

Series 4860 Meter Register

# Installation/Operation/Parts

#### **Company Programs and Documentation**

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#### **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 This equipment has been tested and found to comply with the limits for a class A qualitative period of the PCC Rules. These mints are designed to provide reasonable protection against naminal interference when the equipment is operated in a communication mintroment. 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**

MH7404

MH10581

#### Gasboy International, Greensboro, is an ISO 9001:2000 registered facility. Underwriters Laboratories: **New York**

City: U.L. File# Products listed with U.L NYFD of A # Product MH4314 All dispensers and self-4823 9100A, 9140A, 9152A, 9153A, 9800A, 9840A, 9850A, contained pumping units 9852A,

4997

5046

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

California Air Resources Board (CARB):

Power operated Transfer Pump Models 25, 25C, 26, 27, MH6418

28, 72, 72S, 72SP, 72X, 73 and 1820

Hand operated Transfer Pump Models 1230 Series 1243 Series, 1520 and 1720 Series

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** 

NCWM - Certificate of Compliance Gasboy pumps and dispensers are evaluated by the National Conference of Weights and Measures (NCWM) under the National Type Evaluation Program (NTEP). NCWM has issued the following Certificates of Compliance (COC):

9853A, 9140

9822A, 9823A

9153Q.

9853Q

9100Q, 9140Q, 9152Q,

9800Q, 9840Q, 9852Q,

COC# Product	Model #	COC#	Product	Model #	COC # Product	Model #
95-179A2 Dispenser	9100 Retail S 8700 Series, 9700 Series	91-019A2	Dispenser	9100 Commercial Series		
95-136A5 Dispenser	9800 Series	91-0573A3	Dispenser	1000 Series 2000-CFN Series		

#### **Patents**

Gasboy products are manufactured or sold under one or more of the following U.S. patents:

### **Dispensers**

#### Point of Sale/Back Office Equipment

D335,673

#### **Trademarks**

Non-registered trademarks	Registered trademarks		
Atlas™	ASTRA®		
Consola™			
Infinity™	Fuel Point®		
	Gasboy <sup>®</sup>		
	Keytrol <sup>®</sup>		

Slimline

Additional U.S. and foreign trademarks pending.

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

Additional U.S. and foreign patents pending.

### IMPORTANT WARNINGS AND SAFEGUARDS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**DO** ensure pump is properly grounded.

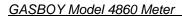
**DO** ensure hose is compatible with fluid being dispensed.

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

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

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

MDE-4430 (formerly 035282) March 2005



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### **INSTALLATION/OPERATION/PARTS**

### INSTALLATION

The 4860 meter can be installed either vertically or horizontally in a piping system. The inlet and outlet are 90° apart and can be rotated in relation to the register by 90° increments. Install a strainer in the meter inlet to prevent jamming from foreign material. A 40 mesh or finer basket is required.

### **OPERATING CHARACTERISTICS**

The 4860 meter uses a nutating disc type measuring chamber and can be calibrated using an adjusting screw. The pushbutton register records in gallons or liters up to 999 9/10. The totalizer is a 7-wheel counter which records up to 999,999.9 gallons or liters. Pushing in the reset button resets the four-wheel register to zero. Change gears permit the meter to be US gallons or liter measure. The 4860 meter will accurately measure liquids with viscosities of less than 120 SSU (60°F) (16°C) at flow rates from 4 to 15 GPM or 15 to 57 LPM. Although designed specifically for petroleum products, the 4860 meter can be used in applications where the materials are compatible with recommendations of the manufacturer of the chemical or substance under consideration.

### **CALIBRATION**

NOTES:

This meter was redesigned causing the calibration procedure to be different depending on the age of your meter. Meters made after May 10,1995 are referred to as new style meters; meters made before that date are referred to as old style.

This meter is for consumer use only and not for re-sale. It is not sealable by Weights and Measures.

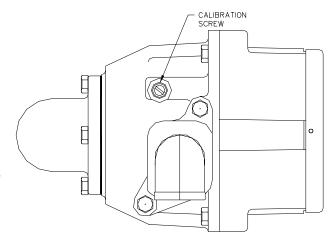
All GASBOY meters are adjusted for accurate measure for diesel within  $\pm$  .05 gallons at the factory. However, since the conditions of the installation can affect pump accuracy, it is the responsibility of the installer to check the pump for accuracy and make any needed adjustments.

Choose the flow rate at which the meter will be used most often for the zero calibration point. For example, if the pump 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  $\pm$  cubic inches.

For old style meters only, remove cap screw, 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.

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.



For new style meters, start with the screw turned all the way in clockwise. For gasoline calibration, turn the screw approximately two full turns counter-clockwise. For diesel, turn the screw approximately two additional full turns counter-clockwise.

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.

#### **SERVICE**

### **WARNING:**

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

NOTE: Numbers in parentheses correspond to the numbers shown on the parts illustration and parts list on pages 4 and 5.

To service the pushbutton register, remove two (one on each side) screws (2) from bezel (1). Remove bezel (1), gasket (3), and dial mask (4). Reset button (5) and spring (6) are released when dial mask is removed. Remove screws (7), reset bearing (8) and screws (11) and lift out register assembly. Drive shaft assembly (12) may be removed by taking out four bearing screws.

### Replacing Bearing and Seal Assembly (Item 16, Old Style)

To replace the shaft seal or service the gear train on back of register housing (18), remove housing from meter body by taking out four screws. *NOTE: The meter housing will be full of liquid so some means should be available to catch what drains from the case and lines.* To remove gears (22-25), remove three retaining rings (20) and drive key (21). Withdraw the drive shaft and gear (14), spacer (15), meter stuffing box (16), and O-ring (17). Slide new O-ring over new bearing seal like you would slide a ring on your finger. Insert shaft (14) through spacer (15) and bearing (16) as shown in the exploded view. Press entire assembled shaft and seal through housing and seat the square of the bearing firmly into the recess in the register housing (18). Reassemble the balance of the register in reverse order of disassembly.

### Replacing Bearing and Seal Assembly (Item 48, New Style)

To replace the bearing and shaft seal assembly (48), or service the gear train on back of register housing (18), remove housing from meter by taking out four screws. *NOTE: The meter housing will be full of liquid so some means should be available to catch what drains from the case and lines.* To remove gears (22-25), remove three retaining rings (20) and drive key (21). Withdraw the drive shaft and gear (14), spacer (15), and all parts of bearing and seal assembly (48). Remove the nylon washer from item 48 and note its location. Remove both oilite bearings and both O-rings from bore in register housing. Using new parts, which consist of a new nylon washer, 2 oilite bearings, and 2 O-rings, reassembly parts in reverse order. Be sure to lubricate both O-rings with an O-ring lubricant before assembling.

#### **Reassemble Gear Train**

Reassemble gear train as follows: gear (24), key (21), cluster gear (25), retaining ring (20), control block (22), and retaining ring (20).

#### **B-SIZE MEASURING CHAMBER DISASSEMBLY**

The B-size measuring chamber can be removed for cleaning by taking out the four meter body screws (33) and lifting off the register housing (18). Remove the three measuring chamber screws (26). After separating the two halves and cleaning, reassemble, making sure the metal baffle (30) is seated in the groove in the two halves and through the slot in the measuring disk (29). Do not sharply strike or drop the phenolic parts while handling. Rotate the disk (29) to make sure it turns freely and replace in the meter body (32). Do not overtighten the screws. A torque of 20-25 pounds is sufficient. When reassembling the register to the old meter body, use a new Oring (19).

#### **PARTS LIST**

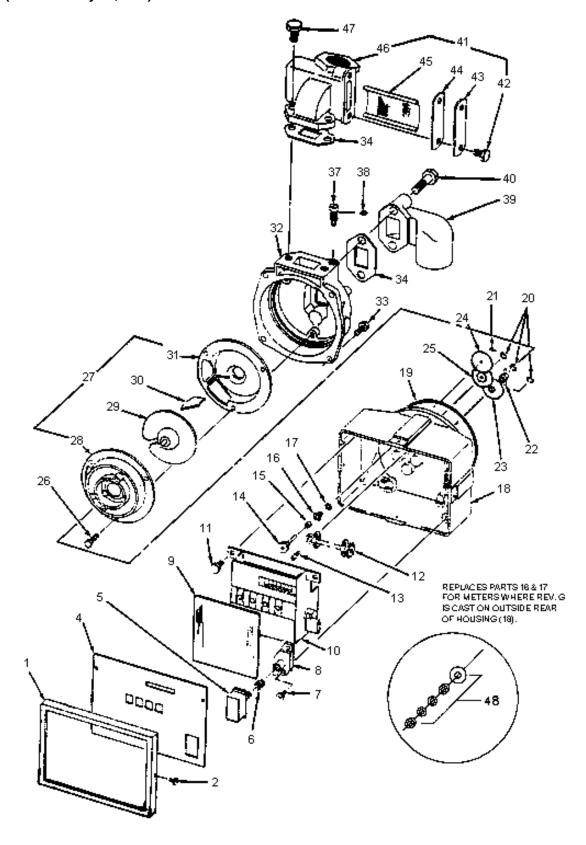
This manual lists parts information for the Model 4860 Meter. Using part numbers when ordering will expedite your order and reduce the possibility of the wrong parts being shipped. When ordering replacement parts, be sure to give the complete name and part number as shown in the appropriate parts lists.

Procedures requiring disassembly of portions of the meter 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.

#### **WARNING:**

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

NEW STYLE (Mfr. after May 10,1995)



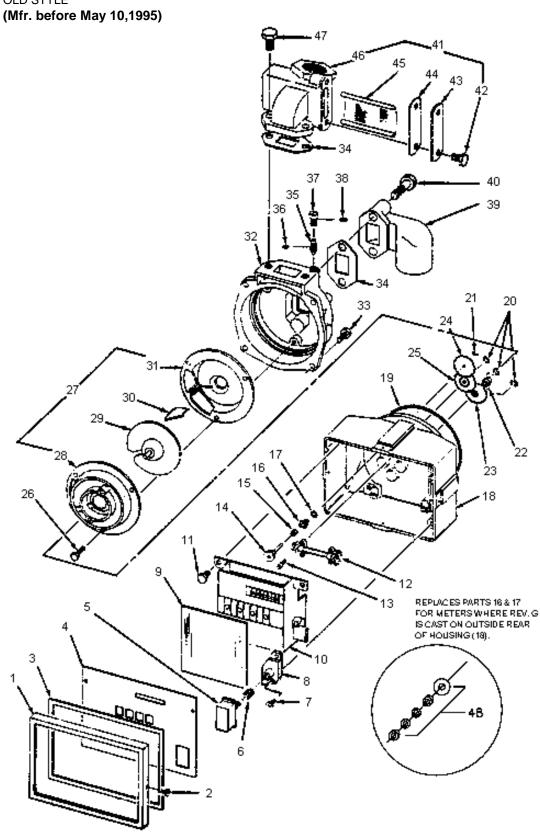
### **NEW STYLE METER - MANUFACTURED AFTER 5-10-95**

036341 Meter Register, US Gallons036343 Meter Register, Liters

036400 Register Assy., US Gallons (Consists of items 1-18, 20-25)
036404 Register Assy., Liters (Consists of items 1-18, 20-25)

Item	Part No.	Description	Item	Part No.	Description	
1	012236	Bezel	41	063400	Inlet Flange & Strainer	
2	053625	Bezel Screw	41	003400	Assembly, 1"	
4	035309	Dial Mask, U.S. & Imperial	42	Q10624 13	Strainer Cover Screw	
	035313	Dial Mask, Liter Measure	43	022915	Strainer Cover	
5	017269	Reset Button	43	027355	Strainer Cover Gasket	
6	057985	Reset Button Spring	45	063295	Strainer Cover Gasket	
7	053737	Reset Bearing Screw	46	003295	Strainer Body, 1", 60 <sup>0</sup>	
8	011816	Reset Bearing	47	051985	Inlet Flange Screw	
9	028736	Dial Glass	48	036995	Bearing & Seal Assy. (new	
10	S00758	Register and Glass	70	030333	style)	
		Assembly			NOTE: New style assy. used	
11	K85736 55	Register Screws			on meters made after mid-	
12	054513	Drive Shaft Assembly			1993. Use items 16 & 17 if	
13	053626	Drive Shaft Assembly Screw			no Rev is cast onto rear of	
14	054522	Drive Shaft and Gear			housing.	
15	056791	Spacer			riodoliig.	
16	014095	Bearing & Seal Assy. (old	СНА	NGE GEARS		
		style) Use item 48 if Rev G	<b>U</b> 1			
		is cast onto rear of housing.	us -	Gas and Dies	el	
17	048865	O-ring	22	012491	Control Block, 12T	
18	031020	Register Housing Assembly		012490	Control Block, Bronze, 12T	
19	049075	O-ring	23	028168	Cluster Gear, 12T-39T	
20	049390	Retaining Ring	24	028448	Drive Gear, 36T	
21	031345	Drive Key	25	028172	Cluster Gear, 15T-38T	
22 -2		See Change Gears below			, , , , , , , , , , , , , , , , , , , ,	
26	025851	Screw, phenolic chamber		Liters - Gas and Diesel		
	052750	Screw, bronze chamber	22	012491	Control Block, 12T	
27	019016	Measuring Chamber,		012490	Control Block, Bronze, 12T	
		phenolic (Standard, sold as	23	028172	Cluster Gear, 15T-38T	
		assembly only. Consists of	24	028151	Drive Gear, 25T	
	040045	items 28-31)	25	028175	Cluster Gear, 29T-36T	
	019015	Measuring Chamber, Bronze				
20		(Optional)	Impe	rial - Gas and	Diesel	
28 29		Measuring Chamber, Top	22	012491	Control Block, 12T	
30		Measuring disk Baffle		012490	Control Block, Bronze, 12T	
31		Measuring Chamber, bottom	23	028168	Cluster Gear, 12T-39T	
32	012790	Meter Body	24	028449	Gear, 37T	
33	K43625	Meter Body Meter Body Screw	25	028174	Cluster Gear, 13-39T	
34	M05618B001	=				
3 <del>4</del> 37	053081	Adjusting Screw				
38	048895	O-ring				
39	003560	Discharge Flange, 1"				
40	K01904	Discharge Flange, 1 Discharge Flange Screw				
70	130 1 30 <del>4</del>	Discharge Flange Sciew				

### OLD STYLE



036343		Meter Register, Liter Gas					
036345		Meter Register, Imperial Gas					
036400		Register Assy., US Gasoline (Consists of items 1-18, 20-25)					
0364		Register Assy., US Diesel (Consists			· · · · · · · · · · · · · · · · · · ·		
0364		Register Assy., Liter Gas (Consists of					
0304	-04	Negister Assy., Liter Gas (Consists t	ווכוו	15 1-10, 20-2	.5)		
ltem	Part No.	Description	ltem	Part No.	Description		
		•			•		
1	012236	Bezel	41	063400	Inlet Flange & Strainer		
2	053625	Bezel Screw	40	04000440	Assembly, 1"		
4	025200	Dial Mack II S. & Imporial	42 43	Q10624 13 022915	Strainer Cover Screw Strainer Cover		
4	035309 035313	Dial Mask, U.S. & Imperial Dial Mask, Liter Measure	43 44	027355	Strainer Cover Gasket		
5	017269	Reset Button	45	063295	Strainer		
6	057985	Reset Button Spring	46	003305	Strainer Body, 1", 60 <sup>0</sup>		
7	053737	Reset Bearing Screw	47	K01901	Inlet Flange Screw		
8	011816	Reset Bearing	48	036995	Bearing & Seal Assy. (new		
9	028736	Dial Glass			style)		
10	S00758	Register and Glass			NOTE: New style assy. used		
		Assembly			on meters made after mid-		
11	K85736 55	Register Screws			1993. Use items 16 & 17 if no		
12	054513	Drive Shaft Assembly			Rev is cast onto rear of		
13	053626	Drive Shaft Assembly			housing.		
14	054522	Screw Drive Shaft and Gear	СПУ	NCE CEAR	S - U.S. GALLONS		
15	056791	Spacer	22	012491	Control Block, 12T		
16	014095	Bearing & Seal Assy. (old	22	012491	Control Block, 121 Control Block, Bronze, 12T		
10	014000	style) Use item 48 if Rev G	23	028168	Cluster Gear, 12T-39T		
		is cast onto rear of housing.	24	028450	Drive Gear, 37T, Gas		
17	048865	O-ring		028465	Drive Gear, 38T, Diesel		
18	031020	Register Housing Assembly	25	028172	Cluster Gear, 15T-38T, Gas		
19	049075	O-ring		028173	Cluster Gear, 15T-39T, Diesel		
20	049390	Retaining Ring					
21	031345	Drive Key			S - LITERS, TENTHS (99.9)		
22 -2		See Change Gears below	22	012491	Control Block, 12T		
26	025851 052750	Screw, phenolic chamber Screw, bronze chamber	23	012490 028172	Control Block, Bronze, 12T Cluster Gear, 15T-38T, Gas		
27	019016	Measuring Chamber,	23	028172	Cluster Gear, 15T-39T, Diesel		
21	013010	phenolic (Standard, sold as	24	028151	Drive Gear, 25T, Gas		
		assembly only. Consists of	- '	028171	Drive Gear, 26T, Diesel		
		items 28-31)	25	028175	Cluster Gear, 29T-36T		
	019015	Measuring Chamber,					
		Bronze (Optional)			S - IMPERIAL GALLONS		
28		Measuring Chamber, Top	22	012491	Control Block, 12T		
29		Measuring disk		012490	Control Block, Bronze, 12T		
30		Baffle	23	028168	Cluster Gear, 12T-39T		
31		Measuring Chamber,	24	028449	Drive Gear, 37T, Gas		
32	012790	bottom Meter Body	25	028163 028174	Drive Gear, 39T, Diesel Cluster Gear, 13-39T		
33	K43625	Meter Body Screw	23	020174	Cluster Gear, 13-391		
34	M05618B001	Gasket					
35	053080	Adjusting Screw					
36	048865	O-ring					
37	052195	Adjusting Screw Cap					
38	048895	O-ring					
39	003560	Discharge Flange, 1"					
40	K01904	Discharge Flange Screw					

Meter Register, US Gas

036341

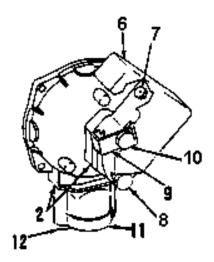
### SPECIFIC METER MODEL CONFIGURATIONS

All flanged castings are interchangeable and can be mixed to match special requirements. Please consult the nearest Gasboy representative for special applications. All configurations shown on this page and the next page use the following parts list.

Item	Part No.	Description	Item	Part No.	Description
1	K47659	Inlet Flange Screw	8	K04395	Discharge Screw
2	M05618B001	Gasket	9	030205	Nozzle Hook
3	003597	Inlet Flange, 3/4", 150	10	K01904	Body & Nozzle Hook Screw
4	K04395	Discharge Flange Screw	11	003650	Inlet Flange, 1"
5	003542	Discharge, 3/4", Vac. breaker	12	Q10624 31	Inlet Flange Screw
6	003235	Hose Drain Valve Body	13	003560	Discharge Flange, 1"
7	066570	Vacuum Breaker			

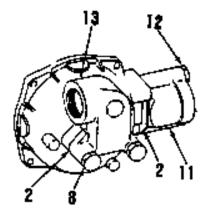
### 035867 Model 4860-7A For Hand Pump Applications

Hose drain valve body equipped with vacuum breaker to permit easy draining of hose and prevent siphoning on aboveground tank applications. Nozzle boot and hook provided to hang up hand pump nozzle. 1" NPT inlet; 3/4" NPT outlet.



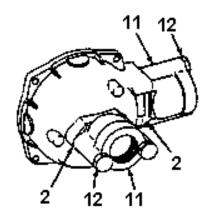
### 035882 Model 4860-4D For Straight Piping Applications

Register can be oriented to any of four 90° positions for proper reading to conform to vertical or horizontal straight piping requirements. 1" NPT inlet and outlet.



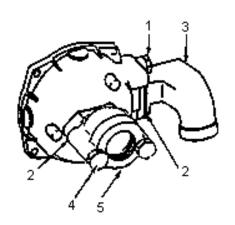
### 035888 Model 4860-4E For 90° Turn Piping Applications

Register can be oriented to any of four  $90^{\rm o}$  positions for proper reading to conform to piping requirements. 1" NPT inlet and outlet.



### 035936 Model 4860-4F For Electric Pump Applications

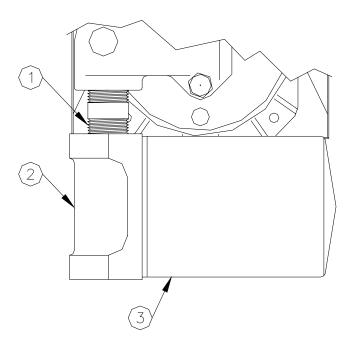
Inlet flange offset to tip register back 15° from vertical for convenient reading. Discharge flange angled at 30° to prevent hose kink at coupling. 3/4" NPT inlet and outlet.



### 033026 REPAIR KIT, 4860 METER

Item	Part No.	Description
1	S00758	Register and Glass Assembly
2	036995	Meter Parts-Stuffing Box
3	M05618B001	Gasket, Inlet-Outlet
4	027355	Gasket, Strainer Cover
5	031345	Key, Spring
6	057985	Setback Spring
7	048895	O-RIng, 5/16 x 7/16
8	049075	O-RIng, 4-5/8 x 4-7/8
9	049390	E-Ring, 5-33-15
10	011816	Bearing
11	017269	Reset Button
12	014095	Bearing, Seal-Stuffing Box
13	048865	O-Ring, 5/32 x 9/32

### **METER BREAKDOWN/FILTER**



Item	Part No.	Description
1	R11495 46	Pipe, 1 x 1-3/4"
2	003044	Filter Adapter, 1"
3	026005	Filter, 7 Micron, Particulate only
	026015	Filter, 30 Micron, Water and Particulate
	026042	Filter, 10 Micron, Water and Particulate
	025909	Filter, 1 Micron, Particulate only, Methanol

### **GASBOY**

7300 West Friendly Avenue, P.O. Box 22087, Greensboro, NC 27420 ● 1-800-444-5529



#### GASBOY WARRANTY POLICY STATEMENT

# (Limited Warranty) New Product WARRANTY

# GASBOY GUARANTEES NEW SERVICE STATION EQUIPMENT MANUFACTURED BY GASBOY IN ACCORDANCE WITH THE PROVISIONS STATED BELOW:

Gasboy will repair or replace parts and equipment found to be defective in materials or workmanship during the warranty period, subject to the following:

- Labor and travel costs incurred by the Authorized Service Contractor (ASC) while servicing Gasboy equipment are included, unless excepted, and will be paid at previously contracted rates to the qualified ASC.
- Warranty services must be performed by the nearest Authorized Service Contractor qualified to perform service on the defective equipment.
- Gasboy will supply new or rebuilt parts to replace parts which are found to be defective within the warranty period. Parts returned to Gasboy must be shipped with transportation charges paid and will be replaced with parts with transportation charges prepaid by Gasboy.
- New Equipment installations must be registered with the Gasboy Call Center within 24 hours of installation to receive full warranty benefits; otherwise, the warranty period commences at the date of invoice.
- Warranty service response time is 24 hours from time service is requested, Monday through Friday (8:00 am until 5:00 pm), excluding weekends. Emergency warranty response time is on-site within 4 hours. Hazardous warranty response time is on-site within one hour. Priority situations, emergency and hazardous, include imminent release of hazardous of dangerous materials, situations with imminent danger to life or property, and a complete site-down situation or 50 percent or more of the fuel dispensing capacity for any one product is inoperative. Overtime will be paid for priority situations only occurring outside routine warranty service hours.
- Warranty repair requiring rented equipment, overtime premium, lodging or charter travel must be approved in advance of service expenditure by the Gasboy Warranty Administration Department.

### Commercial Pumps and Dispensers, Full -Cabinet Consumer Pumps

Commercial Pumps and Dispensers, Full-Cabinet Consumer Pumps are warranted against defects in material and workmanship for one year from date of installation or 24 months from date of original invoice, whichever occurs first. Warranty coverage includes parts and labor.

Exclusions: This warranty excludes hose breakaways, nozzles, hoses and fittings, nozzle-end swivels, retriever cables, graphics materials specified by the customer, fuel filters, belts adjustments, meter calibration, fluorescent lamps, vapor recovery testing and balance system piping, customer-specified items manufactured by others, and customer requested reprogramming of equipment. Some of these excluded items may be warranted by their manufacturer, and warranty claims in connection with these items should be presented directly to the manufacturer.

### Small Transfer Pumps, Meters, Pressure Regulators

Small Transfer Pumps, Meters and Pressure Regulators are warranted against defects in material and workmanship for 24 months from date of installation or 30 months from date of original invoice, whichever occurs first. Non-registered equipment warranty will default to invoice date. The warranty covers parts only. Excepting the Model 2020 Hand Pump, which has a 90-day part warranty from date of original invoice.

### **New Spare Parts**

All new spare parts or warranted replacement parts are warranted against defects in material and workmanship for one year from date of original invoice. The warranty covers parts only.

#### **Keytrol**

The Keytrol is warranted against defects in material and workmanship for one year from date of installation or 24 months from date of original invoice, whichever occurs first. Warranty coverage includes parts and labor

#### **Fuel Management Systems**

CFN/Profit Point, Series 1000/FleetKey, TopKAT, and factory installed Fuel Point Reader are warranted against defects in material and workmanship for one year from date of installation or 24 months from date of original invoice, whichever occurs first. Warranty coverage includes parts and labor.

Standalone and Retrofit Fuel Point Readers, and Fuel Point-vehicle and dispenser components are warranted against defects in material and workmanship for one year from date of installation or 24 months from date of original invoice, whichever occurs first. The warranty covers parts only.

The warranty for field installed/retrofitted Fuel Point Readers is non-transferable. The removal and installation of such components into another pump/dispenser will void the warranty.

#### **Fuel Management Systems**

Peripherals (Modems, CRT's, Flat Screen, Scanner, PIN Pad, Customer Display, ) are warranted against defects in material and workmanship for one year from date of installation or 24 months from date of original invoice, whichever occurs first The warranty covers parts and labor.

Printers (Logger, Receipt, etc.) are warranted against defects in material and workmanship for 90 days from date of installation or 180 days from date of original invoice. The warranty coverage is parts and labor.

Peripherals (Encoders and Embossers) are warranted against defects in material and workmanship for six months from date of original invoice. The warranty covers parts only.

#### **General Exclusions**

- Problems caused by faulty installation are not covered by this warranty. This warranty applies only if equipment has been installed and used in accordance with Gasboy Installation,
  Operating and Service Instructions. Problems caused by improper maintenance of equipment are not covered by this warranty.
- 2. Use of service personnel other than qualified Gasboy service providers without prior approval of the Warranty Administration Department will void payment of the warranty claim in question.
- 3. Damage suffered by Gasboy's equipment resulting from shipping, accident, power surges, neglect, misuse, act of Nature, or abuse is not covered by this warranty.
- 4. Use of non-Gasboy replacement parts, defects caused by the unauthorized addition of non-Gasboy items to Gasboy equipment or by the unauthorized alteration of Gasboy equipment voids this warranty.
- 5. THIS WARRANTY DOES NOT COVER ANY INDIRECT DAMAGES OR LOSS OF PRODUCT OR REVENUE. Repair or replacement of the defective part or component under the terms of this warranty is the EXCLUSIVE REMEDY. Gasboy is not liable for incidental, consequential or indirect damages or loss, including without limitation personal injury, death, property damage, environmental damages, product damages, loss of product, or loss of revenue or profits. Gasboy is not liable for any claims or lawsuits against the customer.
- 6. This warranty does not cover any pump or dispenser components in contact with fuels containing more than 5% methanol or 10% ethanol or 15% MTBE by Volume. This warranty does not cover any component(s) exposed to M85/E85 fuel or other alcohol rich fuel.

# THE WARRANTY CONTAINED HEREIN IS EXCLUSIVE AND THERE ARE NO OTHER EXPRESSED, IMPLIED OR STATUTORY WARRANTIES. WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED

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