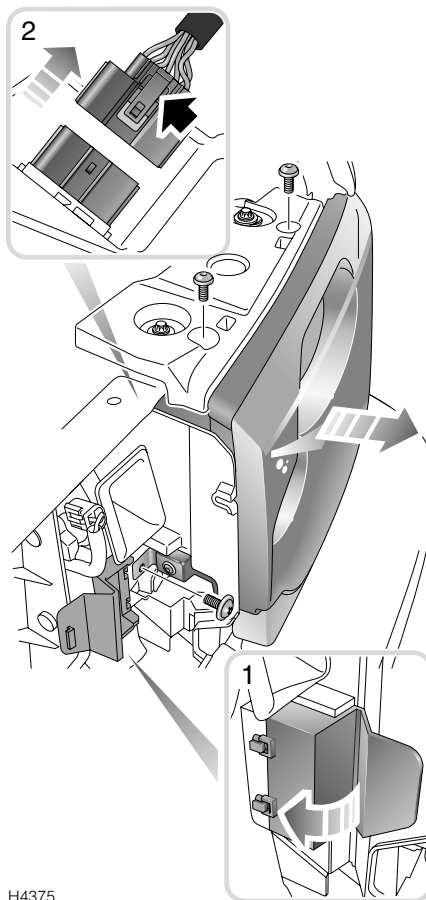
### Light unit removal

To replace any of the bulbs, remove the light unit as follows:



H4373

First unfasten the grille by unscrewing the 3 screws as indicated, then remove the grille by pulling forward.

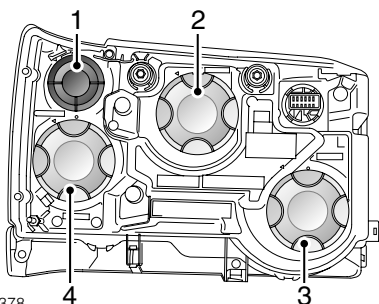


H4375

Open the cover flap (1) and remove the 3 screws as indicated. Pull the light unit forward and disconnect the electrical multi-plug (2) to release the unit.

# Bulb Replacement

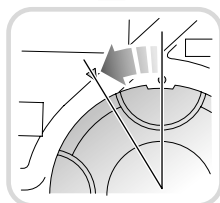
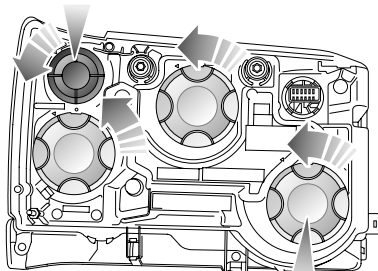
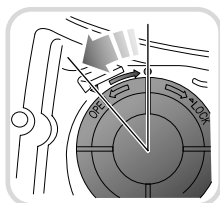
## Bulb location



H4378

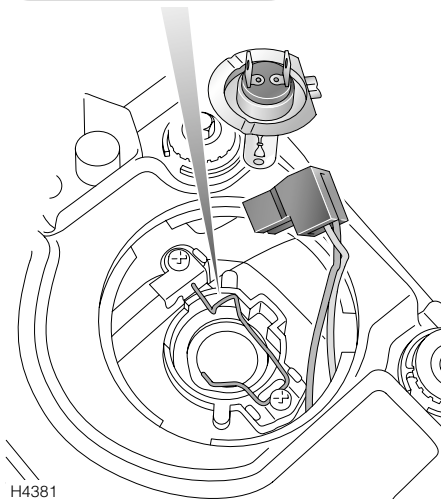
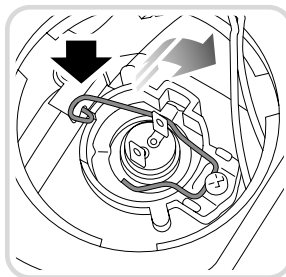
1. Indicator
2. Headlight (Dipped beam)
3. Headlight (Main beam)
4. Sidelight

## Bulb covers



H4380

## Headlight (Dipped beam) bulb replacement



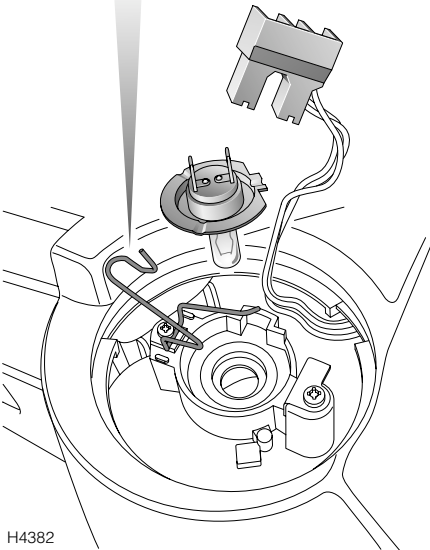
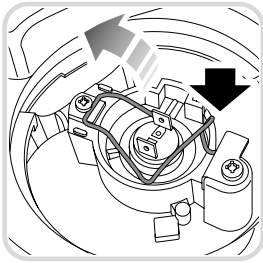
H4381

Remove the plastic bulb cover. Release the spring clip which holds the bulb and withdraw the bulb from the light unit. Disconnect the bulb from the electrical multi-plug. Replace the bulb and re-connect to multi-plug. Insert the bulb into the light unit, ensuring that the tab of the bulb locates in the bulb holder. Replace the spring clip and plastic bulb cover.

**NOTE:** Do not touch the bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.

# Bulb Replacement

## Headlight (Main beam) bulb replacement

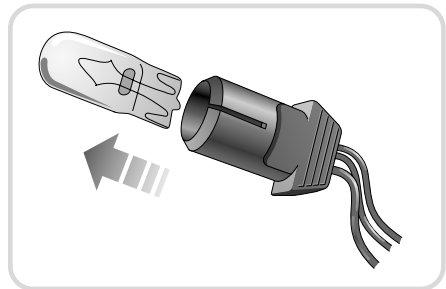
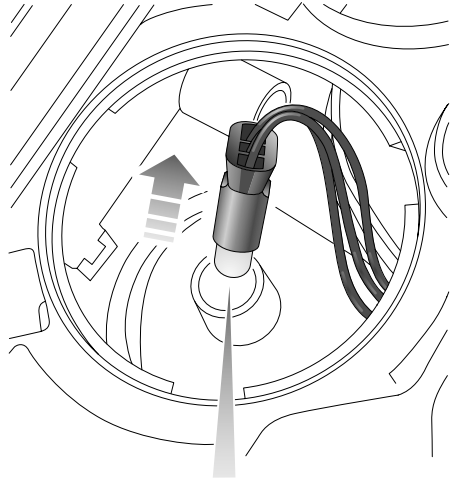


H4382

Remove the plastic bulb cover. Release the spring clip which holds the bulb and withdraw the bulb from the light unit. Disconnect the bulb from the electrical multi-plug. Replace the bulb and re-connect to multi-plug. Insert the bulb into the light unit, ensuring that the tab of the bulb locates in the bulb holder. Replace the spring clip and plastic bulb cover.

**NOTE:** Do not touch the bulb glass with your fingers. If necessary, clean the bulb with methylated spirits.

## Sidelight bulb replacement

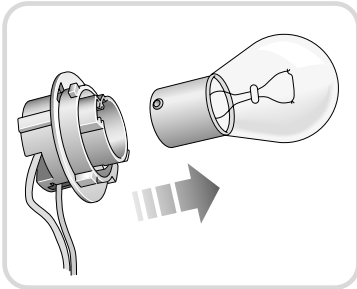
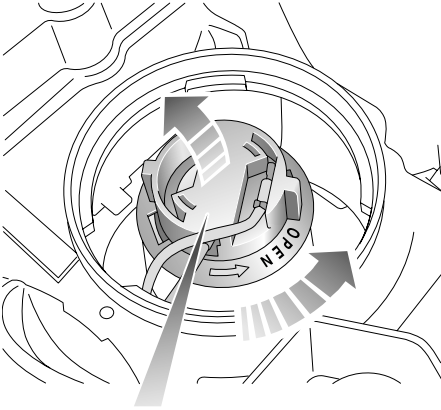


H4383

Remove the plastic bulb cover. Withdraw the bulb holder from the light unit. Pull the bulb from the holder, replace the bulb and insert the bulb holder into the light unit.

# Bulb Replacement

## Front direction indicator bulb replacement



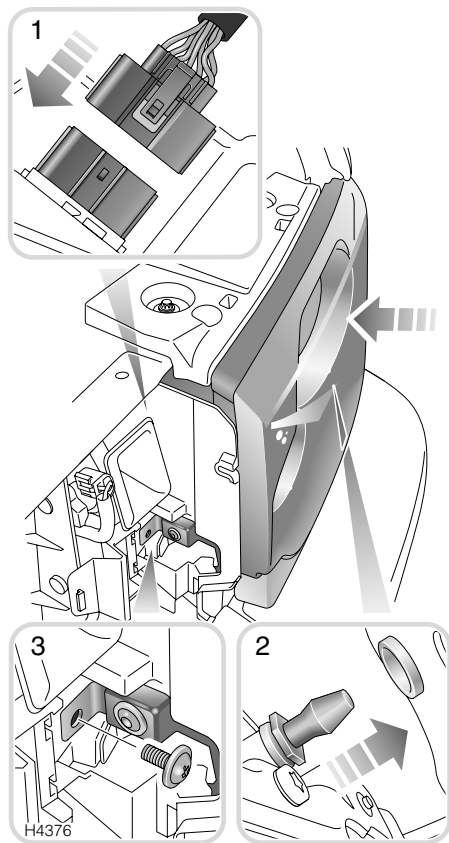
H4385

Remove the plastic bulb cover. Unscrew the bulb holder as indicated above and withdraw from the light unit. Push and twist the bulb to release from the holder, replace the bulb and insert the bulb holder into the light unit.

# Bulb Replacement

## Re-fitting the front light unit

Re-fitting the unit is a reversal of the removal procedure.



Replace the 2 screws at the top of the unit and tighten. Close the cover flap as illustrated.

Re-connect the electrical multi-plug (1) and carefully push the unit back into place, ensuring that the pin (2) is engaged as illustrated. Replace the screw (3) and tighten.