Introduction

Purpose

This manual provides instructions for the installation of 9120K Pulser Kits - M070787K003 (1:1), M07087K001 (10:1), and M07087K002 (100:1).

Table of Contents

Required Tools

The following tools are required for the installation of 9120K Pulser Kits:

- Phillips® screwdriver
- Straight blade screwdriver
- 7 mm wrench
- 13 mm wrench
- Drift punch
- Needle-nosed pliers

Parts List

The following table lists the parts included in 9120K Pulser Kits - M070787K003 (1:1), M07087K001 (10:1), and M07087K002 (100:1).

			Quantity		
Item	**Description**	**Part Number**	**M070787K001**	**M070787K002**	**M070787K003**
1	Bracket, Pulser Shaft	M06740B001	1	1	1
2	Bearing Nyliner #4I2FF	011954	2	2	2
3	Gear Miter-24 T Mach Tank	028422	2	2	2
4	Pin GRV Type 1 3/32 X 5/8	K48724	1	1	1
5	Spirol® Pin .062 X .750	Q10038-30	1	1	1
6	Screw Hex Head Cap Finished	K05287	2	2	2
7	Washer, Lock Ext 1/4 1114	068891	2	2	2
8	Totalizer Shaft 9120K	054526	1	1	1
9	Spirol Pin .052 X .375	Q10038-26	1	1	1
10	Washer, SS .260 X .500 X	068037	1	1	1
11	Screw, Metric M8 X 18	M00417B009	2	2	2
12	Totalizer Coupling 9120K	054527	1	1	1
13	Spirol Pin .078 X .437	Q10038-35	1	1	1
14	Elbow Conduit 1/2 X 90 Male & Female	K42448	1	1	1
15	Nipple Conduit 1/2 X 10-1/2	R11976-80	1	1	1
16	Bushing, Reducing	K49827-22	1	1	1
17	Union Conduit Male & Female 1/2	Q10016-04	1	1	1
18	Desc - Pulser, 10:1	021788	1	N/A	N/A
19	Desc - Pulser, 100:1	047648	N/A	1	N/A
20	Desc - Pulser, 1:1	046973	N/A	N/A	1

Warranty

For information on warranty, refer to MDE-4255 Gasboy®'s Warranty Policy Statement. If you have any warranty-related questions, contact Gasboy's Warranty Department at its Greensboro location.

Important Safety Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock or pressure release could occur and cause death or serious injury if these safe service procedures are not followed.

Preliminary Precautions
You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain or service this equipment.

Emergency Total Electrical Shut-Off
The first and most important information you must know is how to stop all fuel flow to the pump and island. Locate the switch or circuit breakers that shut-off all power to all fueling equipment, dispensing devices, and submerged turbine pumps (STPs).

⚠ WARNING

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

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

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

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

Evacuation, Barricading and Shut-Off
Any procedures requiring accessing the pump/dispenser or STPs requires the following three actions:

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

Read the Manual
Read, understand and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call 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.

⚠ WARNING

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

⚠ WARNING

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

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

Emergency First Aid

Informing Emergency Personnel

- Compile the following information for emergency personnel:
- Location of accident (for example, address, front/back of building, and so on.)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on.)
- Age of victim (for example, baby, teenager, middle-age, elderly.)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on.)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on.)

⚠ WARNING

Gasoline ingested may cause unconsciousness and burns to internal organs.
Do not induce vomiting.
Keep airway open.
Oxygen may be needed at scene.
Seek medical advice immediately.

⚠ WARNING

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

⚠ WARNING

Gasoline spilled in eyes may cause burns to eye tissue.
Irrigate eyes with water for approximately 15 minutes.
Seek medical advice immediately

⚠ WARNING

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

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

Lockout/Tagout

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

Installation of the 9120K Pulser Kit

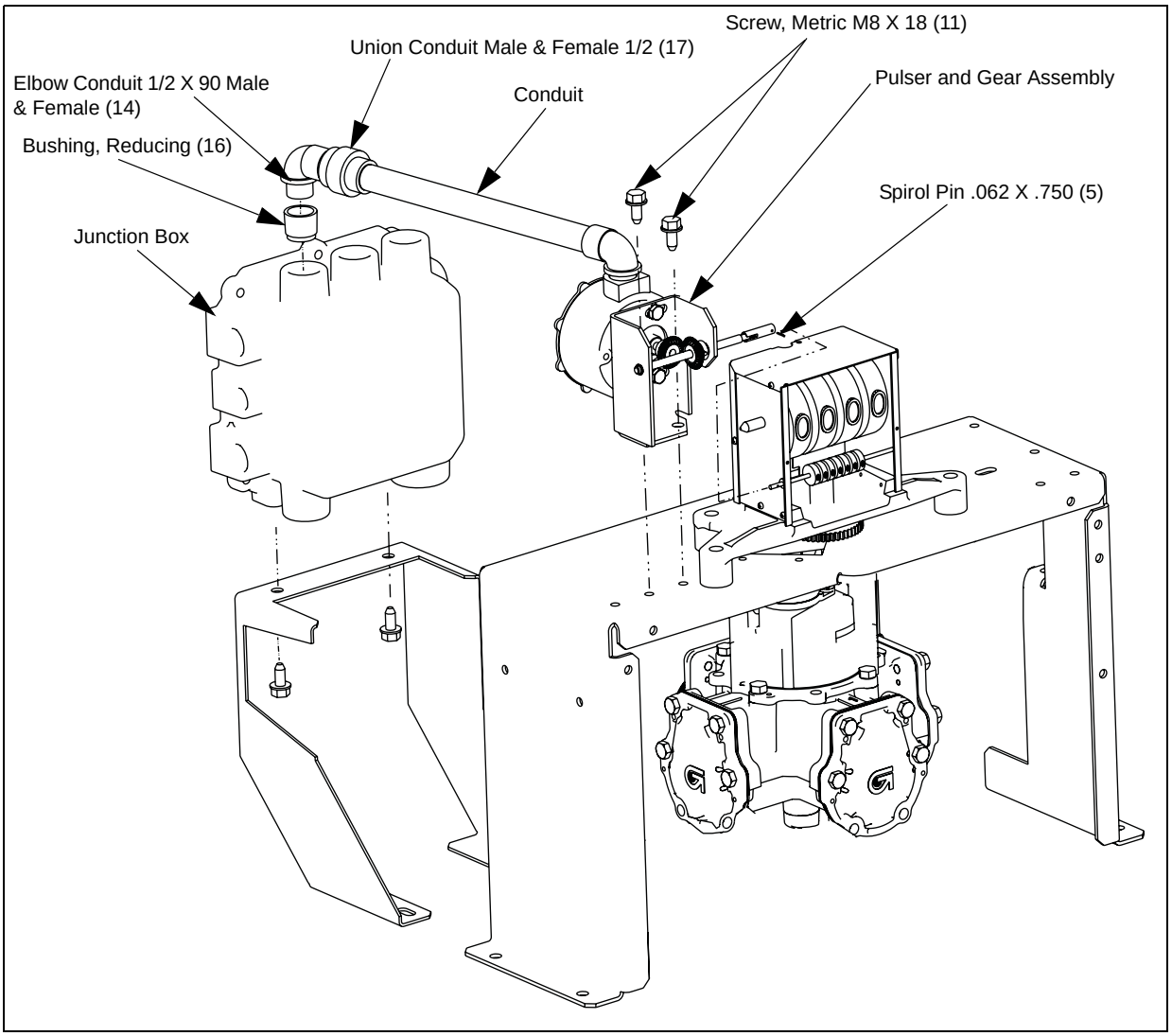
To install the 9120K Pulser Kit, proceed as follows:

1. Turn off and lock out all power to the system. Follow Occupational Safety and Health Administration (OSHA) Lock-Out and Tag-Out procedures.

2. Remove front and back doors and top cover from the unit.

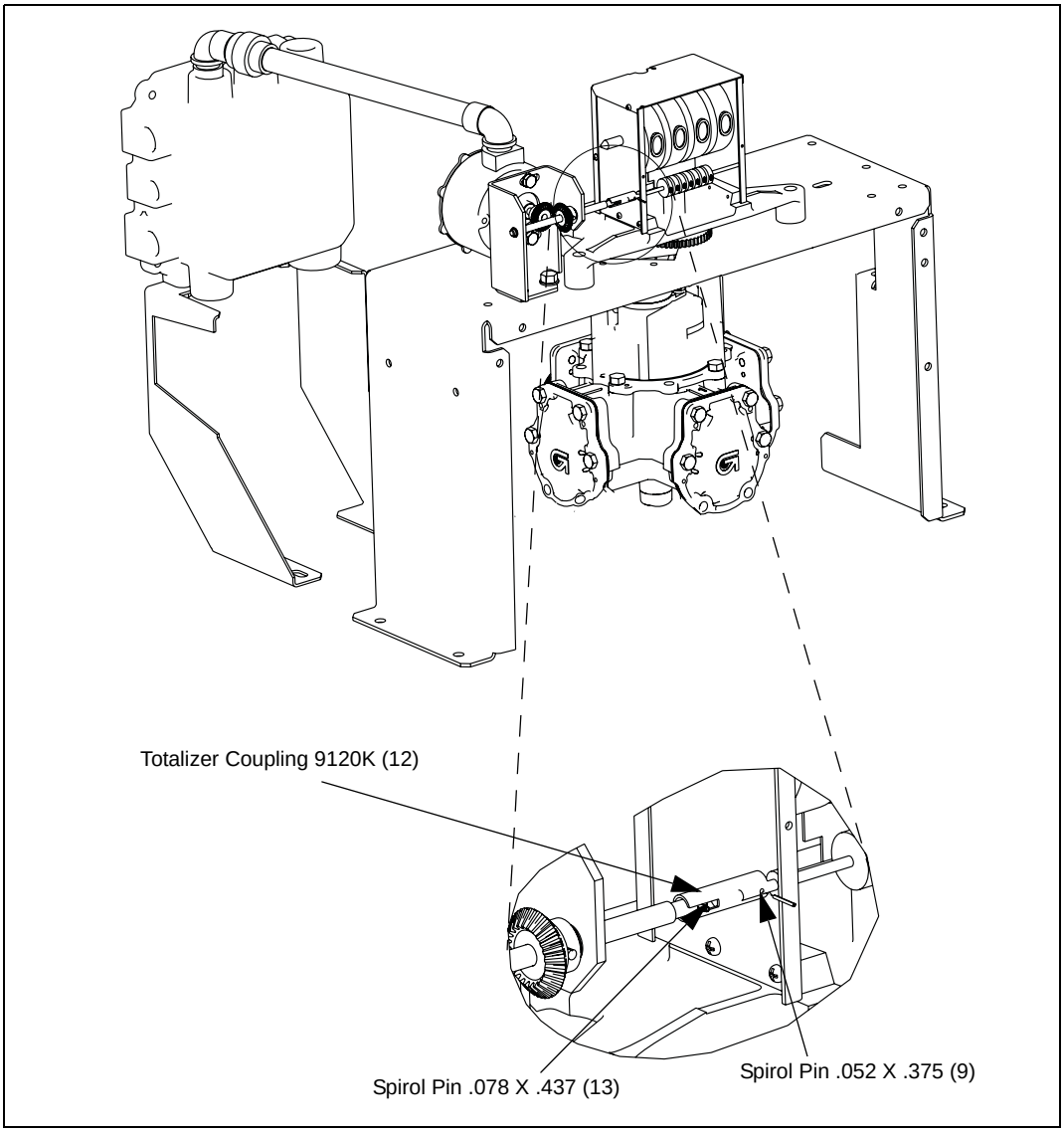
3. Install Spirol pins (Q10038-26 and Q10038-35) into the hole in the register's Totalizer shaft (054526). The pin should be set with both ends protruding equally on the coupling's outer surface (see Figure 1: Exploded View and Figure 2: Assembled View).

Figure 1: Exploded View



4 Align and install the Pulser, gears, bracket and conduit assembly to the platform, aligning the shaft's pin to the slot in the coupling that was installed in the register's Totalizer shaft (see Figure 2: Assembled View). Use two ¼-20 X ½ Taptite screws to secure the Pulser, gears, bracket and conduit assembly in place, while aligning the two existing holes in the platform.

Figure 2: Assembled View



5 Open the junction box cover and connect wires appropriately inside the junction box. Retain all screws.

Note: Direct Current (DC) wires must be on the left side of the divider plate inside the junction box. For details, refer to MDE-4567 9120K and 9820K Series AST Pumps Installation and Operation Manual.

6 Re-install the junction box cover with existing screws.
Note: All screws must be used to ensure an explosion-proof junction box.

7 Remove the existing pipe plug from the junction box's top opening and install the reducing bushing and conduit elbow. See Figure 1: Exploded View on page 5.

8 Disassemble the conduit union into two halves.

9 Attach one half of the conduit union to the elbow installed in Step 7 and the other to the conduit.

10 Feed wires from the conduit through the elbow into the junction box and then align and tighten the union. See Figure 1: Exploded View on page 5.

11 Restore power to the unit and check for proper operation of the Totalizer.

Note: Inspect and ensure that the Totalizer and Pulser shaft do not bind during rotation.

IMPORTANT INFORMATION

Pay attention to the rotation of the Pulser shaft to ensure that catchy or binding spots do not exist. During very slow flow, the unit should not stall and the Totalizer shaft should rotate smoothly. Adjust the Pulser/Register as necessary, if binding occurs.

12 Re-install and secure the sheet metal cover back to the unit.

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