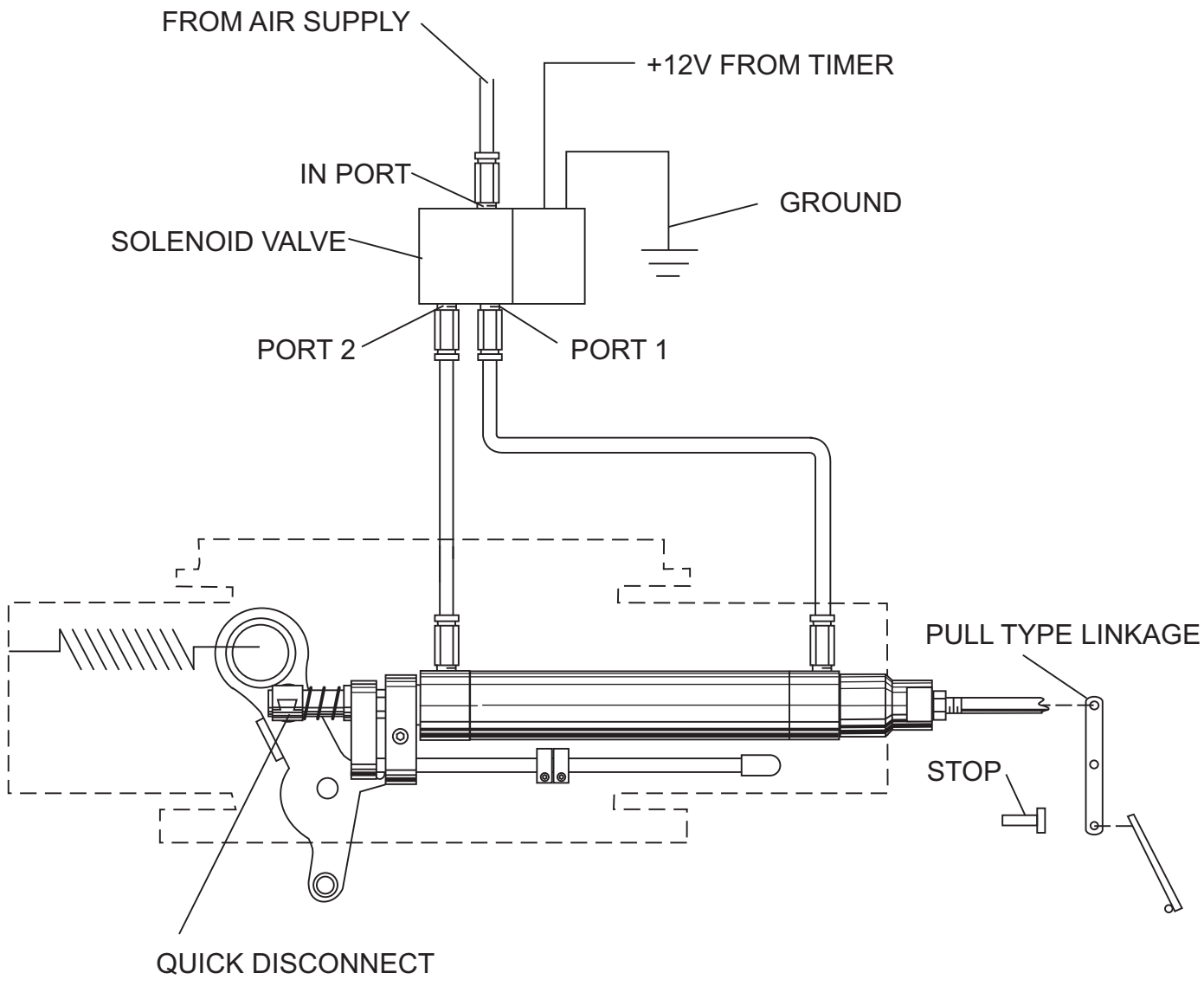
SHIFNOID THROTTLE STOP / STARTING LINE CONTROLLER DIAGRAM

SHIFNOID PART NO.CMW8900 / CMW8925



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Installation Instructions
“Callis Machine Works”
PROGRESSIVE THROTTLE CONTROLLER / STARTING LINE CONTROLLER
PART # CMW8900 2” Stroke
OR
CMW8925 2.5” Stroke

MOUNTING

Remove your throttle cable or rod from your carburetor and remove the rod end that is hooked to your carburetor. The base of the air cylinder has been tapped to accommodate included adaptors, either 10-32 or 1/4-28. It is necessary to reroute your cable or shorten your linkage rod length. Mount the air cylinder on your cable or linkage. Install the other end of the cylinder to your carburetor with the rod end supplied. Make sure your original return springs are still in place and are not binding on the cylinder. It is imperative to verify that all rods or linkage line up, and that there is no catching or binding anywhere in the system. When setting up your linkage, understand the cylinder is just an expanding and contracting part of your linkage. When installing the cylinder, keep in mind that when the cylinder is contracted you should have normal throttle control. Note: When your pedal is at idle your engine should be at idle. When you pedal is floored the car should be wide open. Consequently, when your pedal is floored and the cylinder is activated, it will lengthen your linkage, allowing the carburetor to drop toward idle. How far it drops toward idle is determined by the adjustment. Mount the electric air valve in a spot suitable to allow easy plumbing and access to the screws on one side of the valve. Use 6-32 screws through the two mounting holes, with washers between the mounting surface and the air valve. These washers MUST be used to prevent damage to the valve.

WIRING

The object of wiring your stop / controller is to supply voltage to the air valve when you want the solenoid to activate and place your carburetor in the STOP position and to not supply, or take away voltage when you want your system to return to WIDE open. There are two wires coming from the air valve. Wire one of these to a GOOD chassis ground. When used as a starting line controller, wire the other side to the wire that feeds voltage to your transbrake. When used as a throttle stop, wire the other side to your timers so that you are taking voltage away when you want to slow the car. **WARNING** - NEVER WIRE THIS SYSTEM TO YOUR TIMERS AND A TRANSMISSION BRAKE AT THE SAME TIME. DOING THIS COULD RESULT IN YOUR TRANSBRAKE BEING ACTIVATED BY YOUR TIMER. THIS WOULD CAUSE YOUR TRANSMISSION TO LOCK UP, CAUSING LOSS OF CONTROL.

PLUMBING

Connect your air lines as follows for standard pull type linkage.
PORT 2 - to forward / front port on cylinder.
PORT 4 - to rear / back port on cylinder.
PORT 1 - to bottle regulator.
PORT 3 - is an exhaust port.
If you have a push type linkage, reverse ports 2 and 4. Your CO2 supply should be set at 85 to 110 lbs. Never exceed 125 lbs.

USE

On the air valve are screws marked 1 and 2. Screw 1 controls the speed of the rod as it extends and screw 2 controls the speed at which the rod retracts. By using these screws you can regulate the speed at which the stop / controller activates and deactivates to help prevent shocking your drive train and thus possibly eliminating tire spin and inconsistencies in your run. Putting the screws flush with the body of the solenoid allows the flow to be wide open. As you close the screws you slow down the rate the air flows which slows down the rate the cylinder travels. Most of the adjustment is in the final two turns of the screws. The RPM main adjustment is done with the stainless rod and locking collars. This setting determines the overall travel. This is how you determine where you want your linkage, and engine speed to end up, when this controller is activated. You may test your system by pushing on the override button on the bottom of the air valve.