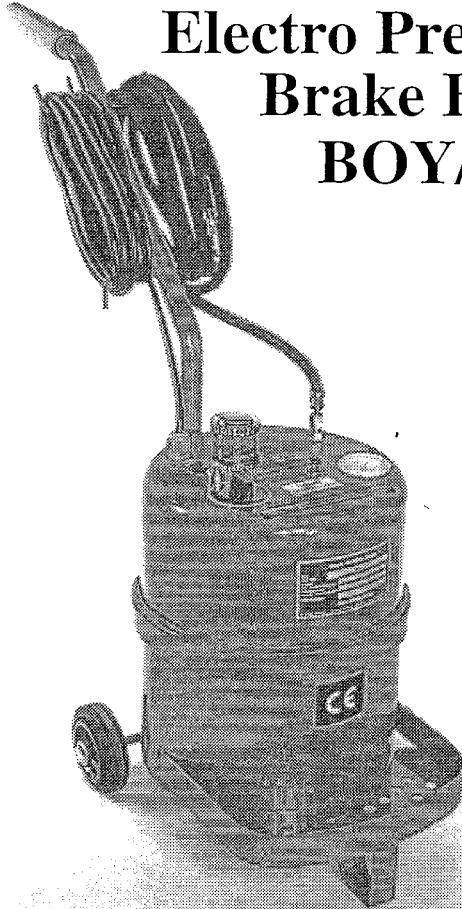


Instruction Manual

**Stierius**®

**Electro Pressure  
Brake Bleeder  
BOY/BSF-10**



## ***Smerius***<sup>®</sup> Safety Instructions

1. The following safety instructions should be observed at all times when opening the *Smerius*<sup>®</sup> Brake Bleeding Equipment.
2. Perform a visual inspection before every use. In the event of defects or damage, do not use! Have your equipment repaired by an authorized *Smerius*<sup>®</sup> Service Center.
3. The *Smerius*<sup>®</sup> Brake Bleeding Equipment is to be used only in accordance with the written instruction booklet.
4. The *Smerius*<sup>®</sup> Brake Bleeding Equipment is to be used only for the maintenance and repair of hydraulic brake fluid and clutch systems.
5. Fill the *Smerius*<sup>®</sup> Brake Bleeding Equipment with BRAKE FLUID ONLY! Use either DOT 3, DOT 4 or DOT 5. Do not mix the different DOT standards together. Never fill the bleeder with gasoline, cleaners, motor oil, or any other liquid other than BRAKE FLUID!
6. Follow all instructions from the Brake Fluid Manufacturer. Read all cautions from the container. Use proper precautions when coming into contact with brake fluid.
7. Keep your *Smerius*<sup>®</sup> Brake Bleeding Equipment clean. Wipe your bleeder with a clean rag and non flammable solvent. Wipe all residue of flammables from the bleeder before use. For instance if gasoline is spilled on it, wipe it off to avoid hazards.
8. Do not put oil, or gasoline, soaked rags on the bleeder unit because of fire hazard.
9. Use only manufacturer recommended adapters and accessories.
10. Always follow the vehicle manufacturers service and maintenance instructions.

For reliable problem free performance from your bleeder, we recommend regular service from an authorized service center.

For proper disposal of used brake fluid we recommend using a sealed brake fluid disposal system.

For the authorized service center nearest you, call *Smerius*<sup>®</sup> at (714) 990-9443.

# Instruction Manual

***Smerius***<sup>®</sup>

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## ***Smerius***<sup>®</sup> - Electro Pressure Brake Bleeder BOY/BSF-10

Brake fluid capacity (2,5 gal./10 liters)

Congratulations on your new ownership of the *Smerius*<sup>®</sup> Brake Bleeder. The *Smerius*<sup>®</sup> brake bleeder uses the newest technical developments in the maintenance of hydraulic brake and clutch systems. It is advised that only professional mechanics perform brake system maintenance.

*Smerius*<sup>®</sup> brake bleeding equipment has been designed to be used with all hydraulic brake systems including Anti Lock Brakes. The 2,5 gal./10 liters Electro model is sealed which eliminates the probability of brake fluid contamination.

The simplicity of our pressure bleeders make it easy for the mechanic to operate without special training.

The large capacity (2,5 gal./10 liters) reservoir allows you to perform multiple brake bleedings without frequent refilling.

The *Smerius*<sup>®</sup> brake bleeders have been thoroughly tested and certified for function and safety.

The *Smerius*<sup>®</sup> Pressure Brake Bleeding System can be operated without the assistance of another person.

## Why should the Brake system be flushed?

Contaminated brake fluid can cause a hydraulic brake system failure. For this reason, only brake fluid from its original should be used in the *Sinenus*<sup>®</sup> brake bleeders.

Brake fluid is hygroscopic meaning it can absorb moisture from the air resulting in a dangerous reduction of its boiling point. Water contaminated brake fluid under repeated working pressure boils and creates air bubbles. Under severe conditions this can result in complete brake failure.

Water contaminated brake fluid causes electrolysis to occur inside the brake system. The air contained in the water droplets causes oxidation. Electrolysis and oxidation corrodes the hydraulic master cylinders and wheel cylinders, and steel brake lines from the inside.

Pressure bleeding has been proven, the most effective method in flushing and bleeding hydraulic brake systems.

Expensive repairs can be avoided by flushing the brake system annually or every 10,000 miles.

## Operating Instructions

1. Remove the fill cap from the *Sinenus*<sup>®</sup> brake bleeder and fill with 2,5 gal./10 liters of new brake fluid. Do not remove the fill inlet screen because it filters debris which can clog the pump's pick-up filter. You can observe the fluid level by looking at the level indicator tube at the side of the unit. (Location # 9). Replace the fill cap finger tight only.
2. Plug the power cord into electrical outlet.
3. Install the proper cylinder reservoir adapter and connect the pressure hose coupling.

4. Turn the power switch to the ON position and check for leaks at the master cylinder adapter.
5. Adjust the pressure regulator until the gage reads 30 P.S.I. /2,0 bar.
6. Bleed the brake system according to automobile manufacturer's procedure.
7. When finished, turn the power switch to the OFF position. This relieves the pressure in the fluid hose allowing a clean disconnection from the master cylinder adapter.
8. Reinstall the original master cylinder cover.

**NOTE:** If the Pressure Bleeder does not operate when the switch is in the ON position, check the fuse mounted in the top of the unit. Replace if necessary or contact your *Snerius*® Service Center.

### **Practical tips for effective hydraulic brake and clutch bleeding**

After installing the correct master cylinder reservoir adapter and connecting the *Snerius*® Electro Brake Bleeding System you can begin the bleeding process. Open one bleeder nipple at a time until the brake fluid flows clean and free from bubbles.

To better observe the brake fluid flow and insure cleanliness of the shop we recommend using the *Snerius*® recovery measuring bottle. It will:

1. help you to see the fluid when it clears up
2. help you to keep your shop floor clean
3. allow easy disposal of brake fluid
4. give you the proper indication for invoicing the customer.

After a complete hydraulic brake system overhaul we recommend that all bleeders be opened simultaneously so the air can escape by the path of least resistance. This process eliminates back pressure and the possibility of the new fluid, mixing with contaminated brake fluid remaining in the system. When the fluid flows clean and free from bubbles close the bleeder nipples and tighten them one after the other and double check tightness.

We recommend during this pressure bleeding process to slowly press the brake or clutch pedal a few times to insure complete purging of air and fluid between the primary and secondary master cylinder chamber.

Fixed calipers can be equipped with several bleeder valves which can require a larger than normal volume of brake fluid for bleeding these systems. Each and every bleeder valve must be bled one after another.

In brake systems with load sensitive brake force regulators, the hydraulic connection to the wheel cylinders connected to the regulator can be blocked when the axles are unloaded (ie. Axle hanging from lift). In this case, the axles must be put under load (see instructions of the vehicle manufacturer) for proper bleeding or brake fluid replacement.

### **Attention:**

In brake systems with a **hydraulic brake booster**, the brake circuits work on brake fluid and the hydraulic booster circuit on **hydraulic oil**. The two fluids must not be interchanged!

### **Bleeding hydraulic clutch systems.**

When bleeding hydraulic **clutch** systems, we recommend using the **clutch bleeding hose # 67**. This hose is attached to the bleeder valve at the slave cylinder. Remove the old fluid from the master cylinder reservoir. Then bleed the system from bottom to top (from the slave to the master).

**The dust covers must be replaced on the bleeder valves after the bleeding or brake fluid replacement operation!**

## **General**

If the brake/clutch pedal travel or hand brake is excessive after a bleeding or fluid replacement operation, or if the pressure build-up is too weak (pedal spongy), repeat the bleeding operation after having vigorously operated the brake or clutch system several times.

### **Adjusting the Bleeder to the correct operating pressure**

The pressure regulator is adjusted to 30 PSI/2 bar at the factory to prevent deforming the master cylinder reservoir and possibly causing the secondary seal to leak. Under certain conditions, it may be recommended that the bleeding pressure be reduced. This can be done by simply turning the regulator knob counter clockwise until the proper pressure is reached.

If more than the factory adjusted 30 PSI/2 bar is needed the lock nuts must be loosened and the knob turned clockwise until the desired pressure is reached. When more than 30 PSI/2 bar is used, we recommend using the # 67 bleeder hose by connecting to a bleeder valve at the wheel cylinder and bleeding from bottom to top (from wheel cylinder to master cylinder).

### **Bleeding in special cases via a bleeder valve**

Open one bleeder valve; then fix the brake or clutch pedal in the full operational position (to the floor) by means of a pedal depressor bar. Connect coupler of the filling hose (10) to the extension hose. Connect the extension hose to the open bleeder valve and turn the bleeder unit ON.

Using the recovery bottle, open each bleeder valve until clear brake fluid, free of air bubbles, flows out. After having completed the bleeding operation, the extension hose stays on the bleeder valve which is still open, and the brake pedal is released slowly until the level of brake fluid in the master cylinder reservoir has reached the „MAX“ mark. Only now can the bleeder valve be closed and then the bleeder unit be turned off.

### **Note:**

After bleeding with higher or lower pressure than 30 PSI/2 bar, return the pressure regulator back to the original setting of 30 PSI/2 bar.

## Low Pressure System Testing

Low pressure system testing can be carried out with the *Smerius*<sup>®</sup> Electro Pressure Bleeder.

### Test procedure:

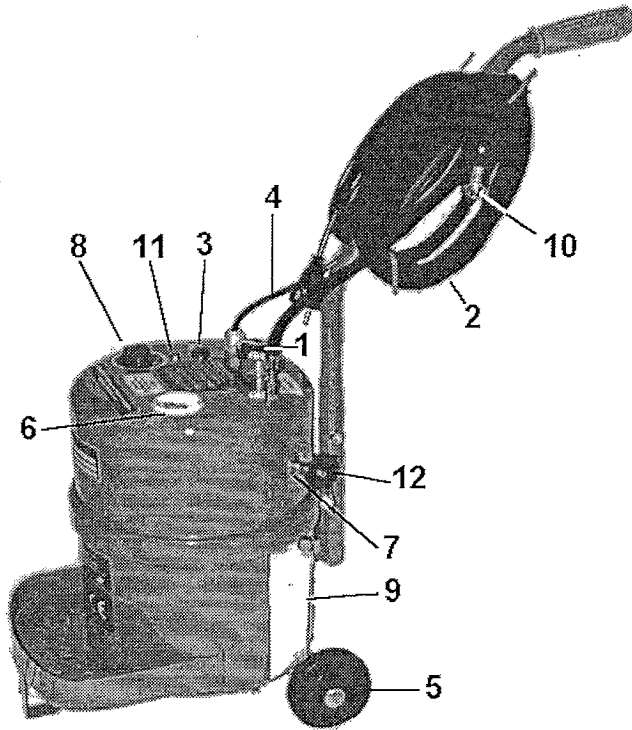
Fill the master cylinder reservoir to the top edge with brake fluid. Connect the unit securely to the master cylinder reservoir with the appropriate bleeder adaptor and filling hose. All bleeder valves in the system must be closed.

Turn unit on. The brake system is now under working pressure. Close the regulator by rotating the hand wheel (12) counter clockwise until no more resistance is felt. The pressure regulator is now closed. The pressure indicated on the gage (6) should not fall over a period of 5 minutes.

If the pressure falls during this period, the system is leaking. After completing the test, siphon off the excess brake fluid above the „MAX“ mark level, or remove it by operating the brake pedal, making sure that the bleeder valve is open.

### When does the Bleeder Unit need to be filled with brake fluid?

The *Smerius*<sup>®</sup> Electro Pressure bleeder will shut off automatically when the fluid level reaches below 0,5 liters. This insures that no air be injected into the brake system. During shut off the low level warning light (11) will illuminate and the buzzer will sound alerting you to the low fluid level condition. At this time turn the unit off and refill with new brake fluid while observing the level indicator on the side of the bleeder unit. Fill to the 15 liter mark. Note: do not remove the filter screen from the fill inlet while filling.



Parts List for the **Stierius**<sup>®</sup> 2,5 gal./10 liters Electro Brake Bleeder BOY/BSF-10

No. Part.

1. Fill inlet cap
2. Fluid pressure hose
3. Fuse
4. Power cord
5. Roller wheels
6. Fluid pressure gage
7. Fluid pressure regulator
8. Power on/off switch
9. Fluid level indicator
10. Hose coupling
11. Low level warning light
12. Fluid pressure regulator wheel



## Warranty:

The *Snerius*<sup>®</sup> Electro Pressure Bleeder is guaranteed to be free of defects in parts and workmanship for one year from the date of purchase. This guarantee becomes valid after receipt of a dated guarantee by our company.

This guarantee is limited to the parts and labor necessary for repair.

Any misuse or abuse of the *Snerius*<sup>®</sup> Electro Pressure Bleeder will void the guarantee.

Shipping costs are the customer's responsibility. Any attempt to repair the *Snerius*<sup>®</sup> Electro Pressure Bleeder by anyone other than our authorized service center will void the guarantee.