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## ROLL STOP / BRAKE LOCK

Congratulations on the purchase of your Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / Brake Lock. If you are not qualified or experienced at performing this type of installation, it is highly recommended that you have the Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / 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. **Do not cut or alter tubing.**

Use Teflon tape on NPT threaded fittings. **When using 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 Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / 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:**

1. The inlet and outlet ports on the valve are 1/8" NPT. Determine the size of the adapter fittings you may need. Please Note: Standard 3/16" brake line nuts cannot be threaded directly into the line lock. A 1/8" NPT adapter fitting is required.
2. Install male fittings in the valve inlet port (top port closest to black heat sinks) and in selected outlet ports of the solenoid valve. Elbow fittings may be used where necessary. Non-used outlet ports must be sealed with 1/8" N.P.T. plugs.

***CAUTION: Do not clamp Speed Unlimited Roll Stop / Brake Lock in vise or damage can and will occur to motor and magnet. Do not over tighten fittings.***

3. Mount Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / 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.
4. Install new steel brake lines if necessary.
5. Additional brake lines may be connected to existing lines by using appropriate size inverted flare union fittings. Any one of the outlet ports (the three lower ports furthest from the black heat sinks) on the valve body can be used for installing a pressure gauge if so desired.
6. Be sure to use a top quality factory recommended, heavy-duty brake fluid that meets D.O.T. 3 or better specifications.

### **Electrical Installation:**

The Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / Brake Lock Activation Switch in a comfortable and easy to reach position.
3. Mount indicator lamp in convenient location under dash, or drill an 11/16" diameter hole in instrument panel if so desired for in-dash mounting. Use caution when drilling. Check for obstructions behind instrument panel before drilling any holes. Mount indicator lamp and splice lamp wire to end of Speed Unlimited Roll Stop / Brake Lock switch wire. Be sure that indicator lamp bracket is grounded.
4. A three (3) way splice must now be made using the wire from the lamp, #2 wire from the Speed Unlimited Roll Stop / Brake Lock switch, and #4 wire from solenoid valve.
5. Using a length of #18 gauge wire, splice one end to the #3 wire of the Speed Unlimited Roll Stop / Brake Lock switch and connect the other end to a switched positive terminal so that the Speed Unlimited Roll Stop / Brake Lock is only operable with the ignition turned on. A Snap-Lok fuse

- holder with 4-amp fuse is provided and should be incorporated into this wire. The fuse will protect your electrical system in the event of a short circuit.
6. Reconnect battery and turn ignition switch on. Depress the switch several times and check fuse. If fuse is burned, check all electrical connections for a short.
  7. Turn ignition switch on. Apply the brakes and depress the Speed Unlimited Roll Stop / Brake Lock switch button. While still holding Speed Unlimited Roll Stop / Brake Lock switch, release brake pedal. **Your brake lights must operate when the hydraulic system is under pressure and Speed Unlimited Roll Stop / 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 manufacturers' 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 Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / Brake Lock is actuated and that all four wheels are free when the Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / Brake Lock switch button. The Speed Unlimited Roll Stop / Brake Lock indicator lamp should light up when switch button is depressed indicating that the solenoid valve is actuated. The operation of the Speed Unlimited Roll Stop / 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 Speed Unlimited Roll Stop / Brake Lock Brake Lock, release the switch button.

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

### **LIMITED WARRANTY:**

Speed Unlimited warrants this product to be free from defects in materials and/or workmanship for ninety days from the date of purchase. The following requirements and exclusions apply: (1) You must be the original purchaser and must maintain the original receipt and return the defective product within 10 days after the expiration of the product warranty. Failure to do so voids all warranty, either express or implied set forth herein. (2) You must reside in the United States or Canada and use the product as described in the warranty registration. (3) The product must not have been altered, disassembled, modified, or converted for any other use than intended by Speed Unlimited. (4) The product, or any part thereof, is not used in accordance with the operating parameters specified by Speed Unlimited (5) The product or any part thereof is damaged or rendered unserviceable due to negligence, vandalism, theft, fire, debris, flood, Act of God, or other peril, malfunction of equipment, or by any cause within the Customer's control. The extent of Speed Unlimited' liability under this warranty shall be limited to the prompt correction or replacement, at Speed Unlimited' option and at no cost to the customer other than return shipment, of any defective part of the product determined to be necessary by Speed Unlimited. This only applies if written Speed Unlimited received notice of the claimed defect prior to expiration of the warranty period. All warranties of merchantability and fitness for a particular purpose are expressly excluded. The duration of any and all implied warranties is limited to the duration of this express warranty. All incidental and consequential damages including but not limited to loss profits even if it has been advised of the possibility of such damages are hereby excluded. Regardless of the form of the claim, Speed Unlimited liability for any damages to the customer for such product is limited to the guidelines herein. This stated, expressed warranty is in lieu of all liabilities or obligations of Speed Unlimited for damages arising out of or in connection with delivery, use or performance of the product. This warranty cannot be amended or changed by any Speed Unlimited representative, employee, or agent and any promises inconsistent with this warranty are void and unenforceable against Speed Unlimited. Some states do not allow limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights that vary from state to state. Your sole remedy for the above warranties is the repair or replacement of the defective product only, at Speed Unlimited' sole discretion.

