

9120K and 9820K Series AST Pumps

Service and Parts Manual

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 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.

9122K, 9123K, 9822K, 9823K

Approvals

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

Site controller, Model 2000S CFN Series

Fuel Point Reader System

Data entry terminals, Model TPK-900 Series

Underwriters Laboratories (UL):		New York City Fire Department (NYFI		
UL File#	Products listed with UL	NYFD C of A # Product		
MH4314	All dispensers and self-contained pumping units	4823	9100A, 9140A, 9152A, 9153A, 9800A, 9840A, 9850A, 9852A,	
	Power operated Transfer Pump Models 25,		9853A, 9140	
MH6418	25C, 26, 27, 28, 72, 72S, 72SP, 72X, 73 and	4997	9822A, 9823A	
	1820	5046	9100Q, 9140Q, 9152Q, 9153Q,	
MH7404	Hand operated Transfer Pump Models 1230		9800Q, 9840Q, 9852Q, 9853Q	
WII17404	Series, 1243 Series, 1520 and 1720 Series	5087	8753K, 8853K, 9153K, 9853K	
MH10581	Key control unit, Model GKE-B Series		(restricted to diesel and non-	
	Card reader terminals, Models 1000, 1000P		retail gasoline sales)	
	Site controller, Model 2000S CFN Series	5091	8752K, 9152K	

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:

5129

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.

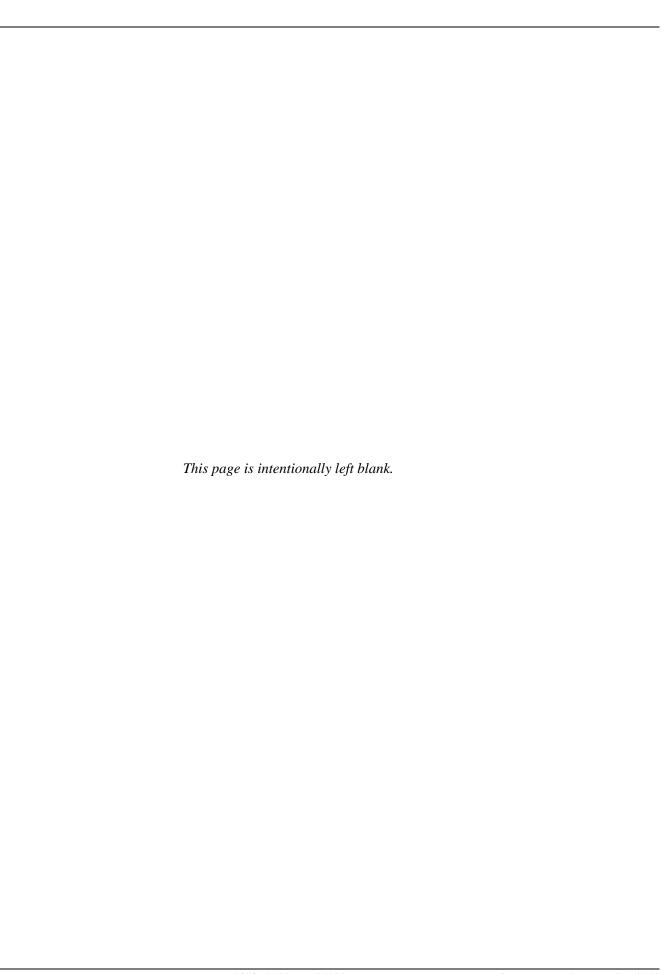
Trademarks

Non-registered trademarks	Registered trademarks	
Atlas TM	ASTRA®	
Consola™	Fuel Point®	
Infinity TM	Gasboy®	Additional US and foreign trademarks pending.
	Keytrol®	Other brand or product names shown may be
	Slimline®	trademarks or registered trademarks of their
		respective holders.



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Purpose Introduction

1 – Introduction

Purpose

This manual is provided to assist the Gasboy Authorized Service Contractor (ASC) in servicing the following units used with Aboveground Storage Tanks (ASTs):

- 9120K compact mechanical commercial pump
- 9820K electronic commercial pump

This manual also provides the parts list for the 9X20K units.

Note: Whenever information in this document applies to all the units listed above, the 9X20K model reference is used.

General Description

Model 9120K

The Gasboy Series 9120K pump units are UL®-listed.

Note: NFPA regulations do not allow tank-mounted pumps to be used for the resale of fuel.

Model 9120K offers four-wheel mechanical-interlock registers. Mechanical pump registers show the total volume for a delivery up to 999.9 gallons.

Standard features and specifications of the 9120K Series pumps are as follows:

- Discharge elbows
- A 12-foot length of hose
- A working voltage of 115/230VAC, 50/60 Hz
- Mechanical Volume Totalizer
- A switch detect and optional pulser outputs which allow monitoring of the register's operation when it is connected to an automated fuel management system.
- Four-piston, positive-displacement meter
- Belt-driven, positive-displacement rotary-vane pump with an 80 mesh (300 micron) strainer and integral air-separation
- Cabinet height of 25.4 inches. The other dimensions may be found on the base layout.
- The standard cabinet finish has the top, sides, and back painted black while the front panel is painted white.
- Filters

Introduction General Description

The available options and accessories for the Gasboy Series 9120K pumps are as follows:

- Interchangeable Automatic Nozzles
- Pulsers
- Special Lengths of Hose
- Vapor Recovery System
- 380 VAC 3-Phase Motor

Model 9820K

The Gasboy Series 9820K Aboveground Storage Tank Remote Access (ASTRA) pump units are UL-listed.

Note: NFPA regulations do not allow tank-mounted pumps to be used for the resale of fuel.

The 9820K Series consists of two metal cabinet assemblies.

- One assembly is mounted on top of the tank and contains the pumping unit, meter, electronic pulser, and all hydraulics. The hose and nozzle are connected to this assembly.
- The second assembly is mounted at a height to permit easy access by a user. It contains the electronic register, controls, display and nozzle boot.

The Standard features and specifications of the 9820K Series pumps are as follows:

- One-inch high, 6-digit, backlighted Liquid Crystal Display (LCD)
- 1000:1 dual-phase, error-checking pulser (gallons); 250:1 dual-phase, error-checking pulser (liters)
- AC authorization line for control of the unit
- Reset complete (Switch Detect) output that allows monitoring of the unit's operation when it is connected to an automated fueling system
- Resettable electronic totalizer
- Discharge elbow
- Both models use a quiet and efficient pump which features an air eliminator, built into the pump casting. The pump meter is a three piston, positive displacement meter which is tested and calibrated for accuracy at any speed or pressure up to the maximum working pressure of 50 psi.
- The standard pumping cabinet finish is white. The electronic register cabinet is black with a blue graphics panel.
- Dual Stage Solenoid Valve
- Filter

Available options and accessories for the Gasboy 9820K Series pumps are as follows:

- Pulser output drive line (open collector), capable of driving 1, 10, 100, 250 and 500 pulses per unit (gallons) or 1, 10, & 100 pulses per unit (liters)
- RS-485 communication for direct connect to Gasboy CFN or TopKATTM equipment
- Battery backup for display of last transaction and capture of stored pulse count in the event of a power failure.
- · Mechanical totalizer
- A working voltage of 115 VAC (115/230 for motor) 60 Hz for domestic use, 230 VAC 50 Hz/60 Hz for international use.
- Other options include listed automatic nozzles, special lengths of listed hose assembly, listed dual swivels, UL-recognized filters, Vapor Recovery, and Vapor Recovery Ready.

Abbreviations and Acronyms

Term	Description
AC (or ac)	Alternating Current
ASC	Authorized Service Contractor
AST	Aboveground Storage Tank
ASTRA	Aboveground Storage Tank Random Access
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
CPU	Central Processing Unit
DC (or dc)	Direct Current
LCD	Liquid Crystal Display
NEC	National Electrical Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Association
PCB	Printed Circuit Boards (preferred term: board)
STP	Submerged Turbine Pump
UL	Underwriters Laboratory

Introduction		Abbreviations and Acronyms
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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.

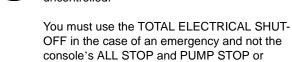
Emergency Total Electrical Shut-Off

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).

⚠ 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.



Total Electrical Shut-Off Before Access

similar keys.

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

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

Signal Words

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

lack

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.

▲ WARNING

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

▲ WARNING

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

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

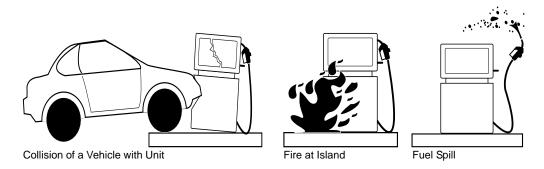


Spilled fuels, accidents involving pumps/dispensers, or uncontrolled fuel flow create a serious hazard.

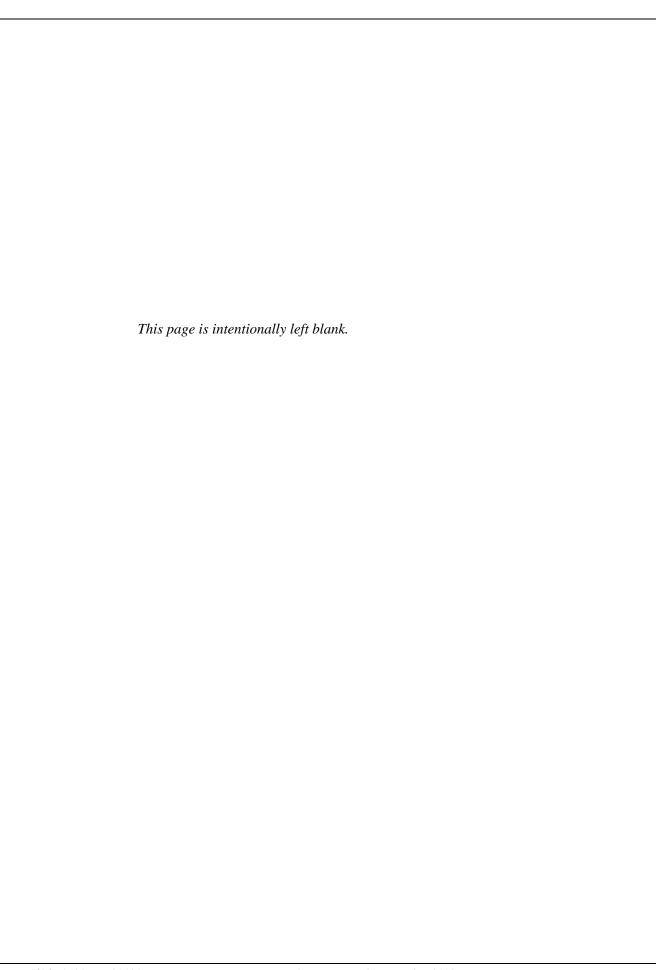


Fire or explosion may result, causing serious injury or death. Follow established emergency procedures.

The following actions are recommended regarding these hazards:



- 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.



General Preventive Maintenance

3 – Preventive Maintenance

General

Gasboy pumps are designed and constructed to give many years of uninterrupted service. In fact, operators report years of trouble-free operation with absolutely no service expense. Yet, certain parts of a pump are bound to wear, and Gasboy therefore recommends a periodic inspection, at least twice a year, for such things as fuel leaks, belt tension and condition, lubrication and strainer cleanliness. If such a procedure is followed, any small adjustments that are necessary can be made before expensive, annoying breakdowns occur. The result of this sound approach is continuous, profitable service from all of your Gasboy equipment.



WARNING



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

Hints for Better Pump Performance

Demand Competent Service

Gasboy suggests all service be done by certified Gasboy Authorized Service Contractors (ASCs) trained and familiar with the service of Gasboy products. Warranty service must be done by Gasboy ASC. Gasboy has a Distributor Network which services fuel dispensing and management systems in every section of the country.

Use Gasboy Authorized Parts

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

Preventive Maintenance Preventive Maintenance

Operate with Reasonable Care

Like any machine, the pump that is operated with reasonable care will last longer and give better service. Abuse should be avoided (such as dropping the nozzle on the ground, operating the unit with a dirty strainer, dragging the hose across the concrete island or driveway, running the pump with the nozzle closed for more than two minutes and so on). Parts that fail from abuse will not be covered by warranty. The time and care given to your pumps will be returned to you in the form of dependable service.

Preventive Maintenance

Refer to the "Important Safety Information" on page 5 and read and understand all the information contained there. It is recommended that all service to this unit be done by Certified Gasboy ASCs familiar with the operation of this equipment and safety requirements for servicing equipment in potentially hazardous condition or location.

Keep Water Out

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

Clean the Dial Face

Clean the dial face with a soft, clean, damp cloth as often as necessary. Do not use abrasive cleaners or those containing ammonia.

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 whenever a filter is changed. 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. Clogged strainers can commonly be cleaned using alcohol. Refer to item 3 in the parts list under "Meter Assembly" on page 24.



CAUTION



Always wear protective safety goggles or glasses when using compressed air.

Preventive Maintenance Preventive Maintenance

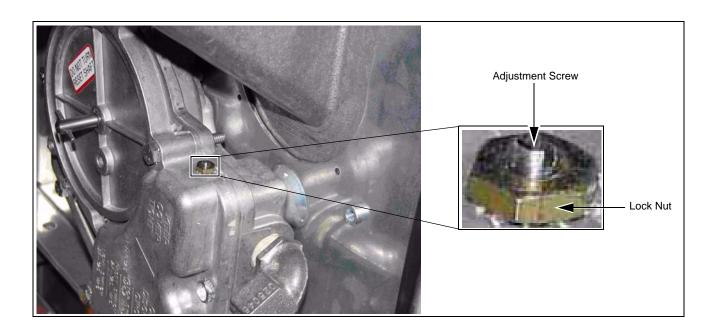
Change the Filter

If the unit is equipped with a filter, check and change it at regular intervals. A dirty filter in a pump will cause a slower delivery rate. Refer to the accessories section of your parts manual to ensure that you replace the filter with one designed for your model. Always use a drip pan directly below the filter when removing the cartridge to prevent contamination of the soil and to aid in fluid recovery. Refer to item 2 in the parts list under "Meter Assembly" on page 24.

Power Reset External Adjustment

If the pump or remote dispenser fails to reset or shut off properly, the reset motor may need to be adjusted. To adjust, proceed as follows:

- 1 Loosen the lock nut on the adjusting screw and back screw out until it stops.
- 2 Move the reset lever to the ON position.
- 3 Turn adjustment screw in until reset motor starts.
- 4 Advance adjustment screw an additional 1/2 to 3/4 turn. Hold screw in this position and tighten the lock nut.
- 5 Move the reset lever to the OFF position, and then back to the ON position to verify if the reset motor operates properly. The reset coupling should make one revolution and stop.



Preventive Maintenance Preventive Maintenance

Adjust the Belts

With proper care, belts will give exceptionally good service. A loose belt not only cuts down pumping speed, due to slipping, but also results in excessive wear.

On the 9X20K units, the belt can be tightened by removing a link from the belt.

Preserve the Finish of Your Pumps

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

The finish on Gasboy pump housings is a high-heat baked synthetic enamel, similar to that used on automobiles. The life of this finish can be lengthened several years if, at regular intervals, the painted surfaces are thoroughly cleaned with a non abrasive detergent and then protected with a coat of paste wax.

- Do not use abrasive cleaners.
- Do not use high pressure spraying equipment.
- Fuel stains can be removed using "Greased Lightening".

In order to retain the unmarked finish on stainless steel, occasional cleaning is required. In corrosive atmospheres, such as coastal areas, a more frequent cleaning schedule is necessary.

- Under ordinary conditions, washing with detergent or soap and water, followed by a clean water rinse, is sufficient.
 - Note: If hard water is used, the surface should be wiped dry with a soft clean cloth to prevent the formation of water spots.
- Marks or spots, such as grease, oily fingerprints and smudges which resist soap and
 detergents, will have to be removed with a stronger cleaner capable of removing all oil/
 grease completely (DO NOT use ordinary steel wool as iron particles may adhere to the
 surface and cause corrosion.)

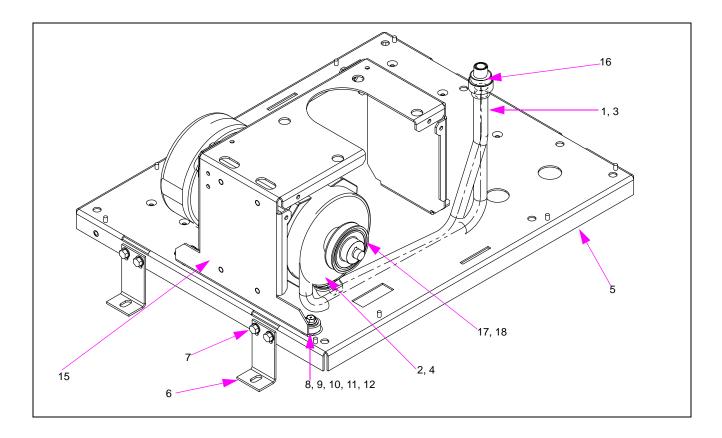
Note: Care should be taken in choosing a cleaner because any cleaning compounds or powders which contain abrasives can scratch a mill-rolled finish. Care must be exercised in their use to run in the direction of the polishing lines in the steel, never across them.

After cleaning, an application of paste wax is recommended to protect the surface and prolong the interval between cleaning.

Base and Motor Shaft Parts

4 – Parts

Base and Motor Shaft



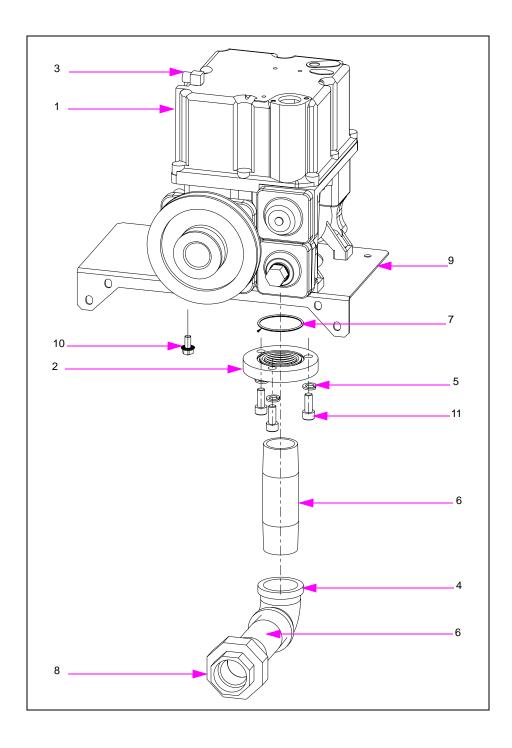
Item #	Part Description	Current Part	Previous Part	Quantity
1	Conduit, Motor to J-Box	M06978B001	-	1
2	Motors, Cont. Duty 61 Frame	R14213-32	-	1
3	Assembly Conduit Motor to J-Box	M07039B001	-	1
4	Electric Motor Frank In	M01068B302	-	1
5	Assembly, Bottom Panel 9x20k	M06582A001	-	1
6	Mounting Foot,9820 SS Tum	026401	-	4
7	Screw, Metric M8 X 18	M00417B009	-	8
8	Mount, Universal	M04871B001	-	4
9	Washer, Flat M20 Stl Znpl	M00959B019	-	4
10	Screw Metric M8 X 40	M00415B017	-	4
11	Belt Adjustable	M07022B002	-	0.0255
12	Flat Washer	M00959B008	-	4
13	Bracket, Reinforced Corner Gussett (Not Shown)	M06757B002	-	2

Parts Base and Motor Shaft

Item #	Part Description	Current Part	Previous Part	Quantity
14	Nut, Metric, Hex Serrd Flg (M8) (Not Shown)	M00414B003	-	4
15	Shelf, Motor Support	M06566A001	-	1
16	Union, Conduit 1/2 Inch	Q10016-04	-	1
17	Pulley A Belt 2.50 Pd	R18900-27	-	1
18	Pulley A Belt 3.00 Pd	R18900-32	-	1

Pump Assembly Parts

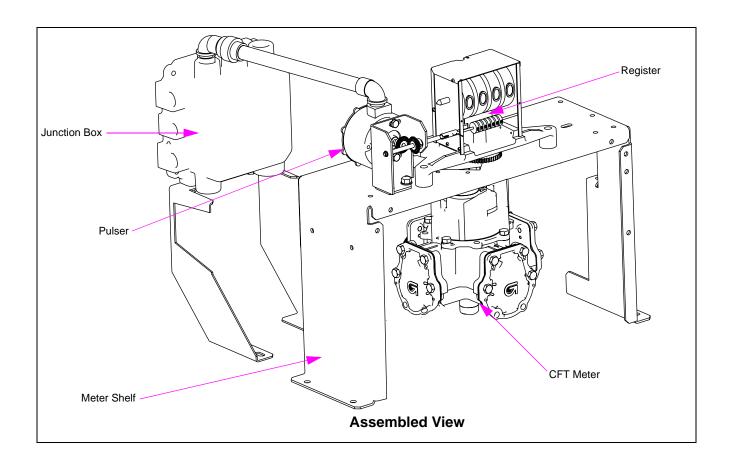
Pump Assembly

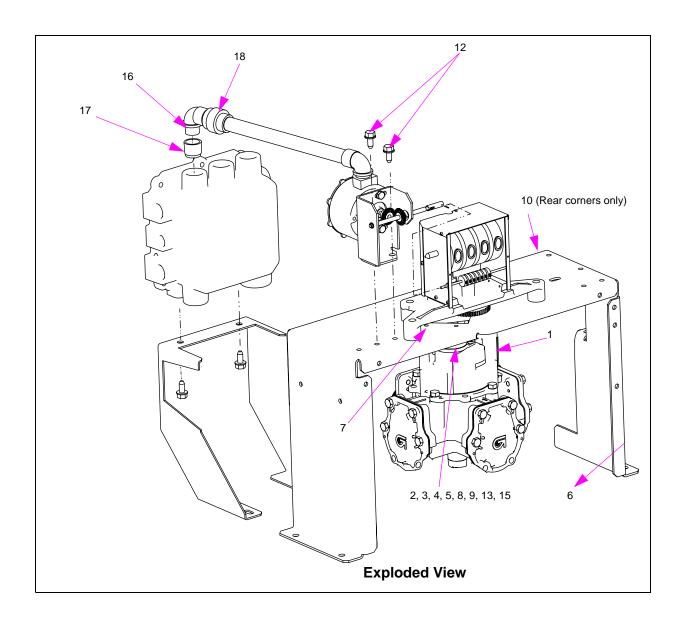


Parts Pump Assembly

ltem #	Part Description	Current Part	Previous Part	Quantity
1	Global Pumping Unit	M04920B003	-	1
2	Adaptor - EPZ Inlet	023146	-	1
3	Connection 90 Elbow Compression (Male)	Q12503-02	-	1
4	Elbow 1-1 1/2 90 deg 150 PSI MI	K46046	-	1
5	Lockwasher Metric M10 Zinc Plate	M01071B001	-	3
6	Nipple FEe Pipe 1 1/2 x 6.00	R11493-28	-	2
7	O-Ring 2.237 x 0.103	Q10067-31	-	1
8	Pipe Union, Female	K12179	-	1
9	Plate, Pump Mounting	M06738B001	-	1
10	Screw Metric M8 X 16	M00415B009	-	4
11	Socket Head Cap Screw, M10 X 25	M04973B005	-	3
12	Tube, Vent 9x20K (Not Shown)	M06650B003	-	1
GPU Re	pair Kits	-	-	
13	Bypass Valve	M04920K100	-	1
14	Strainer	M04920K101	-	1
15	Master Seal	M04920K102	-	1
16	Blades	M04920K103	-	1
17	Control Valves	M04920K104	-	1
18	Lip Seal	M04920K105	-	1
19	Pumping Element Field Rebuild	M04920K106	-	1
20	Sump Float - OIML (B005)	M04920K107	-	1
21	Pumping Element Shop Rebuild	M04920K108	-	1
22	Inlet Check Valve	M04920K109	-	1
23	Overflow Check Valve	M04920K110	-	1
24	Sump Float - Non OIML (B001)	M04920K111	-	1

Meter Shelf, J-Box, and 9123 Register, Reset and Pulser

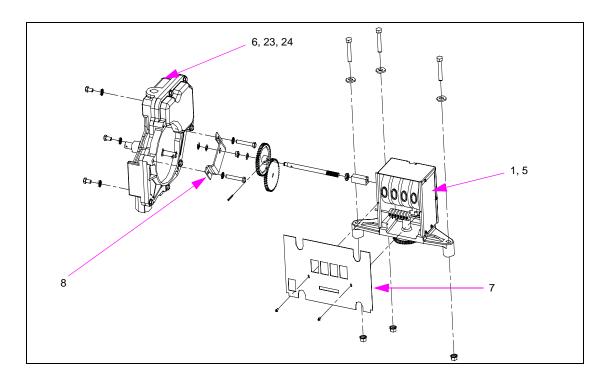




Item #	Part Description	Current Part	Previous Part	Quantity
1	Screw Hex Serr Flng Hd	Q10253-02	-	3
2	Washr Lk Ext Th 1/4x.025	K50411-31	-	1
3	Stud Drive Gear	N23567	-	1
4	Ball Swivel	K93546-01	-	1
5	Pin Cotter 1/16x1/2	K02124	-	1
6	Mounting Bracket, Meter Shelf	M06564A001	-	1
7	Screw, Metric M8 X 16	M00415B009	-	4
8	Gear Pinion 20 Th	K55151-21	-	1
9	Assy Drv Gear & Bush 21	K55152	-	1
10	Bracket, Reinforced Corner	M06757B002	-	2
11	Bracket Assy, Retriever (Not shown)	M06768A002	-	1
12	Screw, Metric M8 X 18	M00417B009	-	13

Item #	Part Description	Current Part	Previous Part	Quantity
13	Screw Skt Hd Cap 5/16-18	Q12081-02	-	1
14	Assy Drive Gear + Bushi	K53743	-	1
15	Gear Pinion 12 Th	K51008-24	-	1
16	Elbow Conduit 1/2 X 90 Male & Female	K42448	-	1
17	Bushing, Reducing	K49827-22	-	1
18	Union Conduit Male & Female 1/2	Q10016-04	-	1

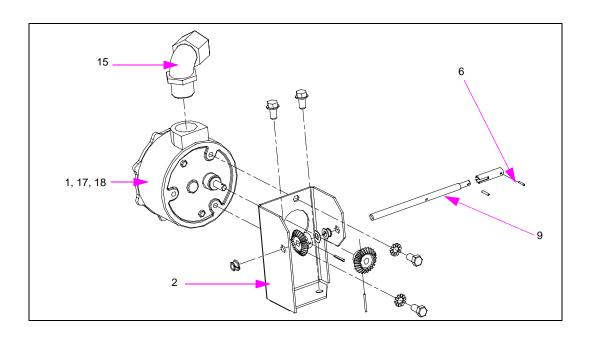
Reset/Register Module



Item #	Part Description	Current Part	Previous Part	Quantity
1	Drive Register Assembly 9120K, Gallons	022834	-	1
2	Nut Hex Keps W/ext Lkwshr	Q12068-06	-	1
3	Screw Hex Hd Cap Finished	K03782	-	1
4	Washer 5/16in Sae-n (.38 X	K65235-33	-	1
5	Drive Register Assembly 9120K, Liters	022835	-	1
6	Reset Assy Elec Unli 115/	048568	-	1
7	Dial-mask	GB91501G001	-	1
8	Bracket-gear & Shaft- 912	014040	-	1
9	Sleeve S/b As 1463-3	056710	-	1
10	Nut Hex 5/16-18 Chk	K01933	-	1
11	Shaft-reset Interlock-912	054510	-	1
12	Gear-60t(9120K Reset)	028235	-	1

Item #	Part Description	Current Part	Previous Part	Quantity
13	Washer, SS .260 X .500	068037	-	2
14	Brng Oilt Flng	N17706-43	-	1
15	Groovpin 1/8x7/8 Ils#2zn2	013128	-	1
16	Washer, lock Ext 1/4 1114	068891	-	3
17	Screw Hex Hd Cap Finished	K05287	-	3
18	Screw Tf Pnh Phl 4-40x	Q11769-02	-	2
19	Ring Ret 1/4	K76238-41	-	1
20	Bracket Assy, Side Frame 9120K (Not Shown)	M04295A001	-	1
21	Screw, Metric M8 X 18	M00417B009	-	2
22	Elbow Cndt 1/2x90 M & F	K42448	-	1
23	Reset/reg Mod 9120K Gal 1	042724	-	1
24	Reset Assy Elec Unli 230/	048677	-	1

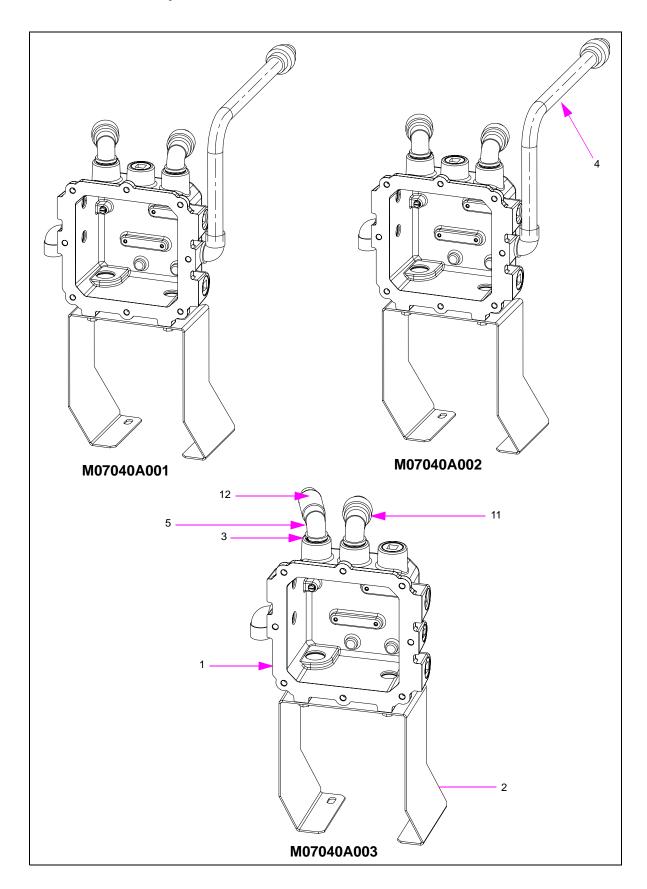
Pulser Module



Item #	Part Description	Current Part	Previous Part	Quantity
1	Plsr 10:1 Vr 769780-010	021788	-	1
2	Bracket, Pulser Shaft	M06740B001	-	1
3	Bearing Nyliner#4l2ff	011954	-	2
4	Gear Miter-24 T Mach Tank	028422	-	1
5	Pin Grv Type 1 3/32x5/8	K48724	-	1
6	Spirol Pin .062 X .750	Q10038-30	-	1
7	Screw Hex Hd Cap Finished	K05287	-	2
8	Washer, lock Ext 1/4 1114	068891	-	2
9	Shaft-totalizer-9120K	054526	-	1
10	Spirol Pin .052 X .375	Q10038-26	-	1

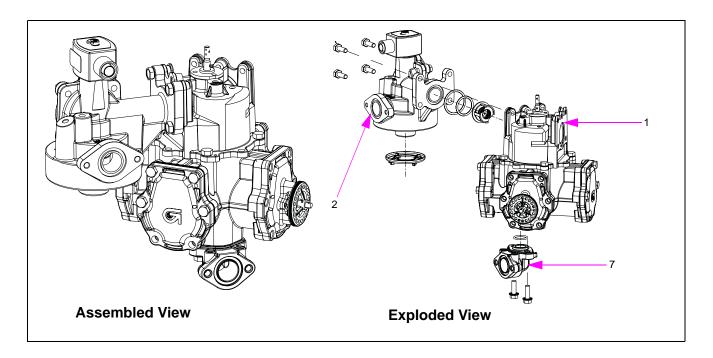
ltem #	Part Description	Current Part	Previous Part	Quantity
11	Washer, SS .260 X .500	068037	-	1
12	Screw, Metric M8 X 18	M00417B009	-	2
13	Coupling-totalizer 9120K	054527	-	1
14	Spirol Pin .078 X .437	Q10038-35	-	1
15	Elbow Cndt 1/2x90 M & F	K42448	-	1
16	Nipple Cndt 1/2 X 10-1/2 (Not Shown)	R11976-80	-	1
17	Pulser Mod 9120K C+10:1	042737	-	0
18	Plsr 100:1 Vr 767181-332	047648	-	1

Junction Box Assembly



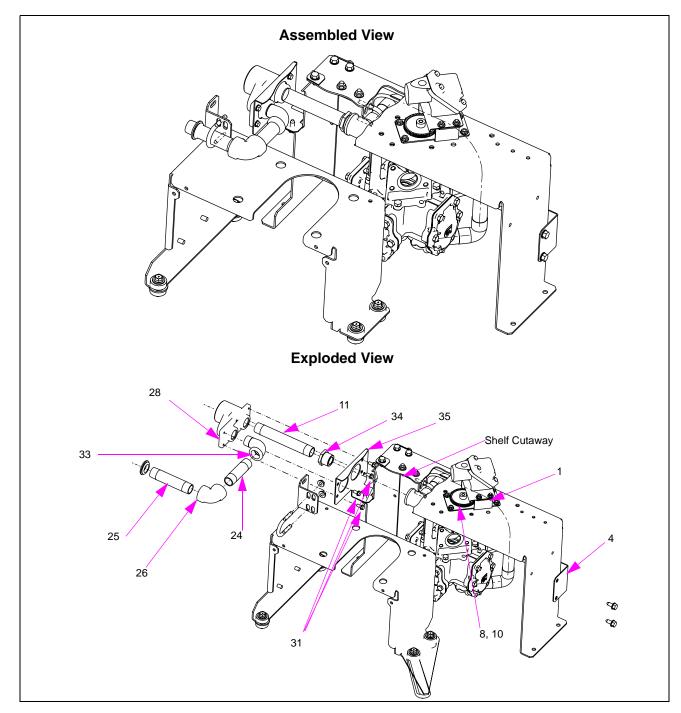
Item #	Part Description	Current Part	Previous Part	Quantity
1	Junction Box	M04480B010	-	1
2	Bracket, J-Box Mounting	M06649B001	-	1
3	Bushing, Reducing 3/4 - 1/2	K49827-22	-	2
4	Conduit, J-Box to Reset	M07002A001	-	1
5	Elbow, 1/2 X 90 M X F	K42448	-	4
6	Pipe Plug C-Sunk 1	K51440	-	1
7	Pipe Plug C-Sunk 1/2	K43850	-	1
8	Pipe Plug C-Sunk 3/4	K57624	-	4
9	Screw, Hex, Sltd, Thd Frng, Wshr Hd (10-32 X 1/2)	K85736-05	-	1
10	Screw TF, Hex Whsr Hd M X 18	M00417B009	-	2
11	Union Conduit 1/2 Inch	Q10016-04	-	3
12	Expansion Union (conduit)	N16289-20	-	1
13	Cover Junction Box	M04536B010	-	1

Meter Assembly



Item #	Part Description	Current Part	Previous Part	Quantity
1	CFT Meter Assembly	T20150-G9 T20150-G10	-	1
2	2- Stage Sol Valve and Filter Manifold	M04607B002 M04607B001	-	1
3	Strainer Insert High Capacity	R19457	-	1
4	Assy Meter Check Valve	N23619-G2	-	1
5	O-Ring 1.234 X 0.139	Q10068-09	-	1
6	O-Ring 1.609X 0.139	Q10068-14	-	1
7	Fitting, Discharge	M04624B040	-	1
8	O-Ring 0.862 X 0.103	N16891-32	-	1
9	Screw Metric M8 X 25	M00415B011	-	2
10	Bolt, Hx Hd Sems, 5/16-18x1" Lg	Q10865-36	-	4

9823 Pulser, Totalizer and Gear Train

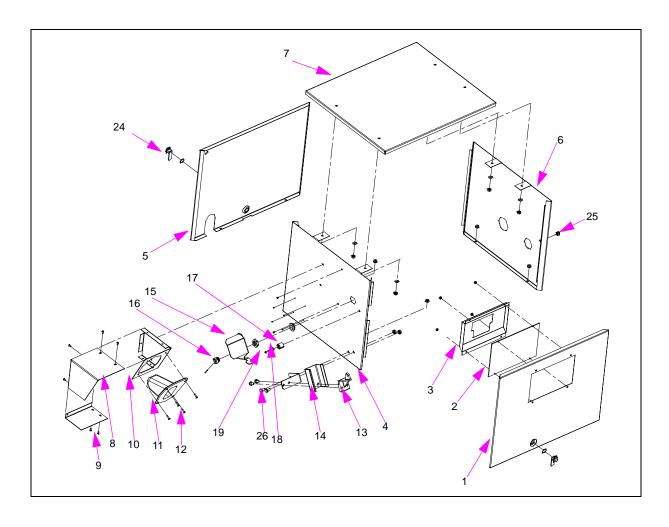


Item #	Part Description	Current Part	Previous Part	Quantity
1	Assy, Pulser Mtg Bracket	M07175A001	-	1
2	Nut, Metric Serrated	M00414B002	-	4
3	Kit-Totalizer, 9820 Gal Factory	025934	-	1
4	Assy, Bracket Ast Totlzr	M06737A001	-	1
5	Screw, Metric M8 X 18	M00417B009	-	2

Item #	Part Description	Current Part	Previous Part	Quantity
6	Tie Cable	Q10178-02	-	2
7	Kit-Totalizer 9820 Ltr Factory	025936	-	1
8	Assy, Brkt Gear Train	M07102A001	-	1
9	Nut, Metric Serrated	M00414B002	-	4
10	Assy, Brkt Gear Train	M07102A002	-	1
Vapor (S	Shown)	·		
11	Nippl 3/4 X 6-1/2 Lg	R11496 70	-	1
12	Assy, Feedline Tube	M06810A001	-	1
13	Flange Pump Discharge	M04686B001	-	1
14	Ring 0 1-1/8x1-3/8x1/8	Q10068-07	-	1
15	Screw Skt Hd Cap Metric	M04973B001	-	2
16	Screw Hex Serr Flng Hd	Q10253-02	-	4
17	Ring O 1-1/4x1-1/2x1/8	Q10068-09	-	2
18	Assy, Discharge Tube	M06809A001	-	1
19	Assy, Bracket U-bolt Mtg	M06767A001	-	1
20	Brakt U-bolt Mounting	M06767B002	-	1
21	U-bolt, Metric, M8	M00703B001	-	2
22	Nut, Metric M8 Serrated	M00414B003	-	6
23	Screw, Metric M8 X 18	M00417B009	-	6
24	Nipple 3/4 X 3-1/2	R11496-75	-	1
25	Nipple 3/4 X 4-3/8 Lg	R11496-84	-	1
26	Elbow-3/4 X 90 (Paint)	024955	-	1
27	Label Gasboy V/r Hose	M04039B003	-	1
28	Casting Splitter Vp Emco#	049980	-	1
29	Elbow Cndt 1/2x90 M & F	K42448	-	1
30	Condt, J-box To Valve	M07001B001	-	1
31	Screw Hex Hd Wshr Hd T-t	K85736-51	-	4
32	Screw, Metric M8 X 16	M00415B009	-	2
33	Elbow St 3/4 X 90 Mi	K21703	-	1
34	Bushg Red Hex Hd	K02297	-	1
35	Bracket, Vapor Casting	M06741B001	-	1
Non Vap	oor	•	•	
36	Nippl 1x10-3/4	R11495-24	-	1
37	Condt, J-box To Valve	M07001B001	-	1
38	Screw, Metric M8 X 16	M00415B009	-	2

Panels, Remote Register, Mounting Kits

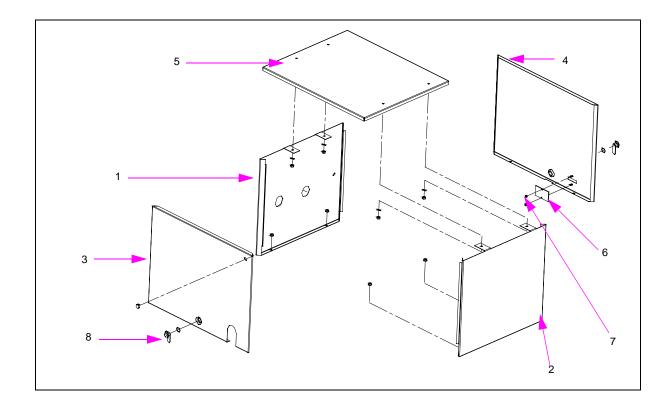
9123K



Item #	Part Description	Current Part	Previous Part	Quantity
1	Assy, Front Panel 9120K	M06583A002	-	1
2	Glass Window 9120K	028811	-	1
3	Brakt 9120K Totalizer Face	M06739B001	-	1
4	Panel Lh Side 9120K	M06584B002	-	1
5	Panel Back 9x20K	M06578B003	-	1
6	Panel Rh Side 9X20K	M06579B002	-	1
7	Assy, Top Panel 9X20K	M06758A001	-	1
8	Cover Nozzle Boot 9120K	026420	-	1
9	Screw Tc Pnh Phl 10-32 X	Q11769-76	-	6
10	Brkt Nozzle Boot Mtg	026403	-	1
11	Boot-noz;98a,88b/d (Mach)	003338	-	1
12	Screw Tpt Phil Fl Hd 8-32	Q13399-03	-	4

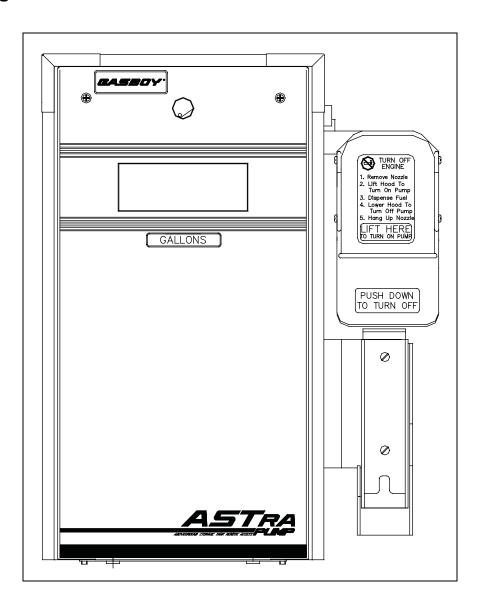
ltem #	Part Description	Current Part	Previous Part	Quantity
13	Bracket Nozzle Boot	026421	-	1
14	Guide-nozzle 9120	029027	-	1
15	Bracket Lever Reset 9120K	033992	-	1
16	Bushing Lever Reset 9120K	017234	-	1
17	Stop-eccentric Plastic	063204	-	1
18	Washer,.264 X .500 X .030	N16599-123	-	1
19	Screw Rd Hd Phil 8-32x1/2	Q11560-53	-	1
20	Nut Hex Slf Lock 5/16-18	Q10218 10	-	2
21	Nut, Metric, Flange	M00414B005	-	4
22	Nut, Metric Serrated	M00414B002	-	8
23	Rivet	047211	-	2
24	Cap Plug 2" Blk Plastic	Q10554-16	-	1
25	Plug Cap Plastic	Q10554-06	-	1
26	Screw Hex Serr Flng Hd	Q10253-02	-	4
27	Nut 1/2 Conduit Seal	K89681	-	1
28	Hook-Noz; 87, 88B/D, 91 (Mach)	003732	-	1
29	Grommet, .875 OD X .375	N15941-42	-	1
30	Pin GRV Type 5 1/8X1	K63742	-	1
31	Cover Nozzle Boot BTM	026419	-	1
32	Grommet DSCH-3/4"	028930	-	1

9823K



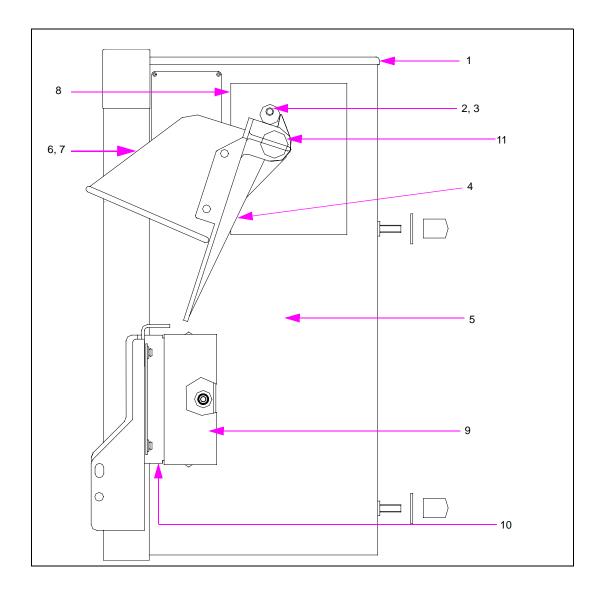
Item #	Part Description	Current Part	Previous Part	Quantity
1	Panel RH Side 9X20K	M06579B002	-	1
2	Panel LH Side 9820K	M06581B002	-	1
3	Panel Back 9X20K	M06578B003	-	1
4	Assembly, Front Panel 9820K	M06580A002	-	1
5	Assembly, Top Panel 9X20K	M06758A001	-	1
6	Window, Totalizer 9 Digit	069076	-	1
7	Nut, Metric, Flange	M00414B005	-	2
8	Lock-Door w/Clip (2" CAM)	035017	-	2
9	Plug Cap Plastic	Q10554-06	-	1
10	Grommet, .875 OD X .375	N15941-42	-	1
11	Nut, Metric Serrated	M00414B002	-	8
12	Cap Plug 2" Blk Plastic	Q10554-16	-	1
13	Grommet Dsch -3/4"	028930	-	1

Remote Register - Front View



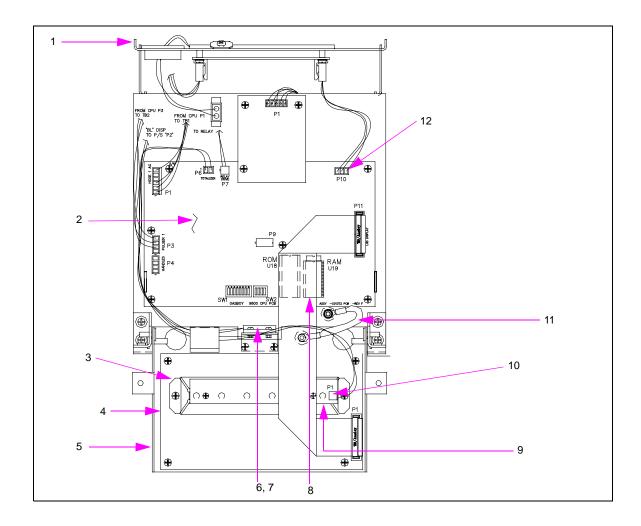
	ltem #	Part Description	Current Part	Previous Part
•	1	115 V Register (9823K)	C06676	-
2	2	230 V Register (9823K)	C06715	-

Remote Register - Side View



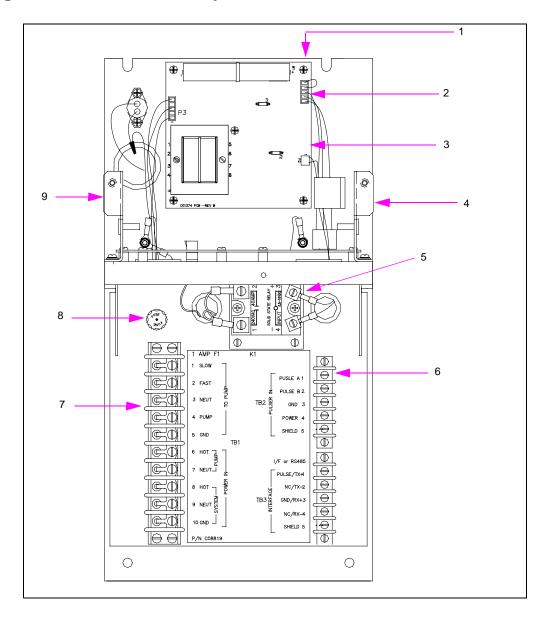
Item #	Part Description	Current Part	Previous Part
1	Panel, Top Cover, 9820 Register	040996	-
2	Stop	C09585	-
3	Cushion Sleeve	C09584	-
4	Lever, Control, 9820 Mach	003771	-
5	Housing Weld Assy.	040999	-
6	Hood	029416	-
7	Hood, Support Assembly	063507	-
8	Bearing Plate Assembly	045988	-
9	Cover	015760	-
10	Bracket, Tamper Proof	015694	-
11	Roll Pin, 1/8 X 1-3/8 (Not Shown)	042657	-

Remote Register Chassis Assembly - Top View



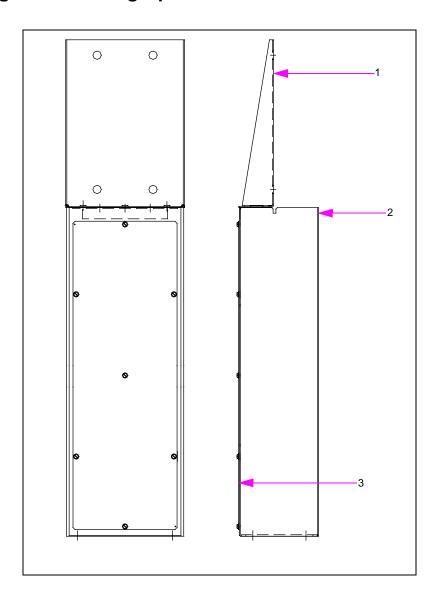
Item #	Part Description	Current Part	Previous Part
1	Weld Assy., Chassis	C35584	-
2	PCB Assy., CPU 120 VAC	C06394	-
3	Reflector, LCD Backlight	C35399	-
4	PCB Assy., LCD Display	C06387	-
5	Bracket Assy., Display Door	C35543	-
6	Cable Assy., Totalizer w/ Bracket	C06673	-
7	Actuator, Totalizer (Not Shown)	C01342	-
8	IC RAM 2K X 8	C01383	-
9	PCB Assy., LED Backlight	C06372	-
10	Cable Assy., Display/Power Supply	C06668	-
11	Cable Assy., Ground Strap	C06454	-
12	Cable Assy., DC Power	C06679	-

Remote Register Chassis Assembly - Front View



ltem #	Part Description	Current Part	Previous Part
1	Weld Assy, Chassis	C35584	-
2	Cable Assy., DC Power	C06679	-
3	PCB Assy., PS w/o Battery, 115V	C06396	-
4	Bracket Assy., RH Hinge	C35538	-
5	Relay Assy.	C06681	-
6	Cable Assy., 5-pos. TB	C06674	-
7	Cable Assy., 10-pos. TB	C06675	-
8	Fuse Holder, Quick Conn.	C09546	-
9	Bracket Assy., LH Hinge	C35539	-

Remote Register Mounting Option



Item #	Part Description	Current Part	Previous Part
1	Bracket Housing Mounting	042073	-
2	Weld Assembly, Pedestal Body	042080	-
3	Cover	042081	-
4	Side Mounting Bracket (not shown)	015128	-
5	Rear Mounting Bracket (not shown)	015127	-

Series Kits and Accessories Parts

Series Kits and Accessories

Part No	Description
003043	Adapter, 9122, 3/4" NPT inlet and outlet
003044	Adapter, 9123, 1" NPT inlet and outlet
MDE-4617	Ast Totalizer Kit, Installation Instructions
MDE-4618	Ast Pulser Kit, Installation Instructions
MDE-4619	Ast Vapor Recovery Kit, Installation Instructions
M07087K001	Ast Pulser Kit; 10:1 Ratio
M07087K002	Ast Pulser Kit; 100:1 Ratio
M07087K003	Ast Pulser Kit; 1:1 Ratio
M07091K001	Ast Totalizer Kit; Gallons
M07091K002	Ast Totalizer Kit; Liters
M07425K001	Ast Adapter Kit; K-version
M07494K001	Ast Vapor Recovery Kit; 9820; K-version
M07494K002	Ast Vapor Recovery Kit; 9820 Vapor Complete
M07494K003	Ast Vapor Recovery Kit; 9120 Vapor Complete
M07494K004	Ast Vapor Recovery Kit; 9120; K-version
Other Options	
R18189-10 R18189-30 R18896-G1 026019	Filter Type
030456 030457	Extra Length Hoses
C06718	CFN/TOPKT RS-485
C06717	Single Pulse Output
C06722	Dual Pulse Output
C05818	Resistor Assembly
C06683	Resistor Assembly
049043	Vapor Recovery Kit
032600	High Hose Retriever

