Introduction

This manual provides installation instructions for Atlas™ Pulser Kits M06245K001 through M06245K011. The kits and associated models covered in this manual are listed and described in the Kit Identification section.

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 required to install the Pulser Kits:

- Wrench Set
- Flat tip screwdriver
- Cross tip screwdriver
- Punches (to remove and install pins)

Kit Identification

Kit Number	Description
M06245K001 - KIT PLSR 10:1 TWIN	Pulser and Coupling Assembly; 10:1 Volume, 91 & 87 TWIN EXCEPT 9140
M06245K002 - KIT PLSR 100:1 TWIN	Pulser and Coupling Assembly; 100:1 Volume, 91 & 87 TWIN EXCEPT 9140
M06245K003 - KIT PLSR 1:1 TWIN	Pulser Assembly; 1:1 Volume, 91 TWIN EXCEPT 9140
M06245K004 - KIT PLSR 10:1 SINGLE	Pulser and Coupler Assembly; 10:1 Volume, 91 & 87 SINGLE EXCEPT 9140
M06245K005 - KIT PLSR 100:1 SINGLE	Pulser and Coupler Assembly; 100:1 Volume, 91 & 87 SINGLE EXCEPT 9140
M06245K006 - KIT PLSR 1:1 SINGLE	Pulser Assembly; 1:1 Volume, 91 SINGLE EXCEPT 9140
M06245K007 - KIT PLSR CM SINGLE	Pulser Assembly; 100:1 MONEY, 87 SINGLE
M06245K008 - KIT PLSR CM TWIN	Pulser Assembly; 100:1 MONEY, 87 TWIN
M06245K009 - KIT PLSR 10:1 9140	Pulser Assembly; 10:1 Volume, 9140
M06245K010 - KIT PLSR 1:1 9140	Pulser Assembly; 1:1 Volume, 9140
M06245K011 - KIT PLSR 100:1 9140	Pulser Assembly; 100:1 Volume, 9140

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.

Parts Lists

Description	Part Number	M06245 K001- KIT PLSR 10:1 TWIN (QTY)	M06245 K002- KIT PLSR 100:1 TWIN (QTY)	M06245 K003- KIT PLSR 1:1 TWIN (QTY)	M06245 K004- KIT PLSR 10:1 SINGLE (QTY)	M06245 K005- KIT PLSR 100:1 SINGLE (QTY)	M06245 K006- KIT PLSR 1:1 SINGLE (QTY)	M06245 K007- KIT PLSR CM SINGLE 100:1 MONEY (QTY)	M06245 K008- KIT PLSR CM TWIN 100:1 MONEY (QTY)	M06245 K009- KIT PLSR 10:1 9140 (QTY)	M06245 K010- KIT PLSR 1:1 9140 (QTY)	M06245 K011- KIT PLSR 100:1 9140 (QTY)
CRTN 14.312 X 11.375 X 15	018656	1	1	1	1	1	1	1	1	1	1	1
DECAL, 10:1 PULSER	023596	1	1	-	1	-	-	-	-	1	-	1
ELBOW-CONDUIT 1/2 X 45 M/	025015	2	2	2	1	1	1	-	-	1	1	1
ELBOW-CONDUIT 1/2 X 90 M/	025045	2	2	2	1	1	1	1	2	-	-	-
GEAR, QUANTITY	027041	2	2	2	1	1	1	-	-	1	1	1
PLATE AND IDLER GEAR ASSY	027044	2	2	2	1	1	1	-	-	1	1	1
HUB-QUAN. SHAFT EXTENSION	031035	2	-	2	1	1	1	-	-	1	1	1
KIT-PLSR VR 312020-924 VR	032942	-	-	-	-	-	-	1	2	-	-	-
PLSR ASY 1:1;91EK LTR	046969	-	-	2	-	-	1	-	-	-	1	-
PLATE-MOUNTNG PULSER 100	046970	2	2	2	1	1	1	-	-	1	1	1
PLSR & CPLG ASSY;100:1	046972	-	2	-	-	1	-	-	-	-	-	1
PULSER & CPLG ASSY; 10:1	046973	2	-	-	1	-	-	-	-	1	-	-
POLY BAG 5 X 6	047401	1	1	1	1	1	1	1	1	1	1	1
SPACER.94 4 NOM.LENGTH	056877	4	4	2	2	1	1	2	4	2	1	2
SPACER TOP.835 NOM.LENGTH	056895	2	2	2	1	2	2	1	2	1	2	1
CONDUIT TEE, MACHINED	064830	1	1	1	1	1	1	1	1	-	-	-
WASHER, LOCK EXT 1/4 1114	068891	12	12	14	6	7	7	3	6	6	7	6
TIE-WRAP, IDENTIF (1"X5/16)	C08682	2	2	2	1	1	1	1	2	1	1	1
SCREW HEX HD CAP FINISHED	K14830	6	6	6	3	3	3	3	6	3	3	3

Description	Part Number	M06245 K001-KIT PLSR 10:1 TWIN (QTY)	M06245 K002-KIT PLSR 100:1 TWIN (QTY)	M06245 K003-KIT PLSR 1:1 TWIN (QTY)	M06245 K004-KIT PLSR 10:1 SINGLE (QTY)	M06245 K005-KIT PLSR 100:1 SINGLE (QTY)	M06245 K006-KIT PLSR 1:1 SINGLE (QTY)	M06245 K007-KIT PLSR CM SINGLE 100:1 MONEY (QTY)	M06245 K008-KIT PLSR CM TWIN 100:1 MONEY (QTY)	M06245 K009-KIT PLSR 10:1 9140 (QTY)	M06245 K010-KIT PLSR 1:1 9140 (QTY)	M06245 K011-KIT PLSR 100:1 9140 (QTY)
ELBOW CNDT 1/2X90 F SPT	K42428	1	1	1	1	1	1	1	1	-	-	-
ELBOW CNDT 1/2X90 M & F	K42448	-	-	-	-	-	-	-	-	1	1	1
PLUG PIPE 1/2 SQ SOCKET	K43850	-	-	-	1	1	1	1	-	-	-	-
BUSHG FCED RDC 3/4X1/2	K49827	1	1	1	1	1	1	1	1	1	1	1
RING RET 1/4	K76238-41	2	2	2	1	1	1	-	-	1	1	1
SCREW TPT HEX WS HD 1/4-2	K85736-39	2	2	2	1	1	1	-	-	1	1	1
CONDUIT	M05292B001	1	1	1	1	1	-	-	-	-	-	-
CONDUIT	M05293B001	1	1	1	-	-	-	-	-	-	-	-
CONDUIT FORMED	M05368B001	-	-	-	-	-	1	1	1	-	-	-
CONDUIT FORMED	M05369B001	-	-	-	-	-	-	-	1	-	-	-
CONDUIT 9140 PULSER	M06869B001	-	-	-	-	-	-	-	-	1	1	1
MOA MECH PULSER CONDUIT	M05370	1	1	1	1	1	1	1	1	1	1	1
UNION CNDT M&F 1/2	Q10016-04	3	3	3	2	2	2	2	3	1	1	1
SPIROL PIN.078 X.437	Q10038-35	2	2	2	1	1	1	-	-	1	1	1
SCREW HEX HD CAP FINISHED	Q10624-37	6	6	6	3	3	3	-	-	3	3	3
NIPPLE 3/4 X 3-3/8	R11496-43	1	1	1	-	-	-	-	1	-	-	-
NIPPLE 3/4 X 3-5/8	R11976-43	-	-	-	1	1	1	1	-	-	-	-
NIPPLE CNDT 1/2 X 4	R11976-57	1	1	1	1	1	1	1	1	-	-	-
INSTAL INSTR PULSER KITS	MDE-4506	1	1	1	1	1	1	1	1	1	1	1

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.

Installing the Pulser Kit in Twin Units (Kits M06245K001 through M06245K003 and M06245K008)

Preparation

1. 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.

2. Using the proper key for the unit, unlock and remove the doors from both sides of the unit. Place the doors in a safe place to prevent damage or scratches.

3. On both sides of the unit, remove the two screws securing the bezel and remove the bezel. Store the bezels and screws in a safe place for reuse.

4. Remove the screws securing the dial face in place and remove the dial faces from each of the computers on both sides. Store the dial faces and screws in a safe place to prevent damage or scratches.

5. Ensure that you have the proper kit for the model dispenser to be retrofitted.

Temporarily Moving the Computers

The computers will have to be temporarily moved to allow space between the units to install the pulser parts. To move the computers, proceed as follows:

1. Note that there are two drive shafts connected to the computer. Make a note of the exact position of the shafts. Things to note are:
   - Bottom (vertical) shaft is set in a slot on the lower end. The pins on the shaft are in the shallower slots.
   - The side shaft is pinned to the drive shaft in the computer and the mark on the rotating wheel (on the computer) has a mark on it. The mark must be pointing up when reassembled to properly align the readout number register.

2. Remove the pin from the side (horizontal) shaft mounted to the computer. Save the pin for reassembly.

3. Loosen and remove the three mounting bolts securing the computer in place. Save for remounting.

4. Move the computer to allow adequate space for mounting the pulser parts (out of the dispenser if necessary). Care must be taken to ensure that the large gear on the side of the computer is kept in the same "OFF" position.

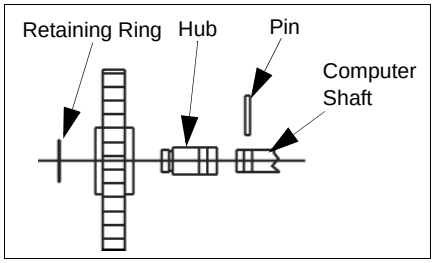
5. Repeat the procedure for the second computer.

Installing the Drive Gear on the Meter Computer Shaft

In the kit, locate two 043225 pins, two 031035 hubs, two 027401 gears, and two K76238-41 retaining rings. See Figure 1.

1 On one of the computers, press a pin into the hole in the computer shaft until it is flush on one side of the shaft. For kits M06245K001 through M06245K003, press the pin into the hole in the computer *quantity* shaft. For M06245K008, press the pin into the hole in the computer *money* shaft.

Figure 1: Driver Gear on Meter Computer Shaft



2 Place a hub on the shaft with the slotted portion of the hub straddling the extending pin and align the hole in the hub with the pin.

3 Push the pin through the hole in the hub until the pin extends equally on both sides of the hub.

4 Place a gear on the hub and align the pin in the shaft with the bearing slot in the gear.

5 Secure the gear in place by placing a retaining ring in the slot near the end of the shaft.

6 Repeat step 1 through step 5 on the shaft of the other computer.

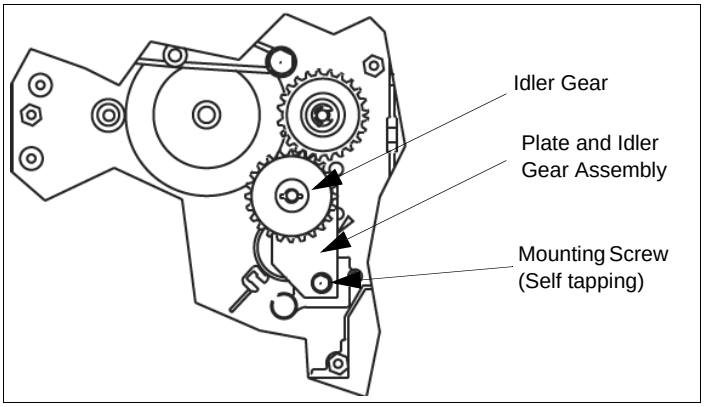
Installing the Plate and Idler Assembly

1 In the kit, locate two K85736-39 screws and two 027044 Plate and Idler Assemblies. See Figure 2 on page 9.

Note: The 053920 mounting screw for the Plate and Idler Assembly is a self-tapping screw. Turning the screw into the mounting hole in the computer side frame and then removing it without the assembly in place will make mounting the assembly easier.

2 At one of the computers, hold the Plate and Idler Gear Assembly in place and loosely secure it with the mounting screw. The boss and bracket holes in the computer assembly must align for proper gear meshing with the previously installed gear.

Figure 2: Plate and Idler Gear Assembly



Note: This illustration is shown rotated 90 degrees from its installed position.

CAUTION

Excessive tightening of the mounting screw will crack the plastic plate.

3 Ensure proper gear position, alignment, and meshing and tighten mounting screw.

4 Repeat step 2 through step 3 to mount the second Plate and Idler Gear Assembly on the other computer.

Assembling 046970 Pulser Mounting Plate and 0469XX Pulser and Coupling Assembly

1 In the kit, locate two 046970 mounting plates, two 0469XX* Pulser and Coupling Assemblies, six 051805 screws, and six 068891 lock washers.
* The part number depends on which kit is being installed. See "Parts Lists" on page 3 for the part number.

2 Place the mounting plate on the Pulser and Coupling Assembly, align the three mounting holes, and loosely secure with three screws and three lock washers.

3 Tighten all screws equally.

4 Repeat step 2 and step 3 for the other mounting plate and pulser and coupling assembly.

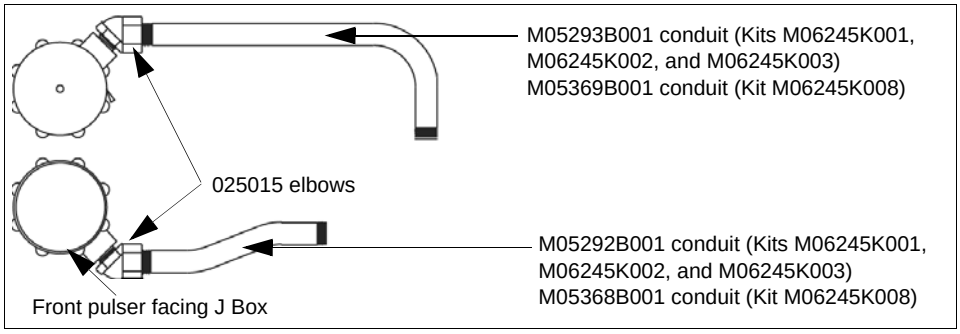
Completing the Assembly and Mounting the Pulser Units

1 In the kit, locate the following parts:
- Two 0469XX* pulser and coupling assemblies
- Two 056895 spacers
- Two 056877 spacers
- Four Q10624-37 screws
- Four 068891 washers
- Two 025015 elbows
- One M05293B001 formed conduit (Kits M06245K001, M06245K002, and M06245K003)
- One M05292B001 formed conduit (Kits M06245K001, M06245K002, and M06245K003)
- One M05368B001 formed conduit (Kit M06245K008)
- One M05369B001 formed conduit (Kit M06245K008)

* The part number depends on which kit is being installed. See "Parts Lists" on page 3 for the part number.

2 Feed the pulser and coupling assembly wires through the 025015 elbow and install the elbow on the pulser and coupling assembly. See Figure 3.

Figure 3: Pulser and Coupling Assembly



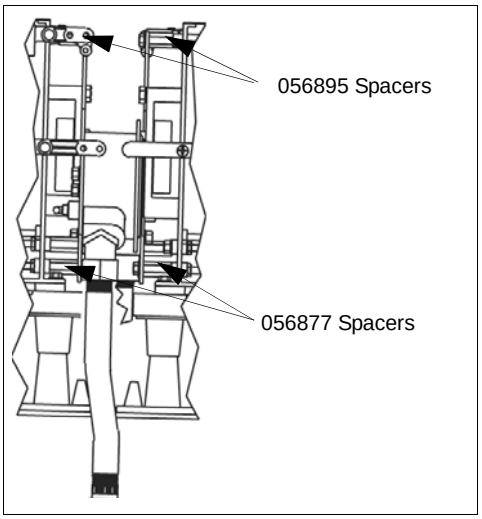
3 Repeat step 2 for the second pulser and coupling assembly.

4 Install the M05292B001 or M05368B001 conduit on the front pulser and coupling assembly (the one with the black band near the end of the wires) and the M05293B001 or M05369B001 on the back pulser and coupling assembly.

Note: The front of the dispenser is the side with the junction box. The front pulser (mounts on the left computer) is the one with the black band near the end of the wires.

5 On the left computer, remove and discard two assembly screws and replace with the two spacers in positions shown in Figure 4. Notice the difference in part numbers and position of the spacers.

Figure 4: Front Pulser Assembly



6 Place the front pulser (one with M05292B001 or M05368B001 conduit mounted on it) in position (installs on the left computer) by positioning the conduit mounted on the pulser through the slot in the unit between the computers. Ensure that the pinned shaft on the pulser aligns with the center hole in the idler gear (refer to Figure 2 on page 9) and the pin seats in the slot in the gear. The mounting holes in the mounting plate must align with the holes in the spacers. See Figure 4.

7 Loosely secure in place with two washers and two screws.

8 Ensure that the parts are meshed properly and tighten the screws.

9 Repeat step 2 through step 5 for the second pulser and coupling assembly (installs on the right computer).

Remounting the Computers

To remount the computers, proceed as follows:

1 At the side shaft mounting, turn the rotating wheel (on the computer) until the mark on the wheel is pointing upward.

2 Mount the shaft on the computer and pin it with the pin saved during removal.

3 Mount the vertical shaft in the slot noted during removal (pin in shallow slots).

4 Move the computer in place aligning the mounting holes and ensuring that the two shafts are properly seated (as noted prior to moving the computers).

CAUTION

Improper alignment can cause meter/computer wear/damage or stalling of the meter/computer at slow flow rates.

5 Secure the computer in place with the mounting bolts saved during the initial moving procedure.

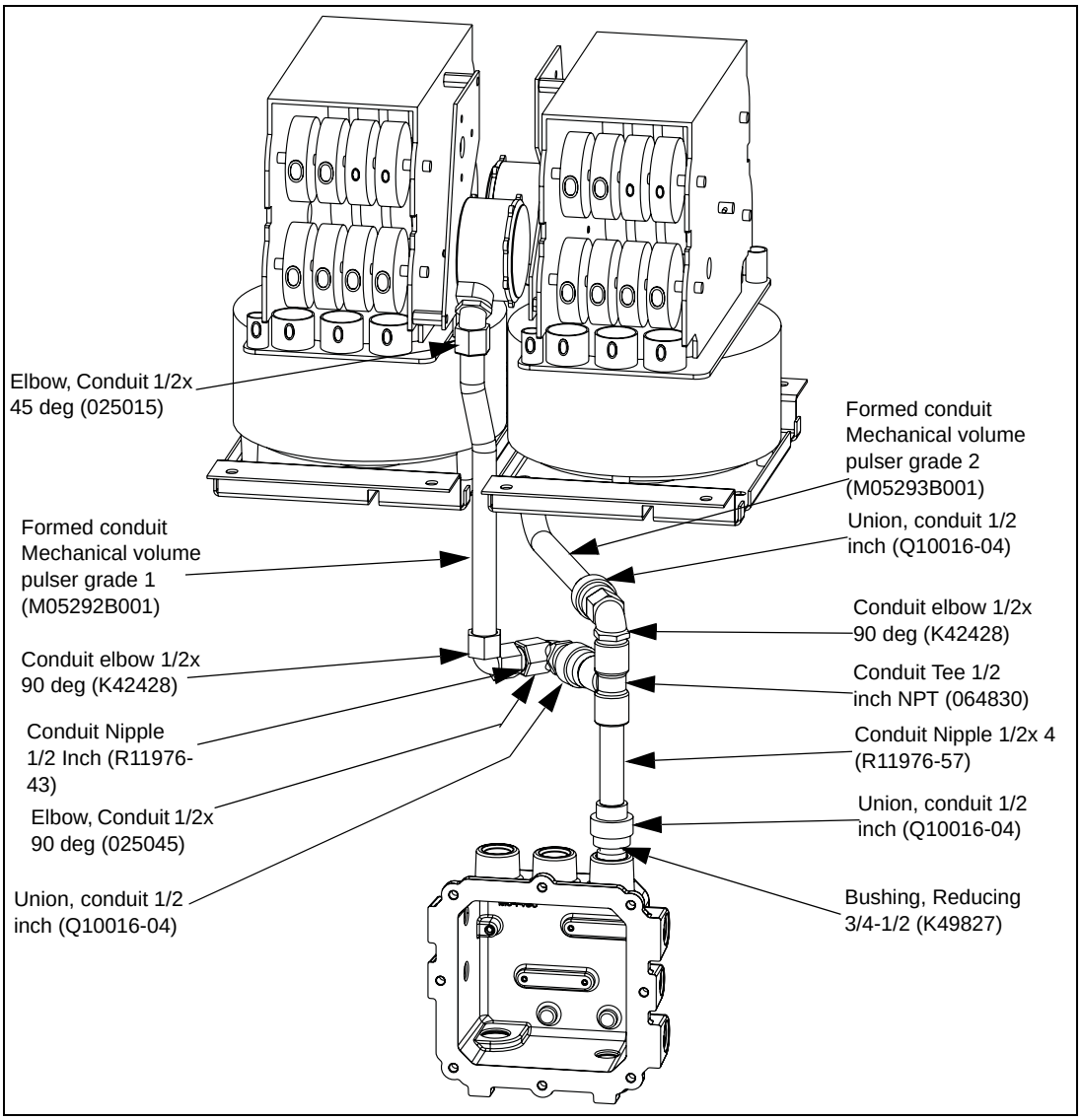
Installing the Remaining Conduit

1 In the kit, locate the parts shown in the appropriate illustration. Refer to Figure 5 on page 12.

Note: Feed wires through conduit and fittings as it is assembled.

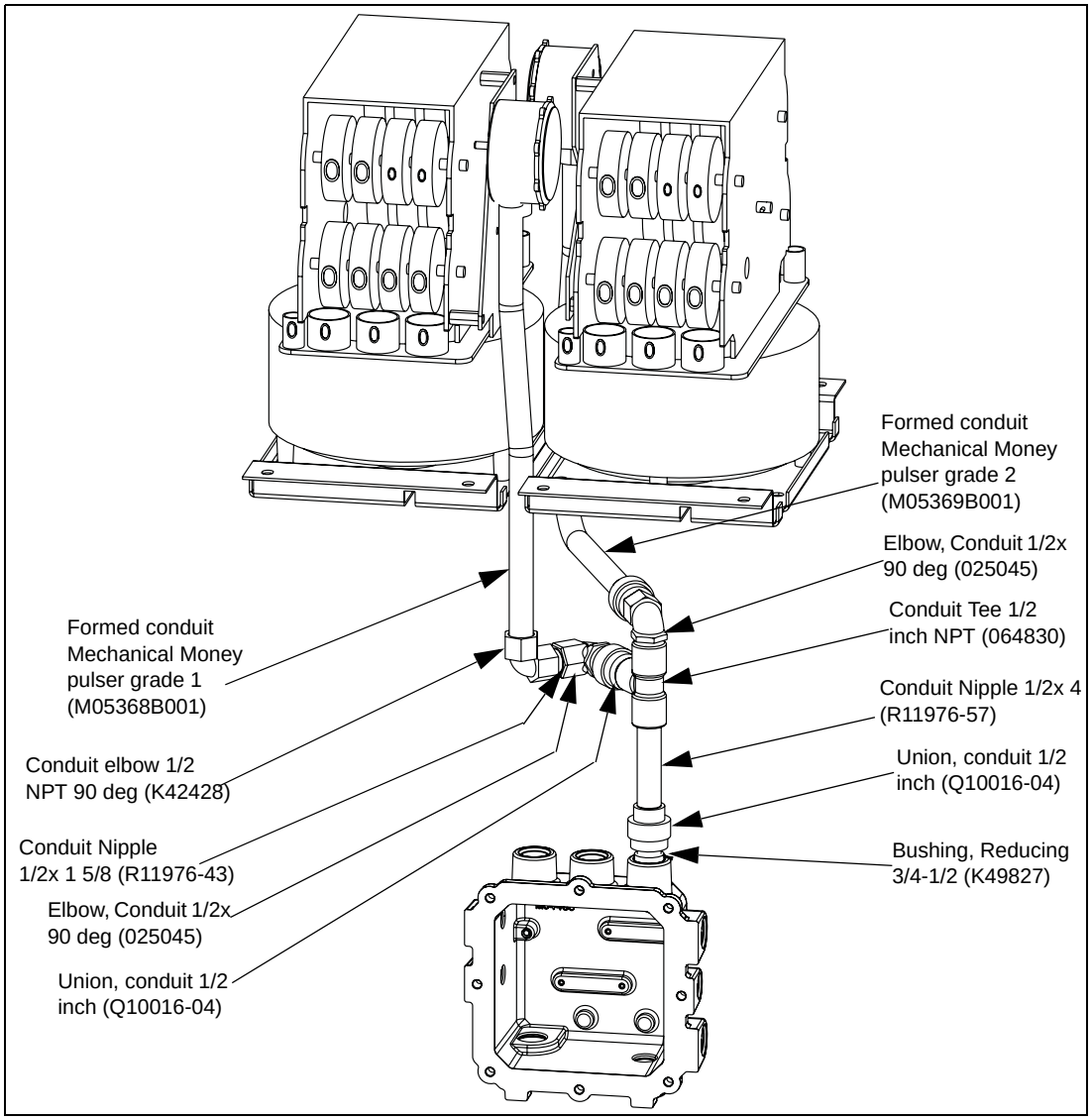
2 Install a Q10016-04 conduit union on the formed conduit connected to the pulsers. For Kits M06245K001, M06245K002, and M06245K003, refer to Figure 5 on page 12.

Figure 5: Dual Volume Mechanical Conduit (M06245K001, K002, and K003)



For Kit M06245K008, refer to Figure 6.

Figure 6: Dual Money Mechanical Pulser Conduit



3 Install the K49827 reducer and Q10016-04 union into the junction box as shown in Figure 6.

4 Make the remaining connections as shown in Figure 6.

Connecting the Wires in the Junction Box

1 Remove the screws securing the cover on the junction box. Save screws for remounting.

2 Inside the junction box, connect the two green ground leads from the pulsers to a secure known ground.

3 Connect the leads for the pulsers, two from the front pulser with black band (mounted to the left computer) and two from the back pulser (mounted on the right computer) to the leads in the junction box marked for the pulsers.

4 Remount the junction box cover and secure with the screws removed in step 1.

Testing/Checking Operation

Only the 10:1 pulser can be tested for operation. Using test equipment, others must be tested when hooked to the pump/dispenser controller. Test the 10:1 pulser as follows:

1. Inform the manager/owner that power will be restored to the unit and then restore power to the unit.
2. Connect a mechanical voltmeter on the two orange signal wires.
3. Set the voltmeter to read Ohms.
4. Slowly dispense fuel and observe that the needle deflects upscale for each 1/10 gallon fuel.

Completing the Installation

1. After determining that the pulsers are functioning properly, remount the dial faces on the two computers and secure with the screws saved during removal.
2. Remount the bezels on both sides of the unit and secure with the screws saved during removal.
3. Remount the doors on both sides of the unit and secure with the keylocks.
4. Inform the manager/owner that the unit can be returned to service.

Installing the Pulser Kit in Single Unit and 9140 (Kits M06245K004 through M06245K007 and M06245K009 - M06245K011)

Preparation

1. 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.

2. Using the proper key for the unit, unlock and remove the doors from both sides of the unit. Place the doors in a safe place to prevent damage or scratches.

3. On both sides of the unit, remove the two screws securing the bezel and remove the bezel. Store bezels and screws in a safe place for reuse.

4. Remove the screws securing the dial face in place and remove the dial faces from both sides of the computer. Store the dial faces and screws in a safe place to prevent damage or scratches.

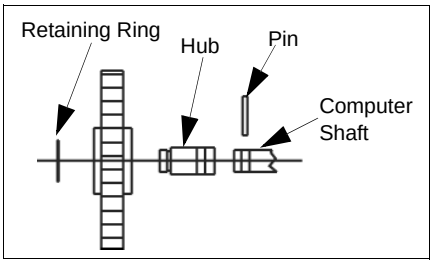
5. Ensure that you have the proper kit for the model dispenser to be retrofitted.

Installing the Drive Gear on the Meter Computer Shaft

In the kit, locate a 043225 pin, a 031035 hub, a 027401 gear, and a K76238-41 retaining ring. See Figure 7.

1. On the computer, press a pin into the hole in the computer shaft until it is flush on one side of the shaft. For kits M06245K004 through M06245K006 and M06245K009 - M06245K011, press the pin into the hole in the computer *quantity* shaft. For M06245K007, press the pin into the hole in the computer *money* shaft.

Figure 7: Installing Drive Gear on Meter Computer Shaft



2. Place a hub on the shaft with the slotted portion of the hub straddling the extending pin and align the hole in the hub with the pin.

3. Push the pin through the hole in the hub until the pin is extending equally on both sides of the hub.

4. Place a gear on the hub and align the pin in the shaft with the bearing slot in the gear.

5. Secure the gear in place by placing a retaining ring in the slot near the end of the shaft.

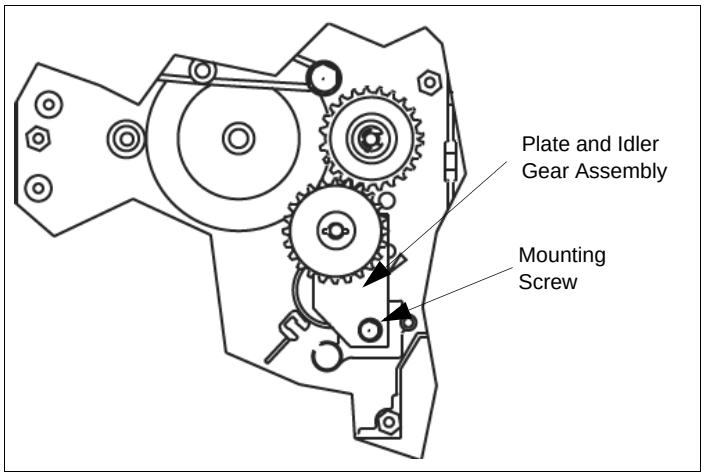
Installing the Plate and Idler Assembly

1 In the kit, locate the K85736-39 screw and the 027044 Plate and Idler Assembly. See Figure 8.

Note: The K85736-39 *mounting screw for the Plate and Idler Assembly is a self-tapping screw. Turning the screw into the mounting hole in the computer side frame and then removing it without the assembly in place will make mounting the assembly easier.*

2 Hold the Plate and Idler Gear Assembly in place and loosely secure with the mounting screw. The boss and bracket holes in the computer assembly must align for proper gear meshing.

Figure 8: Plate and Idler Gear Assembly



Note: This illustration is shown rotated 90 degrees from its installed position.

CAUTION

Excessive tightening of the mounting screw will crack the plastic plate.

3 Ensure proper gear position, alignment and meshing and then tighten the mounting screw.

Assembling 046970 Pulser Mounting Plate and 0469XX Pulser and Coupling Assembly

In the kit, locate a 046970 mounting plate, a 0469XX* Pulser and Coupling Assembly, three K14830 screws, and three 068891 lock washers.

* The part number depends on which kit is being installed. See "Parts Lists" on page 3 for the part number.

1 Place the mounting plate on the Pulser and Coupling Assembly, align the three mounting holes, and loosely secure with three screws and three lock washers.

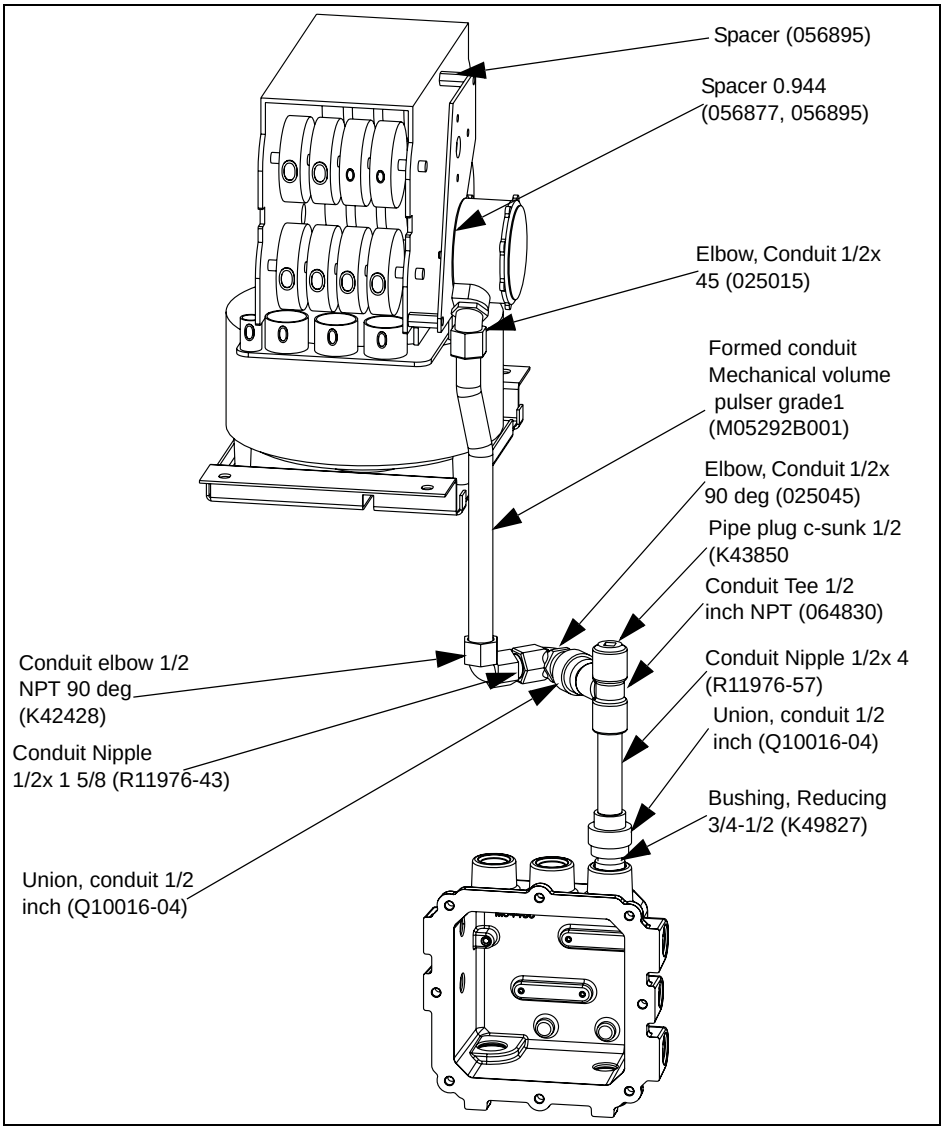
2 Tighten all screws equally.

Completing the Assembly and Mounting the Pulser Unit on Models 8700 and 9100 except 9140

1 In the kit, locate the parts shown in Figure 9.

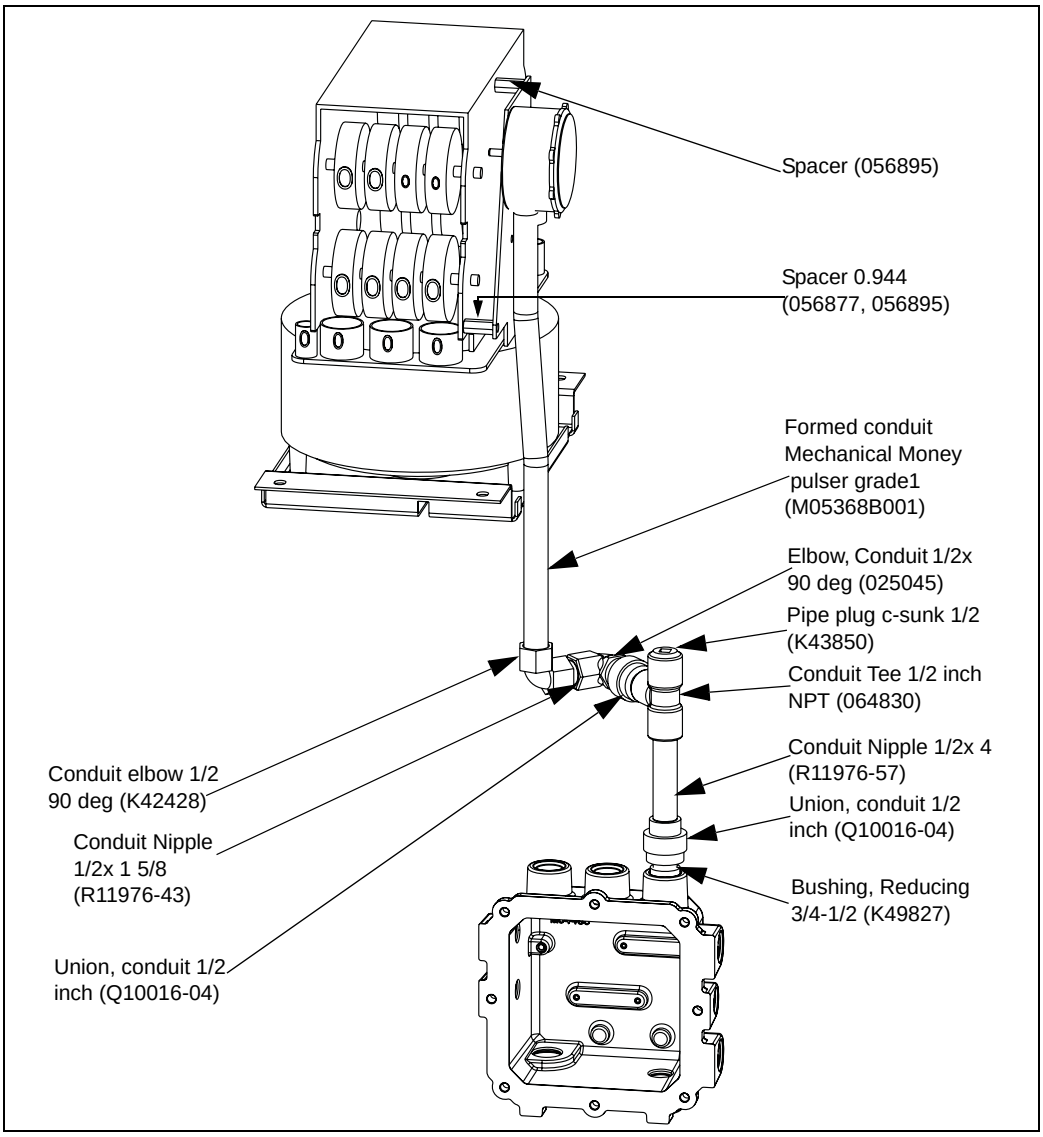
2 Feed the pulser and coupling assembly wires through the 025015 elbow and install the elbow on the pulser and coupling assembly. For Kit M06245K004, M06245K005 and M06245K006, refer to the illustration below.

Figure 9: Single Volume Mechanical Pulser Conduit



For Kit M06245K007, refer to Figure 10.

Figure 10: Single Money Mechanical Pulser Conduit



3 Install the M05292B001 or M05368B001 conduit on the pulser and coupling assembly (to the elbow installed in step 2).

4 Remove and discard the two assembly screws and replace them with the two spacers in positions shown in Figure 9 on page 17 and Figure 10. Notice the difference in part numbers and the position of the spacers.

5 Place the pulser in position by positioning the conduit mounted on the pulser through the slot in the unit. Ensure that the pinned shaft on the pulser aligns with the center hole in the idler gear and the pin seats in the slot in the gear. The mounting holes in the mounting plate must align with the holes in the spacers. Refer to Figure 8 on page 16.

6 Loosely secure in place with two washers and two screws.

7 Ensure that the parts are meshed properly and tighten the screws.

8 Ensuring that the wires extend through the conduit, make the necessary connections as shown in Figure 9 on page 17 or Figure 10.

9 Ensure that the wires extend into the junction box.

Connecting the Wires in the Junction Box

1 Remove the screws securing the cover on the junction box. Save screws for remounting.

2 Inside the junction box, connect the green ground lead from the pulser to a secure known ground.

3 Refer to your Fuel Management System installation manual for proper wiring of the pulsers.

4 Remount the junction box cover and secure it with the screws removed in step 1.

Testing/Checking Operation

Only the 10:1 pulser can be tested for operation. Using test equipment, others must be tested when hooked to the pump/dispenser controller. Test the 10:1 pulser as follows:

1 Inform the manager/owner that power will be restored to the unit and then restore power to the unit.

2 Connect a mechanical voltmeter on the two orange signal wires.

3 Set the voltmeter to read Ohms.

4 Slowly dispense fuel and observe that the needle deflects upscale for each 1/10 gallon fuel.

Completing the Installation

1 After determining that the pulser is functioning properly, remount the dial faces on the computer and secure them with the screws saved during removal.

2 Remount the bezels on both sides of the unit and secure them with the screws saved during removal.

3 Remount the doors on both sides of the unit and secure them with the keylocks.

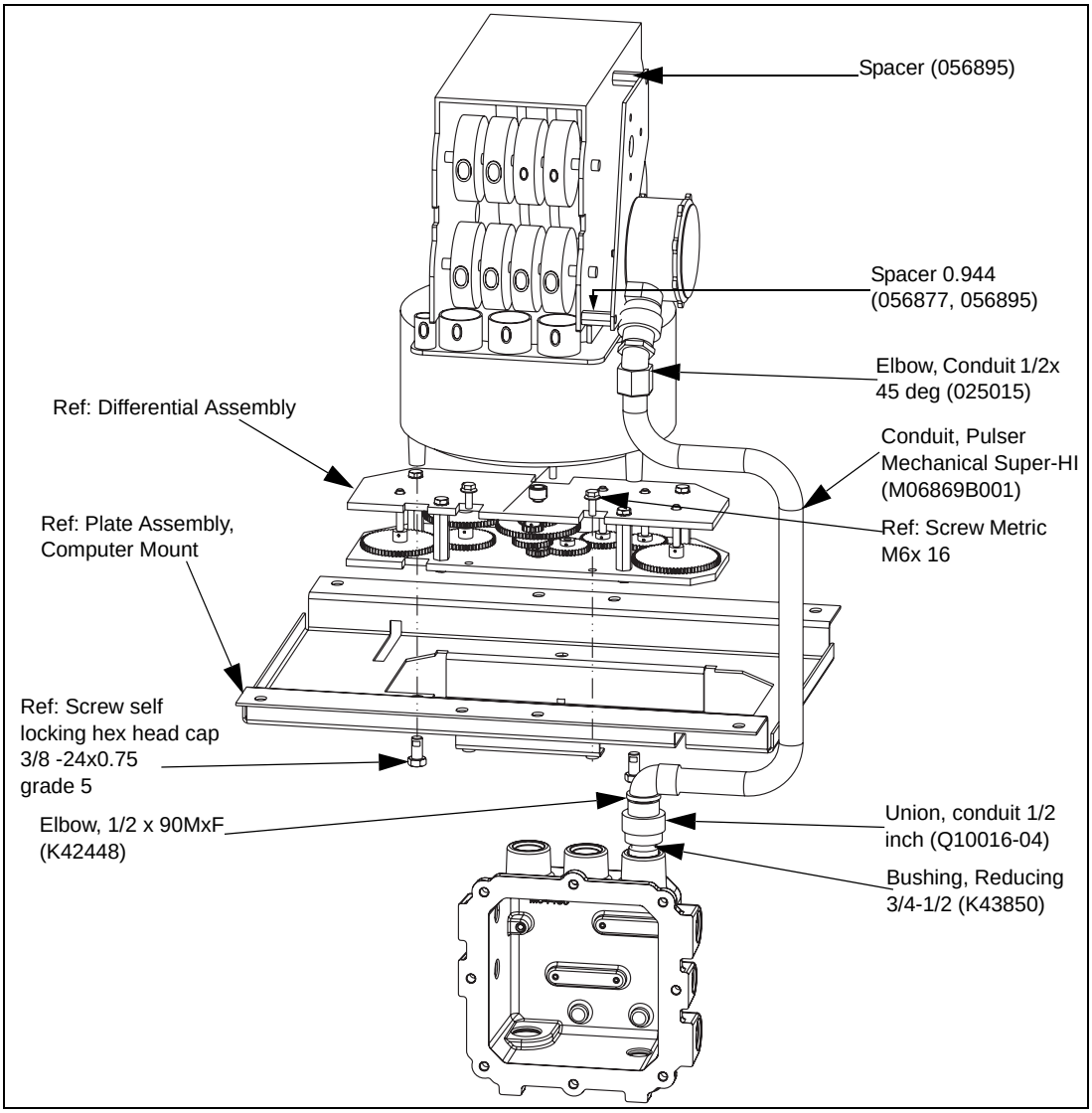
4 Inform the manager/owner that the unit can be returned to service.

Completing Assembly and Mounting Pulser Unit on Model 9140 (Kits M06245K009, M06245K010 and M06245K011)

1 In the kit, locate the parts shown in Figure 11.

2 Feed the pulser and coupling assembly wires through the 025015 elbow and install the elbow on the pulser and coupling assembly.

Figure 11: Super-Hi Mechanical Pulser Conduit and Computer Mount



3 Install the M06869B001 conduit on the pulser and coupling assembly (to the elbow installed in the previous step).

4 Remove and discard the two assembly screws and replace them with the two spacers in the position shown in Figure 11. Notice the difference in part numbers and the position of the spacers.

5 Place the pulser in position by positioning the conduit mounted on the pulser through the slot in the unit. Ensure that the pinned shaft on the pulser aligns with the center hole in the idler gear and the pin seats in the slot in the gear. The mounting holes in the mounting plate must align with the holes in the spacers. Refer to Figure 8 on page 16.

6 Loosely secure in place with two washers and two screws.

7 After careful examination to ensure that the parts are meshed properly, tighten the screws.

8 Ensuring that the wires extend through the conduit, make the necessary connections as shown in Figure 11 on page 20.

9 Ensure that the wires extend into the junction box.

Connecting the Wires in the Junction Box

1 Remove the screws securing the cover on the junction box. Save screws for remounting.

2 Inside the junction box, connect the green ground lead from the pulser to a secure known ground.

3 Refer to your Fuel Management System installation manual for proper wiring of the pulsers.

4 Remount the junction box cover and secure with the screws removed in step 1.

Testing/Checking Operation

Only the 10:1 pulser can be tested for operation. Using test equipment, others must be tested when hooked to the pump/dispenser controller. Test the 10:1 pulser as follows:

1 Inform the manager/owner that power will be restored to the unit and then restore power to the unit.

2 Connect a mechanical voltmeter on the two orange signal wires.

3 Set the voltmeter to read Ohms.

4 Slowly dispense fuel and observe that the needle deflects upscale for each 1/10 gallon fuel.

Completing the Installation

1 After determining that the pulser is functioning properly, remount the dial faces on the computer and secure them with the screws saved during removal.

2 Remount the bezels on both sides of the unit and secure them with the screws saved during removal.

3 Remount the doors on both sides of the unit and secure them with the keylocks.

4 Inform the manager/owner that the unit can be returned to service.

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