

Models 25-28

# Installation and Parts List

**MDE-4421F** 

#### **Computer Programs and Documentation**

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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 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.

#### Approvals

#### Gasboy, Greensboro, is an ISO 9001:2000 registered facility. Underwriters Laboratories (UL): New York City Fire Department (NYFD): California Air Resources Board (CARB): UL File# Products listed with UL NYFD C of A # Executive Order # Product Product All dispensers and self-contained pumping 4823 9100A, 9140A, 9152A, 9153A, G-70-52-AM Balance Vapor Recovery MH4314 9800A, 9840A, 9850A, 9852A, units G-70-150-AE VaporVac 9853A, 9140 Power operated Transfer Pump Models 25, MH6418 25C, 26, 27, 28, 72, 72S, 72SP, 72X, 73 and 4997 9822A, 9823A 1820 5046 91000, 91400, 91520, 91530, Hand operated Transfer Pump Models 1230 9800Q, 9840Q, 9852Q, 9853Q MH7404 Series, 1243 Series, 1520 and 1720 Series 8753K, 8853K, 9153K, 9853K 5087 MH10581 Key control unit, Model GKE-B Series (restricted to diesel and nonretail gasoline sales) Card reader terminals, Models 1000, 1000P 5091 8752K, 9152K Site controller, Model 2000S CFN Series 9122K, 9123K, 9822K, 9823K 5129 Data entry terminals, Model TPK-900 Series Fuel Point Reader System

#### National Conference of Weights and Measures (NCWM) - Certificate of Compliance (CoC):

Gasboy pumps and dispensers are evaluated by NCWM under the National Type Evaluation Program (NTEP). NCWM has issued the following CoC:

CoC#	Product	Model #	CoC#	Product	Model #	CoC#	Product	Model #
95-179	Dispenser	9100 Retail Series, 8700 Series, 9700 Series	91-019	Dispenser	9100 Commercial Series	05-002	Atlas	8700K, 8800K, 9100K, 9200K, 9800K
95-136	Dispenser	9800 Series	91-057	Controller	1000 Series FMS, 2000S-CFN Series			

#### Patents

Gasboy products are manufactured or sold under one or more of the following US patents:

#### Dispensers

5,257,720

#### Point of Sale/Back Office Equipment

D335,673

#### Additional US and foreign patents pending.

#### Trademarks

Non-registered trademarks	Registered trademarks	
Atlas <sup>TM</sup>	ASTRA®	
Consola <sup>TM</sup>	Fuel Point®	
Infinity <sup>TM</sup>	Gasboy®	Additional US
	Keytrol®	Other brand or
	Slimline®	trademarks or

and foreign trademarks pending.

r product names shown may be registered trademarks of their respective holders



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# **1 – Introduction**

### Purpose

This document provides instructions to install Gasboy Models 25-28 and the associated Parts List.

### **Intended Users**

This manual is intended for Gasboy<sup>®</sup>-certified installation technicians. Installation of the Gasboy system by anyone other than a factory certified technician will void customer warranty. For information on training, visit www.gasboy.com.

### **Required Reading**

The installer must read and understand all instructions, safety warnings and precautions before beginning. The installer must also be familiar with:

- This manual
- NFPA 30A, The Automotive and Marine Service Station Code
- NFPA 70, The National Electric Code
- Applicable Federal, State and Local codes and regulations

Failure to do so may adversely affect the safe use and operation of the equipment.

### **Related Documents**

Document Number	Title	GOLD Library
MDE-4443	Repair Kit 032890 for Series 25-26 Meters	Gasboy Consumer Pumps Series
MDE-4449	Seal Installation Kits 032867, 054024, 054026, and M08781K001 Installation Instructions	Gasboy Consumer Pumps Series
MDE-4452	Pump Models 25 and 26 Mounting Instructions	Gasboy Consumer Pumps Series
MDE-4485	Gasboy Pulser Kits X:1 EQ 25 XXX Installation	Gasboy Consumer Pumps Series

### **Abbreviations and Acronyms**

Description
Alternating Current
Gallons Per Minute
Island Card Reader
Liters Per Minute
National Electric Code
National Fire Protection Association
Rotation Per Minute
Pounds per Square Inch
Underwriters Laboratory

### 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.

### **Overview**

### **General Model Information**

The Model 25, 26, 27 and 28 are compact high-speed pumps designed for use by farmers, fleet operators, construction firms, and others who are fueling vehicles and other equipment with large tanks. The four models differ as follows:

- Model 25 is supplied with a cabinet, meter-register, hose and nozzle.
- Model 26 has no cabinet, and is supplied with a meter-register, hose and nozzle.
- Model 27 has no cabinet and no meter-register, and is supplied with only a hose and nozzle.
- Model 28 is the base pump, no meter-register, no hose, or nozzle.

### **Model Features**

The Model 25, 26, 27 and 28 pumps share the following features:

- Delivery rates up to 30 U.S. GPM, 24 Imperial GPM, 114 LPM. Maximum working pressure 50 PSI.
- Available for leaded or unleaded gasoline, diesel, or kerosene, as ordered.
- Direct-drive, vane-type pumping unit, self-priming, with piston bypass to prevent overload.
- Strainer and built-in check valve in base casting to maintain prime.
- 3/4 HP, 1725 RPM motor available standard in 115 VAC/230 VAC, 60 Hz or optional 230 VAC, 50 Hz.
- 4-wheel, push-button reset registers show delivery in US gallons, Imperial gallons, or liters, as ordered up to 999.9.
- Nutating disk meter with calibration screw accurately measures volume pumped.
- Hose, 1" diameter, 12' length. Additional lengths available.
- Self-closing manual nozzle, standard. Automatic nozzle available.
- Filter, optional.
- Dimensions: (Model 25) 15" H x 15" W x 11-1/2" D, approximate weight 132 lbs.

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# **2 – Important Safety Information**

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).

### 

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 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 Hazard Association (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.

### Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes. Alert Symbol



#### 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.

#### 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.

### \Lambda WARNING

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

#### MARNING

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

### 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 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



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

Seek medical advice immediately.

#### WARNING



Gasoline spilled in eyes may cause burns to eye tissue.

Irrigate eyes with water for approximately 15 minutes.

Seek medical advice immediately.

#### WARNING



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

**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.

### **Hazards and Actions**



### WARNING

Spilled fuels, accidents involving pumps/dispensers, or uncontrolled fuel flow create a serious hazard.

Fire or explosion may result, causing serious injury or death.

Follow established emergency procedures.

The following actions are recommended regarding these hazards:



Collision of a Vehicle with Unit

Fire at Island

Fuel Spill

- Do not go near a fuel spill or allow anyone else in the area.
- Use station EMERGENCY CUTOFF immediately. Turn off all system circuit breakers to the island(s).
- Do not use console E-STOP, ALL STOP and PUMP STOP to shut off power. These keys do not remove AC power and do not always stop product flow.
- Take precautions to avoid igniting fuel. Do not allow starting of vehicles in the area. Do not allow open flames, smoking or power tools in the area.
- Do not expose yourself to hazardous conditions such as fire, spilled fuel or exposed wiring.
- Call emergency numbers.

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# 3 – Installation

### **Installation Precautions**

All tanks and installations must conform with all building/fire codes, all Federal, State, and Local codes, National Electrical Code (NFPA 70), NFPA 30, Automotive and Marine Service Station Code (NFPA 30A) and NFPA 395 codes and regulations.

Plan your installation carefully. Dispensing troubles, which seem to be pump-related, are frequently traced to faulty installation. Review the following list of installation **DO**s and **DO NOT**s to avoid potential problems:

- **1 DO** read "Important Safety Information" on page 5. It contains important information regarding the safe use of your pumps.
- **2 DO** install an emergency power cutoff, if the pump is used for other than personal use. 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 order to provide the highest level of safety, we recommend that all employees be trained as to the location and procedure for turning off power to the dispensing equipment.
- **3 DO** use breakaway couplings on discharge hose. While not required for tanks under 1100 gallons, use is recommended for safety reasons.
- 4 **DO** have the pump installed by a competent installer/electrician.
- 5 DO NOT attempt to use a pump if you are not sure the installation is correct.
- 6 DO NOT overload sub- or main breaker panels.
- 7 **DO NOT** install any underground piping without proper swing joints (always use shoulder nipples, never close nipples).
- 8 DO NOT cover any lines until they have been both air and liquid-tested.
- **9 DO NOT** back-fill the tank or supply line with cinders or ashes (back-fill with clean sand, crushed rock, or pea gravel).
- 10 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.
- 11 DO NOT use power line wiring of inadequate capacity.

- 12 DO NOT use a circuit breaker of improper size.
- 13 DO NOT install fill pipe to tank where it can be submerged with standing water.
- **14 DO NOT** use the Gasboy fuel dispensing equipment to remove water ballast from the storage tank.
- **15 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. Tighten junction box covers before replacing panels.
- 16 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 threads minimum engagement. Only one opening in the AC junction box is provided. At completion of the installation, it is the installer's responsibility to ensure that any unused openings are plugged.

### Aboveground Tanks (Models 25-28)

For aboveground tanks, proceed as follows:

- 1 Remove pump base by taking out four screws and O-Ring.
- 2 Measure and cut suction pipe to allow 3" clearance between the bottom of the tank and end of the suction line. Tighten 1-1/4" suction pipe into the pump base using gasoline-resistant pipe compound on the male threads only.
- **3** Screw pump base with suction pipe attached into 2" tank flange, hand-tight. Use pipe compound on the male threads.
- 4 Lay the O-Ring, lubricated with a small amount of grease, into the groove in the pump base. The O-Ring should completely lie flat in the groove without distortion.
- 5 Set the pump on the base positioning the guiding lip of the inlet flange into the recess in the pump base. Orient the pump, aligning the screw holes so that a 90° tightening turn will position the dial face and nozzle hanger in the desired location. Tighten the four screws and turn the pump clockwise to the desired location.

Note: For Model 25 only: The top of the packing box contains a cloth bag with one nozzle hanger (Part Number 003673) and two screws (1/4 x 20 x 3/4 oval head). Align nozzle hanger with lower half of pump handle (pump handle in off position). Insert two screws and tighten.

6 Install conduit and wiring in accordance with national and local electric codes. Use a properly sized wire (see "Wire Size Chart" below). Ensure that the motor changeover switch is set to match voltage being supplied, 115 VAC or 230 VAC.

**250**' 6

10

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Feet	25'	<b>50</b> '	100'	1 <b>50</b> '
115 V	14	12	10	8

12

12

#### Wire Size Chart

14

230 V

### **Direct Mount Underground Tank (Models 25-28)**

For direct mount underground tank, proceed as follows:

1 Attach the 2" coupling (6) to the 2" pedestal pipe (7). Screw the 2" pedestal pipe (7) into the 2" tank flange (8) using pipe compound to exclude surface water from the tank.

Figure 3-1: Direct Mount Underground Tank (Models 25-28)



2 On the pump assembly remove the bottom flange (4) of the flanged union by removing the four cap screws (1).

### CAUTION

Do not lose the O-Ring (3) seal in the flange. Do not damage or scratch the bottom surface of the top flange (2) connected to the pump assembly. This is a sealing surface.

- 3 Remove the plug in the bottom flange and screw 1-1/4" suction pipe (5) into the bottom flange (4) using gasoline pipe compound on the male threads. Suction pipe should be long enough to allow a 3" clearance from the bottom of the tank (8 A).
- 4 Lower the suction pipe (5) through the 2" pedestal pipe (7) and screw the bottom flange (4) into the 2" coupling (6). Use pipe compound on the male threads of the bottom flange to exclude water. Orient the bottom flange to position the pump assembly as required.

5 Complete the installation by following the steps above and the test procedures later in this section.
 Note: Refer to "Mounting Hardware, Models 25-28" on page 44 for part numbers.

### Pedestal Mount (Models 25-28)

CAUTION

For Pedestal mount, proceed as follows:

1 On the pump assembly, remove the bottom flange (4) of the flanged union (2, 3, 4) by removing the four cap screws.

Do not lose the O-Ring (3) seal in the flange. Do not damage or scratch the bottom surface of the top flange (2) connected to the pump assembly. This is a sealing surface.

Figure 3-2: Pedestal Mount (Models 25-28)



- 2 To ensure that the suction line is tight, use gasoline resistant pipe compound on only male threads of all joints.
- 3 Remove plug in the bottom flange (4) and screw 1-1/4" suction pipe (9) into the bottom flange (4).

- 4 Install 2" coupling (6) on the bottom flange (4). Install 2" pedestal pipe (10) in the coupling.
- 5 Slide the pedestal base (12) up over the unthreaded end of the 2" pedestal pipe (10) (about 1/3 the way up) and tighten one or two set screws (11) enough to hold the pedestal in place.
- 6 Attach the top half of the union (14) to the 1-1/4" x 22-1/2" suction pipe (9). Attach the bottom half of the union to the 1-1/4" suction pipe from the tank (15). When constructing the island (18), provide clearance (16) around the suction pipe (15). Fill cavity with dry sand. Locate anchor bolts as shown.
- 7 Connect the assembled pedestal at the union (14). Orient the bottom flange (4) to the desired pump position and tighten the union. Slide the base (12) (Part Number 003055) down over the anchor bolts (17). Tighten the six set screws (11) (Part Number 053320) and the four anchor bolts (17).
- 8 Complete the installation by following the steps above listed under Aboveground Tanks. Also follow the test procedures later in this section. *Note: Refer to "Mounting Hardware, Models 25-28" on page 44 for part numbers.*

### Vacuum Breaker

A vacuum breaker tubing kit can be used with any 20 Series pump. The vacuum breaker is used to break a siphon should the nozzle drop below the fluid level in the tank while the pump is stuck in the open position. Gasboy requires that the vacuum breaker be tubed back to the tank using UL-listed fittings.

The illustration below shows two methods for installing tubing for the vacuum breaker. In all instances, the vacuum breaker must be tubed (using 1/4" tubing) to the vapor space at the top of the tank; if the tube is installed below the fluid level of the tank, the ability to break vacuum and prevent siphoning will be lost. Using the illustrated methods, the tube end may terminate into the annular vapor space between the 1" suction pipe and the 2" mounting pipe, or into an opening in the top of the tank. All components shown are provided when you order the kit Part Number 032797.





*Note: Tubing can be piped to any available opening on top of tank. Use reducer bushings as required.* 

Figure 3-4 on page 15 shows the vacuum breaker tubing for installations where the pump is installed below the fluid level of the tank. For these installations, the tubing must run directly to the tank top. The tubing must be horizontal or must slope either toward the pump or the tank so there are no traps or low spots. Traps or low spots can severely affect vacuum breaker performance. Tubing length should not exceed 8 feet.



Figure 3-4: Vacuum Breaker Tubing for Installations

*Note: Tubing can be piped to any available opening on top of tank. Use reducer bushings as required.* 

### **Testing the Vacuum Breaker**

To test the Vacuum Breaker, proceed as follows:

- 1 Charge tubing completely with fluid.
- 2 Turn on pump and run for several minutes to purge any air from the system.
- 3 Turn off the pump.
- **4** With nozzle at ground level and discharging into a container, open nozzle. A small quantity of fluid (several cups) should drain and then stop.

### **Test procedures**

To perform the test procedures, proceed as follows:

- 1 Before conducting any operational test, ensure that there is no water in the tank. Do not use the Gasboy pump to pump water.
- 2 After installing the pump, hose and nozzle, take the nozzle out of the boot. Turn the start handle to ON and make a short delivery to prime the pump.
- **3** Make several deliveries to determine if the pump is operating satisfactorily, including a rate of flow (GPM) and accuracy test. It is the responsibility of the installer to make any accuracy (calibration) adjustments required to match the installation conditions.
- 4 Take voltage readings for the pump on start up and while making a delivery. Any voltage reading less than 10% of the rated voltage can be considered a low voltage condition and should be corrected to insure satisfactory service.
- 5 After completing the above tests, check the strainer to determine that the product being withdrawn from the tank is clean.

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# 4 – Wiring

### **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. 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, Automotive and Marine Service Station Code (NFPA 30A), and NFPA 395 codes and regulations.
- 2 Use only threaded, rigid, metal conduit.
- **3** Use only UL-approved insulated gasoline and oil-resistant stranded copper wiring of the proper size.
- 4 Wire connections should be tightly spliced and secured with a wire nut; close off the open end of the wire nut with electrical tape.
- 5 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.
- 6 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 (ICR) 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.

### \land WARNING

To reduce the risk of electrical shock when servicing, turn off all power to the pump.

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

### **Wiring Diagrams**



Figure 4-1: 115 VAC Wiring - Models 25 to 28 (left) ; Model 25 with Pulser (right)





- 2 Wire connections should be tightly spliced and secured with a wire nut. Close off the end of the wire nut with electrical tape.
- 3 The Aux AC Control Lead is shipped capped from the factory. When used, it connects to a solenoid valve or fuel management system. Do not connect this wire without first checking the ON voltage of this line to ascertain compatibility with the equipment being connected.
- 4 Pulser wiring must be 18 AWG and installed in metal conduit separate from all AC wiring. It cannot share a common junction box, wiring trough or conduit with any AC wiring.
- 5 To connect a 115 VAC/230 VAC, 60 Hz motor to a 230 VAC power source, the internal motor switch needs to be changed from the LOW VOLTS setting to the HIGH VOLTS setting. You might have a plate with either a slot or two holes (one for the LOW volts setting and the other for the HIGH VOLTS setting).

#### Figure 4-3: Plate with Slot or Holes



If you have a plate with a slot, remove the screw, and move the plate all the way to the HIGH VOLTS end, and then, re-insert the screw. If you have a plate with two holes, remove the screw from the LOW setting hole, and move the plate so that the hole for the HIGH setting aligns with the screw hole. Then, re-insert the screw.

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# **5 – Operation**

### **General Recommendations**

- To obtain the maximum flow rate, use the #038380 manual-operation (OPW-311A) nozzle or the #038531 automatic (OPW-7H) shutoff nozzle. Avoid the use of nozzles with higher pressure drops than these recommended nozzles.
- Although the Series 25-28 will operate on 115 VAC current, we recommend its use with 230 VAC current for maximum efficiency and reduced chance of encountering a low voltage problem.
- Some diesel fuels congeal and clog the strainer during cold weather reducing the flow rates substantially. The standard pump is equipped with a 40 mesh strainer to prevent this. However, there is also a possibility that a pump equipped with a 100 mesh strainer for gasoline service is being used to dispense diesel fuel, in which case the strainer should be replaced.

### Instructions

- 1 If pump has a push-button register, press the RESET button to reset the register to zero.
- 2 Remove nozzle; turn pump handle to ON position.
- 3 Make delivery.
- 4 Turn pump handle to OFF position and hang up nozzle. Note: If extra length of hose is used, store hose out of the path of vehicles to prevent it from being run over.

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# **6** – Maintenance and Service

### **Servicing Components**

### Cover and Switch Assembly (Models 25-28)

The Model 25 cover assembly can be removed by taking out four screws, holding in the reset push button and lifting the cover off. Start lever can be removed by taking out the Allen set screw and turning the start lever counterclockwise to unscrew it from the weld nut attached to the inside of the frame. Unscrewing the start handle frees the switch cam. The switch pin is attached to the switch plate with a nut and lockwasher.

When reassembling these parts, ensure that the start handle is positioned so that the set screw threads into tapped hole in start handle shaft and the start handle covers the nozzle boot opening when the pump in ON to prevent hanging up the nozzle without turning the pump OFF. Ensure also that the switch plate hits against the stop pin in both the ON and OFF positions to prevent excessive force from being applied to the switch stem.

### **Check Valve and Strainer**

The built-in check valve and strainer are accessible under the strainer cover, secured with five screws. The strainer should be cleaned once a year or whenever there is a noticeable slowing of the rate of delivery. The check valve should be cleaned or replaced if loss of prime is indicated by delivery of small volume of product followed by air and then full flow. The standard pump is equipped with a 40 mesh strainer for diesel fuel. A 100 mesh strainer for gasoline service is available.

### **Bypass Valve**

Bypass valve is located under the cover secured with four screws. The bypass valve does not require maintenance. If for any reason the bypass is removed, ensure that you assemble it into the tube with the bullet-shaped nose toward the hole and slot at the end of the tube. The assembled valve and tube should be inserted into the pump with the hole end first. The bypass valve is preset to provide the most efficient operation and is not adjustable.

### **Rotor, Vanes and Shaft Seal**

Rotor, vanes and shaft seal can be removed by taking off pump cover held on with three screws. No maintenance is required for these parts. A shaft seal leak is evident if product drips from the drain slot shown in the parts drawing at the bottom of the inner pump head.

### **Replacing the Shaft Seal**

#### Figure 6-1: Exploded View of Seal Assembly and Pump



- Notes: 1) Before performing pump maintenance or service, refer to "Important Safety Information" on page 5.
  - 2) Refer to Figure 6-1 for part identification and the exploded view of the seal assembly and pump.

To replace the shaft seal, proceed as follows:

- 1 Remove the Pump Cover, Rotor, Vanes, and Shaft Key to expose the Mechanical Seal.
- 2 Remove the Retaining Ring and entire seal assembly from the shaft.
- 3 Separate the Pump Block from the Inner Pump Head and Motor assembly. Retain the O-Rings (049180) for reuse.
- 4 Remove the old Inner Pump Head. Note: Ensure that you do not scratch the shaft or motor counterbore surfaces when removing the old seal parts.
- 5 Carefully install the new Inner Pump Head (M08504B001PG8) on the motor shaft. Note: The Rubber Seal Boot (M08508B001), Seal Ring (048820), and Locator Pins (054535) are pre-installed in the Inner Pump Head.
- 6 Reassemble the Pump Block and Inner Pump Head using the new Locator Pins (054535). Reuse one of the O-Rings (049180) between the Inner Pump Head and Pump Body.
- 7 Refer to Figure 6-1 on page 24 to install the new seal parts and secure with Retaining Ring (K76238-65).
- 8 Reassemble the Rotor, Vanes, Shaft Key, and Pump Cover. Reuse one of the O-Rings (049180) between the Pump Body and Pump Cover.

### **Slinger Ring**

The slinger ring throws any product leaking past the seal away from the shaft and prevents product form entering into the motor. When replacing the rotor and the vanes, seat Woodruff keys firmly in key ways in the shaft, align rotor key ways with keys and assemble rotor to shaft with larger diameter opening toward seal. Insert vanes in rotor so that beveled edge of vane matches contour of rotor. Ensure that the O-Ring lies flat in groove of pump block; use a new O-Ring if the existing ring is cut, damaged or swollen.

### **Bearings**

If bearing in pump cover is worn or damaged replace cover; slide shaft into pump cover bearing and tighten in position with three screws.

### Calibration

- Notes: 1) This meter was redesigned causing the calibration procedure to be different depending on the age of your meter. Meters made after October 4, 1995 are referred to as new style meters; meters made before that date are referred to as old style.
  - 2) This meter is for consumer use only and not for re-sale. It is not sealable by Weights and Measures.

All Gasboy meters are adjusted for accurate measure for the fuel specified within + .05 gallons at the factory. However, since the conditions of the installation can affect meter accuracy, it is the responsibility of the installer to check the meter for accuracy and make any needed adjustments.

### **IMPORTANT INFORMATION**

To calibrate the meter accurately for use with both gasoline and diesel, you must change the internal cluster gear for US gallons and the drive gear for liters. The required gear is shipped with the pump in a labeled envelope.

*Note: The pump strainer should also be changed to match the product dispensed.* 

Choose the flow rate at which the meter will be used most often for the zero calibration point. For example, if the meter is being used with an automatic nozzle, calibrate with the nozzle set on the middle or top notch position, whichever is used most frequently.

Use a certified five-gallon measure with a sight glass and scale showing cubic inches over or under an exact five gallons. Fill and drain the test measure to completely wet the interior surfaces. Reset the register to zero and deliver an exact measured five gallons into the test measure at the selected flow. Read the level of the liquid in the sight glass on the scale in + cubic inches.

Remove cap screw (old style only), exposing the slotted head calibration screw. Use a narrow blade screw driver to turn the calibration screw clockwise to correct for plus cubic inches or counterclockwise for minus cubic inches in the test measure.



Figure 6-2: Calibration Screw

Count the number of full turns and fractional turns each time for reference in judging the number and direction of any additional turns required to calibrate the meter to exact zero.

Replace the cap screw (old style only). Deliver about 1/2 gallon through the meter before resetting to zero and retesting. Allow a ten-second drain period each time the test measure is emptied to assure accurate measure. Adjust and retest until register is zeroed at desired flow.

### Register

The register can be replaced as a unit by taking off the dial mask and removing two screws; reassemble reset push button and spring as shown on exploded view.

The C size measuring chamber can be removed for cleaning by taking out four (4) screws, lifting off register housing and removing three measuring chamber screw fasteners; to separate the two halves of the measuring chamber, tap the outer edge with a soft mallet - be careful not to damage the machined surface. After cleaning, the two halves will hand press together after making sure the vertical divider plate is aligned with grooves in the top and bottom half. The O-Ring must lie flat in the groove in the meter housing when assembling register housing; replace this O-Ring if it is damaged or swollen.

For your information, the parts list shows the number of teeth in each gear of the gear train. If for any reason, the cluster gear is replaced, use a new key; bend this new L-shaped key into a U-shape after inserting into groove in gear and through hole in shaft to capture this driving key in place.

To replace meter shaft seal on an old-style meter, slide O-Ring over bearing like a ring on a finger; insert shaft into bearing and press this assembly into square recess in register housing. To replace meter shaft seal on a new style meter, install new nylon washer, two new oilite bearings and two new O-Rings in reverse order of disassembly into bore in register housing.

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# 7 – Parts List

This section lists parts information for the Model 25, 26, 27, and 28 pumps. Using part numbers when ordering will expedite your order and reduce the possibility of the wrong parts being shipped. When ordering replacement parts, ensure that you give the complete name and part number as shown in the appropriate parts lists. It is also helpful to supply the serial number of the equipment.

Procedures requiring disassembly of portions of the pump should be performed by competent service personnel. Do not depend upon the repair service of a general mechanic unless he is thoroughly familiar with the mechanism. Gasboy has a distributor network which services fuel dispensing equipment and management systems in every section of the country.

### **New Parts**

New parts have been added to Models 25-28. When making replacements, use the new parts listed on the following pages.

See the following parts lists for new parts. New parts are marked with an asterisk (\*).

**WARNING** To reduce the risk of electrical shock when servicing, turn off and lock out all power to the pump.

# Assembly, Model 25

Figure 7-1: Model 25



ltem	Description	Part Number
	Model 25, U.S. Gasoline Model 25, U.S. Diesel Model 25, Liter Gasoline Model 25, Liter Diesel	089412 089424 089461 076103
1	Screw 8-32 x 1/4 Wsh-0667548	K85736-07
2	Front Cover Assembly, CRS	022102
3	Cap Screw, 5/16-18 x 3/4"	Q10624-01
4	Discharge Flange	003647
	Discharge Flange w/Vacuum Breaker Hole	003611
5	O-Ring	Q10067-22
6	Soc. Hd. Set Screw 10-32 x 1/4 Cup	053516
7	Switch Arm Assembly	051072
8	Spring Washer	068281
9	Washer, 5/16"	K65235-33
10	Cam Assembly	M04446A001
11	Nut 1/4-20 Hex SE - 0668684	K01941
12	Lockwasher, 1/4"	068891

Item	Description	Part Number	
13	Pin	042282	
14	Machine Screw, 1/4-20 x 5/8" (For 003673 Hanger)	052315	
	Screw (For 015139 Hanger; Not Shown)	K14830	
15	Nozzle Hanger (Auto Nozzle)	003673	
	Nozzle Hanger (Manual Nozzle; Not Shown)	015139	
16	Right Side Panel Assembly, CRS	M04798A001	
17	Nut, Lock 5/16-18-0667733	Q10218-10	
18	Carriage Bolt	013030	
19	Frame Assembly	M04506A001	
20	Cap Screw, 5/16-18 x 7/8	K45523	
21	Discharge Casting	003541	
22	Gasket	M05613B001	
23	Cap Screw, 5/16-18 x 7/8	K45523	
24	Meter, Register (see breakdown)		
25	Gasket	M05614B001	
26*	Junction Box Cover	003461	
27*	Junction Box	003337	
28*	Conduit Ell, 1/2 x 90	025045	
29*	Conduit, 1/2 x 2-1/4	021351	
30	Cap Screw, 5/16-18 x 7/8	K45523	
31	Gasket	M05616B001	
32	Pump and Motor Assembly (60 Hz)	048010	
	Pump and Motor Assembly (50 Hz)	048997	
33	Strainer Block Assembly, Gasoline	063357	
	Strainer Block Assembly, Diesel	063358	
34	Hose, 1" x 12' (Not Shown)	030430	
35	Nozzle, 402-Manual (Not Shown)	038509	
	Alt. Nozzle, 7H-Automatic (Not Shown)	038531	
36	Cover Assembly (Top, Back, and Left Side), CRS	M04566A001	
37	Vacuum Breaker Assembly, Threaded (Not Shown)	066534	
	Vacuum Breaker Assembly (Not Shown)	066570	
38	Eccentric Stop (Not Shown)	063209	
39	Screw (Not Shown)	052314	
40	Bezel	012267	
41	Plug	Q10554-14	
42	Reserved	-	
43*	Junction Box Cover Gasket	M05591B001	
44*	Bracket, J-Box Support-0667293	M05592B002	
45	Screw 1/4-20 x 1	051813	
46	Nut 1/4-20 Hex SE - 0668684	K01941	
47*	U Bolt, 1-3/8 I.D	013295	
* These are new parts for pumps within the listed serial number range. See "New Parts" on page 29. Note: Users desiring pulser parts should see the 25 Pulser Breakdown later in this section.			

# Assembly, Model 26

### Figure 7-2: Model 26



Item	Description	Part Number
	Model 26, U.S. Gasoline	089438
	Model 26, U.S. Diesel	089437
	Model 26, Liter Gasoline	089563
	Model 26, Liter Diesel	092240
20	Cap Screw, 5/16-18 x 7/8	K45523
21	Discharge Casting	003072
	Discharge Casting w/Vacuum Breaker Hole	003088
22	Gasket	M05613B001
23	Cap Screw, 5/16-18 x 3/4	Q10624-01
24	Meter, Register Assembly (see breakdown)	
25	Gasket	M05614B001

ltem	Description	Part Number
26*	Junction Box Cover	003461
27*	Junction Box	003337
29*	Conduit, 1/2 x 2"	021337
30	Cap Screw, 5/16-18 x 3/4"	Q10624-01
31	Gasket	M05616B001
32	Pump and Motor Assembly (60 Hz)	048998
	Pump and Motor Assembly (50 Hz)	048999
33	Strainer Block Assembly, Gasoline	063357
	Strainer Block Assembly, Diesel	063358
34	Cap Screw, 5/16 -18 x 3/4	Q10624-01
35	Nozzle Boot	003331
36	Spacer	056967
37	Switch Plate	034497
38	Hose, 1" x 12'	030430
39	Hook Only (OPW-311)	003788
	Set Screw	K06083-26
	Alt. Nozzle with Hook (7H-Automatic)	038412
	Hook Only	003789
	Set Screw	053155
40	Vacuum Breaker Assembly, Threaded	066534
41	Reserved	-
42	Reserved	-
43*	Junction Box Cover Gasket	M05591B001
44*	Bracket, J-Box Support-0667293	M05592B002
45	Screw 1/4-20 x 1	051813
46	Nut 1/4-20 Hex SE-0668684	K01941
47*	U Bolt, 1-3/8 I.D.	013295
*These a	re new parts for pumps within the listed serial number range. See	"New Parts" on page 29.

## Assembly, Models 27 and 28

Figure 7-3: Models 27 and 28



ltem	Description	Part Number
	Model 27, Gasoline Model 27, Diesel	089462 089518
	Model 28, Gasoline Model 28, Diesel	089459 089460
26*	Junction Box Cover	003461
27*	Junction Box	003337
29*	Conduit, 1/2 x 2"	021337
30	Cap Screw, 5/16-18 x 7/8"	K45523
31	Gasket	M05616B001
32	Pump and Motor Assembly (60 Hz)	048998
	Pump and Motor Assembly (50 Hz)	048999
33	Strainer Block Assembly, Gasoline	063357
	Strainer Block Assembly, Diesel	063358
34	Cap Screw, 5/16-18 x 3/4"	Q10624-01

ltem	Description	Part Number
35	Nozzle Boot	003331
36	Spacer	056967
37	Switch Plate	034497
38	Street Ell, 1" x 90	K02321-20
	Discharge Casting w/Vacuum Breaker Hole	024933
39	Cap Screw, 5/16-18 x 3/4"	Q10624-01
40	Flange	003640
41	Gasket	M05614B001
	Hose, 1" x 12'	030430
	Hook only (311-Manual)	003788
	Alt. Nozzle with Hook (7H-Automatic)	038412
42	Vacuum Breaker Assembly, Threaded (Not Shown)	066534
43*	Junction Box Cover Gasket	M05591B001
44*	Bracket, J-Box Support-0667293	M05592B002
45	Screw 1/4-20 x 1	051813
46	Nut 1/4-20 Hex SE-0668684	K01941
47*	U Bolt, 1-3/8 I.D.	013295
*These a	are new parts for pumps within the listed serial number range. See	"New Parts" on page 29.

### Pump and Motor Assembly, Models 25-28



Figure 7-4: Pump and Motor Assembly for Models 25-28

ltem	Description	Part Number
1	Cap Screw, 3/8-16 x 3	Q10624-33
2	Pump Cover	022168
3	Rotor	051491
4	Vane	067061
5	Seal Assembly, includes items 6 - 14, 17, and 22	M08781K001
6	Woodruff Key	031375
7	Retaining Ring	K76238-65
8	Washer	067210
9	Spring	M08745B001
10	Washer	067210
11	Rubber Seal	M08511B001
12	Rotating Seal Ring	049510
13	Floating Seal Ring	048820
14	Rubber Seal Boot	M08508B001
15	O-Ring	049180

Item	Description	Part Number
16	Cap Screw, 3/8-16 x 3/4	K01901
17	Locating Pin	054535
18	Pump Block	003208
19	O-Ring	049180
20	Cap Screw, 3/8-16 x 1 1/4	K01903
21	Cap Screw, 3/8-16 x 3/4	K01901
22	Inner Pump Head (Red)	M08504B001PG8*
	Inner Pump Head (White)	M08504B001PN1
	Inner Pump Head (Beige)	M08504B001PN2
* The red o beige), t	colored Inner Pump Head is provided in the kit by default. If other col hey must be ordered separately.	ors are required (white or
23	Slinger Ring, Buna N side toward pumping unit	049525
24	Motor, Model 25, 60 Hz	F37683
	Motor, Model 25, 50 Hz	F37685
	Motor, Model 26, 27, and 28, 60 Hz	F37684
	Motor, Model 26, 27, and 28, 50 Hz	F37686
Note: When replacing a Model 25 motor, item numbers 6, 10, and 13 on page 6-3 must be replaced if replacing an AO Smith motor with a Franklin. In addition, it may be necessary to drill a clearance hole in the Model 25 side frame to prevent the on/off switch threads from interfering with the side of the unit.		
25	Cap Screw, 5/16-18 x 1/2	Q10624-13
26	Bypass Cover	023037
27	Gasket	M05615B001
28	Bypass Valve Assembly	066991
29	Tube, Bypass Valve	065726

### 3460 Meter Register Assembly, Models 25 and 26



#### Figure 7-5: 3460 Meter Register Assembly for Models 25 and 26

Item	Description	Part Number
1	Tapping Screw, Model 26 only	052693
2	Bezel, Model 26 only	012236
4	Scr 6-32 x 3/8 FLST-0667548	M06198B001
5	Dial Mask, U.S. and Imperial, 25	035307
	Dial Mask, Liter Measure, 25	035311
	Dial Mask, U.S. and Imperial, 26	035309
	Dial Mask, Liter Measure, 26	035313
6	Reset Button	017269
7	Spring	057985
8	Screw 8-32x3/8 PN H-0667548	Q11769-29
9	Bearing	011816
10	Dial Glass	028736
11	Cap Screw, 1/4-20 x 1/2"	K05287
12	Register Assembly (inc. glass)	S00758
	Register Assembly, Ext Shaft/Pul (inc. glass)	S00766
13	Screw 6-32x3/8 FLST-0667548	M06198B001
14	Drive Shaft Assembly	054513
15	Cap Screw, 5/16-18 x 7/8"	K45523
16	Inlet Manifold	003561
17	Gasket - 0667030	M05617B001
18	Adjusting Cap Screw (Old style meter mfr. before 10/4/95)	052195
	Adjusting Screw (New Style meter mfr. after 10/4/95)	053081
19	O-Ring	048895
20	Adjusting Screw (Old style meter mfr. before 10/4/95)	053080
21	O-Ring (Old style meter mfr. before 10/4/95)	048865
22	Cap Screw, 5/16-18 x 3/4"	Q10624-18
23	Meter Housing	003253
24	O-Ring 5.987 x .103	Q10068-49
25	Fastener	025851
26	Measuring Chamber, C Size, Bronze	019018
	Measuring Chamber, C Size, Phenolic	019027
27	E-Ring 5133-15 TR-0667647	K76238-82
28	Кеу	031345
29	Drive Shaft Assembly	054512
30	Bearing and Seal Stuffing Box (old style)	014095
	Bearing and Seal Stuffing Box (new style) Note: New style stuffing box used on meters made after mid- 1993.	036995
31	O-Ring	048865
32	Register Housing Assembly, Model 25	031019
	Register Housing Assembly, Model 26	031018
	Register Housing Assembly, Model 25 w/Pulser	037219

Item	Description	Part Number
CHAN	GE GEARS - US GALS	
33	Control Block, 12T	012498
34	Cluster Gear, 39T and 13T, Gas	028174
	Cluster Gear, 39T and 12T, Dsl	028168
35	Drive Gear, 48T	028167
CHAN	GE GEARS - LITERS	·
33	Control Block, 12T	012498
34	Cluster Gear, 39T and 29T	028169
35	Drive Gear, 29T, Dsl	028201
	Drive Gear, 28T Gas	028209
CHAN	GE GEARS - IMPERIAL	·
33	Control Block, 10T	012500
34	Cluster Gear, 39T and 13T	028174
35	Drive Gear, 48T	028167

Serial Number	Description	Part Number
1	Mtr Reg, US Gal, 25, Gas, Phen	037200
2	Mtr Reg, US Gal, 25, Dsl, Phen	038945
3	Mtr Reg, US Gal, 25, Brz, Puls, Gas	037219
4	Mtr Reg, US Gal, 25, Brz, Puls, Dsl	038947
5	Mtr Reg, US Gal, 26, Gas, Phen	037201
6	Mtr Reg, US Gal, 26, Dsl, Phen	038946
7	Mtr Reg, Liter, 25, Gas, Phen	037202
8	Mtr Reg, Liter, 25, Dsl, Phen	038930
10	Mtr Reg, Liter, 25, Brz, Puls, Gas	037217
11	Mtr Reg, Liter, 25, Brz, Puls, Dsl	038926
12	Mtr Reg, Liter, 26, Phen, Gas	037203
13	Mtr Reg, Liter, 26, Phen, Dsl	038931
14	Reg Assy, US Gals, 25, Gas	048482
15	Reg Assy, US Gals, 25, Dsl	038949
16	Reg Assy, US Gals, 26, Gas	048484
17	Reg Assy, US Gals, 26, Dsl	038948
18	Reg Assy., Liter, 25, Dsl	038936
19	Reg Assy., Liter, 26, Gas	048487
20	Reg Assy., Liter, 26, Dsl	038928
21	Reg Assy., 25, Liter, Ext. Shaft, Dsl	038935
22	Reg Assy., 25, Gals, Ext. Shaft, Dsl	038919

### **Strainer Block Assembly, Models 25-28**

Note: A design change was made on 6/2/2003 replacing the metal check valve with a plastic check valve. If your pump serial number is 8139213 or older (US models) or 1028283C or older (Canada models), you must order retrofit kit 032083. The picture below shows instructions for kit 032631.





ltem	Description	Part Number
1	Strainer Block	003207
2	Strainer Cover, 25, 26, 27 and 28	003489
3	Strainer (Gasoline), 100 Mesh	063282
	Strainer (Diesel), 40 Mesh	063283
4	Check Valve Assembly	020620
5	Cap Screw, 5/16-18 x 3/4	Q10624-01
6	Gasket	M05619B001
7	Inlet Flange	003648

ltem	Description	Part Number
9	Square Cut Ring	049136
10	Pipe TBE, 2 x 6	044942
11	Screw Hex HD CAP-0665830	K01902
12	O-Ring, 2-1/2 x 2-11/16	Q10067-22
13	Base	003078
14	Spacer	065525

# Filter Assembly, Models 25 and 26

Figure 7-7: Filter Assembly for Models 25 and 26



ltem	Description	Part Number
1	Pipe TBE, 1 x 5-3/8, Model 25	R11495-86
	Pipe TBE, 1 x 7-1/2, Model 26	R11495-110
2	Filter Adapter	003087
3	Street Elbow, 1 x 90°	K02321-20
4	Filter 1" Int (ST-0667782)	R18189-10
	Filter, Diesel	026019

Serial Number	Description	Part Number
1	Model 25 Gas	03302 <b>8</b>
2	Model 25 Diesel	033029
3	Model 26 Gas	033030
4	Model 26 Diesel	033031

# Pulser Assembly, Model 25



### Figure 7-8: Pulser Assembly for Model 25

ltem	Description	Part Number
1	Pulser Mounting Bracket Model 25	M06025B001
2	Contactor 10:1	021788
3	Lock Nut	039130
4	Elbow, Conduit 1/2 x 90°	025045
5	Conduit Nipple 1/2 x 1 1/8	R11976-39
6	Conduit Junction Box 1.00 IN.	M06044B001
7	Pulser Conduit Model 25	M06027B001
8	Union, Conduit 1/2	Q10017-01
9	Bushing, reducing 1 x 1/2	K49827-20

## Mounting Hardware, Models 25-28

### **Direct Mount**

Figure 7-9: Mounting Hardware for Models 25-28 - Direct Mount



ltem	Description	Part Number
1	Cap Screw	K01902
2	Top Flange	003648
3	O-Ring	Q10067-22
4	Bottom Flange	003078
5	Suction Pipe	044010
6	Coupling, 2"	021970
7	Pedestal Pipe, 2" Dia.	045535
8	Tank Flange	N/A

### 032039 Pedestal Kit



### Figure 7-10: Mounting Hardware for Models 25-28 - 032039 Pedestal Kit

ltem	Description	Part Number
9	Suction Pipe	044010
10	Pedestal Pipe, 2" Dia.	045535
11	Set Screw	053320
12	Pedestal Base	003055
13	Nut (customer-supplied)	-
14	Union	K02340-28
15	Suction Pipe (customer-supplied)	-
17	Anchor Bolts (customer-supplied)	-

### **Vacuum Breaker Kits**

Current models are shipped with vacuum breakers; however, these kits can be used to modify older pumps without vacuum breakers:

- 032698 Model 25
- 032699 Model 26

In addition, a Vacuum Breaker Tubing Kit, Part Number 032797 is available when tubing back to the tank is desired. Refer to "Vacuum Breaker" on page 13 for tubing routing.

### Pump Repair Kit 032890

Description	Part Number
Bearing, Seal Stuffing Box	014095
Gasket, Discharge	M05613B001
Gasket, Inlet Manifold	M05614B001
Gasket, Bypass Valve	M05615B001
Gasket, Strainer Block	M05615B001
Gasket	M05617B001
Dial Glass	028736
Key, Spring	031345
O-Ring, 5/32 x 9/32 Buna-N	048865
O-Ring, 5/16 x 7/16 Buna-N	048895
Rubber Seal	M08511B001
O-Ring, 1-11/16 x 1-7/8 Buna-N	Q10067-22
O-Ring 5.987 X .103	Q10068-49
O-Ring, 3 x 3-1/4 Buna-N	049180
Drive Shaft Assembly	054512
Vane, 25	067061
O-Ring, 2-1/2 x 2-11/16, Buna-N	Q10067-22
Kit, 25-28 Plastic Check Valve Retrofit Kit	032631
Kit, 25/26 Seal Assemblies	M08781K001
Meter Parts Stuffing Box	036995
Instr. Sheet, PUM-0667320	MDE-4443
Warning Sheet - Gas - 0667270	MDE-4430

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