

BEDIENUNGSANLEITUNG - NOTICE D'UTILISATION - OPERATING INSTRUCTIONS



BT521 150

-  Brilliant Tools Master Kühlsystem-Diagnose-Satz, 28-tlg.
-  Brilliant Tools Kit universel diagnostic système de refroidissement, 28 pièces
-  Brilliant Tools Master cooling radiator pressure tester with vacuum purge and refill kit, 28 pcs

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Dear customer!

We are very pleased that you decided to purchase this product from kstools. Thank you for your confidence in us. You can find all the information you need in these operating instructions. Please read the instructions completely with care and observe the advice given. The operating instruction is part of the item and should be kept intact.

If you have any uncertainties or further questions, please contact: customerservice@brilliant-tools.com

The manufacturer is not liable for personal injuries and material damages which result from improper use.



Pay heed to the vehicle manufacturer's specifications!

2.1 Individual parts and applications

No.	Radiator cap application
0	Thermometer
1	Pressure testing pump with gauge
2A	Connector R123/R124 (black)
2B	Connector R123/R125 (blue)
2	for Deutz Engine (1015)
	for Mercedes Benz (Sprinter -2006, Vito -2006)
3	for Mercedes Benz (W123 - W126 - W124 - W201)
	for GM (Buick)
	for Jeep
4	for Peugeot
	for Subaru
	for Chrystler
	for Acura
	for GM (Nova, Spectrum, Sprint)
	for Mitsubishi
	for Nissan

No.	Radiator cap application
	for Mazda
	for Toyota
	for Infiniti
	for GEO
	for Suzuki
	for Isuzu
	for Mercedes Benz
5	for Honda
	for Toyota
	for Suzuki
	for Mitsubishi
	for Chrystler
	for Acura
	for Lexus
6	for Mercedes Benz (ML-Klasse - W163 - W164)
	for GM (achiva - skylark - grand am 1992~2002)

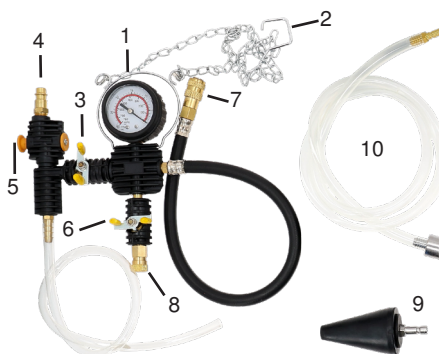


No.	Radiator cap application
7	for Volvo
	for Saab
	for Sterling
	for Citroen
	for Renault
	for Fiat
	for Alfa
	for Jeep
	for Mini
8	for VW (Vento - T4 - Passat 1996 - Golf - Beetle - Sharan)
9	for Audi (A4 - A5 - A6)
	for BMW 345
	for VW (Passat 1997~2002)
	for Porsche (Cayenne)
10	for BMW (E46 - E36 - E34 - E39 - E38 - E32 - E90)
11	for Audi
	for VW
12	for Ford Mondeo

No.	Radiator cap application
	for International
	for Land Rover
	for Opel
	for Ssangyong motor
13	for Mercedes Benz (C-Klasse - E-Klasse - S-Klasse - W140 - W220 - W124 - W210 - W211 - W215 - W216 - W221 - R230)
14	for Ford Mondeo - Focus - C-Max03
15	for Mazda (M3)
16	for Mercedes Benz A-Klasse
17	for BMW E60 - E63 - E64 - E65
18	for VW Sharan 1.8T - 2.8
19	for Toyota RAV4 - Previa
20	for Alfa, Citroen, Fiat, Mini, Peugeot, Renault, SAAB, Sterling, Jeep, Volvo
21	for Cadillac, Chevrolet, Ford, Freightliner, GM, GMC, Jaguar, Land Rover, Oldsmobile, Pontiac, SAAB, Saturn
22	for BMW Mini >2008, PSA 2008-2010
H	Handle

2.2 Technical description of the vacuum cleaning and filling device

No.	Description
1	Manometer
2	Hook
3	Changeover valve
4	Compressed air connection
5	On/Off switch
6	Changeover valve
7	Radiator cap connection
8	Cooling water hose connection
9	Universal radiator cap adapter
10	Cooling water hose





3. Safety and operating notes

Tools should generally only be used for their intended purpose under the designated conditions and within their usage limitations. Check the condition of the tool regularly and replace any damaged parts.

Careful maintenance will guarantee the constant readiness for use and long service life of the tool. The individual components (e.g. adapter cap) of the set should only be operated by hand or with the supplied operating wrench. Keep the threads of all adapter caps clean at all times. Ensure that the tool is in perfect condition before use.

Check for correct attachment of the tool and monitor the forces which occur during the work procedure. If any sign of overload, heaviness of operation etc. is observed, operation should be discontinued. Always wear personal protective equipment in accordance with accident prevention regulations. Do not make any alterations to the products, since this automatically invalidates any warranty claim.

4. Operating instructions

4.1 Cooling system leak testing

4.1.1 Cooling system leak testing via radiator or expansion tank cap

- Unscrew the original cap.
- Select the appropriate adapter cap from the set and screw onto the container opening.
- Attach the hand pump and pump until the manometer indicates approx. 0.7 to 1 bar or 10 to 15 psi (see Fig. 1 & 2)

Caution: Avoid pressures above 2.4 bar/35 psi.

- Watch the manometer for a little while to check if the pressure drops.
A drop in pressure indicates a leak in the cooling system.
- Release the pressure by operating the pressure relief valve on the pump hose coupling and unscrew the adapter cap.
- Locate any leak points in the cooling system and carry out the necessary repairs.
- Repeat the leak test as described above.

4.1.2 Leak testing of the original radiator or expansion tank cap

- Select the bayonet adapter 2A (black) or 2B (blue) with the appropriate bayonet-adapter cap (No. 2, 3, 4 or 5) from the set and screw the cap onto the adapter.
- The original cooling system cap is screwed onto the opposite side of the bayonet adapter.

Caution: Cap testing for original bayonet-closure cap only (see adapter application list).

- Attach the hand pump to the bayonet adapter cap, then pump (see Fig. 3).

Note: The overpressure valve of the original radiator cap must open within the range from 1 to 1.5 bar. Below approx. 1 bar the cap should be tight (the exact vehicle-specific value can be seen from the information on the original radiator cap or in the manufacturer documentation).

- After testing, release the pressure by operating the pressure relief valve on the pump-hose coupling and unscrew the adapter cap.
- Clean/service the defective cap or replace it.



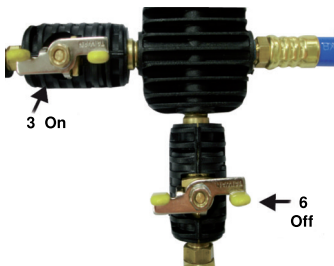


Fig. 6

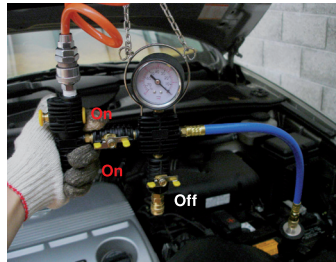


Fig. 7



Fig. 8

4.2.2 Filling the cooling system

- Connect the cooling water filler hose to the connection coupling on the device
- Ensure that the changeover valve No. 3 is in the „OFF“ position before you begin the filling operation.
- Ensure that the coolant hose is filled with coolant.

Caution: The fluid container should contain approx. 10% more than the required fill quantity, so that the suction hose cannot suck in any air. The suction foot should be positioned as nearly as possible to an angle of 90° to the bottom of the container.

- Turn changeover valve No.6 to the „ON“ position, so that the coolant can be sucked into the cooling system (see Fig. 9)
- The filling process is complete as soon as the manometer needle again points to „zero“.

Caution: If the radiator or expansion tank is still not completely filled up to the mark after the filling process, the rest must be topped up manually.

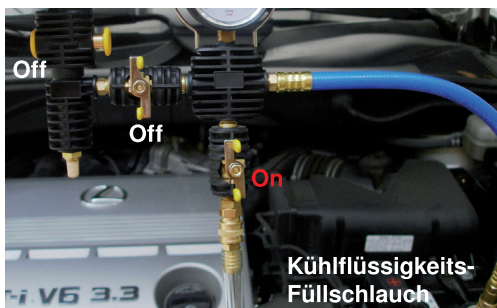


Fig. 9

5. Maintenance

The threads of the adapter cap should be regularly cleaned. All connection couplings should regularly be given a drop of compressed-air maintenance oil. The changeover valves and the piston rod of the hand pump should also regularly be given a drop of fine engineering oil.

Always return tools to their cases after use, so that nothing can be lost or damaged.

Incorrect or defective replacement parts can lead to damage.



6. Checks

Carry out a visual inspection before each use of the tool in order to detect any damage, or loose, missing and worn parts. Any part which is suspected to have been overloaded must be immediately taken out of service and replaced.

The manufacturer accepts no liability for personal injury and/or material damage which can be attributed to incorrect use of the Cooling System Diagnosis/Service Set All operators are required to read these instructions prior to use of the tool.

7. Disposal

Disposal or recycling must be carried out in accordance with the laws of the particular country of use.

8. Guarantee

The KS Tools Werkzeuge und Maschinen GmbH guarantee applies for all tools that are used under normal usage conditions.

The following are excluded from the guarantee:

- **Consumables** e.g. any type of cutting tools, cutting inserts and disks, cutting and scraping tools, brooms, brushes, files, batteries, bits or bit sockets, rotor blades in pneumatic devices, isolators on heating coils, any type of fuses, carbon brushes, etc.
- **Faulty functioning** of parts that show usage-related or other natural wear and tear, as well as tool defects that can be traced back to usage-related or other natural wear and tear.
- **Defects** in the tool that can be traced back to a failure to observe the operating instructions, improper use, use under abnormal environmental conditions or unsuitable operating conditions, overloading or improper maintenance.
Also defects in tools caused by the use of accessory parts or other parts that are not KS Tools original parts.
- Tools which have been modified or equipped with additions.
- Minor deviations from the intended quality that are however insignificant for the value and suitability for use of the tool.

The guarantee period is 12 months in cases of industrial or equal use.

The guarantee period starts on the date of purchase by the commercial end customer. The date of the original purchase receipt is decisive. For technical products with limited guarantee types A, B and C, the user must principally submit the purchase receipt in addition to the serial number of the device, if present.

The guarantee applies under consideration of the guarantee type for the duration specified in the price list valid on the day the product was purchased.

If no guarantee claim exists for the product (expiration of the guarantee time, guarantee exclusion for the reasons listed in Sec. 2) but the repair is still possible, this will only be carried out following approval of the cost estimate by the user.