



GASBOY

215A/215ATW/216A/216ATW

SATELLITE DISPENSERS

INSTALLATION/OPERATION

MANUAL

035286

REV. 03/07/03

INSTALLERS - IMPORTANT

In addition to installation information, this manual contains warnings, safeguards and procedures on the use and care of the satellite dispensers. Please leave this manual with the dispenser owner after the installation is complete.

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GASBOY INTERNATIONAL LLC LANSDALE, PA

IMPORTANT WARNINGS AND SAFEGUARDS

Gasoline and petroleum products are flammable. To avoid injury or death to persons or damage to equipment or property, follow these listed warnings and other warnings and precautions outlined in this manual when installing, using, or working around this equipment. Check with GASBOY Technical Services for compatibility of liquids with pump materials.

TURN OFF AND LOCK OUT ALL POWER TO PUMP BEFORE PERFORMING SERVICE, MAINTENANCE OR IN THE EVENT OF A FUEL SPILL.

All products must be installed by a qualified installer and used in conformance with all building, fire, and environmental codes and other safety requirements applicable to its installation and use, including, but not limited to, NFPA 30, NFPA 30A, NFPA 395 & NFPA 70. A qualified installer is familiar with fuel systems installations under the above stated building, fire, and environmental codes and other safety requirements for the particular type of installation.

This product is only part of a fuel dispensing system and additional equipment and accessories, such as, but not limited to, breakaway connectors, shear valves, pressure regulators, flow limiters, and other safety devices may be necessary to meet the applicable codes.

For maximum safety, we recommend that all employees be trained as to the location and procedure for turning off power to the entire system. Instructions regarding proper operation of the equipment along with the appropriate safety warnings should be posted in plain view at the fuel island.

Before performing service or maintenance (including changing of fuel filters or strainers) or in the event of a fuel spill, turn off and lock out all power to the system. In battery-powered pumps, disconnect power source. In submersible pump applications, turn off and lock out power at the master panel and close any impact valves to the submersible pump and any other dispensers which use that submersible pump. AC power can feed back into a shut-off dispenser when dispensers share a common submersible pump or starter relay. Also block islands so no vehicles can pull up to the dispenser when the dispenser is being worked on.

DO NOT use Teflon tape for any pipe threads in the product.

DO NOT use consumer pumps for pumping fuel or additives into aircraft.

DO NOT use commercial pumps for direct fueling of aircraft without filters and separators necessary to ensure product purity.

DO NOT use where sanitary design is required (for food products for human consumption) or with water-based liquids.

DO NOT smoke near the pump or when using the pump.

DO NOT use near open flame or electrical equipment which may ignite fumes.

DO NOT permit the dispensing of gasoline or other petroleum products into a vehicle with its motor running.

DO NOT permit the dispensing of gasoline or other petroleum products into unapproved containers or into approved containers in or on vehicles including trucks. All containers must be filled on the ground to prevent static discharge. Always use Approved and Listed hoses and nozzles with electric pumps and dispensers.

DO NOT block open the nozzle in any manner. Nozzles shall conform to UL and NFPA code requirements for attended or unattended service.

DO ensure that the pump is equipped with proper filters based on the product being dispensed and its intended use.

DO wear safety goggles and protective clothes when dispensing any liquid which may be potentially harmful or hazardous.

DO keep all parts of body and loose clothing clear of belts, pulleys, and other exposed moving parts at all times.

DO require washing and changing of clothes if fuel is spilled on a person or his/her clothing. Keep away from open flames, sparks, or people smoking.

DO provide a receptacle for catching product from pump/meter when servicing.

DO clean up product spills on the driveway. Turn off and lock out all power prior to cleanup.

DO insure pump is properly grounded.

DO insure hose is compatible with fluid being dispensed.

DO inspect hose, nozzle, and pump on a regular basis for wear, damage, or other conditions which may create a safety or environmental hazard.

DO make sure all pipe threads are properly cut and the inside reamed to remove burrs. Use UL classified gasoline-resisting compound on all joints of gasoline handling piping. Sealing compound must also be resistant to Gasohol (Ethanol and Methanol). Use gasoline-resistant pipe compound on male threads only; pipe compound used on female threads can be squeezed into the supply line where it can enter the product stream and become lodged in the pump or meter.

DO ensure that junction box covers are in place and properly tightened. Mating surfaces between the box and cover must be free of dirt, nicks, and scratches. All unused entries into the junction box must be properly plugged.

CONTENTS

IMPORTANT WARNINGS AND SAFEGUARDS

Section 1:	INTRODUCTION	
	Purpose	1-1
	General Description	1-1
Section 2:	INSTALLATION	
	Installation Precautions	2-1
	Foundation	2-2
	Dispenser	2-2
	Nozzle, Hose, and Accessories.....	2-2
	Supply Line	2-3
	215A/216A Dispensing Unit Dimensions	2-4
	215A/216A Front Load Dispensing Unit Dimensions	2-5
	215ATW/216ATW Twin Satellite Dispensing Unit Dimensions	2-6
	011975 Base Layout, 215A/216A	2-7
	011919 Base Layout, 215ATW/216ATW	2-8
Section 3:	WIRING	
	Wiring Precautions	3-1
	Grounding	3-2
	Wire Size	3-2
	Conduit	3-2
	Wiring Diagrams	3-3
	024214 Wiring Diagram, 9100A	3-3
	025257 Wiring Diagram, 9800A	3-4
	024319 Wiring Diagram, 9800A Front Load.....	3-6
	024320 Wiring Diagram, 9100A w/Front Load Satellite	3-8
Section 4:	START-UP	
	Completion Checklist	4-1
	Start-Up	4-1
Section 5:	OPERATING SEQUENCE	
Section 6:	PREVENTIVE MAINTENANCE	
	General	6-1
	Hints for Better Pump Performance	6-1
	Demand Competent Service	6-1
	Use Authorized Parts	6-1
	Operate With Reasonable Care	6-2
	Preventive Maintenance Check List	6-2
	Keep Water Out	6-2
	Preserve the Finish of Your Pumps	6-2

INTRODUCTION

PURPOSE

The *GASBOY 215A/215ATW/216A/216ATW Satellite Dispensing Units Installation/Operation Manual* is provided to assist the installer in installing and operating the units. This manual should be supplied to the electrician prior to the installation of conduit and wiring to ensure the satellite dispensing unit is installed properly. Faulty installations are the major cause of unit malfunctions. The unit **must** be installed and operated as described in this manual to ensure the reliability and proper operation of the satellite dispensing unit. In addition to installation information, this manual contains warnings, safeguards and procedures on the use and care of the satellite units. Be sure to leave this manual with the owner after the installation is complete.



Customers and installers having any questions pertaining to the installation should contact their GASBOY distributor.

GENERAL DESCRIPTION

The GASBOY satellite dispensing units are used in conjunction with GASBOY Listed Series 9100A and Series 9800A dispensers. This unit provides additional control of a remote dispensing line.

Features and specifications of the 215A/215ATW/216A/216ATW are:

- Hose hangers.
- Discharge elbows.
- A 12-foot Listed gasoline hose assembly.
- A working voltage of 115 VAC, 60 Hz. for domestic units or 230VAC, 50 Hz. or 60 Hz. for international use.
- Unions are provided at the inlet of all suction pumps and dispensers.
- The standard cabinet finish is top, sides, painted black while the front and back panels are painted white.
- The height of the cabinets is 45-1/2" (1156mm). The other dimensions may be found in Section 2 of this manual and on the single sheet base layout for each model.
- Available options and accessories for the satellite dispensing units include Listed automatic nozzles, high/low slowdown valves, special lengths of Listed hose, Listed dual swivels, front and back panels painted to the color specified by the customer, stainless steel panels and Listed emergency shutoff valves.

INSTALLATION

INSTALLATION PRECAUTIONS

All installations 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.

Plan your installation carefully. A dispensing unit cannot be expected to work satisfactorily unless the underground installation is correct. Dispensing troubles are frequently traced to faulty installation. Review the following list of installation **DO's** and **DON'T's** to avoid potential problems:

1. **DO** read the **WARNINGS** page at the front of this manual, preceding the Table of Contents. It contains important information regarding the safe use of your dispensing equipment.
2. **DO** install an emergency power cutoff. In addition to circuit breaker requirements of NFPA 70 and NFPA 30A, a single control which simultaneously removes AC power from all site dispensing equipment is recommended. This control must be readily accessible, clearly labeled, and in accordance with all local codes.

In a fuel management system application, the EMERGENCY STOP and STOP keys on the console and/or the optional EMERGENCY STOP button on the Island Card Reader do not remove AC power from equipment and under certain conditions, will not stop product flow.

In order to provide the highest level of safety to you, your employees, and customers, we recommend that all employees be trained as to the location and procedure for turning off power to the entire system.

3. **DO** have the satellite dispensing unit installed by a competent installer/electrician.
4. **DO** install breakaway coupling on discharge hose. If using a high hose retriever, install breakaway approximately 12" downstream of hose clamp on nozzle side of clamp.
5. **DO NOT** attempt to wire a pump/remote dispenser without first reviewing the appropriate wiring diagram and notes. This manual contains instructions for wiring mechanical and electronics units. **Using the mechanical wiring diagram for an electronic pump will cause CPU PCB damage to the electronic pump.**
6. **DO NOT** experiment with a pump if you are not sure the installation is correct.
7. **DO NOT** overload sub- or main breaker panels.
8. **DO NOT** install any underground piping without proper swing joints. (Always use shoulder nipples, never close nipples).
9. **DO NOT** cover any lines until they have been both air- and liquid-tested.
10. **DO NOT** back-fill the tank or supply line with cinders or ashes. (Back-fill with clean sand, crushed rock, or pea gravel).
11. **DO NOT** use black iron pipe or fittings for underground installations. (Use only new galvanized or fiberglass* pipe and fittings). *Install all fiberglass pipe and fittings according to manufacturer's specifications and requirements.

12. **DO NOT** use power line wiring of inadequate capacity. (Use gauge specified by the wiring diagram or wire chart provided in Section 4).
13. **DO NOT** use a circuit breaker of improper size. (See Section 4).
14. **DO NOT** install fill pipe to tank where it can be submerged with standing water.
15. **DO NOT** use the GASBOY fuel dispensing equipment to remove water ballast from the storage tank.
16. **DO NOT** use gaskets on covers of explosion-proof type boxes. The sealing compound found around wires at various locations within conduit is a requirement of the National Electrical Code and should not be disturbed. Ensure that the mating surfaces between the junction box and cover are free of dirt, debris, nicks and scratches. Tighten junction box covers before replacing panels.
17. **DO NOT** use knock-out boxes or flexible conduit for installing this unit. All power and lighting wires should be run in threaded, rigid, metal conduit. All threaded connections must be drawn up tight with five (5) threads minimum engagement. Only one opening in the AC junction box is provided with a plug at the factory. At completion of the installation, it is the installer's responsibility to ensure that any unused openings are plugged.

FOUNDATION

When constructing the island for the dispensing equipment, be sure to extend the island excavation beyond the depth of the frost line. Leave open an area from the inside edge of the unit's base as shown on the specific base layout. Unless required by local regulations, **do not** cement the pipes and conduits into the island. The open area within the base will provide access for future servicing of the fittings and conduit assemblies. Fill in the boxed-in section with dry sand to keep condensation in the satellite housing to a minimum.

Secure the dispensing unit to the island using anchor bolts through the two mounting holes, which are 12-3/16 inches (310mm) apart and are indicated on each base layout by an **X**. If the dispensing unit is not securely fastened to the island, supply line leaks at unions and pipe joints may occur. Use one of two types of bolts to anchor the satellite to the island. Use two (2) 1/2" x 5" (13mm x 125mm) machine bolts imbedded in the concrete, or, to meet minimum UL and API requirements for universal interchangeability of pumps, use two 1/2" x 3 1/2" (13mm x 90mm) lag screws with 2" (51mm) expansion shields.

DISPENSER

Refer to the installation/operation manuals supplied with the dispenser for the proper installation and operation of this unit.

- *Series 9100A Installation/Operation Manual, 035257*
- *Series 9800A Installation/Operation Manual, 035296*

NOZZLE, HOSE, AND ACCESSORIES

This unit is normally equipped for use with a UL-Listed interchangeable service station type nozzle. Units equipped with suffix N are equipped for use with a UL-Listed Richards Mark XIII nozzle. Only UL-Listed hose assemblies and accessories are to be used with this device. A Listed breakaway connector must be installed on all hose assemblies. On front-load twin satellites, each start lever corresponds with the hose outlet to its right.

SUPPLY LINE

The supply line for satellite dispensing units is connected to the satellite outlet of the dispenser.

Use new galvanized or fiberglass (see note) pipe, 1 1/2" (38.1mm) minimum diameter.

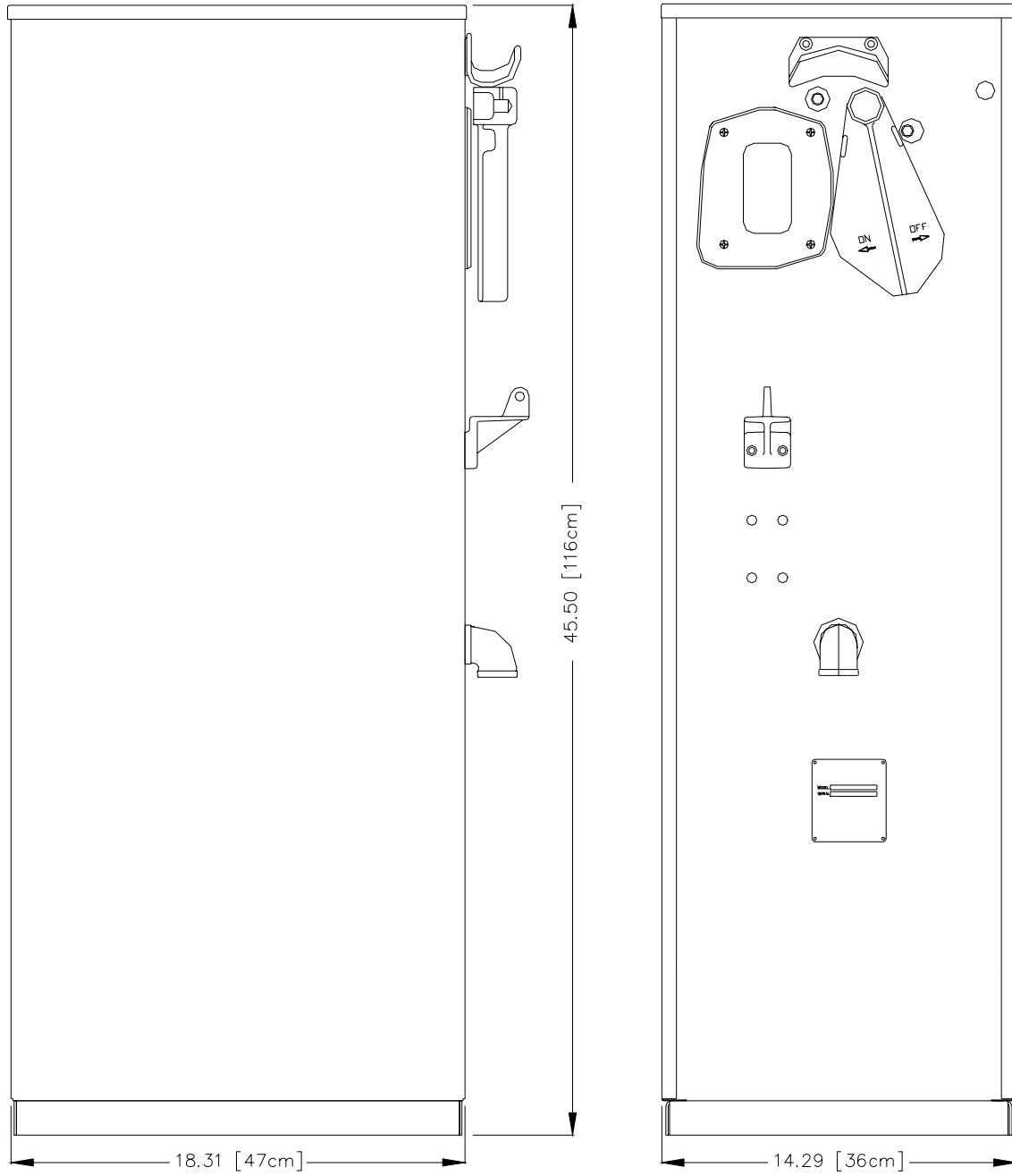
NOTE: Fiberglass pipe is to be installed according to manufacturer's specifications and requirements.

Be sure both the pipe and the tank are clean. Foreign matter entering the satellite can cause extensive damage. Obstructions in the supply line can create pump problems and reduced flow rate.

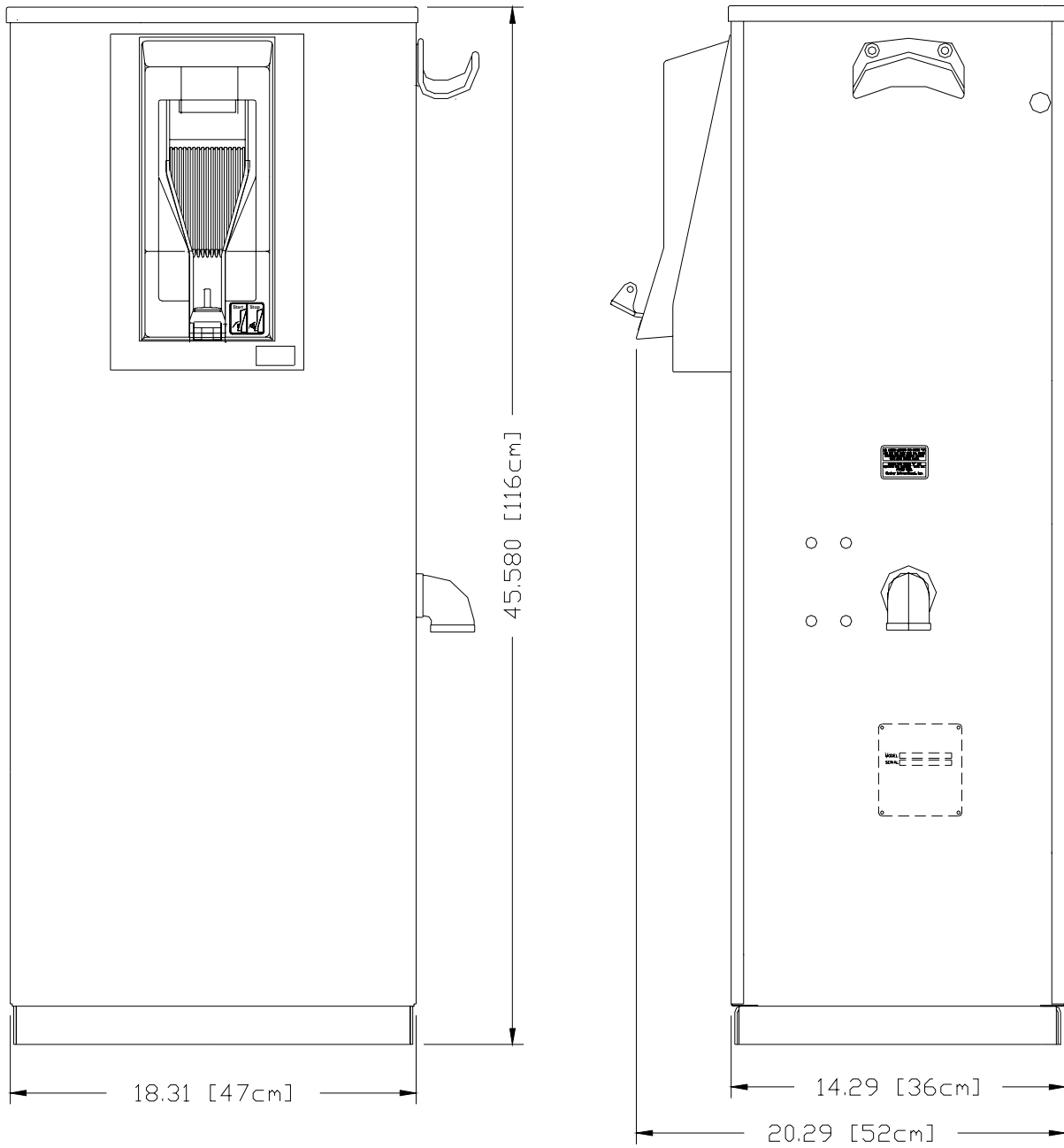
Make sure all pipe threads are properly cut and the inside reamed to remove burrs. Use Listed gasoline-resistant compound on all joints of gasoline handling piping. Sealing compound must also be resistant to Gasohol (Ethanol and Methanol). **Do not** use Teflon Pipe Sealing Tape. Use gasoline-resistant pipe compound on male threads only; pipe compound used on female threads can be squeezed into the supply line where it can enter the product stream and become lodged in the pump or meter. Install swing joints under the pump and at the satellite to avoid breaks in the supply line from settling or frost heave.

Upon completion of installation, all liquid-carrying lines must be checked for leaks.

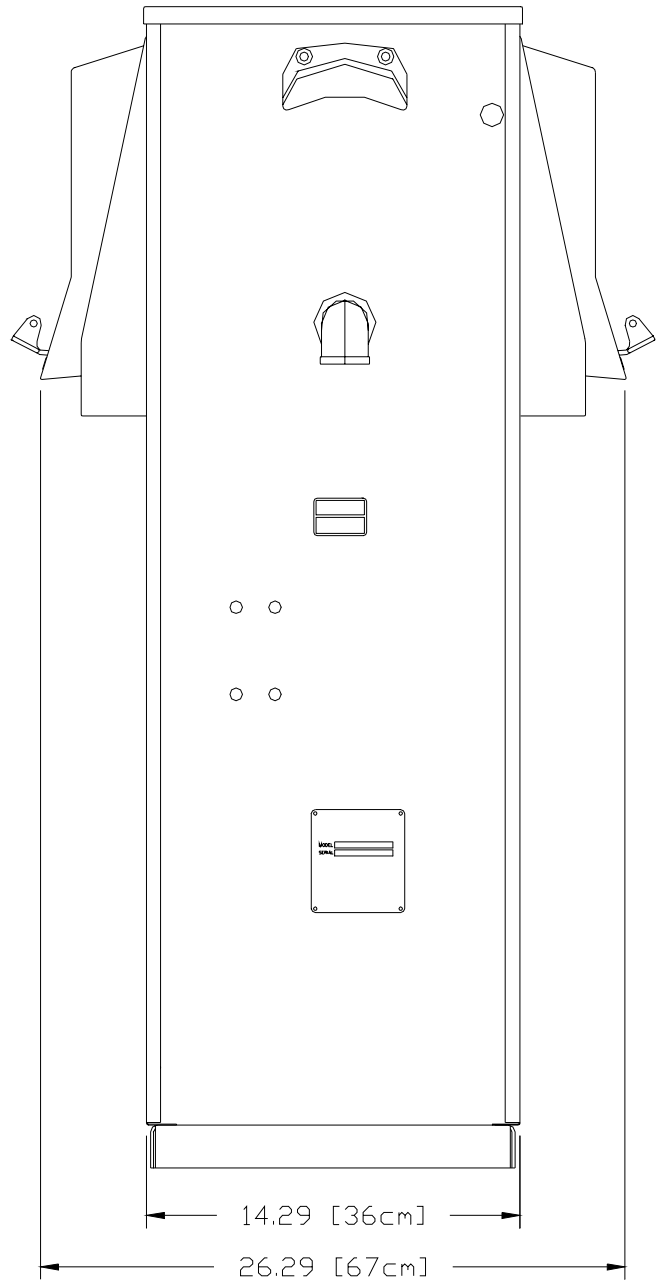
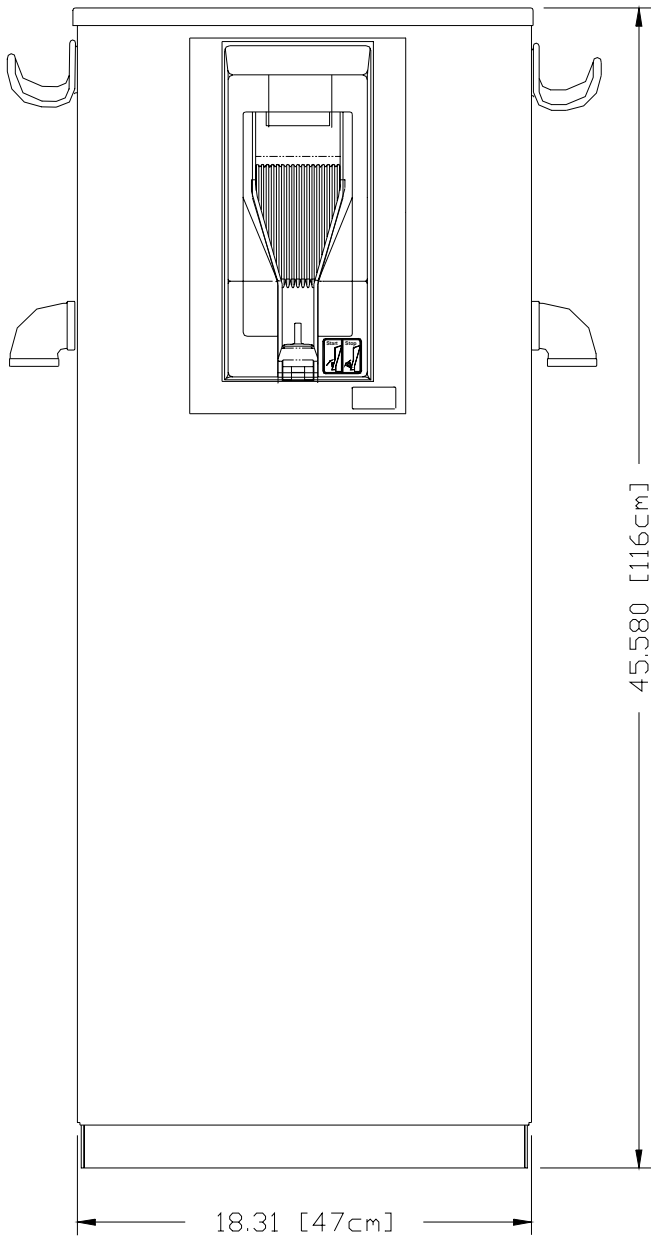
215A/216A SATELLITE DISPENSING UNIT DIMENSIONS



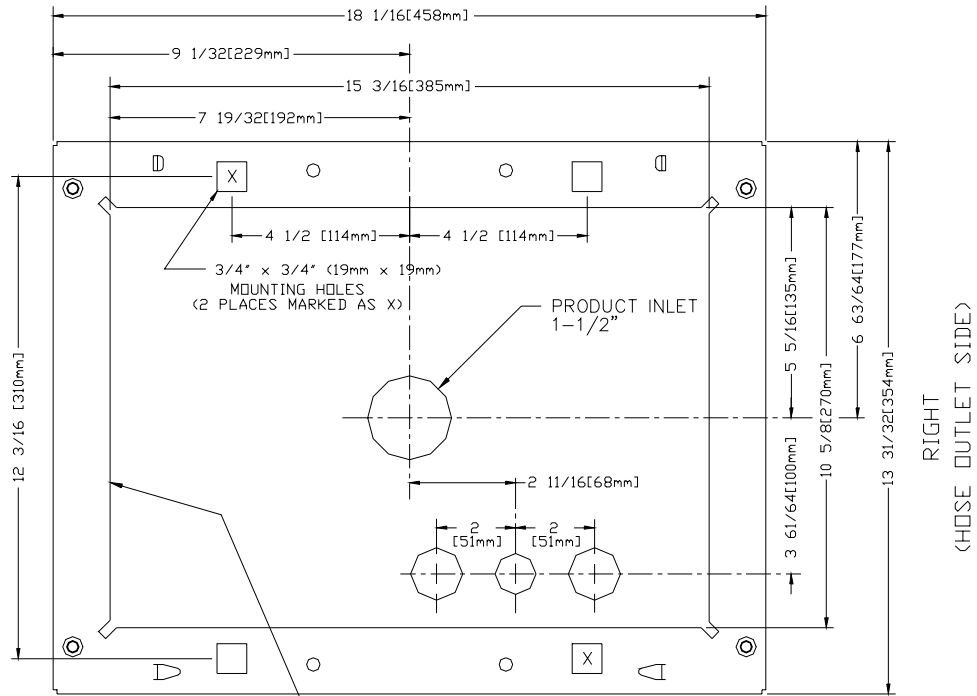
215A/216A FRONT LOAD SATELLITE DISPENSING UNIT DIMENSIONS



215ATW/216ATW TWIN SATELLITE DISPENSING UNIT DIMENSIONS

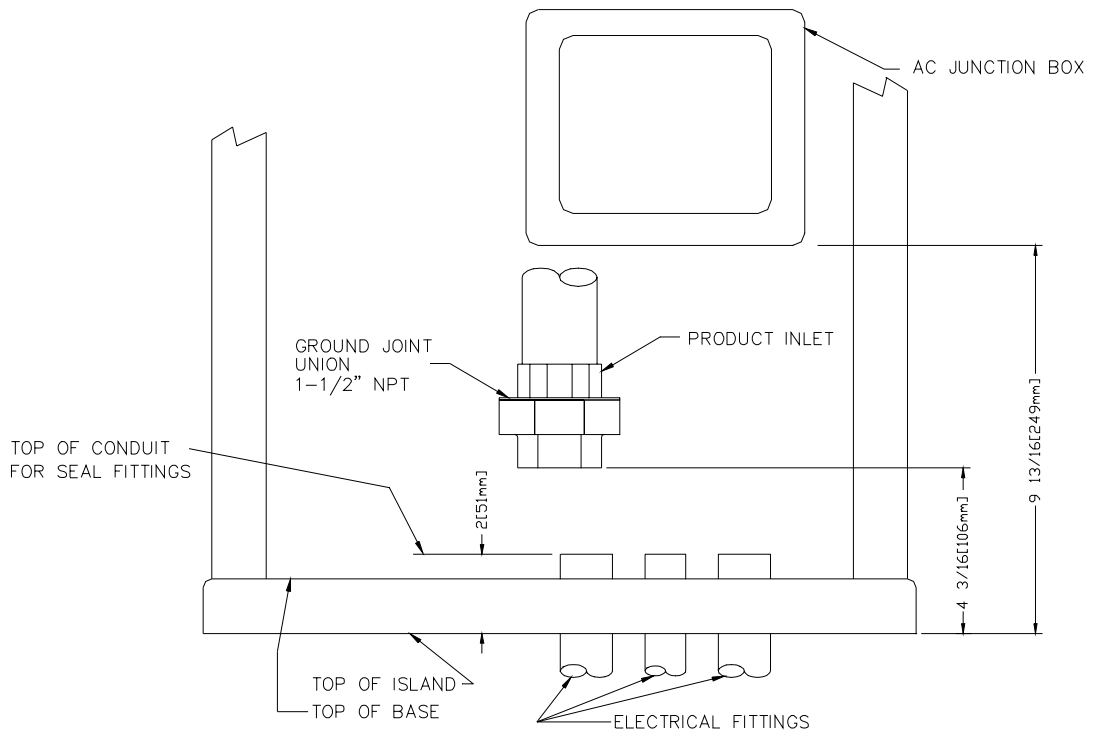


011975 BASE LAYOUT
Model 215A/216A

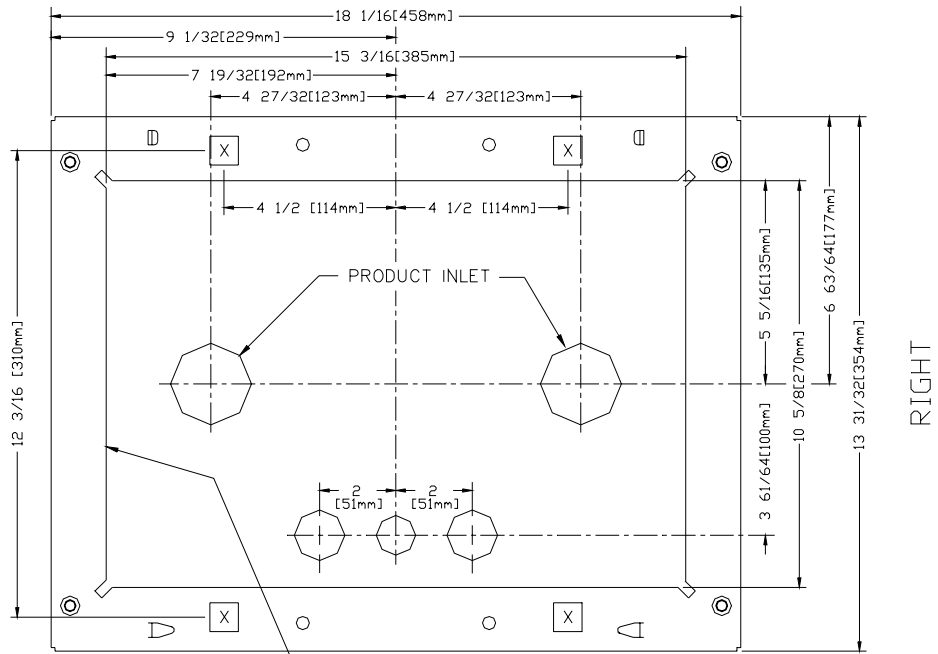


FOR EASE IN INSTALLATION OF PIPING
 WE DO NOT RECOMMEND CEMENTING
 FROM INSIDE EDGE OF PUMP BASE.

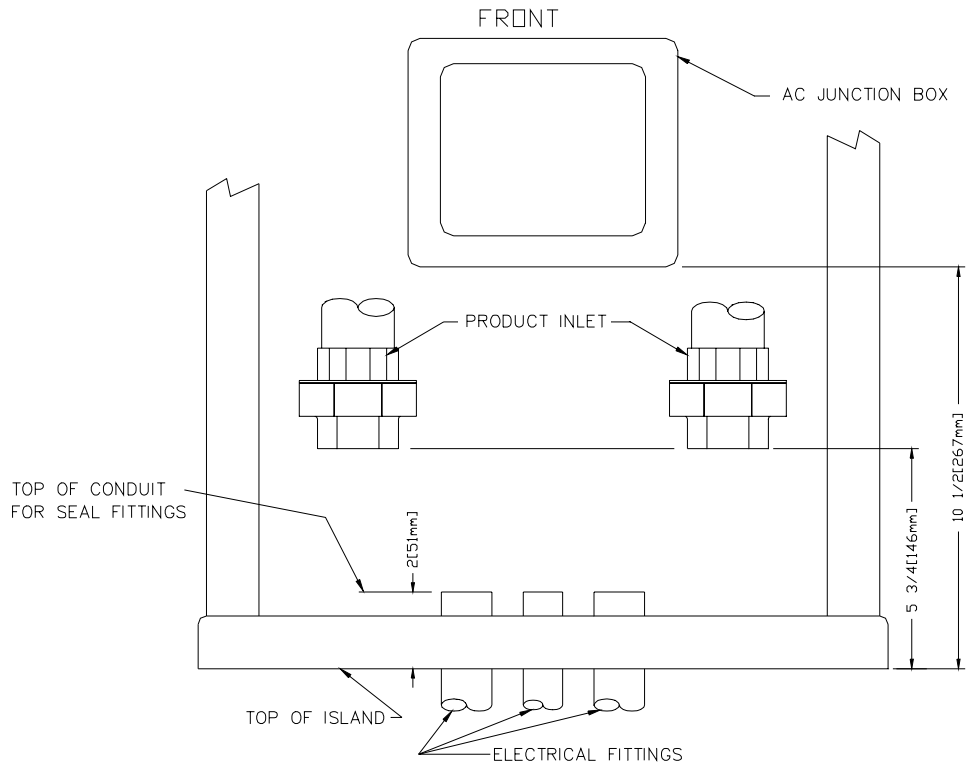
FRONT



011919 BASE LAYOUT
Model 215ATW/216ATW



FOR EASE IN INSTALLATION OF PIPING
 WE DO NOT RECOMMEND CEMENTING
 FROM INSIDE EDGE OF PUMP BASE.



Section 3

WIRING



Customers and installers having any questions pertaining to the installation should contact their GASBOY distributor.

WIRING PRECAUTIONS

The quality of the electrical installation is a major factor in maintaining proper safety levels and providing trouble-free operation of your GASBOY pump/dispenser. To assure a quality installation, follow these rules:

1. All wiring must be installed to 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. Use the proper wiring diagram. This manual contains instructions for wiring mechanical and electronic units. **Using the mechanical wiring diagram for an electronic pump will cause CPU PCB damage to the electronic pump.**
3. Use only threaded, rigid, metal conduit.
4. Use only UL-labeled insulated gasoline- and oil-resistant stranded copper wiring of the proper size.
5. Wire connections should be tightly spliced and secured with a wire nut; close off the open end of the wire nut with electrical tape.
6. The line to the motor should be on a separate circuit and installed on a 20 to 30 AMP breaker depending on the motor size and/or the voltage setting.
7. Install an emergency power cutoff. In addition to circuit breaker requirements of NFPA 70 and NFPA 30A, a single control which simultaneously removes AC power from all site dispensing equipment is recommended. This control must be readily accessible, clearly labeled, and in accordance with all local codes.

In a fuel management system application, the EMERGENCY STOP and STOP keys on the console and/or the optional EMERGENCY STOP button on the Island Card Reader do not remove AC power from equipment and under certain conditions, will not stop product flow.

In order to provide the highest level of safety to you, your employees, and customers, we recommend that all employees be trained as to the location and procedure for turning off power to the entire system.

WARNING:



To reduce the risk of electrical shock when servicing, turn off all power to the pump/dispenser. In submersible pump applications, turn off power to the submersible pump and any other dispensers which use that submersible pump. AC power can feed back into a shut-off dispenser when dispensers share a common submersible pump or starter relay.

8. Have the pump/dispenser installed by a competent installer/electrician.

GROUNDING

To ensure proper operation of the equipment and provide the necessary safety factors, this unit must be grounded. A ground wire (preferably green) must be connected between the unit's AC junction box ground lug and the main electrical service panel. One (1) earth ground connection is required per unit. The ground rod is to be a solid, corrosion-resistant conductor and must be installed at the main electrical panel in accordance with the National Electrical Code. It should be properly tied into the ground bus strip of the panel. We recommend the neutral and ground bus strips be bonded together (unless prohibited by local codes).

WIRE SIZE

The minimum AC wire size of the satellite should be 14 AWG.

CONDUIT

All wiring to the satellite dispensing unit must be installed in threaded, rigid, metal conduit. **PVC is not acceptable.**

All wiring and conduit runs must also conform with the National Electrical Code (NFPA 70) and the Automotive and Marine Service Station Code (NFPA 30A). All wiring and conduit runs must conform to local codes. Canadian users must also comply with the Canadian Electrical Code.

WIRING DIAGRAMS

The following pages contain wiring notes and wiring diagrams for both 9100A Series mechanical pumps and 9800A Series electronic pumps. Consult the appropriate wiring diagram for your pump/dispenser model and follow all notes. **Be sure to use the correct wiring diagram. Incorrect wiring of a 9800A Series unit will cause damage to the CPU PCB.**

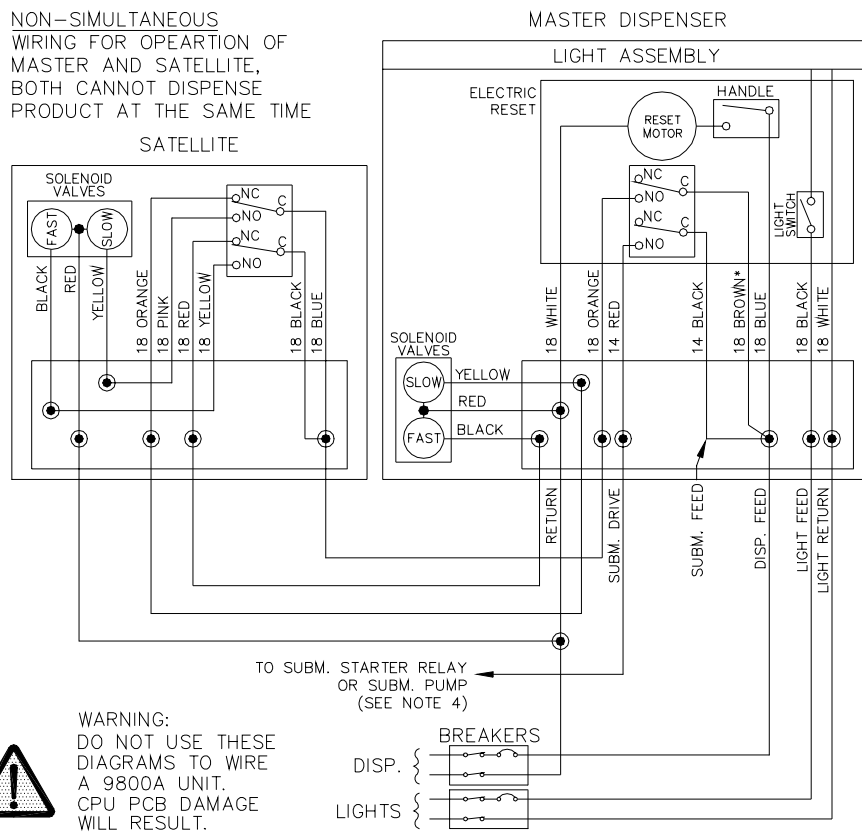
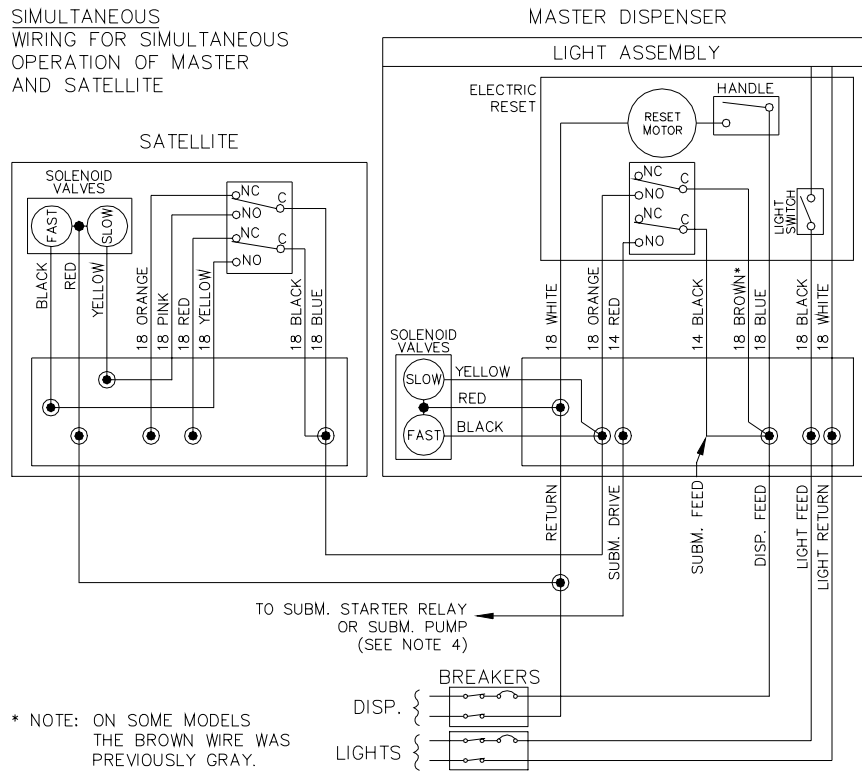
Wiring diagrams show simultaneous and non-simultaneous operation of master and satellite. Be sure to use the correct one for your application.

Notes For 024214, 9100A Wiring Diagram:

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.
2. See Weights and Measures Handbook 44 to determine which mode of satellite operation is relevant for your application. In many cases, the satellite must be wired so it cannot dispense product while the master dispenser is dispensing and vice versa. Use the correct wiring diagram according to your application.
3. This wiring diagram is intended only to show the connections between the satellite and the dispenser. See wiring diagram for master dispenser (according to model number) for applicable warnings and proper connection of all wires. Consult the *9100A Installation Manual* for full wiring information for the dispenser.
4. When wiring dispensers, submersible starter relays are always recommended when a submersible pump is used; however, the control circuit is capable of directly driving a submersible pump up to 1 HP at 115/230 VAC. Any pump over these ratings will require a submersible starter relay.

024214 WIRING DIAGRAM

Models **Satellite with Island-Oriented Nozzle (side) 215A/9152AX, 9153AX**
Satellite with Island-Oriented Nozzle (side) 216A/9153AX, 9140AX



024257 WIRING DIAGRAM

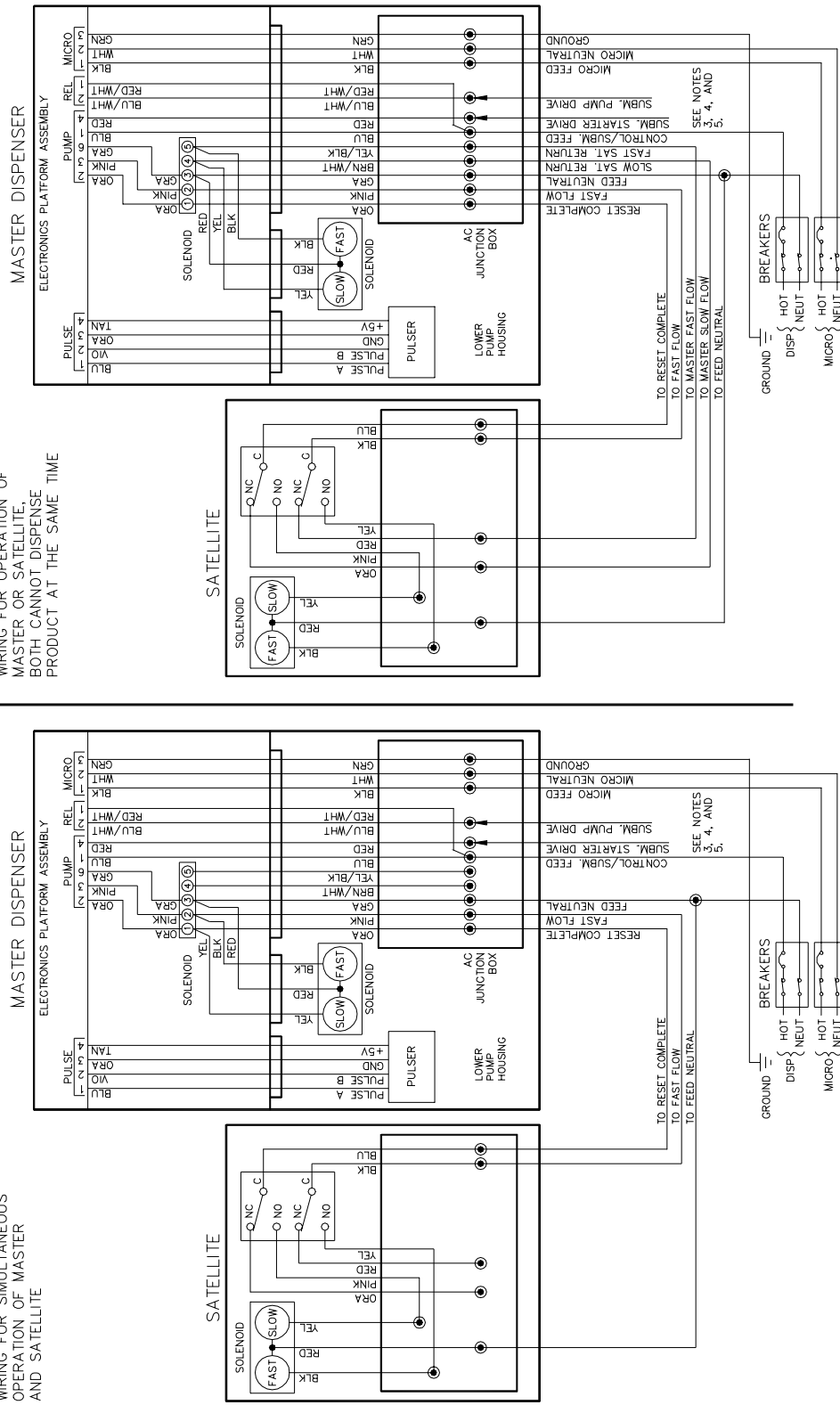
Models **Satellite 215A/9800A**
Satellite 216A/9800A

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. See Weights and Measures Handbook 44 to determine which mode of satellite operation is relevant for your application. In many cases, the satellite must be wired so it cannot dispense product while the master dispenser is dispensing and vice versa. Use the correct wiring diagram according to your application.
3. If using a GASBOY 9800A and satellite in an application where both master and satellite cannot dispense product at the same time, a minor change in the 9800A wiring must be made. Wire the dispenser to the satellite as shown in the wiring diagram labeled **Non-Simultaneous**.
4. If this unit is equipped for 230 VAC operation (international), wire as shown in the standard 115 VAC wiring layout diagram.
5. This wiring diagram is intended only to show the connections between the satellite and the dispenser. See wiring diagram for master dispenser (according to model number) for applicable warnings and proper connection of all wires. Consult the *9800A Installation Manual* for full wiring information for the dispenser.

SIMULTANEOUS
 WIRING FOR SIMULTANEOUS
 OPERATION OF MASTER
 AND SATELLITE

NON-SIMULTANEOUS
 WIRING FOR OPERATION OF
 MASTER OR SATELLITE,
 BOTH CANNOT DISPENSE
 PRODUCT AT THE SAME TIME



WARNING:
 FAILURE TO FOLLOW THE CORRECT WIRING DIAGRAM
 AND ALL THE LISTED NOTES AND PRECAUTIONS MAY
 RESULT IN DAMAGE TO THE CPU PCB.

024319 WIRING DIAGRAM

Models **Satellite 215A/9800A Front Load
Twin Satellite, 215ATW/9800A
Satellite 216A/9800A Front Load
Twin Satellite, 216ATW/9800A**

NOTES:

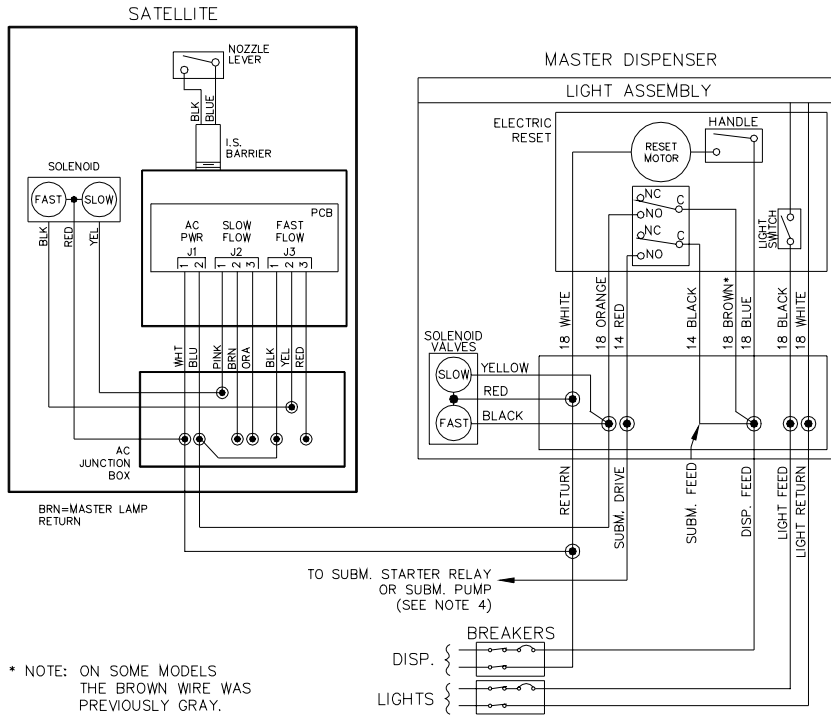
1. All wiring and conduit runs must conform with all building/fire codes, all Federal, State, and Local codes, National Electrical Code, (NFPA 70), NFPA 30, and Automotive and Marine Service Station Code (NFPA 30A) codes and regulations. Canadian users must also comply with the Canadian Electrical Code.
2. See Weights and Measures Handbook 44 to determine which mode of satellite operation is relevant for your application. In many cases, the satellite must be wired so it cannot dispense product while the master dispenser is dispensing and vice versa. Use the correct wiring diagram according to your application.
3. If using a GASBOY 9800A and satellite in an application where both master and satellite cannot dispense product at the same time, a minor change in the 9800A wiring must be made. Wire the dispenser to the satellite as shown in the wiring diagram labeled **Non-Simultaneous**.
4. If this unit is equipped for 230 VAC operation (international), wire as shown in the standard 115 VAC wiring layout diagram.
5. Twin satellite models 215ATW and 216ATW: Although the wiring from both master dispensers will enter into the same AC junction box, the wiring to the controls for each satellite hose outlet is to be supplied independently from its corresponding master dispenser.
6. This wiring diagram is intended only to show the connections between the satellite and the dispenser. See wiring diagram for master dispenser (according to model number) for applicable warnings and proper connection of all wires. Consult the *9800A Installation Manual* for full wiring information for the dispenser.

024320 WIRING DIAGRAM

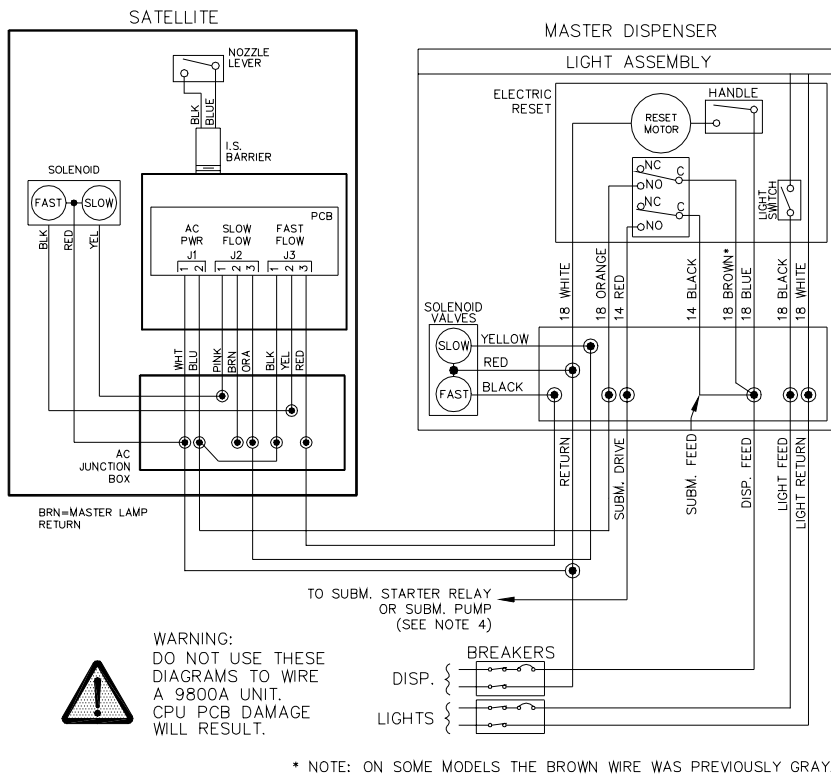
Models **Satellite w/Lane-Oriented, Front Load Nozzle 215AZ/9100A**
 Twin Satellite w/Lane-Oriented, Front Load Nozzle, 215AZTW/9100A
 Satellite w/Lane-Oriented, Front Load Nozzle 216AZ/9100A Front Load
 Twin Satellite w/Lane-Oriented, Front Load Nozzle, 216AZTW/9100A

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.
2. See Weights and Measures Handbook 44 to determine which mode of satellite operation is relevant for your application. In many cases, the satellite must be wired so it cannot dispense product while the master dispenser is dispensing and vice versa. Use the correct wiring diagram according to your application.
3. This wiring diagram is intended only to show the connections between the satellite and the dispenser. See wiring diagram for master dispenser (according to model number) for applicable warnings and proper connection of all wires. Consult the *9100A Installation Manual* for full wiring information for the dispenser.
4. When wiring dispensers, submersible starter relays are always recommended when a submersible pump is used; however, the control circuit is capable of directly driving a submersible pump up to 1 HP at 115/230 VAC. Any pump over these ratings will require a submersible starter relay.



SIMULTANEOUS WIRING FOR SIMULTANEOUS OPERATION OF MASTER AND SATELLITE



NON-SIMULTANEOUS WIRING FOR OPERATION OF MASTER AND SATELLITE, BOTH CANNOT DISPENSE PRODUCT AT THE SAME TIME

START-UP

COMPLETION CHECK LIST

The information below should be reviewed to help verify the proper installation of the satellite dispensing unit. **If the installation does not meet criteria listed, correct the problem before the start-up is performed.**

1. **If connected to a Series 9800A dispenser, to avoid damage to the CPU PCB board, verify that the RESET COMPLETE, FAST FLOW, SUBM. STARTER DRIVE, and SLOW and FAST SATELLITE RETURN wires are not shorted to conduit or chassis.**
2. The unit must be properly secured to the island.
3. All plumbing must be complete and tight. **All liquid-carrying lines must be checked for leaks.**
4. All conduit work must be complete. All junction box covers must be secured. Conduits should not be sealed until the wiring is verified through proper operation.
5. The unit must be properly grounded.
6. Before any testing begins, remove any water in the tank through a fill opening, using a suitable pump. Do not use the GASBOY pump or dispenser and submersible pump to remove water. Serious damage may occur.
7. A sufficient volume of fuel must be put in the tank to insure that the liquid level is high enough to allow the submersible pump to operate efficiently (dispensers).

START-UP

After successfully verifying the installation against the completion check list, the unit is ready for start-up. Follow the procedure listed below to perform an orderly start-up of the satellite dispensing unit.

1. Turn on the circuit breaker(s) for the various control lines to the dispenser to be tested.
2. Remove the nozzle for Side 1 from its holder and turn on the pump handle.
3. Dispense fuel. If the unit contains a slow/fast flow valve, verify that it opens. Check all plumbing for leaks at this time.
4. Turn the pump handle off. Open the nozzle. No fuel should be dispensed.
5. For twin models, repeat Step 1 to Step 4 for the other untested dispenser.

Section 5

OPERATING SEQUENCE

1. AC power (115 VAC/230 VAC Int'l) must be provided to the submersible feed and slow flow/reset motor feed. If a submersible starter relay is used, AC power (115 or 230 VAC) must be supplied to the input contacts of the submersible starter relay.
2. The user begins to dispense product.
3. At the master dispenser, the register displays the total volume. If an optional pulser kit is attached, it will be supplying pulses which may be recorded by an external monitoring system.
4. The fueling transaction continues to run until the user turns off the dispenser handle.

PREVENTIVE MAINTENANCE

GENERAL

GASBOY dispensers are designed and constructed to give many years of uninterrupted service. In fact, hundreds of operators report years of trouble-free operation with absolutely no service expense. Yet, certain parts of a dispenser are bound to wear, and GASBOY therefore recommends a periodic inspection, at least twice a year. If such a procedure is followed, any small adjustments that are necessary can be made before expensive, annoying breakdowns occur. The result of this sound approach is continuous, profitable service from all of your GASBOY equipment.

Procedures requiring disassembly of portions of the dispenser must be performed by qualified service personnel.

WARNING:

To reduce the risk of electrical shock when servicing, turn off all power to the dispenser. In submersible pump applications turn off power to the submersible pump and any other dispensers which use that submersible pump. AC power can feed back into a shut-off dispenser when dispensers share a common submersible pump or starter relay. Always turn off all power to the dispenser and submerged pumps at the master panel and close any impact valve before performing any maintenance or service to the dispenser, including the changing of any fuel filters or strainers. Also block islands so no vehicles can pull up to the dispenser when the dispenser is being worked on.

HINTS FOR BETTER PUMP PERFORMANCE

Demand Competent Service

If your pump should stop or fail to operate properly, don't depend upon the repair service of a general mechanic unless he is thoroughly familiar with the mechanism. Experience shows that the repair results will be much more satisfactory if you demand the service of a competent representative of the pump manufacturer. GASBOY has a distributor network which services fuel dispensing and management systems in every section of the country.

Use Authorized Parts

Should excessive wear, rust, or corrosion of parts cause inefficient operation, it is always best to replace them immediately; but if you want the best results and continuity of the Underwriters' Label on your pump, be sure they are new authorized service parts supplied by GASBOY. Every part of a pump or dispenser is carefully designed for a particular purpose. If it is replaced by an incorrect or substandard substitute, pump operation will be unsatisfactory. Always use new gaskets or seals when servicing or rebuilding Gasboy equipment; do not re-use old ones.

Operate with Reasonable Care

Like any machine, the pump or dispenser that is operated with reasonable care will last longer and give better service. Abuse should be avoided (such as dropping the nozzle on the ground, operating the unit with a dirty strainer, dragging the hose across the concrete island or driveway, running the pump with the nozzle closed for more than two minutes, etc.). The time and care given to your pumps will be returned to you in the form of dependable service.

PREVENTIVE MAINTENANCE CHECK LIST

Keep Water Out

Water tends to collect in underground and above ground storage tanks. This is due to moisture-laden air being drawn into the storage tank and condensing, or to defective fill openings that are not properly protected with watertight covers. Storage tanks should be checked after every fill-up for water and removed with a sump pump, to forestall serious damage to equipment. Water, sediment, and other foreign matter that accumulates in the tank can be drawn up into the pump or dispenser and cause failures.

Preserve the Finish of Your Pumps

Nearly all gasoline pumps are installed outdoors where their surfaces are subjected to the action of the weather. As a result, it is necessary to give the finish a reasonable amount of care if an attractive appearance is to be maintained.

The finish on GASBOY pump housings is a high-heat baked synthetic enamel, similar to that used on automobiles. The life of this finish can be lengthened several years if, at regular intervals, the painted surfaces are thoroughly cleaned with a high grade automobile polish and then protected with a coat of paste wax. Do not use abrasive cleaners or polish. Do not use high pressure spraying equipment.

In order to retain the unmarked finish on stainless steel, occasional cleaning is required. In corrosive atmospheres, such as coastal areas, a more frequent cleaning schedule is necessary. Under ordinary conditions, washing with detergent or soap and water, followed by a clean water rinse, is sufficient. If hard water is used, the surface should be wiped dry with a soft clean cloth to prevent the formation of water spots. Marks or spots, such as grease, oily fingerprints and smudges which resist soap and detergents, will have to be removed with a stronger cleaner. (**DO NOT** use ordinary steel wool as iron particles may adhere to the surface and cause corrosion.) Care should be taken in choosing a cleaner because any cleaning compounds or powders which contain abrasives can scratch a mill-rolled finish. Care must be exercised in their use to run in the direction of the polishing lines in the steel, never across them. After cleaning, an application of paste wax is recommended to protect the surface and prolong the interval between cleaning.

WARRANTY

General Statements:

Gasboy International LLC. warrants all new equipment manufactured by Gasboy against defective material and/or workmanship, for the warranty period specified below, when the equipment is installed in accordance with specifications prepared by Gasboy.

This warranty does not cover damage caused by accident, abuse, Acts of God, lack of surveillance of automatic recording systems, negligence, mis-application, faulty installation, improper or unauthorized maintenance, installation or use in violation of product manuals, instructions, or warnings. Under no circumstance shall Gasboy be liable for any indirect, special, or consequential damages, losses, or expenses to include, but not limited to, loss of product, loss of profits, litigation fees, or the use, or inability to use, our product for any for any purpose whatsoever.

Parts Only - During the warranty period, Gasboy will, at its option, repair or replace defective parts returned transportation prepaid to its factory.

On-Site Labor Included - Gasboy will also provide, within the Continental United States and during the warranty period, the services of an Authorized Service Representative (ASR) for on-site repair or replacement of defective parts.

Replacement Parts - Any system components that are not part of the original system order, including Island Card Readers, Pump Control Units, etc., are considered replacement parts.

Equipment	Term	Coverage
Commercial Pumps and Dispensers Full-Cabinet Consumer Pumps	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts and Labor.
Small Transfer Pumps, Meters, Pressure Regulators	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first. - Excepting the Model 2020 Hand Pump, which has a 90-day warranty from date of GASBOY International's invoice.	Parts Only.
Keytrol	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts and Labor.
Fuel Management Systems: - CFN/ Profit Point - Series 1000/Fleetkey - TopKAT - Fuel Point Readers (sold with new systems)	One year from date of start-up or 15 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first. - The basic warranty only applies to systems which have been started up by a Gasboy Authorized Service Representative (ASR).	Parts and Labor.
Additional Fuel Point Items: - Fuel Point Readers sold for retrofitting existing systems. - Fuel Point vehicle and dispenser components.	One year from date of start-up or 15 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts Only.
Encoders, Embossers, Modems, CRTs, and Logger Printers	Purchased with Fuel Management System (Encoders, Embossers only): 90 days from the date of start-up by a Gasboy ASR, or 180 days from date of Gasboy International's invoice, whichever occurs first. Purchased with Fuel Management System (Modems, CRTs, and Logger Printers only): Matches system warranty. Purchased Separately: 90 days from date of Gasboy International's invoice to the purchaser.	Purchased with System (Encoders, Embossers only): Parts only. Purchased with System (Modems, CRTs, Logger Printers only): Matches system warranty. Purchased Separately: Parts Only.
Air Diaphragm Pumps	Three years from date of purchase (for full warranty description, see Price List).	Parts Only.
Items not manufactured by Gasboy (ex. automatic nozzles, hoses, swivels, etc.)	Not warranted by Gasboy International (consult original manufacturer's warranty).	Not Applicable.
Replacement Parts	One year from date of Gasboy International's invoice to the purchaser.	Parts Only.

To the extent permitted by law, this warranty is made in lieu of all other warranties, expressed or implied, including warranties of freedom from patent infringement, or merchantability, or fitness for a particular purpose, or arising from a course of dealing or usage of trade. No one is authorized to vary the terms of the warranty nor may anyone make any warranty of representation, or assume any liability other than that herein stated, in connection with the sale described herein. The acceptance of any order by Gasboy International is expressly made subject to the purchaser's agreement to these conditions.



GASBOY INTERNATIONAL LLC

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