

ALCOHOL INJECTION CONTROLLER VC-100



100psi Boost Activated

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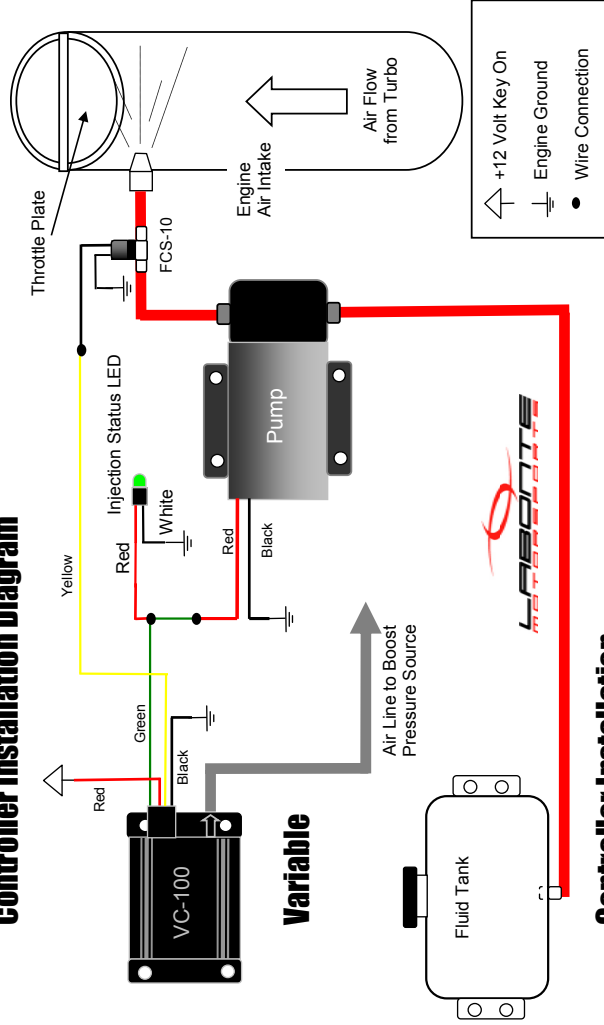
CAUTION

You must completely read though these instructions before installing and operating this product. Failure to due so can result in damage to this product and the vehicle.

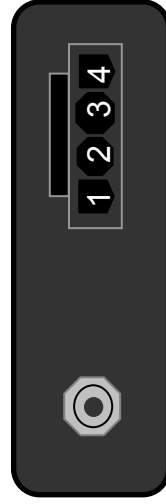
Introduction

The VC-100 from Labonte MotorSports is engineered to reliably operate Methanol Injection pumps on turbo gasoline or diesel engines. The controller will increase injection pressure over a user adjustable range and quickly shut off when boost pressure drops to prevent misfire. No special MAP or MAF is required. The small rugged design and easy setup makes the VC-100 the logical choice for automotive/offroad enthusiasts.

Controller Installation Diagram



Controller Installation



The figure above shows the back view of the variable controller. Attach controller to secure location with easy access in engine bay or passenger compartment. The VC series controllers are designed to withstand engine bay conditions, but should not be mounted directly to the engine block. Connect boost pressure hose from intake plenum to hose barb on back of connector.

Your controller has an internal self resetting fuse such that an external automotive type fuse is not required. In the case of a fault the internal fuse will attempt to reset after about 1 minute.

- Connect GREEN wire at position 3 to +12V key on source. When selecting a 12V key-on source, try to find a dedicated circuit with at least a 15 AMP fuse.
- Connect YELLOW wire at position 2 to either black wire of FCS-10, (Fluid Control Solenoid)
- Connect BLACK wire at position 1 to a good Ground location. Plug wire harness into back of controller.

CAUTION: Always insure to have a good electrical ground connection. Poor ground will result in erratic operation of controller.

Testing the Controller

The VC-100 has a built in test mode.

NOTE: Remove hose from nozzle holder and place in bucket or bottle to catch fluid during testing.

Turn Full Psi dial counter clockwise so dial arrow is at lowest setting (below 15psi)

Controller will activate pump at 50% capacity and solenoid will open Turn Full Psi dial clockwise to 15 psi or greater to stop test mode.

Inspect lines and fittings for secure connections and repair if needed.

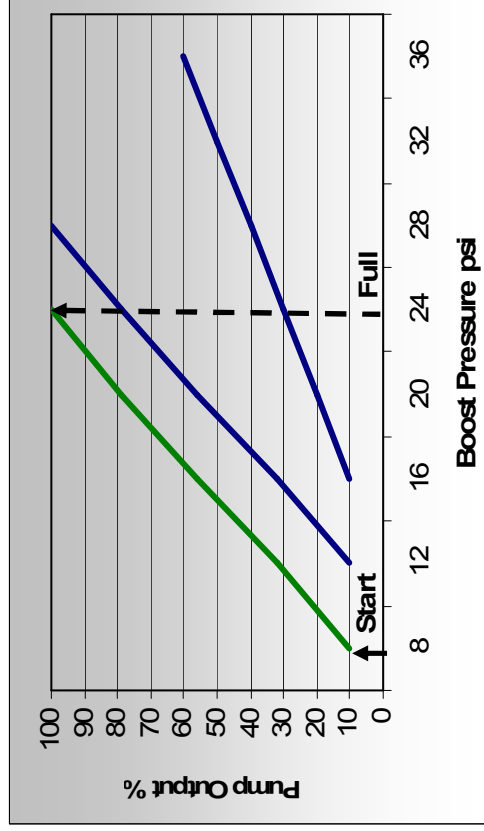
Variable Controller Tuning



- Use a tie wrap or hose clamp to keep rubber vacuum/boost line on gray hose barb in high boost applications (over 20psi).

- Adjust the "Start Psi" boost level first by turning dial clockwise to about one third of the engines max boost output. This sets the boost pressure required to activate the injection system.
- Next, adjust "Full Psi" to the engines max boost output.
- Note - over lapping the settings, where the Full dial is lower than Start, will result in max injection at the onset point.
- Adjust Full dial until a smooth power curve is felt with no misfiring.
- If engine stumbles or hesitates at onset of injection, injection is too soon. Increase Start Psi setting in small steps until a smooth power curve is felt.

Controller Operation Example



The above chart plots three different settings for the VC-100 water/methanol injection controller

For setting 1, green, the chart shows the Start dial at 8psi and the Full dial at 24psi. At 8psi of boost pressure the pump will operate at 10%. At 24psi of boost pressure, the pump will deliver 100% of injection pressure.

For boost pressure readings between the Start and Full settings, the controller will progressively adjust the pump pressure as shown on the graph. Controller will enable pump output at 100% for boost levels above the Full Psi setting.

Operating Characteristics

Characteristic	Min	Typ.	Max	Units
Operating Temperature	-20	----	105	deg C
Supply Voltage	9	13.8	16	Vdc
Boost Input	1	----	140	psi
Pump Driver	----	4	15	Amps
Solenoid Diver	.1	.5	6	Amps

Install Notes:

Pump Setting _____ (psi)

Nozzle Size _____ (ml/min)

Controller setting Start: _____

Full: _____

Misc:

Limited Warranty

Labonte MotorSports Warranties this product to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Labonte MotorSports will at its sole option repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation costs. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.

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Labonte MotorSports retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact Labonte MotorSports for shipping instructions and an RMA tracking number. The unit should be securely packed with the tracking number clearly written on the outside of the package. The unit should then be sent, freight charges paid, to Labonte MotorSports. A copy of the original sales receipt is required as the proof of purchase for warranty repairs.

Online Auction Purchases:

Products sold through online auctions are not eligible for rebates or other special offers from Labonte MotorSports. Online auction confirmations are not acceptable for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Labonte MotorSports will not replace missing components from any package purchased through an online auction.

The unit has no user-serviceable parts. Should you ever encounter a problem with your unit contact Labonte MotorSports for repairs.

The unit is fastened shut with screws. Any attempt to open the case to change or modify the unit in any way will void your warranty and may result in permanent damage to the equipment.

Disclaimer

Labonte MotorSports shall not be liable for any consequential or incidental damage, personal injury, or replacement of equipment and or property resulting from the misuse or improper installation of Labonte MotorSports products. Labonte MotorSports is not responsible for damage to your vehicle as a result of failed components or improper installation. Always check to make sure your system is operating correctly. Double check all the wiring and installation prior to starting.



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