ELECTRICS

SECTION MR

MR.1 - PFK 457 VEHICLE SECURITY ALARM

Keys

A mechanical key is used to operate the combined ignition switch/steering column lock, and the emergency manual door locking function via the left hand door. The keyhead incorporates three push buttons by which to operate the electronic immobiliser, alarm system and central door locking.

A duplicate key is supplied with the new car and, on receipt, should be separated and kept in a safe place for use in an emergency. The mechanical key code and security system PIN (sPecific Identification Number) are also supplied with the keys, and should be removed from the key ring by the owner, and noted safely with the vehicle documents. These numbers should also be recorded by the selling dealer and kept securely with the vehicle file in the interests of customer service. The codes will be required when ordering or programming replacement or additional keys, and the PIN will allow the security system to be overridden in case of transmitter loss or failure (see later).

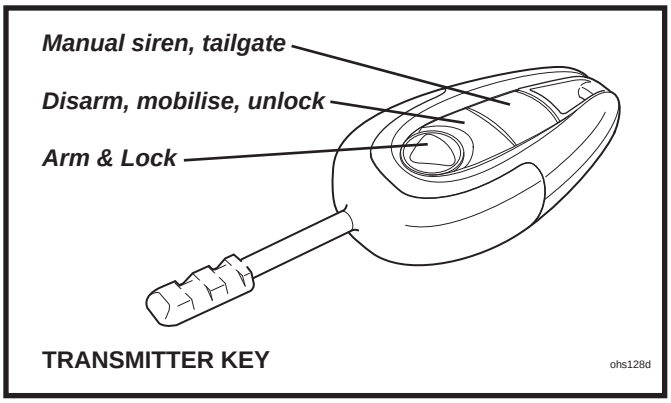
Vehicle Security Alarm

The Lotus Evora is fitted as standard with a PFK 457 immobiliser/alarm which includes the following features:

- U.K. approval to Thatcham category 1.
- 'Dynamic coding' of the transmitter keys; Each time the transmitters are used, the encrypted rolling code is changed to guard against unauthorised code capture.
- Passive activation of immobiliser, central locking and alarm system.
- Ingress protection using sensing switches on the latches of both doors, and the tailgate.
- Selectable cockpit intrusion detection using a microwave sensor.
- Self powered siren to maintain protection if the vehicle battery is disconnected.
- Personal protection by 'on demand' activation of the siren.
- Emergency alarm override and transmitter key programming using an alarm sPecific Identification Number (PIN).
- Homesafe and selectable dynamic (drive away) locking.

Transmitter Keys

Two transmitter keys are provided with the car, and combine a mechanical key blade with a three button transmitter unit incorporated into the key head. The mechanical key operates the ignition switch/steering lock and emergency manual door locking. The transmitter operates the central locking, alarm system and electronic immobiliser. The 4-digit code for the mechanical key, the unique serial number of the immobiliser/alarm, and the system's 5-digit sPecifc Identification Number (PIN), are supplied on plastic tags attached to the key ring of a new vehicle.



TRANSMITTER KEY

Disarming the Alarm/Unlocking

When approaching the car, it is likely that the vehicle is locked and the alarm armed, as indicated by the alarm red tell tale lamp in the speedometer face flashing once every 3 seconds. To disarm the alarm and unlock the doors:

- Press the central, unlock, button on the transmitter key. The first press will unlock the driver's door, and a second press, the passenger's door.
- This command will be acknowledged by a double flash of the hazard lamps.
- The alarm tell tale will be extinguished.
- The interior and mood lights will fade on, and remain lit for up to 2 minutes (if set to the 'courtesy' position).
- The engine will be mobilised (see below).

Auto Re-arm

If a door is not opened and closed within 2 minutes of a disarming command, the doors will passively re-lock and the alarm system re-arm.

Passive Immobilisation

In order to provide a measure of automatic vehicle security, independent of any driver initiative, the system will automatically immobilise the engine's cranking and fuel pump circuits after the ignition has been turned off for 40 seconds, or a similar period has elapsed since the last mobilising command. With the ignition off, the alarm tell tale will indicate that immobilisation is in effect by a brief flash every 1.5 seconds. With ignition on, immobilisation is indicated by a continuously lit tell tale.

To mobilise the car (i.e. allow engine starting) with ignition on or off, press once the transmitter centre button; the alarm tell tale will be extinguished.

Arming the Alarm/Locking the Doors

To lock the doors and arm the alarm, remove the ignition key, shut both doors, and check that the tailgate is properly closed.

- Press once the raised logo button on the transmitter key.
- This command will be acknowledged by a single flash of the hazard lamps.
- Both doors will be locked, and after a settling period of 40 seconds, the engine will be immobilised, and the alarm system armed.
- The alarm tell tale will flash once every 3 seconds.
- The interior and mood lamps (if lit) will fade off.

Note:

i) If the system is armed when a door is not fully shut, three ***triple*** beeps will sound as a warning and the doors will not be locked. Opening a door will ***not*** trigger the alarm.

ii) If the system is armed when the tailgate is not fully closed, three warning ***double*** beeps will be heard, and the doors will not be locked. Opening a door in this instance ***will*** trigger the alarm.

When fully armed, and after the settling period of 40 seconds has expired, the alarm will be triggered by any of the following actions:

- Interruption of the car battery power supply or siren cables.
- Energising the ignition circuit ('hot wiring').
- Opening a door;
- Opening the tailgate;
- Movement detected within the cabin (unless de-selected).

If the alarm is triggered, the hazard warning lamps will flash and the wailing siren will sound for a period of approximately 30 seconds before closing down and resetting, ready for any further triggering input. If a trigger is continuously present (e.g. door left open), the alarm will repeat for a maximum of eight 30 second cycles before excluding the triggering sensor for the remainder of the armed period.

To silence the siren, press once the central, disarm button on the transmitter key. If necessary, press a second time to disarm the alarm. Note that if the vehicle battery has been disabled, it will not be possible to interrupt the siren until completion of the sequence.

Alarm Tell Tale Summary

Brief flash every 3 secs;	Immobilised, alarm armed.
Brief flash every 1.5 secs;	Immobilised, alarm disarmed, ignition off.
Tell tale on;	Immobilised, alarm disarmed, ignition on.
Tell tale off;	Mobilised, alarm disarmed, ready to start.

Turning Off the Interior Movement Sensor

A microwave sensor mounted behind the centre console, will detect substantial physical movement within the cockpit, and trigger the alarm.

If an animal is to be left in the vehicle, or if for any other reason it is desired to exclude the interior movement sensor, press once the transmitter logo button in the normal way to set the alarm, and then press a second time (within 2 seconds) to exclude the interior movement sensor. A single beep will be heard as confirmation. The sensor will automatically re-activate next time the alarm is armed.

Opening the Tailgate

To open the tailgate, press twice the end button on the transmitter key; the latch will release and allow the tailgate to be opened, assisted by pressurised struts. Boot lamps will switch on automatically whenever the tailgate is open.

With the ignition switched on, warning of an open or not fully latched tailgate is provided on the right hand screen in the instrument panel via the vehicle silhouette graphic.

To close the tailgate, ensure that no persons or objects will be trapped before pulling down the panel and pressing firmly over the latch to assure its complete engagement. Guard against inadvertently locking the transmitter key in the boot.

Manual Activation of Siren

If, for personal security reasons, it is desired to manually activate the siren at any time when the ignition is off, hold pressed the end button on the transmitter key for 3 seconds. The wailing siren will sound, and the hazard lamps flash for a period of 30 seconds. To stop the siren, press once any of the transmitter buttons.

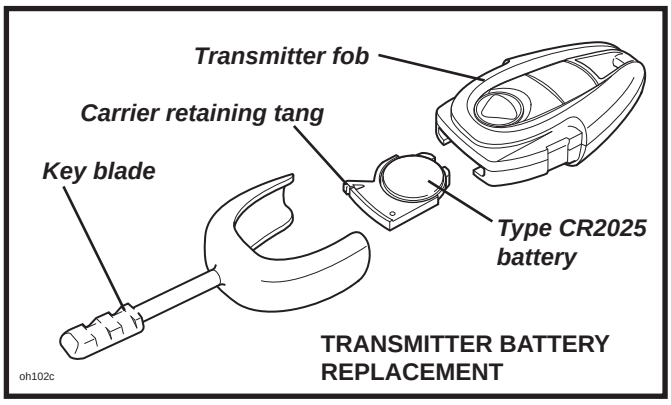
Manual siren activation will not affect the alarm system status.

Transmitter Key Battery Replacement

The transmitter fobs will normally operate within a range of 5 metres from the car, but this may be reduced by the presence of other radio signals in the vicinity.

The transmitters are powered by a long life 3V Lithium battery, type CR2025, readily available from electrical outlets, which with normal use should last for 3 years. To ensure continuity of operation, it is recommended to renew the batteries every 12 months:

- Using a small screwdriver, prise the transmitter fob from the key blade carrier utilising the slot provided on the back of the case.
- At the end face of the fob, prise the retaining tang inwards whilst withdrawing the battery carriage from the fob.
- Remove the old battery and wait for 10 seconds before inserting a new battery, with +ve sign lowermost, and holding the battery only by its periphery.
- Slide the battery carriage back into the fob, pressing firmly to engage the clip, and then clip back onto the key blade.
- The transmitter should now operate normally.



TRANSMITTER BATTERY REPLACEMENT

Emergency Disarming/Mobilising

If the key transmitter is damaged or fails to function, and a spare key is not available, the alarm system's unique sPecific Identification Number (PIN) may be used to disarm the alarm **provided that** access is available to the cabin:

- Turn on the ignition. The alarm tell tale will light.
- If the alarm is armed, accessing the cabin, or turning on the ignition will trigger the alarm until completion of this emergency process.
- Within 10 seconds, turn the ignition off; the tell tale will begin to flash.
- After a number of flashes corresponding to the first digit of the PIN, turn on the ignition. Note that the first flash may not be of full duration (but is still to be counted) dependent on the waveform position at time of ignition switch off. Note that 10 flashes correspond to a zero digit.

- Turn off the ignition and after a number of flashes corresponding to the second digit of the PIN, turn on the ignition. Repeat this process until all 5 digits have been completed. If, at any stage of the process, a number is entered incorrectly, the system will immediately revert to the start, so that the whole PIN must be re-entered.
- If the PIN is entered correctly, the alarm will now be overridden and the engine mobilised. However, automatic immobilisation will still occur after an ignition off time of 40 seconds, requiring a repeat of the above procedure to mobilise. Note that automatic re-arming of the alarm and automatic door locking cannot occur until a working transmitter is used to operate the alarm.

Programming Additional Transmitters

Two transmitter fobs are provided with the new car. If one transmitter is lost or damaged, a replacement should be obtained immediately, and programmed to the car alarm controller using the alarm system's unique sPecific Identification Number (PIN). A maximum of 6 transmitters may be programmed to the car, any thereafter overwriting the first to have been programmed.

- With the engine immobilised (tell tale flashes briefly once per second), turn on the ignition.
- Enter the PIN as detailed in the emergency disarming process above, followed by the additional two digits 1, 1.
- The tell tale will flash rapidly for one second, then turn off.
- Within 8 seconds, press any button on the transmitter to be programmed. The tell tale will then pulse rapidly and the siren will beep.
- Within 10 seconds press any button on the next transmitter to be programmed (if applicable), and repeat this process for all remaining transmitters.
- When all transmitters have been programmed, wait for 10 seconds, or turn off the ignition.

To disable a lost or stolen transmitter from the system, use the above procedure to programme 6 transmitters, if necessary repeatedly reprogramming the same transmitter if less than 6 programmed transmitters are to be used.

Disconnecting the Car Battery

In order to prevent the alarm being triggered, before disconnecting the vehicle battery, ensure that the alarm is disarmed.

Trigger Report Back and Feature Selection

A facility is provided to identify the source of an alarm triggering event (trigger report back), as well as allowing certain features of the system to be selected or de-selected. The same procedure described above to input a PIN is used, but in this case to input the programming code '123'; the tell tale will then flash rapidly for 1 second, then remain lit. Commencing within 10 seconds, continue this procedure to input the two digits of the feature code, after which the tell tale will flash rapidly for 1 second then beep once or twice to indicate the new status of that feature; one for 'ON', twice for 'OFF'. Selection will alternate each time that feature code is entered. Note that within 10 seconds, a second feature code (or repeat) may be selected from this point by entering only the 2-digit code. To exit programme mode, simply wait for 10 seconds.

Feature	*Code*	*Default*	*1 Beep*	*2 Beeps*
Revert to defaults	123 00			
Trigger report back	123 11	see below		
Unlock with ignition	123 33	OFF	ON	OFF
Lock with ignition	123 34	OFF	ON	OFF
Selective door unlock	123 41	ON	ON	OFF
Audible tones*	123 61	OFF	ON	OFF
Lock with auto re-arm	123 87	ON	ON	OFF
Door open audible warning	123 88	ON	ON	OFF

* When selected, a single beep will sound when the alarm is armed, and a double beep when disarmed. To silence for a single activation, press briefly the transmitter auxiliary (3rd) button prior to pressing the arm or disarm button.

Trigger report back: After the code 12311 has been entered, the tell tale flashes out a code(s) to indicate the source of the alarm trigger:

No. of flashes	*Triggering sensor*
1	Microwave movement sensor
2	Door, bonnet or boot lid
3	Ignition energisation
4	Manual siren activation

Quick Test

To facilitate testing of the alarm system, the unit can be placed into a 'Quick Test' mode by arming the alarm with one transmitter key, and disarming with another. In this mode, the system will shorten the siren time to 2 seconds, the immobiliser arm time to 5 seconds, and the settling time to zero. To exit this mode, simply wait for 2 minutes without any further inputs.

Note that in Quick Test mode, any movement detected by the microwave sensor will trigger only the tell tale and not the siren. The 2 minute timer will not be extended.

Location of Alarm Components

The alarm system components are located as follows:

- Electronic Controller/Immobiliser: Mounted on the top face of the scuttle beam at passenger's extreme end. Accessible after removal of the fascia dash panel.
- Siren Unit: Mounted on the underside of the front subframe LH longeron, ahead of the lower wishbone forward pivot. Accessible after removal of the front undertray.
- Microwave sensor: Mounted behind the centre console.
- Door Sensor: Switch incorporated into each door latch mechanism.
- Tailgate Sensor: Incorporated into the latch mechanism.

MR.2 - CENTRAL DOOR LOCKING

The central door locking (CDL) operates on the driver's and passenger's doors in conjunction with the security alarm system.

To open the doors from outside:

To unlock the doors from outside, press the central, unlock button on the transmitter key. The first press will unlock just the driver's door. Press a second time to unlock the passenger's door.

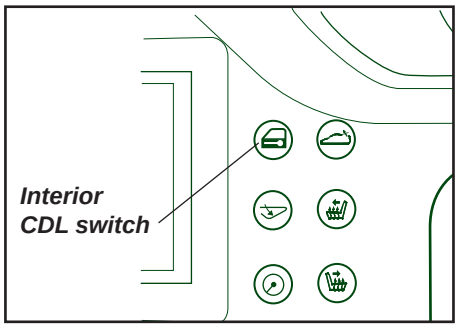
When the door is opened, a fully closed window will drop slightly, preparatory to easing its subsequent closing, and the interior and footwell will be illuminated. If the driver's door is opened whilst the ignition is off but the key is in position, or if the exterior lights are switched on, an audible warning will sound.

On shutting the door, the window will close automatically unless already open by request, and the footwell illumination will be extinguished. The interior lamp will remain lit for 2 minutes, or until the ignition is switched on.

Interior Door Lock Switch

If it is desired to lock the doors from inside the car, for example to deter highjack attempts, press the door lock switch in the cluster inboard of the steering column, with ignition on or off. Both doors will be locked and the switch will light up as a reminder.

Alternatively, each door can be locked individually by depress ing the button at the rear end of each door sill, but this action will not activate the lock switch illumination.



Dynamic (drive away) Locking

This selectable feature will automatically lock the doors when road speed first exceeds 10 mph (15 km/h). The doors will remain locked until either the interior door lock switch is pressed, or each door is unlocked manually by lifting the door sill button.

To select Dynamic Locking, turn on the ignition and hold the interior door locking switch pressed for at least 5 seconds, until a single beep is heard as confirmation. The feature will remain selected throughout

further ignition cycles until the switch is again pressed for 5 seconds and a double beep is heard, confirming de-selection.

Note that the lighting up of the interior door locking switch provides a visual indication of the door lock status (locked when lit).

WARNING: Whether locked using the locking switch, sill buttons or 'drive away locking' feature, the interior release handles will be disabled. Before opening, the door must first be unlocked by pressing the interior lock switch, or lifting the door sill button.

To open the doors from inside:

(Please also see Service Notes section BV12a for Inteva door latches)

To open the door from inside, first unlock if necessary by pressing the interior lock switch, or lifting the door sill button, and then pulling the door release handle located towards the front of the door.

On opening the door, a fully closed window will drop slightly to aid subsequent door closing, and the interior and footwell lamps will light. If the driver's door is opened when the ignition is off but the key is in position, or if the exterior lamps are on, an audible warning will sound.

After shutting the door, the window will close automatically (unless already open by request), and the interior lamps will be extinguished after a 2 minute delay.

To lock both doors, press once the raised logo button on the transmitter key.

Locking The Doors Mechanically

(Please also see Service Notes section BV12a for Inteva door latches)

In the event of a discharged vehicle battery, or an inoperative transmitter key, the right hand door may be locked by pressing down the door sill button, and holding the exterior handle raised as the door is closed. The left hand door may be locked in a similar manner, or alternatively, may by locked by using the key in the exterior lock barrel; insert the key, turn fully clockwise, return to the vertical and withdraw. To unlock, insert the key in the lock, turn fully counterclockwise, return to the vertical and withdraw.

Note:

- Locking the doors mechanically will not arm the alarm system.
- When locking both doors by pressing down the sill buttons, be aware of the potential for inadvertently locking the keys in the vehicle.

Inertia Switch

The safety inertia switch is designed to operate on impact, typified by vehicle collision, to switch off the fuel pump, and thus minimise any fire hazard. The central door locking will also be triggered to unlock the doors.

The inertia switch is mounted on the backstay at the left hand side of the engine bay, ahead of the airbox, and is reset by pressing the rubber diaphragm button on the top of the unit.

CDL Component Location

A CDL actuator is mounted on a plate integral with the latch mechanism with which it interacts via a rotary link. A CDL control module is mounted on the passenger end of the scuttle beam, at the top of the cabin side vertical face, and is accessible after removal of the fascia lower panel.

MR.3 - ELECTRIC WINDOWS

The switches for the electric window operation are mounted in the door trim panel armrests, a single switch for the passenger and one for each door for the driver. The switches are operative with the ignition key at position I or II, at which time the icon in the switch will be illuminated.

To lower a window, press down the appropriate switch; if held for more than a second, the window will automatically lower fully. Lift the switch to raise the window (no one-touch raising).

To ease door closure, and optimise the sealing of the frameless door glass against the weatherstrips, a fully raised window will automatically drop a small distance when the door is opened (preparatory to closing), and rise again after the door is shut.

Note: If the battery supply is interrupted, the one touch down and auto drop features will not function. There will be an increased risk of damage to the door window seals until:

- each window is fully lowered and the switch held for 2 seconds (a click will be heard).

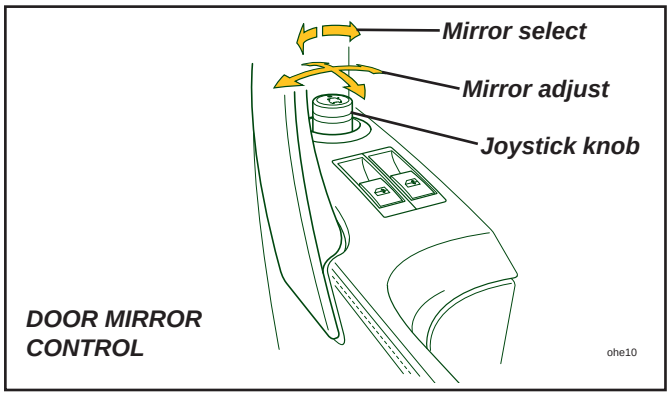
The electric window lift mechanism uses an electric motor and winder drum driving a steel cable around top and bottom guide pulleys to a lift block. The window glass is fixed to the lift block which is guided by a vertical rail. Fuses C9 and C10 protect the window lift motors, and C33 the control switches. The door harnesses are routed to the scuttle area via a grommet in the 'A' post area ahead of the door hinge post.

MR.4 - DOOR MIRRORS

Rear view mirrors are fitted on both driver's and passenger's doors, and include the following features:

- Electric adjustment of mirror glass;
- Mirror glass heaters;
- Optional electric fold flat facility;

Mirror adjustment: The mirror control switch is located in the driver's door armrest, ahead of the door window switches, and comprises a combined rotary selector switch and joystick. To adjust the mirror, turn the ignition key to position I or II, select the right or left hand mirror by turning the knob to the appropriate arrow, then use the knob as a joystick to move the mirror plane in any of four directions. Note that the mirror glasses are convex to provide a wider field of vision, but by so doing, make objects seem smaller and farther away than when viewed through a flat glass. Take care when judging distances and approach speeds until familiarity has been gained.



DOOR MIRROR CONTROL

Fold flat (if fitted): If necessary, to reduce obstruction when parked, both mirrors may be folded flat against the doors; turn the ignition key to position I or II, select the central 'fold' rotary position on the joystick, and hold the joystick rearwards until both mirrors have stopped moving. To unfold, hold the joystick forwards until mirror movement stops. The field of vision setting will be retained.

Mirror heating: Heating elements in the mirror glasses are energised in conjunction with that of the heated rear screen. The switch is located in the heater control panel, and will light up amber when the heater circuits are operating, but due to the high current demand, this function requires the engine to be running. The circuits will turn off after the switch is pressed a second time, or the ignition is switched off, or automatically after a ten minute period has elapsed.

Component Location

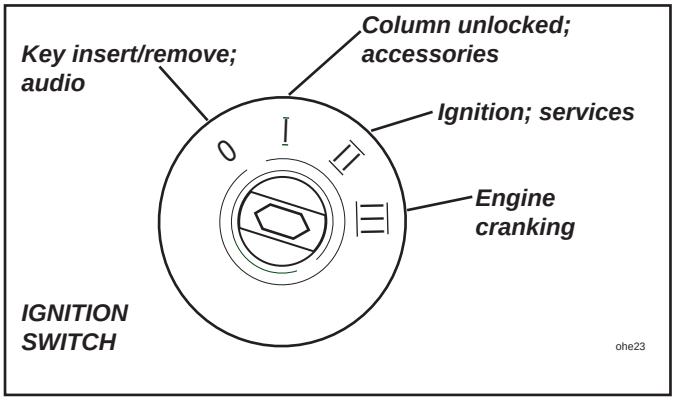
A 'mini' relay for the heater circuit is mounted in the front fuse/relay station. Mirror control switch fuse is C33, HRS/mirror heater switch fuse C28, heater relay input fuse MC6, relay output to mirrors fuse C31.

MR.5 - SWITCHES & INSTRUMENTS - DRIVER'S INFORMATION

Ignition Switch/Steering Lock

The switch/lock is located on the right hand side of the steering column. With the key out of the switch, the steering column is locked, and the following electrical circuits will function:

- Locking and alarm system.
- Horns.
- Hazard warning lamps.
- Sidelamps and headlamps.
- Fuel filler flap release.
- Interior lamps.
- Automatic operation of cooling fans and re-circ. pump.
- Glovebox latch.
- Boot auxiliary power socket.



0 With the key inserted into the switch at position '0', the audio system and glovebox lamp are functional.

I To unlock the steering, turn the key clockwise to the 'I' position. If the key is reluctant to turn, wriggle the steering wheel to ease the load on the steering lock. At this 'accessories' position, the following electrical circuits will function in addition to those above:

Auto only: P - Park is automatically selected.

- Power windows.
- Windscreen wiper and washer.
- Interior fan.
- Door mirror adjustment and fold.
- Cabin auxiliary power socket.

II Turn further clockwise to the 'ignition' position to activate all remaining electrical systems (note that some circuits require the engine to be running).

III Turning further clockwise to '**III**' against spring pressure will operate the starter motor. As soon as the engine starts, allow the key to return to position 'II'. For the correct starting procedure, see the later chapter 'Starting Procedure & Running In'. To stop the engine, turn the key back to 'I'.

Note that in order not to compromise engine starting, all electrical functions operative at position 'I', will drop out whilst the engine is being cranked.

0 To remove the key, turn fully counterclockwise to '0' and withdraw. The steering column lock will be acti vated when the key is withdrawn but may not engage until the steering is turned and the mechanism is aligned.

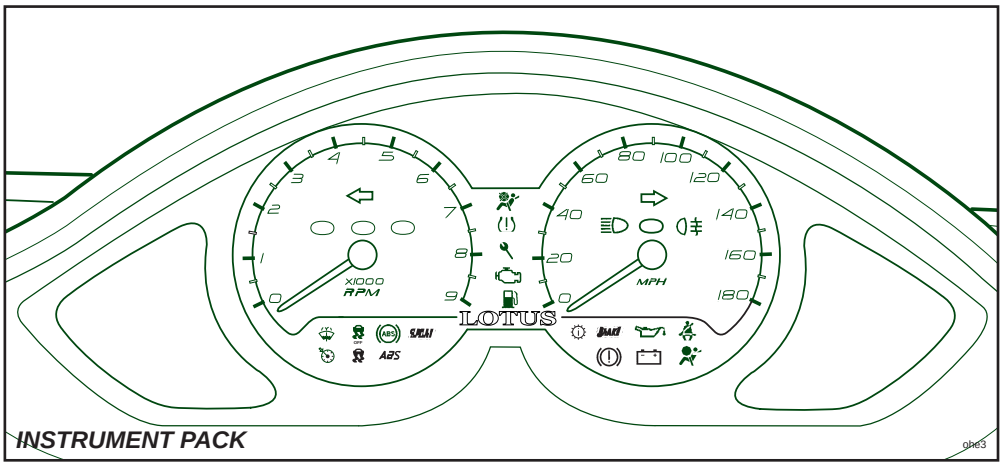
Auto only: the key cannot be removed from the ignition switch until P has been selected.

NOTICE: DO NOT leave the ignition switched on for long periods without the engine running. Although the engine ignition system itself draws no current when the engine is stopped, a battery drain will occur through other circuits even when auxiliary equipment is not being used.

WARNING:

- **Do not push or tow the car unless the key is first used to unlock the column and is then left in the lock. Withdrawing the key will cause the steering to lock.**
- **Never remove the key from the ignition switch or turn off the ignition while the car is moving. Withdrawing the key will cause the steering to lock and may cause an accident resulting in serious injury or death.**

INSTRUMENT PACK



INSTRUMENT PACK

The I.P. (Instrument Pack) is a sealed non-serviceable unit on which the following driver information is displayed:

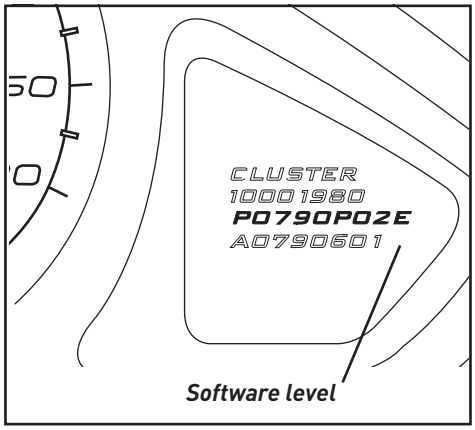
- Speedometer
- Odometer
- Trip recorder
- Tachometer
- Tell Tales
- Fuel level
- Fuel consumption
- Engine coolant temperature
- Ambient air temperature
- TPMS (Tyre Pressure Monitoring System) if fitted
- Clock
- Reversing sensor buzzer (if reverse proximity sensors fitted)

Because the unit of vehicle speed is printed onto its face, instrument packs are produced as either MPH or KPH variants, and installed with non-erasable base software to make them compatible with vehicle by VIN range and airbag system fitted.

Base Software

Although the base software cannot be altered, in the event of an issue with the instrument pack, the version of software fitted can be checked if requested by a Field Service Engineer, to do this:

- Sit in the vehicle, ensure that both doors are closed.
- Press and hold down the info button on the left hand column stalk.
- Insert the ignition key into the ignition switch and turn to position II, ignition services.
- The software level information will then be displayed in the right hand instrument panel screen.



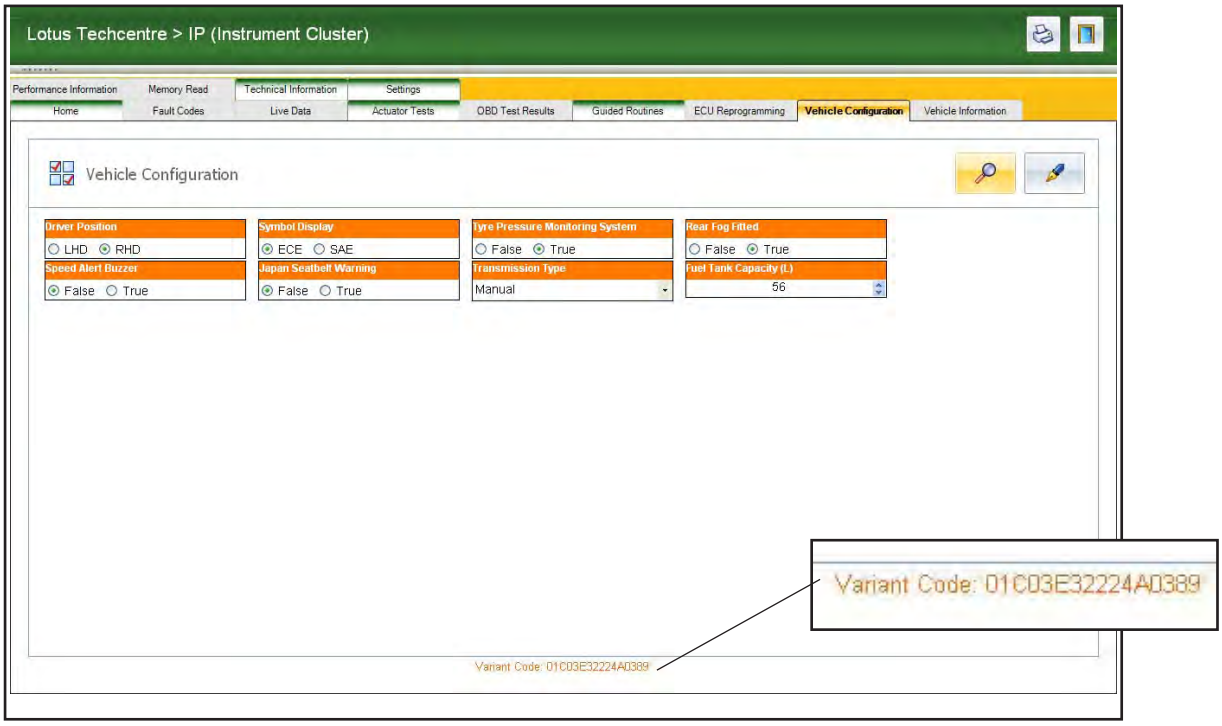
Vehicle Configuration

The instrument pack can provide the correct functionality and display options for any Evora production vehicle regardless of it's model type, tell tale display and options etc required.

The instrument packs functionality and display are determined by the 'configuration' stored in the vehicles Electronic Control Module (ECM) also referred to as its variant code (see section MR.14 for further ECM information).

If the instrument packs display does not appear to be functioning correctly then check the configuration of both the instrument pack and ECM is correct using Lotus TechCentre before carrying out further diagnostic action.

Instrument cluster configuration screen as viewed using Lotus TechCentre



If it is necessary to renew an instrument pack then it is highly recommended that before removing the existing unit that you note down its variant code and current mileage, as this information will have be downloaded onto the replacement pack using the Lotus TechCentre vehicle configuration screens.

Note: Although it is possible to manually enter the variant coding from the option screens available there is a risk of making an error if this option is selected which may affect the display and or functionality of the instrument pack.

If the variant coding has not been recorded or if the instrument pack will not communicate with Lotus TechCentre then it is advised to contact Lotus Cars Technical Publication Department stating the full vehicle VIN requesting the variant code information.

Although vehicle mileage can be reset using Lotus TechCentre, to prevent potential abuse a limitation to this function has been imposed, once the mileage/kilometre display on the odometer exceeds 50miles or 75 kilometres the odometer reading can no longer be altered.

For further information see the 'Lotus TechCentre User Guide' which can be downloaded from the Lotus Dealer Portal at:

http://dealers>Aftersales>Miscellanous Technical Information>TechCentre Information.

Instrument Pack removal

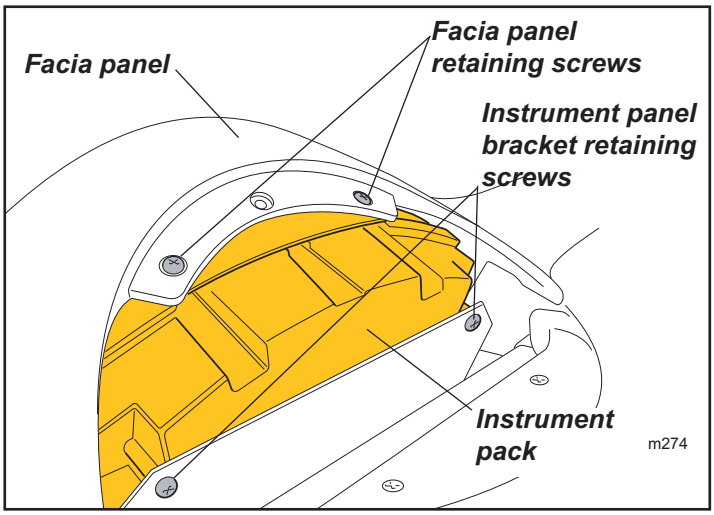
1. Retrieve current odometer and variant coding information as listed on page 10.

2. Using the steering column tilt lever, adjust the steering column down to its lowest setting.

3. Place suitable protection over the upper steering column shroud to prevent marking it withdrawing the instrument pack.

4. Remove the fascias access panel located directly above the instrument panel as well as the left hand/right switch panels (see V.E.7 for further information).

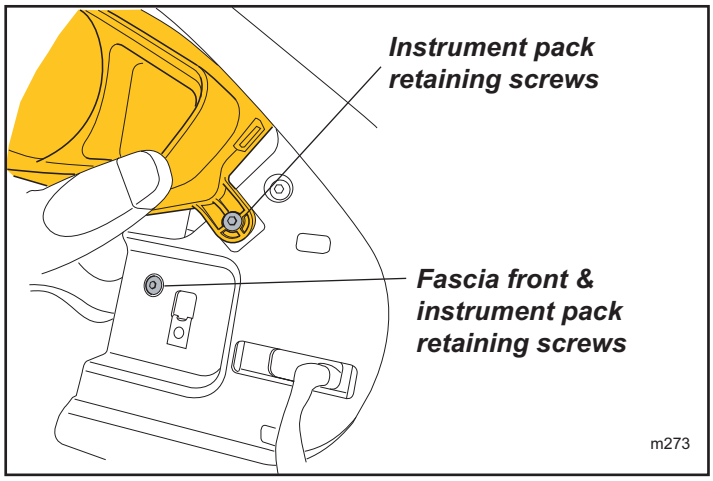
5. Release the 2 screws securing the instrument pack to the top of the fascia panel.



6. Release the 2 screws securing the instrument pack to the front of the fascia panel.

7. Release the 2 screws securing the fascia front and instrument pack bracket to the dashboard.

8. The instrument pack and retaining bracket should now feel 'loose' within the fascia panel.

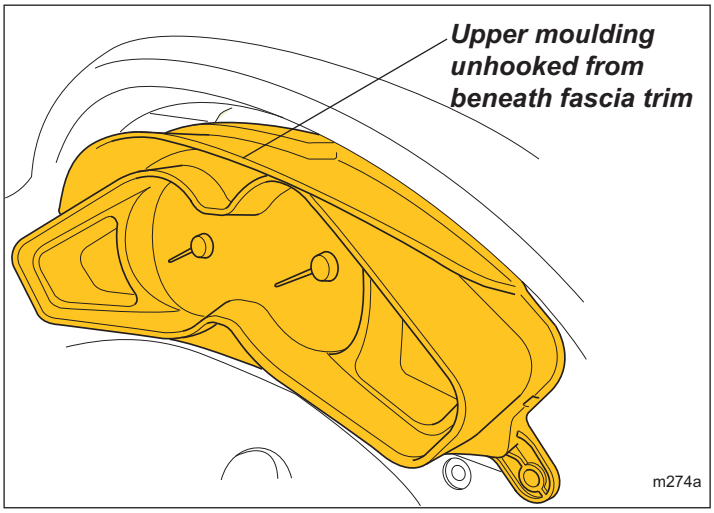


9. Unhook the instrument packs upper moulding from behind the facia trim and tilt slightly forward.

10. This will allow better access to the remaining two upper screws retaining the back of the instrument pack to the bracket.

11. Release these 2 screws, pull the instrument pack further forward and disconnect the 2 harness connectors from the back of the unit.

12. Withdraw the assembly from the fascia panel, taking care not to mark any of the trim surfaces.

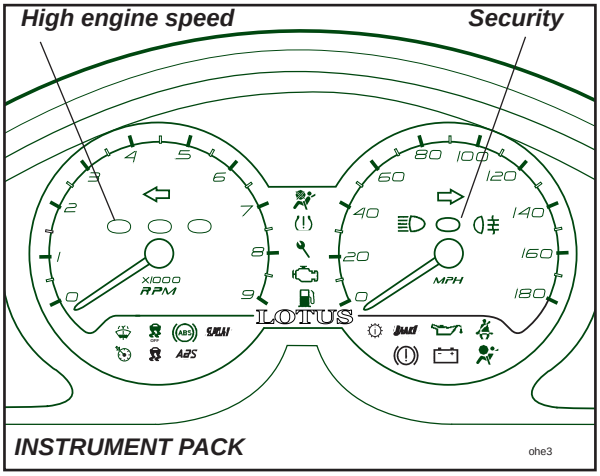


Refitting

Reverse procedure of removal except that if a new instrument pack is being fitted then the current vehicle mileage and variant code must be re-installed into the new pack using Lotus TechCentre.

TELL TALE LAMPS

Tell tale lamps are incorporated into the instrument panel to provide important information about various vehicle systems.



Bulb Check

In order to check that the warning systems are functional, all operative tell tale lamps will light for a few seconds each time the ignition is switched on - refer to the text below for details of this feature relating to particular lamps. If the lamp does not light as specified, it is possible that the warning circuit or instrument assembly may be at fault; see your dealer without delay, and be aware that there may be no warning of a malfunction with that feature.

Turn Tell Tale (green)

A left turn tell tale is incorporated into the upper face of the tachometer, and a right turn tell tale in the speedo face. A bulb check will light the lamps for about 3 seconds following ignition switch on.

When the left hand or right hand turn indicators are operating, the appropriate green tell tale will flash in unison together with an audible tone. If the tell tale fails to light, or flashes at an unusual or irregular rate, check the operation of the turn indicator lamps immediately.

High RPM Tell Tales (red)

Three red tell tale rings are incorporated into the tachometer face to warn that maximum engine speed is being approached. No bulb test function applies.

Maximum engine speed is governed for both the continuous and transient (during acceleration) states, and are detailed in the later section 'Tachometer'.

As the rate of rpm increase is potentially greater in the lower gears, the tell tale trigger points are tailored to accommodate the reaction time available. As maximum rpm is approached, the tell tales will light in the following left to right sequence:

- one red light;
- two red lights;
- three rapidly flashing lights with an audible warning.

When exploiting maximum acceleration, gearchange upshifts should be made immediately the three flashing lights appear.

NOTICE:

- A graduated engine speed limit is imposed on a cold engine to reduce possible damage and wear from a delinquent driving style.
- Using maximum rpm and the above tell tale facility should be restricted to occasions when maximum acceleration is required. Overuse will compromise powertrain service life.
- The engine is not protected from overspeeding caused by erroneous or premature downchanging. Such misuse could result in catastrophic failure, not covered by the vehicle warranty.

High Beam Tell Tale (blue)

This lamp glows blue whenever the headlamp high beams are operating. A bulb check will light the lamp for about 3 seconds following ignition switch on.

Security Alarm Tell Tale (red)

For details of the vehicle security alarm and its tell tale, see sub-section MR.1

Rear Foglamp Tell Tale - where fitted (amber)

This lamp glows amber whenever the rear fog lamp is operating (see 'Rear Fog Lamp Switch'). A bulb check will light the lamp for about 3 seconds following ignition switch on.

Passenger Airbag Off Switch - not USA (amber)

This amber tell tale will light with ignition on, whenever the passenger airbag has been disabled by the key operated switch at the passenger end of the fascia. A bulb check will light the lamp for about 3 seconds following ignition switch on.

Tyre Pressure Monitoring System (TPMS) (amber)

If the car is so equipped, with ignition on, this amber tell tale, together with an audible alert, warns of low pressure in one or more tyres. Stop the car as soon as it is safe so to do, and take appropriate action. A bulb check will light the lamp for about 3 seconds following ignition switch on.

Electrical Fault Tell Tale (amber)

The Engine Control Module (ECM) on the Evora is also used to manage various related electrical systems, and is able to detect certain types of fault, which may or may not be apparent to the driver. If such a fault is detected, which has no detrimental effect on exhaust emissions (see MIL below), this amber tell tale will light for the first 30 seconds after turning on the ignition. Interrogate using the Lotus TechCentre.

A bulb check will light the lamp for about 3 seconds following ignition switch on.

Engine Malfunction Indicator Lamp (amber)

The engine Malfunction Indicator Lamp (MIL) is provided to warn the driver that the engine management system has detected a fault which may result in increased noxious emissions from the exhaust. In order to minimise emissions and potential engine damage, various operational limitations may automatically be applied. A circuit check will light the lamp for about 3 seconds following ignition switch on.

i) If the MIL lights continuously whilst driving, immediately reduce speed and adopt a moderate driving style. Seek dealer advice without delay and avoid all unnecessary journeys.

ii) If the MIL flashes, an engine misfire has been detected which is likely to cause overheat damage to the catalytic converters. Slow down immediately and be prepared to stop.
- If the MIL then stops flashing, and is lit continuously, proceed with caution and seek dealer advice.
- If the MIL continues to flash, stop the car as soon as it is safe so to do, and switch off the engine. Seek dealer advice.

NOTICE: Continuing to drive the car with a flashing MIL may cause overheat damage to the catalytic converters, possible engine damage, increased emissions, and impaired fuel economy and driveability.
In order to comply with emissions regulations, data regarding activation of the MIL is recorded in the engine electronic controller, and may be downloaded by Lotus dealers using the TechCentre.

Low Fuel Level Tell Tale (amber)

A circuit check will light the lamp for about 3 seconds following ignition switch on. Thereafter, this amber tell tale will light, with ignition on, when approximately 5 litres of fuel remain. Refuel at the next opportunity.

Low Washer Fluid Level Tell Tale (amber)

This amber tell tale is provided to warn of low fluid level in the reservoir serving the windscreen and headlamp powerwash jets. A bulb check will light the lamp for about 3 seconds following ignition switch on, but if the lamp then remains lit, or lights after washer use, refill the reservoir with a suitable fluid at the first opportunity.

Cruise Control Tell Tale (amber)

If the car is so equipped, this amber tell tale indicates when the cruise control is enabled. For full details of this system, see later. A bulb check will light the lamp for about 3 seconds following ignition switch on.

Traction Control Off Tell Tale (amber)
Base Evora from start of production (non USA)

This amber tell tale reminds the driver that the traction control has been manually switched off. Lotus Traction Control should aways be active when driving on public roads in normal conditions. To re-activate LTC, press momentarily the LTC off switch and check that the tell tale is extinguished. For LTC details, see later.

A bulb check will light the lamp for about 3 seconds following ignition switch on.

Lotus Dynamic Performance Management Off Tell Tale (amber)
Start of production for USA market (formerly referred to as ESP (Electronic Stability Program)
All non USA vehicles from '11MY VIN0. BH_11178

This amber tell tale reminds the driver that the Lotus Dynamic Performance Management (Lotus DPM) has been manually switched off. Lotus DPM should aways be active when driving on public roads in normal conditions. To re-activate Lotus DPM, press momentarily the Lotus DPM off switch and check that the tell tale is extinguished. A bulb check will light the lamp for about 3 seconds following ignition switch on.

Traction Control Tell Tale (amber)
Base Evora from start of production (non USA)

This amber tell tale will flicker whenever the Traction Control system is triggered to indicate to the driver that the tractive limit is being broached. A bulb check will light the lamp for about 3 seconds following ignition switch on, but if the tell tale lights constantly, a fault has been detected, and traction control will not be enabled.

Lotus Dynamic Performance Management (amber)
Start of production for USA market (formerly referred to as ESP (Electronic Stability Program)
All non USA vehicles from '11MY VIN0. BH_11178

This amber tell tale will flicker whenever the Lotus Dynamic Performance Management (Lotus DPM) functions are triggered to indicate to the driver that the tractive limit is being breached. A bulb check will light the lamp for about 3 seconds following ignition switch on, but if the tell tale lights constantly, a fault has been detected, and these features will not be enabled. See your dealer without delay.

ABS Tell Tale ABS (amber)

A bulb check will light the lamp for about 3 seconds following ignition switch on, but if the lamp then remains lit, or comes on whilst driving, a fault in the anti-lock brake system is indicated. The base brake system will continue to operate normally, but without the anti-lock feature. Heavy braking, or braking on slippery surfaces may cause one or more wheels to lock and result in reduced steering response and possible loss of control.

The car may continue to be driven with appropriate care and anticipation, but should be checked and repaired at the earliest opportunity.

Sport Tell Tale SPORT (amber)

This tell tale will light up amber to indicate that 'Sport' mode has been selected, delivering increased throttle response and a reduced level of traction control. This selection will default off when the ignition is next turned on. A bulb check will light the lamp for about 3 seconds following ignition switch on.

Brake Tell Tale BRAKE (red)

A circuit check will light this lamp for about 3 seconds following ignition switch on. The tell tale will then remain lit if the parking brake is applied. Check that the tell tale is extinguished when the parking brake is released, as driving the car with the brake not fully disengaged will cause overheat damage to the rear brakes.

With the parking brake released, if the tell tale should light at any time after the 3 second check period, stop the car immediately, as the circuit has detected a dangerously low level of brake fluid in the master cylinder reservoir, possibly caused by a hydraulic leak in one of the separate front or rear brake circuits. In the event of a leak there is a danger that air may enter the hydraulic system and cause spongy operation and extended pedal travel. The divided brake circuit should ensure that emergency braking remains, but the car should not be driven until the fault has been identified and rectified.

Note that in order to inhibit false warnings of low fluid level due to surge effects, this circuit incorporates a 10 second delay, requiring that the signal be present for a minimum of this period.

Oil Pressure Tell Tale (red)

This red tell tale warns of low engine oil pressure. The lamp will be lit whenever the ignition is on and the engine is stopped, but should go out as soon as the engine is started. If the lamp fails to go out after engine start up, or comes on when the engine is running, stop the engine immediately and do not restart until the cause has been investigated and rectified.

WARNING: Continuing to run the engine with the oil tell tale lit could cause major engine damage or seizure, resulting in loss of car control and a crash. You or others could be killed or seriously injured.

Battery Charging Tell Tale (red)

This red tell tale will light whenever the ignition is on and the engine is stopped. If it lights any time when the engine is running, it indicates that the battery is not being charged, which may be due to a broken auxiliary drive belt, or an electrical fault.

Stop the car as soon as safely possible and turn off the engine. The auxiliary belt also drives the engine water pump, without which function the engine will overheat very quickly. If it can be determined that the auxiliary belt and water pump are functioning correctly, it may be possible in favourable daylight conditions, to drive a short distance to a repair facility, but do not, under any circumstances, allow the battery to become completely discharged by continuing to drive, as this may result in engine damage and the car being stranded in a dangerous position.

Seat Belt Tell Tale (red)

As a reminder to fasten the seat belts, the seat belt tell tale in the instrument cluster will flash red for about six seconds following ignition switch on, accompanied, if the driver's belt is not fastened, by an intermittent audible tone. Thereafter, if the driver's belt remains unfastened, the lamp will light continuously, but if vehicle speed should exceed 15 mph (20 km/h) the lamp will flash, accompanied by a beeping tone for a period of two minutes, unless curtailed by a speed reduction below 10 mph (15 km/h) before this time.

Airbag Tell Tale (red)

The airbag safety system, including the pre-tensioning seat belts, has a self-diagnostic feature which lights the red tell tale if a fault is detected. As a bulb check, the tell tale will light for about six seconds following ignition switch on, and then go out, but if the lamp remains lit, or comes on at any other time, a fault in the airbag system is indicated, which should be rectified without delay by your Lotus dealer.

Transmission Malfunction Indicator (amber) (IPS versions only)

The transmission warning light is illuminated if a fault is detected within the transmission, an associated control component or if the transmission oil exceeds its recommended maximum temperature.

A bulb check will light the lamp for about 3 seconds following ignition switch on.

- If the temperature of the transmission becomes too high the vehicle will default to a limited power mode and the Transmission Malfunction Indicator lamp will illuminate.
- If a fault is detected within the transmission, an associated component or if transmission oil temperature continues to rise, then the Transmission Malfunction Indicator lamp will illuminate continuously. Reduce speed immediately and adopt a moderate driving style.
- If a fault is detected within a transmission component which could affect the vehicles emissions, then the engine Malfunction Indicator Lamp (MIL) will also illuminate continuously. Reduce speed immediately and adopt a moderate driving style. See page 55 of the main handbook for further information regarding the driving style that should be adopted if the MIL lamp is illuminated or flashing.
- Even if the Transmission Malfunction Indicator lamp extinguishes, proceed with caution and seek dealer advice without delay and avoid all unnecessary journeys.

INSTRUMENTS

Speedometer

This analogue display uses an illuminated pointer to indicate road speed in either mph or km/h dependent on market. Each time the ignition is switched on, a re-setting routine will be performed with the pointer sweeping to full scale and back to zero. The scale backlighting and pointer will be illuminated whenever the ignition or sidelamps circuits are active.

Note that a digital speed display in alternative units (mph or km/h) is available in the information panel menu (see later).

Tachometer

This analogue display uses an illuminated pointer to indicate engine speed in revolutions per minute. The engine management system graduates the maximum engine speed allowed during the warming up phase, and once normal running temperature has been reached, limits continuous engine speed to 6,600 rpm (or 7,000 rpm in Sport mode). During maximum acceleration through the lower gears, very short bursts up to 6,800 rpm are allowed (or 7,200 rpm in Sport mode).

Each time the ignition is switched on, a re-setting routine will be performed with the pointer sweeping to full scale and back to zero. The scale backlighting and pointer will be illuminated whenever the ignition or sidelamps circuits are active.

Three red tell tale rings are incorporated into the tachometer face to warn that maximum engine speed is being approached, but as the rate of rpm increase is potentially greater in the lower gears, the tell tale trigger points are tailored to accommodate the reaction time available. The tell tales will light in the following left to right sequence:

- one red light;
- two red lights;
- three rapidly flashing lights with an audible warning.

When exploiting maximum acceleration, gear upshifts should be made immediately the three flashing lights appear.

NOTICE:

- The use of wide throttle openings and/or high rpm before normal running temperature has been reached should be avoided. A graduated engine speed limit is imposed on a cold engine to reduce possible damage and wear from a delinquent driving style.
- Do not run the engine continuously at its maximum speed.
- The engine is not protected from overspeeding caused by erroneous or premature downchanging, the consequences of which could be catastrophic failure not covered by the vehicle warranty.
- Use of maximum rpm and the above tell tale facility should be restricted to occasions when maximum acceleration is required. Overuse will compromise powertrain service life.

Odometer

A vehicle total distance travelled indicator, in miles or kilometers, dependent on market, is displayed at the centre top of the instrument panel whenever the ignition key is inserted. See later for the trip distance function. (Please note, odometer position for IPS models is now used for PRND display and odometer display is moved to RH information screen. (See coolant temperature display information and section FA for further information).

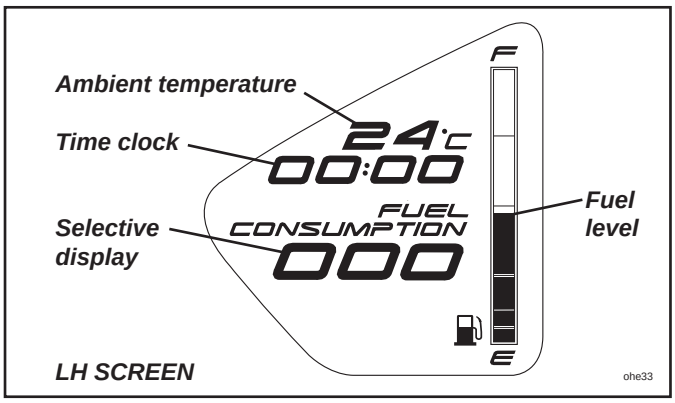
Fuel Level Display

An indication of the level of fuel in the tank is displayed, with ignition on, in the form of a vertical bar graph in the instrument panel left hand screen. The solid bar within the outline, represents the proportion of fuel remaining in the tank.

When only 5 litres remains, an amber tell tale in the instrument panel will light. Refuel at the next opportunity.

The total usable fuel capacity is 60 litres (13 imp. gal), but for re-fuelling purposes, from the time the low fuel tell tale is triggered, approximately 50 litres can be accommodated. Note that from the point of low fuel tell tale activation to the gauge reading empty, is around 5 litres. The remaining balance of 5 litres should be treated only as an emergency contingent, the use of which may entail intermittent fuel starvation and potential engine damage. In such a situation, driving style should be modified to minimise engine load and cornering forces.

If maximum engine or handling performance is to be exploited, or severe gradients tackled, a high fuel level should be maintained to ensure the greatest safety margin of fuel supply.



NOTICE: Do not allow the tank to run completely dry, as this could damage the catalytic converters and fuel pump. Any such consequence would not be covered by the vehicle warranty.

Ambient Air Temperature Display

The outside air temperature is shown on the instrument panel left hand screen whenever the ignition is switched on, with units displayed in degrees Centigrade or Fahrenheit dependent on market. The sensor is mounted by a grommet into the RH side of the engine radiator air intake duct.

If the temperature drops to 4°C (39°F) or below, the display will flash for ten seconds, accompanied by a single audible chime to alert the driver to potentially hazardous road conditions. Note that optimum accuracy will be obtained when the car is moving.

To change the displayed units between Centrigrade and Fahrenheit, see 'Information Switch' below.

Time Clock

A digital 24-hour time clock is displayed in the instrument panel left hand screen whenever the ignition key is inserted.

To adjust the clock, see 'Information Switch' below:

Information Switch

A button is mounted on the end of the left hand column stalk, and has different functionality with ignition on and off. With the ignition key inserted, but ignition ***OFF***, the button operates as follows:

Time clock adjustment

- Press the info. button for more than one second, until the hour display flashes.
- Press momentarily the info. button to advance the figure by one hour and repeat as necessary. Alternatively, a rapid double press will automatically scroll the display; press again to stop the scrolling at the desired figure.
- Press the info. button for more than one second until the seconds display flashes. Repeat the above adjustment procedure.
- Press the info. button for more than one second to enter the next mode:

Ambient temperature units

- Current temperature display units will now be displayed. To change from °C to °F, or vice-versa, press momentarily the info. button.
- To retain the displayed units, press the info. button for more than one second to enter the next mode:

Tyre pressure units (if TPMS is fitted)

- Current tyre pressure units will now be displayed. To change from bar to psi, or vice-versa, press momentarily the info. button.
- To retain the displayed units, press the info. button for more than one second to exit the adjustment mode.

With the ignition ***ON,*** the info. button operates the trip functions as follows:

Trip Recorder

The instrument panel left hand screen allows a menu of trip functions to be displayed, selected by the 'info' switch on the end of the steering column left hand stalk. When the ignition is turned ***ON***, the panel will display the trip distance since the last reset, in either miles or kilometres, dependent on market.

A single momentary press of the info. button will scroll to the next function in the following sequence:

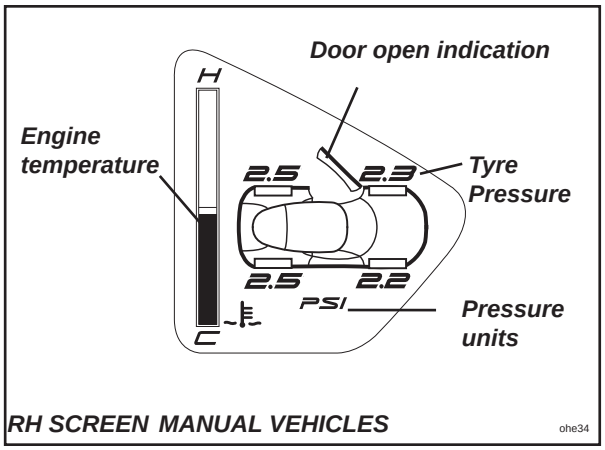
- *Trip distance.*
- *Range;* Driving distance available on current fuel level, based on average fuel consumption since reset.
- *Average fuel consumption;* In mpg or km/l dependent on market. This display will be blank for the first 5 minutes of driving time since reset, to allow data to stabilise.
- *Road speed;* Displayed digitally in alternative units (mph or km/h) to those of the analogue instrument.
- *Trip distance.*

The Trip Distance, Range, and Average Fuel Consumption can all be reset, by selecting that function and then pressing the info. switch for more than one second until the display zeroes.

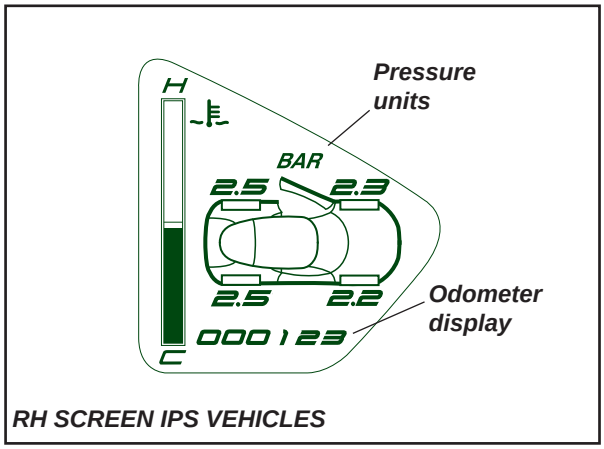
Coolant Temperature Display

An indication of the engine coolant temperature is displayed, with ignition on, in the form of a vertical bar graph in the instrument panel right hand screen. To optimise display space, the shown scale commences at

60°C (140°F), and finishes at 120°C (250°F).



RH SCREEN MANUAL VEHICLES



RH SCREEN IPS VEHICLES

The running temperature will fluctuate a certain amount as the operating conditions change, and during periods of idling or in heavy traffic, the temperature may rise to over 100°C (212°F), with the cooling fans switching on at half speed at approximately 98°C (208°F), and full speed at approximately 103°C (217°F). In order to prompt closer monitoring by the driver of temperatures over 110°C (230°F), the temperature icon will flash and be accompanied by the message '***Engine too hot***' displayed above the car silhouette.

The pressurised cooling system has a boiling point of over 120°C (250°F), and if the temperature approaches this level, the car should be stopped and the engine allowed to idle for a few minutes whilst the temperature is monitored. If the temperature continues to rise, there is a danger of engine damage; switch off and seek qualified assistance.

NOTICE: After a heavy snowfall, ensure that the radiator cooling outlet grille in the front body is cleared of snow before driving the car, or overheating may result.

Tyre Pressure Monitoring System (TPMS)

On cars so equipped, a sensor incorporated into each of the tyre valves, monitors the air pressure inside the tyre, and supplies an onboard control module with this data by radio transmission. As soon as the car has been driven a short distance, tyre pressure readings will be displayed against the corresponding wheels on the vehicle silhouette in the instrument cluster right hand screen. If any pressure should fall below 75% of the recommended value, an alert message is sent to the instrument panel, causing the tyre pressure tell tale to light up amber, and the corresponding pressure on the silhouette to flash.

If this warning should occur, stop the car as soon as it is safe so to do, and examine the affected tyre. If there is no visible damage and a tyre pump is available, correct the pressure to that stated in the Technical Data section of this handbook, and proceed with caution to a tyre dealer for professional inspection and advice. Note that the tell tale will automatically be extinguished when the correct pressure is restored. If the tyre is punctured, or no inflation equipment is available, consider using the emergency tyre inflator aerosol (see page 128), but observe the associated **WARNINGS** and be aware that the TPMS sensor in the tyre will be disabled by the sealing fluid, and must subsequently be renewed.

The TPMS incorporates self-malfunction recognition, and if a fault is detected, the low tyre pressure tell tale will flash for one minute and then remain constantly lit, this sequence being repeated for subsequent ignition cycles; **the system may not be able to detect or signal low tyre pressure**. See your dealer without delay.

Be sure to advise any tyre fitters or service technicians that TPMS is fitted, and that any replacement tyre valves include the correct pressure sensors. If a fault is indicated after wheel or tyre replacement, it is likely that a sensor has been incorrectly fitted or damaged. If a tyre valve is renewed, or is moved to a different wheel position, the TPMS will automatically identify the new configuration.

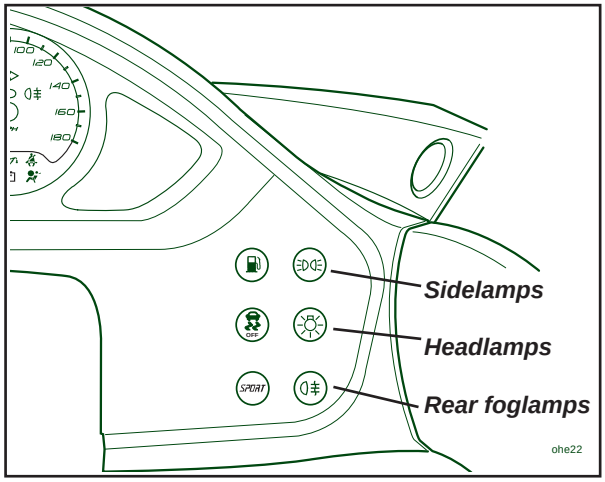
Note that the pressure sensors are powered by integral batteries, with an average service life of 10 years. It is recommended to renew all pressure sensors at this time interval.

Door/Tailgate Open Display

The instrument cluster right hand screen includes a plan view silhouette of the car, which will graphically show when either door is open, or indicate an open tailgate by flashing the corresponding area. This situation will endure until the panel is fully latched.

Lighting Switches

Lighting functions are controlled by a vertical row of three push button switches mounted in the fascia outboard of the steering column. Each switch is pressed once to switch on, and pressed a second time to switch off. Each switch button incorporates a function symbol which is backlit red with the side-lamps and ignition switched on, and which lights up brightly when the circuit is active.



Sidelamp Switch (USA - Parking Lamps Switch)

The topmost outboard switch functions with or without the ignition, and switches on the sidelamps (and side marker lamps) and some switch illumination. To help locate the switch in the dark, when the ignition is on, the button symbol will be backlit red, changing to brightly lit green when the circuit is activated.

Note that the headlamps must be off before the sidelamps can be switched off.

Headlamp Switch (USA - Master Lighting Switch)

The second switch down functions with or without ignition, and switches on the headlamps together with the sidelamps and some switch illumination. The switch button symbol is backlit red with the sidelamps on, and lights up green to indicate when the circuit is active. The steering column lever switch (see later) is used to select main or dip beam.

A second momentary press will switch off the headlamps, but leave on the sidelamps. To switch off both the side and headlamps, hold the switch pressed for more than one second.

Daytime Running Lamps (DRL) - USA markets

When the engine is started, the following 'day time running' lamps will automatically be activated: Front and rear sidelamps, side marker lamps and headlamp low beams. The sidelamps tell tale will also be lit (see above). Note that the headlamp main beams will not be operational until the master lighting switch is pressed, which will be confirmed by the corresponding tell tale.(see above).

When the ignition is turned off, the DRLs will switch off automatically, but not if the engine stalls. If the headlamps have been manually selected, the lights will remain lit until the master lighting switch is pressed.

Rear Fog Lamp Switch (where fitted)

The lowermost outboard switch controls the single rear fog lamp, which will operate only when both the ignition and the headlamps are active. The switch button symbol is backlit red with the sidelamps on, and lights up amber to indicate when the circuit is active

Note that the switch will default to 'off' whenever the headlamps or ignition are switched off, such that the switch must again be pressed when fog lamp operation is required.

In some territories, rear fog lamps may be used legally only in conditions of 'seriously reduced visibility'. Be aware that indiscriminate or forgetful use of the rear fog lamp can cause distraction and discomfort to following traffic.

Homesafe

The Homesafe feature keeps the headlamps lit for a 30 second period after locking/arming the alarm, in order to light the departure route. To activate Homesafe;

- leave the headlamps switched on;
- withdraw the ignition key;
- use the transmitter to lock/arm the alarm.

The master lighting switch will flash during the 30 second period to indicate that Homesafe is operating.

'Lights On' Warning

If the lights are on when the ignition is switched off, a 'lights on' audible warning will sound when the driver's door is opened.

Reversing Lamp, Parking Aids and Reversing Camera

With the ignition switched on, selection of reverse gear will cause:

- The reversing lamp to light.
- If fitted, the parking aid system will sound an audible acknowledgement, and then search for objects at bumper height within the detection zone of about 1.5 m (5 ft) around the rear of the car. When within this range, an intermittent beeping will be heard, which increases in frequency as the distance is reduced, becoming a continuous tone at around 300 mm (1 ft). Be aware that the sensitivity of the system will vary according to the size, position and material/density of an object.
- If fitted, the reversing camera will switch on and display an image on the audio set screen, if and when the set is manually switched on. Note that in order to cover the whole width of the car, the view will be distorted from a conventional image.

Take time to familiarise yourself with the image displayed, the parking aid beeping frequency, and the actual distance being detected before fully utilising these systems.

Hazard Warning Lamps Switch

The hazard warning switch button is located inboard of the audio set, and is backlit red when the sidelamps are switched on. The switch is enabled at all times, and when pressed, causes simultaneous flashing of all the exterior turn lamps. In addition, the switch button graphic will flash, and an accompanying audible tone will sound. Press the button a second time to switch off.

Instrument and Switch Illumination

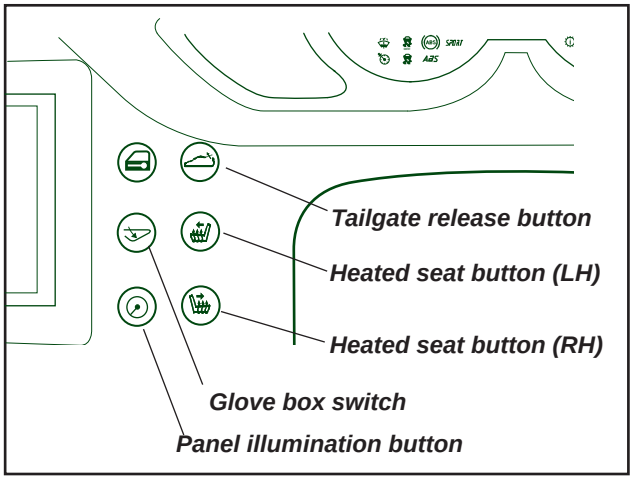
The fascia mounted push button switches are backlit red whenever the sidelamps and ignition are switched on. The sidelamps switch itself is backlit with the ignition on. Most switches will light up brightly when that circuit is activated. The brightness of both the backlighting and active states is dimmed with the sidelights on, in order to prevent distraction in the dark. Similarly, the red displays in the instrument panel side screens are dimmed when the vehicle lights are on.

The speedometer and tachometer illumination is provided by white LEDs, with the pointers coloured red. The lighting level of these instruments and that of the heating/ventilation control panel, may be adjusted by a switch button inboard of the steering column:

- To set the nightime level, switch on the sidelamps and press and hold the panel illumination button; the brightness will progressively increase. Release the button at the required level.
- The next press of the button will progressively decrease the brightness. Release at the required level.
- To set the daytime level, repeat the above procedure with the sidelamps switched off.

Heated Front Seats

From '11MY VIN BH_11178 front driver and passenger's heated seat option is available. The seats are heated and thermostatically controlled to maintain a maximum temperature of 37 ± 3 °C. Single touch switches are located in the fascia panel inboard of the steering column and will illuminate amber when depressed the seats will continue to be heated and the switch remain illuminated until either the seat heater button is pressed for a second time or the ignition is switched off. The heated seat function will always default to 'off' at the next drive cycle.



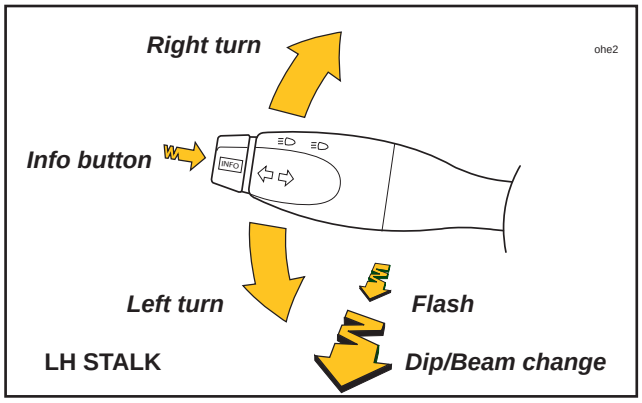
Tailgate Release Switch

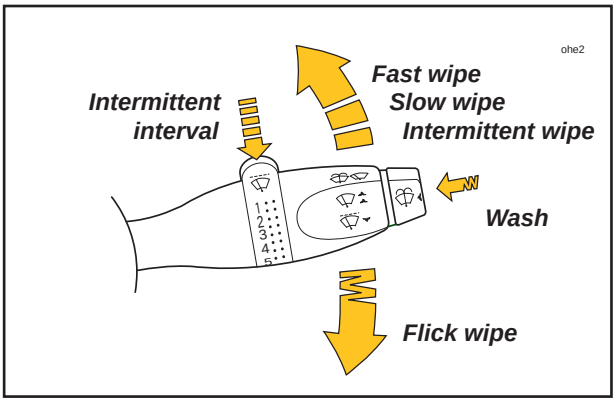
Models fitted with the heated seat option are also provided with a tailgate release button on the same switch assembly. The switch is located in the facia panel above the heated seat buttons, inboard of the steering column.

The tailgate can only be opened using this button if the vehicle is stationary with the handbrake applied and the key in the ignition. The functionality of opening the tailgate using the transmitter key remains the same (see section MR.1)

Steering Column Lever Switches

Lever switches are provided on the steering column, one on the left for headlamp functions, and one on the right for windscreen wiping and washing.





Turn Indicators/Headlamp Flash/Dipswitch

Turn Indicators: The turn indicators operate only with the ignition switched on. Move the lever down to indicate a left hand turn, and up for a right turn. The switch will be cancelled when the steering wheel is returned to the straight ahead position.

For convenience, when signalling a lane change, lightly pressing the switch up or down will allow its return under spring action. Pressing the switch for less than a second will trigger three flashes of the indicators.

Headlamps: The left hand lever switch is operated by pulling the left hand lever switch towards the steering wheel, to one of two spring loaded positions, and then releasing.

Headlamp Flash: To flash the headlamp main beams with or without ignition, pull the lever switch to the first position; the beams will light until the lever is released.

Dip/Main Beam Switching: When the headlamp switch is pressed (see page 64), the headlamps will switch on in either dip or main beam mode according to the last made selection. To change from one to the other, pull the lever fully towards the steering wheel to the second spring loaded position, and then release. Each such action will cause alternate selection of main and dip beams. Note that with ignition on, the main beam tell tale in the instrument panel will indicate the current status.

Info Button: Momentarily pressing the 'Info' button on the end of the stalk will scroll through a menu of trip functions (see above).

Windscreen Wiper & Washer Control

The right hand lever switch is enabled at ignition key positions I and II, and is operated as follows:

Wiper functions

- To 'flick' wipe the screen, press the lever switch downwards against spring pressure and release. The wiper will sweep the screen once at slow speed. Holding the lever downwards will activate further slow sweeps until released.
- For intermittent wipe, push the lever up to the first position, and select the wipe interval by rotating the numbered collar to one of its six positions, the wipe frequency increasing at higher numbers.
- For slow speed continuous wipe, move the lever upwards to the second position.
- For fast speed continuous wipe, push fully upwards to the third position.

Note: In very cold weather, before attempting to use the wiper, ensure that the blade is not frozen to the screen (use windscreen de-icer fluid), or damage to the blade or circuit fuse may be caused.

Windscreen washer functions

- For short wash/wipe, a momentary press of the button on the end of the stalk will trigger the washer pump and a single sweep of the wiper.
- For a longer wash/wipe, press the end button for longer than one second to operate the washer, and to trigger 3 sweeps of the wiper.

Headlamp Powerwash

With ignition and headlamps on, the headlamp powerwash will be activated for a short burst at the first, and every subsequent fifth request of the screen wash switch. Cycling of either the ignition or headlamp switch will reset this timing.

The powerwash jets are contained in a sliding module which normally sits flush with the surface of the headlamp cover. When activated, a stepper motor with combined pump, operates to lift the module proud of the headlamp to expose the jets and deploy a pair of high pressure water streams to the lamp cover. The module then retracts. Note that this function shares the water reservoir used for the windscreen washers.

Note:

- The combined washer reservoir has a low fluid level sensor which will activate a tell tale in the instrument cluster.
- The windscreen washer jets have heating elements which are active whenever the ignition is on.

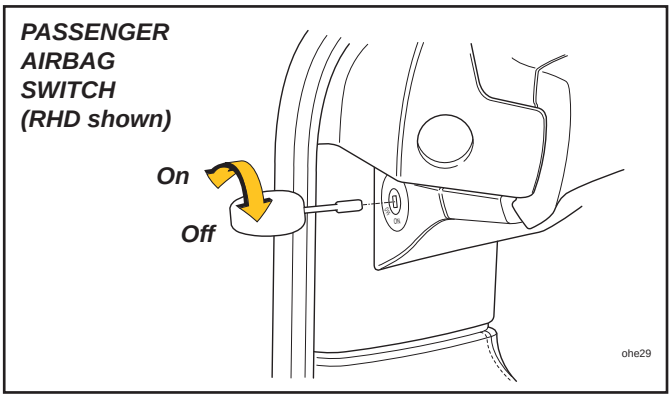
Horn

To sound the twin tone horns, which are operative at all times, press the centre pad on the steering wheel.

Passenger Airbag Defeat (PAB) Switch

If a rearward facing child seat is to be used in the front passenger seat of the Evora, it is essential to switch off the passenger airbag. If an accident should occur and trigger airbag inflation, the back of the seat could be subjected to a force sufficient to seriously injure or kill the child.

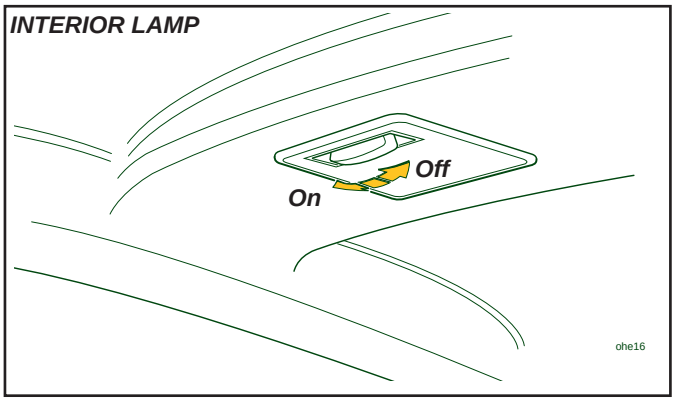
A PAB switch is located at the end of the passenger fascia, accessible only with the door open, and is operated using the mechanical ignition key; insert the key and turn clockwise to the 'OFF' position, and withdraw the key. With the ignition switched on, a tell tale lamp in the instrument panel will light up amber as a reminder that the passenger airbag has been disabled. To reinstate airbag operation, insert the key in the PAB switch and turn counterclockwise.



Interior Lighting

The main interior lamp is located centrally in the roof and incorporates a three position rocker switch:

- *Forward end depressed;* Lamp is switched off ('0').
- *Rear end depressed;* Lamp is switched on with or without ignition ('I').
  NOTICE: To guard against flattening the battery, ensure that the lamp is not switched on when leaving the car.
- *Switch central;* This is the normal, courtesy position (door symbol).



A 'mood lighting' strip crossing the fascia and extending along both door trim panels, is controlled in conjunction with the main interior lamp. Each front footwell also houses a separate lamp to aid ingress.

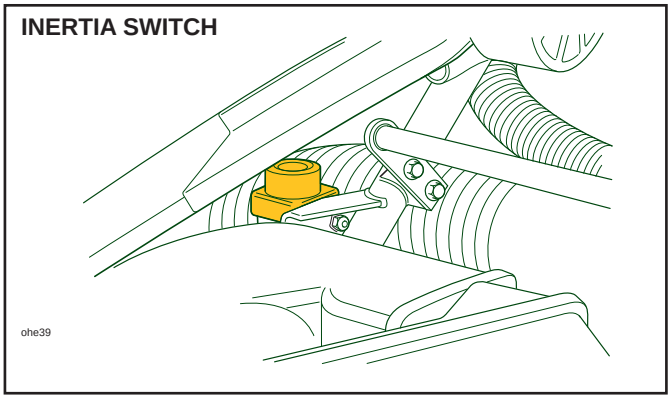
With the interior lamp switch set to the courtesy position; when the transmitter key button is pressed to unlock the doors, the interior lamp and mood lamps will fade on for a maximum period of 2 minutes. If a door is opened, the footwell lamp will also light. On closing the door, the footwell lamp will be extinguished, but the interior and mood lighting will abide for 2 minutes or until the ignition is switched on.

Similar logic will apply when opening the door to exit the vehicle, with the lighting being extinguished when the doors are locked using the transmitter, or after a period of 2 minutes.

Inertia Switch

The safety inertia switch is designed to operate on impact, typified by vehicle collision, to switch off the fuel pump, and thus minimise any fire hazard. The central door locking will also be triggered to unlock the doors.

The inertia switch is mounted on the backstay at the left hand side of the engine bay, ahead of the airbox, and is reset by pressing the rubber diaphragm button on the top of the unit.



Lotus Traction Control Base Evora from start of production (non USA)

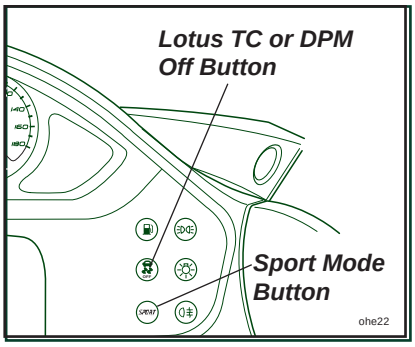
Lotus Traction Control (LTC) is a software programme integrated within the engine management and ABS electronic control units (ECUs) and uses inputs from the wheel speed sensors to determine if wheelspin is occurring. If an excessive degree of wheelspin is detected, LTC will modulate fuel injector delivery, throttle opening and rear brake application, in order to control engine power output and spinning wheel inertia, until grip is restored. This feature can improve vehicle stability in some extreme conditions of use, especially where variable or differential side/side surface grip prevails, or when maximum vehicle performance is being exploited. Refer also to 'EDL' (see below).

If the traction control tell tale in the instrument panel is seen to flicker, this is an indication that the LTC has been triggered and electronic intervention is taking place; the tractive limit has been reached and driving style should be modified accordingly.

WARNING: The enhanced vehicle control that this feature provides should not induce any relaxation of caution or vigilance by the driver. Physical limits of cornering and braking still apply, and excessive speed may result in loss of control and an accident. The driver is at all times responsible for the judgement of appropriate speed.

Traction Control 'Off' Button: In certain unusual circumstances, such as loose surfaces, deep snow or when 'rocking' the vehicle free from mud, it may be desirable temporarily to switch off the LTC. An LTC 'off' button is provided in the fascia, outboard of the steering column, and is operative only with the ignition on.

To switch off LTC, hold the button pressed for one second, until the button surround lights up in conjunction with the amber 'LTC off' tell tale in the instrument panel.



WARNING:

- **Lotus Traction Control should always be active when driving on the public highway in normal conditions.**
- **If the system is switched off when driving off-highway, be aware of the consequent change in vehicle behaviour and modify driving style accordingly.**

To re-activate LTC, briefly press the button a second time and check that the tell tale goes out. Irrespective of the system status when the ignition is turned off, LTC will automatically be activated next time the ignition is switched on.

If the on-board diagnostic system detects a fault with the LTC, the tell tale will be lit continuously; see your dealer without delay.

Lotus Dynamic Performance Management (Lotus DPM)
Start of production for USA market (formerly referred to as ESP (Electronic Stability Program)
All non USA vehicles from '11MY VIN0. BH_11178

This is incorporated into the software programme integrated within the engine management and ABS electronic control units (ECUs).

This feature enhances vehicle stability in extreme manoeuvres typified by accident avoidance attempts or misjudged cornering demands. Current vehicle behaviour is constantly monitored, and compared with a determination of driver intent as indicated by data gathered from the driving controls. When vehicle stability is at risk, the ABS is utilised to apply a measured braking force to individual wheels and modulate the fuel injector delivery and throttle opening as necessary in order to help the driver maintain control of the vehicle.

This feature can improve vehicle stability in some extreme conditions of use, especially where variable or differential side/side surface grip prevails, or when maximum vehicle performance is being exploited. See also 'EDL' (page 86).

If the Lotus DPM tell tale in the instrument panel is seen to flicker, this is an indication that the system has been triggered and electronic intervention is taking place; the tractive limit has been reached and driving style should be modified accordingly.

WARNING: The enhanced vehicle control that this feature provides should not induce any relaxation of caution or vigilance by the driver. Physical limits of cornering and braking still apply, and excessive speed may result in loss of control and an accident. The driver is at all times responsible for the judgement of appropriate speed.

Sport Mode (if fitted)

In order to cater for the preferences of some sport oriented drivers, a Sport Mode selector button is provided to deliver quicker throttle response, increased wheel slippage thresholds, no throttle reduction on detection of understeer, and a maximum continuous engine speed raised from 6,600 to 7,000 rpm. Note that switching off the Lotus Traction Control (see above) in conjunction with selection of Sport Mode, will retain the Sport features, but without any power induced wheelslip intervention. In all cases, anti-lock braking will be retained.

WARNING: Be aware that selecting Sport Mode and/or LTC OFF, will alter the handling characteristics of the car. Drivers should excercise caution until familiarity has been gained in a controlled safe environment.

The Sport Mode switch is located in the fascia panel outboard of the steering column. To switch on Sport Mode, turn on the ignition, and hold the button pressed for one second until the button surround lights up amber, accompanied by the amber 'SPORT' tell tale in the instrument panel. In order to prevent unintentional acceleration if the button is pressed whilst driving, in these circumstances, the button surround will flash in acknowledgement, but Sport Mode will not be activated until the throttle pedal has been fully released.

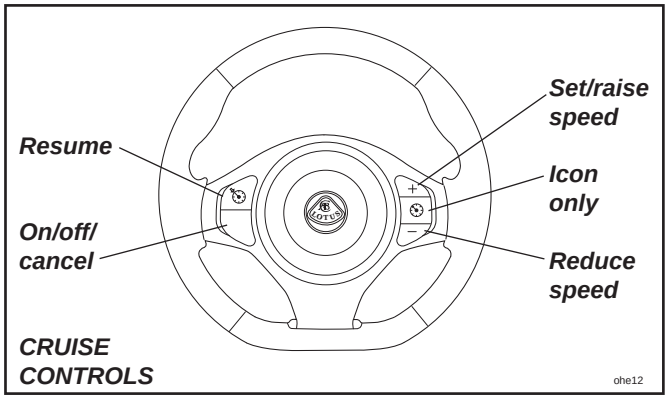
Briefly pressing the button a second time will switch off Sport Mode as soon as the throttle pedal is fully released.

Note that Sport Mode will default to 'off' at the next ignition cycle.

Cruise Control

The cruise control system is operated by four switches mounted on the steering wheel spokes.

- On/off/cancel (lower left).
- Resume (upper left).
- Set/raise speed setting (upper right).
- Reduce speed setting (lower right).



The three operational states of cruise control are:

- Off.
- Enabled (but inactive).
- Active.

To enable cruise control: The system will always default to 'off' whenever the ignition is turned off. To enable

cruise control, turn on the ignition, and press the on/off switch; the tell tale in the instrument panel will light to confirm that the system is enabled (although no speed has yet been set). Alternatively, this operation may be combined with that for activation, by pressing the on button followed by the set button (see below).
To activate cruise control: Drive the car to the desired cruising speed and press the set button. The accelerator may now be released, but the set speed will be maintained (road gradient and winds permitting). The accelerator may be used to increase speed temporarily without affecting the setting.

Note; The system cannot be activated below 30 mph (45 km/h) or above 130 mph (210 km/h), or in first or second gear .

Deactivation: Cruise control will be deactivated when any of the following actions occur:
- The brake pedal is depressed;
- The clutch pedal is depressed.
- The on/off/cancel button is pressed.

In each case, normal manual speed control will be restored, but the system will remain enabled.

Resume: To resume cruise, press resume switch. Vehicle speed will automatically adjust to cruise setting.

Changing the cruise setting: Whilst cruise is active, the speed setting can be adjusted by holding down the '+' or '-' buttons to accelerate or slow the car to the desired new speed. On release of the button, that speed will then be set. Alternatively, a single short press of either button will increase or decrease the setting by 1 mph (1.5 km/h).

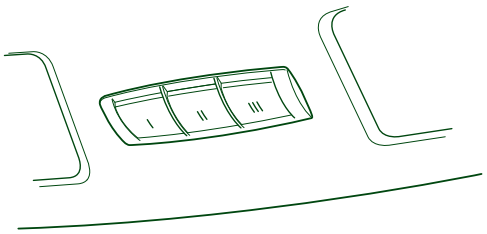
If the system is not active, the car can be driven to the desired speed, and the set button pressed.

To disable cruise control: To switch off the system, with cruise inactive, press the on/off switch; the tell tale lamp will be extinguished.

Homelink

The homelink system offers wireless control of non-vehicle based systems, such as requests for garage door opening, perimeter gate opening, and house lights switching.

The Homelink control panel and integrated transmitter unit is located in the roof section of the vehicle and features three switches, labelled I, II and III, for communication with external systems. The Homelink electronic controller must be programmed to match that of the external system through a training and synchronisation process, and is suitable for both rolling and non-rolling codes.



HOMELINK CONTROL PANEL ohe35

After programming, and with ignition on, press the appropriate Homelink button when within operating range of the system, to activate the exterior device. The LED on the Homelink control panel will light when a button is pressed as confirmation of switch contact.

For full details refer to the separate Homelink literature; LSL560 (RoW) or LSL562 (USA).

MR.6 - COMPONENT LOCATION & FUSE RATINGS

Main Fusebox

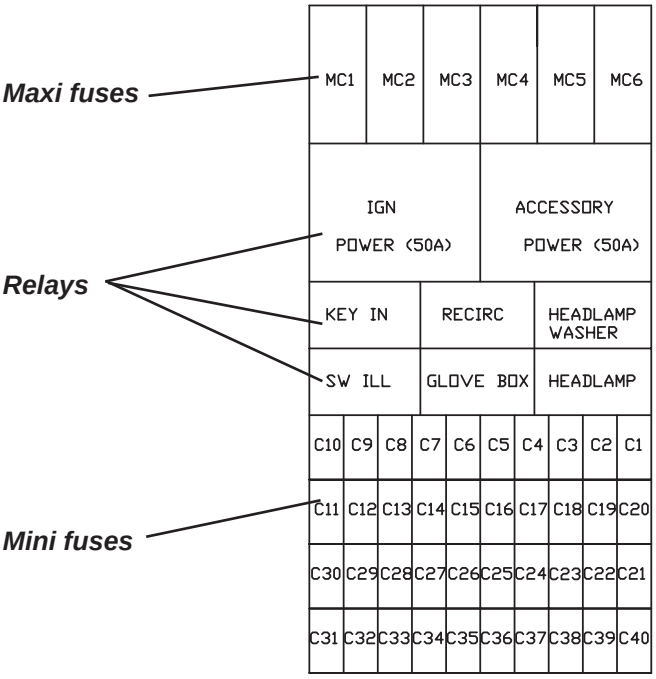
The main fuse and relay boxes are located at the front of the passenger footwell, protected by a removable panel secured by a quarter turn fastener at each top corner, and a location channel on the floor. Forty slots are provided for mini fuses which are numbered, and coloured according to their amperage rating, and may be pulled out from their slots using the fuse extractor tool clipped to the fusebox. Six maxi fuses protecting major circuits are also provided, along with six single contact change over micro relays and two 50A power relays.

Base Evora from start of production *(manual non supercharged up to '11MY VIN BH_11177)*

Slot	*Rate*	*Circuit*
C1	10A	Horn
C2	5A	Battery services
C3	7.5A	CDL, Alarm B+
C4	20A	Rad fan relay 1
C5	20A	Rad fan relay 3
C6	10A	Radio B+
C7	5A	Key-in relay
C8	2A	Ignition switch†
C9	20A	Driver's window
C10	20A	Pass. window
C11	7.5A	Hazard & Turn
C12	3A	Interior lighting
C13	20A	Int. control mod.
C14	3A	Footwell lamps
C15	5A	LH sidelamps
C16	5A	RH sidelamps
C17	15A	LH headlamp
C18	15A	RH headlamp
C19	15A	Main beam
C20	3A	Rear foglamp
C21	3A	Ign. services
C22	5A	ABS
C23	3A	Homelink
C24	3A	Brake lamps
C25	15A	HL powerwash
C26	5A	Alarm ignition
C27	-	
C28	7.5A	HVAC ignition
C29	5A	Washer jets†
C30	5A	SRS unit
C31	3A	Heated mirrors
C32	5A	Washer pump
C33	5A	Mirror/window sw.
C34	20A	Wiper motor
C35	-	*
C36	20A	Interior fan*
C37	10A	Cabin pwr. socket*
C38	-	*
C39	-	*
C40	-	*

† *Ratings for these fuses are now the same as from the introducton of the Evora 'S' and 'IPS'.*

Slot	*Rate*	*Circuit*
MC1	40A	Battery positive
MC2	40A	B+, ignition
MC3	40A	Accessories
MC4	40A	ABS B+
MC5	25A	ABS B+
MC6	25A	HRS



***Evora IPS**

Slot	*Rate*	*Circuit*
C8	5A	Ignition switch
C29	7.5A	Washer jets
C35	20A	Interior fan
C36	10A	Cabin pwr. socket forward
C37	10A	Cabin pwr. socket rear
C38	25A	Heated rear screen
C39	10A	LH heated seat
C40	10A	RH heated seat

Evora S and *manual non supercharged from '11MY VIN BH_11178)

Slot	*Rate*	*Circuit*
C29	7.5A	Washer jets
C35	20A	Interior fan
C36	10A	Cabin pwr. socket forward
C37	10A	Cabin pwr. socket rear
C38	25A	Heated rear screen
C39	10A	LH heated seat
C40	10A	RH heated seat

Front Relay Blocks

Mounted on the front fusebox panel, is a block of relays, the layout of which is inverted for opposite drive hands:

RHD

RAD FAN 1	RAD FAN 3	AUTO DEMIST	TRUNK RELEASE*	WATER VALVE
RAD FAN 2	WIPER	HRS/MIRROR		LH HEATED SEAT*
				RH HEATED SEAT*

LHD

RH HEATED SEAT*		HRS/MIRROR	WIPER	RAD FAN 2
LH HEATED SEAT*		AUTO DEMIST	RAD FAN 3	RAD FAN 1
WATER VALVE	TRUNK RELEASE*			

* Optional on introduction of Evora S

Rear Fusebox

Fuses and relays for the engine bay and rear mounted systems are contained in a fusebox mounted in the cabin, behind the left hand rear quarter trim panel (see MR.14). For access, use a coin to release the quarter turn fastener on the lower edge of the removable panel, and unhook the top edge. Twenty slots are provided for mini fuses which are numbered, and coloured according to their amperage rating, and may be pulled out from their slots using the fuse extractor tool clipped to the fusebox. Two maxi fuses protecting major circuits are also provided, along with four single contact change over micro relays, and two power relays.

Base Evora and 'S' from start of production *(manual and supercharged)*

Slot	*Rate*	*Circuit*
R1	10A	ECU, fan relay 3
R2	7.5A	Injectors
R3	10A	Ignition coils
R4	2A	Re-circ. pump
R5	-	
R6	-	
R7	5A	ECU ignition*
R8	7.5A	Engine solenoids
R9	5A	O2 heaters
R10	5A	Alternator ign.
R11	7.5A	A.c. compressor
R12	5A	Rev lamp, camera
R13	-	
R14	10A	Engine bay fan
R15	3A	Boot lamps
R16	10A	Boot pwr. socket
R17	20A	Amplifier
R18	5A	Fuel filler flap
R19	10A	Fuel pump
R20	5A	Alternator B+

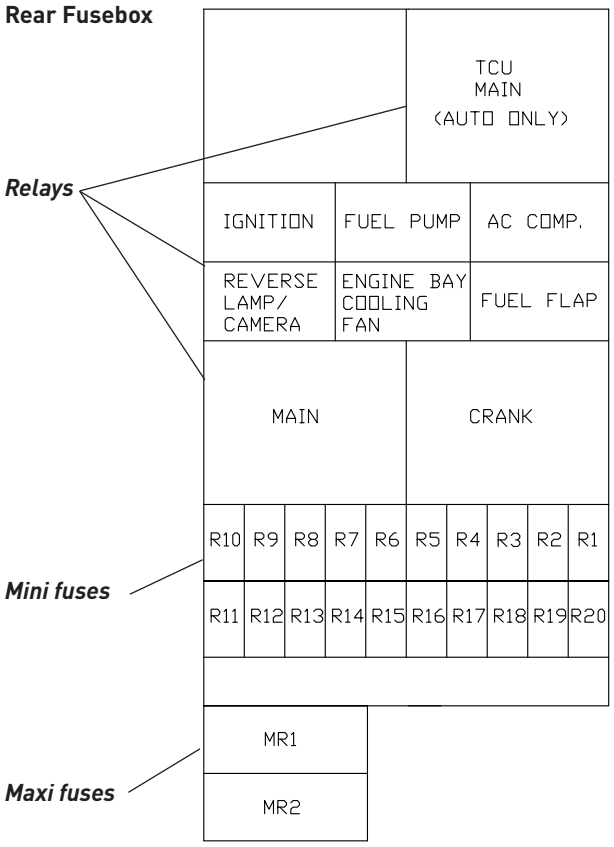
***Evora IPS**

Slot	*Rate*	*Circuit*
R5	30A	TCU main relay
R6	5A	Gear select lock solenoid
R7	7.5A	ECU ignition
R13	7.5A	Eng Acc Solenoids

Fuse colours

2A - Black	5A - Orange	15A - Light blue
3A - Violet	7.5A - Brown	20A - Yellow
4A - Pink	10A - Red	25A - Clear

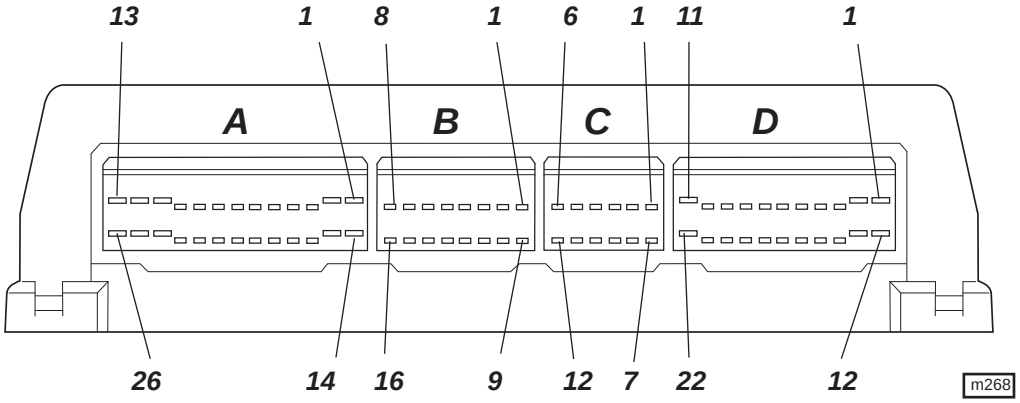
Rear Fusebox



Slot	*Rate*	*Circuit*
MR1	30A	Crank & main rly.
MR2	30A	Busbar R17-R20

Integrated Control Module

Also mounted on the front fusebox panel is the integrated control module (ICM) which is used to perform switching and control functions for many of the circuits. The module uses 4 harness connector blocks designated A,B,C,D, with all connection details identified on the relevant circuit diagram, and summarised below:



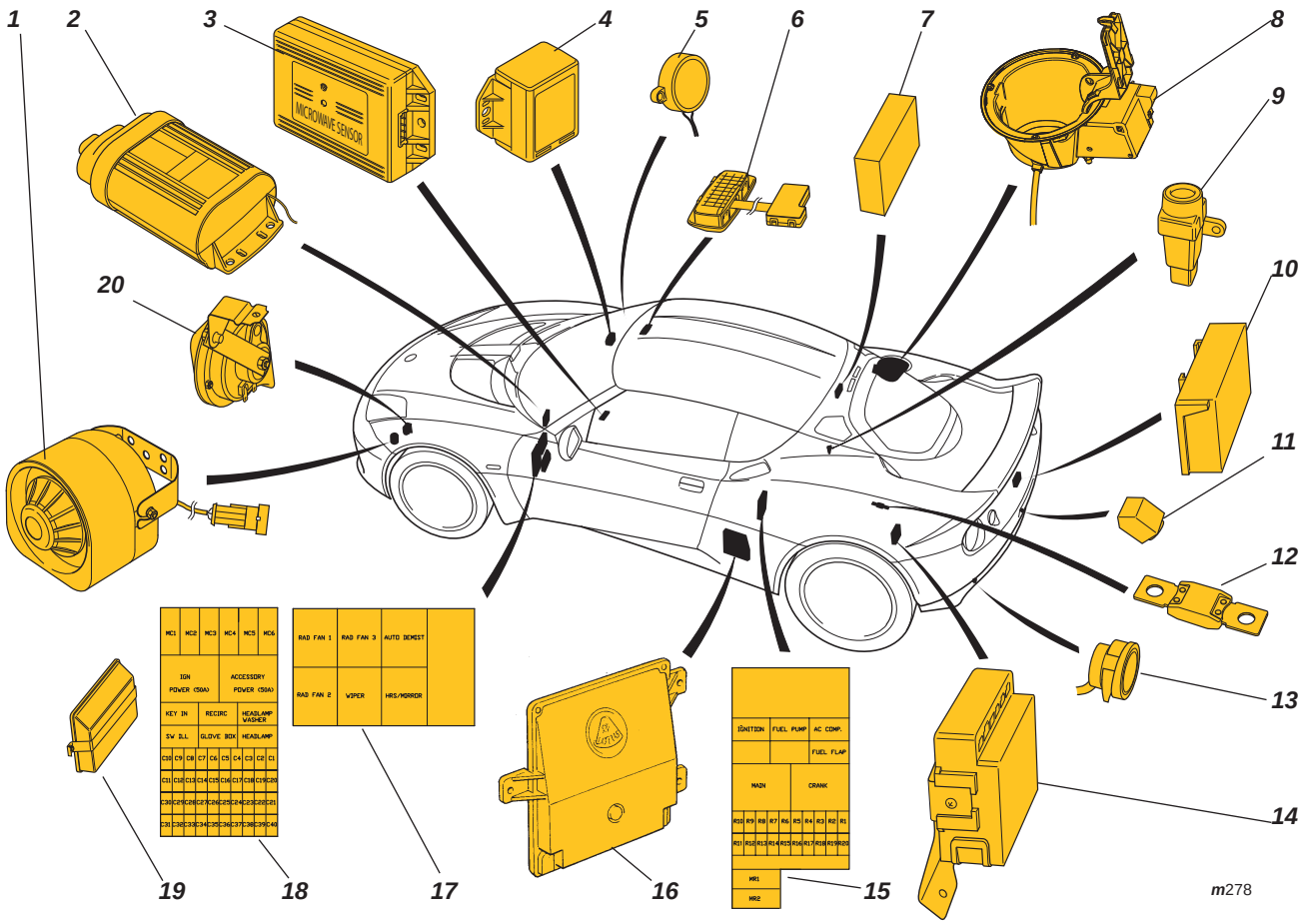
Pin	*Description*
A1	Supply for indicator relays
A2	Left indicators output
A3	-
A4	-
A5	Fog switch input
A6	-
A7	-
A8	Headlamp powerwash output
A9	A.c. recirc. control output
A10	Supply for recirc. & powerwash control
A11	Horn output
A12	Supply for horn & foglamps
A13	Supply for indicator current sense
A14	Right indicators output
A15	Battery ground
A16	-
A17	-
A18	-
A19	LED lighting option input
A20	Left indicator switch input
A21	Right indicator switch input
A22	Intermittent variable input
A23	DRL option input
A24	Battery ground
A25	Fog lights output
A26	Indicators supply after current sensing
B1	Main beam flash input
B2	Recirc. switch input
B3	Hazard switch input
B4	Wiper int. input
B5	Washer monitor input
B6	HRW switch input
B7	A.c. request switch input
B8	Driver door switch input
B9	CDL switch illumination
B10	CDL switch monitor
B11	Lock status input
B12	Unlock status input

Pin	*Description*
B13	-
B14	Passenger door switch input
B15	Headlamp switch input
B16	Sidelamps switch input
C1	Main beam flash power input
C2	Int. fan fast input
C3	Fog switch illum. input
C4	-
C5	Drive away locking output
C6	Sidelights switch illum. output
C7	HRS output
C8	Recirc. switch illum. output
C9	A.c. request output
C10	-
C11	-
C12	Diagnostic comms. KW2000
D1	ICM main supply & main lighting
D2	-
D3	HRS switch illumination
D4	Ignition switch input
D5	Headlamp relay output
D6	Hazard switch illumination
D7	Hazard active illumination
D8	A.c. switch illumination
D9	Headlamps switch illum. output
D10	-
D11	Door open output
D12	Sidelights output
D13	Main beam solenoid output
D14	Int. fan speed input
D15	Horn switch output
D16	-
D17	Eng. man. rpm input
D18	Wiper park input
D19	Wiper relay control output
D20	Auto demist input
D21	Indicators fault monitor input
D22	-

Component Location

1. Alarm siren: Left hand front wing area
2. Alarm ECU: Under dashboard
3. Alarm microwave sensor: Behind centre console
4. CDL module; Passenger side of scuttle beam vertical face.
5. Sounder parking aid (early vehicles only, now incororated into instrument pack
6. Homelink module: Front of headliner above windscreen
7. Reversing camera ECU (if fitted); In boot, on LHS of rear transom.
8. Fuel filler flap solenoid: integral to fuel filler bowl assembly (see section MR.15)
9. Inertia switch: Mounted on the backstay at the left hand side of the engine bay
10. TPMS: module in boot, LH of tailgate latch assembly behind trim cover.
11. Reversing camera (if fitted): mounted on bracket behind centre of rear bumper
12. Mega Fuse: located in-line of battery positive harness
13. Sensor rear parking aid (if fitted): mounted into rear bumper
14. Rear parking aid ECU (if fitted): In boot, on LHS of rear transom.
15. Rear fusebox and relay station: Behind access panel located in left hand rear quarter trim panel
16. ECU (Electronic Control Module) and TCU (Transmission Control Module) behind access panel located in left hand rear quarter trim panel (see MR14).
17. Front relay station: passenger side footwell
18. Front fusebox: passenger side footwell
19. Integrated Control Module (ICM): mounted on the front fusebox panel
20. Horns; one beneath the front end of each front longeron, aligned with apertures in the air intake duct. Accessible after removal of front undertray.

Audio Equipment see section MR.7
Engine management components attached to the engine; see section EMR.
Supplementary Restraint System (SRS); see section WF.
Anti-lock Braking System (ABS); see section JL.



MR.7 - AUDIO EQUIPMENT

Operating instructions for the unit fitted are contained in a separate booklet supplied by the equipment manufacturer. The audio set will operate with the ignition key inserted, and in any of its positions, including the '0' lock position.

On cars fitted with a 2-DIN audio system and 175mm display screen, the following features are also included:

- AM/FM radio;
- CD audio;
- DVD video, operable only with the parking brake engaged;
- i-pod to i-pod video interaction/control;
- MP3 player;
- USB, phono and i-pod inputs located in the glovebox;
- Satellite navigation;
- Integrated microphone for Bluetooth phone operation;
- When set is switched on, automatic display from reversing camera when reverse gear is engaged.
- Note that the screen should be cleaned occasionally with a lint free, spectacle polishing cloth.

Note

- The 'satnav' system includes a road network safety camera database, which may be activated at the owner's request when the system is set up. If using the vehicle in territories where such a feature is illegal, it is the owner's responsibility to ensure that the system is de-activated.
- Note that the quality of radio reception will vary according to audio equipment fitted and local area signal strength.

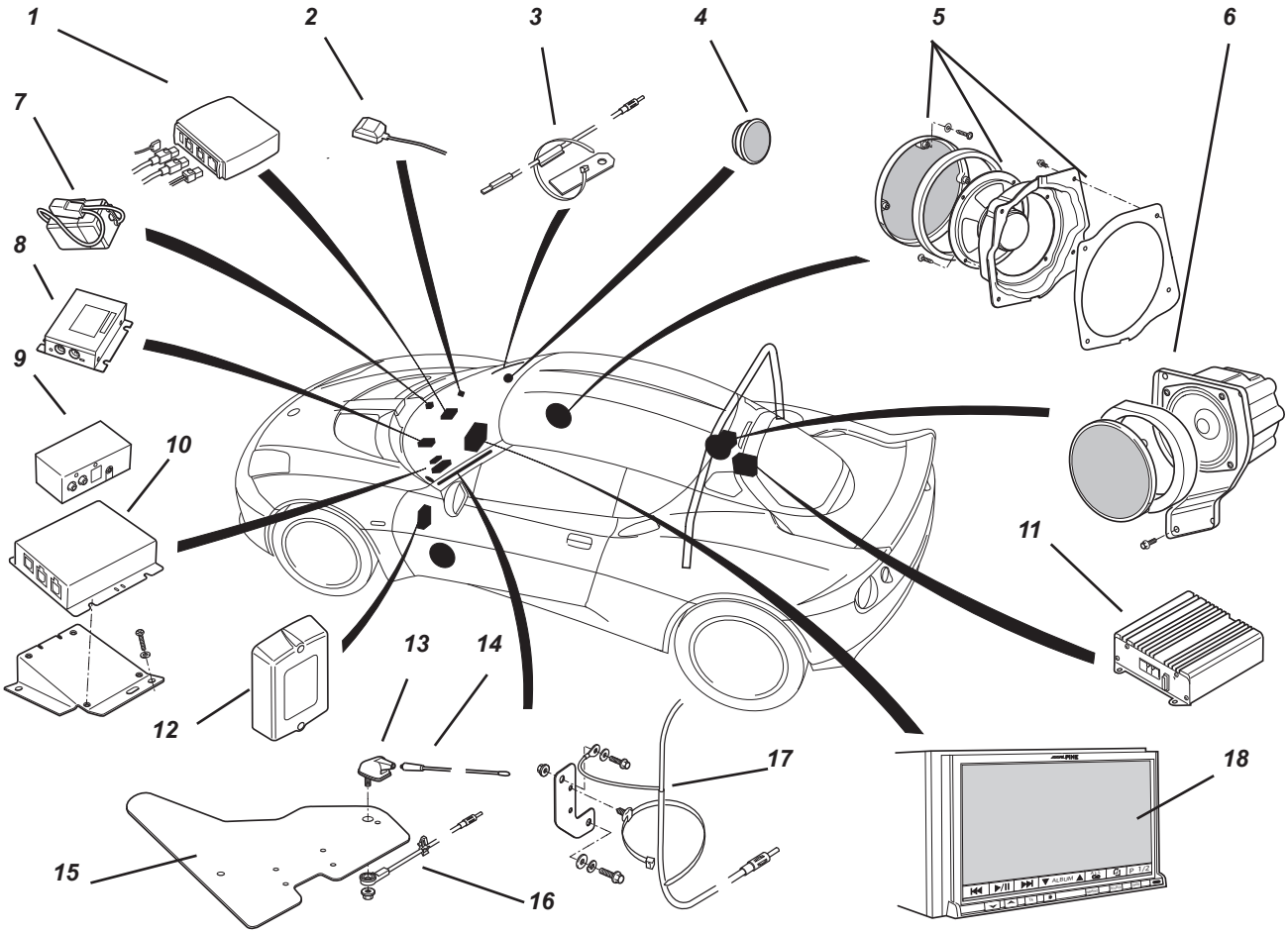
Speakers: A main speaker is fitted into each of the door trim panels, and a high frequency 'tweeter' incorporated into each end of the dash fascia panel. In addition, some cars are fitted with a single sub-woofer, low freqency speaker in the right hand rear quarter trim panel.

Door speakers - Alpine LUK-SB01B (4-speaker base spec.):
145mm aperture, 63mm depth

Door speakers - Alpine LUK-SB02T: (4/5-speaker high spec.):
145mm aperture, 63mm depth
Sub-woofer - Alpine SWE 843 (5-speaker high spec.):
183mm aperture, 111mm depth

Tweeters - Alpine LUK-ST01:
42mm aperture, 12mm depth

Security: Some audio sets feature a removable front panel; For details, refer to the set manufacturer's litera ture.

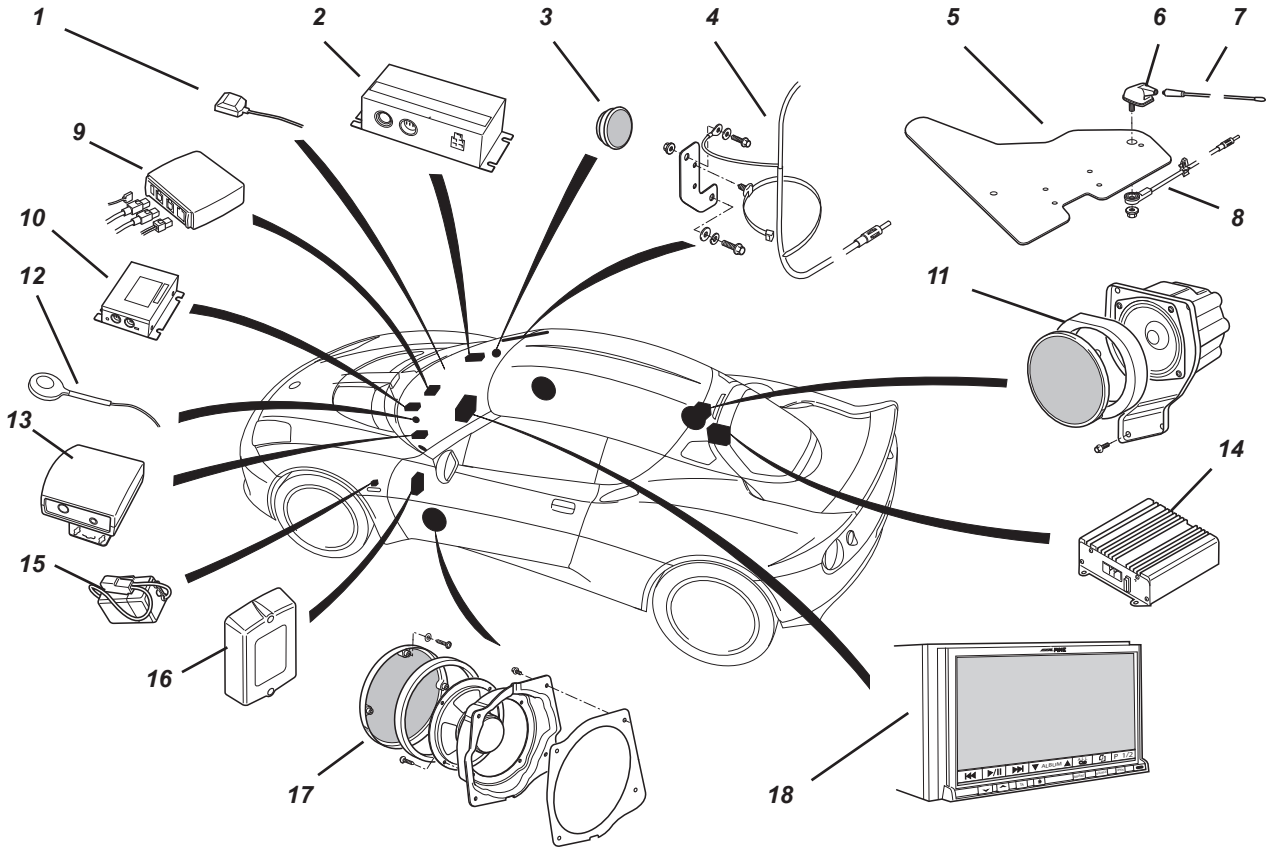


I.C.E COMPONENT LOCATION - EURO/ROW & JAPAN MARKETS

m269

Item	Description	Location
1	Blue tooth module†	Attached to scuttle under dash fasca
2	GPS antenna**†	Attached to scuttle under dash fasca
3	TMC Antenna*	Behind 'A' Pillar trim opposite side to antenna mast
4	Speakers, tweeter	Fascia top panel
5	Speakers, main	Door trim panels
6	Speaker, subwoofer**	Behind RHR quarter panel trim
7	Radio choke	In front of main fusebox
8	Imprint module**	Under scuttle behind passenger lower facia trims
9	Imprint navigation interface†	On top of Navigation module
10	Navigation module†	Attached to scuttle under dash fascia
11	Amplifier*	Behind RHR quarter panel trim
12	Cross over modules	Attached to LH/RH chassis 'A' post area behind lower 'A' post trims
13	Antenna base	Attached to ground plane
14	Antenna mast	Behind passenger 'A' pillar trim
15	Antenna ground plane	Bolted to passenger side scuttle under dash fascia
16	Antenna co-axial cable	In front of scuttle under dash fascia
17	Antenna/co-axial cable††	Behind passenger 'A' pillar trim and in front of scuttle beam
18	Head unit	Behind inboard switch panel attached to main fascia

* Only supplied to specific markets.
** Additional equipment supplied with 'Tech Pack' option.
† Additional items fitted with 'Tech Pack' option with fixed Sat Nav head unit fitted from VIN BH_10948
†† Replaces items 13 -16 from VIN BH_10948



I.C.E COMPONENT LOCATION - FEDERAL MARKETS

m270

Item	Description	Location
1	GPS antenna*†	Attached to scuttle under dash fascia
2	Radio interface module	Attached to scuttle under dash fascia
3	Speakers, tweeter	Fascia top panel
4	Antenna/co-axial cable††	Behind passenger 'A' pillar trim and in front of scuttle beam
5	Antenna ground plane	Behind passenger 'A' pillar trim
6	Antenna base	Attached to ground plane
7	Antenna mast	Behind passenger 'A' pillar trim
8	Antenna co-axial cable	In front of scuttle under dash fascia
9	Blue tooth module†	Attached to scuttle under dash fasca
10	Imprint module*	Under scuttle behind passenger lower facia trims
11	Speaker, subwoofer*	Behind RHR quarter panel trim
12	Antenna, satellite radio*	Attached to chassis 'A' post area behind lower 'A' post trims
13	Tuner, satellite radio*	Attached to scuttle under dash fascia
14	Amplifier*	Behind RHR quarter panel trim
15	Radio choke	In front of main fusebox
16	Cross over modules	Attached to LH/RH chassis 'A' post area behind lower 'A' post trims
17	Speakers, main	LH/RH Door trim panels
18	Head unit	Behind inboard switch panel attached to main fascia

* Additional equipment supplied with 'Tech Pack' option.
† Additional/revised items fitted with 'Tech Pack' option with fixed Sat Nav head unit fitted from VIN BH_10948
†† Replaces items 5 -8 from VIN BH_10948

To remove the audio head unit

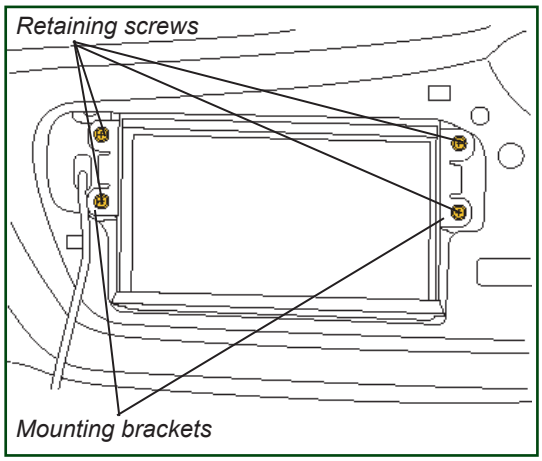
1. Activate unit so that the display screen tilts open.

2. Carefully remove the inboard switch panel. (see sub-section VE.7 step 4).

3. Remove the unit by supporting it at the mounting brackets whilst carefully pulling and twisting it away from the fascia dash panel.

4. Unplug all rear harnesses and pigtail connectors.

   Refit in reverse order to removal.



MR.8 - BATTERY, BATTERY CABLES & EARTHING POINTS

Battery

WARNING: POISON/DANGER - CAUSES SEVERE BURNS - KEEP OUT OF REACH OF CHILDREN. Contains sulphuric acid - avoid contact with skin, eyes or clothing. If in contact with skin or eyes; flush with copious amounts of water. Remove contaminated clothing. Seek immediate medical attention. If ingested; seek immediate medical attention . Do not induce vomiting or give fluids to drink. Batteries produce explosive gases. Keep sparks, flames and cigarettes away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.

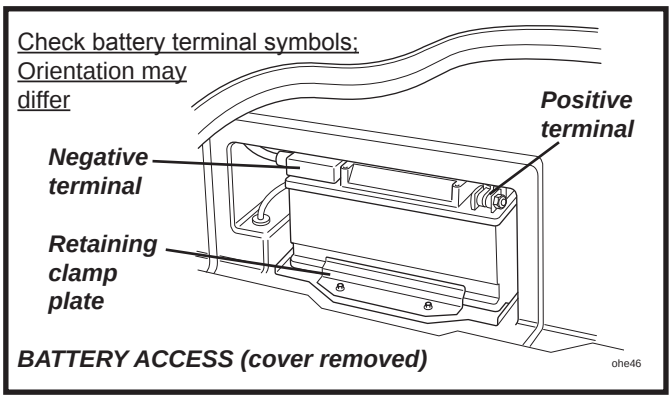
Battery Access

The 72 Ah VARTA BLUE *dynamic* battery (Varta part number 572409068) is located at the left hand front of the rear luggage compartment, protected by a plastic cover. No routine inspection or topping up of the electrolyte is required, but at intervals specified in the Maintenance Schedule, the battery terminals should be checked for security and condition, and protected with petroleum jelly.

To remove the battery, release the three thumbscrews and remove the plastic cover. Release the two screws and remove the retaining clamp from the base of the battery. Withdraw the battery sufficiently to allow the cables to be disconnected (see below).

When lifting out the battery, be aware of the considerable weight, and take all appropriate precautions to safeguard personal health.

Refit the battery, with its terminals to the rear, by reversing the above procedure. Remember to push on the breather pipe (if applicable).



Disconnecting the Battery (also see section FA for information for Evora IPS battery disconnection)

If the battery is to be disconnected, the following precautions should be taken:

i) If the vehicle is fitted with security coded audio equipment, check that the code is available for entering after battery reconnection.

ii) Wait for at least **30 minutes** after switching off the ignition to allow the engine management system to and associated sensors to shut down in the correct sequence.

iii) Ensure that all electrical loads (e.g. lights) are switched off.

iiv) Check that the security alarm is disarmed. If the battery is disconnected when armed, the alarm will be triggered.

v) Disconnect the **negative** (earth; black; '-') battery cable first, and re-connect last. If the battery positive terminal is inadvertently earthed (e.g. when using a spanner) whilst the negative terminal is still connected,

the resultant short circuit with heavy sparking and current flow could cause serious burns.

Battery Reconnection

i) Check again that all electrical loads are switched off.
ii) Connect the positive battery cable first, followed by the negative (earth) cable.
iii) Be aware that the vehicle security alarm may be triggered by the action of battery re-connection. Have the alarm transmitter key ready to disarm the alarm (see 'Vehicle Security Alarm').
iv) After reconnection, a change in the engine performance characteristics may be noted for a period whilst the computer controlled engine management system 're-learns' some of its settings.
v) If necessary, enter the security code into audio equipment.

Battery Charging

Under conditions of normal daily use, it should not be necessary to use external battery charging equipment. In a low usage regime, however, it is important to maintain the charge state of the battery using a trickle charger, or an automatic battery management conditioner such as that available through Lotus After Sales. Starting difficulties may be encountered after an unattended period of 3 weeks. A battery conditioner is able to continuously monitor battery charge state and switch on and off automatically in order to maintain the battery in a fully charged condition without danger of damage through overcharging.

If the battery becomes discharged to the extent that the car cannot be started, the recommended course of action is to fit a substitute battery whilst the original battery is trickle charged. If, in an emergency, the car has to be 'jump' started, the subsequent conditions of car use may not allow for sufficient alternator charging of the battery to achieve a fully charged state. The battery should be trickle charged by external means until 12.8 volts is recorded, which process may take 24 hours or longer. Putting the battery into service at a lower state of charge will reduce the time period for which the car can be parked without subsequent starting concerns. A battery left in a fully discharged state for a prolonged period, may not be recoverable to its original condition.

Unless using an automatic battery management charger, the battery should be removed from the car for recharging, to a well ventilated area to avoid a build up of fumes in the luggage compartment and to prevent damage to the car's electrical system. Observe the safety precautions listed above when removing the battery and take care to avoid sharp knocks or shocks, keeping the battery as upright as possible. Beware of the considerable weight of a battery, and take necessary precautions against personal injury.

The recommended bench charge rate is 4 amps. When the battery is fully charged (12.8 volts), allow it to stand for an hour before refitting into the battery well and reconnecting the leads - see above.

Quiescent Drain

With a fully charged battery, a car with no aftermarket electrical equipment fitted, all electrics switched off, and the alarm system either armed or disarmed, will have a quiescent current drain of between 27 - 32 mA dependent on audio and sat. nav. options. Under normal conditions, this should allow a park period of over four weeks before starting difficulties may be encountered.

If current drain is found to significantly exceed specification, the cause must be established by isolating components (e.g. at fusebox) and rectifying faults as necessary.

Battery Cables

Two red cables are connected to the battery positive post. One leads to the solenoid on the starter motor. A second cable leads to the positive post fixed to the back of the cabin bulhead in the LHR wheelarch area, and includes an 'in-line' 150A fuse. This post is linked via a cable routed through the LH sill area to the front mounted positive post on the top of the passenger side scuttle, and from here to the main fusebox/relay panel at the front of the passenger footwell.

A braided earth cable connects the negative battery terminal to the chassis rear earth point, on the inside face of the LH siderail, at the LHF of the engine bay, accessible from beneath. Two further cables link this point to the transmission casing, and to the rear fusebox and ECU mounting bracket at the LHR of the cabin.

WARNING: Before disconnecting a live feed cable from either post, first disconnect the earth cable from the battery. Be aware of the danger of short circuits and sparks caused by a live feed cable contacting the chassis or other metal components.

The rear positive post is mounted on a bracket which also secures the left hand end of the evaporative emissions canister, and is accessible with the wheelarch liner and/or rear clamshell removed. Special care

should be taken to prevent sparks in this area. When re-connecting the rear positive post, note that two spacers A075W4020Z should first be fitted onto each stud, before each pair of cables is assembled back to back, with the battery and front fusebox cables on the front stud, and the alternator and rear fusebox cables on the rear stud. Tighten the M8 retaining nuts to 16 Nm.

MR.9 - WIPER MECHANISM

The windscreen wiper mechanism comprises a uni-directional motor with an external rotary link, a connecting rod, and a pair of actuating links which join the connecting rod to the arms of the wiper spindle. This mechanism provides the wiper with a motion which is slowed at each end of its travel in order to ease the inertia loads during direction changes, to the benefit of refinement and durability. The motor and wheelbox are mounted on a single pressed steel bracket which is bolted to the underside of the windscreen frame.

To remove the wiper mechanism:

1. Remove the front clamshell (see sub-section BV.4).

2. Remove the wiper arm.

3. Remove the 4 retaining screws, and withdraw the windscreen gutter with drain tubes.

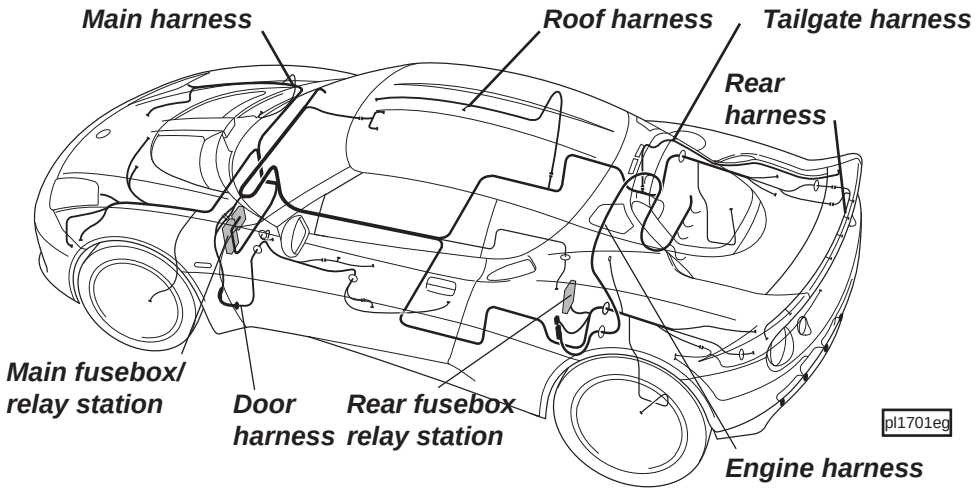
4. Unplug the harness connector from the wiper motor. Release the 4 cap head screws around the wiper spindle that secure the mounting bracket to the windscreen frame, and the single screw at the motor end of the bracket. Withdraw the wiper mechanism.

5. Re-assemble in the reverse order to removal, torque tightening the bracket bolts to 20 Nm.

Note that no service parts are offered for the wiper mechanism. Excessive wear in any part of the mechanism, or motor is rectified by renewal of the complete assembly.

MR.10 - HARNESS ROUTING

The main harness runs from the main fusebox/relay station at the front of the passenger footwell, up to the center underside of the scuttle, across to the passenger side and through to the top of the scuttle. Then it runs across the full width of the scuttle to supply all the fascia components and to each of the separate door harnesses. At the centre of the front bulkhead, a branch of the main harness penetrates the bulkhead and divides along each side to supply the HVAC functions, ABS, lighting and other front mounted electrical equipment. From the same junction at the front bulkhead, a further branch runs down the centre of the cockpit, beneath the gearchange mounting channel to supply the fuel pump, with branches also running to each side behind the seat mounting front cross-member and back to each rear quarter area. The RH branch supplies the roof harness near the 'B' post area and continues through the rear bulkhead to supply the tailgate and rear lighting harnesses. The LH branch connects to the engine management ECU and engine harness, then continues through the bulkhead to supply the parking sensors and TPMS.



MR.11 - HEADLAMP ASSEMBLIES

Xenon Headlamp Assemblies

The Lotus Evora is available with High Intensity Discharge (HID)/Xenon headlamp assemblies, the light sources of which utilise a plasma discharge arc between two electrodes to provide a blue-white light for optimal illumination of the roadway. Each headlamp unit uses a D1S electronic igniter/burner unit (equivalent to the bulb), mounted in a specially coated alloy reflector, ahead of which is fixed a glass aspheric lens on an alloy carrier. A shielded high tension harness connects the burner unit to a voltage ballast unit mounted in the base of the headlamp housing. The ballast unit is supplied with battery voltage and outputs around 20,000 volts (up to 80,000 during the start up phase) to the burner, although the power consumption is only 35 Watts.

A bottom pivoted flap is used to mask the upper part of the light beam (i.e. lower part in front of the lamp, prior to beam inversion by the aspheric lens), and allow a single light source to provide both main and dip beams. The flap is sprung and counterweighted in order to default to the vertical, masking, position, and is swung down by a solenoid fixed to the side of the reflector unit, when main beam is selected. Also contained within each headlamp housing is a 10 LED sidelamp, positioned outboard of the headlamp, and an 8 amber LED turn lamp at the front of the housing, fronted by a clear diffuser.

Due to the increased light production of the gas discharge headlamps, and the increased potential for dirt on the lamp cover causing dazzle from refraction, a powerful headlamp washer is fitted. A dedicated high pressure pump is fitted into the windscreen washer bottle, and supplies a powerwash module incorporated into the outer side of each headlamp unit, normally lying flush with the headlamp cover. When the windscreen washer control is operated, the headlamp washer pump is also activated for 2 seconds, the pressure from which causes the telescopic washer module to extend about 20 mm above the headlamp cover and deploy two conical sprays of fluid from a pair of high flow jets. The module then returns under spring action to its flush position.

Note that certain atmospheric conditions may result in some condensation inside the lamp unit. This should have no significant effect on lamp performance and is no cause for concern.

Headlamp Servicing

The only serviceable parts of the Xenon headlamp unit are:

- D1S burner unit
- Voltage ballast unit
- Powerwash module
- High tension cable

WARNING:

The high voltages produced by the headlamp ballast unit could cause injurious electric shocks. Ensure the battery is disconnected before servicing the headlamp assembly.

To replace the burner unit, first disconnect the battery to protect from potentially injurious shocks. Remove the access grommet in the wheelarch liner, and pull off the protective boot from the back of the headlamp housing. Release the spring wire clip and withdraw the burner sufficiently to allow the H.T. cable to be unplugged. Note that touching the glass envelope by hand is likely to lead to premature failure. If necessary, the envelope should be cleaned using white spirit and a paper tissue.

Other serviceable parts may be replaced after removing the headlamp housing from the car.

Headlamp Housing Removal

Each headlamp is secured to the front subframe longeron via front and rear mounting brackets. To remove a headlamp housing:

1. Remove the front roadwheel and wheelarch liner;

2. Disconnect the wiring harness and washer tubing;

3. Release the two screws securing the headlamp front mounting bracket to the subframe, and the two fixings securing the headlamp rear bracket to the bumper support bracket. Withdraw the headlamp assembly.

4. When re-fitting, ensure the front clamshell is first fitted and optimised for position before adjusting the headlamp mounting to obtain a satisfactory fit of the lamp in the aperture.

5. Re-connect the harness and washer tubing and check headlamp beam alignment.

Headlamp Beam Alignment

1. Using beam setting equipment compatible with local regulations, position the machine between 300 and 700mm in front of the LH headlamp, and parallel with the two headlamp units using the sight bar or similar device dependent on the machine design, to ensure cross car match. Use the guides provided on the machine to ensure the correct height and lateral setting.

2. Switch on the headlamp dip beams and check the lateral beam alignment. The 'knee point' of the beam cut off line must lie within a tolerance of 2% to the passenger side, and 0%. Check the vertical alignment of the dip beam which must lie within a tolerance of -0.5% and -2%.

3. If adjustment is required, turn the steering to full lock to facilitate removal of the four screws retaining the access cover in the wheelarch liner.

4. Each headlamp assembly features two adjustment screws, one for vertical, and one for horizontal aim (USA cars - vertical only). To adjust the beam laterally, turn the inboard adjuster screw. Turn clockwise to adjust the beam to the right. Optimum setting is 0%. To adjust the beam vertically, turn the outboard adjuster screw. Turn clockwise to raise the beam. Optimum setting is -1.2%. Re-check lateral alignment.

5. Repeat for the opposite lamp.

6. Re-fit the access cover in the wheelarch liner.

Headlamp beam masking for driving in opposite drive hand territories

The Evora headlamp assemblies do not have an internal masking facility. Therefore if it is necessary to drive a RHD vehicle in an opposite drive hand territory the low beam 'kick up' bias should be masked to prevent dazzle.

Proprietary adaptor kits such as 'Eurolites Headlamp Beam Adaptors' can be purchased from many different motorists stores and used for a limited time period with xenon headlamps.

The correct positioning of any adaptor is critical to ensure that only the dipped headlamps 'kick up' bias beam is masked without affecting the its horizontal beam pattern.

Therefore Lotus has produced beam converter templates that will aid in the fitting of suitable masking/adaptor kits, ensuring that they are positioned correctly on the headlamp lens so masking the 'bias' beam pattern area without disrupting the horizontal pattern.

Template information:

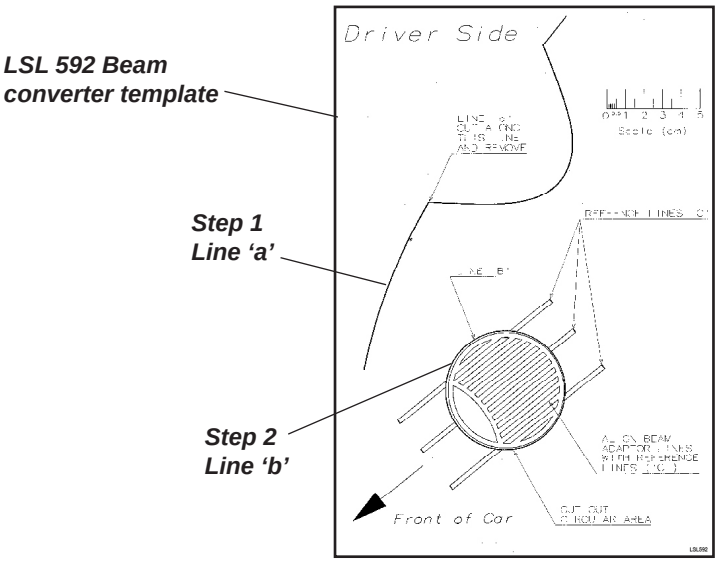
Part Number	Description	Qty
LSL 592	Beam converter template, driver's side - RHD	1
LSL 593	Beam converter template, passenger's side - RHD	1

ACTION:

1. Cut along contour line (a) and remove this portion of the template.

2. Cut out the circular area of the template following line 'b'.

3. Clean lens and activate lamps per Beam Adaptor manufacturer's recommendations which can be found in the included fitting kit.



4. Lay the 'Drivers Side' template onto the driver's side headlamp lens using the inner line of the black 'frame' as a guide. Hold in place on the lens with 3 small pieces of masking tape.

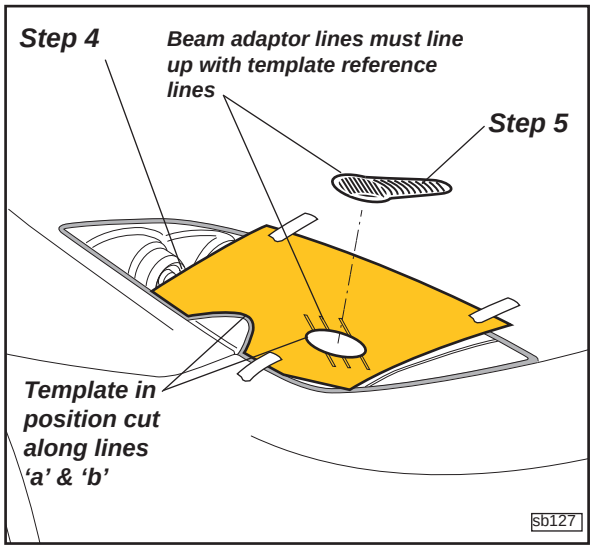
5. Peel off the backing paper from the circular section of the beam adaptor and position centrally inside the circular area of the template ensuring the adaptor lines are in the same orientation as the reference lines 'c' on the template.

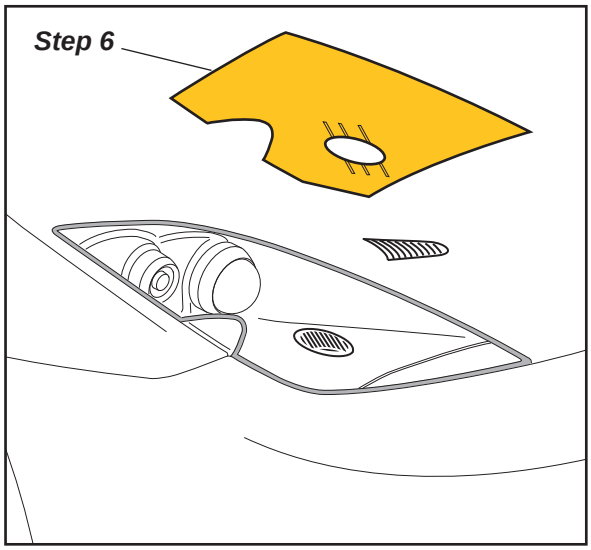
6. Remove the template.

7. Tear off the tail portion of the beam adaptor

Repeat the process using the 'Passenger Side' template for the passenger side headlamp.

For removal of the Beam Adaptors, follow the adaptor manufacturer's instructions and recommendations.





MR.12 - BULB REPLACEMENT

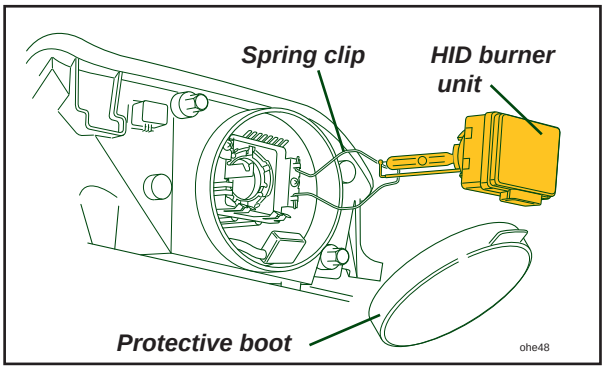
HID Xenon Headlamps

Each HID headlamp unit uses a D1S electronic igniter/burner unit (equivalent to the bulb), mounted in a specially coated alloy reflector, with a ballast unit to output around 20,000 volts to the burner.

WARNING: The high voltages produced by the headlamp ballast unit could cause injurious electric shocks. Ensure the battery is disconnected before servicing a headlamp assembly.

1. Disconnect the battery to protect from potentially injurious shocks. Remove the access cover in the wheelarch liner, and pull off the protective boot from the back of the headlamp housing.

2. Release the spring wire clip and withdraw the burner sufficiently to allow the H.T. cable to be unplugged. Note that touching the glass envelope by hand is likely to lead to premature failure. If necessary, the envelope should be cleaned using white spirit and a paper tissue.



3. After refitting, verify lamp operation and check that the protective boot is correctly fitted onto the lamp body before replacing the wheelarch liner grommet.

Front Turn Indicator & Sidelamp Bulbs

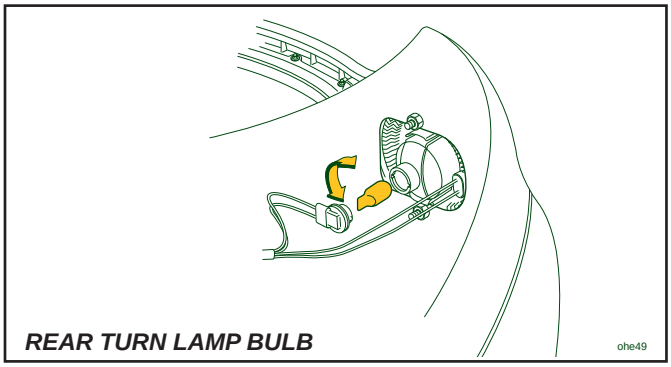
The front turn lamps and sidelamps are provided by light emitting diodes (LEDs) and are incorporated into the headlamp assemblies. These lamps are designed for long life and are serviceable only by replacement of the complete headlamp unit.

Rear Lamp Cluster Bulbs

The outboard lamp cluster contains the tail, brake and turn indicator functions, and is configured as follows:

Annulus; tail and brake lamps.
Centre; turn indicator lamp.

The tail and brake lamps are provided by a ring of light emitting diodes (LEDs), and are serviceable only by complete lamp cluster replacement. Each turn indicator lamp uses a filament type GE921 capless bulb retained in a bayonet type holder. From inside the boot, turn the bulb holder anti-clockwise to release from the lamp body, and withdraw the bulb.

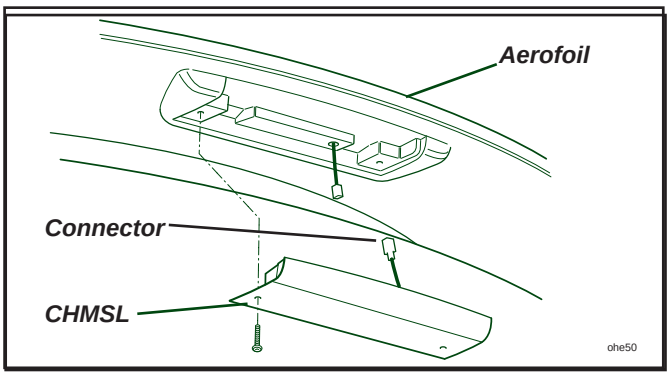


Rear Fog and Reverse Lamps

A secondary lamp is mounted inboard of each rear lamp cluster, to provide a rear fog lamp on the driver's side, and a reversing lamp on the passenger side. Both these lamps are sealed units containing a ring of LEDs, which are serviceable only by replacement of the complete lamp. Note that this process requires the rear bumper to be removed (see sub-section BV.7).

Centre High Mounted Stop Lamp (CHMSL)

The CHMSL, mounted to the underside of the rear aerofoil, uses a string of light emitting diodes (LEDs) for optimum visibility. The lamp is a sealed unit with no replaceable bulbs, and may be replaced complete, after releasing the two retaining screws and unplugging the harness connector.



Side Repeater Lamps

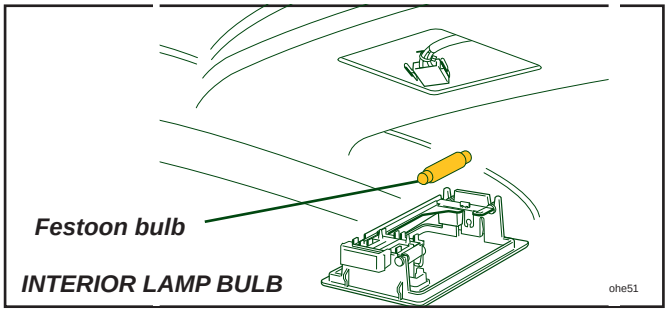
The side repeater lamps are mounted in the front clamshell behind each wheelarch, and use durable light emitting diodes (LEDs). The lamps are servicable only by complete replacement, the lamp being secured by an adhesive gasket.

Licence Plate Lamps

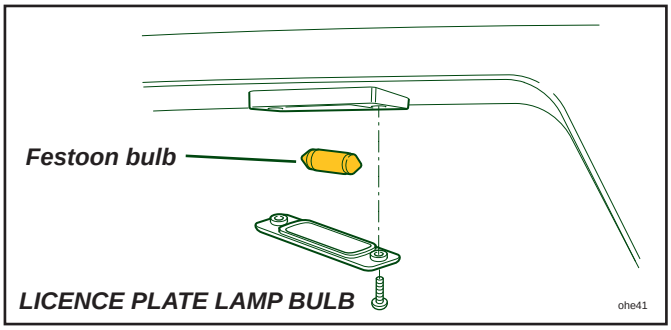
To replace a bulb in a rear licence plate lamp, first remove the two screws securing the lamp to the body, and withdraw sufficiently to allow access to the festoon bulb.

Interior Lamp

To withdraw the interior lamp from the roof trim panel, first ease one end of the lamp from its aperture. Withdraw the lamp sufficiently to allow access to the festoon bulb, if necessary, unplugging the harness connector.

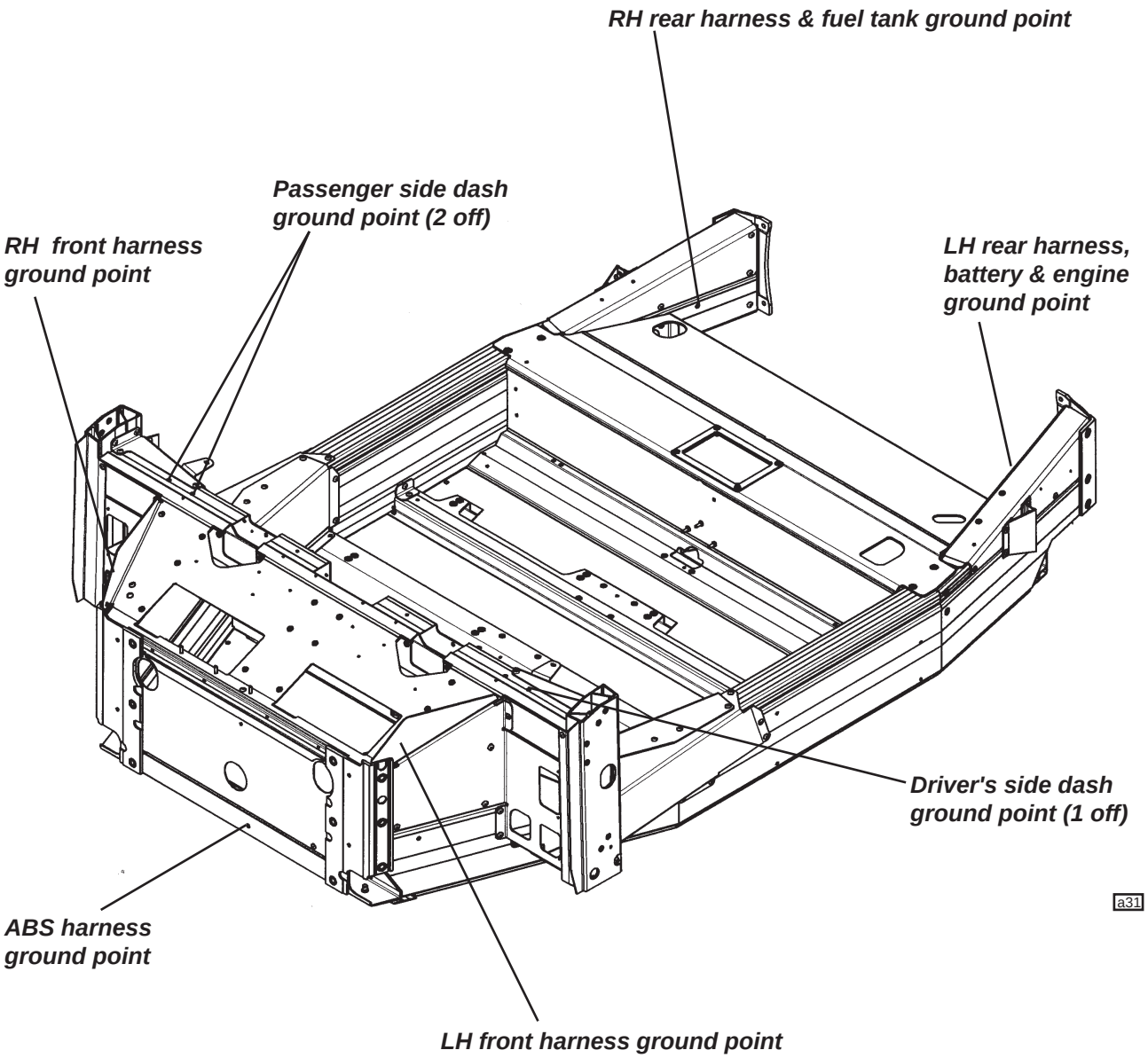


INTERIOR LAMP BULB

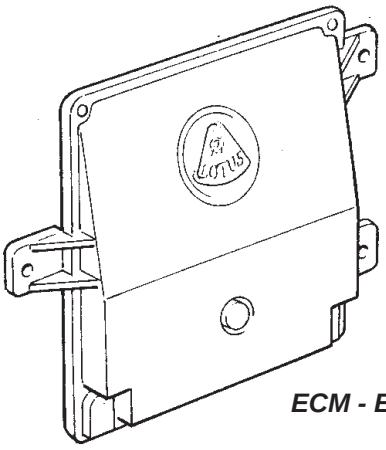


LICENCE PLATE LAMP BULB

MR.13 - GROUND POINTS
(refer to circuit diagram A8)



MR.14 - ECM (ELECTRONIC CONTROL MODULE AND TCU (TRANSMISSION CONTROL UNIT)



ECM - Electronic Control Module

The Electronic Control Module (ECM) or Engine Control Unit (ECU) is a non serviceable unit incorporating microprocessors which process the inputs in real time, not only from the engine management sensors but various other sensors and modules within the vehicle such as the instrument pack, alarm system, Anti Lock Braking system (ABS) and Tyre Pressure Monitoring System (TPMS) etc.

The unit contains the hardware and software (firmware). The hardware consists of electronic components on a printed circuit board (PCB), ceramic substrate or a thin laminate substrate. The main component on this circuit board is a microcontroller chip (CPU). The software is stored in the microcontroller or other chips on the PCB, typically in Erasable Programmable Read Only Memory (EPROM) or flash memory so the CPU can be re-programmed by uploading updated code. This is also referred to as an (electronic) Engine Management System (EMS).

Firmware and calibration

At the time of assembly the vehicles ECM and Transmission Control Unit (TCU) (if fitted) are downloaded with their relevant firmware and calibration also referred to as its EMS programme or .CRP file.

This ensures that the functionality of the ECM or TCU is correct in relation to its model, model year and the territory the vehicle is being sold into.

Vehicle configuration and variant code

The ECM is then ‘configured’ dependant on the additional options that the vehicle should be equipped with such as but not limited to fitment of such items as:

- Sports Mode button
- Tyre pressure Monitoring System (TPMS)
- Heated front seats
- Basic Traction control or Electronic Stability Control (ESP also referred to as Lotus Dynamic Performance Management)
- Speed Alert Buzzer (GCC cars only)

The selection of the relevant options will produce a 'variant code' for the vehicle which can be viewed in the EMS vehicle configuration screen using Lotus TechCentre and is also stored in the vehicles build book stored at Lotus Cars.

At this time a self adhesive label is also attached to the casing of the ECM. The label displays an actual label part number and homologation number which will identify the ECM assembly in relation to:

- Model Year
- Engine type, induction system and power output
- Designated vehicle territory
- Calibration number
- Vehicle designation i.e., Elise, Evora etc.

To protect the ECM and TCU from subsequent incorrect programming which could cause poor, non-starting or engine performance issues etc, the EMS programme initially downloaded at the factory cannot be overwritten with any other programme. The only EMS reprogramming possible is to update the 'level' of the existing programme already installed in the ECM.

In the event that the EMS programme downloaded into the ECM that does not match its existing programme then the vehicle will fail to start, the (Malfunction Indicator Light) MIL will illuminate and a fault code will be stored in the ECM.

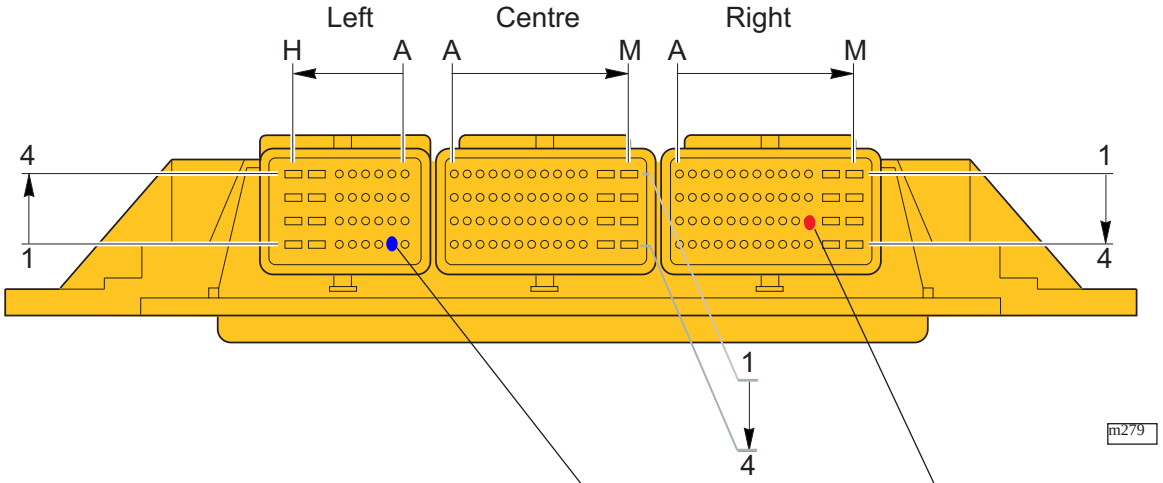
Harness connection and 'Pin out' identification

The ECM uses 3 harness connector blocks. The engine harness has 2 multi-plug connectors which connect to the central and left blocks (central and upper as viewed in situ), with the vehicles main harness multi-plug connecting to the right block (lower as viewed in situ).

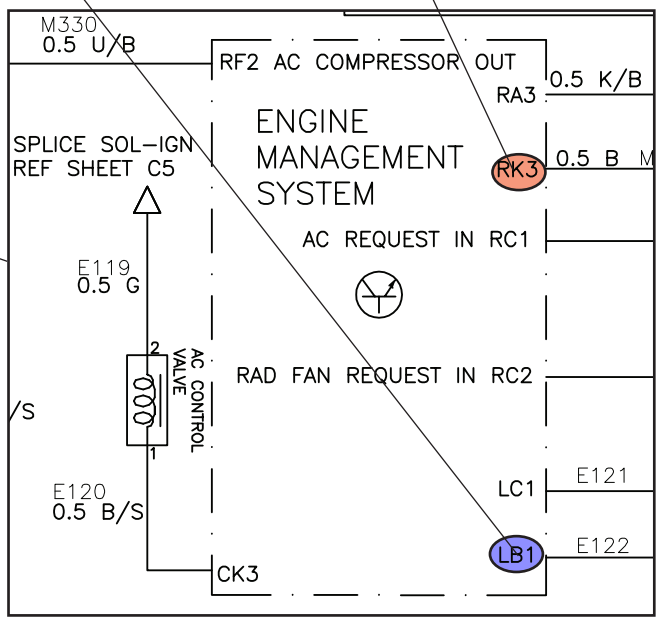
All harness connection information to the ECM is identified on the relevant circuit diagrams by:

Block: L – Left, C – Centre and R – Right
Column: 1 – 4
Row: A – M

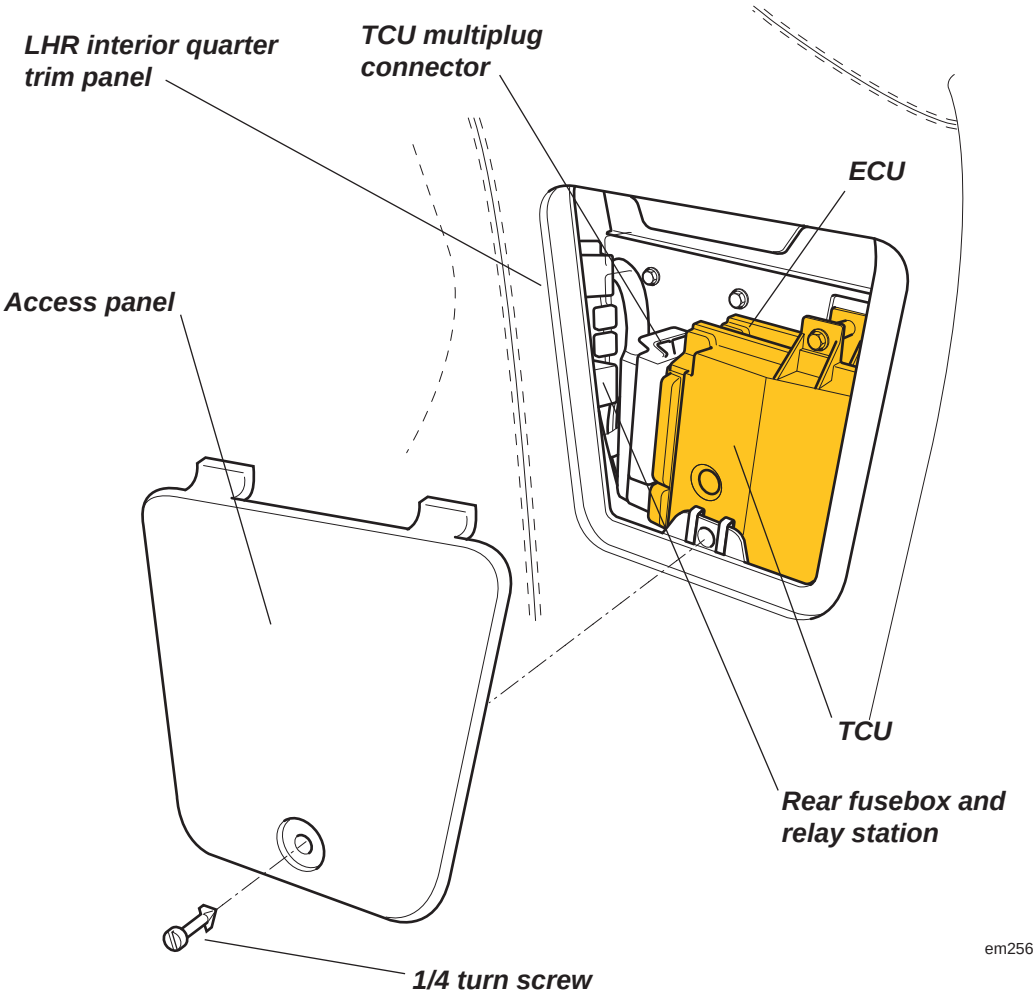
Column and Row numbers and digits are also stamped onto the ECM harness connector blocks as well as the actual harness multi-plugs



Typical example of EMS pin information as displayed in an Evora Circuit Diagram



ECM and TCU Location



The ECU (Electronic Control Unit) and TCU (Transmission Control Unit) are both located behind the interior left hand rear quarter panel trim. They can be accessed by releasing the ¼ trim fastener on the lower edge of the access panel and unhooking it from its top edge. The ECU is bolted to a retaining bracket fixed to the inner bodyside.

The TCU (if fitted) is bolted against the ECU.
Rear fuse and relay access may be restricted by these modules and it may be necessary to loosen them from their mounting brackets and move them away from the relay station to gain access to the fuses and relays.

To remove the ECU

Note: If it is necessary to renew an ECU or TCU then it is highly recommended that before removing the existing unit that you note down its current firmware calibration (Program or .CRP file number) and the variant code which can be obtained from the Lotus TechCentre vehicle informaton and EMS configuration screens.

Before removing the ECM print out the vehicles performance history using TechCentre and file with the vehicles existing records or job card for future reference. This procedure should also be carried out before uploading a new programme as action of downloading a new level programme will delete the existing performance history.

Please note: Lotus Cars may request a copy of a vehicles performance history in the event of a warranty enquiry which is related to potential powertrain abuse.

Note: Do not disconnect the ECU harness connectors for at least 30 minutes after switching off the ignition to allow the engine management system and associated sensors to shut down in the correct sequence.

- Release the ¼ trim fastener on the lower edge of the access panel and unhook the panel it from its top edge and remove.
- Remove the 2 lower and 1 upper M10 flanged nuts securing the ECU to the bracket.
- Pull the ECU slightly forward to release it from the brackets retaining studs.
- Move ECU away from the rear fusebox to gain access to its 3 harness connectors.
- Starting from uppermost connector, unclip and detach them from the ECU.
- The ECU can now be withdrawn from the rear panel.

To refit the ECU

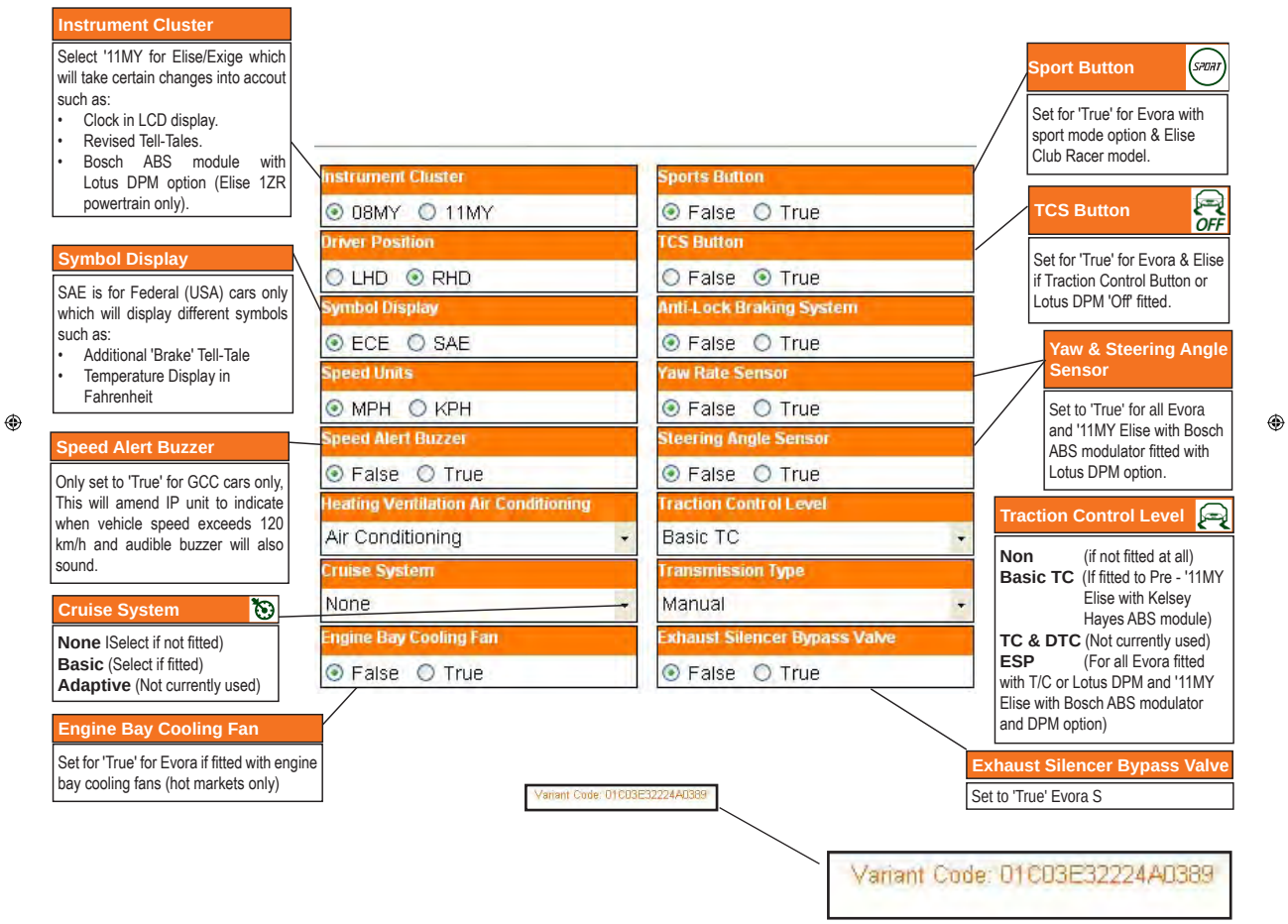
Reverse procedure from removal except for.

If the ECU or TCU has been renewed then re-enter the correct firmware calibration (Program or .CRP file number) using the ECU Reprogramming option on Lotus TechCentre.

Once the replacement ECU or TCU contains the relevant program it will still be necessary to download the correct variant coding into the unit so that its functionality is correct relevant to the options fitted to the vehicle:

The units current variant code can be identified using Lotus TechCentre.

ECU configuration screen 1 of 2 as shown on Lotus TechCentre



Check for any illuminated tell tales that may be displayed on the instrument pack and using Lotus TechCentre interrogate the ECU for any live or pending codes and erase.

Note: Although it is possible to manually enter the variant coding from the option screens available there is a risk of making an error if this option is selected which may affect the display and or functionality of the instrument pack.
If the varient code has been recorded then it is recommended to use the guided routine option available on Lotus TechCentre.

If the variant coding has not been recorded or if the ECU will not communicate with Lotus TechCentre then it is advised to contact Lotus Cars Technical Publication Department stating the full vehicle VIN requesting the variant code information.

For further information see the 'Lotus TechCentre User Guide' , which can be downloaded from the Lotus Dealer Portal at:

http://dealers>Aftersales>Miscellanous Technical Information>TechCentre Information.