

**WE OFFER DEDICATED
TECHNICAL SUPPORT!**



**Our UK based diagnostic support centre
can help you with the following:**

- Locating information within the product
- Clarification of manual procedures
- Assistance with OEM fault codes and descriptions*
- Setting up the product; garage details; customer details; preferences
- Assist with sourcing information from OEM which is not covered*

**Call us on:
0845 6066512**

*Some exceptions may apply.

Snap-on

**INFORMATION
SYSTEM**

Snap-on

SNAP-ON INFORMATION SYSTEM OVERVIEW

MAINTENANCE

SERVICE SCHEDULES

SCHEDULE GUIDANCE

MAINTENANCE PROCEDURES

- Battery disconnect/reconnection
- Electronic parking brake
- Service indicator reset
- Start/stop deactivation
- Tyre pressure monitoring system
- Windscreen wipers; service position

REPAIR DATA

ENGINE, TRANSMISSION, STEERING, SUSPENSION, BRAKES, EXTERIOR AND INTERIOR

- Adjustment data
 - Engine settings
 - Engine electrical components
 - Wheel alignment
 - Brake dimensions
- Emission data
- Tyre sizes and pressures
- Torque settings
- Fluid capacities and drain & refill locations
- Lubricants and fluids
 - Engine
 - Cooling
 - Transmission

- Steering
- Air conditioning

Repair manuals

- Ancillary drive belt - removal/installation
- Automatic transmission - emergency park release
- Automatic transmission - fluid level check/drain/refill
- Battery - disconnection/reconnection
- Brake system - bleed
- Clutch - removal/installation
- Cooling system - drain/refill
- DPF
- Electric parking brake (EPB) - procedures
- High voltage circuit deactivation
- Key and remote - reprogramming
- Manual transmission - removal/installation
- Oil level check - vehicles without dipsticks
- Parking brake - adjustment
- Procedures for hybrid and electric vehicles
- Start/stop - deactivate/activate
- Selective catalytic reduction: AdBlue drain/refill
- Self-levelling suspension jacking up mode
- Service interval reset
- Timing belt - removal/installation
- Timing chain - removal/installation
- Tyre pressure monitoring systems
- Wheel alignment settings
- Windscreen wipers - service position

Technical drawings

- Air conditioning
- Brakes

- Engine mounts
- Steering and suspension

Repair times

- Complete vehicle

ELECTRONICS

VESA

- Engine, steering, suspension, brakes, climate control
- Component circuit testing
- Can-Bus overview
- Locations
- Fault code diagnostics

COMFORT WIRING DIAGRAMS

- Systems not covered by VESA

COMPONENT LOCATIONS

- Grounding points
- EOBD connector
- Control units

FUSES AND RELAYS

WARNING LIGHTS AND INDICATORS

SMARTPACK

SMARTCASES - VERIFIED REAL WORLD FIXES; RECALLS

TECHNICAL SERVICE BULLETINS



Snap-on Information System
Maintenance and Repair Data



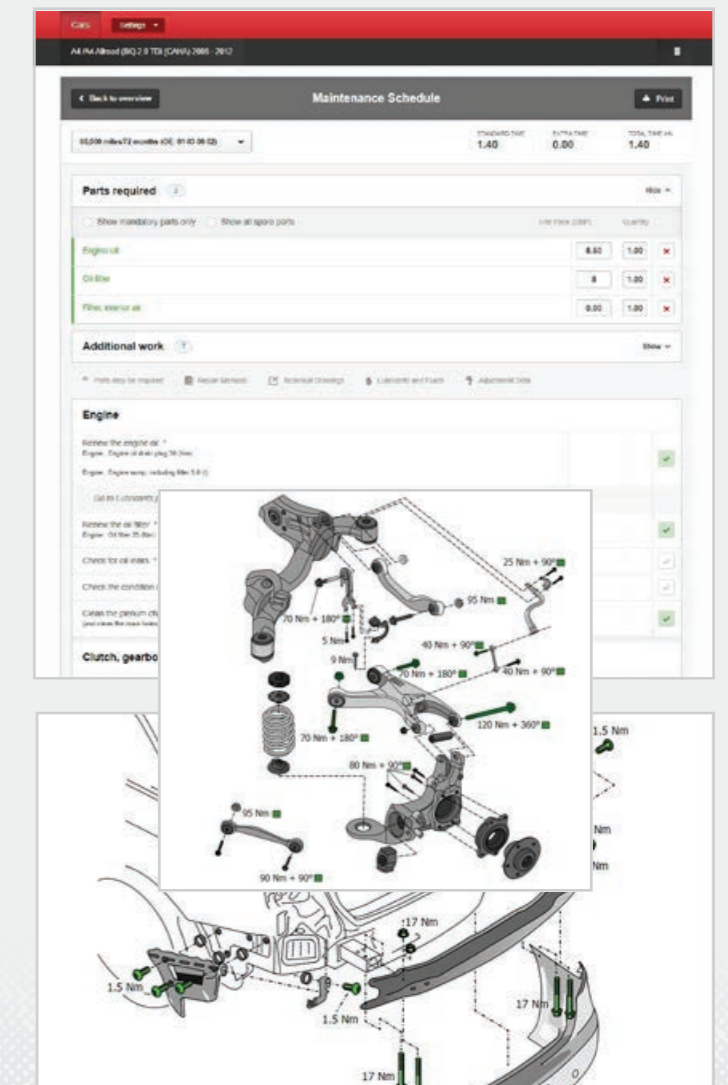
The benchmark in comprehensive technical information for your workshop.



Snap-on Information System Maintenance and Repair Data

Snap-on Information System Maintenance and Repair Data is an intuitive, easy-to-use system, refined over years of development. It covers most of the essential mechanical repair information.

The key to data is not just its quality, accuracy, usefulness and relevance but also how it is presented for the benefit of its intended users.



USER BENEFITS

INCREASE WORKSHOP EFFICIENCY - SAVE TIME, SAVE MONEY



FAST VEHICLE SELECTION WITH VRM



MOBILE FRIENDLY LOGIN FROM ANYWHERE



UNIQUE SMART CASES AND GUIDED DIAGNOSTICS (VESA II)



BASED ON OEM TECHNICAL INFORMATION



ENABLES FAIR COMPETITION WITH VM'S AUTHORISED REPAIRERS



THOUSANDS OF TECHNICAL DRAWINGS & REPAIR MANUALS



98%+ COVERAGE - EUROPEAN VEHICLE PARC VOLUME





Identification data



IDENTIFICATION DATA

Finding your vehicle is easy.

Identification code locations provide you with the recommended method to specify your vehicle. Snap-on Information System Maintenance and Repair Data features various search options such as engine code, European Type Approval and VIN. Depending on the country, a number plate search is also available.

FEATURES

- VIN and identification plate locations ✓
- VIN decoder ✓
- Equipment codes ✓

The screenshot displays the Snap-on Information System interface. On the left, there's a 'Select make' dropdown menu with options like ABARTH, ALFA ROMEO, BUICK, CADILLAC, CITROEN, DODGE, and HONDA. Below this is a 'Select model' section with a list of models including A4 (FW), A4 Allroad (FK), A4 (BE, BK), A4 (BE, BK), and A4 (BL). A search filter is also present. On the right, there's a grid of vehicle images with their respective identification codes and model years. In the center, a detailed view of a car's engine compartment is shown, with a green box highlighting the location of the identification code. Below this, there's a table with columns for engine type, equipment code, power, and model year.

Engine	Equipment code	Power	Model Year
2.0 TDI	DESA	160	2016 - ...
2.0 TDI	DETA	140kW	2016 - ...
2.0 TDI	CZHA	110kW	2016 - ...
2.0 TDI	DEUA	110kW	2016 - ...

Maintenance



MAINTENANCE

Clear, comprehensive and, above all, helpful.

A single overview of the OEM service intervals enables a quick selection of the required service.

Service item intervals allow quick access to maintenance information (time and distance) for specific components.

Full maintenance schedules, which are

The screenshot displays the Snap-on Information System interface for maintenance. On the left, there's a sidebar with a car icon and a 'Change car' button. Below this are menu options: Overview, Maintenance, Repair Data, and Electronics. The main area shows a 'Schedules' dropdown menu with options for 'Service indicator reset', 'Maintenance procedures', and 'Maintenance forms'. To the right, there's a list of service intervals, including 'Time/distance dependent service, (- 2009)', 'Longlife service, (- 2009)', 'Timing belt intervals', 'Service item intervals', 'Oil service (service indicator)', 'Inspection service (service indicator)', 'Oil service + inspection service', 'Inspection service: every 40,000 miles/48 months', and 'Oil service + inspection service (combined): every 40,000 miles/48 months'. Below this, there's a detailed view of the 'Air filter' service interval, which is 'every 60,000 miles and clean the housing'. Other service items listed include 'Brake fluid', 'Engine oil', 'Filter, interior air', 'Fuel filter', 'Oil filter', and 'Timing belt'.

Continued on next page

Continued from previous page

Maintenance Schedule

200,000 miles/240 months (OE: 01 03 00 12)

STANDARD TIME: 1.70 EXTRA TIME: 2.00 TOTAL TIME (H): 3.70

Parts required

Part	Unit Price (GBP)	Quantity
Engine oil	8.90	6
Oil filter	6.20	1.00
Timing belt		1.00
Timing belt set	128.40	1.00
Filter, interior air	0.00	1.00

Additional work

Task	Time
Renew the fuel filter every 40,000 miles	+ 0.40
Renew the air filter every 60,000 miles	+ 0.20
Renew the timing belt(s) every 120,000 miles/60 months	+ 2.00
Diesel particulate filter: check the saturation with a diagnostic tool first check at 100,000 miles, then every 20,000 miles	+ 0.10
Selective catalytic reduction (SCR) check the fluid level, top up if necessary every 10,000 miles	+ 0.10
CVT: renew the fluid every 40,000 miles	+ 0.60
Braking system: renew the brake fluid first change at 36 months, then every 24 months	

Brakes

- Check the brake fluid level, top up if necessary *
- Go to Lubricants page
- Check the brake pad thickness *
- Go to Adjustment Data page
- Check the brake lines, hoses and connections for leaks and damage *

Suspension, wheels and tyres

- Check the tread depth and wear pattern on all the tyres, including the spare
- FOLLOW UP Renew four tyres + 1.20
- Check the tyre pressures, adjust if necessary
- Go to Adjustment Data page
- Reset the tyre pressure monitoring system *
- Tyre pressure monitoring system
- Check the tyre sealant can expiry date *
- Ball joints: check the condition * (check for play)

Electrical System

- Check the battery magic eye *
- Check the battery charge, using an appropriate battery tester *

printable for convenience, are provided for make – model – derivative, presented by intervals and broken down by subject (engine, brakes, etc.) or location (engine compartment, under the vehicle, etc.).

Additional work is also displayed, following the OEM recommendations. All tasks have a corresponding OEM code and time. The total time is also displayed at the top and bottom of the page.

A unique feature is the availability of logical follow-up tasks which makes it easier to complete the work sheet.

FEATURES

- Maintenance schedules (OEM-based) ✓
- Printable work sheets ✓
- Smart links to adjustment data ✓
- Links to parts ✓
- Follow-up tasks ✓
- Additional tasks ✓
- Service times ✓
- Service indicator reset manuals ✓
- Timing belt renewal intervals ✓
- Tyre pressure monitoring system procedures ✓

Continued on next page



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'SMART' LINKS

Where necessary, there are links to detailed and annotated technical drawings of components or adjustment values, as well as to subsections relating to additional aspects of the task.

There are instructions on how to disconnect and reconnect batteries, and on resetting service indicators and tyre pressure monitoring systems.

Available 'smart' links to main subjects:

 ADJUSTMENT DATA

 LUBRICANTS AND FLUIDS

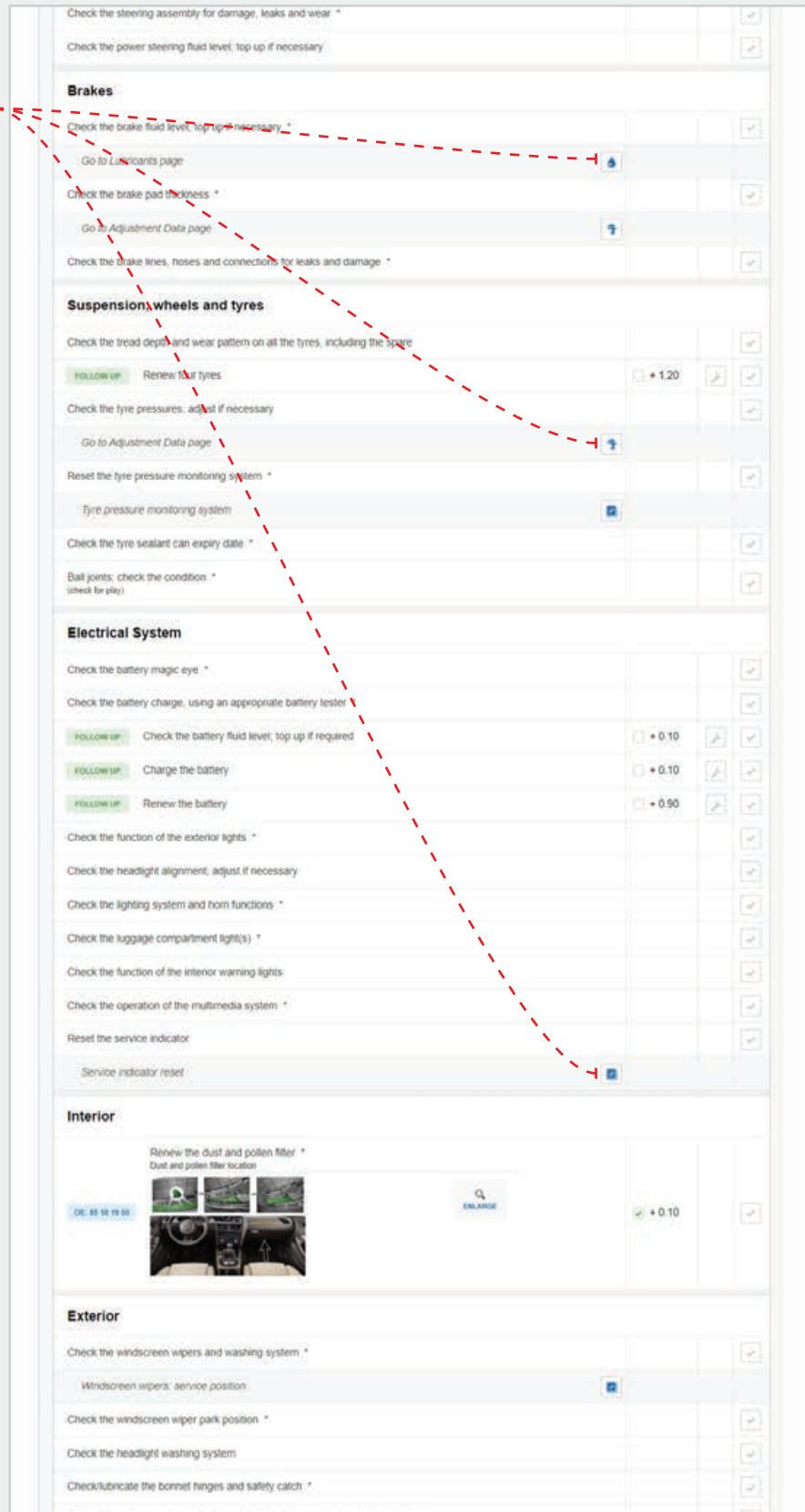
 REPAIR MANUALS

 REPAIR TIMES

 TECHNICAL DRAWINGS

Available 'smart' links to other features and subjects:

- Body and paint report
- Vehicle inspection report
- Tyre inspection report



The screenshot displays a list of maintenance tasks categorized by system. Each task includes a description, a 'smart' link icon (such as a wrench, water drop, or document), and a time estimate. A red dashed line highlights the 'smart' link icons for 'Check the brake fluid level, top up if necessary', 'Renew your tyres', 'Check the battery fluid level; top up if required', and 'Service indicator reset'.

Task	Smart Link	Time Estimate
Check the steering assembly for damage, leaks and wear *	None	
Check the power steering fluid level, top up if necessary	None	
Brakes		
Check the brake fluid level, top up if necessary *	Water drop icon	
Go to Lubricants page	Water drop icon	
Check the brake pad thickness *	None	
Go to Adjustment Data page	Wrench icon	
Check the brake lines, hoses and connections for leaks and damage *	None	
Suspension, wheels and tyres		
Check the tread depth and wear pattern on all the tyres, including the spare	None	
FOLLOW UP Renew your tyres	Wrench icon	+ 1.20
Check the tyre pressures, adjust if necessary	None	
Go to Adjustment Data page	Wrench icon	
Reset the tyre pressure monitoring system *	None	
Tyre pressure monitoring system	Water drop icon	
Check the tyre sealant can expiry date *	None	
Ball joints, check the condition * (check for play)	None	
Electrical System		
Check the battery magic eye *	None	
Check the battery charge, using an appropriate battery tester	None	
FOLLOW UP Check the battery fluid level; top up if required	Water drop icon	+ 0.10
FOLLOW UP Charge the battery	Water drop icon	+ 0.10
FOLLOW UP Renew the battery	Water drop icon	+ 0.90
Check the function of the exterior lights *	None	
Check the headlight alignment, adjust if necessary	None	
Check the lighting system and horn functions *	None	
Check the luggage compartment light(s) *	None	
Check the function of the interior warning lights	None	
Check the operation of the multimedia system *	None	
Reset the service indicator	None	
Service indicator reset	Water drop icon	
Interior		
Renew the dust and pollen filter * Dust and pollen filter location	Water drop icon	+ 0.10
Exterior		
Check the windscreen wipers and washing system *	None	
Windscreen wipers: service position	Water drop icon	
Check the windscreen wiper park position *	None	
Check the headlight washing system	None	
Check/lubricate the bonnet hinges and safety catch *	None	

Repair data

The screenshot displays the 'Adjustment Data' section for an engine. The table below lists key specifications:

Oil pressure	> 2.0 / 2000	(bar/psi)
Maximum cylinder head distortion	0.1	(mm)
Diesel particulate filter: maximum ash deposit mass	0.125	(mm)
Drive belt layout		

Below the table, there are sections for 'Ride height, front' (364 mm) and 'Rearlight' (refer to the sticker under the bonnet). There are also sections for 'Air-conditioning compressor oil' (150 ± 10 ml) and 'Rear axle adjustment' (refer to the sticker under the bonnet).

ADJUSTMENT DATA

'Comprehensive' doesn't begin to describe the extent of the information contained in this section of Tech.

The specifications provided range from torque settings to cylinder firing order, from idle speed to NOx emissions, and from cooling system cap pressure to rear brake disc thickness.

FEATURES

- Ancillary drive belt ✓
- Wheel alignment ✓
- Emission data ✓
- Tyre sizes and pressures ✓
- Torque settings ✓
- Air-conditioning service connectors ✓
- Capacities ✓



LUBRICANTS AND FLUIDS

All oil and fluid specifications in one view.

All conceivable specifications are provided here, conveniently linked to related data for ease of use, and featuring technical illustrations showing the location of filler and drain plugs.

FEATURES

- Qualities and viscosities ✓
- Capacities and torque settings ✓
- Location of filler and drain plugs ✓

The screenshot displays the 'Lubricants and Fluids' interface for a vehicle. The sidebar on the left lists various systems: Engine, Cooling system, Basic data, (Manual transmission), (0B2), (Manual transmission), (0B1), Rear differential, (0BC), (4WD), Steering, (- 03/2012), (04/2012 - 10/2013), Denso, (6SEU14), (- 03/2012), Denso, (7SEU17), (- 03/2012), Denso, (6SAS14), (03/2011 -), and Denso, (6SES14), (03/2012 -).

The main content area is titled 'Lubricants and Fluids' and includes a 'Print' button. It is organized into sections:

- Engine:** Lists engine oil (SAE 5W-30, VW 507 00, All temperatures) and engine sump capacity (5.0 l).
- Cooling system:** Lists coolant specifications (TL-VW 774J (G13) for various temperatures) and cooling system capacity (0.5 l).
- Basic data:** Lists brake fluid (VW 501 14) and brake system capacity (1.0 l).
- (Manual transmission), (0B2):** Lists gear oil (VW G 055 532 A2) and manual transmission capacity (4.8 l), along with a diagram for the filler level plug location.
- Steering:** Lists power steering fluid (VW G 004 000) for (- 03/2012).
- Rear differential, (0BC), (4WD):** A modal window showing a technical diagram of the rear differential with a green circle indicating the filler/drain plug location.
- Denso, (6SES14), (03/2012 -):** Lists compressor oil (VW G 052 300 A2) and air-conditioning compressor oil capacity (110 ± 10 ml).

Cars Settings

M/AM/Alroad (BQ) 2.0 TDI (CAW) 2008 - 2012

← Back to overview **Timing belt: removal/installation** Print

Warnings and recommendations

General

Removal

Installation

Torque settings

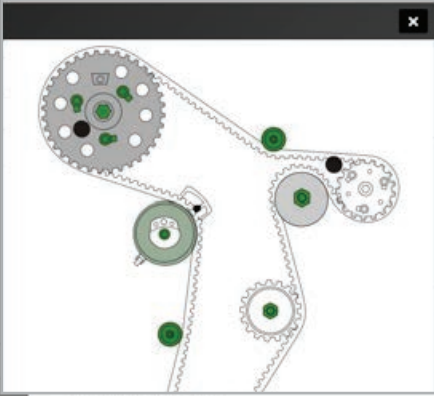
Special tools

Parts required

Warnings and recommendations

Unless otherwise advised by the manufacturer, the following procedures are recommended:

- Always fit a new timing belt after removal.
- Coolant pump renewal is recommended after timing belt removal.
- Check the tensioner and idler pulleys; renew if necessary.



Removal

Disconnect the battery

Battery: procedures for disconnects/reconnection

Remove the engine lower cover

Vehicles with additional heater:

Remove the exhaust silencer



Steering

Power steering fluid VW G 004 000 (- 03/2012)



Denso, (6SES14), (03/2012 -)

Compressor oil VW G 052 300 A2

- Air-conditioning compressor oil 110 ± 10 (m)



REPAIR MANUALS

Detailed, step-by-step repair and service instructions.

Snap-on Information System features detailed, step-by-step repair and service instructions for those tasks which, while being relatively routine, require specific procedures for the car in question. Again, Snap-on Information System provides technical illustrations and, where necessary, reference numbers identifying special tools. In this way, Snap-on Information System helps boost productivity and improve workshop flow.

FEATURES

Timing belt; removal/installation	✓
Timing chain; removal/installation	✓
Ancillary drive belt; removal/installation	✓
Clutch: removal/installation	✓
Manual transmission; removal/installation	✓
Cooling system; drain/refill	✓
Diesel particulate filter	✓
Battery procedure	✓
(Semi-) automatic transmission fluid level check and drain/refill	✓



REPAIR TIMES

A more realistic timeframe.

Snap-on Information System expands official (OEM) repair times to take account of associated tasks, making its data more helpful and relevant in the real world. The module contains numerous included tasks for overlap calculation. By listing follow-up tasks we ensure that no labour times are overlooked. This helps to maximise workshop revenue.

FEATURES

- Overlap technology ✓
- Specific and generic times ✓
- Follow-up work ✓
- Links to parts ✓

The screenshot displays the 'Repair Times' module for a vehicle model 'A4 (M Alroad (8K) 2.0 TDI (CAHA) 2008 - 2012'. It provides a summary of 'Total repair times' for 2 jobs, totaling 6.70 hours and requiring 1 part. Below this, a list of jobs is shown, including tasks like 'Remove/fit the crankshaft front radial seal' and 'Renew the timing belt kit and the coolant pump'. A 'Parts required' section lists items such as 'Oil filter', 'Filter, interior air', and 'Water pump & timing belt set'. The main area shows a detailed list of tasks with their OEM times and Snap-on times, including follow-up tasks like 'Repair the timing belt cover'. A sidebar on the left categorizes tasks by system, such as 'Fuel system', 'Exhaust system', 'Gearbox', 'Automatic transmission', 'Drivetrain', 'Electrical components', 'Steering', 'Front axle', 'Front suspension', 'Rear axle', 'Rear suspension', 'Wheels and tyres', 'Pedals', 'Brakes (Mechanical)', 'Brakes (Electric)', and 'Brakes (Hydraulic)'. At the bottom, there is a 'Note' stating that the values are recommended averages and that the user is responsible for any changes. An 'Important note' at the very bottom states that the data is compiled from OEM documentation and that Snap-on is not responsible for any omissions or consequential damage.

General features

Cost estimate

AUDI A4 /A4 Allroad (8K) 2.0 TDi 2008 - 2012

Jobs

	Rate (GBP)	Time (h)	Total (GBP)
Time/distance dependent service (1 - 2009) 65 000 miles/72 months	0.00	1.40	0.00
FOLLOW UP Renew the battery	0.00	0.30	0.00
Renew timing belt kit and the coolant pump	0.00	0.30	0.00
Time margin: 8.0 %			Total Time: 2.00 (h)
Subtotal			GBP 0.00

Parts

	Unit Price (GBP)	Quantity	Price (GBP)
Engine oil	0.00	1.00	0.00
Oil filter	0.00	1.00	0.00
Filter interior air	0.00	1.00	0.00
Water Pump & Timing Belt Set	128.50	1.00	128.50
Subtotal			GBP 128.50
Grand Total		GBP 128.50	
VAT Rate		0.30 %	
VAT		GBP 0.00	
Grand Total with VAT		GBP 128.50	

COST ESTIMATE

The cost estimate is the starting point for quick estimates on the basis of intelligent links between data, repair times and parts. The result can be easily exported to be used in the part ordering work flow.

Key features:

- Combined overview of selected maintenance and repairs
- Option to add jobs and parts manually
- Easy export functionality



TECHNICAL DRAWINGS

Over **100,000** high-quality technical drawings.

A picture is worth a thousand words. Snap-on Information System has over 100,000 high-quality technical drawings in its database. Far from being generic images, these are bespoke illustrations with featured parts highlighted for ease of identification and the option to link directly to a shopping cart in a parts catalogue. Torque settings are indicated in the drawing to ensure that the correct torque is used for the specified bolt/nut. There are also notifications for bolts/nuts which must be renewed and of any requirement for using locking compound.

FEATURES

- Links to parts ✓
- Torque settings ✓

Engine/Transmission

Brake components, front, exploded view

Front disc brakes, (F10)

Brake components, front, exploded view

Front disc brakes, (F14C)

Brake components, front, exploded view

Rear disc brakes, (CR4C)

Brake components, rear, exploded view

(Manual transmission), (R01, R02)

Gear shift lever assembly

Gearbox mount

Differential

Propeller shaft

Rear differential, (R0C), (4WE)

Differential

Propeller shaft

(2WD)

Subframe, front

Suspension, front

Subframe, rear

Suspension, rear

Shock absorber, rear

(4WD)

Subframe, front

Suspension, front

Subframe, rear

Suspension, rear

Shock absorber, rear

(L-plate, Stalco)

Steering column

Power steering rack

Electric power steering rack

(Convertible)

Steering column

Power steering rack

Electric power steering rack

Air conditioning

Air conditioning components

(- 2012)

Seat belts, front

Seat belts, rear

Bumper, removal, front

Bumper, removal, rear

(Allroad), (- 2012)

Seat belts, front

Seat belts, rear

Bumper, removal, front

Bumper, removal, rear

Bumper, removal, rear

Power steering rack

Electric power steering rack

(Convertible)

Steering column

Power steering rack

Electric power steering rack

Air conditioning

Air conditioning components

(- 2012)

Seat belts, front

Seat belts, rear

Bumper, removal, front

Bumper, removal, rear

(Allroad), (- 2012)

14 Nm

Parts required Show ▾

25 Nm 40 Nm 20 Nm 19 Nm 24 Nm

Parts required Show ▾

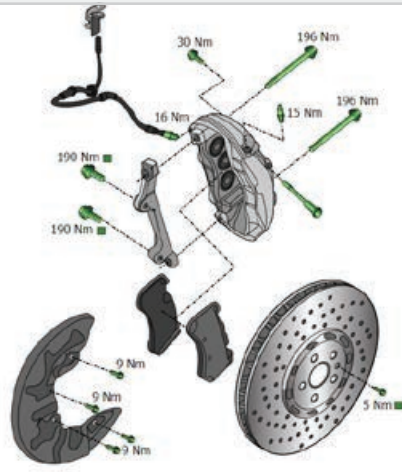
6 Nm 20 Nm 20 Nm 20 Nm 20 Nm

Parts required Show ▾

95 Nm 95 Nm 55 Nm 55 Nm 20 Nm

30 Nm + 90° 20 Nm

- Power steering rack
- Electronic power steering rack
- (Convertible)
- Steering column
- Power steering rack
- Electronic power steering rack
- Air conditioning
- Air conditioning components
- (- 2012)
- Seat belts, front
- Seat belts, rear
- Bumper, removal, front
- Bumper, removal, rear
- (Abroad), (- 2012)
- Seat belts, front
- Seat belts, rear
- Bumper, removal, front
- Bumper, removal, rear
- Electronic power steering rack
- (Convertible)
- Steering column
- Power steering rack
- Electronic power steering rack
- Air conditioning
- Air conditioning components
- (- 2012)



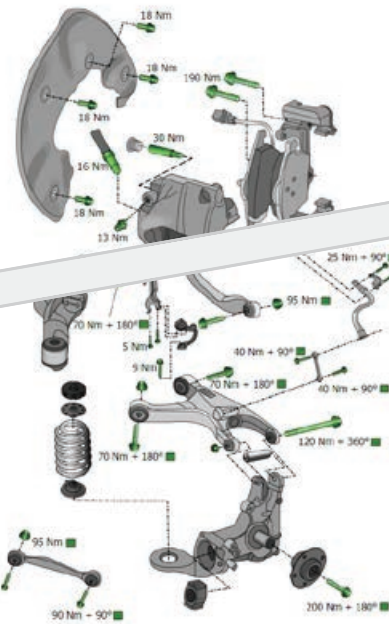
■ Renew bolts/nuts

Parts required

Show

Front disc brakes, (FN3)

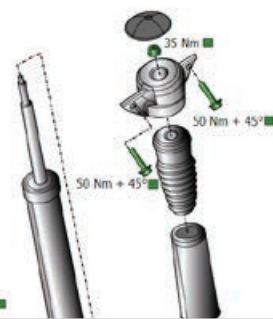
Parts



■ Renew bolts/nuts

Parts required

Show



150 Nm + 180° ■



Recalls



RECALLS

Ensure that the vehicle conforms to safety standards by informing the customer about potential safety recalls for their vehicle.

FEATURES

- Safety related recall actions issued by OEM ✓
- Link to fault codes and related cases ✓

SmartPACK™

Filter results:

- Vehicle area: [Dropdown]
- Noise: [Dropdown]
- Operating condition: [Dropdown]
- Fault code: [Dropdown]
- Defect: [Dropdown]

Sort results: Most recent date first [Dropdown]

Overview | Maintenance | Repair Data | Electronics | SmartPACK™ 83

All 83 | SmartCASE™ 17 | Recall data 6 | Technical Service Bulletins 50

Recall data

- The additional heater element falls and/or overheats (19/02/2018 OE: R2018/051 (B0C5)) (01/04/2011 - 31/07/2015) (From VIN WAUZZZ9K8BA148770 - WAUZZZ9K8GA006538) >
- The additional heater element falls and/or overheats (08/01/2018 OE: R2017/034 (B0C5)) (01/04/2011 - 31/07/2015) (From VIN WAUZZZ9K3BA148578 - WAUZZZ9K8GA006511) >
- Airbag deployment failure (05/12/2014 OE: R2014/149 (69K5)) (01/11/2011 - 15/10/2014) (From VIN WAUZZZ8K'DA000698 - WAUZZZ9K'DA800932) >
- Airbag deployment failure (05/12/2014 OE: R2014/149 (69K5)) (01/11/2011 - 15/10/2014) (From VIN WAUZZZ8K'FA000781 - WAUZZZ9K'FA800814) >
- Airbag deployment failure (05/12/2014 OE: R2014/149 (69K5)) (01/11/2011 - 15/10/2014) (From VIN WAUZZZ8K'EA000867 - WAUZZZ9K'EA800951) >

← Back to overview **Reduced braking efficiency** Print

01/10/2014 R2014/098 (471, 8) VIN # - WAUZZZ9K'DA178051WAUZZZ9K'DA0045673 Date 2012-01-01 - 2014-05-27

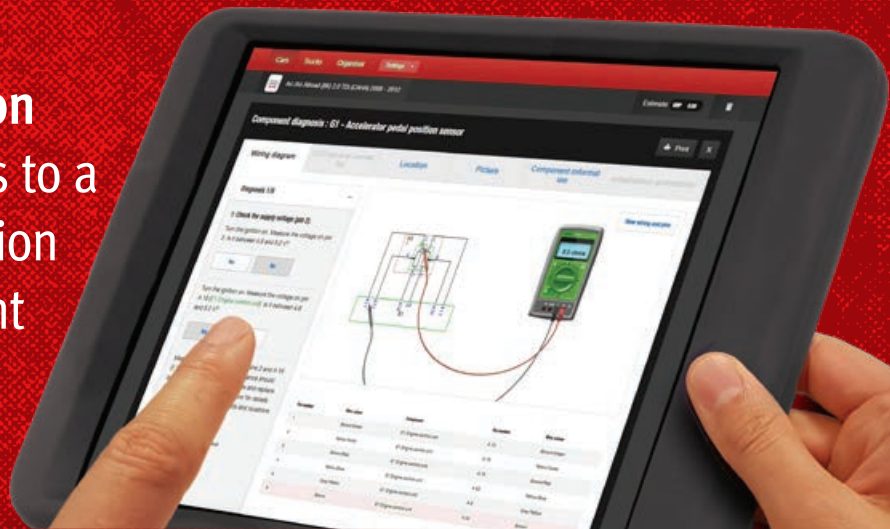
Detect
Engine oil leakage into the brake servo via the vacuum feed line. Damaged brake servo diaphragm; Increased brake pedal effort

Solution
Renew the vacuum line

Disclaimer
The recall bulletins are provided for information purposes only. The customer should be directed to the appropriate franchised dealer for rectification of the issues identified in the Safety Recall notice. This ensures that the repair is fully carried out in accordance with the provisions of the Safety Recall notice and any updated provisions thereof. It will also ensure that both the manufacturer's database (the list of affected vehicles) and the country-specific licensing agency are informed that the recall has been actioned.

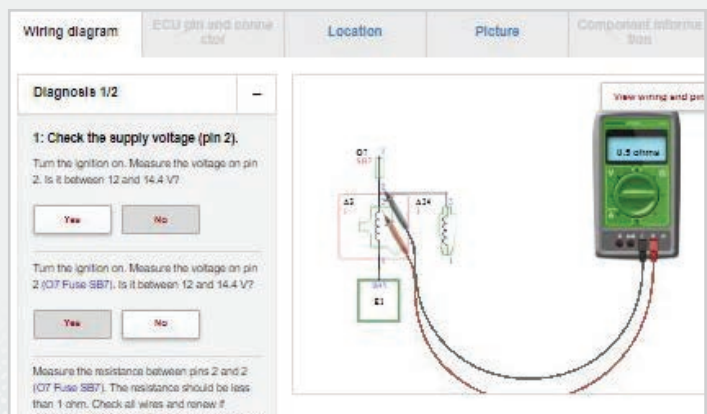
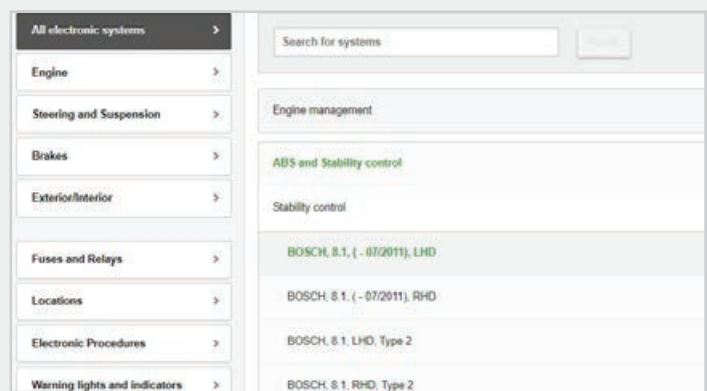


An innovative application which guides technicians to a rapid, precise identification of system and component errors.



Snap-on Information System Electronics

Electronic data has always been an important aid to workshops. Nowadays, with **electrical systems and advanced technologies** becoming an ever more significant feature in modern cars, it has become essential. At its heart sits **Vehicle Electronics Smart Assistant MK II (VESA™)**.





VESA MK II Guided Diagnostics



VESA MK II GUIDED DIAGNOSTICS

An innovative application for electronics diagnostics.

Probably unrivalled in the aftermarket arena, VESA is an innovative electronics diagnostics application. It is based on vehicle CAN-Bus data and helps technicians diagnose faults and component errors. It takes an OEM's often bewildering and unfamiliar wiring schematic, converts it to a clearer, more readable format and then zooms in on the component and wiring under consideration.

Example A

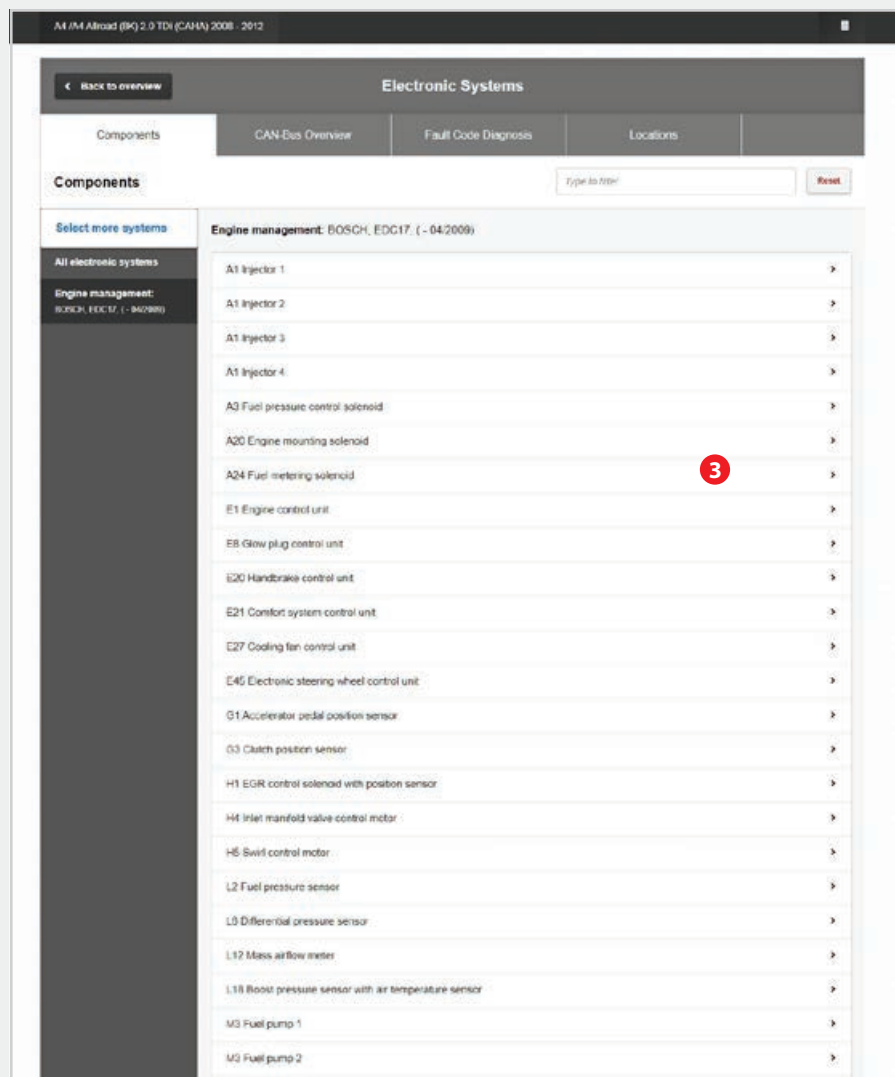
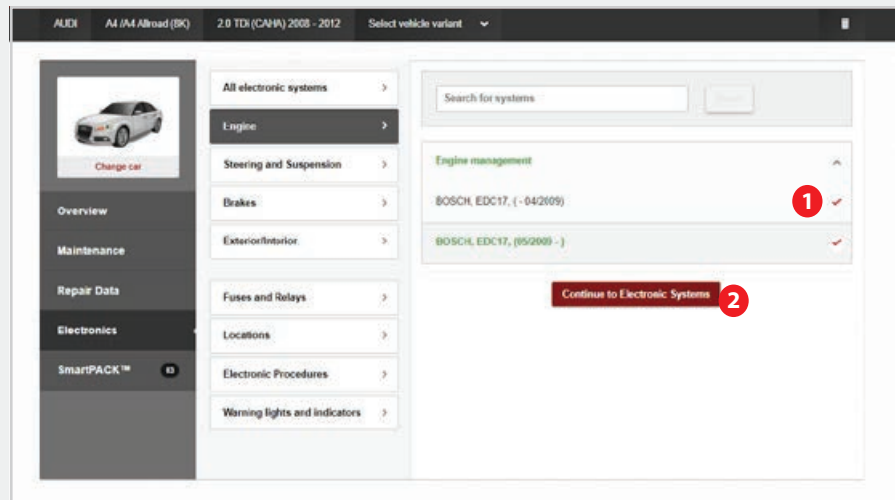
DIAGNOSTICS BY COMPONENT

[Engine tab]

1. Select systems
2. Confirm selected systems

[Electronic systems page]

3. Select component



Continued on next page

Continued from previous page

A4 /M4 Allroad (BK) 2.0 TD (CA*H) 2008 - 2012

Component diagnosis : A3 - Fuel pressure control solenoid

Wiring diagram ECU pin and colour test Location Picture Component information Initialization procedures

Diagnosis 1/2

1: Check the supply voltage (pin 2).
Turn the ignition on. Measure the voltage on pin 2. Is it between 12 and 14.4 V?

Turn the ignition on. Measure the voltage on pin 2 (O7 Fuse SB7). Is it between 12 and 14.4 V?

Measure the resistance between pins 2 and 2 (O7 Fuse SB7). The resistance should be less than 1 ohm. Check all wires and renew if necessary. See the diagram below for details on wire colours, connectors, welds and locations (if applicable).

2: Check the connectivity of pin 1.

5

4

Pin number	Wire colour	Component	Pin number	Wire colour
1	Brown/Blue	E1 Engine control unit	6 45	Brown/Blue
2	Grey/Violet	A24 Fuel metering solenoid	2	Grey/Violet
2	Grey/Violet	O7 Fuse SB7	2	Grey/Violet

[Diagnosis page]

4. Answer the questions with *yes* or *no* until the component diagnosis is completed
5. or click in the wiring diagram to access the information for the selected component or fuse/ground point

A4 /M4 Allroad (BK) 2.0 TD (CA*H) 2008 - 2012

Component diagnosis : O7 - Fuse SB7

Wiring diagram ECU pin and colour test Location Picture Component information Initialization procedures

Diagnosis 1/1

1: Check the supply voltage (pin 1).
Turn the ignition on, crank or start the engine. Measure the voltage on pin 1. Is it between 12 and 14.4 V?

4.2 V

Pin number	Wire colour	Component	Pin number	Wire colour
1	Red/Gray	O7 Fuse SB10	1	Red/Gray
1	Red/Gray	O7 Fuse SB2	1	Red/Gray
1	Red/Gray	O7 Fuse SB5	1	Red/Gray
1	Red/Gray	O7 Fuse SB6	1	Red/Gray
1	Red/Gray	O7 Fuse SB8	1	Red/Gray



Example B

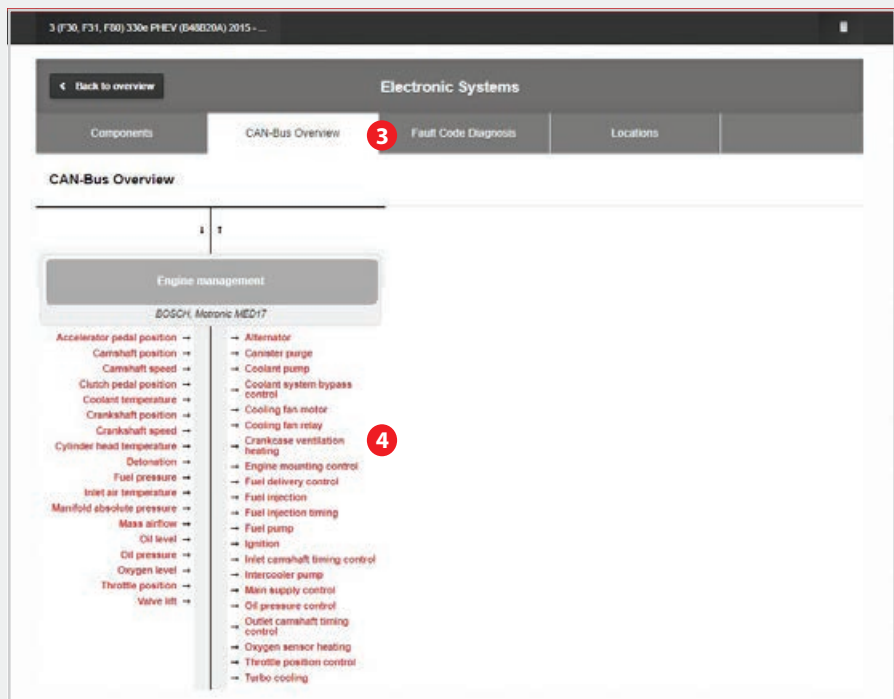
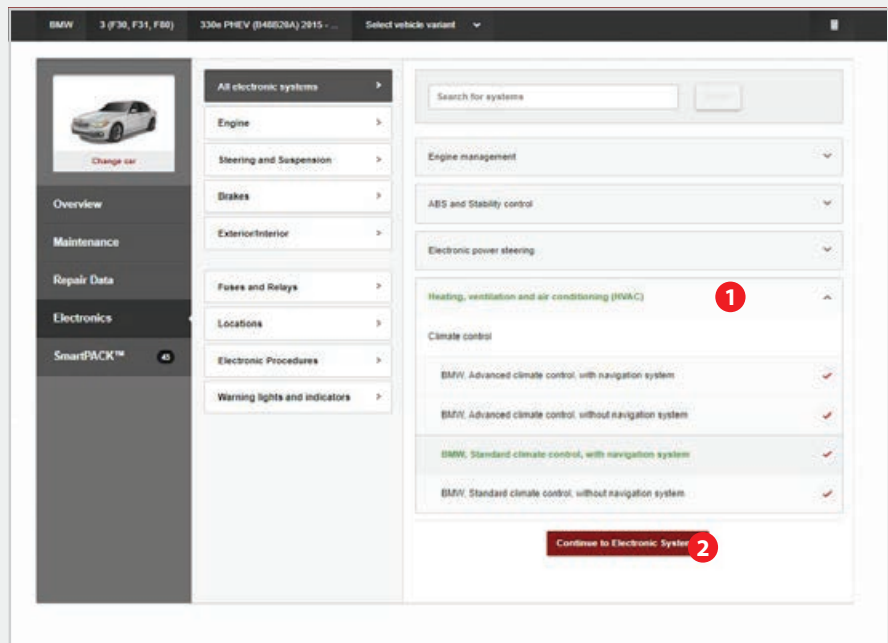
DIAGNOSTICS BY CAN-BUS COMPONENTS OVERVIEW

[All electronic systems tab]

1. Select systems
2. Confirm selected systems

[Electronic systems page]

3. Select CAN-Bus overview tab
4. Select signal



Continued on next page

Continued from previous page

3 (F30, F31, F80) 330e PHEV (B48B20A) 2015 - ...

Component diagnosis : V1 - Canister purge solenoid

Wiring diagram | ECU pin and connector | Location | Picture | Component information | Substitution procedures

Diagnosis 1/3

1: Check the supply voltage (pin 1).
Turn the ignition on. Measure the voltage on pin 1. Is it between 12 and 14.4 V?

Turn the ignition on. Measure the voltage on pin C 1 (E1 Engine control unit). Is it between 12 and 14.4 V?

5

Measure the resistance between pins 1 and C 1 (E1 Engine control unit). The resistance should be less than 1 ohm. Check all wires and renew if necessary. See the diagram below for details on wire colours, connectors, welds and locations (if applicable).

2: Check the solenoid operation

3: Check the connectivity of pin 2.

Pin number	Wire colour	Component	Pin number	Wire colour
1	Red/Green	E1 Engine control unit	C 1	Red/Green
2	White	E1 Engine control unit	C 16	White

[Diagnosis page]

5. Answer the questions with *yes* or *no* until the component diagnosis is completed
6. or click in the wiring diagram to access the information for the selected component or fuse/ground point

3 (F30, F31, F80) 330e PHEV (B48B20A) 2015 - ...

Component diagnosis : E1 - Engine control unit

Wiring diagram | ECU pin and connector | Location | Picture | Component information | Substitution procedures

Diagnosis 1/17

1: Check the supply voltage
Turn the ignition on. Measure the voltage on pin D 16. Is it between 12 and 14.4 V?

2: Check the connection to ground

3: Check the connectivity of pin A 21.

4: Check the supply voltage

5: Check the connection to ground

6: Check the connectivity of pin A 26.

7: Check the supply voltage

8: Check the connection to ground

9: Check the connectivity of pin A 32.

10: Check the supply voltage

11: Check the connection to ground

12: Check the connectivity of pin A 47.

13: Check the supply voltage

14: Check the connectivity of pin A 47.

15: Check the supply voltage

16: Check the connectivity of pin A 48.

17: Check the connectivity of pin A 54.

Pin number	Wire colour	Component	Pin number	Wire colour
A 3	Yellow	G1 Accelerator pedal position sensor	5	Yellow
A 4	Yellow/Green	G1 Accelerator pedal position sensor	3	Yellow/Green
A 6	White	H08 Exhaust flap motor with position sensor	1	White



Example C

DIAGNOSTICS BY FAULT CODE

[Overview page]

1. Add a fault code or multiple fault codes, separated by commas
2. Select a system

[Electronic systems page]

3. Select a fault code description or select Combined diagnosis of the above

AUDI A4 /A4 Allroad (8K) 2.0 TDi (CAHA) 2008 - 2012 Select vehicle variant

AUDI A4 /A4 Allroad (8K) 2.0 TDi 2008 - 2012

Maintenance schedules
Select

Fault codes
p0100, p0101, p0108 Search 1

Most used

- Repair Times
- Timing Belt
- Adjustment Data

SmartPACK™

- TSBs (Technical Service Bulletins) 60
- Recalls 6
- Cases 17

AUDI A4 /A4 Allroad (8K) 2.0 TDi (CAHA) 2008 - 2012 Select vehicle variant

AUDI A4 /A4 Allroad (8K) 2.0 TDi 2008 - 2012

Fault codes
p0100, p0101, p0108 Search Reset

Search results: p0100, p0101, p0108

Fault code description:
P0100 - Mass airflow meter 1 circuit/open
P0101 - Mass airflow meter 1 circuit range/performance
P0108 - MAP sensor/barometric pressure sensor circuit high
P0100, P0101, P0108 -

Electronic Systems

Engine management

- BOSCH, EDC17, (-04/2009) Fault code: P0100 P0101 P0108 2
- BOSCH, EDC17, (05/2009 -) Fault code: P0100 P0101 P0108

SmartCASE™

No results found

AUDI A4 /A4 Allroad (8K) 2.0 TDi (CAHA) 2008 - 2012 Select vehicle variant

AUDI A4 /A4 Allroad (8K) 2.0 TDi 2008 - 2012

Fault codes
p0100, p0101, p0108 Search Reset

Search results: p0100, p0101, p0108

Fault code description:
P0100 - Mass airflow meter 1 circuit/open
P0101 - Mass airflow meter 1 circuit range/performance
P0108 - MAP sensor/barometric pressure sensor circuit high
P0100, P0101, P0108 -

Electronic Systems

Engine management

- BOSCH, EDC17, (-04/2009) Fault code: P0100 P0101 P0108
- BOSCH, EDC17, (05/2009 -) Fault code: P0100 P0101 P0108

SmartCASE™ 3

No results found

Recall data

No results found

Continued on next page

Continued from previous page

3 (F30, F31, F80) 330e PHEV (E48E26A) 2015 - ...

Component diagnosis : L1 - MAP sensor

Wiring diagram | ECU pin and connector list | Location | Picture | Component information | Installation procedures

Diagnosis 1/3

1: Check the supply voltage (pin 1).
Turn the ignition on. Measure the voltage on pin 1. Is it between 4.8 and 5.2 V?

Yes No

Turn the ignition on. Measure the voltage on pin D 53 (E1 Engine control unit). Is it between 4.8 and 5.2 V?

Yes No **4**

Measure the resistance between pins 1 and B 53 (E1 Engine control unit). The resistance should be less than 1 ohm. Check all wires and renew if necessary. See the diagram below for details on wire colours, connectors, welds and locations (if applicable).

2: Check the connection to ground (pin 2).

3: Check the connectivity of pin 3.

Pin number	Wire colour	Component	Pin number	Wire colour
1	Blue	E1 Engine control unit	B 53	Blue
2	Black/Yellow	E1 Engine control unit	B 48	Black/Yellow
3	Yellow	E1 Engine control unit	B 49	Yellow

5

[Diagnosis page]

4. Answer the questions with **yes** or **no** until the component diagnosis is completed;
5. and/or click here to go to the next fault code diagnosis

FEATURES

- Diagnostics wizard ✓
- Wiring diagrams for engine management, ABS and ESP ✓
- Wiring diagrams for EPS, air conditioning, climate control ✓
- Fault codes (manufacturer's and EOBD) ✓
- Fault code link to Smart module ✓
- Component and grounding point location ✓

A4 /M /Broad (8K) 2.0 TDI (C4HA) 2008 - 2012

Component diagnosis : L18 - Boost pressure sensor with air temperature sensor

Wiring diagram | ECU pin and connector list | Location | Picture | Component information | Installation procedures

Diagnosis 1/4

1: Check the supply voltage (pin 3).
Turn the ignition on. Measure the voltage on pin 3. Is it between 4.8 and 5.2 V?

Yes No

Turn the ignition on. Measure the voltage on pin A 17 (E1 Engine control unit). Is it between 4.8 and 5.2 V?

Yes No

Measure the resistance between pins 3 and A 17 (E1 Engine control unit). The resistance should be less than 1 ohm. Check all wires and renew if necessary. See the diagram below for details on wire colours, connectors, welds and locations (if applicable).

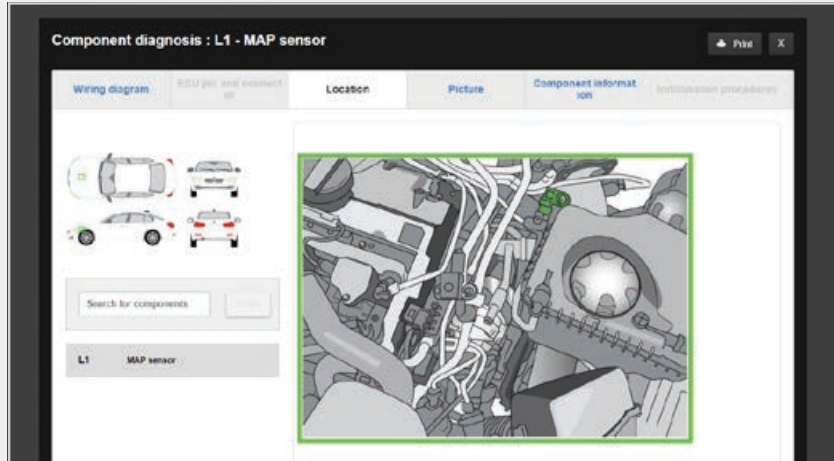
2: Check the connection to ground (pin 1).



VESA MK II Guided Diagnostics | general features

LOCATION

Component locations directly accessible from component diagnostics.



PICTURE

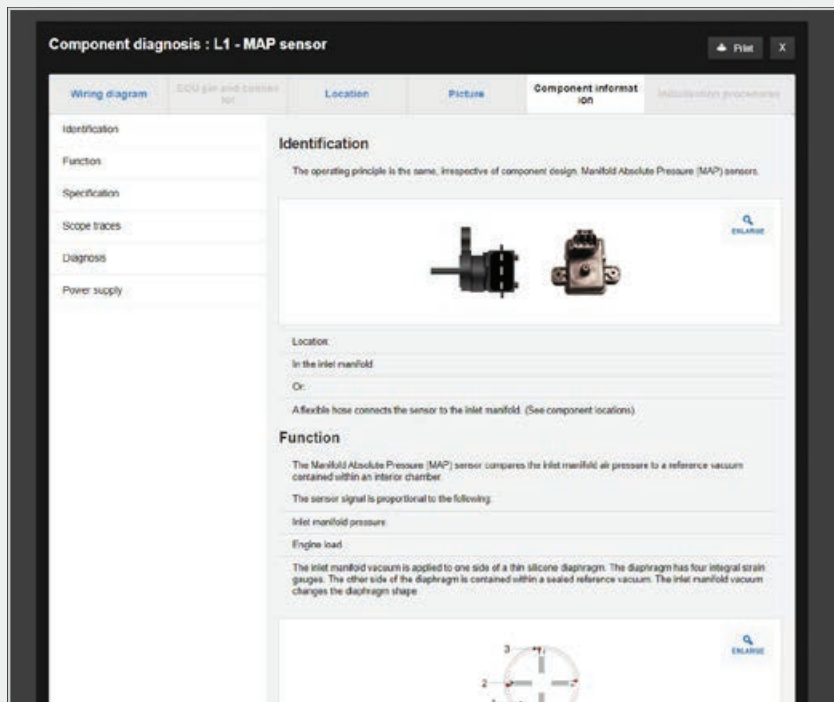
Generic picture of the selected component.



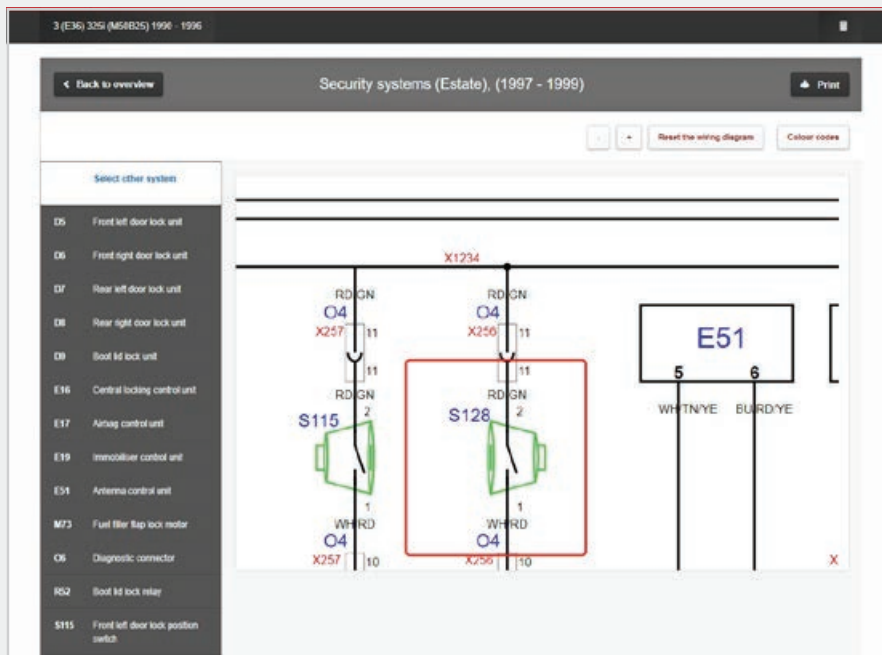
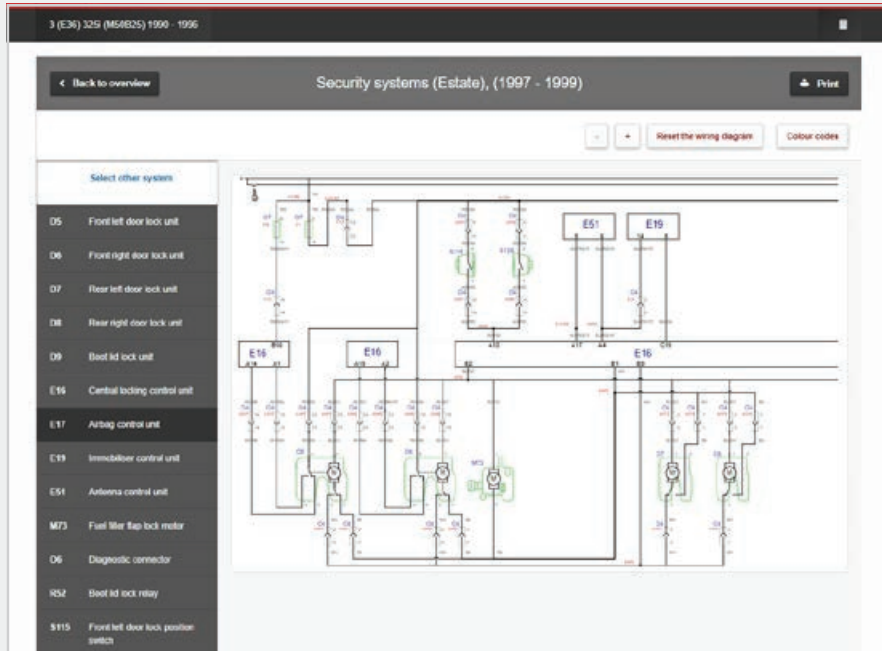
COMPONENT INFORMATION

Detailed technical information.

Component information covers technical details about the selected component. It covers a functional description and generic scope images (if relevant).



Wiring diagrams



COMFORT WIRING DIAGRAMS

Clear, 'localised' wiring schematics.

Clear, 'localised' wiring schematics for all key vehicle features, with wire and component trace functionality for fast, efficient, first-time fixes.

FEATURES

Wiring diagrams covering electrical systems/components, e.g. door locks, windows, windscreen/headlight wash/wipe, airbags, exterior lights, starting and charging ✓

Pan and zoom functionality ✓

Highlight functionality to trace corresponding wires and components ✓



Fuses and relays



FUSES AND RELAYS

Clear fuse location and identification feature.

The electronics module is packed with essential information, typified by this clear fuse location and identification feature. Fuse boxes may be installed in various locations on a vehicle, making them more difficult to find. Using the data in Fuses and Relays minimises the time spent on searching.

Fuse locations are also accessible directly from the wiring diagram.

FEATURES

- Fuse and relay box locations ✓
- Fuse and relay overview ✓

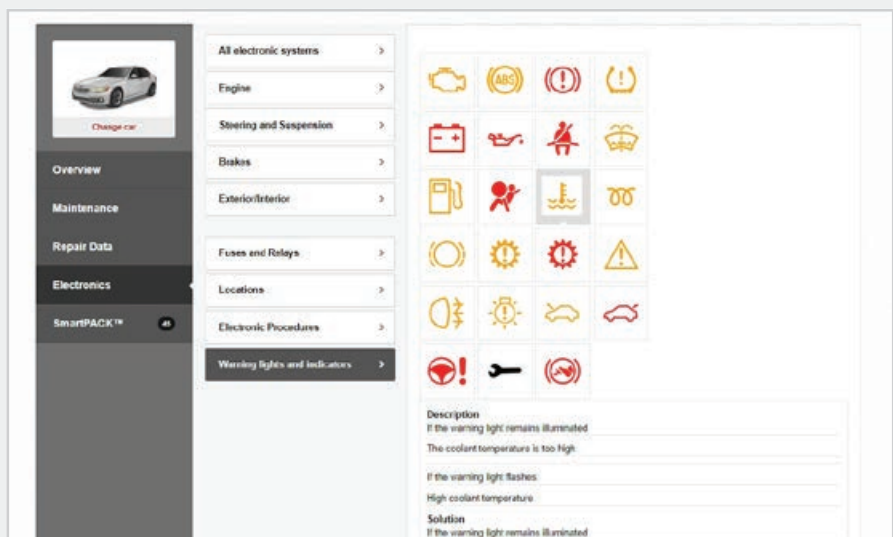


Warning lights and indicators

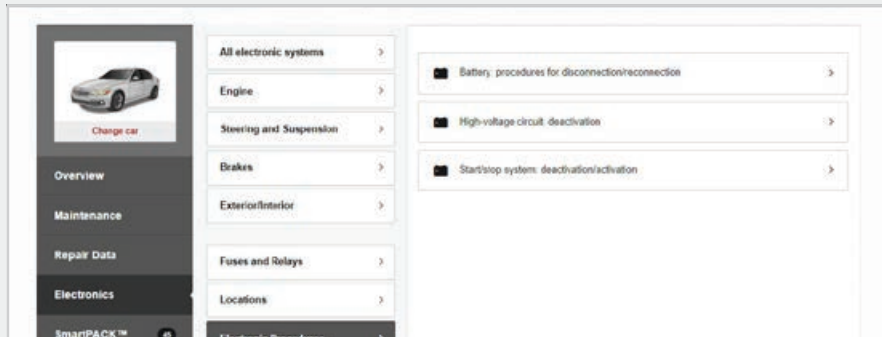
An extensive list of possible warning lights.

Specific to each manufacturer, with a short description and solution.

- Make-specific overview of available warning lights
- Covering both the European and the US car parc



Electronic Procedures




BATTERY: PROCEDURES FOR DISCONNECTION/ RECONNECTION

Disconnecting/reconnecting a battery used to be a straightforward task.

In modern vehicles, the procedure is more complicated. The technician needs to know what procedures to follow after reconnecting a battery. This will prevent the customer having to return the vehicle to the workshop due to errors in systems such as parking assistance or power windows. Due to the growing number of hybrid vehicles on the market, technicians also need specific instructions on how to work safely on these vehicles.

Other available procedures:

 HIGH-VOLTAGE CIRCUIT: DEACTIVATION

 START/STOP SYSTEM: DEACTIVATION/ ACTIVATION

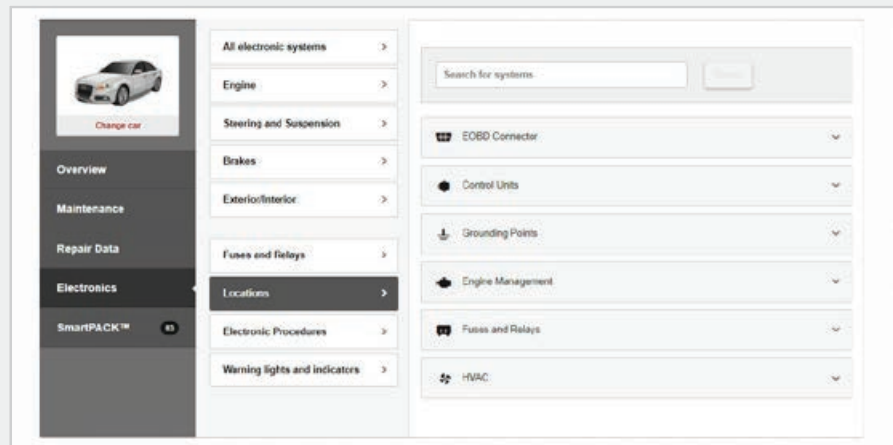




Locations

One of the clear goals of Snap-in Information System's data is to **reduce the number of unbillable hours.**

With our Locations feature, we ensure that the required component, control unit or ground point can be found immediately. All locations are accessible from the local wiring diagrams.



Available locations:

EOBD CONNECTOR

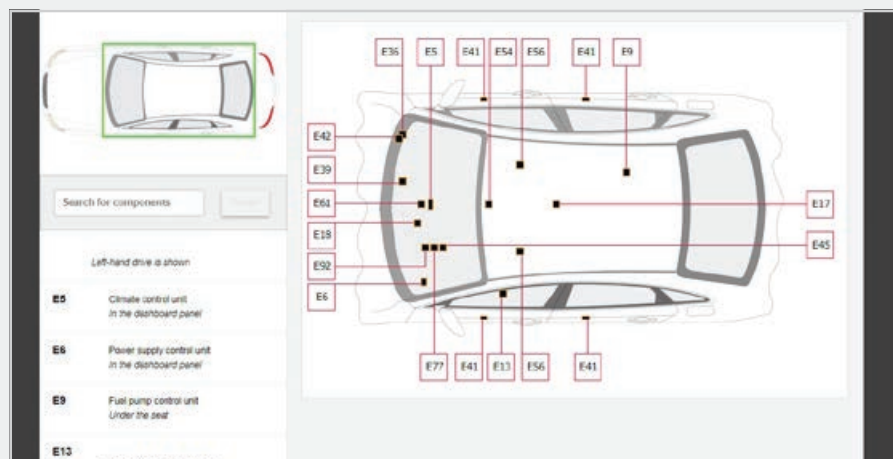
CONTROL UNITS

GROUNDING POINTS

ENGINE MANAGEMENT

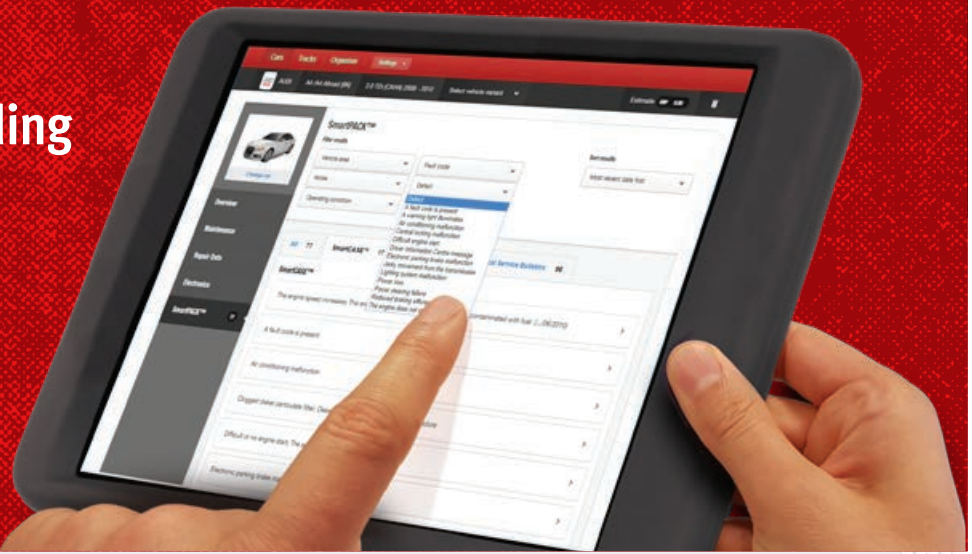
FUSES AND RELAYS

HVAC





Reduce time spent on finding and fixing known issues. Our fixes are sourced from manufacturers and industry specialists.



Snap-on Information System SmartPACK™

SmartPACK™ features SmartCASE™, Recall data and Technical Service Bulletins complete with symptoms, causes and solutions, supported by fault codes, their analysis and fault rectification details.

SmartCASE™ features an ingenious resource of known fixes and tips for rectifying faults associated with specific models, again complete with symptoms, causes and solutions.

Filter results

Vehicle area Fault code

Noise Defect

Operating condition

All 60 SmartCASE™ 8 Recall data 3 Technical Serv

Technical Service Bulletins

Grinding noise from the steering column when the steering wheel is turned (10/11/2)

The brake pad wear indicator warning light illuminates (27/06/2017, OE: 2037697/6)

Symptom
Oil leakage

Cause
Oil leakage

Solution
Check the



Technical Service Bulletins

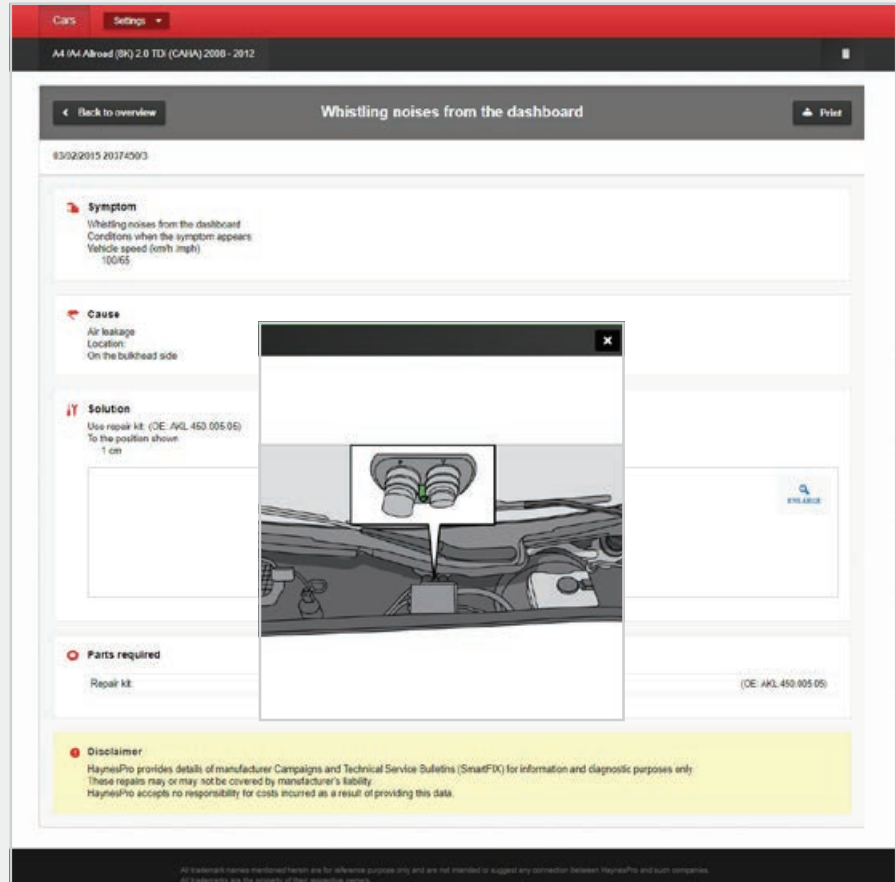


TECHNICAL SERVICE BULLETINS

Information that adds **real value** for professional technicians.

Snap-on Information System offers instant access to a multitude of Technical Service Bulletins (TSBs) sourced from original equipment manufacturers (OEM).

Our team of technical authors carefully adapts the TSBs we receive to best suit the user's needs. With a simple mouse click, the technician can instantly check the availability of Technical Service Bulletins for a given vehicle.



What makes Snap-on Information System Recall Data and TSBs stand out?



Data complies with the original OEM documentation (covering TSBs from 2008 onwards).



Single point of access to detailed information on faults, workarounds and defects usually only known to vehicle manufacturers.



Links to industry standard identification, providing an effective interface with other databases.



Smart links to other data categories (specifications, procedures, references).



The time spent on rectifying known issues is reduced. Based on the available information, the workshop can decide whether to rectify the issue in-house or to refer the work to an approved dealer.



Accessible via a fault code search.

SmartCASE™

The screenshot displays the SmartCASE™ interface for a specific vehicle: A4 (M) Altrroad (8K) 2.0 TDI (CPM) 2005 - 2012. The main title is 'The oil pressure warning light illuminates'. Under the 'Symptom' section, it states 'The oil pressure warning light illuminates'. The 'Cause' section lists several potential issues, including 'Balance shaft drive assembly', 'Intermediate shaft gearwheel', 'Excessive wear', 'Alternative cause', 'Oil pump', 'Faulty hexagonal bit coupling', and 'Explanation: Crankshaft gearwheel'. A detailed diagram of the engine's internal components is shown, with parts labeled A through F. The 'Solutions' section provides steps to confirm the diagnosis, such as 'Check the oil pressure' and 'Connect a pressure gauge'. There are also 'ENLARGE' buttons for the diagram and solution images.

VERIFIED FIXES AND TIPS (SMARTCASE™)

Saving time and money.

This Smart feature extends Snap-on Information System coverage from OEM-based technical data to information sourced from industry experts and renowned helpdesk organizations.

SmartCASE™ is a unique database module containing cases, with verified fixes and tips, for vehicles on the European market. It helps the independent workshop to check quickly for solutions to problems for a selected vehicle, so saving time and money.

The screenshot shows a list of related subjects under the heading 'Related subjects'. The list includes:

- Engine : The oil pressure warning light illuminates briefly after the engine is started
- Electronics Engine : The oil pressure warning light illuminates when the ignition is turned off
- Electronics Engine : The oil pressure warning light illuminates when the ignition is turned off
- Engine : The oil pressure warning light illuminates

 Each item has a right-pointing arrow icon. At the bottom, there is a small disclaimer: 'All trademarks names mentioned herein are for reference purposes only and are not intended to suggest any connection between Snap-on™ and such trademarks names mentioned herein.'

Related subjects

Every bulletin has suggestions for other solutions for similar problems.

What makes Snap-on Information System SmartCASE™ stand out?



Extension of OEM coverage



Over 5100 unique bulletins covering 43 brands



Accessible via a fault code search



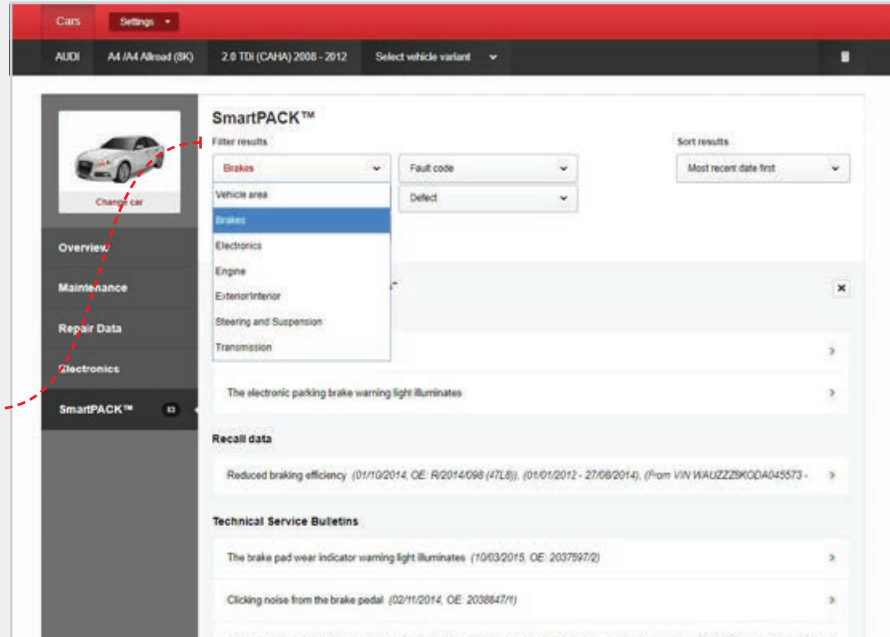
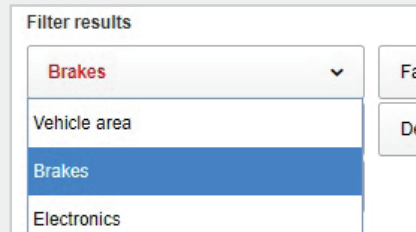
General features

FILTER RESULTS

Users can filter TSBs, Cases or Recalls by specifying vehicle area (engine, steering etc.), fault code, noise, defect, or operating condition.

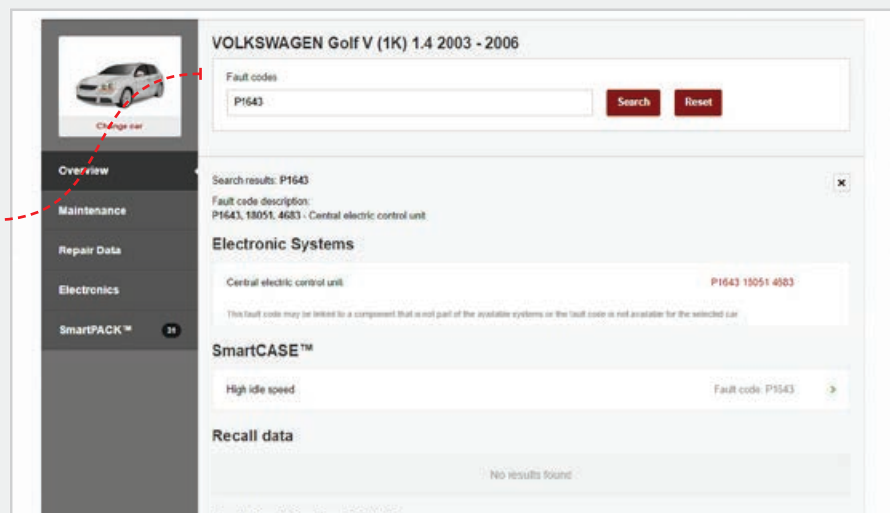
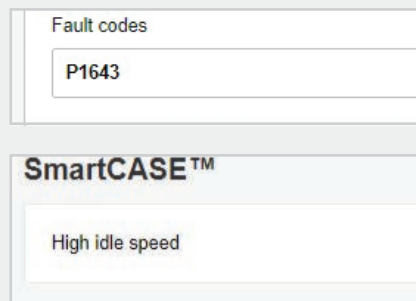
Example

Filter criteria: *Vehicle area - Brakes*



FAULT CODE SEARCH

Users can find Snap-on Information System Smart bulletins via **fault code search** on the overview page.



Snap-on

INFORMATION SYSTEM

FAQS FOR SIS UK USERS

Q: DOES THE SIS COME WITH A VEHICLE REGISTRATION LOOK-UP?

A: Yes, Vehicle Registration Mark (VRM) look-up is included in your subscription. You can also search for a vehicle using free text, engine code as well as the VIN, just click on “Search” on the top right of the home page. Please note the VIN search is based on decoding the VIN and may not produce an exact one to one match.

Q: DOES SIS DO EVERYTHING AUTODATA DOES?

A: Yes, by and large, everything the Autodata system does and covers the SIS also does and covers. In fact, many now rate SIS as having the best data coverage of any SMR provider.

Q: CAN I ADD A LABOUR RATE TO BE USED IN CONJUNCTION WITH REPAIR TIMES AND SERVICING?

A: Yes, you can actually set three different rates as well as VAT rates. Go to “Settings” then “Preferences”. These will then appear in any estimate you create.

Q: IS THE DATA BASED ON OEM INFORMATION?

A: Yes, but the Smart Cases comes from the vehicle manufacturers and re-written into a more usable and standardised format.

Q: CAN I USE THE APPLICATION ON A MOBILE DEVICE.

A: Yes, the application is fully mobile optimised and looks great on tablet devices. The home screen view can be changed to make the manufacturers’ buttons larger or smaller to suit and there is also an option to pin your favourite manufacturers to the top of the screen. Use the three icons next to the “search” button.

Snap-on

**INFORMATION
SYSTEM**

SIS Software Subscription Team

Tel: 01536 413825 and choose option one
E-mail: kettsubscriptions@snapon.com
Mon-Fri 8.30am-5.30pm

SIS Technical Support Team

Tel: 0845 6066512
E-mail: DiagUKPS@snapon.com
Mon-Fri 8.45am-5pm
website: diagnostics.snapon.co.uk/SIS

Snap-on®