BRAKE FLUID TRONIC

Operating instructions

539682511

BRAKE FLUID TRONIC

The following safety instructions should be observed in addition to the points already listed in the owner's manual:

1. These safety instructions must always be observed to ensure safe operation.
2. Before each use, visually inspect the device for damage. Do not use defective devices; have them repaired by authorized specialists.
3. Only use the device in accordance with the owner's manual provided (see "Commissioning").
4. NEVER operate the device with compressed air!
5. Only use the device for its intended purpose – maintenance of hydraulic brake systems and clutch actuators. Never empty or fill other containers!
6. Only use the device with LIQUI MOLY brake fluids, e.g., DOT3, DOT4, DOT5.1. Never use other fluids (fuels, solvents, motor oil, mineral oil, etc.).
7. Use personal protective equipment in accordance with the safety instructions for the filling medium. In case of contact with the filling medium, take the measures described in the safety instructions.
8. Clean devices that are dirty on the outside. No residues of flammable liquids may remain on the housing.
9. Do not clean the device with a high-pressure cleaner! (Design according to IP44)
10. Do not place oil, fuel, or solvent-soaked rags on the device.
11. Only use the appropriate accessories (e.g., brake bleeder) according to the manufacturer's specifications (see also 'Brake Fluid Tronic adapter set' insert, part no. 53950, at www.liqui-moly.com).
12. Follow the instructions of the respective vehicle manufacturer!

To maintain the reliability and safety of the device, it is recommended that it be serviced regularly by qualified personnel.

To ensure environmentally friendly disposal of the old fluid, it is recommended to use a closed brake fluid disposal system.

Attention: The device must not be cleaned with flammable liquids!

Attention: The power connection may only be replaced by the manufacturer or its customer service department, which is normally equipped with special tools.

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Note:

The Brake Fluid Tronic device is state-of-the-art in the field of hydraulic brake system and clutch actuation maintenance. The devices are designed for one-person operation (follow the vehicle manufacturer's operating instructions).

Suitable for all ABS systems and hydraulic clutches. The device is very sturdy and can be used universally. The device is so easy to use that no special training is required for mechanics.

However, every mechanic who works with this device must be instructed on how to use it and provided with operating instructions on how to use the device. By using LIQUI MOLY brake fluid containers, several brake fluid changes can be carried out without refilling.

Important!

Contaminated and water-containing brake fluid can lead to failure of the hydraulic brake system. For this reason, only use brake fluid from the original brake fluid containers.

The hygroscopic properties of brake fluid promote the absorption of moisture from the air. Moisture dangerously lowers the boiling point of the brake fluid. Braking causes high temperatures in the brake system, which leads to the formation of boiling bubbles in brake fluid contaminated with moisture, which may make further braking impossible.

Corrosion within the brake system is caused by electrolytic processes in water-containing brake fluid. However, boiling bubbles and air bubbles already contain corrosion, as the air bubbles carry oxygen with them.

It is therefore recommended that the brake fluid in hydraulic brake systems be replaced in accordance with the vehicle manufacturer's maintenance schedule.

When changing the brake fluid in hydraulic systems, always use the new brake fluid to flush the old brake fluid out of the system.

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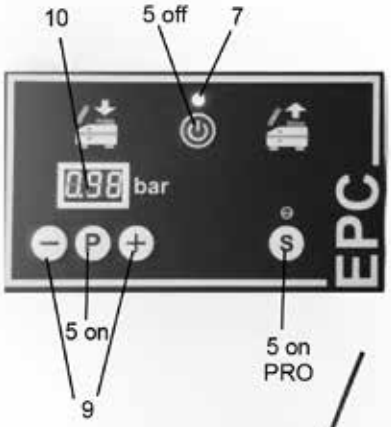

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Delivery status / Installation / Commissioning

The packaging contains the following parts in the delivery condition:

1 control unit (complete with power cable and filling hose)
1 chassis
1 set of mounting materials
1 suction pipe insert, complete
1 adapter no. 20
1 collection bottle

When unpacking the device, check for any transport damage. Transport damage should be reported immediately to the responsible transport company!

Device description:

Part	Part designation	Part	Part designation
1	Control unit	11	Suction fitting
2	Filling hose	12	Sealing cone
3	Filling hose coupling	13	Special connection nipple for suction fitting
4	Electrical supply cable	14	Connection coupling for suction fitting
5	ON/OFF switch	15	Connection for end switch
6	Electrical fuse	16	Container lock
7	Red indicator light (only EG 60 II)	17	Impeller with safety cap
8	Plug nipple for self-venting	18	Swivel castor
9	EPC pressure regulator: +/- buttons	19	Adapter no. 20
10	Operating pressure gage		
21	Spiral hose	23	Collection bottle
22	Suction pipette	24	Tube for collection bottle

Device repair

Repair work on the fitting part may only be carried out by authorized customer service centers! The device is designed so that, in the event of a defect in the fitting part, only the control unit needs to be sent in for repair.

In this case:

- Unscrew the mounting screws on the left and right sides of the control unit
- Remove the control unit with the filling hose and power cord from the device column
- Only send this unit with the suction tube insert (11) for repair

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Technical data

H x W x D:	850 x 400 x 330 mm	Power connection:	AC 230 V / 50/60 Hz
Brake fluid container:	5–20 liters	Power output:	120 W
Filling hose length:	approx. 3.5 m	Electrical fuse:	M2.0A (5x20 mm)
Power cord length:	approx. 4.5 m	Pressure control range:	0–3.5 bar, continuously variable
Empty weight:	23 kg	End stop:	Yes
Flow rate:	approx. 40 l/h	Pressure gage:	0.5–6 bar (0–86 psi)
(at 2.5 bar tau/2.0 bar flow pressure)		Operating temperature:	0–45 °C
Sound pressure level:	66 dB (A)		

We reserve the right to make technical changes, including design changes!

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1. Place the brake fluid container in the device and secure it against accidental slipping using the container lock (16).
2. Unscrew the original screw connection and replace it with the suction fitting (11), closing the container opening with the plug.
3. The “green LED and display” light up.
4. To ensure a bubble-free brake fluid flow, the device must be vented after each brake fluid container change! To do this, attach the filling hose (2) with the filling hose coupling (3) to the plug nipple for self-venting (8) and switch on the pressure regulator (P). The subsequent flow must run for 30 seconds. If the device switches off before this, the process must be repeated. Then switch off the device at the electric ON/OFF switch (5) and disconnect the filling hose coupling (3) from the plug nipple for self-venting (8). The device is now ready for operation.
5. Fit the appropriate brake bleeder (adapter) to the reservoir of the master brake cylinder in a pressure-tight manner and connect the filling hose (2) with the filling hose coupling (3) to the plug nipple of the adapter.
6. Switch on the device using the pushbutton (5 ON). Once pressure has built up, the operating pressure gage (10) will display the pressure set on the pressure regulator (9) (factory setting: 1 bar).
7. Perform the bleeding process or brake fluid change in accordance with the vehicle manufacturer‘s specifications. The manufacturer‘s specifications must be strictly observed, especially when dealing with vehicles with ABS systems and/or load-dependent brake force regulators!
8. After bleeding or changing the brake fluid, switch off the device at the electric ON/OFF switch (5 OFF). This will release the residual pressure in the filling hose. The filling hose (2) can now be disconnected from the adapter.
9. Remove the adapter from the reservoir and refit the original cap to the reservoir.
10. Check the brake fluid level in the reservoir and adjust it if necessary.

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If, after bleeding or changing the brake fluid, the brake or clutch pedal travel is too long or the pressure build-up is too "soft", the bleeding process must be repeated after repeatedly pressing the brake or clutch pedal firmly.

How to set the correct operating pressure

The pressure regulator (9) is factory-set to an operating pressure of 1 bar. This ensures that the reservoir is not deformed during the bleeding or brake fluid replacement process and that no leaks occur at the secondary sleeve. Bleeding or changing the brake fluid at a lower operating pressure (as required for some vehicle types) is possible without any problems.

Suction function

- Connect the collection bottle (23) to the plug nipple on the rear of the device.
- Press the pushbutton (5 ON) to activate the suction function.
- Use the suction pipette (22) to suck the old fluid out of the reservoir on the vehicle and clip the pipette back onto the rear.
- Switch off the suction function using the pushbutton (5 OFF).
- Fill the reservoir with fresh brake fluid.

The bleeding process can then be carried out as described under "Commissioning". The collection bottle can continue to be used to collect the brake fluid. To do this, disconnect the collection bottle (23) and insert the tube with the connector (24) into the bottle coupling.

ONLY FOR LIQUI MOLY BRAKE FLUID!

Failure to comply will void any warranty claims.

If the device is switched on but still does not function, the power supply may be interrupted. Check the device fuse (6) and replace it if necessary (see “Technical Data”).

To release the pressure in the device, switch off the device at the electric ON/OFF switch (5) before setting a new lower pressure on the pressure regulator (9). Then reduce the pressure on the pressure regulator (9) using the minus button. Switch on the device (P) and set the desired pressure using the plus button.

When does the device need to be refilled?

When the container is empty, the device switches off automatically. This ensures that no air is pumped into the brake system. As an additional control, an acoustic warning signal sounds and the indicator light (7) illuminates.

In this case, the empty brake fluid container must be replaced with a full one. The device should be switched off at the electric ON/OFF switch (5 OFF). Please then refer to the relevant points in section “Commissioning”.

Disposal

The device can be returned to the manufacturer/distribution partner (shipping and transport costs are borne by the sender). Alternatively, it must be disposed of in accordance with legal and official waste regulations.

Advice and tips

Some practical advice and tips for effective bleeding of a hydraulic brake or clutch system

Once the brake service unit has been connected to the vehicle's reservoir using a brake bleeder (adapter), the bleeding or brake fluid replacement process can begin:

- Perform the bleeding process according to the vehicle manufacturer's specifications.
- Open each bleeder valve one after the other until clear, bubble-free brake fluid escapes.
- When completely refilling the brake system, it is advantageous to open all bleed screws. The brake fluid pushes the air ahead of it. Through the open bleed screws, the air seeks the path of least resistance and escapes immediately (without back pressure and without the possibility of mixing with the brake fluid). When clear, clean brake fluid begins to escape from the bleed screw, the bleed screw is tightened by hand, wheel by wheel. Once this process is complete, the bleed screw is tightened again.
- During the bleeding and brake fluid change process, we recommend slowly depressing the brake or clutch pedal fully several times to ensure that the annular spaces between the primary and secondary sleeves are also flushed with new brake fluid and any air bubbles still adhering to the cylinder are released.
- Brake systems with fixed calipers require a larger amount of fluid to be flushed out when changing the brake fluid. This ensures that the brake fluid can also be replaced in the parts of the fixed caliper housing that are not directly flushed. It is important to note that fixed calipers may have several bleeder valves. All bleeder valves must be bled one after the other.
- In vehicles with load-dependent brake force regulators, the hydraulic passage to the wheel brakes connected to the regulator may be blocked when the axles are unloaded (vehicle is on a 2-post lift). To ensure proper bleeding and a proper brake fluid change, the axles should be loaded. The data provided by the respective vehicle manufacturer must be observed.
- We recommend using clutch bleeder hose no. 67 for bleeding and filling hydraulic clutch systems. This hose is connected to the bleeder valve of the master cylinder using a lever nipple and locked in place. The old brake fluid is first sucked out of the reservoir. Bleeding or filling is then carried out from bottom to top.

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