



Consumer Electric Pumps

Installation/Operation/Parts Manual

(For Models 72S, 72X, 73, 1820, 1820R,
1820RSS, 1820RC, 1820RCSS)

Computer Programs and Documentation

All Gasboy computer programs (including software on diskettes and within memory chips) and documentation are copyrighted by, and shall remain the property of, Gasboy. Such computer programs and documents may also contain trade secret information. The duplication, disclosure, modification, or unauthorized use of computer programs or documentation is strictly prohibited, unless otherwise licensed by Gasboy.

Federal Communications Commission (FCC) Warning

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

Approvals

Gasboy, Greensboro, is an ISO 9001:2000 registered facility.

Underwriters Laboratories (UL):

UL File#	Products listed with UL
MH4314	All dispensers and self-contained pumping units
MH6418	Power operated Transfer Pump Models 25, 25C, 26, 27, 28, 72, 72S, 72SP, 72X, 73 and 1820
MH7404	Hand operated Transfer Pump Models 1230 Series, 1243 Series, 1520 and 1720 Series
MH10581	Key control unit, Model GKE-B Series Card reader terminals, Models 1000, 1000P Site controller, Model 2000S CFN Series Data entry terminals, Model TPK-900 Series Fuel Point Reader System

New York City Fire Department (NYFD):

NYFD C of A #	Product
4823	9100A, 9140A, 9152A, 9153A, 9800A, 9840A, 9850A, 9852A, 9853A, 9140
4997	9822A, 9823A
5046	9100Q, 9140Q, 9152Q, 9153Q, 9800Q, 9840Q, 9852Q, 9853Q
5087	8753K, 8853K, 9153K, 9853K (restricted to diesel and non-retail gasoline sales)

California Air Resources Board (CARB):

Executive Order #	Product
G-70-52-AM	Balance Vapor Recovery
G-70-150-AE	VaporVac

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 #
95-179A2	Dispenser	9100 Retail Series, 8700 Series, 9700 Series	91-019A2	Dispenser	9100 Commercial Series
95-136A5	Dispenser	9800 Series	91-057A3	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

Atlas™
Console™
Infinity™

Registered trademarks

ASTRA®
Fuel Point®
Gasboy®
Keytrol®
Slimline®

Additional US and foreign trademarks pending.

Other brand or product names shown may be trademarks or registered trademarks of their respective holders.

Table of Contents

1 – Introduction	1
Purpose	1
Description	1
Warranty	2
2 – Important Safety Information	3
3 – Installation	5
Installation on an Underground Tank - Direct Mount	5
Installation on an Underground Tank - Pedestal Mount	6
Installation on an Aboveground Tank - Direct Mount	7
Installation on an Aboveground Tank - Vacuum Breaker	7
4 – Wiring	9
Pump Wiring Diagrams	9
5 – Startup And Operation	11
Meter Calibration	11
Calibration	12
Daily Operation	12
6 – Troubleshooting	13
Maintenance	13
When Your Pump Needs Service	14
Troubleshooting	14
7 – Parts	17
General Information	17
Model 72 Assembly	18
Model 1820 Assembly	21
Direct Drive Motor-Pump Assembly	24
Installation Parts	26
1860 and 4860 Meter-Register	27
Register Assemblies	28
3-Wheel Meter Register (for Models 1820)	29
1860/3860 3-Wheel Meter Register (for Models 1820)	30
4860 4-Wheel Register (Models 72S and 1820R)	33
Model 1820 Register Setback and Switch Linkage Assembly	37
Optional Kits for Series 72 and 1820 Pumps	38
1820R	39
1820R Pulser and Junction Box Assemblies	41

This page is intentionally left blank.

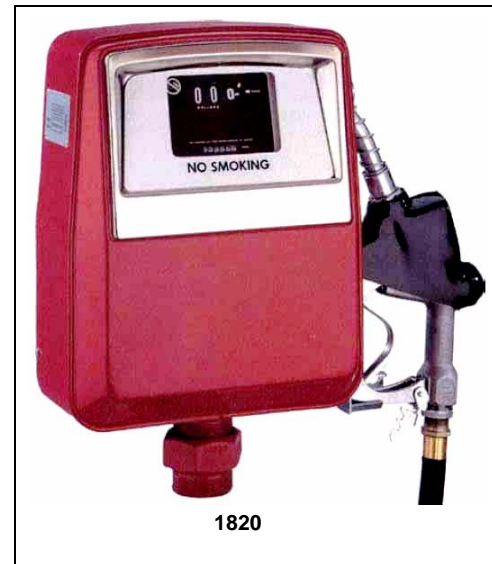
1 – Introduction

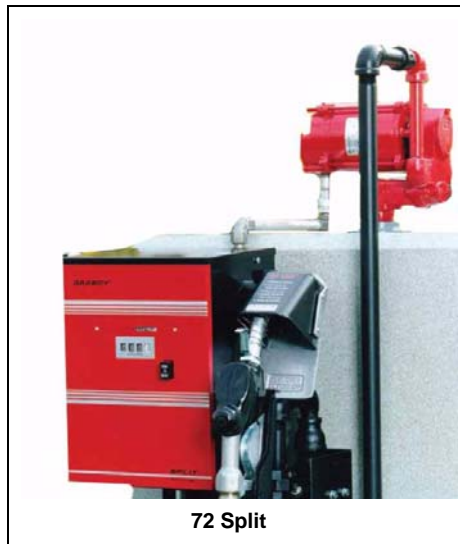
Purpose

This document provides instructions for installation, operation and the parts list for the following Gasboy® Consumer Electric pump models:

- 72S
- 72X
- 73
- 1820
- 1820R 1820RSS
- 1820RC
- 1820RCSS.

Description





These models are used on the Vented Tanks.

Installation Options

- Direct-mount above underground tanks
- Pedestal-mount for remote underground
- Aboveground skid tanks

Specifications

- **Pumping Unit:** Self-priming, direct-drive rotary vane; 23 psi (1.6 bars) stainless steel bypass; check valve with pressure relief valve.
- **Motor:** 1/3 HP (0,25kw), 1725 rpm motor with thermal overload protection and auxiliary AC line. Standard 115 VAC, 60 Hz; optional 230 VAC, 50 Hz.
- **Register:**
 - 72S: 4-wheel push-button reset, 7-digit master totalizer.
 - 1820: 3-wheel, volume only; lever-type reset with interlock; 6-digit master totalizer (optional, except for 1820R: 4-wheel push-button).
 - Registration options: US gallons, Imperial gallons, liters.
- **Meter:** Nutating disk phenolic measuring chamber in aluminum diecast housing; adjustable calibration $\pm 0.5\%$ at full flow
- **Hose & Nozzle:** 12' (4 m) Underwriters Laboratories (UL®)-Listed hose assembly with integral static discharge wire; manual self-closing nozzle.
- **Connections:** 2" NPT for tank opening; 1" suction; 3/4" NPT discharge
- **Strainer:** 100-mesh nylon
- **Delivery Rate:** 18 GPM, at 115V, 60 Hz.; 68 LPM at 60 Hz.; 57 LPM at 50 Hz.

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.

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 and island. Locate the switch or circuit breakers that shut-off all power to all fueling equipment, dispensing devices, and submerged turbine pumps (STPs).

WARNING



The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser.



This means that even if you activate these stops, fuel may continue to flow uncontrolled.

You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not only these cashier station "stops."

Total Electrical Shut-Off Before Access

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

Evacuation, Barricading and Shut-Off

Any procedures requiring accessing the pump/dispenser or STPs requires the following three actions:



- An evacuation of all unauthorized persons and vehicles using safety tape, cones or barricades to the effected units
- A total electrical shut-off of that unit

Read the Manual

Read, understand and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the Gasboy Customer Service at 1-800-444-5579, Tech Support 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

There is applicable information in NFPA 30A; *Automotive and Marine Service Code*, NFPA 70; *National Electrical Code (NEC)*, OSHA regulations and federal, state, and local codes which 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



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

Signal Words

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



DANGER - This signal word is used to alert you to a hazard to unsafe practice which will result in death or serious injury



WARNING - This alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol - This signal word designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol - When used by itself, CAUTION 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 become explosive if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause explosive vapors in the vicinity of dispenser or island.

Important Safety Information

No Open Flames



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 fuels and their vapors. After getting 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. Be familiar with Cardiopulmonary Resuscitation (CPR) methods if you are working 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 tag out and lock out procedures. If you are not familiar with this requirement, refer to information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure to use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Ensure grounding connections are properly made. Ensure that sealing devices and compounds are in place. Ensure not to pinch wires when replacing covers. Follow OSHA Lock-Out and Tag-Out 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 to clean hands after handling equipment. Do not place any equipment in mouth.



WARNING

This area contains a chemical known to the State of California to cause cancer.



WARNING

This area contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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

Emergency First Aid

Informing Emergency Personnel

Compile the following information for 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.

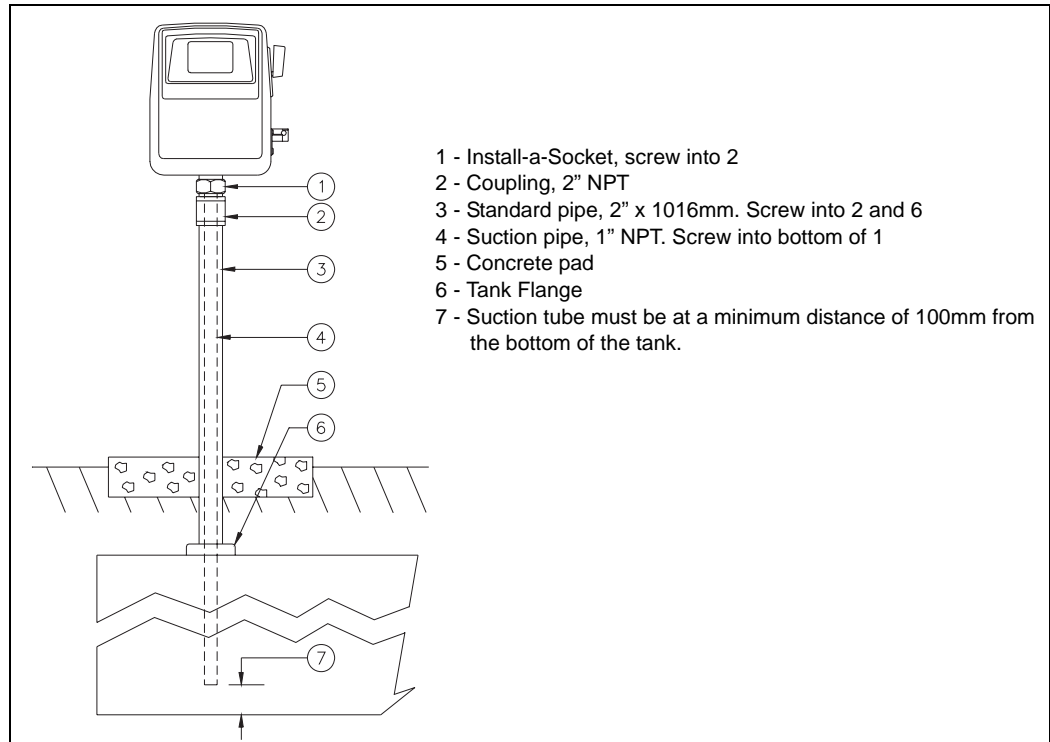
IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Lockout/Tagout

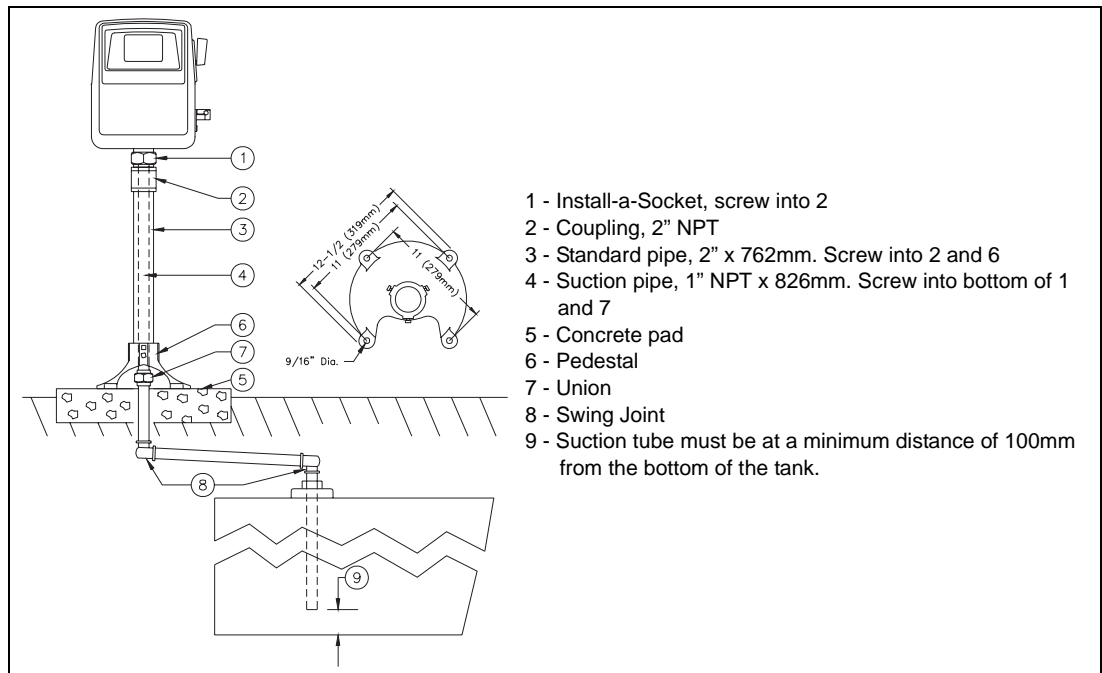
Lockout/Tagout covers servicing and maintenance of Machines and equipment in which the unexpected energization or start up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical or other energy,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

3 – Installation

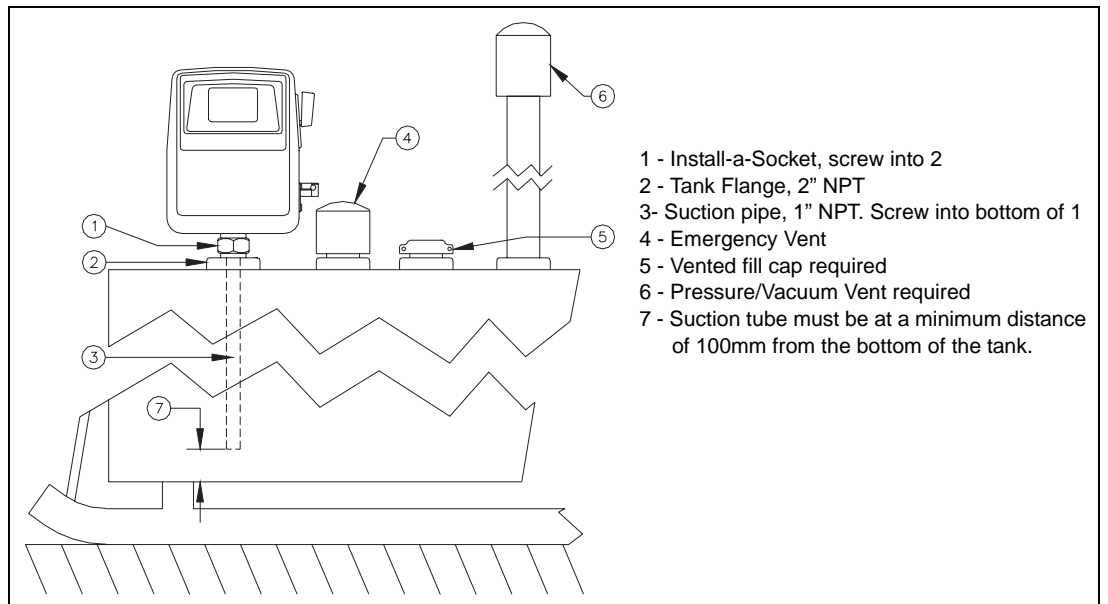
Installation on an Underground Tank - Direct Mount



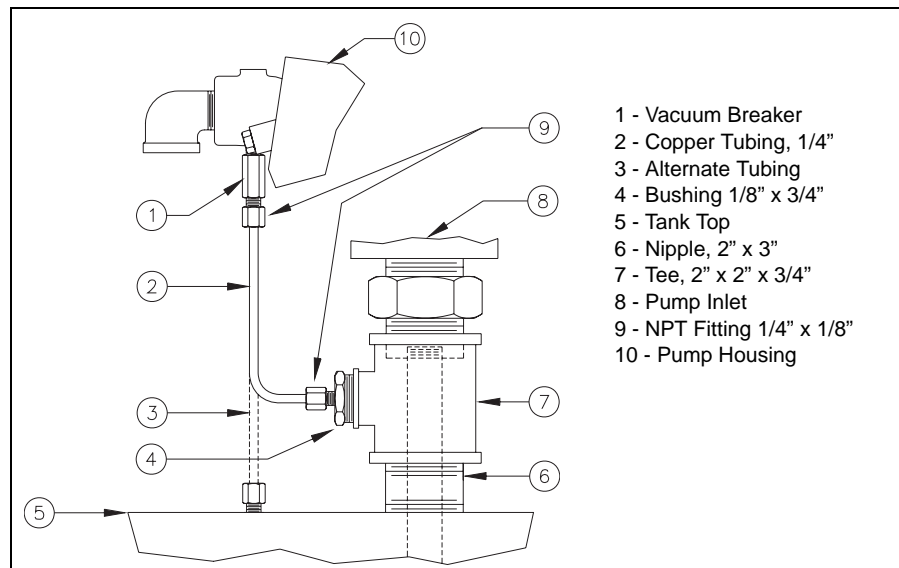
Installation on an Underground Tank - Pedestal Mount



Installation on an Aboveground Tank - Direct Mount



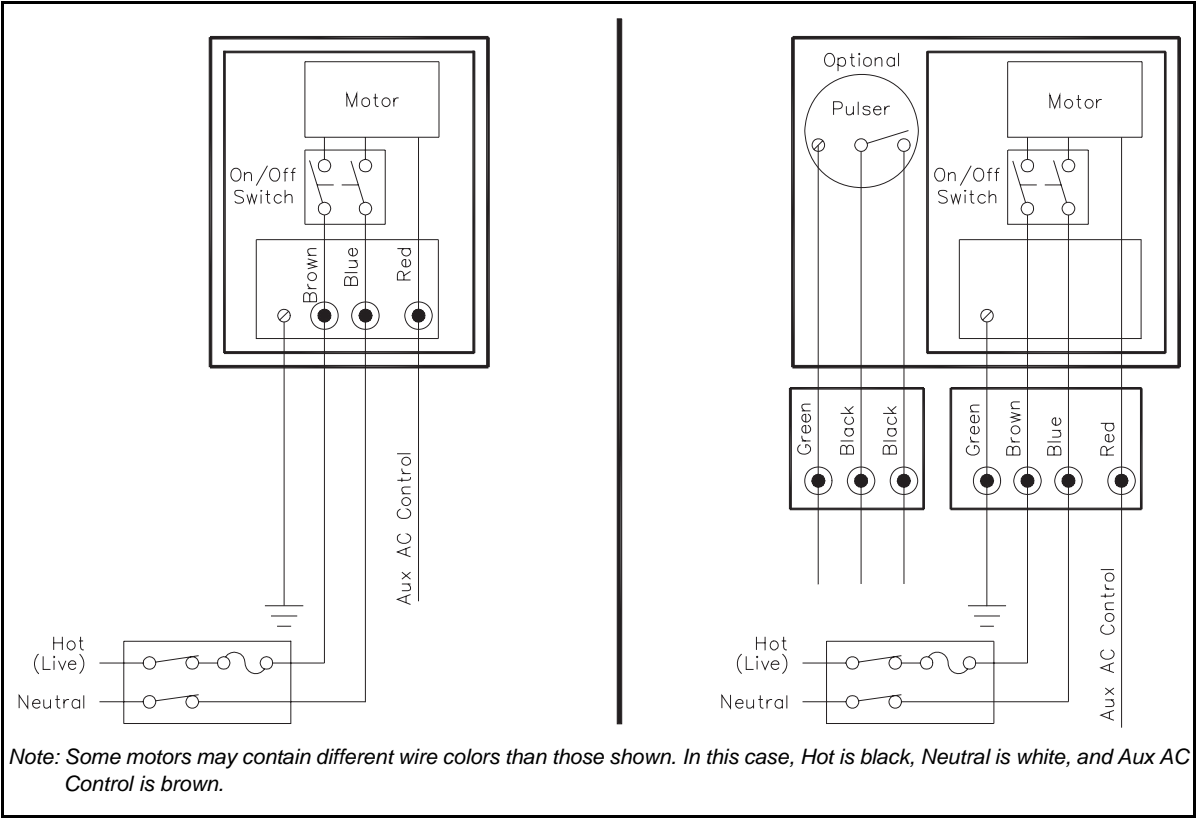
Installation on an Aboveground Tank - Vacuum Breaker



This page is intentionally left blank.

4 – Wiring

Pump Wiring Diagrams



Notes: 1) All wiring and conduit runs must conform with all building, fire, and environmental codes, and all National and local codes and regulations.

2) Wire colors (internal pump wiring as shipped from factory):

Green	Ground
Brown	ACC Neutral
Blue	ACH Hot (Live)
Red	Aux AC Control Lead
Motor current consumption:	230 VAC, 50 Hz, 1,95 A; recommended circuit breaker 10 A

- 3) *Model 72, 73, and 1820 models: Make field wire connections in the motor junction box.
Model 1820R models: A separate junction box is supplied with these pump models. Install the junction box directly below the pump. Make field wire connections in this junction box using the wiring which extends from factory-installed conduit within the pump. Do not make connections in the pump motor junction box. Tightly splice wire connections and secure with a wire nut. Close off the end of the wire nut with electrical tape.*
- 4) *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. Voltage is present on this line only after motor reaches full speed.*
- 5) *Pulser wiring must be 18AWG and installed in a separate metal conduit away from all AC wiring except where local regulations dictate otherwise. It cannot share a common junction box, wiring trough or conduit with any AC wiring.*

5 – Startup and Operation

Meter Calibration

All consumer electric pumps are adjusted for accurate measure within $\pm .05$ units at the factory for the fuel specified on the order. However, since the conditions of the installation can affect pump accuracy, it is the responsibility of the installer to check the pump for accuracy and make any needed adjustments. Where required, it is the owner's responsibility to report this device to the local Weights and Measures officials for their inspection before the unit is put into service.

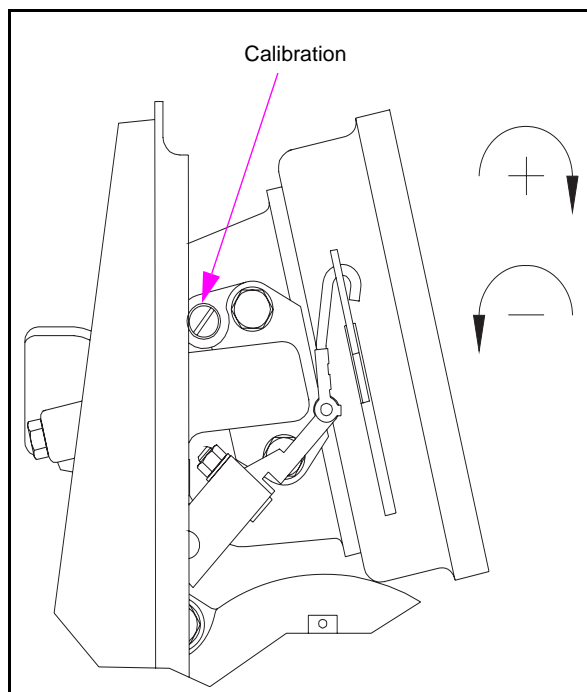
Choose the flow rate at which the meter will be used most often for the zero calibration point.

Use a certified measure with a sight glass and scale.

To calibrate the meter, proceed as follows:

- 1 Fill and drain the test measure to completely wet the interior surfaces.
- 2 Reset the register to zero and deliver an exact measured quantity into the test measure at the selected flow.
- 3 Read the level of the liquid in the sight glass on the scale.
- 4 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 exactly zero.

Calibration



Daily Operation

To begin the fueling operation, proceed as follows:

- 1 Remove the nozzle from the boot and turn on the pump handle.
- 2 Reset the register to zero if your model has a register.
- 3 Dispense fuel.
- 4 Turn the pump handle off. The amount delivered is displayed on the register.

The pump motor is equipped with thermal overload protection. If overheated, this will shut itself off if there is not an additional external protection circuit which trips earlier. Ensure that you turn off the pump power if this occurs. As the motor cools, it will start without warning if power is on.

6 – Troubleshooting

Maintenance

Perform a periodic inspection at least twice a year. Before inspecting/servicing pump, follow all warnings outlined in the Warnings and Safeguards sheet inside the front cover of this manual.

Remove Water from Tank

After every fill-up, check your tanks for water. Remove any water with a sump pump.

Clean the Dial Face

Use a soft, clean, damp cloth as needed.

Preserve the Pump's Finish

Clean all painted surfaces at regular intervals with a high grade automobile polish and protect with a coat of paste wax. Do not use abrasive cleaners or polish. Do not use high-pressure spraying equipment.

For stainless steel cabinets, wash with mild detergent or soap and water followed by a clean water rinse. Do not use abrasive cleaners. Stubborn stains, such as oil or grease will require a stronger cleaner. DO NOT use steel wool. Always clean in the direction of the polishing lines in the steel, never across them. In hard water areas, wipe the surface dry with a soft clean cloth to prevent spotting. Protect the finish with a coat of paste wax.

Check and Change Filter

If applicable, check and change the filter at regular intervals.

Clean the Strainer

Clean the strainer immediately after the pump has been installed and tested, and again after a few hundred gallons have been delivered. Thereafter, once every six months, or as required. The symptoms of a dirty or clogged strainer in a pump are slow delivery, noisy operation, and pulsation.

To clean the strainer, turn off AC power to the pump. Locate the Suction Strainer Cap on the plumbing unit and unscrew it to access and remove the strainer. Use compressed air to blow the dirt out of the strainer. Always wear protective safety goggles or glasses when using compressed air.

Clean the Bypass Assembly

The bypass valve assembly should be removed only for cleaning and should be checked if there is notable loss in system performance. No adjustment is required. To remove the valve, turn off AC power to the unit, remove the two bolts to the bypass cover and lift out the bypass valve assembly.


When Your Pump Needs Service

Note: Follow all warnings outlined in the “Important Safety Information” on page 3.

- Procedures requiring disassembly of portions of the pump should be performed by competent service personnel. Contact your local distributor or a Gasboy international location listed on the Warranty page of this manual.
- Replace worn, rusted, or corroded parts immediately with new authorized service parts from Gasboy. Replacing parts with incorrect or substandard substitutes will result in unsatisfactory pump operation. Always use new gaskets or seals when servicing or rebuilding equipment; do not re-use old ones.

Refer to “Parts” on page 17 for list of parts and service procedures for consumer electric pumps. Using part numbers when ordering will expedite your order and reduce the possibility of the wrong parts being shipped.

Troubleshooting

Symptom	Checks	Corrective Action
Pump does not start	Is the breaker at the panel turned on?	Replace the motor if the checks do not solve the problem.
	Is the Aux AC Control wire capped or connected to a solenoid valve or fuel management system and is the valve opening?	
	Is there power at the pump? Check at the junction box. Voltage cannot be below 104 volts on a 115V pump and 204 volts on a 230V pump.	
	Is the switch rod turning the switch on and off at the motor?	
	Is motor overheated (thermal switch cutoff)?	Switch off the power to prevent automatic starting of the pump when the motor cools sufficiently.
<div><div> CAUTION</div><div>Be careful, the external motor surface could be hot enough to be painful or cause injury. Let it cool down and retry.</div></div>		

Symptom	Checks	Corrective Action
Pump hums but does not start.	Is voltage adequate? Check voltage with the pump on bypass, with the nozzle closed. Voltage cannot be below 104 volts on a 115V pump; 204 volts on a 230V pump.	Replace motor if checks do not solve the problem.
	Is the Aux AC Control wire capped or connected to a solenoid valve or fuel management system and is the valve opening?	
	Check rotor, vanes, and bypass valve for free operation. Check the motor with rotor and vanes removed. The shaft should turn easily and smoothly by hand. Spin the shaft by hand clockwise, quickly start the motor (hand clear of shaft) and observe the shaft. It should stop turning in the clockwise direction and turn in a counterclockwise direction. If it does not, replace the motor.	Rotor is springloaded! Take care after the removal of the cover and the shaft key that no parts are lost.
Pump runs but does not prime or deliver product.	Is there gas in the tank?	Fill up the tank.
	Do you have a nozzle with the anti-drain valve removed? (You must be able to blow air through the nozzle in the direction the fuel flows through it, when the nozzle handle is held open).	Recommend use of the part number 038519 for unleaded and 038520 for diesel.
	Loosen the pump cover and slide aside so you can observe the rotor and vane movement inside the pump cavity. Rotor should be turning freely in a counter-clockwise direction. If rotor turns in the clockwise direction, it is bad.	Replace motor, if bad.
	If register is recording but no product is being dispensed, you may have a supply line air leak.	Correct supply line leak.
Pump runs but does not prime or deliver product.	Check for an air leak on the suction side of the pump. Is the check valve seated properly?	Reassemble and prime the pump using liberal quantity of motor oil in the pump cavity. If it primes, run the pump full flow and snap nozzle closed; shut off motor and check for leak on suction side of pump above check valve. Any observed liquid leakage would indicate an air leak when pump is running with nozzle open and would prevent priming when the pump was empty.
	Are bypass, strainer, and check valve cover plates flat? They could be bent from excessive pressure created by a vehicle running over the hose.	
	Is there an air leak in the suction line below check valve.	Perform the accuracy check using 5 gallon Seraphim Test can. Any clock fast error (see Inaccurate Delivery) in excess of 2- 1/2% indicates an air leak in the suction line. The most common source of an air leak in the suction line is the union. Check the union for alignment and tightness before checking balance of suction line. If the pump does not prime using oil, suction line is blocked or has a severe air leak.
Pump delivers product but does not register.	Is the main totalizer recording? If yes, problem is in the register assembly. Ensure that the lever on the side of the register is returning back to the record position.	Repair/replace lever.
	If the main totalizer is not working, the problem is a broken or jammed measuring chamber.	Replace.

Symptom	Checks	Corrective Action
Pump delivery is slow.	Check for dirty strainer.	Clean the strainer.
	Check for clogged or dirty filter.	Change the filter.
	An automatic nozzle will reduce flow rate about 25%. Check flow rate without the nozzle or with standard nozzle. A farm type automatic nozzle (such as Husky 1GS swivel) provides the best flow.	Replace/repair nozzle.
	Check for supply line restriction.	Test the pump with a vacuum gauge. If vacuum is abnormally high, there is a restriction.
Pump loses prime.	Inspect the check valve poppet and seat for clean mating surfaces.	Clean, if necessary.
	If, after a period of non-use, a pump delivers product initially, followed by air and then full flow, there is an air leak in the suction line.	Repair the suction line.
	Install a pressure gauge between the hose and the nozzle. Operate the pump at full flow. Close the nozzle closed and turn off the pump.	If pressure falls to zero rapidly, replace the check valve and clean and inspect the valve seat.
Inaccurate delivery.	Calibrate the meter.	(See "Meter Calibration" on page 11)
	A clock-fast error (more on the register than is delivered) in excess of 2.5% is due to air in the suction line or vaporization of gasoline in the pump.	Check pump for the loss of prime and suction line for the air leak.
	A clock-slow condition may result from the following: <ul style="list-style-type: none"> Any slowing of the register or measuring chamber due to excessive friction resistance or mechanical failure. Inadvertent bypassing of the measuring chamber. 	Check register for zero setback; check the reset lever return to the top of the slot in the meter cover after setback; check for "hang-up" of number wheels in register or gears not meshing.
Pump delivers product when not turned on.	In aboveground storage tank, if the fluid level is higher than pump, positive head pressure may force the product through pump.	Install a pressure regulating valve or a solenoid valve in the supply line to the pump.
	Check for defective vacuum breaker.	Replace if necessary
Vacuum breaker spits product	Clean and replace the vacuum breaker.	If problem persists, install the return line kit.

7 – Parts

General Information

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.

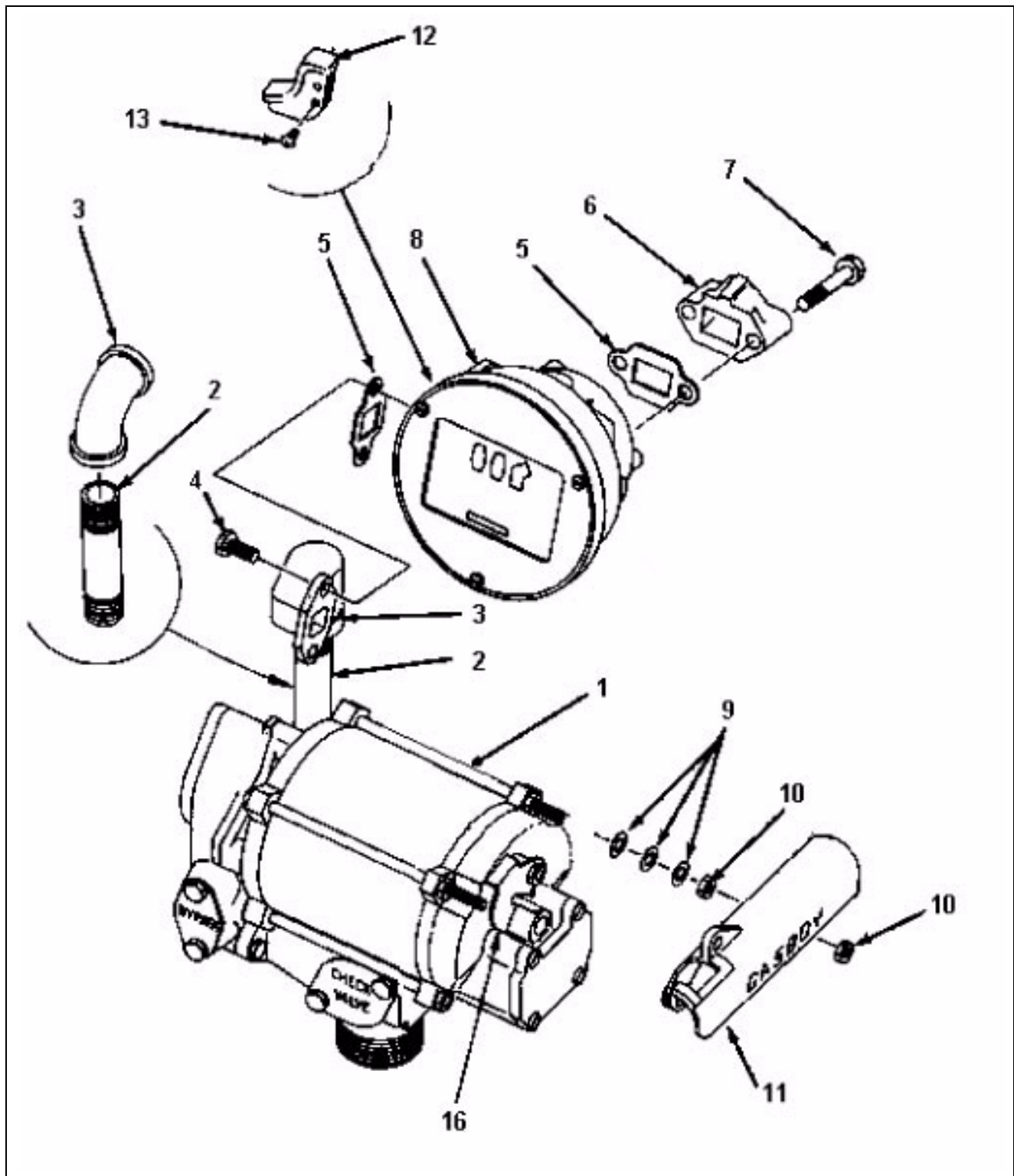
Procedures requiring disassembly of portions of the pump should be performed by competent service personnel. Do not depend upon the repair service of a general mechanic unless he is thoroughly familiar with the mechanism. For service/parts, contact your local distributor or a Gasboy international location listed in MDE-4255 Gasboy's Warranty Policy Statement.



WARNING

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

Model 72 Assembly



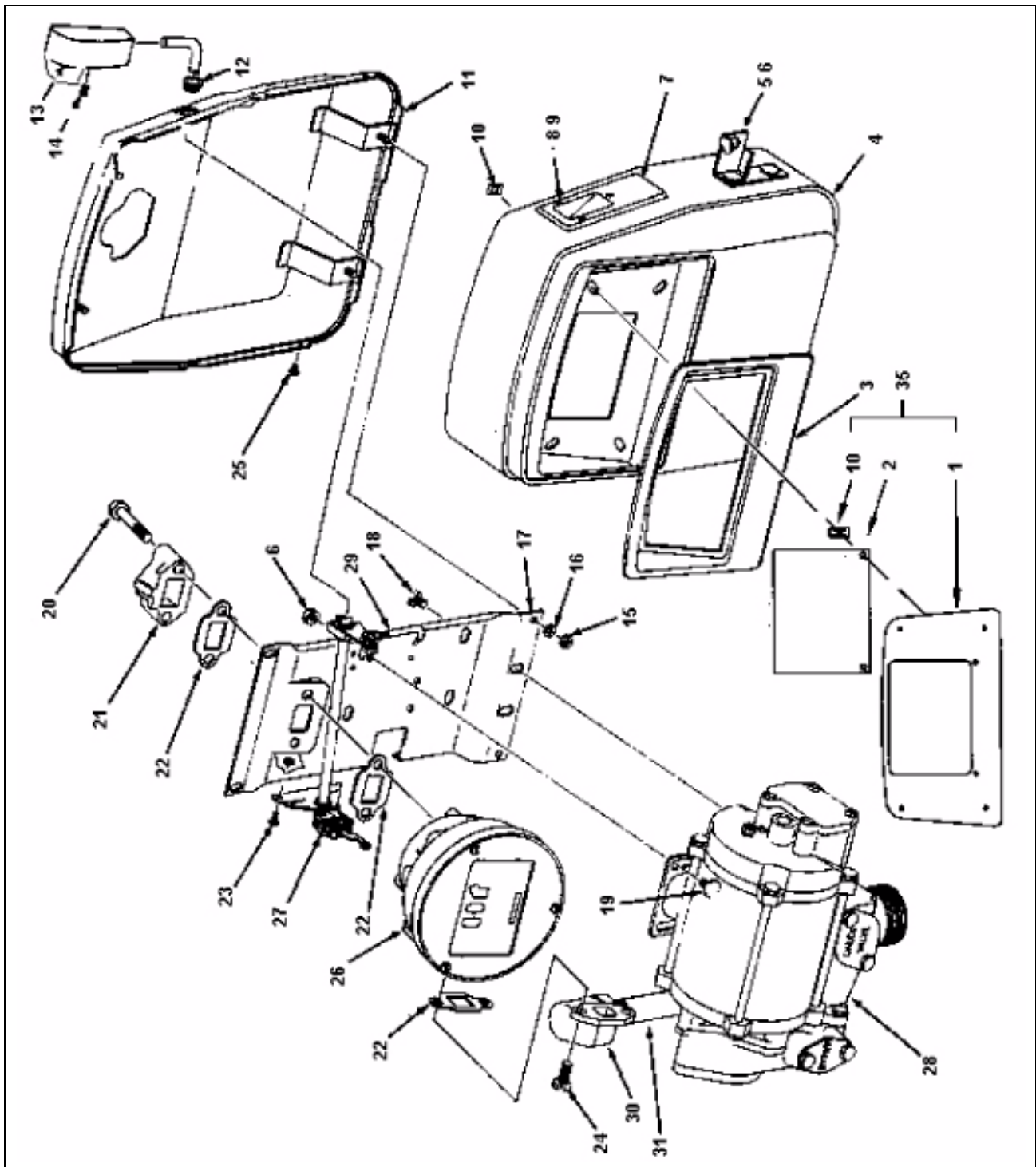
Note: The Meter shown is an 1860 meter. Current model 72S uses the 4860 meter. See "4860 4-Wheel Register (Models 72S and 1820R)" on page 32 for parts.

Item	Description	Part Number
1	Pump Assembly (See "Direct Drive Motor-Pump Assembly" on page 23 Parts List)	-
2	3/4" X 6-7/8" Pipe Nipple	044089
3	Flanged Inlet, 72S	003597
	Elbow, 72X & 73	024934
4	Screw	052000
5	Gasket	027055
6	3/4" Horizontal Discharge for Vacuum Breaker	003542
	1" Horizontal Discharge for Vacuum Breaker	003544
7	Screw	052105
8	Meter Register Assembly (See breakdown for your model)	-
9	Washer	068020
10	Hex Nut	039085
11	Nozzle Boot	000325
12	Reset Lever Handle	029410
13	Reset Lever Screw	053900
14	Hose, 3/4 x 12 ft. (Not Shown)	030605
15	Nozzle, 3/4" EBW-unl.(Not Shown)	038471
16	Motor Switch Lever	034121
17	Vacuum Breaker (Not Shown)	066534

Optional Accessories

Item	Description	Part Number
1	Filter Kit (1820/1820R) (Contains * items shown below)	032814
2	Bushing, 3/4" x 1"	*017270
3	Pipe tube, 3/4" x 2"	*043960
4	Adapter, Filter 3/4"	*003043
5	Elbow, street 3/4" x 90	*024940
6	Filter, Wix 24006 dsl/gas	*026005
7	Hose-3/4" x 14 ft.	030340
8	Hose-3/4" x 15 ft.	030355
9	Motor for 50 cycle, 230V	037461
10	Nozzle - 3/4" Manual-Unleaded	038471
11	Nozzle - 3/4" Manual- Leaded	038475
12	Nozzle-Automatic-Unleaded-Husky	038519
13	Nozzle-Automatic-Leaded-Husky	038520
14	Hook Assembly, OPW 11A	038510
15	Hook Assembly, EMCO A2000	038511
16	Hook Assembly, OPW 7H	038503
17	Kit, Vacuum Breaker Tubing and Fittings	032700

Model 1820 Assembly

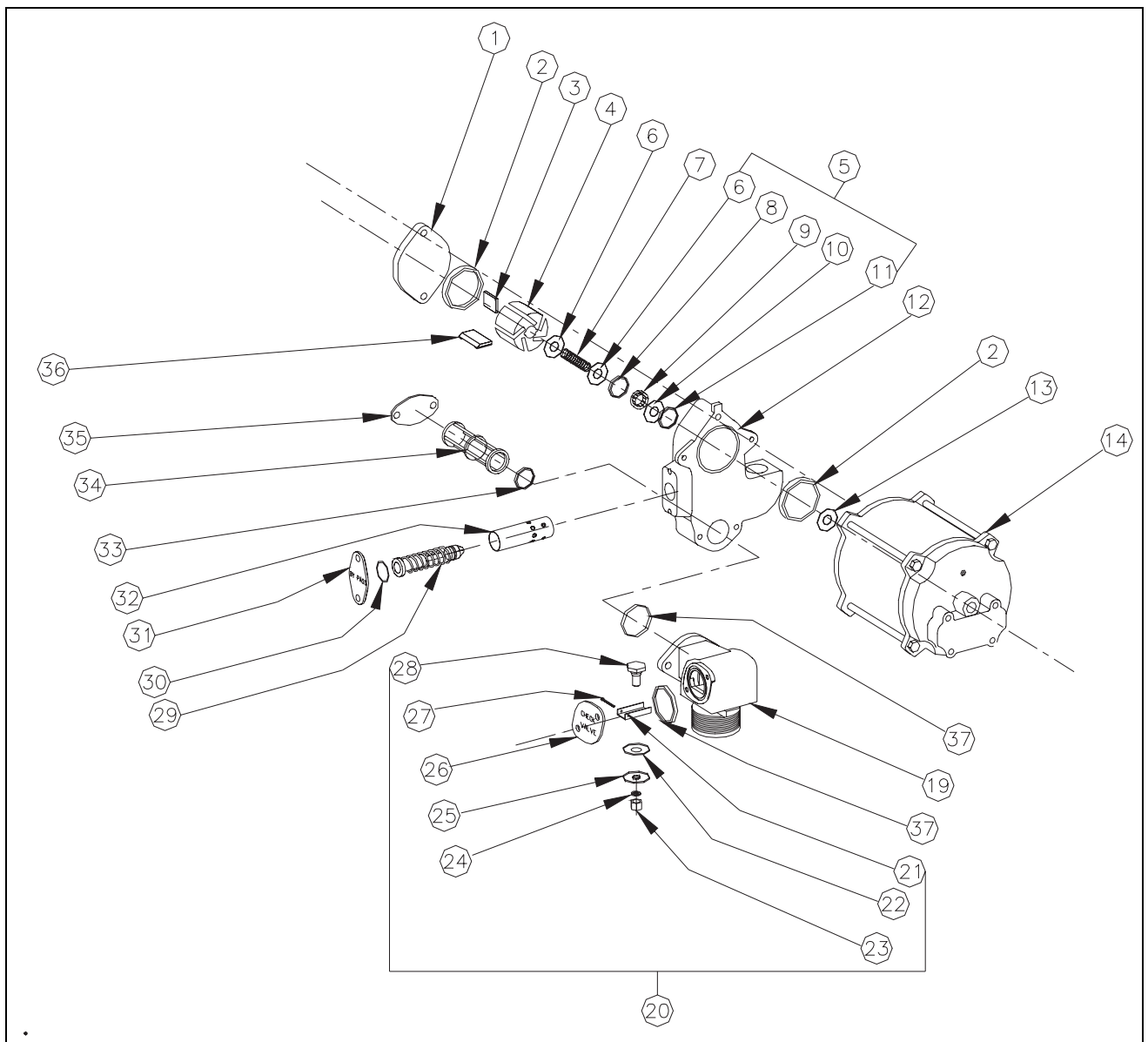


Item	Description	Part Number
1	Dial Face Assembly	025393
2	Dial Glass	028850
3	Bezel	012265
4	Front Panel Assembly	040630
5	Nozzle Hanger	029620
	Nozzle Hanger - Automatic	029590
	Nozzle	-
6	Keps Lock Nut	038605
7	Scuff Plate	003820
8	Machine Screw	052856
9	Keps Lock Nut	039070
10	Speed Nut	039461
11	Rear Panel Assembly	041545
12	Nyliner Bearing	039815
13	Control Lever	003717
14	Set Screw	053170
15	1/4-20 Hex Nut	038860
16	1/4 Lock washer	068891
17	Pump and Meter Support	063970
18	Cap Screw	051880
19	Carriage Bolt	013030
20	Machine Screw, Horizontal Discharge	052105
	Machine Screw, Flgd Discharge	052555
21	Horizontal Discharge-3/4", for vac breaker	003542
	Horizontal Discharge-1", for vac breaker	003544
	Horizontal Discharge 1820r	003645
22	Gasket	027055
23	Machine Screw	052855
24	Cap Screw	052000
25	Self-Tapping Screw	053725
26	Meter-Register Assembly (See breakdown for your model)	-
27	Control Shaft Assembly (See breakdown)	054654
28	Direct Drive Motor Assembly (See "Direct Drive Motor-Pump Assembly" on page 23 parts breakdown)	
29	Switch Rod Assembly (See breakdown)	051206
30	Flanged Inlet (72S & 1820)	003597
	Flanged Inlet (1820R)	003601
31	3/4" x 6-7/8 Nipple	044089
32	Hose-3/4" x 12 ft., (Not shown)	030605
33	Nozzle-Manual Unl, (Not Shown)	038471
35	Dial Face Kit (consists of items 1, 2, & 10)	032912
36	Vacuum Breaker (Not Shown)	066534

Optional Accessories

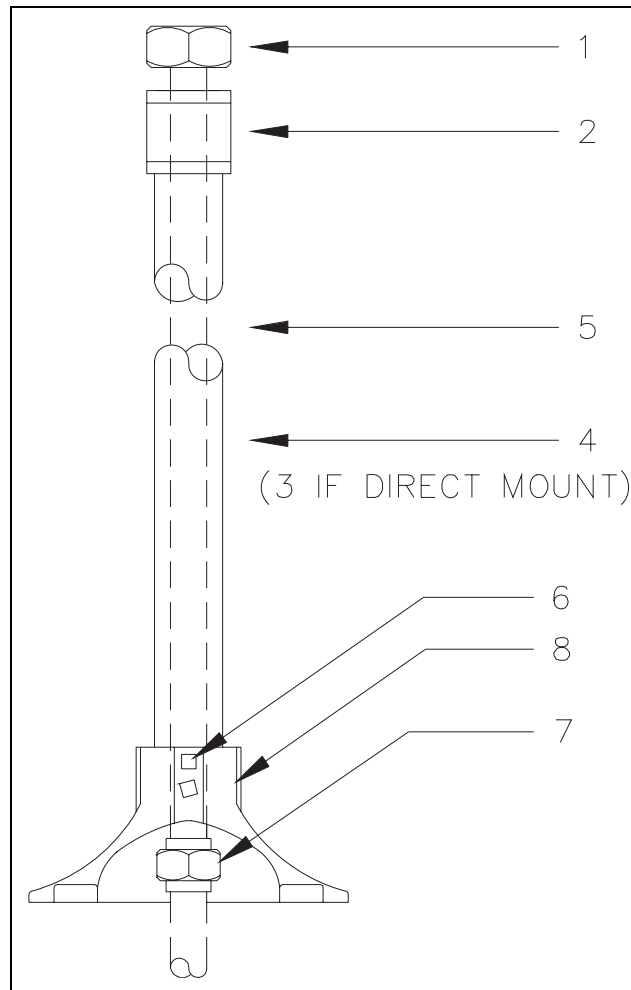
Item	Description	Part Number
1	Filter Kit (1820/1820R) (Contains * items shown below)	032814
2	Bushing, 3/4" x 1"	*017270
3	Pipe tube, 3/4" x 2"	*043960
4	Adapter, Filter 3/4"	*003043
5	Elbow, street 3/4" x 90	*024940
6	Filter, Wix 24006 dsl/gas	*026005
7	Hose-3/4" x 14 ft.	030340
8	Hose-3/4" x 15 ft.	030355
9	Motor for 50 cycle, 230V	037461
10	Nozzle - 3/4" Manual-Unleaded	038471
11	Nozzle - 3/4" Manual- Leaded	038475
12	Nozzle-Automatic-Unleaded-Husky	038519
13	Nozzle-Automatic-Leaded-Husky	038520
14	Hook Assembly, OPW 11A	038510
15	Hook Assembly, EMCO A2000	038511
16	Hook Assembly, OPW 7H	038503

Direct Drive Motor-Pump Assembly



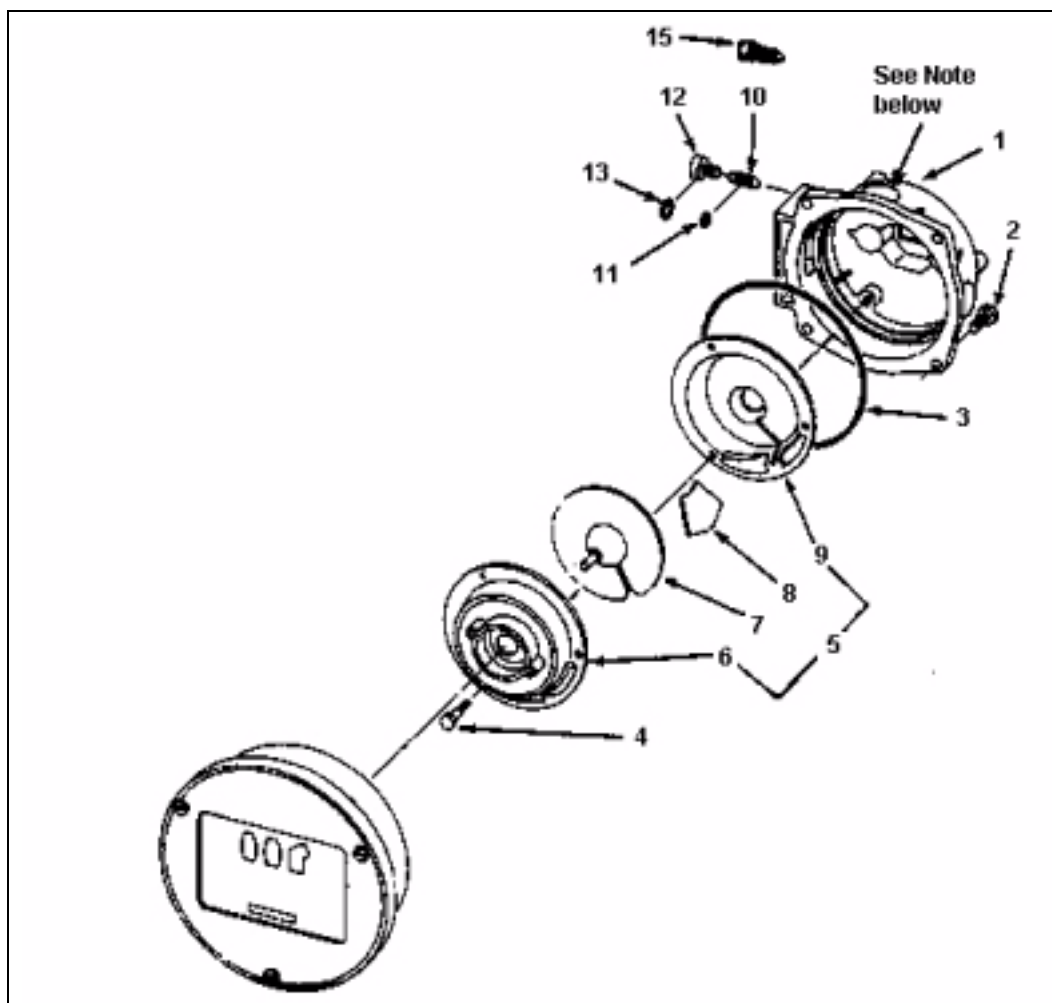
Item	Description	Part Number
1	Pump Cover	003490
2	Square-Ring	049004
3	Key, 72	031285
4	Rotor	051475
5	Seal Group (Consists of items 6-11)	054024
6	Washer	067210
7	Spring	057956
8	O-Ring	048941
9	Rotating Seal Ring	049510
10	Floating Seal Ring-Carbon	048820
11	O-Ring	048956
12	Pump Block	003210
13	Slinger Ring	049525
14	Motor, 115V, 60 cycle, 72	F37332
	Motor, 115V, 60 cycle, 1820	F37697
	Motor, 230V, 50 cycle, 72	F37616
	Motor, 230V, 50 cycle, 1820	F37461
19	Base	003065
20	Check Valve Assembly (Consists of items 21-25 & 28)	066655
21	Valve Guide	029155
	Valve Guide, 1820R	029005
22	Washer	068680
23	Hexagonal Jam Nut	038980
24	Washer	068650
25	Valve Disc	024356
26	Check Valve Cover Assembly	022271
27	Cotter Pin	042370
28	Valve Stem w/Relief Valve	062620
	Relief Valve	*062365
29	By-Pass Stem Assembly	062335
30	Square Ring	049001
31	By-Pass Cover	022315
32	Tube	065725
33	Square-Ring	049002
34	Strainer, 100 Mesh, Gasoline	063268
	Strainer, 30 Mesh, Diesel	063266
35	Strainer Cover	022900
36	Vane	067030
37	Square-Ring	049003

Installation Parts



Item	Description	Part Number
1	Install-a-Socket	003835
2	2" Coupling	021970
3	2" x 40" Pipe (underground)	045010
4	2" x 30" Pipe (pedestal)	045535
5	1" x 32 1/2" Suction Pipe	044380
6	Set Screws	053320
7	1" Union	066445
8	Pedestal Base	003055

1860 and 4860 Meter-Register



Note: All meters are calibrated for gasoline. Older-style meters may have a "D" for diesel or a "G" for gasoline.

Item	Description	Part Number
1	Meter Body	012790
2	Meter Body Screw	051835
3	O-Ring	049075
4	Screw	025851
5	Measuring Chamber Assembly (sold as assembly only; includes items 6-9)	019016
	Bronze Measuring Chamber	019015
6	Measuring Chamber Top	-
7	Measuring Disc	-
8	Baffle	-
9	Measuring Chamber-bottom	-
10	Adjusting Screw (Old Style)	053080

Item	Description	Part Number
11	O-Ring, Buna	048865
	O-Ring, Viton	048866
12	Adjusting Screw, Cap	052195
13	O-Ring	048895
14	Register Assembly (See "Register Assemblies" on page 27 for the list)	-
15	Adjusting Screw (New Style; places items 10-12)	053081

Register Assemblies

3-Wheel Disc Register Phenolic (shown above)

Item	Description	Part Number
1	US Gallons, Gas, Gasboy only	035963
2	US Gallons, Diesel, Gasboy only	035964
3	Full Liter, Gas, Gasboy only	036293
4	Full Liter, Diesel, Gasboy only	036130
5	1/10 Liter, Gas, Gasboy only	048478
6	1/10 Liter, Diesel, Gasboy only	036131

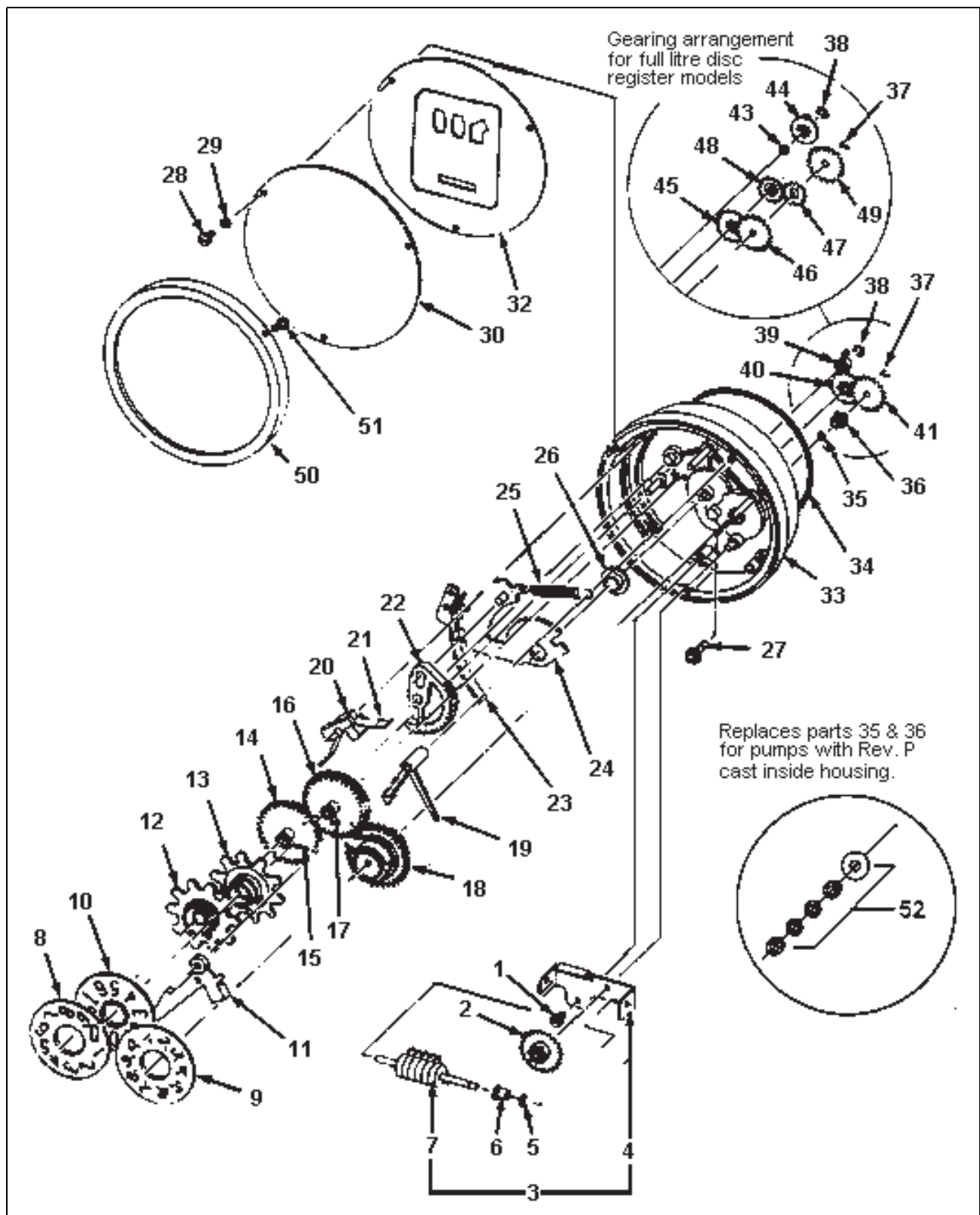
4-Wheel Push-button Register - Bronze Chamber

Item	Description	Part Number
1	1820RC, US Gallons, Gas, Gasboy only	048901
2	1820RC, US Gallons, Diesel, Gasboy only	048900

4-Wheel Push-button Register Phenolic (Not Shown)

Item	Description	Part Number
1	US Gallons, Gas, Gasboy	036400
2	US Gallons, Diesel, Gasboy	036401
3	Liter, Gas, Gasboy	036404
4	Liter, Diesel, Gasboy	036405

3-Wheel Meter Register (for Models 1820)



1860/3860 3-Wheel Meter Register (for Models 1820)

Description	Kit Number
US Measure, Gasboy	035634
Liter Measure, Full, Gasboy	036296
Liter Measure, 1/10, Gasboy	035640
Imperial Measure	035638

Item	Description	Part Number
1	Screw	052840
2	Totalizer Drive Gear	028615
3	Totalizer Assembly (items 4-7. Not sold separately).	065305
8	L H Number disc	024280
9	R H Number disc	024310
10	Center Number disc	024220
11	Overthrow stop center & L H Wheels	063220
12	L H Count Wheel	028225
12A	L H Wheel Assembly (Includes items 12, 14, 15)	068994
13	Center Count Wheel	027580
13A	Center Wheel Assembly (Includes items 13, 16, 17)	068993
14	L H Reset Gear	028245
15	L H Reset Pawl	042070
16	Center Reset Gear	027600
17	Center Reset Pawl	042040
18	Wheel and Clutch Assembly	068995
19	Overthrow Stop Pawl	042055
20	Detent Spring Retainer	048805
21	Detent Spring	057580
22	Reset Sector Gear	054325
23	Reset Lever Shoe	056425
24	Reset Lever	033822
25	Reset Lever Spring	057895
26	Reset Lever Bearing	012085
27	Register Drive Gear & Shaft	054955
28	Dial Mask Screw	052840
29	Fiber Washer	067780
30	Dial Glass	028780
32	Dial Mask US Gallons & Imperial Gallons, 1820	035394
	Dial Mask, Liter, Tenths, 1820	035380
33	Register Housing	022675
34	O-Ring	049075
35	O-Ring	048865
36	Bearing and Seal Assembly (Use only when Revision K is cast inside of housing #33 If other Revision, see item 52).	014095

Item	Description	Part Number
37	Drive Key	031345
38	Retaining Ring	049390
50	Bezel (72 models)	012250
51	Bezel Screw (72 models)	053605
52	Bearing & Seal Assembly (Use only when Revision P is cast inside of housing #33. If other Revision, see item 36).	036995

Note: Due to meter redesign, meters manufactured after May 10, 1995 use the new style change gears. Older meters use the old style change gears.

Change Gears-U.S. Gallons (New Style)

Item	Description	Part Number
Gasoline or Diesel		
39	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
40	Cluster Gear, Gas, 32T-11T	028129
41	Drive Gear, Gas, 36T	028448

Change Gears-U.S. Gallons (Old Style)

Item	Description	Part Number
39	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
40	Cluster Gear, Gas, 33T-11T	027715
	Cluster Gear, Dsl, 34T-11T	027655
41	Drive Gear, Gas, 36T	028448
	Drive Gear, Dsl, 37T	028450

Change Gears-Imperial Gallons

Item	Description	Part Number
39	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
40	Cluster Gear, Gas, 34T-10T	027670
	Cluster Gear, Dsl, 35T-10T	027685
41	Drive Gear, Gas, 38T	028465
	Drive Gear, Dsl, 39T	028480

Change Gears-Liters, Tenths (New Style)

Item	Description	Part Number
39	Control Block, 26T	012505
40	Cluster Gear, 18T-11T	027705
41	Drive Gear, 36T	028448

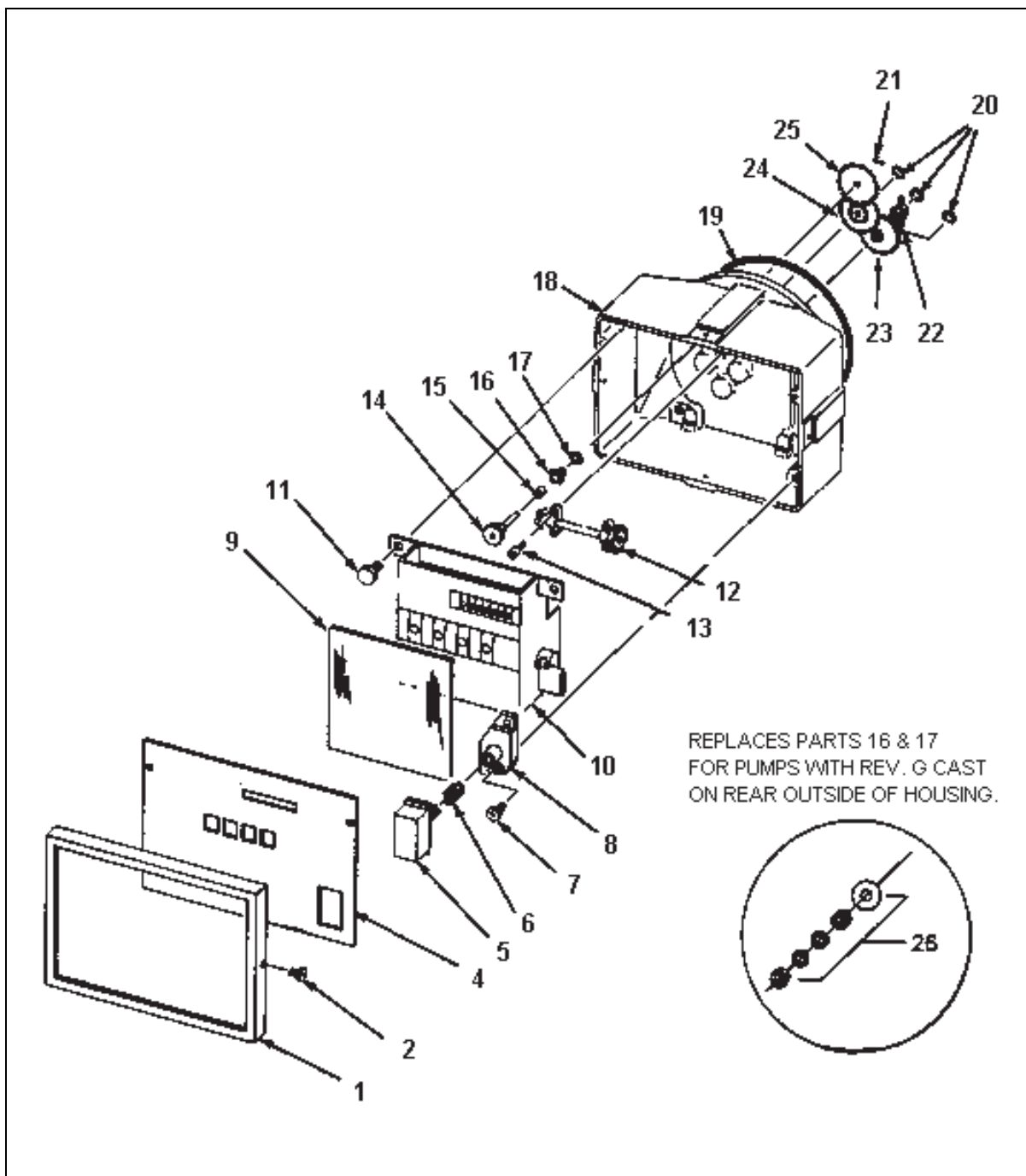
Change Gears-Liters, Tenths (Old Style)

Item	Description	Part Number
39	Control Block, 26T	012505
40	Cluster Gear, Gas, 18T-11T	027705
	Cluster Gear, Dsl, 19T-11T, 1820S only	027700
41	Drive Gear, Gas, 36T	028448
	Drive Gear, Dsl, 38T	028465

Change Gears-liters, Full (999 liters)

Item	Description	Part Number
3	Totalizer Assembly (All Black Wheels)	065309
9	R H Number disc (Full Liter)	024315
27	Register Drive Gear & Shaft	053318
32	Dial Mask (Full Liter)	035381
43	Spacer Washer	068454
44	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
45	Cluster Gear, Gas, 32T-11T	028129
	Cluster Gear, Dsl, 34T-11T	027655
46	Gear, 38T	028229
47	Gear, 24T	028230
48	Cluster Gear, 14T-25T	028231
49	Drive Gear, Gas, 34T	028232
	Drive Gear, Dsl, 35T	028228

4860 4-Wheel Register (Models 72S and 1820R)



Description	Kit Numbers
U.S. Measure, 72S, Gasboy	036341
Imperial Measure, 72S, Gasboy	036345
Liter Measure, 1820R, Gasboy	036361
Liter Measure, 1820R, External Shaft, Gasboy	036373
Liter Measure, 72S, Gasboy	036343
US Measure, 1820R, Gasboy	036357
US Measure, 1820R, External Shaft, Gasboy	036353

Item	Description	Part Number
1	Bezel	012236
	Bezel, 1820R	012267
2	Bezel Screw	052693
4	Dial Mask, 72	035309
	Dial Mask, 1820R	035307
5	Reset Button	017269
6	Spring, setback	057985
7	Reset Bearing Screw	053737
8	Reset Bearing	011816
9	Dial Glass	028736
10	Register Assembly (incl glass)	S00758
	Register Assembly, External Shaft (incl glass)	S00765
11	Register Screw	053901
12	Drive Shaft Assembly	054513
13	Drive Shaft Assembly Screw	053626
14	Drive Shaft and Gear	054522
15	Spacer	056791
16	Bearing and Seal Assembly (Use if no letter is cast onto rear of housing #18. If Revision G, see item 26).	014095
17	O-Ring	048865
18	Register Housing	031020
	Register Housing, 1820R	048426
19	O-Ring	049075
20	Retaining Ring - E	049390
21	Drive Key - Spring	031345
26	Bearing & Seal Assembly (Use only when Revision G is cast onto rear of housing #18. If no Revision, see item 16).	036995

Note: Due to meter redesign, meters manufactured after May 10, 1995 use the new style change gears. Older meters use the old style change gears.

Change Gears-US Gallons (New Style)

Item	Description	Part Number
Gasoline or Diesel		
22	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
23	Cluster Gear, 12T-39T	028168
24	Cluster Gear, Gas, 15T-38T	028172
25	Drive Gear, 36T	028448

Change Gears-U.S. Gallons (Old Style)

Item	Description	Part Number
22	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
23	Cluster Gear, 12T-39T	028168
24	Cluster Gear, Gas, 15T-38T	028172
	Cluster Gear, Dsl, 15T-39T	028173
25	Drive Gear, Gas, 37T	028450
	Drive Gear, Dsl, 38T	028465

Imperial Gallons (New Style)

Item	Description	Part Number
22	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
23	Cluster Gear, 12T-39T	028168
24	Drive Gear, 38T	028450
25	Cluster Gear, 13T-39T	028174

Imperial Gallons (Old Style)

Item	Description	Part Number
22	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
23	Cluster Gear, 12T-39T	028168
24	Cluster Gear, 13T-39T	028174
25	Drive Gear, Gas, 38T	028450
	Drive Gear, Dsl, 39T	028163

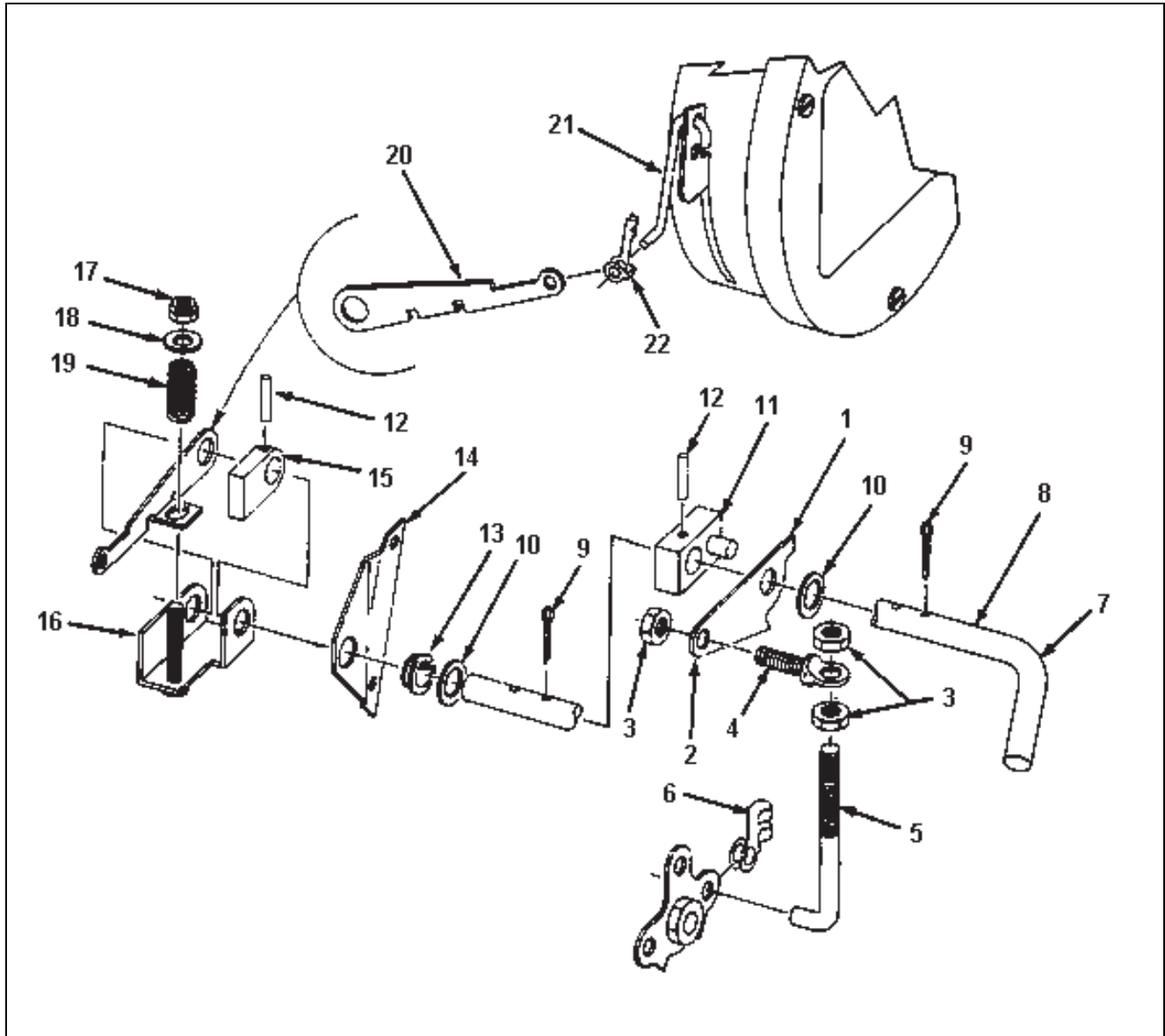
Liter Measure (New Style)

Item	Description	Part Number
Gasoline or Diesel		
22	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
23	Cluster Gear, 15T-38T	028172
24	Cluster Gear, 29T-36T	028175
25	Drive Gear, 25T	028151

Liter Measure (Old Style)

Item	Description	Part Number
22	Control Block, 12T	012491
	Control Block, Bronze, 12T	012490
23	Cluster Gear, Gas, 15T-38T	028172
	Cluster Gear, Dsl, 15T-39T	028173
24	Cluster Gear, 29T-36T	028175
25	Drive Gear, Dsl, 26T	028171
	Drive Gear, Gas, 25T	028151

Model 1820 Register Setback and Switch Linkage Assembly

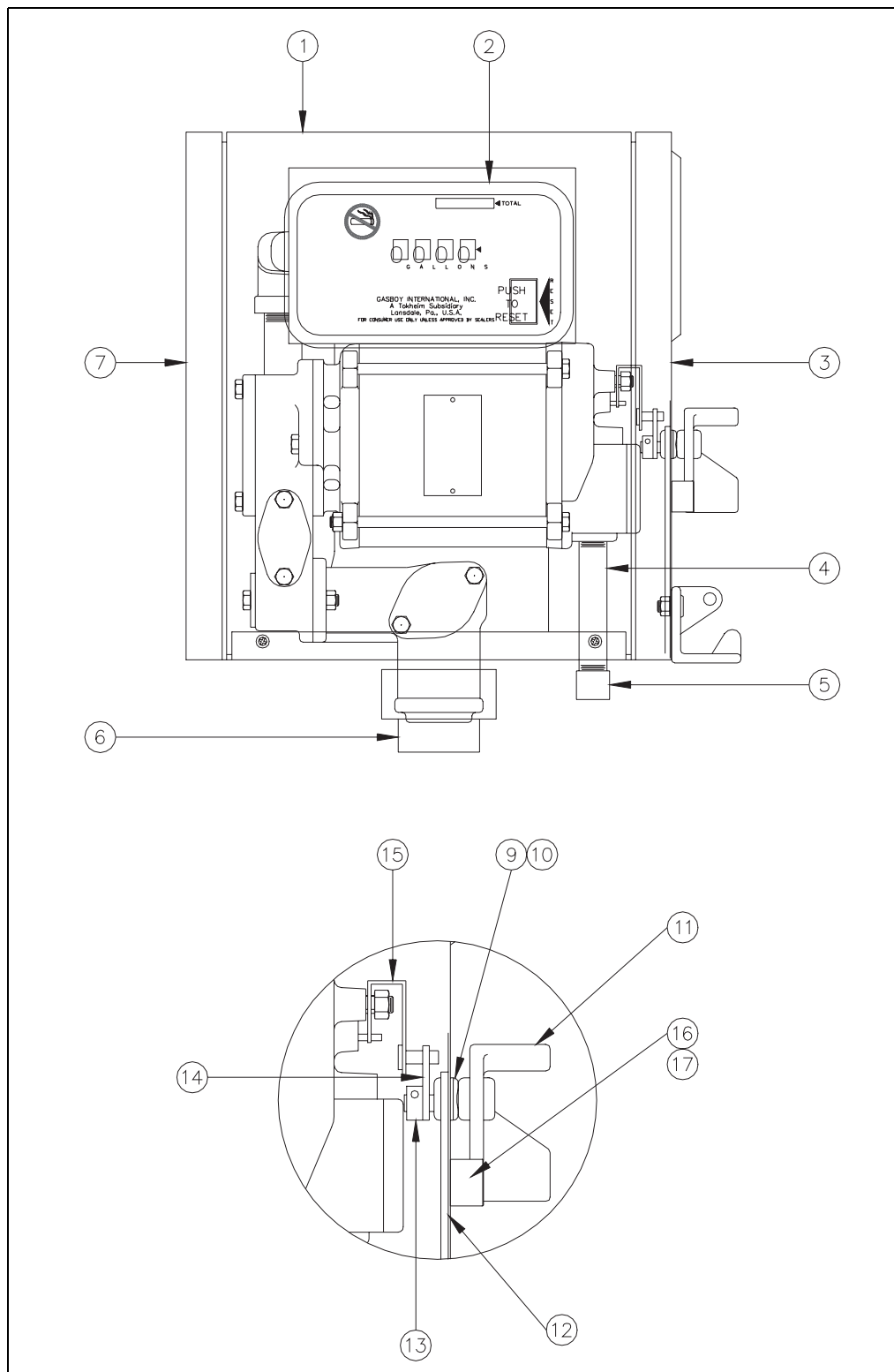


Item	Description	Part Number
1	Switch Rod Assembly (consists of items 2-5)	051206
2	Switch Lever, 1820	034155
3	Hexagonal Lock Nut	038905
4	Adjusting Screw	051730
5	Switch Rod	050755
6	Throttle Clip - L H	021040
7	Control Shaft (consists of items 8-20)	054654
8	Control Shaft	054610
9	Cotter Pin	042355
10	Washer	068635
11	Drive Block Assembly	012520
12	Drive-Lock Pin	042596
13	Nyliner Bearing	039815
14	Shaft Bracket	011870
15	Drive Block, Reset	012641
16	Reset Arm Driver Assembly	024776
17	Hexagonal Nut	038875
18	Washer	067270
19	Spring Reset	057925
20	Reset Arm	010827
21	Reset Link	034804
22	Throttle Clip - R H	020935

Optional Kits for Series 72 and 1820 Pumps

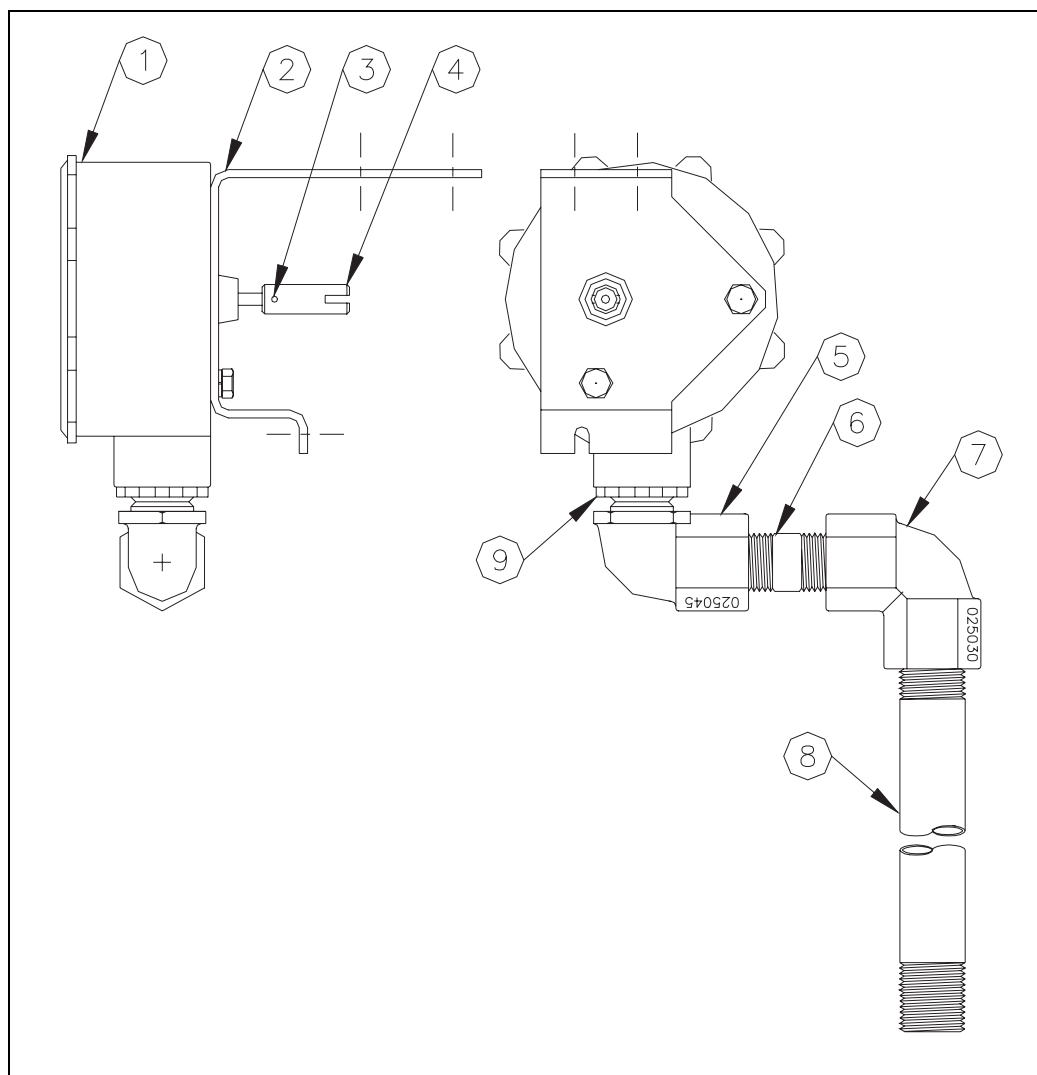
Item	Description	Part Number
1	Kit, Wall-Mount 1820/1820R	032765
2	Kit, Filter - 1820R (for use with wall mount kit 032765)	032711
3	Kit, Filter - 1820 (for use with wall mount kit 032765)	032712
4	Kit, Filter 1820/1820R Diesel/Gas	032814
5	Kit, Repair 72, 1820	032888
6	Kit, Vacuum Breaker 1820R	032701
7	Kit, Vacuum Breaker Tubing and Fittings (does not include Vacuum Breaker)	032700
8	Kit, Vapor Recovery (72VR)	047575
9	Register Rebuild Kit, 1860	032889
10	Register Rebuild Kit, 4860	033026

1820R



Item	Description	Part Number
1	Cover-1820R, CRS	022194
	Cover-1820R, SS	022971
2	Bezel	012267
3	Panel Assembly-Right, CRS	041384
	Panel Assembly-Right, SS	041383
4	Conduit 1/2 x 5	021374
5	Thread Protector 1/2" MNPT	017931
6	Install-a-Socket	003835
7	Panel Assembly-Left, CRS	022193
	Panel Assembly-Left, SS	022970
	Panel Assembly-Left, CRS, Pulser	022988
	Panel Assembly-Left, SS, Pulser	022979
8	Panel-Back, CRS (Not Shown)	040754
	Panel-Back, SS (Not Shown)	040811
9	Washer - 5/16 plated	068080
10	Washer - Spring 7/16	068281
11	Switch Arm Assembly	051072
12	Frame Assembly	026575
13	Set Screw, Socket Head, 10-32x1/4 HF	053516
14	Cam Assembly	017578
15	Switch Actuator Assembly	033748
16	Eccentric Stop	063209
17	Flathead Screw	052314

1820R Pulser and Junction Box Assemblies



Item	Description	Part Number
1	Pulser, 10:1	021788
2	Bracket Pulser	014646
3	Spiral Pin	043211
4	Pulser Coupling	021943
5	Elbow, ½ x 90 M/F	025045
6	Conduit, ½ x 1-3/4	021532
7	Elbow, ½ x 90 F/F	025030
8	Conduit, ½ x 9-1/2	021378
9	Conduit Locknut	039130

Items Not Shown

Item	Description	Part Number
1	Junction Box	003340
2	Junction Box Cover	003515
3	Washer, Brass Cupped	067506
4	Screw, 10-32 x 3/8 Slotted Ground	052976

This page is intentionally left blank.

UL[®] is a registered trademark of Underwriters Laboratories Inc.



GASBOY

© 2007 GASBOY

7300 West Friendly Avenue · Post Office Box 22087

Greensboro, North Carolina 27420

Phone 1-800-444-5529 · <http://www.gasboy.com> · Printed in the U.S.A.

MDE-4673 Consumer Electric Pumps Installation / Operation / Parts Manual · May 2007