

## **Discovery 2 vehicle purchase check points. ( Not to be considered a definitive list ).**

N White. Updated 29/01/17 Rev 3.

### **Before going to look:**

- 1) Go to the following website and check the vehicle MOT history. It is FREE.

<https://www.check-mot.service.gov.uk/>

<https://vehicleenquiry.service.gov.uk/>

### **Chassis:**

- 1) Rear Chassis - rear third of chassis is prone to rusting.
- 2) Check entire chassis for rust.

### **Instrument warning lights:**

- 1) 3 Amigos , HDC/ABS/TC warning lights are not on when engine is running.
- 2) Instrument warning lights work as they should , self check lights extinguish as they should.

Example ABS / HDC / TC / SRS/ACE ( if fitted). read full explanation in owners handbook. ( see extract below)

### **Engine compartment:**

- 1) All fluids are to the correct levels. Engine oil / PAS / Coolant / ACE if fitted.
- 2) Power steering pipes run under the radiator and prone to rust.
- 3) Check if wastegate actuator rod has "standard" number of threads showing which is approx 13.
- 4) Check oil for the smell of diesel.

### **Car interior:**

- 1) Sunroofs leak. Check roof lining for dampness.
- 2) Check passenger and drivers footwell for dampness.
- 3) Check rear boot carpet for dampness.
- 4) Verify all doors lock and unlock using the fobs / key in door lock and the centre console lock button.
- 5) Check all electrics work as they should. Windows , mirrors, Sunroofs, seats.
- 6) Check all windows raise and lower smoothly.
- 7) Check all doors open on the outside door handles. Once unlocked.

### **Transmission / Gearbox:**

- 1) Check and select if fitted the Central Diff lock. ( not fitted to all D2's )
- 2) Check Low box and High engage and disengage as they should.
- 3) Check all Forward and reverse gears engage and disengage as they should.
- 4) Check all UJ's for looseness and check rear rubber prop / diff donut for splits.

### **Car Security:**

- 1) Check if two fobs are present and working.
- 2) Check all keys work in drivers door lock and the ignition.
- 3) Check paperwork has the EKA code.
- 4) Check the radio code / Key code are included

### **SLS - Air Suspension: ( if fitted)**

- 1) Check if car should run on air suspension if it is still fitted.
- 2) If fitted with air suspension , press ORM button and raise vehicle to off road raised height. Press again to lower.
- 3) Check vehicle sits level. Std Height on SLS model is 473mm +- 15mm, ctr wheel hub to bottom edge of wheelarch.
- 4) Check rear height sensors, make sure they are not damaged / broken at fixing points.

### **ACE - Active cornering enhancement: ( if fitted)**

- 1) Look underneath for leaks from the ACE system if fitted. Front and Rear suspension.
- 2) If ACE has been removed question if pump / has been removed and ARB's are now standard.

### **HDC - Hill Descent Control:**

- 1) Verify the warning lights work as they should. ( see warning light info below).
- 2) Select Low range and press the HDC button, Green light should stay solid.

### **Diagnostic checks:**

- 1) If possible put diagnostics ( nanocom / hawkeye ) on car and verify if any faults are recorded. Remove if possible before test drive. Review after test drive.
- 2) If Diagnostics available check MAF has a reading of approx 55 showing when engine idling.

### Miscellaneous:

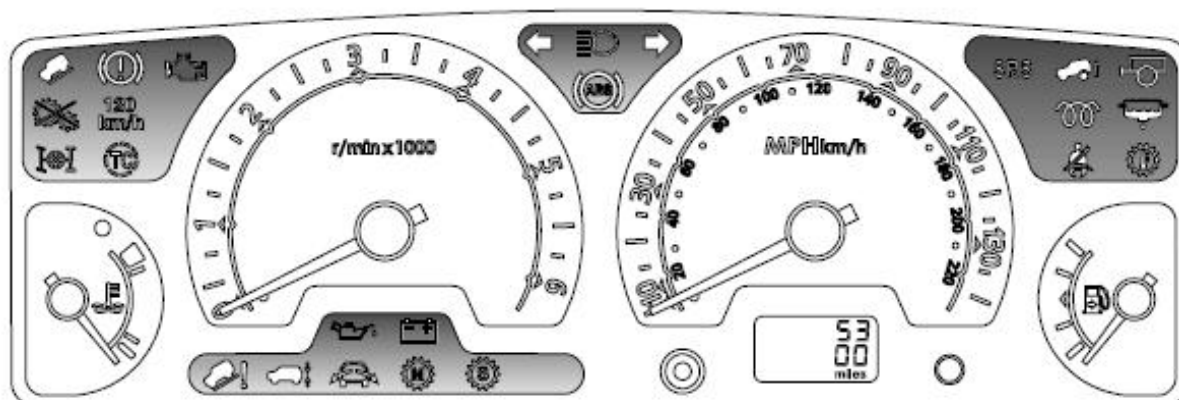
- 1) Check hydraulic jack is under battery cover in engine bay.
- 2) Check jack handles are in a bag in the rear door packet.
- 3) Check locking wheel nut key is in the bag in the rear door pocket.
- 4) Check Tyres have even wear across the tread pattern.
- 5) General condition of tyres including inside walls.



This Photo is from a 2003 TD5 D2 Manual, with SLS , without ACE. At just ignition switched on position.

# Warning Lights

## INSTRUMENT PANEL



H4399

The location and specification of the warning lights may vary according to model and market requirements.

### Check engine - AMBER\*



The light illuminates as a bulb and system check when the starter switch is turned on, and extinguishes as soon as the engine is started. Illumination at any other time indicates an engine fault - if the light illuminates while driving, avoid high speeds and seek qualified assistance urgently.

### Airbag SRS - RED



The light illuminates when the starter switch is turned to position 'II' and extinguishes after about 4 seconds. If the light illuminates at any other time, the system is faulty - seek qualified assistance urgently.

### Handbrake, brake fluid - RED



The light illuminates for about 3 seconds as a bulb check when the starter switch is turned on. It also illuminates when the handbrake is applied with the starter switch in position 'II'.

The light should extinguish when the handbrake is fully released or shortly after the electrical circuits are switched on. If the light illuminates whilst driving, a fault with the braking system is indicated. Stop the vehicle as soon as safety permits and seek qualified assistance before continuing.

### Low oil pressure - RED



The light illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes when the engine is started. If the light remains on, flashes on and off, or illuminates whilst driving, stop the vehicle as soon as safety permits and SWITCH OFF THE ENGINE IMMEDIATELY. Seek qualified assistance before driving. Always check the oil level when this light illuminates.

### Transmission oil temperature - RED\*



Illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes after 3 seconds approx. If the light illuminates while driving, the gearbox oil temperature is too high (most likely to occur in very hot weather during continuous high speed driving, or whilst towing heavy loads on steep inclines or if the handbrake has been applied while driving).

If the light illuminates, reduce speed. If the light remains on, stop the vehicle and allow the gearbox to cool. Do not drive until the light has extinguished. (Depending on the ambient temperature and the carrying loads imposed on the vehicle, it may take several minutes before the light extinguishes and it is safe to drive).

### Anti-lock braking system - AMBER



The light illuminates as a bulb and system check when the starter switch is turned to position 'II'. If the light illuminates whilst driving or remains illuminated after the starter switch is turned on, a fault has occurred. This means that full ABS control may not be available and you should seek qualified assistance urgently.

**NOTE:** Faults which cause the ABS light to illuminate after the initial system checks, or whilst driving, will be accompanied by a warning chime sounding 3 times.

### Headlight main beam - BLUE



Illuminates when the headlights are switched to main beam.

### Direction indicators - GREEN



The left or right warning light flashes in time with the corresponding left or right direction indicator lights whenever they are operated. If the warning light fails to flash, or flashes very rapidly, this may indicate a bulb failure in one of the direction indicator lights.

If the hazard switch is pressed, both warning lights will flash in conjunction with the direction indicator lights.

### Trailer direction indicators - GREEN



The light illuminates briefly as a bulb check when the starter switch is turned to position 'II'. If a trailer is attached, the light illuminates in conjunction with the vehicle direction indicator lights to show that all trailer indicator lights are functioning correctly. In the event of a bulb failure on the trailer, the warning light remains off.

### Glow plug - AMBER (diesel only)



Illuminates when the starter switch is turned to position 'II'. Wait for the light to extinguish before starting the engine.

### Battery charging - RED



The light illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes once the engine is running. If it remains on, or illuminates whilst driving, a fault is indicated. Seek qualified assistance urgently.

### Seat belt - RED\*



The light illuminates when the starter switch is turned to position 'II' and extinguishes after

approximately 6 seconds, even if the driver's seat belt remains unfastened. In some markets illumination of the light will be accompanied by a warning chime (see '*AUDIBLE WARNINGS*', page 68)

### Hill descent control (HDC) 'information' - GREEN



Illuminates briefly as a bulb and system check when the starter switch is turned to position 'II' and

also when HDC is selected.

If HDC is selected when Low Range gears are engaged the light will illuminate continuously indicating that HDC is active.

When HDC is selected and non-operating gears are engaged (i.e. High range), the light will flash to inform the driver that HDC is selected, but will not operate.

If the light starts to flash while HDC is active, normal functionality may seize and HDC 'fade out' may be induced (see '*HILL DESCENT CONTROL*', page 139).

### Hill descent control (HDC) 'failure' - AMBER



Illuminates briefly as a bulb and system check when the starter switch is turned to position 'II'.

If the light illuminates at any other time, either a fault has occurred which affects the functionality of the system, or over-use of the system has been detected, in which case HDC may 'fade out' (see '*HILL DESCENT CONTROL*', page 139).

**NOTE:** *Faults which cause the HDC 'failure' light to illuminate after the initial system checks, or whilst driving, will be accompanied by a warning chime sounding 3 times.*

### Traction Control - AMBER



Illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes after

approximately 3 seconds. The light illuminates for a minimum of 2 seconds, whenever traction control is operating.

If the light illuminates continuously, and remains illuminated when the vehicle is stationary, a fault with the system is indicated; seek qualified assistance.

**NOTE:** *Faults which cause the light to illuminate after the initial system checks, or whilst driving, will be accompanied by a warning chime sounding 3 times.*



### Active cornering enhancement (ACE) - RED/AMBER\*



The light illuminates RED when the starter switch is turned to position 'II'. After two seconds, the RED illumination changes to AMBER, and after a further two seconds, the light extinguishes.

#### ***If illumination occurs while driving, a fault with the system is indicated, as follows:***

- ***If the light shows RED*** (a flashing red light which changes to constant illumination after two minutes, and is accompanied by a warning chime): This indicates a system fault that may result in serious damage to vehicle components and reduced ACE performance. Stop the vehicle as soon as safety permits and switch off the engine. DO NOT CONTINUE DRIVING! Seek qualified assistance immediately.
- ***If the light shows AMBER*** (constant illumination): This indicates a system fault that will result in reduced ACE performance but will not leave the vehicle in a dangerous condition. You may continue driving, but reduce speed, take additional care, and consult a Land Rover dealer at the earliest opportunity.

### Fuel filter - AMBER (diesel only)



Illuminates as a bulb check when the starter switch is turned to position 'II' and extinguishes after 3 seconds approximately. If the light illuminates while driving, this indicates the presence of excessive amounts of water in the fuel. You may continue driving but should seek qualified assistance at the earliest convenient time.

### Off Road - AMBER\*



Illuminates briefly as a bulb and system check when the starter switch is turned to position 'II' and then extinguishes.

#### ***If the off-road switch is pressed:***

The light flashes continually while the rear of the vehicle is either; rising to off-road height, or returning to standard ride height. The light illuminates constantly while the suspension remains at off-road height.

In addition, the light will flash if extended mode is induced.

### Manual mode - GREEN (Auto only)



Illuminates for 3 seconds as a bulb check when the starter switch is turned to position 'II'. Illuminates constantly while Manual mode is selected.

***NOTE:*** If both the Manual and Sport mode lights (shown below) flash together, this indicates an electrical fault with the automatic gearbox. If the lights continue flashing after the vehicle has been brought to a halt and the starter switch has been turned off and then on again, you should seek qualified assistance urgently.

### Sport mode - GREEN (Auto only)



Illuminates for 3 seconds as a bulb check when the starter switch is turned to position 'II'. Illuminates constantly while Sport mode is selected.

### Self-levelling suspension - AMBER\*



Illuminates briefly as a bulb and system check when the starter switch is turned to position 'II' and then extinguishes.

*If the remote handset is operated:*

The light flashes continually while the rear of the vehicle is being lowered, or raised.

*If the light illuminates constantly:*

A fault with the suspension is indicated. Seek qualified assistance as soon as possible.

While it is possible to continue driving the vehicle in this condition, there is a considerable risk of causing further damage to the suspension. Preferably, the vehicle should be brought to a halt as soon as conditions allow. Further travel should be limited to reaching the nearest Land Rover dealer, or driving to a place of safety while awaiting recovery. In any event, speed must be restricted to a rate that will guarantee a smooth, and totally bump-free, ride at all times, ideally traversing only smooth, metalled roads.

### Hi/Lo range- AMBER



Illuminates briefly as a bulb and system check when the starter switch is turned to position 'II' and then extinguishes.

Illuminates continuously while the transfer gearbox lever is in the neutral position.

### Differential lock warning light - AMBER\*



Illuminates when the differential lock is selected and remains illuminated while the differential lock is engaged.

It will only extinguish when the differential lock actually disengages.

There will be a slight delay between differential lock disengagement and the warning light being extinguished, and is quite normal.

**NOTE:** *If the warning light is obviously reluctant to extinguish after the differential lock has disengaged, some transmission 'wind-up' may be present.*

*Reversing the vehicle for a short distance and then moving forward will usually 'unwind' the transmission and the warning light will extinguish. The vehicle can then be driven as normal.*

*However, if after two or three attempts to 'unwind' the transmission, the light remains on, consult your dealer AS SOON AS POSSIBLE.*

REF . Check Engine light / MIL light. Rave file states this. Not as Owners manual.

The MIL is located in the instrument cluster. It illuminates to alert the driver to system malfunctions. During ignition a self-test function of the lamp is carried out. The lamp will illuminate for 3 seconds then extinguish if no faults exist. If a fault is present the lamp will be extinguished for 1 second before illuminating.



