



Installation Instructions 1745000

OVERVIEW:

CAUTION:

Carefully read and comprehend all instructions before beginning install. If you are inexperienced performing this type of install, we strongly recommend using a qualified mechanic or shop to complete it.

Congratulations on the purchase of your new HURST Roll Control system, featuring advanced design quality stainless steel valve assembly for resistance to corrosion, greater durability, reliability and more precise positive action.

WARNINGS:

This system is designed primarily for high performance race cars to momentarily engage front brakes (max 60 seconds) while staging for a drag race. It won't safely function as a long term brake holding device.

It should be used only on domestic cars and light duty trucks (no more than ¾ ton) 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 of a driver depressing the brake pedal.

We do **NOT** recommend installing system on vehicles equipped with anti-lock or split diagonal brake systems.

INSTALLATION NOTES:

When working on brake system; maintain a clean working area, not allowing dirt or foreign matter to contaminate it which may allow improper operation and failure.

The Roll Control solenoid valve will not interfere with normal brake operation when properly installed in accordance with directions provided.

On any vehicle, rear brake lights must operate when brake system is under pressure. Therefore, a pressure operated switch must be installed if the Roll Control system defeats the purpose or function of factory rear brake light switch. (See Figure 1)

The Roll Control solenoid valve must be firmly mounted to prevent brake lines from flexing and causing failures. Mount it on fire wall, away from headers, exhaust pipes, steering and suspension components. Use a line fitting wrench on all line fittings while installing brake lines.

All fittings and brake lines may be purchased from your local parts store. Only SAE approved seamless steel brake lines with double flared ends should be used. Do NOT use copper tubing. Use PTFE tape on threaded fittings.

CAUTION:

Using PTFE tape to excess can contaminate the solenoid valve or brake system. Use sparingly and do NOT apply it to starter thread of fittings.

Brake lines are available in a variety of lengths and come pre-assembled with tube nuts. Do NOT cut or alter tubing, but instead, make sure you have the correct size and length tubing.

Use pre-cut template gauge (supplied in kit) to determine proper size fittings and brake lines required for install. If bending lines is necessary, use a tube bender to avoid kinking or crushing.

After install, bleed all air out of system. Bleed air at wheel cylinders, starting with wheel furthest from master cylinder and ending with closest. Follow vehicle manufacturers brake bleeding procedures.

CAUTION:

Be sure to check all connections for leakage under pressure. There must be NO leakage.

Use a top quality heavy duty brake fluid that meets DOT 3 or DOT 4 specifications. Most domestic manufactures use five general types of brake systems (pages 5-7).

Match your brake system to comparable system on diagrams to complete proper installation. Electrical installation is the same on all vehicles (page 2).

INSTALLATION INSTRUCTIONS:

1. From diagram (page 5-7), determine fittings to be measured. Use pre-cut template gauge to check size. The tube nut thread determines size of female thread in male fittings that must be purchased. This also indicates tubing size required, if necessary.

NOTE: For reference, a chart is provided (page 4) showing standard Weatherhead part numbers for fittings that may be required.

2. Install male fittings in valve inlet port (stamped "M" next to port) and in selected outlet ports of solenoid valve. Elbow fittings may be used where necessary. Unused outlet ports must be sealed with 1/8" NPT plugs.

CAUTION:

Do NOT clamp Roll Control valve in vice. Do not overtighten fittings.

3. Mount solenoid valve close to brake lines (away from headers, exhaust pipes, steering and suspension components) which will be used for connecting Roll Control system. Valve may be mounted in any position (vertical-horizontal, etc.). Using #13 drill bit (.185 dia), drill holes to mount and fasten valve with 1/4" screws or drill 1/4" holes and fasten it with 1/4" bolts and lock nuts. The black ground wire must be secured under one of the mounting screws. Use solderless terminal connector on this wire. If it isn't a good electrical ground, run auxiliary wire to engine block or negative (-) terminal of battery.
4. If necessary, install new brake lines. Determine size using pre-cut template gauge.

RECOMMENDED: Complete the following actions (step 5) simultaneously.

5. Additional brake lines may be connected to existing lines using appropriate size inverted flare union fittings. Use outlet ports on Roll Control valve to install pressure gauge (if desired).
6. In some installs, it may be necessary to remove one line from pressure differential switch. If so, plug opening with proper size SAE thread plug designed for inverted flare fittings.

CAUTION:

Use SAE thread plug only. An NPT pipe plug will strip threads, causing leakage, malfunction and improper operation.

ELECTRICAL INSTALLATION:

CAUTION:

The Hurst Roll Control Solenoid Valve is designed for 12 volt operation only.

To create a stable circuit, use 18 gauge wire and solder or use solderless crimp to complete your wiring.

1. Disconnect negative (-) cable from battery. On floor shift installations, remove old shifter knob or "T" Handle. Slide switch retention sleeve over shifter stick to desired position. If desired, attach cable to stick using chrome tape (lowest taped area must be above shifter boot).

NOTE: For more precise control, use a Hurst T-Handle, Pistol Grip shift handle or a round shift knob that are all available with a 12V momentary switch.

2. Slide protective sleeve over wires. Form a generous loop of wire below floor and be sure to allow sleeve to cover wires where they route through hole in floor. Keep wires away from sharp edges/corners and hot engine and exhaust components.
3. Mount indicator lamp in convenient location under dash, or drill 1/16" hole in instrument panel for in-dash mounting. Be cautious while drilling to avoid damage to any other panel components. After mounting lamp, splice its wire to end of Roll Control switch wire #2 (Figure 2). Make sure indicator lamp bracket is grounded.
4. Make a 3-way splice using wire from lamp; #2 wire from Roll Control switch, #4 wire from solenoid valve (Figure 2).
5. Using length of 18 gauge wire, splice one end to #3 wire of Roll Control switch then connect remaining end to a switched positive terminal so Roll Control is only operable with ignition on. A snap-lok fuse holder with 4-amp fuse is provided and should be incorporated into wire. The fuse will protect your electrical system in the case of a short circuit.
6. Reconnect battery and turn ignition switch on. Depress Roll Control switch several times and check fuse. If fuse is burned, check all electrical connections for a short.

- Turn ignition "ON". Apply brakes and press Roll Control switch. Release brake pedal while holding switch and have someone check for proper operation of rear brake lights. They must operate when hydraulic system is under pressure and Roll Control solenoid valve is engaged. Otherwise, connect hydraulic brake light switch to one outlet port of solenoid valve (Figure 2). Suggested switch-Wagner Electric FC 5106. Electrical hook-up should be a parallel hook-up to existing pedal brake switch wiring.

CONTENTS OF ROLL CONTROL KIT

DESCRIPTION
Solenoid Valve
Stage Lock Button
Indicator Light
Fuse Assembly
Template Gauge

OPERATING INSTRUCTIONS:

To actuate your HURST Roll Control system: Turn ignition switch "ON", fully depress brake pedal (to firmly engage brakes), then press Roll Control switch. The indicator lamp should light up when switch button is pressed, meaning the solenoid valve is actuated.

WARNING:

When vehicle is in motion, never press switch button while applying brakes.

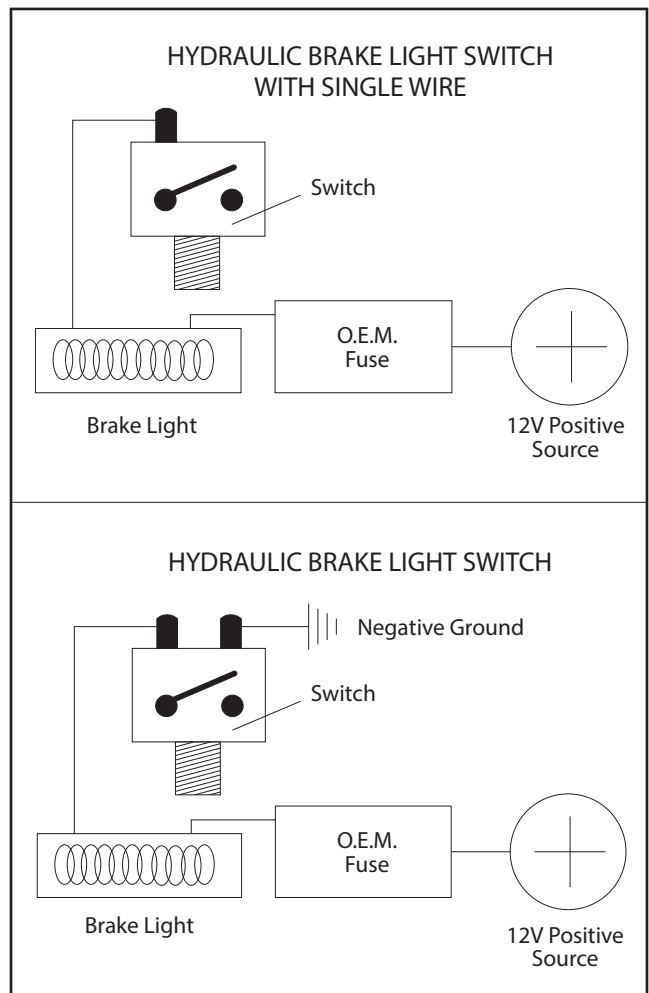
Hold button and firmly press brake pedal again. Operating Roll Control will now allow you to release brake pedal and maintain an engaged front brake system for racing applications. This allows preloading the drive train without roll out. The holding power of your Roll Control depends on brake system pressure. To disengage it, release the switch button.

RECOMMENDED: Use a dash mounted gauge (0-1000 psi) for more consistent braking results.

CAUTION:

Before driving vehicle, do a final inspection of brake system for proper operation. Check all connections under pressure for leaks and be sure brake pedal engages properly. Test Roll Control system several times to ensure it operates correctly. Make sure both wheels have brakes engaged when Roll Control is actuated and that all four wheels are free when it is released.

FIGURE 1

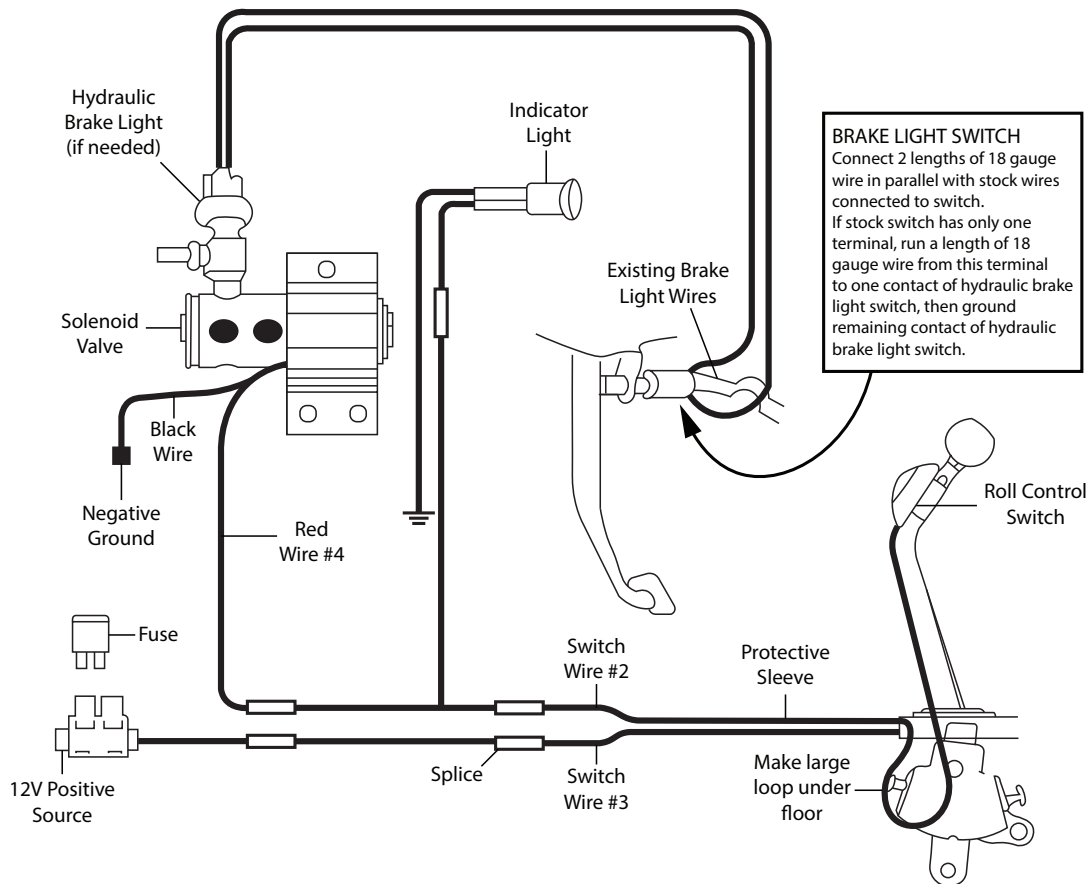


FITTING CHART

PART NUMBERS SPECIFIED ARE WEATHERHEAD

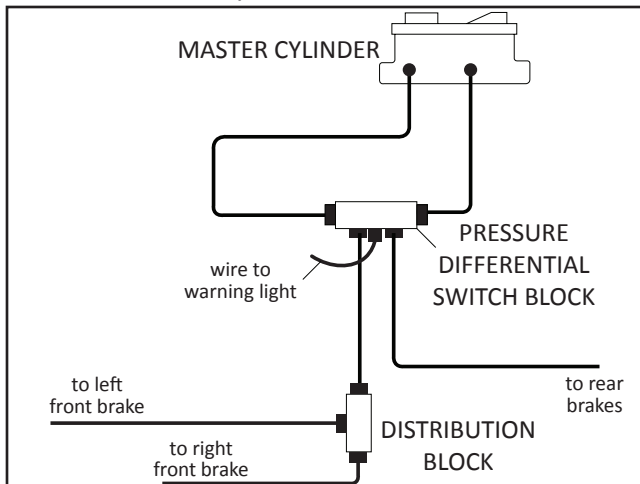
DESCRIPTION	TEE	MALE CONNECTOR	MALE CONNECTOR	STEEL PLUG	UNION	STEEL BRAKE LINES	MALE ELBOW	MALE ELBOW
ALL 3/16" LINE	WH 550x3	WH 200x3	WH 200x3	WH 131x3	WH 300x3	3/16" DIA.	WH 400x3	WH 400x3
ALL 1/4" LINE	WH 550x4	WH 200x4	WH 200x4	WH 131x4	WH 300x4	1/4" DIA.	WH 400x4	WH 400x4
1/4 LINE FROM MASTER CYLINDER TO DISTRIBUTION BLOCK 3/16 LINE FROM BLOCK TO WHEEL CYLINDERS	WH 550x4	WH 200x3	WH 200x4	WH 131x4	WH 300x3	6 1/4" DIA. 7 3/16" DIA. 8 1/4" DIA.	WH 400x3	WH 400x4

FIGURE 2



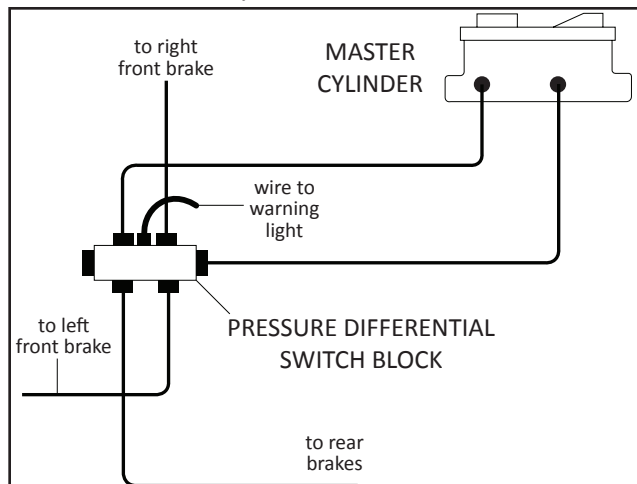
SYSTEM 1:

1. Dual Master Cylinder

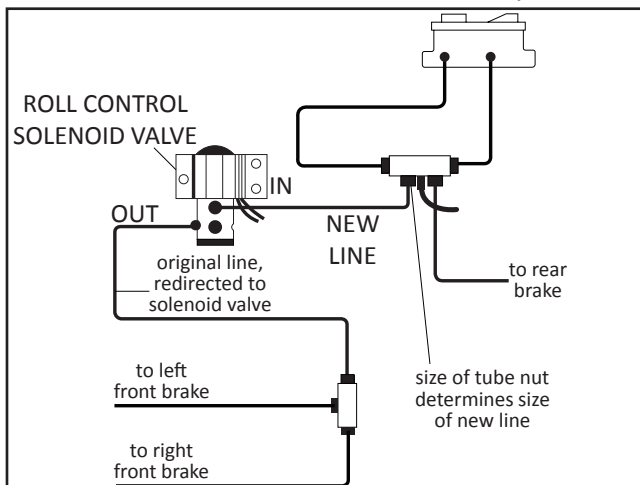


SYSTEM 2:

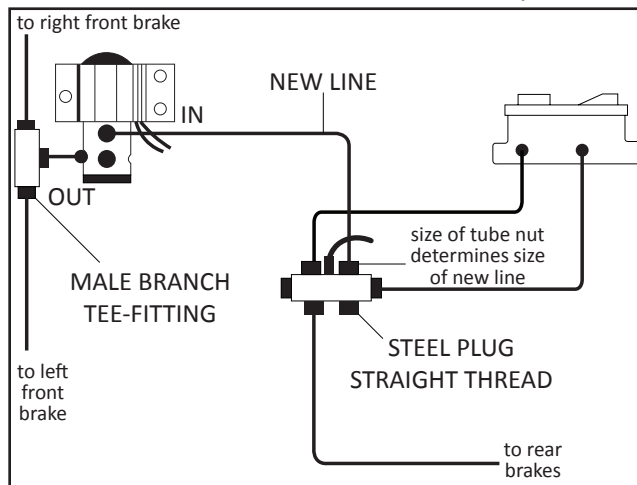
4. Dual Master Cylinder



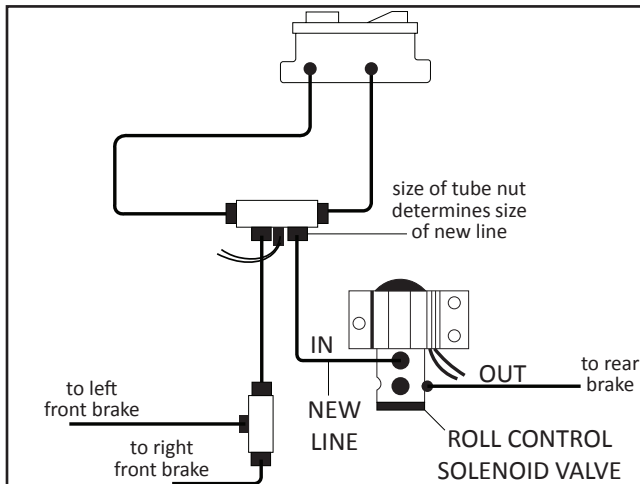
2. Roll Control installed, front brakes only.



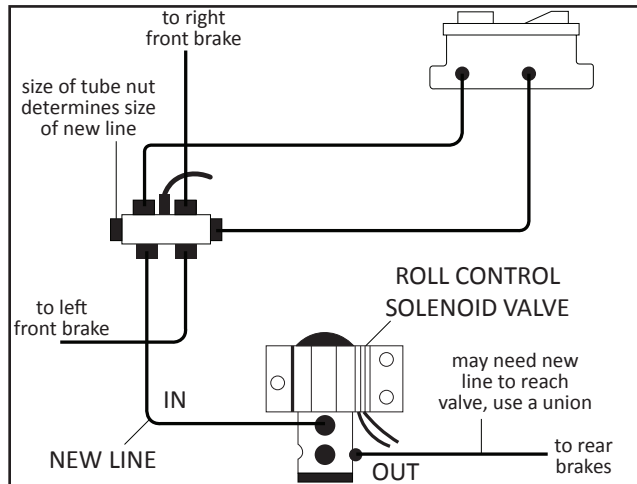
5. Roll Control installed, front brakes only.



3. Roll Control Installed, rear brakes only.

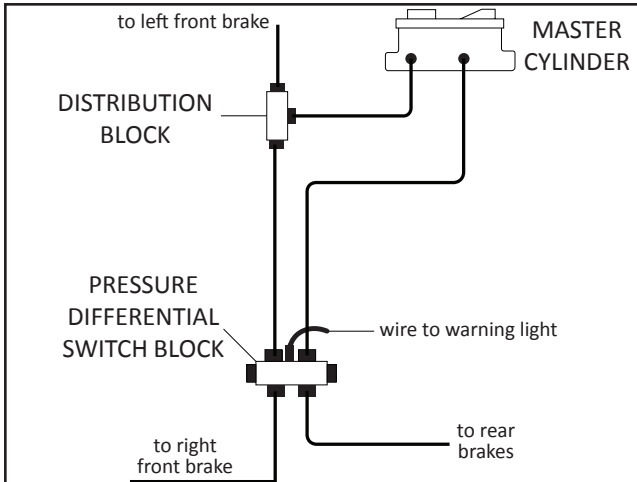


6. Roll Control installed, rear brakes only.



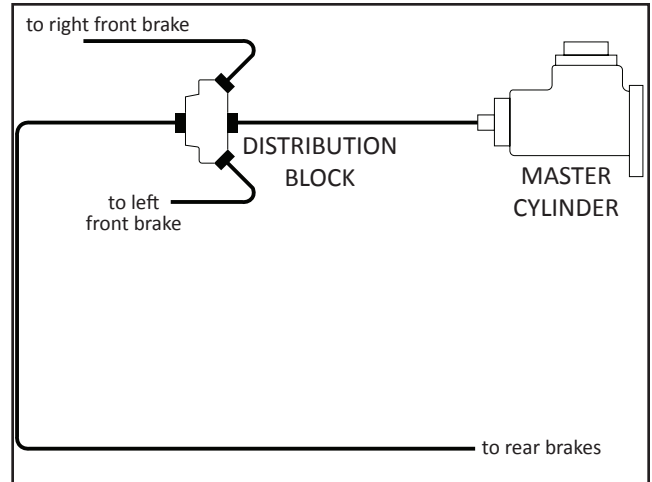
SYSTEM 3:

7. Dual Master Cylinder

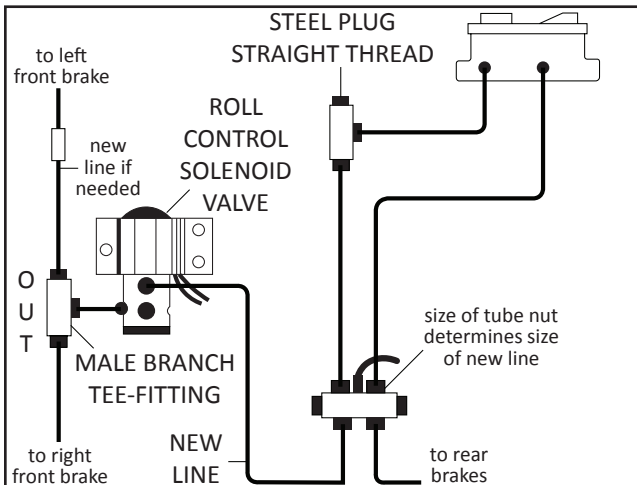


SYSTEM 4:

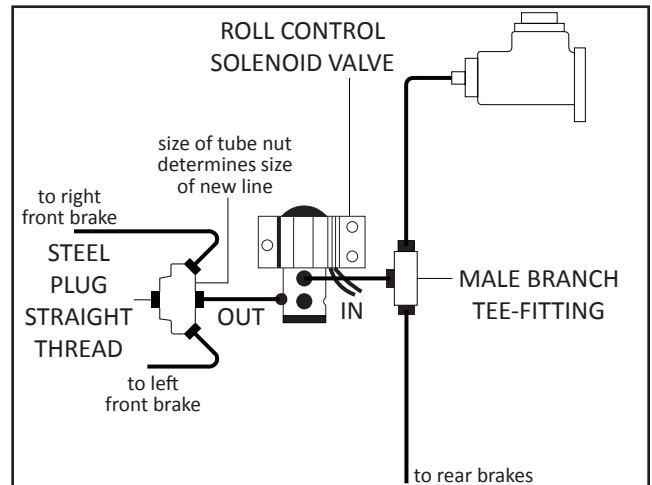
10. Single Master Cylinder



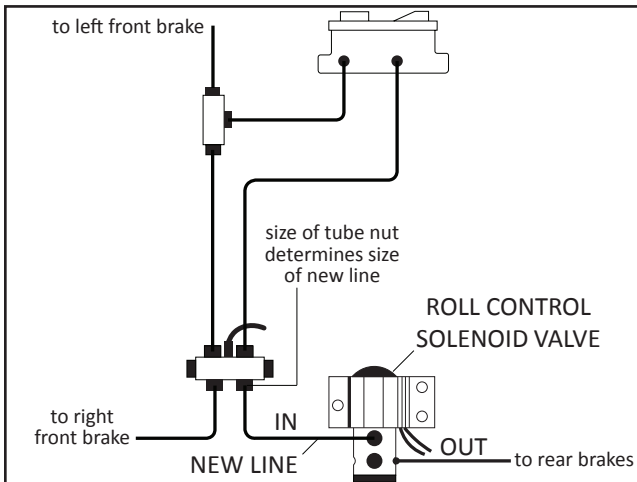
8. Roll Control installed, front brakes only.



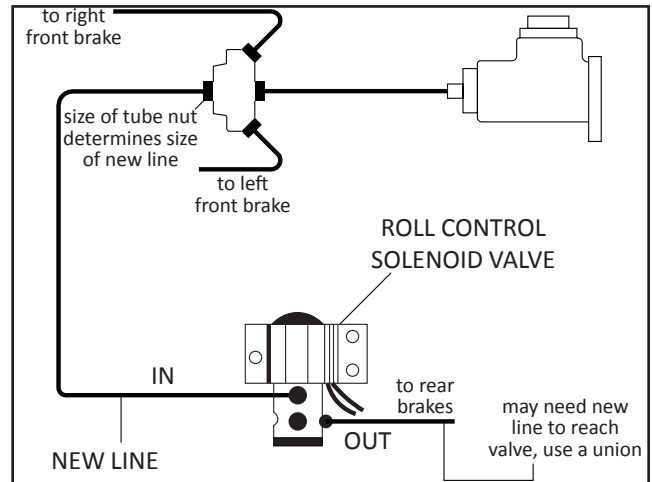
11. Roll Control installed, front brakes only.



9. Roll Control installed, rear brakes only.

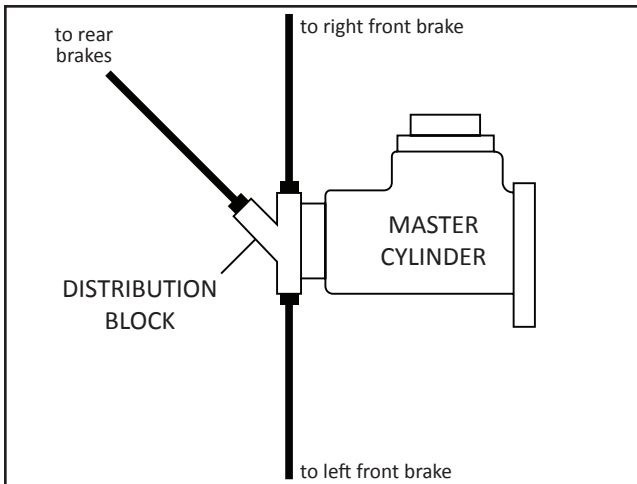


12. Roll Control installed, rear brakes only.



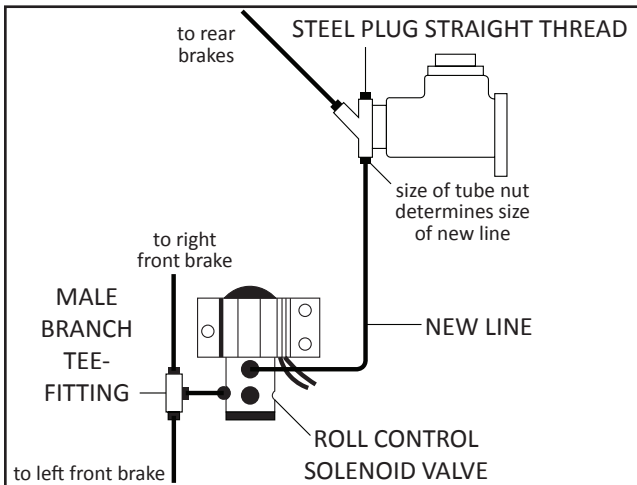
SYSTEM 5:

13. Single Master Cylinder



Congratulations on the installation of your Hurst Roll Control kit. Retain these instructions for future reference.

14. Roll Control installed, front brakes only.



15. Roll Control installed, rear brakes only.

