

Introduction

This manual provides installation instructions for installing the Atlas Discharge and Valve Conduit Retrofit Kit.

Under certain service and installation conditions where the internal dispenser piping, conduit and mounting is distorted, some Gasboy Atlas units may develop a leak or inconsistent solenoid valve operation. This kit prevents these occurances.

Caution

Failure to follow the procedure outlined with in this kit may result in a compromised effectivity of this kit and could result in leaks or improper valve operation.

Required Reading

Before installing a kit, the installer must read, understand, and follow:

- This manual
- NFPA 30A, The Automotive and Marine Service Station Code
- NFPA 70, The National Electric Code
- Applicable federal, state and local codes and regulations

Failure to do so may adversely affect the safe use and operation of the equipment. Note: This kit must be installed by a Gasboy Authorized Service Contractor (ASC) to ensure warranty.

Required Tools

The following tools are needed to install this kit:

- Standard Wrench Set (Metric and SAE) w/universal joint and 12 inch extension
- Set of combination wrenches (Metric and SAE)
- Flat tip screwdriver
- Cross tip screwdriver
- Punches (to help line up bolt holes)

Parts Lists

			Quantity Per Kit	
Item	Part Number	Description	M06228K001	M06228K002
1	Q12887_48	M8 X 18 CLINCH STUD	1	2
2	M06217B001	METER STABILIZER BRKT	1	2
3	M00414B003	M8 FLANGED NUT	1	2
4	M04681B001	COPPER DISCH TUBE	1	2
5	M06230B001	DISCHARGE FLANGE	1	2
6	Q10068_07	O-RING	2	4
7	M05230B009	M8 X 16 SEMS BOLT	6	12
8	N16289_20	1/2 " EXPANSION UNION	1	2
9	R11976_52	1/2" X 3-1/4" NIPPLE	1	2
10	K42428	1/2" X 90 ELBOW	1	2
11	R11976_75	1/2" X 9-3/8" NIPPLE	1	2
12	R11976_39	1/2" X 1-1/8" NIPPLE	N/A	1
13	K49306	1/2" X 45 ELBOW	N/A	1
14	R11976_67	1/2" X 6-3/8" NIPPLE	N/A	1

M06228K001 - 1 - Hose Kit & M06228K002 - 2 - Hose Kit



M06228K001, 002 Field Retrofit Kits - Atlas 2-Hose Dispenser Shown

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).

\Lambda 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 shutoff 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 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

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.

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

Be sure to use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Be sure grounding connections are properly made. Make sure that sealing devices and compounds are in place. Be sure 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. Be sure to clean hands after handling equipment. Do not place any equipment in mouth.

\Lambda WARNING

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

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.)

 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.



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.

Installing the M06228K001 or M06228K002 Kit

The disassembly, replacement and reassembling process shown below is the same whether upgrading a Single Hose System or a dual Hose System.

Preparation

- Request permission from the manager/owner to remove power from the unit and then remove power using normal procedures. Observe the lockout/tagout safety procedures. Reference, "Important Safety Information" on page 3
- 2 Make sure you have the proper kit type (Single or Dual Kit).
- **3** Be prepared to follow all applicable safety rules and procedures. Reference, "Important Safety Information" on page 3
- **4** Using the proper tools, remove the back and front covers from the unit. Place covers in a safe place to prevent damage or scratches. Save the mounting hardware for later reuse.
- 5 Follow all safety procedures and OSHA requirements as outlined in MDE-2531, Pump and Dispenser Start-up/Service Manual. Follow Section 6, Meter Repair, under the heading "Before Beginning Work" to bleed fuel and shut-down the unit.

Hint: place a rag into the side panels of the unit on both sides, this will keep tools from falling into the well and getting lost. Figure 1

Removing

1 Remove the covers to the junctions box. See Figure 1. Save bolts for reuse.

Figure 1: Junction Box



- 2 Mark the valve wire connections to correspond with the red, yellow and black valves wires, to aid in reconnecting to the correct wire. (If there are two valves, also mark those wires.)
- **3** Remove and retain the wire nuts to the indicated wires.
- **4** Loosen the valve conduit unions at the junction box. Reference Figure 1.

To remove the discharge line:

5 Disconnect and remove the bolts to the formed flanges to the discharge fitting on the bottom of the meter and at the unit discharge fitting. See Figure 2.





- 6 Remove the (2) bolts connecting the unit discharge fitting to the frame.
- 7 Remove the unit discharge fitting and slide copper discharge tube out of the unit. (Retain the unit discharge fitting and one of the formed flanges. Discard the copper tube, o-rings, bolts and the other formed flange.)

If there are two meters, disconnect and remove the second discharge line in the same manner as steps 5, 6, and 7.

To remove the valve filter manifold: (see Figure 3)

8 Tape meter/computer universal joint to retain the "dumb-bell" looking part, for units using the mechanical meters. (Dumb-bell may be displaced during disassembly/reassembly.)

HINT: It may be desirable to tape the meter shaft connection to the pulser drive connector mounted on the lower air gap plate on electronic units.

- **9** Loosen the (3) bolts securing the meter to the meter bracket.
- **10** Remove the (2) bolts connecting the feedline to the valve/filter manifold. Retain the bolts and the 0-ring.
- 11 Remove the (4) bolts connecting the valve/filter manifold to the meter and remove the valve/ filter manifold along with the connected coil conduit. Remove the conduit from the coil. Remove the union half from the conduit. Retain the valve/filter manifold, bolts, o-rings and the union half. Discard the conduit.
- **12** Repeat steps 8 through 11 if there are two meters.
- **13** If the unit has internal hose retrievers, remove the retriever reel(s) and bracket(s). Retain the reel and hardware. Discard the bracket.

Figure 3: Valve/Filter Manifold Removal



To reassemble the unit:

Note: If the unit has hose hooks, check to see if there is a clinch stud in the frame, see Figure 5, Item 1, if one exists, skip steps 14 through 17.

If there is no clinch stud:

- **14** Remove the hose hook.
- **15** Remove the screws that attach the sheathing to the lower frame.
- **16** Carefully pull the sheathing out enough to insert the stud (Item 1) through the retriever cutout into the hole above the cutout as shown in Figure 5. *Note: The stud only needs to be inserted through the hole; it does not need to be pressed in.*
- **17** Replace the sheathing screws and the hose hook.

Unit reassembly:

18 Thread the valve wires through the conduit and fittings to build the new conduit run from the coil per Figure 4.



Figure 4: Installing Valve Wires

- **19** Screw the retained union half to the end of the conduit that will fit to the junction box as shown in Figure 4.
- **20** Tighten the conduit fittings sufficiently to where final installation only requires minor adjustment.
- **21** Ensuring that the o-rings are in place, reinstall the valve/filter manifold using (2) of the retained 5/16 x 1 inch bolts into the right side meter mounting holes as shown in Figure 5. (Do not tighten.)
- **22** Install the meter stabilizer bracket (Figure 5, item 2) by mounting it to the left side of the back of the manifold mounting flange as shown in Figure 5. Insert (2) of the retained 5/16 x 1 inch bolts. (Do not tighten.)



Figure 5: Installing Meter Stabilizing Bracket With Hose Retriever Details Shown

- **23** Ensure that the slot in the bracket (Item 2) is retrained on the stud (Item 1). Install the flanged nut (Item 3) onto the stud. (Do not tighten.)
- 24 Making sure the o-ring is in place, reconnect the feedline to the manifold by inserting the (2) retained M8x16 flanged bolts. Do not tighten.*Note: If there are two meters, repeat steps 13 to 24.*
- 25 Tighten all (4) bolts that attach the manifold to the meter (manifold mounting screws).
- **26** Tighten the nut attaching the meter stabilizer bracket to the frame (Reference Figure 5, Item 3). (If there are (2) meters repeat steps 25 and 26.)
- 27 Tighten the (3) bolts on the meter support bracket. Repeat on the second meter if applicable.
- **28** Tighten the (2) feedline bolts. (If there are (2) meters repeat this step.)

If there is an internal hose retriever:

- **29** Remount the reel to the meter stabilizer bracket and rotate the wheel two full turns to tighten the cable torque.
- **30** Re-thread the cable through the cable grommet to connect the hose and hose clamp. Repeat on the second meter if applicable.

Continue from this point if there is not an internal hose retriever:

31 Using the copper tube (Figure 6, Item 4), slide the retained meter discharge flange on one end of the tube so that the o-ring will be captured within the flange's formed o-ring cavity.



Figure 6: Discharge Flange Replacement.

- **32** Insert (1) o-ring (Figure 6, Item 6) over the tube end.
- **33** Slide the new discharge flange (Figure 6, Item 5) over the opposite end of the copper tube so that the o-ring will be captured within the formed o-ring cavity of the flange. Insert (1) o-ring (Figure 6, Item 6) over the tube end.
- 34 Insert the copper tube into the existing meter discharge fitting (Figure 6). Slide the o-ring and flange to the face of the meter discharge fitting and insert (2) SEMS bolts (Figure 6, Item 7. Do not tighten. *Note: Existing flange goes to the meter side.*
- **35** Insert the existing unit discharge fitting on the other end of the copper tube. Insert (2) SEMS bolts (Figure 6, Item 7) through the mounting holes in the frame to mount the existing unit discharge fitting to the frame. Tighten the (2) bolts.
- 36 Slide the o-ring and the new flange to the face of the unit discharge fitting and insert (2) SEMS bolts (Figure 6, item 7. *Note: Ensure that the new flange is completely inside the cut out in the frame. If the flange catches the frame, leaks could occur.*
- **37** Tighten the bolts on both the unit discharge fitting and the meter discharge fitting.
- **38** Check the distance from the back side of the flange on the meter discharge fitting to the inside of the frame. See Figure 7. (The distance should measure 5.00 to 5.10 inches.) If this is not within these limits, check for correct bracket installation.



Figure 7: Flange to Frame Dimension

- **39** If there is a second meter, repeat steps 31 to 38.
- **40** If the meter shaft to computer/pulser joint was taped at the beginning of the process, remove the tape and check the connection.

Reconnecting the Conduit:

- **41** While referencing Figure 8, thread the valve wires through the union half attached to the junction box and into the box.
- **42** Tighten the conduit fittings.
- **43** Reconnect the wiring same as originally wired.
- **44** Replace the junction box cover and tighten the bolts.
- 45 Check all bolts and connections. Use start-up procedures as noted in MDE-2531.



Figure 8: Reconnecting Conduit

Completing Installation

- **1** Open the shear valves.
- **2** Restore power to the unit.
- **3** Check for leaks.
- **4** After determining that the unit is functioning properly with no leaks, reattach the covers removed at the beginning of the installation.
- **5** Inform the manager/owner that the unit can be returned back to service.



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