

INJECTION FAIL-SAFE IFS-30C



Methanol Injection Monitoring System

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 **CAUTION**

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

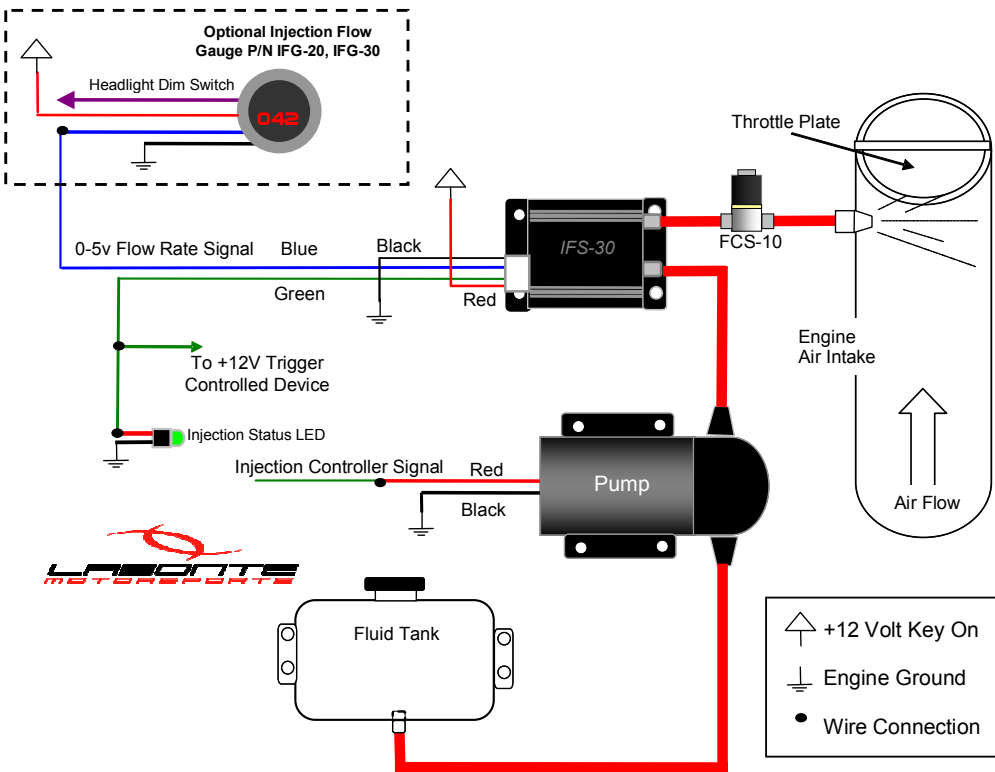
Introduction

The Injection Fail-Safe unit by Labonte MotorSports is designed to ensure reliability for highly modified performance vehicles using a Methanol Injection Systems.

The unit is designed to detect under flow and over flow conditions that can be caused by: Out of Fluid, Clogged Nozzle, Pump cavitations or fault, Leaks in the system. The IFS-30 will output a +12volt trigger signal when no faults are present and it is safe to operate the vehicle at higher boost or horse power levels.

The IFS-30 has an internal flow meter that can measure flow from 100ml/min up to 2.5L/min.

System Installation Diagram



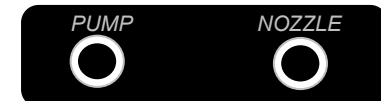
See Page 5 for Boost Bypass Kit install

Installation Mechanical

The Injection Fail-Safe unit can be installed in the engine bay of the vehicle. Do not mount the unit directly on the engine block or damage to the product may result.

Insert the high pressure line from the output of the pump into the quick connect PUMP fitting on the front of the IFS-30 unit. Pull on the hose after inserting to insure a tight connection. Insert a second high pressure hose into the quick connect Nozzle fitting on the front panel. The other end of this hose is to be connected to the injection nozzle.

If you have an Injection Flow Control Solenoid, it should be installed on the hose between the IFS-30 unit and the injection nozzle.



Electrical Connections

- Connect the BLACK wire from pin 1 to a secure ground or battery negative terminal.
- Connect BLUE wire from pin 2 to input of optional injection flow gauge (P/N IFG-20 or IFG-30) or 0-5volt input of an aftermarket data logger, or leave unconnected.
- Connect the GREEN wire from pin 3 to the device that will receive the 12 volt Trigger signal (i.e. BBK-20 solenoid) and to the RED wire of Injection Status LED (if installed). The other wire of LED goes to vehicle ground.
- Connect the RED wire from pin 4 to +12volt Key On power.



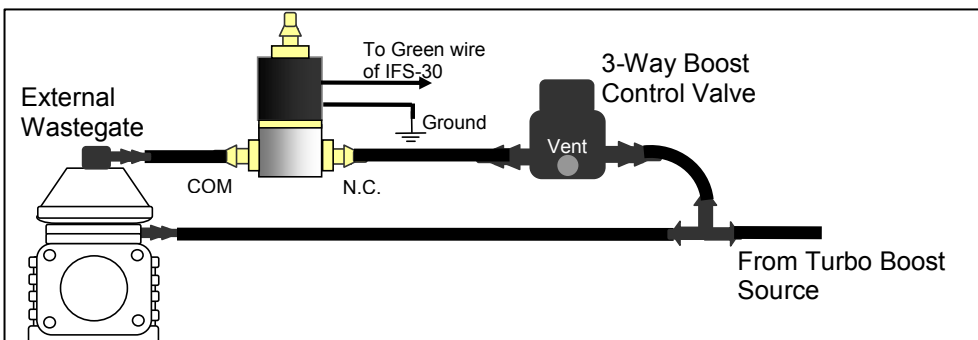
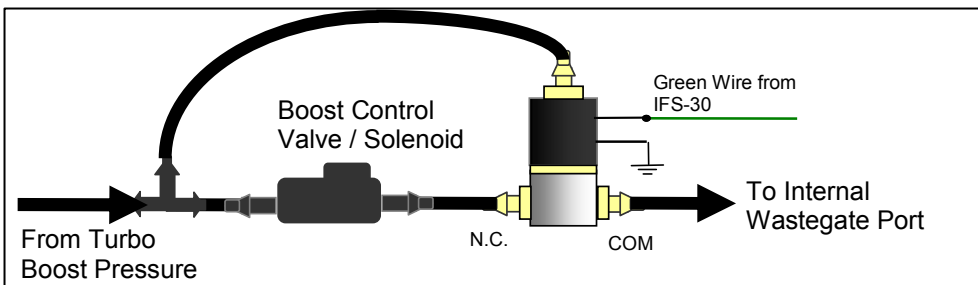
Operation

The Injection Fail-Safe unit monitors the fluid flow of the methanol injection system. When flow is above the unit's set point, the +12v trigger will go to a high state. When connected to the Green Injection Status LED, the LED will go on to indicate when meth injection is active and flowing correctly.

Boost Bypass Kit (BBK-20) Install

The BBK-20 solenoid is designed to keep the engine at wastegate pressure *until* meth flow is above the User Adjustable Trigger point. Once meth flow is detected, the IFS-30 +12V trigger will enable the BBK-20 solenoid. This will allow the installed boost controller to operate normally.

Note: Methanol Injection needs to start at a boost pressure at least 1-2psi below wastegate pressure. The IFS-30 will keep the turbo at wastegate pressure and will never detect flow if injection is set to start at a psi greater than wastegate.



Adjustable Trigger

The IFS-30 unit has a user adjustable Trigger that can be used to set the flow point at which the +12v signal is activated. The adjustment dial is located on the back of the IFS-30 unit next to the electrical connector. The recommended starting point is one third of total nozzle flow rating. For dual nozzles, add total max flow of both nozzles and divide by three.

Nozzle Size	M3	M4	M5	M6	M7	M8	M10	M12	M15
Max Flow (ml/min)	231	277	356	463	593	617	772	925	988
Trip Point	77	92	119	154	198	206	257	308	329

Flow Output Signal

The IFS-30 will output a 0-5volt signal that is proportional to the flow of fluid measured by the unit. The output signal is equal to 0.1 volts for every 100ml/min of fluid flow. Note this is a low current output and not intended to drive any external device such as a relay or solenoid.

Operating Characteristics

Characteristic	Min	Typ.	Max	Units
Operating Temperature	0	----	105	deg C
Supply Voltage	9	13.8	16	Vdc
Trigger Drive Current	----	1	1.5	Amps
Flow Range	100	----	2500	ml/min
Output Trigger	1.25	----	12.5	Vdc

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.

THIS WARRANTIES AND REMADIES CONTAINED HEREIN ARE EXCLUSIVE AN IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEAGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL LABONTE MOTORSPORTS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you.

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 REMADY 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 RMA 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 though 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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