Bearmach

HawkEye

Your new diagnostic tool for
Land Rover vehicles

User Manual

www.bearmach.com

Bearmach HawkEye

Instruction Manual

04/2010 - EN(1.0)

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Overview

Nearly every new road vehicle, and many older vehicles, have multiple control modules that monitor and control different aspects of the vehicle (e.g. Engine, Transmission, Body, Suspension). The HawkEye service tool has been specifically designed to connect to, and communicate with, a number of these control modules and allow the user to extract information (e.g. Diagnostic Trouble Codes) which may aid in the diagnosis of system problems.

OM1555

The vehicle coverage available on the HawkEye service tool is dependent on the tool purchased.

The following vehicle coverage is available.

- Defender
- Defender (L326)
- Freelander 1
- Freelander 2 (L359)
- Discovery I
- Discovery II
- Discovery III
- Range Rover Classic
- Range Rover (P38a)
- Range Rover (L322)
- Range Rover Sport (L320)

Getting Started

Connect the EOBD cable (BA 5071) to the HawkEye service tool and the vehicle's diagnostic connector. Once connected, the current software version number is displayed.

Introduction

Unlocking New Units

A new or updated HawkEye service tool requires a security key to unlock the specific Land Rover model(s) required. To register the HawkEye service tool, email technical.support@omitec.com including the serial number of the unit, Land Rover model(s) required and contact details.

After obtaining your security key, follow this procedure to unlock the service tool.

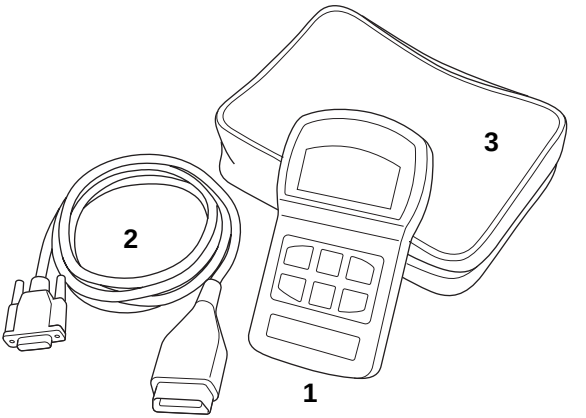
1. Select ‘User Menu’ from the main menu.
2. Select 'Security' from the user menu.
3. Select 'Enter Security Key' from the security menu.
4. Using the ▲ and ▼ keys, scroll through the alpha/numeric character list.
5. Confirm each character by pressing the ✓ key.

   If you make a mistake use the ◀▶ key and enter the correct character. To re-enter the code from the beginning, press the ✕ key.
6. When prompted to verify the security key, press ✓ to confirm.
7. Power down the HawkEye service tool by disconnecting the power supply.
8. Reconnect the power supply to restart the HawkEye service tool. The screen should now show a list of the applications included.

Additional Models

To add vehicles to the HawkEye service tool, contact your local supplier.

Kit Contents



OM1472

HawkEye kit

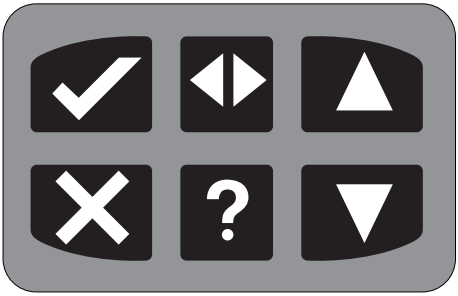
1. HawkEye service tool
2. J1962 cable (BA 5071)
3. Protective pouch
4. Quick Reference Guide (not shown)

Introduction

Display Screen

The HawkEye service tool screen is a backlit LCD capable of displaying four rows of text containing up to twenty characters.

Keypad



OM1473

The HawkEye service tool is operated via the 6-button keypad.

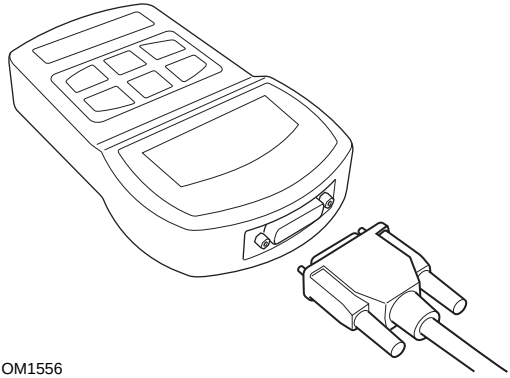
The table below details the keypad buttons and their functionality.

Key	Function
✓	Select a menu option, Continue or Yes.
✕	Exit a menu or No.
▲	Scroll up within a menu or text.
▼	Scroll down within a menu or text.
◀▶	Scroll left and right.
?	Provide context sensitive help (where available).

Easy Reset Facility

To reset the HawkEye service tool without disconnecting from the vehicle, hold the ✓, ✕, ▲ and ▼ keys down simultaneously.

Connection



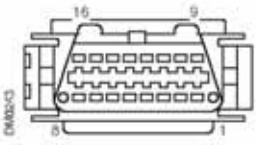
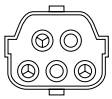
OM1556

The HawkEye service tool has a 15-way connector through which it can communicate to the vehicle via various interface cables. Connection to the specific system is via either the vehicle's EOBD (J1962) diagnostic socket or by a system specific connector. Refer to the 'Vehicle Application List' to determine the correct cable.

When connecting the cable to the HawkEye service tool, always secure the cable with the fixing screws to prevent accidental disconnection during use.

Introduction

Diagnostic Connector Location

Connector	Connector Location	Connector Face View
J1962	In the driver / passenger footwell on: Defender (L316) Freelander Discovery I - III Range Rover (P38a) Range Rover (L322) Range Rover Sport (L320)	
	Under the driver / passenger seat on: Defender	
14CUX	Behind the driver side kick panel on: Discovery I (V8)	 OM1557
	Under driver / passenger seat on: Range Rover Classic	

Troubleshooting

If communications cannot be established with the vehicle, follow the procedure below.

1. Check the correct system was selected from the menu.
2. Check the correct cable was used against the application list.
3. Disconnect both ends of the cable and ensure that no pins are bent or snapped.
4. Reset the control module on the vehicle by turning the ignition OFF and ON, reconnect the service tool and try again.

If communications still cannot be established, contact the Product Support Team for further assistance.

Safety Precautions

The following guidelines are intended to ensure the safety of the operator whilst preventing damage to the electrical and electronic components fitted to the vehicle.

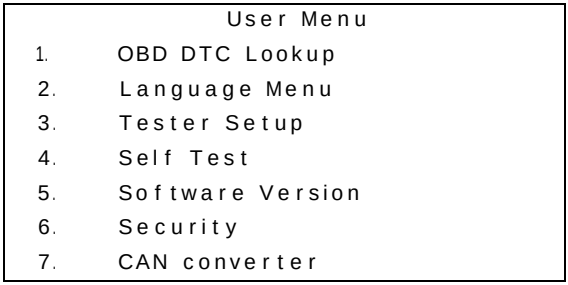
Equipment - prior to commencing any test procedure on the vehicle, ensure that the HawkEye service tool, its harnesses and connectors are in good condition.

Polarity - always observe the correct polarity when connecting the HawkEye service tool to the vehicle battery

Before carrying out testing on a vehicle, the following procedure should always be observed.

- Check the handbrake/parking brake is on.
- Check that neutral or park is selected.
- Keep test equipment and harnesses away from HT leads.
- Be aware of moving parts.
- Do not run engine in a confined space without adequate ventilation.

User Menu



Use the ▲ and ▼ keys to select the required function and press ✓ to confirm the selection.

For more information, see *'HawkEye Menu Structure', page 27*.

Note: Press ✕ to return to the main menu.

DTC Lookup

This option is used to look up a DTC description.

Looking up a known DTC

1. Use the ◀▶ and ? keys to move the cursor under the required DTC character, then using the ▲ and ▼ keys, change the characters as required.
2. Press the ✓ key to confirm the DTC.
3. Press ✕ to return to the user menu.

If the unit recognises the DTC, the screen will display the full description (for example, *P0100 - Mass or Volume Air Flow 'A' Circuit*).

Where more than one description is available, a separate menu will appear for you to select the appropriate option.

If a code is not recognised, the message 'No Text Allocated for this Code' is displayed.

Language Menu

The language menu allows changing of the software language, if available.

Selecting an alternative language

1. Use the ▲ and ▼ keys to select the required language.
2. Press the ✓ key to confirm the selection.

   Note: This menu is only enabled when more than one language is installed on the HawkEye service tool. If no additional languages are installed, the message 'Not Enabled' will be displayed and the display will return to the User Menu.

Self Test Menu

SELF TEST MENU	
1.	Full Self Test
2.	Flash Test
3.	Memory Test
4.	IIC Memory Test
5.	Vehicle Com Test
6.	PWM J1850 Test
7.	VPW J1850 Test
8.	CAN Comms Test
9.	Key Pad Test
10.	Display Test
11.	Display All Clear

Selecting a test

1. Use the ▲ and ▼ keys to select the required test.
2. Press ✓ to confirm the selection.
3. Follow the on-screen instructions to carry out the specified test.
4. Press the ✓ or ✗ key to return to the Self Test menu.

Software Version Menu

This menu displays the HawkEye service tool software version number before displaying a list of all software modules currently loaded onto the service tool, including their version numbers.

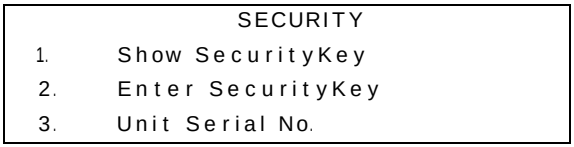
Checking the software version

1. Use the ▲ and ▼ keys to scroll through the software module list.
2. Press the ✓ or ✗ key to return to the Self Test menu.

Security Menu

All of the applications on the HawkEye service tool are 'locked' by a security key. To unlock a particular application, the appropriate security key must be obtained from the Product Support team and entered into the HawkEye service tool. If the expected applications are not displayed in the User Menu it could be that the security key has not been entered or that it has been entered incorrectly.

To examine or enter a security key, enter the 'Security' option. The following menu will be displayed.



Show SecurityKey

This option displays the SecurityKey on-screen.

1. Select 'Show SecurityKey' from the Security menu and press the ✓ key.
2. Press the ✓ or ✗ key to return to the Security menu.

If the security key is incorrect, 'Key is Invalid' will be displayed. Press the ? key for further information.

Enter SecurityKey

This option is used to enter the security key to unlock the functions on the HawkEye service tool.

1. Select 'Enter SecurityKey' from the Security menu and press the ✓ key.
2. Using the ▲ and ▼ keys, scroll through the alpha / numeric character list.
3. Confirm each character by pressing the ✓ key.
   In the event of a mistake, use the ◀▶ key and enter the correct character. To re-enter the code from the beginning, press the ✕ key.
4. When prompted to verify the security key, press the ✓ key.
5. Restart the HawkEye service tool either by disconnecting and then reconnecting the power supply, or by holding down the ✓, ✕, ▲ and ▼ keys simultaneously.

Note: Pressing the ? key at any point will display the on-screen instructions.

Note: The ✕ key can be pressed at any point to cancel input of the security key. The original security key will be retained by the HawkEye service tool.

Unit Serial No.

This option displays the serial number of the HawkEye service tool on-screen.

The unit serial number will match the number on the back of the unit and should be quoted when calling Product Support to ensure efficient resolution of any technical issues. This number cannot be changed.

1. Select the 'Unit Serial No.' option from the Security menu and press the ✓ key.
2. Once the unit serial number has been noted, press the ✕ key to return to the Security menu.

Anti-Lock Braking System (ABS)

- Land Rover vehicles

Longitudinal Acceleration Sensor Calibration

This routine is necessary in the following situations.

- The Longitudinal Acceleration Sensor has been replaced.
- The ABS / TC / ESP control module has been replaced.
- The ESP system is not behaving properly as it should. Resetting of this sensor can sometimes cure erroneous ESP behaviour.

Airbag

- Land Rover Freelander 2 (L359) (2007-)

Restraints Build Mode Entry / Exit

This function is used to place the Airbag / Restraint System in a ‘build mode’, to facilitate safe maintenance and repairs to be performed without risk of detonation of airbags or pretensioners. When work has been completed on the system, the Airbag / Restraints system must be taken out of ‘build mode’ to restore normal operation.

Crash Reset

This option is necessary on vehicles where airbags have been deployed following a crash. The routine clears the crash ‘flag’ in the Body Control Module to enable normal operation after repair of the vehicle and installation of a new airbag.

Air Suspension System (Ride Level Module - RLM)

- Discovery III (2005 - 2009)
- Range Rover Sport (L320) (2005 - 2009)
- Range Rover (L322) (2006 - 2009)

There are several functions available via the HawkEye service tool.

- Set Operating Mode.
- Set Tolerance Control Mode.
- Deflation Routines.

Set Operating Mode

This procedure is used to set the RLM to different modes. Modes can be set under the 'Configuration' option of the HawkEye service tool. The current operating mode can be displayed under the 'Live Data' option of the HawkEye service tool.

Pre-test conditions

- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Normal Mode

This is the normal operating mode for the RLM.

Manufacturing Mode

This mode is mainly used in the factory when assembling the vehicle. It can, however, also be used if the owner of the vehicle wishes to fit coil springs instead of the air springs. Placing the control module in this mode ensures that the control module continues to function in terms of processing information such as height information. This process will render the Air Suspension controls and instruments non-functional.

Note: If the vehicle is driven in any mode other than Normal Mode, the Air Suspension will NOT operate correctly.

Set Tolerance Control

This procedure is used to set the RLM tolerance control. Tolerance control can be set under the 'Configuration' option of the HawkEye service tool. The current tolerance control state can be displayed under the 'Live Data' option of the HawkEye service tool.

Pre-test conditions

- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Normal Tolerances

This state is the normal operating mode for the Air Suspension system.

Tighter Tolerances

This state is used when another part of the vehicle is being aligned or calibrated. The two main instances where this state is used are:

- Wheel alignment;
- Adaptive Headlamp calibration.

Deflation Routines

There are several routines available for this system.

- Deflate air springs
- Deflate reservoir
- Deflate all (air springs and reservoir)
- Exit deflate mode.

These routines are to be used when work must be carried out on the air suspension system; this will reduce the risk of personal injury caused by compressed air.

Pre-test conditions:

- The ignition must be ON;
- An approved battery charger must be connected to ensure consistent power supply.

Caution: The vehicle will lower during deflation of the air suspension. To avoid damage, ensure all doors are closed.

Warning: It is the responsibility of the technician to ensure that air has been fully expelled from the air suspension system even if the HawkEye service tool indicates that the routine has completed successfully. The procedure may need to be run more than once to ensure all air is expelled from the system. Failure to do so may result in personal injury.

Exit Deflate Mode

After the work has been completed the technician ***must*** re-enable the system using the 'Exit Deflate Mode' option to restore normal operation of the air suspension system.

Air Suspension System (EHC2)

- Range Rover (L322) (2002 - 2006)

There are four functions available via the HawkEye service tool for the EHC2 air suspension system.

- Actuators
- Set Operating Mode
- Set Tolerance Control Mode
- Deflation Routines

Actuators

There are a number of actuators available on the HawkEye service tool. These are split into two different sections.

Level Selection

The HawkEye service tool can be used to force the air suspension system to any level as an alternative to using the ride height switch inside the vehicle.

- Access Level.
- Motorway Level.
- Standard Level.
- Off-road Level.

These are useful for the diagnosis of faults with the ride height switch and wiring.

Pre-test conditions:

- The engine must be RUNNING.

Drive Outputs

The following outputs can be driven individually using the HawkEye service tool.

- Front right valve
- Front left valve
- Rear right valve
- Rear left valve
- Exhaust valve
- Reservoir valve
- Compressor valve
- High-pressure exhaust valve
- Front cross-link valve
- Rear cross-link valve
- Access LED
- Motorway LED

- Standard LED
- Off-road LED
- Hold LED

Pre-test conditions

- The ignition must be ON and the engine OFF.

Set Operating Mode

There are four functions available via the HawkEye service tool for the EHC2 system.

- Transport mode
- Low Tolerance Mode (used during wheel alignment or headlamp levelling)
- Production Mode (used to disable all control circuits within the system)
- Normal Mode (to cancel all of the above).

There procedures are used to set the control module to different modes. Modes can be set under the 'Service Functions' option of the HawkEye service tool. The current operating mode can be displayed under the 'Live Data' option of the HawkEye service tool.

Pre-test conditions

- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Note: If the vehicle is driven in any mode other than 'Normal Mode', the air suspension will not operate correctly.

Deflation Routines

There are seven routines available for this system.

- Deflate right front
- Deflate left front
- Deflate right rear
- Deflate left rear
- Deflate front
- Deflate rear
- Deflate all

These routines for use prior to servicing the air suspension system to reduce the risk of injury by compressed air.

Pre-test conditions

- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Caution: The vehicle will lower during deflation of the air suspension. To avoid damage, ensure all doors are closed.

Warning: It is the responsibility of the technician to ensure that air has been fully expelled from the air suspension system even if the HawkEye service tool indicates that the routine has completed successfully. The procedure may need to be run more than once to ensure all air is expelled from the system. Failure to do so may result in personal injury.

Inflation

When work has been completed on the specified area the air suspension can be re-inflated either by selecting the corresponding ‘Inflation’ routine or by starting the engine. When the engine is running, the system will inflate the four corners to the correct height for the currently selected level.

Inflation Routines

There are seven routines available for this system.

- Inflate right front
- Inflate left front
- Inflate right rear
- Inflate left rear
- Inflate front
- Inflate rear
- Inflate all

These routines are to be used either when work has been completed on a section of the air suspension system or to try and level the vehicle in an emergency repair situation.

Caution: The vehicle will raise during inflation of the air suspension. To avoid damage, ensure all doors are closed.

Pre-test conditions

- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Note: These routines may need to be repeated more than once to completely inflate the specified area.

Steering Angle Sensor (SAS)

- Land Rover vehicles

Steering Angle Sensor (SAS) Calibration

The SAS can be calibrated by using the 'SAS Calibration' option and following the on-screen instructions.

Note: The SAS should be calibrated after performing any wheel alignment, suspension adjustment or steering column replacement procedure.

Longitudinal Acceleration Sensor Calibration

This routine is necessary in the following situations.

- The longitudinal acceleration sensor has been replaced.
- The ABS / TC / ESP control module has been replaced.
- The ESP system is malfunctioning. Resetting of this sensor can sometimes cure ESP malfunction.

Service Reset

- Check application list for vehicles covered.

There are two service reset options available for Land Rover.

Service Interval Reset

This option resets the conventional service interval indicator. This function is to be used ***after*** a full service has been completed on the vehicle.

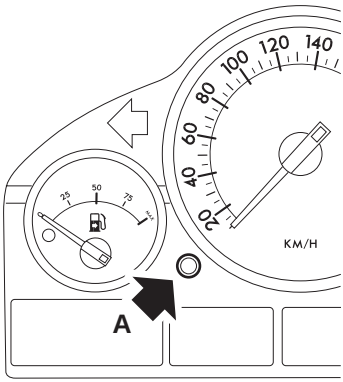
Oil Degradation Counter Reset

This option is necessary on vehicles which have Diesel Particulate Filters (DPF) fitted. This is not necessary on vehicles with petrol or LPG engines or for diesel engines where a DPF is not fitted. The counter should only be reset ***after*** the oil has been changed.

Manual Service Reset

- Range Rover (L322) (2002 - 2009) (except Japan and North America)

1. Switch ignition OFF.



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2. Press and hold button A.
3. Keep button depressed and switch the ignition to position I.
4. Keep button depressed for five seconds until ‘SIA RESET’ appears in the LCD display.
5. The display will now indicate the distance to service and the type of service required (OIL SERVICE or INSPECTION).
6. Check the distance to service has been reached. If it hasn’t, please proceed to the next step. If it has, please proceed to step 9.
7. Press button A once. The display will show the date to service.
8. Check the service date has been reached. If it has not, please proceed to step 10. If it has, please proceed to step 11.
9. When the distance to service has been reached, press button A for 5 seconds. ‘RESET’ will flash on the display. Press button A again before ‘RESET’ has flashed 5 times to reset the service distance limit. The new distance to service will be displayed for 5 seconds before the service date is displayed.
10. Press button A once to end the service interval check and reset.
11. When the date for service limit has been reached, press and hold button A for 5 seconds. ‘RESET’ will flash on the display. Press button A again before ‘RESET’ has flashed 5 times to reset the service date limit. The new date to service will be displayed for 5 seconds before end service is displayed.
12. Switch ignition OFF.

Electronic Parking Brake (EPB)

- Discovery III (2005 - 2009)
- Range Rover Sport (L320) (2005 - 2009)
- Range Rover (L322) (2006 - 2009)

There are four functions available under the ‘Service Brakes’ menu.

Unjam Electronic Parking Brake

This procedure should be used if one of the parking brake cables becomes detached or breaks whilst the vehicle is being driven.

Pre-test conditions

- The vehicle must be stationary.
- The engine must be RUNNING and at IDLE speed.

After performing the procedure it is necessary for the technician to carry out checks on the condition of the rear brake shoes and drums. If both are satisfactory, the technician should then refer to the Land Rover technical information.

Note: Part of this procedure places the parking brake into ‘Mounting Position’. In ‘Mounting Position’ a red flashing light will appear in the instrument cluster. It does not indicate a vehicle fault.

Mounting Position

The parking brake must be driven into the ‘Mounting Position’ if any of the following procedures are to be performed.

- Parking brake shoes removal or installation
- Parking brake shoe and lining adjustment

  Note: This procedure must be carried out if new parking brake shoes are fitted, new rear brake discs are fitted or if the vehicle has been mud wading for more than 50 miles.
- Changing parking brake cables
- Parking brake actuator removal or installation (to ensure parking brake cables can be connected and disconnected)

Pre-test conditions

- The vehicle must be stationary.
- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Ensure the on-screen instructions are followed precisely.

To exit the 'Mounting Position' mode, switch the parking brake on and then off, twice.

Note: This procedure places the parking brake into 'Mounting Position'. In 'Mounting Position' a red flashing light will appear in the instrument cluster. It does not indicate a vehicle fault.

Latching Position

This procedure may be required after use of the parking brake emergency release in order to relatch the parking brake.

Pre-test conditions

- The vehicle must be stationary.
- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.

Ensure the on screen instructions on the service tool are followed precisely and in the correct order.

Longitudinal Accelerometer Calibration

This procedure may be necessary if the longitudinal accelerometer has been replaced.

Pre-test conditions

- The ignition must be ON.
- An approved battery charger must be connected to ensure consistent power supply.
- Ensure the vehicle is placed on a level surface and remains stationary throughout the calibration procedure.
- Ensure the parking brake module is secured to the vehicle and that the parking brake is applied.

Ensure the on-screen instructions are followed precisely.

Electronic Parking Brake (EPB) - Disabling Manually

This procedure is necessary before carrying out work on the rear brake discs. When performed correctly, the brake caliper pistons are retracted by the control module.

1. Switch the ignition ON.
2. Apply and hold the footbrake.
3. Apply and hold the parking brake switch in the RELEASE position.
4. Turn the ignition OFF and remove the key (where applicable).
5. Release the footbrake.
6. Release the parking brake switch.
7. Remove fuse number 8 from the fuse box to isolate the parking brake electrical circuit.

Electronic Parking Brake (EPB) - Enabling Manually

1. Install fuse number 8 into the fuse box to re-enable the parking brake electrical circuit.

Electronic Parking Brake (EPB) Shoes - Bedding In

This procedure must be carried out if new parking brake shoes are fitted, new rear brake discs are fitted or if the vehicle has been mud wading for more than 50 miles.

1. Switch engine ON.
2. Apply the footbrake 3 times within 10 seconds and hold applied after the third application.
3. Apply the parking brake 4 times and release it 3 times within 10 seconds to enter 'Service Bedding In Procedure Mode'.

   Note: The 'Service Bedding In Procedure Mode' will remain active until the next ignition cycle or until the vehicle speed exceeds 31mph (50km/h). If it deactivates, repeat steps 1-3 to re-activate 'Service Bedding In Procedure Mode'.
4. Conduct 10 stops from 19 - 22mph (30 - 35km/h) to bed-in the parking brake linings.

   Note: The parking brake force will be increased to the dynamic maximum as long as the switch is held in the applied position.If the switch is released then the parking brake will be released.

   Caution: The EPB must be allowed to cool between each application. The EPB can be cooled either by driving for 500 yards (500 metres) at 19 - 22mph (30 - 35 kmh) or by remaining stationary for 1 minute without activating the parking brake switch.

Cleaning

To maintain the condition and serviceability of the service tool, it is advisable to follow the cleaning procedures below.

Caution: Never use solvents or other harsh cleaning fluids to clean the HawkEye service tool. Harsh solvents may seriously damage the plastic casing.

Caution: The HawkEye service tool is not waterproof. Always dry the unit thoroughly after cleaning or if it has been subject to accidental spillage.

It is recommended that the following parts of the HawkEye service tool are periodically inspected and cleaned as required.

- The case
- The display screen
- The keypad
- Adapter cables and connectors

To clean the HawkEye service tool, or any of its cables or connectors, apply a mild detergent solution to a soft clean cloth.

Caution: Before cleaning, disconnect the service tool from the vehicle or any other power source.

Display Screen

During normal everyday use, the screen may become dusty or covered in grime. To clean the screen, always use a soft, clean, antistatic cloth. If any stubborn stains or marks remain, use a non-abrasive glass cleaner applied to a soft, clean cloth. Gently wipe the cloth across the display until the marks have been removed.

Software Updates

Software updates can be loaded onto the service tool by connecting it to a PC. The cable to connect the service tool to the PC will be supplied along with the upgrade CD or via the internet. Full instructions for loading the software updates to the service tool will also be supplied with the upgrade.

Specification

HawkEye complies with ISO/DIS 15031 Part 4 as an EOBD service tool.

Voltage Requirements - 8.0 volts to 16.0 volts DC.

Current requirement - 750mA maximum.

Display - 20 characters by 4 lines LCD with LED back light.

Operating temperature range - 0°C to 50°C

Declaration of Conformity

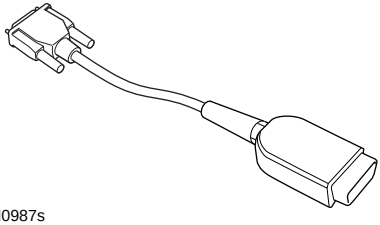
The HawkEye tool is CE marked and complies with the following directives.

- EN55022:1998 - ITE Emissions (Class A)
- EN50082-1:1998 - Generic EMC Immunity
- EN60950:1992 - Safety Requirements
- FCC47 Part 15 - Radio Frequency Devices (Class A)

A copy of the Declaration of Conformity certificate is available on request from the manufacturer or your supplier.

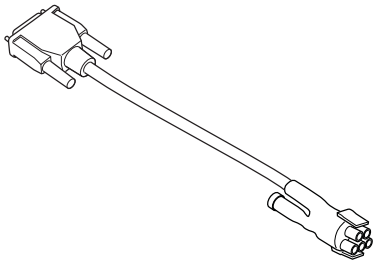
Diagnostic Cables

Cable Identification



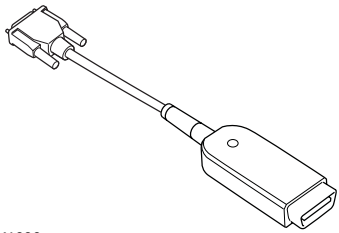
OM0987s

BA 5071 - J1962 cable (supplied with HawkEye diagnostic tool)



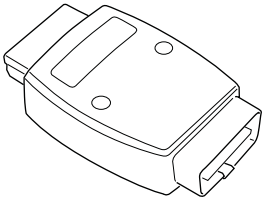
OM1002s

BA 5072 - Land Rover Lucas 14CUX cable



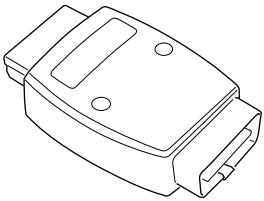
OM1006s

BA 5073 - Land Rover air suspension cable



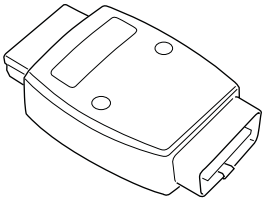
OM0995s

BA 5076 - Land Rover green adapter (10AS)



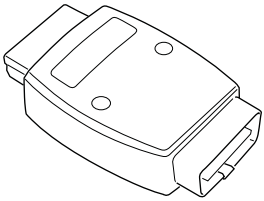
OM0995s

BA 5077 - Land Rover grey adapter (TEVES MK25, EWS 3)



OM0995s

BA 5078 - Land Rover red adapter (L322)



OM0995s

BA 5080 - Land Rover black adapter (Medium / Low Speed CAN)

HawkEye Menu Structure

The table below details the HawkEye service tool main menu structure.

Defender	EMS	CUX14	See *'Petrol Engine - 14CUX', page 37*
		GEMS	See *'Petrol Engine - GEMS', page 37*
		TD5	See *'Diesel Engine - TD5', page 34*
	ABS	WABCO 'D'	See *'ABS - WABCO 'D", page 47*
	Security	10AS	*'Security - 10AS', page 56*
Defender (L316)	EMS	See *'Diesel Engine - Diesel EMS', page 35*	
	ABS	WABCO 'D'	See *'ABS - WABCO 'D", page 47*
	Security	10AS	See *'Security - 10AS', page 56*
Discovery I	EMS	CUX14	See *'Petrol Engine - 14CUX', page 37*
		GEMS	See *'Petrol Engine - GEMS', page 37*
		MEMS 1.9	See *'Petrol Engine - MEMS 1.9', page 39*
		EDC 1.3.1	See *'Diesel Engine - EDC 1.3.1', page 35*
	ABS	WABCO 'C'	See *'ABS - WABCO 'C", page 49*
	Airbag	TRW SPS	See *'Airbag - TRW SPS', page 50*
	Security	10AS	See *'Security - 10AS', page 56*

Appendix A: Menus

Discovery II	EMS	M 5.2.1	See *'Petrol Engine - M 5.2.1', page 41*
		TD5	See *'Diesel Engine - TD5', page 34*
	Transmission	GS8.87.0/1	See *'Transmission - GS 8.87.0/1', page 43*
	ABS	WABCO 'D'	See *'ABS - WABCO 'D", page 47*
	Airbag	TRW Gen 4	See *'Airbag - TRW Gen 4', page 50*
	Security	BCU	See *'Security - BCU', page 58*
	Chassis	Air Suspension	See *'ABS - WABCO 'D", page 47*
		ACE (ROCK / ARC)	See *'Chassis - ACE', page 55*
Discovery III	EMS	Petrol	See *'Petrol Engine - Petrol EMS', page 42*
		Diesel	See *'Diesel Engine - Diesel EMS', page 36*
	Transmission	See *'Transmission', page 46*	
	ABS	See *'ABS', page 49*	
	Airbag	See *'Airbag', page 51*	
	EPB	See *'EPB', page 63*	
	Service Reset	See *'Service Reset', page 62*	
	Steering Angle	See *'SAS', page 61*	
	Security	See *'Security - Body', page 60*	
	Chassis	See *'Chassis', page 55*	
	Fuel-Burning Heater	See *'Fuel-Burning Heater', page 64*	

Freelander 1	EMS	MEMS 1.9	See *'Petrol Engine - MEMS 1.9', page 39*
		MEMS 3	See *'Petrol Engine - MEMS 3', page 40*
		EMS 2000	See *'Petrol Engine - EMS 2000', page 38*
		MS43	See *'Petrol Engine - MS43', page 41*
		EDC 1.3.1	See *'Diesel Engine - EDC 1.3.1', page 35*
		DDE 4.0	See *'Diesel Engine - DDE 4.0', page 35*
	Transmission	JATCO FPO	See *'Transmission - JATCO FTO', page 43*
	ABS	WABCO 'D'	See *'ABS - WABCO 'D", page 47*
		ABS MK20	See *'ABS - MK20 / MK25', page 48*
		ABS MK25	
	Airbag	Autoliv AC4	See *'Airbag - Autoliv AC4', page 50*
		Siemens SRE Smart	See *'Airbag - Siemens SRE Smart', page 50*
	Security	CCU	See *'Security - CCU', page 57*
		EWS 3D	See *'Security - EWS 3D', page 57*
Freelander 2	EMS	Petrol	See *'Petrol Engine - Petrol EMS', page 41*
		Diesel	See *'Diesel Engine', page 36*
	Transmission	See *'Transmission', page 43*	
	ABS	See *'ABS', page 48*	
	Airbag	See *'Airbag', page 50*	
	Service Reset	See *'Service Reset', page 62*	
	Security	See *'Security', page 58*	
	Fuel-Burning Heater	See *'Fuel-Burning Heater', page 64*	

Range Rover (L322) 02MY - 05MY	EMS	Petrol	See *'Petrol Engine - ME 7.2', page 42*
		Diesel	See *'Diesel Engine - DDE 4.0', page 36*
	Transmission	Petrol	See *'Transmission - ZF / EGS 8602', page 44*
		Diesel	See *'Transmission - GM5 / EGS20', page 45*
	ABS	See *'ABS - Bosch 5.7', page 49*	
	Airbag	See *'Airbag - TRW MRS 4', page 51*	
	Body Electrics	See *'Security - GM3 Body Electrics', page 60*	
	Service Reset	See *'Service Reset', page 62*	
	Steering Angle Sensor	See *'SAS', page 61*	
	Security	See *'Security - EWS 3D', page 57*	
	Air Suspension	See *'Air Suspension - EHC2', page 53*	
	Fuel-Burning Heater	See *'Fuel-Burning Heater', page 64*	

Range Rover (L322) 06MY	EMS	Petrol	See *'Petrol Engine - Petrol EMS', page 42*
		Diesel	See *'Diesel Engine - DDE 4.0', page 36*
	Transmission	Petrol	See *'Transmission', page 46*
		Diesel	
	ABS	Petrol	See *'ABS', page 49*
		Diesel	See *'ABS - Bosch 5.7', page 49*
	Airbag	See *'Airbag - TRW MRS 4', page 51*	
	Service Reset	See *'Service Reset', page 62*	
	Body Electrics	See *'Security - GM3 Body Electrics', page 60*	
	Steering Angle Sensor	Petrol	See *'SAS', page 61*
		Diesel	See *'SAS', page 61*
	Air Suspension	See *'Chassis', page 55*	
	Fuel-Burning Heater	See *'Fuel-Burning Heater', page 64*	

Appendix A: Menus

Range Rover (L322) 07MY onward	EMS	Petrol	See *'Petrol Engine - Petrol EMS', page 42*
		Diesel	See *'Diesel Engine - Diesel EMS', page 36*
	Transmission	See *'Transmission', page 46*	
	ABS	See *'ABS', page 49*	
	Airbag	See *'Airbag', page 51*	
	EPB	See *'EPB', page 63*	
	Service Reset	See *'Service Reset', page 62*	
	Steering Angle Sensor	*'SAS', page 61*	
	Body Electrics	See *'Security - GM3 Body Electrics', page 60*	
	Chassis	See *'Chassis', page 55*	
	Fuel-Burning Heater	See *'Fuel-Burning Heater', page 64*	
Range Rover (P38a)	EMS	M 5.2.1	See *'Petrol Engine - M 5.2.1', page 41*
		GEMS	See *'Petrol Engine - GEMS', page 37*
		EDC 1.3.1	See *'Diesel Engine - EDC 1.3.1', page 35*
	Transmission	GS8.87.0/1	See *'Transmission - GS 8.87.0/1', page 43*
		GS2-38	See *'Transmission - GS 2-38', page 43*
	ABS	WABCO 'C'	See *'ABS - WABCO 'C'', page 49*
		WABCO 'D'	See *'ABS - WABCO 'D'', page 47*
	Airbag	TRW SPS	See *'Airbag - TRW SPS', page 50*
		TRW Gen 4	See *'Airbag - TRW Gen 4', page 50*
	Chassis	Air Suspension	See *'Air Suspension - Airsus', page 52*

Range Rover Classic	EMS	14CUX	See *'Petrol Engine - 14CUX', page 37*
	Chassis	Air Suspension	See *'Air Suspension - Airsus', page 52*
Range Rover Sport (L320)	EMS	Petrol	See *'Petrol Engine - Petrol EMS', page 42*
		Diesel	See *'Diesel Engine - Diesel EMS', page 36*
	Transmission	See *'Transmission', page 46*	
	ABS	See *'ABS', page 49*	
	Airbag	See *'Airbag', page 51*	
	EPB	See *'EPB', page 63*	
	Service Reset	See *'Service Reset', page 62*	
	Steering Angle Sensor	See *'SAS', page 61*	
	Security	See *'Security - Body', page 60*	
	Chassis	See *'Chassis', page 55*	
	Fuel-Burning Heater	See *'Fuel-Burning Heater', page 64*	

Appendix A: Menus

Menus - Diesel Engine

Diesel Engine - TD5

- Defender
- Discovery II

Read Faults / DTCs		
Clear Faults / DTCs		
Live Data		
Circuit Tests	Injector 1 Test	
	Injector 2 Test	
	Injector 3 Test	
	Injector 4 Test	
	Injector 5 Test	
	CM Check	
	EGR Vacuum Mod	
	EGR Inlet Throtl.	
	Turbo Wastegate	
	MI Lamp	
	Glow Plug Lamp	
	Glow Plug Relay	
	Tachometer	
	Temperature Gauge	
	Fuel Pump	
	A/C Clutch Drive	
	Fan(s) Test	
Programming	Immobilisation	Immob. NOT Fitted
		Immob. Fitted
	Read Injector	
	Set Injector	Injector 1
		Injector 2
		Injector 3
		Injector 4
		Injector 5
	Set Throttle	Throttle 2 Track
		Throttle 3 Track

Diesel Engine - Diesel EMS

- Defender (L316) (2007 -)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
Circuit Tests

Diesel Engine - EDC 1.3.1

- Freelander 1
- Discovery I
- Range Rover (P38a)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Circuit Tests	Engine Stop
	Boost Pres Wasteg
	A/Con. Comp. Relay
	EGR Valve
	Pre-Heater Relay
	Pre-Heater W/Lamp
	Diagnostic Lamp
	Fuel Pump
Read CM Details	

Diesel Engine - DDE 4.0

- Freelander 1

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Aircon Clutch
	Glow Plug Relay
	EGR Vacuum Mod
	Cooling Fan

Appendix A: Menus

Diesel Engine

- Freelander 2 (L359)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
Oil Change
ECM Data

Diesel Engine - DDE 4.0

- Range Rover (L322) (2002 - 2006)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
ECM Data	
Actuators	EGR Control
	Pre-Supply Pump
	Glow Time Relay
	Charge Air Control
	Cooling Fan

Diesel Engine - Diesel EMS

- Discovery III
- Range Rover (L322) (2007 -)
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Menus - Petrol Engine

Petrol Engine - 14CUX

- Defender
- Discovery I
- Range Rover Classic

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Injectors
	Fuel Pump

Petrol Engine - GEMS

- Defender
- Discovery I
- Range Rover (P38a)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	MI Lamp
	Fuel Pump
	Purge Valve

Appendix A: Menus

Petrol Engine - EMS 2000

- Freelander 1

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Main Relay
	Injector 1
	Injector 2
	Injector 3
	Injector 4
	Injector 5
	Injector 6
	Fuel Pump Relay
	A/C Clutch
	Cooling Fan Relay
	Purge Canister
	Over Speed Relay
	Stepper Motor
	Prime Fuel Line
	VIS Balance
	VIS Butterfly
ECM Data	

Petrol Engine - MEMS 1.9

- Freelander 1
- Discovery I

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Temperature Gauge
	Fuel Pump
	PTC Heater
	Air Conditioning
	Idle Solenoid
	ORFCO Solenoid
	Pulse Air Valve
	EGR Valve
	Purge Valve
	O2 Sensor Heater
	Emiss. Fail Lamp
	Turbo Boost Cont
	Fuel Used
	Fan Control 1
	Fan Control 2
	VVT - Inc Period
	Back Pres. Valve
	Var. Geom. Inlet
	Anti RunOn Valve
	Tachometer
	Boost Gauge
	SW Throttle Sw
	VVT - Dec Period
	Fan Control 3
	Test Ign. Coils
	Injectors
	Ambient Air Lamp
	Cruis Dis Relay
	Hill Desc Relay
	RevLite-Caterham

Appendix A: Menus

Petrol Engine - MEMS 3

- Freelander 1

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
ECM Data	
Actuators	Main Relay
	Fuel Pump Relay
	MI Lamp
	A/C Clutch
	Radiator Fan
	Auxiliary Fan
	US O2 Heater
	DS O2 Heater
	Engine Bay Fan
	Warning Lamp
	Tachometer
	Injector 1
	Injector 2
	Injector 3
	Injector 4

Petrol Engine - MS43

- Freelander 1

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
ECM Data	
Actuators	Cooling Fan
	Fuel Pump
	DMTL Pump
	DMTL Valve
	DMTL Heater
	Purge Valve
	A/C Clutch
	MI Lamp

Petrol Engine - Petrol EMS

- Freelander 2 (L359)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Petrol Engine - M 5.2.1

- Discovery II
- Range Rover (P38a)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
ECM Data	
Actuators	Fuel Pump
	Condenser Fan
	CVS Valve
	E Box Fan

Appendix A: Menus

Petrol Engine - ME 7.2

- Range Rover (L322)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Fuel Injector 1
	Fuel Injector 2
	Fuel Injector 3
	Fuel Injector 4
	Fuel Injector 5
	Fuel Injector 6
	Fuel Injector 7
	Fuel Injector 8
	Map Thermostat
	Tank Vent. Valve
	A/C Compressor
ECM Data	

Petrol Engine - Petrol EMS

- Discovery III
- Range Rover (L322) (2006)
- Range Rover (L322) (2007 -)
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Menus - Transmission

Transmission - JATCO FTO

- Freelander 1

Read Faults / DTCs
Clear Faults / DTCs
Live Data

Transmission

- Freelander 2 (L359)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Transmission - GS 8.87.0/1

- Discovery II
- Range Rover (P38a)

Faults Codes / DTCs	Read Faults / DTCs
	Clear Faults / DTCs
Live Data	
ECM Data	

Transmission - GS 2-38

- Range Rover (P38a)

Faults Codes / DTCs	Read Faults / DTCs
	Clear Faults / DTCs
Live Data	
ECM Data	

Appendix A: Menus

Transmission - ZF / EGS 8602

- Range Rover (L322) (2002 - 2005)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Solenoid Valve 1
	Solenoid Valve 2
	Solenoid Valve 3
	Pressure Act. 1
	Pressure Act. 2
	Pressure Act. 3
	Pressure Act. 4
	Pressure Act. 5
	Shiftlock
	Instruments
ECM Data	

Transmission - GM5 / EGS20

- Range Rover (L322) (2002 - 2006)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Pressure Act. 1
	Pressure Act. 4
	Solenoid Valve 1
	Solenoid Valve 2
	Solenoid Valve 3
	Shiftlock
	Reversing Light
	Eng. Intervention
	Park (P) Lamp
	Reverse (R) Lamp
	Neutral (N) Lamp
	Drive (D) Lamp
	1st Gear (1) Lamp
	2nd Gear (2) Lamp
	3rd Gear (3) Lamp
	4th Gear (4) Lamp
	5th Gear (5) Lamp
	Sport (S) Lamp
	Economy (E) Lamp
	Manual (M) Lamp
	Economy (A) Lamp
	Fault Indication
ECM Data	

Appendix A: Menus

Transmission

- Discovery III
- Range Rover (L322 - Petrol Only) (2006)
- Range Rover (L322) (2007 -)
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Menus - Anti-lock Braking System (ABS)

ABS - WABCO ‘D’

- Defender
- Defender (L316) (2007 -)
- Freelander 1
- Discovery II
- Range Rover (P38a)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Circuit Tests	Inlet Valve RF
	Outlet Valve RF
	Wheel Test RF
	Hydraulics RF
	Inlet Valve LF
	Outlet Valve LF
	Wheel Test LF
	Hydraulics LF
	Inlet Valve RR
	Outlet Valve RR
	Wheel Test RR
	Hydraulics RR
	Inlet Valve LR
	Outlet Valve LR
	Wheel Test LR
	Hydraulics LR
	Supplies / Grounds
	ABS Warning Lamp
	TC Warning Light
	Brake Warn. Lamp
	Shuttle Valve Sw.
	Valve Relay
	Pump Relay
	HDC Info. Light

Circuits Tests (continued)	HDC Fault Light
	Brake Light Relay
	Speedometer
	SLS RR Valve
	SLS LR Valve
	SLS Exhaust Valve
	SLS Cmpress Relay
	SLS RR Height
	SLS LR Height
	SLS Audible Warn
	SLS Warning Light
	OFF Road Light
	TC Valve NC
	TC Valve NO
	Isolation Inlet
	Rough Road Signal
Programming	Configuration
	Transportation

ABS - MK20 / MK25

- Freelander 1

Read Faults / DTCs
Clear Faults / DTCs
Live Data

ABS

- Freelander 2 (L359)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Configuration	SAS Calibration
	Long. Accel. Calib.
ECM Data	

ABS - WABCO ‘C’

- Discovery I
- Range Rover (P38a)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Circuit Tests	ABS Warning Lamp
	ETC Info Lamp
	Wheel Test LF
	Wheel Test LR
	Wheel Test RF
	Wheel Test RR
	Ignition Valves
	ETC Valves

ABS - Bosch 5.7

- Range Rover (L322) (2002 - 2006)

Read Faults / DTCs
Clear Faults / DTCs
SAS Calibration

ABS

- Discovery II
- Range Rover (L322) (2006 -)
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Appendix A: Menus

Menus - Airbag

Airbag - Autoliv AC4

- Freelander 1

Read Faults / DTCs
Clear Faults / DTCs
ECM Data

Airbag - Siemens SRE Smart

- Freelander 1

Read Faults / DTCs
Clear Faults / DTCs
ECM Data

Airbag

- Freelander 2 (L359)

Read Faults / DTCs		
Clear Faults / DTCs		
ECM Data		
Configuration	Airbag Build Mode	Entry
		Exit
	Crash Reset	

Airbag - TRW SPS

- Discovery I
- Range Rover (P38a)

Read Faults / DTCs
Clear Faults / DTCs
ECM Data

Airbag - TRW Gen 4

- Discovery II
- Range Rover (P38a)

Read Faults / DTCs
Clear Faults / DTCs
ECM Data

Airbag - TRW MRS 4

- Range Rover (L322) (2002 - 2006)

Read Faults / DTCs
Clear Faults / DTCs
ECM Data

Airbag

- Discovery III
- Range Rover (L322) (2007 -)
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
ECM Data

Appendix A: Menus

Menus - Air Suspension

Air Suspension - Airsus

- Range Rover Classic
- Range Rover (P38a)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Circuit Tests	Compressor
	Left Front Valve
	Right Front Valve
	Left Rear Valve
	Right Rear Valve
	Inlet Valve
	Exhaust Valve
	EAS Manual
	EAS Fault
	SLOW 35 MPH MAX
	SLOW 20 MPH MAX
	Inhibit Lamp
	High Profile Lamp
	Standard Lamp
	Low Profile Lamp
	Access Lamp
Maintenance	Transportation
	High Lock Mode
Calibration	

Air Suspension - EHC2

- Range Rover (L322) (2002 - 2005)

Read Faults / DTCs		
Clear Faults / DTCs		
Live Data		
Actuators	Access Level	
	Motorway Level	
	Standard Level	
	Offroad Level	
	FR Corner Valve	
	FL Corner Valve	
	RR Corner Valve	
	RL Corner Valve	
	Reservoir Valve	
	Exhaust Valve	
	Compressor Relay	
	Hi. Pres. Exhst. Val	
	Rear Cross-Link	
	Front Cross-Link	
	Access Indict. LED	
	Motorway LED	
	Standard LED	
	Off-Road LED	
	Hold LED	
Service Functions	Operational Mode	Transport Mode
		Production Mode
		Wheel Alignm. Mode
		Normal Mode
	Deflate	Deflate All
		Deflate Front
		Deflate Rear
		Deflate FL Corner
		Deflate FR Corner
		Deflate RL Corner
		Deflate RR Corner

Service Functions (continued)	Inflate	Inflate All
		Inflate Front
		Inflate Rear
		Inflate FL Corner
		Inflate FR Corner
		Inflate RL Corner
		Inflate RR Corner
ECM Data		

Menus - Chassis

Chassis - ACE

- Discovery II

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Warning Lamp
	Main Relay
	Direct. Ctl. Valve 1
	Direct. Ctl. Valve 2
Calibration	Upper Lateral Acc
	Lower Lateral Acc
	Both Lateral Acc
Bleeding	Front Axle
	Rear Axle
	Full Bleed
System Test	

Chassis

- Discovery III
- Range Rover (L322) (2006 -)
- Range Rover Sport (L320)

Read Faults / DTCs		
Clear Faults / DTCs		
Live Data		
Configuration	Operational Mode	Production Mode
		Normal Mode
	Tolerance Control	Normal / Standard
		Tight/Wheel-Align
	Deflate	Deflate Springs
		Deflate Reservoir
		Deflate All
		Exit Deflate Mode
ECM Data		

Appendix A: Menus

Menus - Security

Security - 10AS

- Defender
- Defender (L316) (2007 -)
- Discovery I

Live Data	
Programming	GEMS Immobilisation
	Spider Immobilisation
	EDC Immobilisation
	DDS Immobilisation
	Catalyst Overheat Warning
	Land Rover Defender
	Discovery Interior Lights
	Defender Interior Lights
	Pulsed Horn
	Hazards ON Alarm Triggered
	Hazards ON Alarm Arm / Disarm
	Passive Immobilisation
	CDL Operative With Alarm Armed
	Immobiliser Off With Ignition
	Disarm Alarm / Immob. With Key
	Disarm Alarm Only with Key
	Unlock Vehicle - No Disarm
	Mislock Sounder
	LED Indication of Alarm Trigger
Transmitters	

Security - CCU

- Freelander 1

Live Data	
Circuit Tests	CCU Int Buzzer
	Horn
	Alarm LED
	Door Open W/Lamp
	Seat Belt W/Lamp
	H/Brake Warn Lamp
	Courtesy Light
	Tail Fog Lamps
	Hazard Relay
	Driver Door Motor
	D'able Lock Motors
	Unlock Motors
	Tail Window Down
	Tail Window Up
	Front Wiper Slow
	Wiper F'ward Rel
	Wiper Reverse Rel
	Tail Door Act
	Win Heater Relay
	Crank Enable

Security - EWS 3D

- Freelander 1
- Range Rover (L322) (2002 - 2005)

Fault Codes / DTCs	Read Faults / DTCs
	Clear Faults / DTCs
Live Data	
ECM Data	

Appendix A: Menus

Security

- Freelander 2 (L359)

Read Faults / DTCs	
Clear Faults / DTCs	
ECM Data	
Live Data	
Configuration	Crash Reset

Security - BCU

- Discovery II

Live Data	
Circuit Tests	Horn
	Fuel Flap
	Alarm LED
	Ign Interlock
	Crank Enable
	Lock Doors
	Unlock Doors
	Superlock Doors
	Single Pt. Entry
	Front LH Window
	Front RH Window
	Rr Window Enable
	Sunroof Enable
	Front Wipe Enable
	Rear Wiper Enable
	H/Lamp Power Wash
	Front Fogs Relay
	LH Ind. Enable
	RH Ind. Enable
	Shift Interlock
	Transfer Neutral
	Sounder
	Check Engine Lamp
	LH Ind Warn Lamp

Circuit Tests (continued)	RH Ind Warn Lamp
	Check ACE Lamp
	Manual Lamp
	Diff. Lock Lamp
	Oil Pressure Lamp
	H/Temp Warn. Lamp
	Sport Warn Lamp
	Trans. Temp Lamp
	Alternator W/Lamp
	Trailer Indicator
	HDC Select W/Lamp
	ABS Warning Lamp
	Traction W/Lamp
	Check HDC W/Lamp
	Brake Warn. Lamp
	Seat Belt W/Lamp
	Glow Plug W/Lamp
	Check SLS W/Lamp
	Heated Rr Window
	Heat Rr Win Lamp
	Heated Front Lamp
Transmitters	
Programming	Gearbox
	Front FOG
	Shift Interlock
	DRL
	Wash Wipe
	Key In Warning
	Electric Seat
	Electric Windows
	Heated Fr Screen
	Rear Win / Sun Roof
	Autographics
	HDC/SLABS
	Courtesy Lamps
	Error Warning

Programming (continued)	Seat Belt W/Lamp
	Seatbelt Sound
	Bulb Failure
	Superlock
	Unlocking
	Alarm Disarm
	Inertia Switch
	Speed Locking
	Volumetric
	Alarm
	Passive
	Hazards
	Mislock
	Alarm Sound
	Bath Robe Lock
	Alarm Tampered
	Eng. Immobilised
	Low Battery Warn
	EKA

Security - GM3 Body Electrics

- Range Rover (L322)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Security - Body

- Discovery III
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

Menus - Steering Angle Sensor (SAS)

SAS

- Range Rover (L322) (2002 - 2005)
- Range Rover (L322 - Diesel Only) (2006)

Read Faults / DTCs
Clear Faults / DTCs
SAS Calibration

SAS

- Discovery III
- Range Rover (L322 - Petrol Only) (2006)
- Range Rover (L322) (2007 -)
- Range Rover Sport (L320)

Read Faults / DTCs	
Clear Faults / DTCs	
Configuration	SAS Calibration
ECM Data	

Menus - Service Reset

Service Reset

- Freelander 2 (L359)
- Range Rover (L322) (2006 -)
- Discovery III
- Range Rover Sport (L320)

Service Reset

Service Reset

- Range Rover (L322) (2002 - 2005)

Oil Reset
Distance Reset
Time Reset

Menus - Electronic Parking Brake (EPB)

EPB

- Discovery III
- Range Rover (L322) (2007 -)
- Range Rover Sport (L320)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Service Brakes	Unjam EPB
	Mounting Position
	Latching Position
	Long. Accel. Calib.
ECM Data	

Menus - Fuel-Burning Heater

Fuel-Burning Heater

- Range Rover (L322) (2002 -)

Read Faults / DTCs	
Clear Faults / DTCs	
Live Data	
Actuators	Everything Off
	Water Pump On
	Air Fan Full Load
	Glow Plug On
	Dosing Pump On
	Aircon Fan On
	FBH On
ECM Data	

Fuel-Burning Heater

- Freelander 2 (L359)
- Discovery III
- Range Rover Sport (L320)

Read Faults / DTCs
Clear Faults / DTCs
Live Data
ECM Data

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