



1200 Southeast Ave  
Tallmadge Ohio 44278

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**Summit Brake Lock**  
**Part # SUM-760002**  
**2-Port Stand Alone Unit**

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Congratulations on the purchase of your Summit 2-Port Brake Lock. Your system includes a stainless steel nickel-plated corrosion resistant valve assembly that guarantees superior reliability and extended durability.

**Important Information:**

Carefully read these instructions before installing your Summit 2-Port Brake Lock. If you are not qualified or experienced at performing this type of installation, it is highly recommended that you have the Summit 2-Port Brake Lock installed by a qualified automotive mechanic. These instructions contain warnings that must be observed otherwise your vehicle could be rendered unsafe and as a result possible serious injury to you and your car could occur.

The Summit 2-Port Brake Lock solenoid valve is designed to be installed in the front brake system for racing and can also be used in the rear brake system for momentary (maximum of 60 seconds) hill holding. In these conditions, the solenoid valve should not interfere with normal brake operation.

All fittings and brake lines may be purchased from your local parts store, and only SAE approved seamless steel brake lines with double flared ends should be used. **Do not use copper tubing.** Brake lines are available in a variety of lengths and come pre-assembled with tube nuts. Use only brake lines that are of the correct size and length. We strongly recommend the Summit Line Lock Installation Kit, SUM-G3904. Use the pre-cut template gauge (supplied in kit) to determine the proper size of fittings and brake line required for installation.

Use Teflon tape or sealer on NPT (National Pipe Thread) fittings only; do not use any sealer on tube nuts or flare fittings. **If you use Teflon thread sealer, take extra care not to get any inside the lines otherwise contamination can and will occur.**

To be street legal, the rear brake lights must operate when the brake system is under pressure. Therefore, a pressure-operated switch must be installed if the Summit Brake Lock defeats the purpose/function of the stock rear brake light switch. See section #7 of **Electrical Installation** before proceeding. (Not required for off-road use and NHRA drag racing venues.)

## **Safety Precautions:**

The Summit 2-Port Brake Lock is designed primarily for high performance racecars to momentarily (maximum of 60 seconds) keep the front brakes engaged while staging for a drag race. It will not safely function as a long-term brake holding device. It should only be used on domestic cars and light duty (no more than 3/4 ton rated) trucks using a standard hydraulic braking system that is in a safe, operable condition. It should never be used as a temporary brake holding device in place of a parking brake or as a replacement for a driver depressing the brake pedal. The Summit Brake Lock is not recommended for vehicles with anti-lock or split diagonal brake systems. However it can be made to work in racing conditions only.

The Summit 2-Port Brake Lock solenoid valve must be securely mounted to prevent flexing of brake lines. Unsecured mounting can cause premature failure.

The solenoid must be mounted away from areas like suspension components, steering components, headers, and exhaust pipes. An area such as the firewall is suggested, and a line-fitting wrench is always recommended on all line fittings while installing the brake lines.

When working on your brake system it is always important not to allow contaminants (dirt or foreign matter) to get into the lines or fluid. This may cause improper operation and failure.

Use a tube bender to avoid kinking or crushing if bending lines is necessary: **there must be no leakage!**

## **Installation Instructions:**

***CAUTION: Before we begin. Your Summit Racing ® 2-Port Brake Lock was shipped to you in a light bath of DOT 3 brake fluid to prevent corrosion of parts and insure longevity. It is imperative that you clean your brake lock before installing device or fluid may become contaminated. If this happens, simply flush the entire system.***

1. Install 1/8<sup>th</sup> NPT adapter fittings in the valve inlet port (top port closest to heat sinks) and in outlet port of the solenoid valve. Elbow fittings may be used where necessary..

***CAUTION: Do not clamp Summit Racing ® 2-Port Brake Lock in a vise or damage can and will occur to motor and magnet. Do not over tighten fittings.***

2. Mount Summit 2-Port Brake Lock solenoid valve close to the brake lines (away from headers, exhaust pipes, steering and suspension components), which you will be using for connecting the Summit 2-Port Brake Lock system. Valve may be mounted in any position (vertical-horizontal, etc.). Using a 3/16 or #13 drill bit, drill holes for mounting and fasten with supplied 1/4" bolts. Secure the black ground wire under one of the mounting screws. Use a solderless/crimp connector terminal on this wire. If this is not a good electrical ground, run an auxiliary wire to the engine block or negative (-) terminal of the battery.
3. Install new steel brake lines if necessary (determine size by using pre-cut template gauge).

4. Additional brake lines may be connected to existing lines by using appropriate size inverted flare union fittings. Any one of the outlet ports on the valve body can be used for installing a pressure gauge if so desired. It is recommended that this be done at this time.
5. On some applications it may be necessary to permanently remove one brake line from the proportioning valve. If this is required, plug the line with a proper size inverted flare plug.

**CAUTION:** *Be sure to use an inverted flare plug only. Use of an NPT pipe plug will cause thread damage, leakage, and improper operation of the vehicle braking system and the Staging Lock System.*

6. Be sure to use a top quality factory recommended, heavy-duty brake fluid that meets D.O.T. 3 or D.O.T. 4 specifications.

### **Electrical Installation:**

The Summit 2-Port Brake Lock is designed for 8 to 16 Volt DC operation only.

To assure good electrical connections use #18 gauge standard insulated automotive wire or equivalent and solder all splices together. Always wrap each splice/connection with a good grade of electrical tape.

**CAUTION:** *Wires should never be stretched to make a connection. Always confirm you have proper lengths.*

1. Disconnect negative (-) cable from battery.
2. Mount Summit 2-Port Brake Lock Activation Switch in a comfortable and easy to reach position.
3. It is highly recommended that you use a UL approved activation switch a fuse (not included) when doing this installation.
4. Reconnect battery and turn ignition switch on. Depress the switch (not included) several times and check fuse (not included). If fuse is burned, check all electrical connections for a short.
5. Turn ignition switch on. Apply the brakes and depress the switch button. While still holding the switch, release brake pedal. **Your brake lights must operate when the hydraulic system is under pressure and Summit Brake Lock solenoid valve is engaged.** If not, connect a hydraulic brake light switch to one of the outlet ports of the solenoid valve (we recommend Wagner Electric part number FC 5106). Electrical hook-up should be a parallel hook-up to existing pedal brake switch wiring.

After installation, bleed all air out of the system. Follow vehicle manufacturer brake bleeding procedures. Bleed air at wheel cylinders starting with wheel furthest from master cylinder and ending with closest. Be sure to check all connections for leakage under pressure.

*Caution: Before driving vehicle, completely check the brake system for proper operation. Check all connections under pressure for leaks and be sure that you have a good solid brake pedal. Test the Summit Brake Lock system several times to be sure that it operates correctly.*

*Be sure that the proper two wheels have the brakes engaged when the Summit Brake Lock is actuated and that all four wheels are free when the Summit Brake Lock switch is released.*

### **Operating Instructions:**

With ignition switch in the “on” position, fully depress brake pedal to firmly engage brakes, and then depress the switch button. The operation of the Summit 2-Port Brake Lock will now allow you to release the brake pedal and maintain an engaged front brake system for racing applications. This will allow you to preload the drive train without roll out.

To disengage the Summit Brake Lock, release the switch button.

**Warning: While vehicle is in motion, never depress switch button when applying brakes.**

### **Further Upgrades**

Summit Racing Equipment also offers the following parts to compliment your Summit Brake Lock system.

#### Line Lock Installation Kit

This kit includes everything you need to install your brand new line lock. It comes with all the required connectors, flare adapters, unions, plugs and brake lines.

SUM-G3904

#### Tubing Bender

Accurately bend 1/4", 5/16", and 3/8" tubing up to 90 degrees.

SUM-900675