

Installation Instructions

Launch Control

(see www.bmracing.com for the latest technical product information)
Part Number 46075

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This Launch Control must be installed according to these instructions for safe operation. The unit can be used in either the front wheel part of the brake system or the rear wheel part of the brake system of a passenger car or light duty truck. Install the launch control in the rear brake system only for use as a hill holder system on the street.

The B&M **Launch Control** is a standard design with one connection from the master cylinder and one connection to the brakes.

WARNING: The B&M **Launch Control** is designed primarily for use on high performance vehicles used in drag racing. It is **for** short term use (60 seconds maximum) to lock the wheels while staging the vehicle for drag racing. It is not intended for use as a long term brake holding device. It should only be used on passenger cars and light trucks (3/4 ton or less) using a standard hydraulic brake system that is in good safe operating condition. If your vehicle is equipped with a **dual diagonal braking system (the left front is connected to the right rear and the right front is connected to the left rear; common to front drive imports), two launch controls must be utilized.** The B&M Launch Control should never be used as a temporary brake holding device in place of a parking brake or in place

of a driver depressing the brake pedal.

IMPORTANT: Read and fully understand these instructions before installing the B&M **Launch Control**. Note that these instructions contain warnings that must be observed in order to reduce the risk of improper installation that could make the vehicle unsafe and result in possible serious injury. If you are not experienced or qualified at doing this type of installation, we strongly recommend that you have the B&M Launch Control installed by a qualified and certified automotive mechanic.

Do not cut or attempt to flare steel tubing. Do not use copper tubing. Use a tube bender when bending the tubing to avoid crushing the tube. Pre assembled steel braided BRAKE hoses may be an acceptable substitute for steel lines in high performance applications.

INSTALLATION NOTES

On rear wheel drive applications, the solenoid valve can be installed in the front wheel brake system as a staging device for drag racing and in the rear wheel brake system for short term use as a hill holder (60 seconds maximum). On front wheel drive applications, the solenoid valve(s) should be mounted in the rear braking system(s) for use either as a staging device or hill-holder (60 seconds maximum), The solenoid valve does

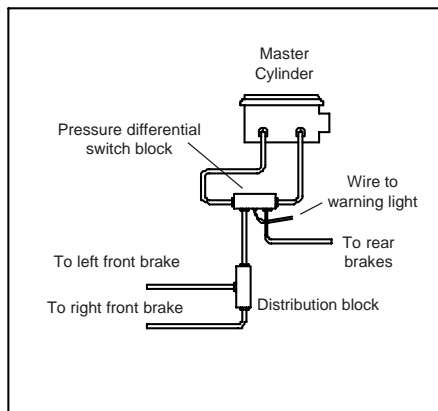
not interfere with normal operation of the brakes or with safety regulations when installed according to these instructions.

The brake light system on the rear of the vehicle must operate when any part of the brake system is pressurized. A hydraulic pressure brake light switch must be installed in the system if the launch control valve defeats the operation of the stock brake light switch. See the electrical section for details.

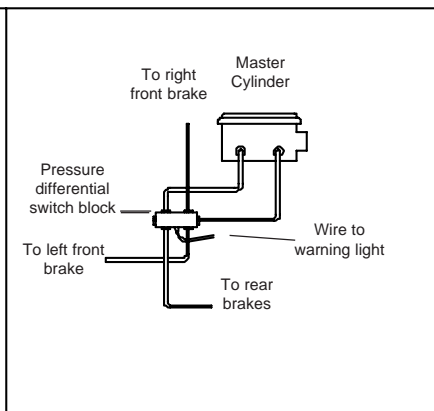
The launch control valve must be mounted to a rigid surface to prevent vibrations that could cause failures of the joints or lines. The firewall is a good mounting location. Keep the valve and the brake lines away from the heat of the exhaust system.

Two basic types of master cylinders have been used on production cars, single master cylinder and dual master cylinder. Dual master cylinders have been required on all production cars built since approximately 1970, earlier cars have single master cylinders. The dual master cylinders have the brake fluid reservoir divided into two separate sections while single master cylinders have a single compartment reservoir. **SOME CARS (MOSTLY FRONT WHEEL DRIVE) HAVE DIAGONALLY SPLIT SYSTEMS WHERE THE RIGHT FRONT**

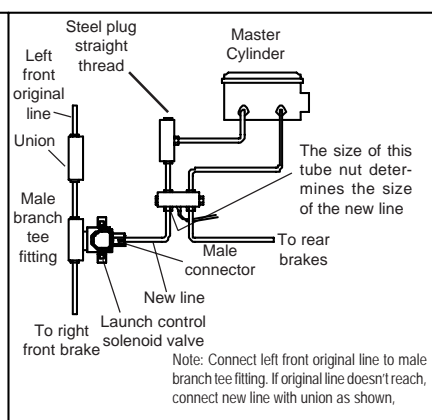
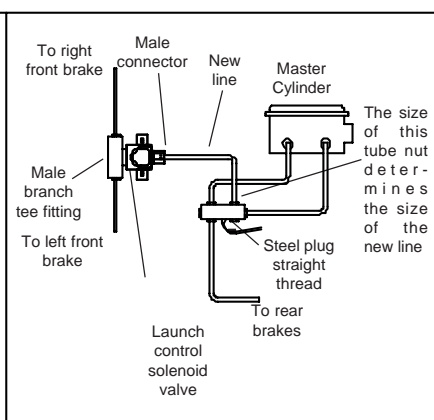
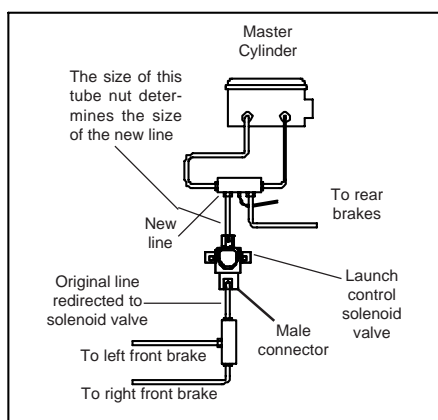
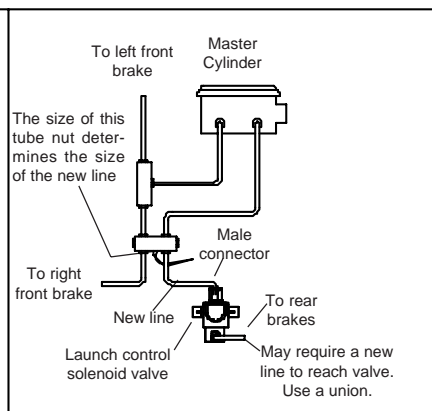
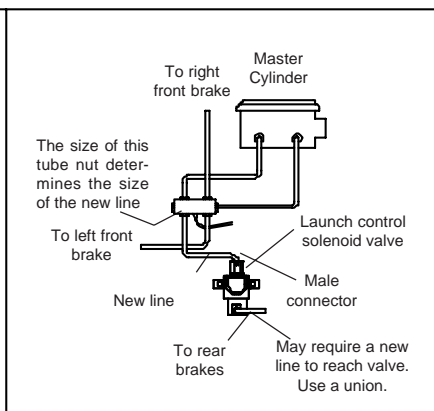
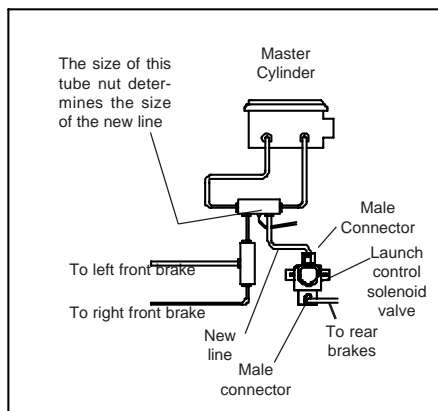
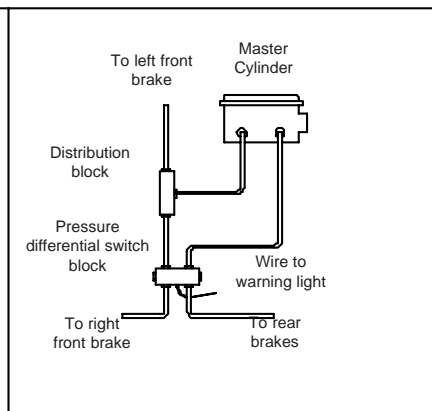
SYSTEM A Dual Master Cylinder



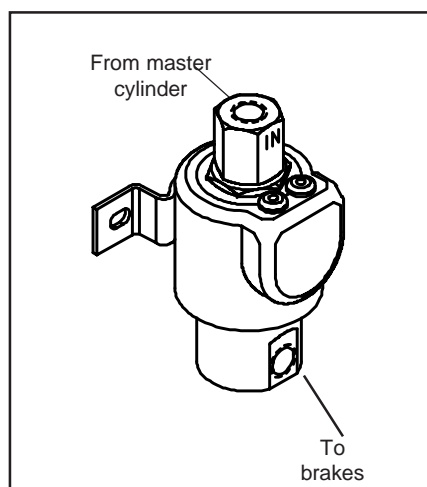
SYSTEM B Dual Master Cylinder



SYSTEM C Dual Master Cylinder



BRAKE AND THE LEFT REAR BRAKE ARE ON ONE CIRCUIT WITH THE LEFT FRONT BRAKE AND RIGHT REAR BRAKE ARE ON THE SECOND CIRCUIT. FOR THESE SYSTEMS, IT IS RECOMMENDED THAT TWO LAUNCH CONTROLS BE UTILIZED, ONE IN EACH SYSTEM. Illustrations are given for the hydraulic portion of six typical single and dual master cylinder brake systems. These represent the hydraulic system of most domestic and import vehicles. The electrical section of the

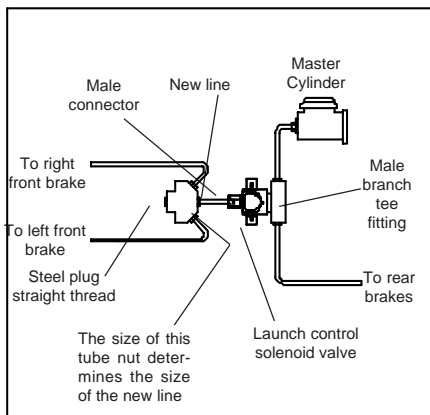
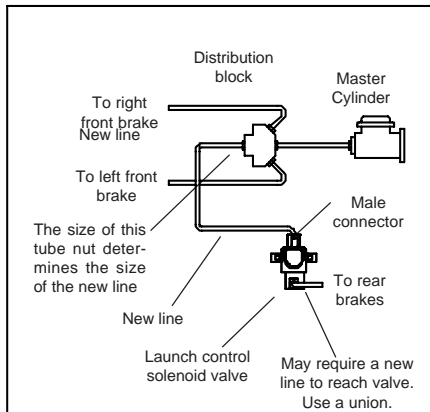
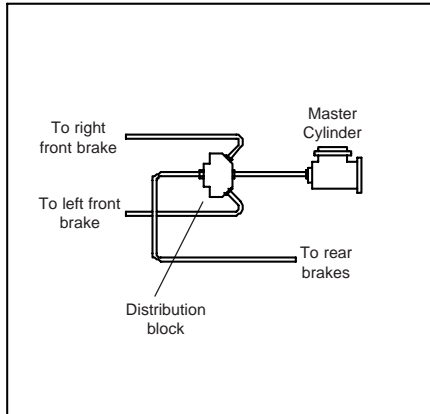


instructions is the same for all systems. Read the instructions thoroughly and identify the additional brake line and fittings that you will require. These lines and fittings are available for most popular vehicles. In order to determine the correct fittings required, a tube nut gauge is included with this kit. The locations to check the fittings are shown on the illustrations for the different types of brake systems.

INSTALLATION

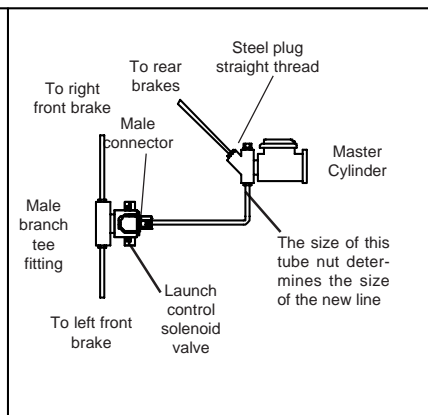
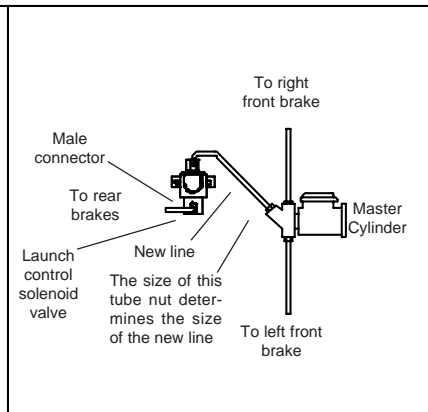
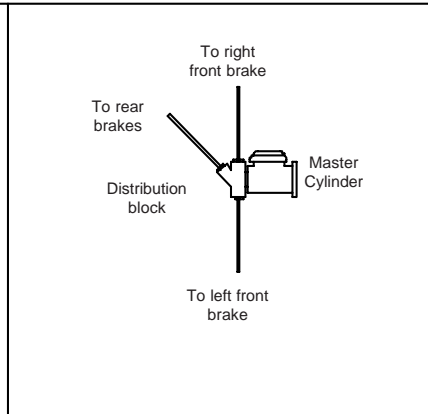
Step 1. Measure the stock tube nut at the position indicated on the

SYSTEM D Single Master Cylinder



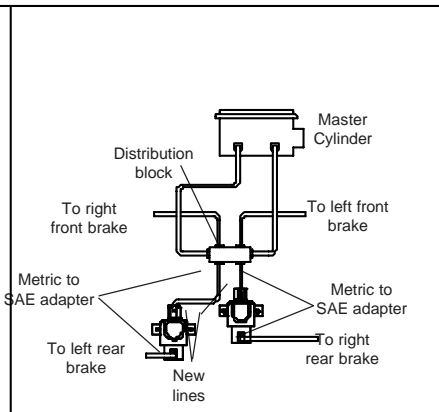
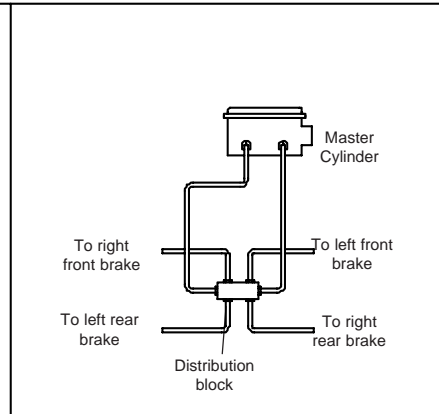
drawing that matches your brake system. The size of the tube nut measured across the flats with the gauge indicates the size of the female threads in the distribution block or the differential pressure switch block. You must use two female fittings for the launch control solenoid valve, one for the inlet and one for the outlet. These fittings will have a male 1/8" NPT tapered pipe thread on one side. If a male connector is called for on the diagram of your system, you want a male connector with the 1/8" NPT pipe thread on one end and a flare fitting

SYSTEM E Single Master Cylinder



with female threads the same size as the threads that was measured with the gauge. Where a male branch tee is called for on the diagram, you want a tee fitting with a 1/8" NPT male pipe thread on one end and flare fittings on the other two sides of the tee.
Step 2. Install the male connectors and/or male branch tees in the correct ports of the solenoid valve. In all cases the Master Cylinder connects to port labeled "IN" and the line to the brakes connects to the port marked "OUT". Mount the valve in a position that locates the connectors close to the

SYSTEM F Metric Diagonal Braking System

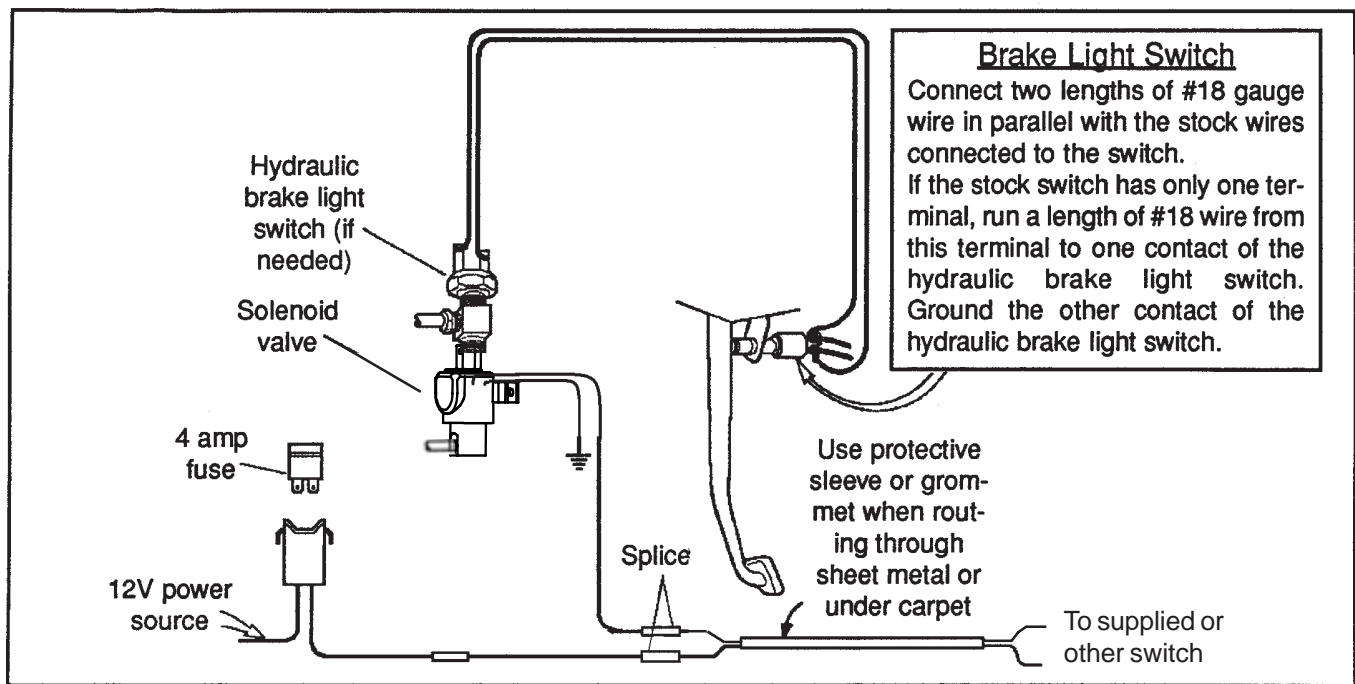


line to which they will be connected. The mounting position of the valve is not important. Using the holes in the bracket of the valve as a guide, drill two .185" (No. 13 drill) holes for mounting.

Step 3. Install a new length of steel brake line tubing in the specified location and reroute the existing brake lines. When bending brake line use a tube bender to avoid crushing the tubing. If an existing brake line must be lengthened, a flare union must be used. Where there is an unused port in the distribution block or pressure differential switch block use a steel plug designed for flare fittings. These plugs, like all of the tube nuts used in the system, have straight machine threads, not tapered pipe threads. Do not attempt to force a tapered pipe plug or fitting into a port with straight threads.

ELECTRICAL INSTALLATION

Make sure that all electrical connections are properly joined together by either soldering the connection or by using a crimp-on



insulated connector. All soldered connections should be wrapped with plastic electrical tape. All wires should be as short and direct as possible, but not short enough to put any tension on the wires. Electrical wires should not be under tension even when the engine and transmission move on the their mounts.

Step 1. Disconnect the negative battery cable.

Step 2. A momentary push button switch is supplied and may be mounted in any convenient position. You may want to use the B&M T-Handle with push button (#80659 chrome or #80658 brushed aluminum) or the push button knob (#46112). These knobs and T-Handles will fit most S.A.E. sizes of shifter stick threads.

Step 3. Run a length of 18 gauge wire from the end of the switch cable to the solenoid valve(s). At the solenoid valve(s) splice the newly installed wire to one lead of the solenoid(s), ground the other solenoid lead(s).

Step 4. Connect one end of the fuse holder to a switched ignition terminal. Run a length of 18 gauge wire from the other end of the fuse holder to the other wire of the switch cable. Splice

this wire at both ends.

Step 6. Connect the battery. The solenoid valve(s) should operate when the push button is depressed. If the fuse blows out there is a short circuit. Check all of the splices and connections to be sure they are insulated and that there are no short circuits.

Step 7. Apply the brakes hard, push and hold the launch control button and release the brakes. Have someone check to see if the brake lights remain on. If the lights go out it will be necessary to add an additional hydraulic brake light switch. The switch should be installed on the brake side of the solenoid valve, as shown in the illustration. The two terminals of the new brake light switch should be wired in parallel with the existing brake light switch.

OPERATION

Pressing and holding the launch control push button switch energizes the solenoid valve. When the brake pedal is pushed the hydraulic pressure applies all four brakes. When the brake pedal is released the pressure is retained the solenoid valve on the wheels that are controlled by the launch control, while the pressure

is released on the other wheels. When the push button is released the brakes that were held on by the launch control are released and the vehicle can accelerate. After the installation, but before driving the vehicle, check the brake system thoroughly for leaks and be sure that you have a solid brake pedal. Apply the launch control several times and be sure that the wheels that are supposed to be locked are locked and that the brakes are free when the launch control is released.

After the installation has been completed bleed the entire brake system thoroughly to eliminate all air in the system. Check all connections for leakage under pressure and be sure you have a hard brake pedal, not a soft pedal. Replace any brake fluid lost by the installation or by bleeding with heavy duty brake fluid marked DOT 3 or DOT 4.

For most automatic transmission shifters we recommend that you use the B&M T-Handle with push button (#80659 chrome or #80658 brushed aluminum) or the push button knob (#46112). These knobs and T-Handles will fit most sizes of stick threads. B&M also offers remote buttons with spiral cord #46003 and #46013.