



## Introduction

### Purpose

This document provides installation instructions for Gasboy® 9820 Pump Interface Kits, C07057 Single/Dual Pulse out or C07092 RS485 Communications.

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### Required Tools

The following tools are required for the installation of the kit:

- Flat-tip Screwdriver
- Cross-tip Screwdriver
- Standard Socket set

### Parts List

The following table lists the parts included in the Pump Interface Kits, C07057 and C07092:

Sr. No.	Description	Part Number	Quantity	
			C07057	C07092
1	PCA, Atlas 9800 Pulse Out Interface W/Totalizer	M06587A001	1	-
2	PCA, Atlas 9800 RS-485 Interface	M06725A001	-	1
3	Standoff, M/F #6-32 X 3/4" Lg	C08381	2	2
4	Washer, Lock #6 Ext. Tooth	G068843	2	2
5	Screw, Sems Ph Phil 6-32 X 3/8 Stl Zn Pl	Q12083-13	2	2
6	Cable Assy, Opt.Comm TB-9820RR	C06678	1	1
7	Screw, Mh Pnh Phi 8-32 X .625 Stl Zn Pl	Q11270-55	2	2
8	Washer, Lk #8 Reg Sst	K73278-33	2	2

## Related Documents

Document Number	Title	GOLD Library
MDE-4255	Gasboy's Warranty Policy Statement	Gasboy Atlas Pumps/Dispensers
MDE-4331	Atlas™ Fuel Systems Installation Manual	Gasboy Atlas Pumps/Dispensers
MDE-4334	Atlas Start-up/Service Manual	Gasboy Atlas Pumps/Dispensers
MDE-4567	9120K & 9820K Series AST Pumps Installation and Operation Manual	Gasboy Atlas Pumps/Dispensers
MDE-4652	Atlas 9800 Electronics Field Installation Instructions	Gasboy Atlas Pumps/Dispensers

## Abbreviations and Acronyms

Term	Description
DEF	Diesel Exhaust Fluid
NEC®	National Electrical Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PCB	Printed Circuit Board
STP	Submersible Turbine Pump
TAC	Technical Assistance Center

## Warranty

For information on warranty, refer to *MDE-4255 Gasboy's Warranty Policy Statement*. If you have any warranty-related questions, contact Gasboy's Warranty Department at its Greensboro location.

# Important Safety Information

**Notes:** 1) Save this Important Safety Information section in a readily accessible location.

2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.


## Preliminary Precautions


You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

## Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

**⚠ WARNING**

 The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

 You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

## Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gasboy equipment.

## Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

## Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the call a Gasboy Authorized Service Contractor or call the Gasboy Service Center at 1-800-444-5529. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

## Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 70; National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

## Replacement Parts

Use only genuine Gasboy replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gasboy replacement parts could create a safety hazard and violate local regulations.

## Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

## Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

### Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

### Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



**DANGER:** Alerts you to a hazard or unsafe practice which will result in death or serious injury.



**WARNING:** Alerts you to a hazard or unsafe practice that could result in death or serious injury.



**CAUTION with Alert symbol:** Designates a hazard or unsafe practice which may result in minor injury.

**CAUTION without Alert symbol:** Designates a hazard or unsafe practice which may result in property or equipment damage.

## Working With Fuels and Electrical Energy Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

## Important Safety Information

### No Open Fire



Open flames from matches, lighters, welding torches or other sources can ignite fuels and their vapors.

### No Sparks - No Smoking



Sparks from starting vehicles, starting or using power tools, burning cigarettes, cigars or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

### Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

### Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

### Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth

#### WARNING

In the event of inclement weather, including snow, ice, or flooding that makes driving conditions dangerous, please avoid servicing units. Always use available door stops to secure upper doors against unwanted/unexpected movement, especially during high winds. If necessary, reschedule service to avoid damage to the equipment. Weather may change unexpectedly; be aware of local weather conditions. During service, if conditions develop making service unsafe, close the unit(s) and proceed to a safe location.

#### WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

#### WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.



Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

## In an Emergency

### Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

#### WARNING



Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

#### WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

#### WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth and lungs. Keep airway open. Seek medical advice immediately.

#### WARNING



Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

#### WARNING



Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

#### WARNING

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

**IMPORTANT:** Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

### Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

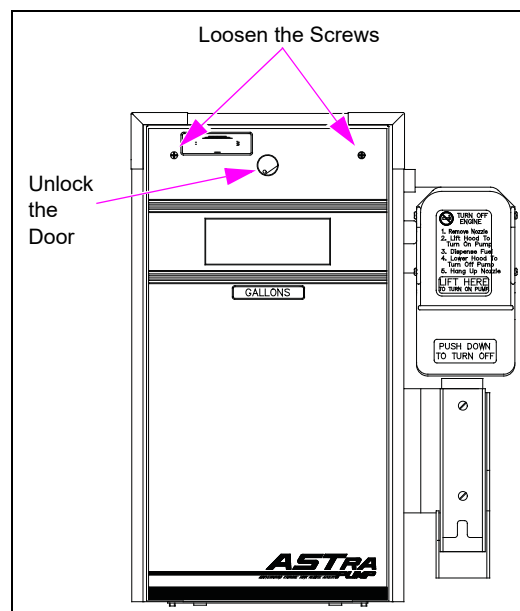
# Installation of the Gasboy 9820 Pump Interface Kit

Installing this kit involves DC wiring to the Fuel Management System. Refer to *MDE-4567 9120K & 9820K Series AST Pumps Installation and Operation Manual*, and your Fuel Management System Installation Manual before proceeding.

To install the Gasboy 9820 Pump Interface Kit, proceed as follows:

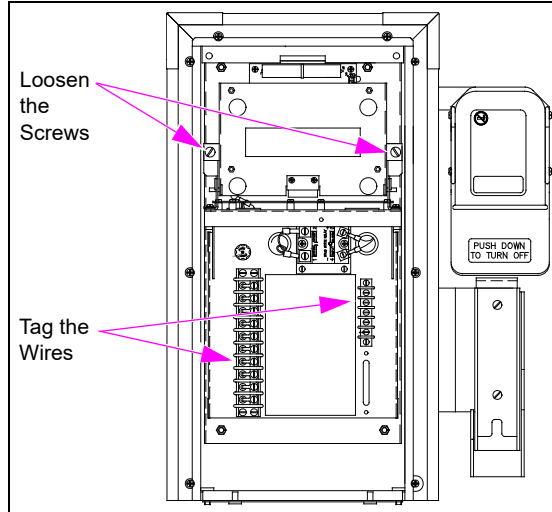
- 1 Turn off the circuit breakers that supply power to the MICRO and PUMP feeds.
- 2 Unlock the door and loosen the two screws. Tilt the top of the door out, then lift up to remove it.

**Figure 1: Removing the Door**



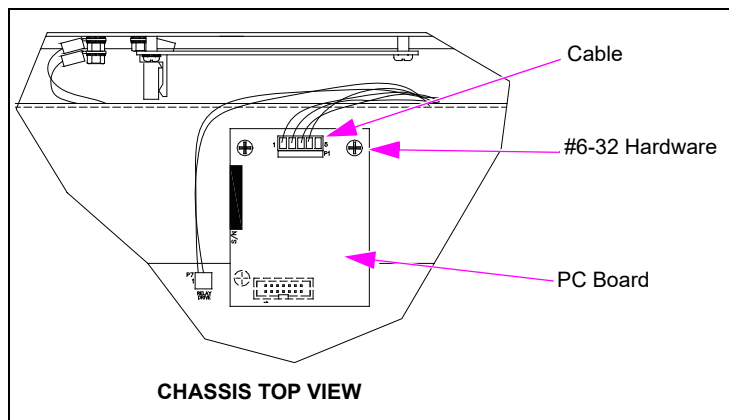
- 3 Loosen the two screws located on the left and right display support brackets and pivot the Display Assembly down.

**Figure 2: Relocating the Display Assembly**



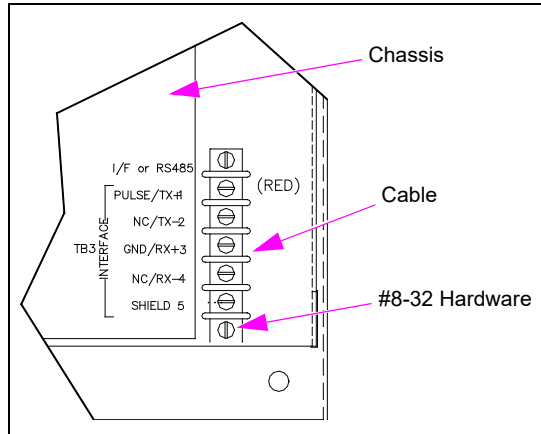
- 4 Note down the wiring or tag all the wires that are connected to the terminal blocks. Remove all the wires from the terminal blocks.
- 5 If the model 9820 Pump contains a battery-backed power supply, pull the connector off P1 on the power supply. After a few seconds, reconnect P1.
- 6 Remove the 9820 Chassis from the cabinet.
- 7 Install the PC Board using the #6-32 hardware.

**Figure 3: Installing the PC Board**



- 8 Feed the connector end of the cable into the round terminal bracket mounting hole at the bottom-right of the chassis. Position the terminal block with the red wire in position 1. Secure the terminal block using the #8-32 hardware.

**Figure 4: Installing the Terminal Block**



- 9 Carefully route the cable and install the connector on P1 of the new I/F PC Board.
- 10 Return the chassis to the cabinet.
- 11 Reconnect all the wiring.
- 12 Connect the new field wiring to the new terminal block. For more information refer to *MDE-4567 9120K & 9820K Series AST Pumps Installation and Operation Manual*.
- 13 Turn on the MICRO and FEED circuit breakers.

# Pulse-out I/F Board (M06587A001) Jumper Settings

## Jumpers JP1, JP2, and JP3

This board assembly can be configured for use in one of the following pump/dispenser configurations:

- Dual-channel, Single-hose Pulse-out I/F (see [Figure 5](#) on [page 9](#)).
- Single-channel, Dual/Single-hose Pulse-out I/F (Refer to *MDE-4567 9120K & 9820K Series AST Pumps Installation and Operation Manual* for the wiring diagram, for models equipped with the old CPU. For models with the new CPU, refer to *MDE-4652 Atlas 9800 Electronics Field Installation Instructions*).

The table below shows the jumper settings and terminal block positions to connect at the bottom of the register, based on the configurations.

Check JP1 - JP3 jumpers and change them, if necessary. The jumper settings must be changed only when power to the pump/dispenser is removed, to protect the circuit that they are connected to.

In the model 9820 Pump, the P3 Connector is not connected.

Terminal Block Position	Jumper Settings	
	Single-channel, Dual/Single-hose Pulse-out I/F (Default Setting)	Dual-channel, Single-hose Pulse-out I/F
	JP1 Position 1 JP2 Position 1 JP3 Open	JP1 Position 2 JP2 Position 2 JP3 Open
TB3-1	Pulse-out	Pulse-out A
TB3-2	No Connection	Pulse-out B
TB3-3	Return	Return A
TB3-4	No Connection	Return B

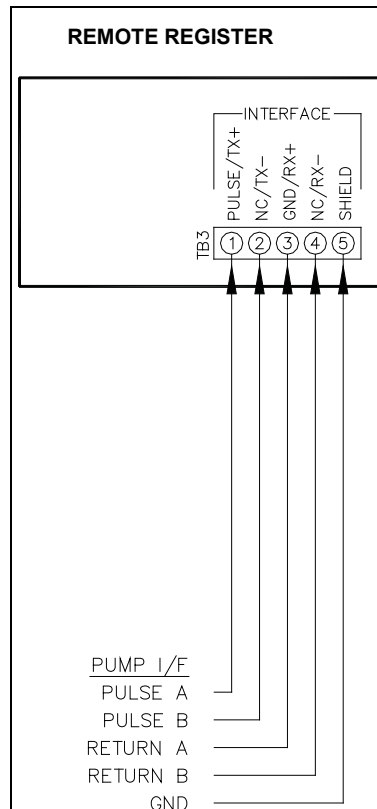


## Jumpers JP4 and JP5

When this board is used in a model 9820 Pump/Dispenser, jumpers JP4 and JP5 are set to the Q/A position.

Figure 5 illustrates the proper output for using a Pump I/F Board (M06587A001), jumpered to provide two isolated pulse outputs from a single pulser.

**Figure 5: Dual-channel, Single-hose Pulse-out I/F**



*Notes: 1) All wiring and conduit runs must conform with all building/fire codes, all Federal, State, and Local codes, National Electrical Code, (NFPA 70), NFPA 30, and Automotive and Marine Service Station Code (NFPA 30A) codes and regulations. Canadian users must also comply with the Canadian Electrical Code.*

*2) Refer to MDE-4567 9120K & 9820K Series AST Pumps Installation and Operation Manual or MDE-4652 Atlas 9800 Electronics Field Installation Instructions for complete installation instructions.*

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