Introduction

This document provides information on installing replacement motors in Atlas™ units, along with the requisite belts and pulleys. While installing the new motor, pumping unit pressures will also need to be set to ensure problem-free operation.

Atlas Motor Kits

Kit No.	Description
M06699K001	Atlas Motor Kit, 1 HP, 60HZ, 1PH
M06699K002	Atlas Motor Kit, 1 HP, 50HZ, 1PH

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 Equipment

- Voltmeter with clamp on amp probe
- General mechanics tools

Parts List

Atlas Motor Parts List for M06699K001

Part Number	Description	Quantity per Kit
R14213-32	Motor 1 HP, 60 Hz, 1 PH	1
R06711-52	V Belt 4L290	1
R18900-27	Pulley A Belt, 2.50 PD	1

Atlas Motor Parts List for M06699K002

Part Number	Description	Quantity per Kit
R14213-33	Motor 1 HP, 50 Hz, 1 PH	1
R06711-52	V Belt 4L290	1
R18900-32	Pulley A Belt, 3.00 PD	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: 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 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 Lockout/Tagout 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 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. 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 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. Reference Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Installing New Atlas Motor Kits

Preparing for the Installation

1. Request permission from the manager/owner to remove power from the unit and then remove power using normal procedures. Perform the lockout/tagout safety procedures.
2. Ensure that you have the proper kit for the model unit to be retrofitted.
3. Follow all applicable safety rules and procedures.

Installing the New Atlas Motor

To install the new Atlas motor, remove the old motor and then install the new one, as explained below:

Removing the Old Motor

1. Disconnect motor wires in the junction box. Mark wires in junction box so that you can be sure of connecting the new motor correctly.
2. Remove the belt.
3. Disconnect motor conduit at the expansion union. Refer to Figure 1.
4. Remove the two shoulder bolts on the bottom of the motor deck plate. Remove the washers, cupped washers and rubber mounts. Refer to Figure 2. Retain all hardware.
5. While place something underneath the motor to prevent it from dropping suddenly, remove the two flanged screws from the top of the motor deck plate, and retain the hardware.
6. Remove the motor from the unit.
7. Remove the motor from the motor deck plate and retain the hardware.

Figure 1: Old Atlas Motor

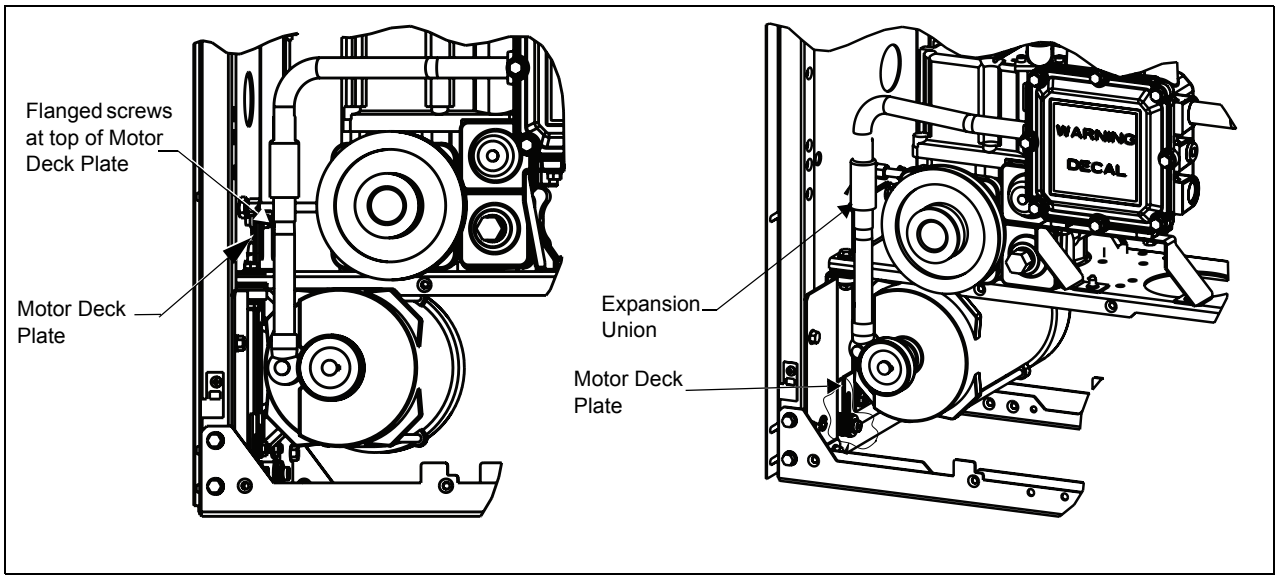
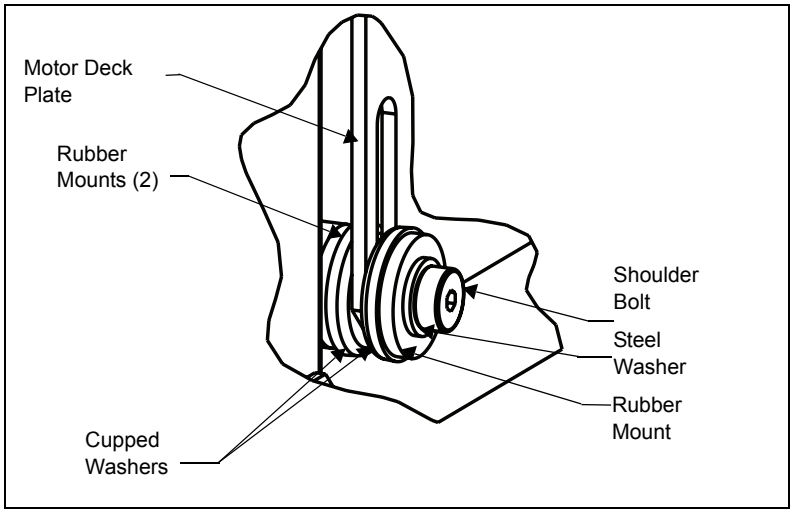


Figure 2: Motor Installation Mount



Installing the New Motor

1. Attach the new motor to the motor deck plate and tighten the four nuts.
2. Transfer the motor conduit from the old motor to the new.
3. Insert the motor and deck plate assembly into the unit.
4. Thread the motor wiring through the conduits into the junction box.
5. Insert the two flanged screws through the slots in the top of the deck plate through the clinch-nuts on the pump mounting plate flange.
6. Replace the rubber mounts, cupped washers and washers and the shoulder bolts in the slots on the bottom of the deck plate and thread the shoulder bolts into the clinch-nuts in the bottom frame plate.
7. Connect the expansion union and tighten the conduit.
8. Attach the new motor pulley to the motor shaft, align it with the pump pulley and tighten.
9. Using the proper tool, such as a crow bar, lift the motor up and place the new belt onto the pulleys.
10. Using the proper tool, such as a crow bar, push the motor down enough to adjust the tension on the belt to 45 lbs. If tension gauge is unavailable, adjust the tension until there is about 1/2 inch of play midway between the pulleys.

    Note: Do not increase the tension above 45 lbs. This may result in shorter pump and motor life.

11. Tighten the two screws on the top of the deck plate.

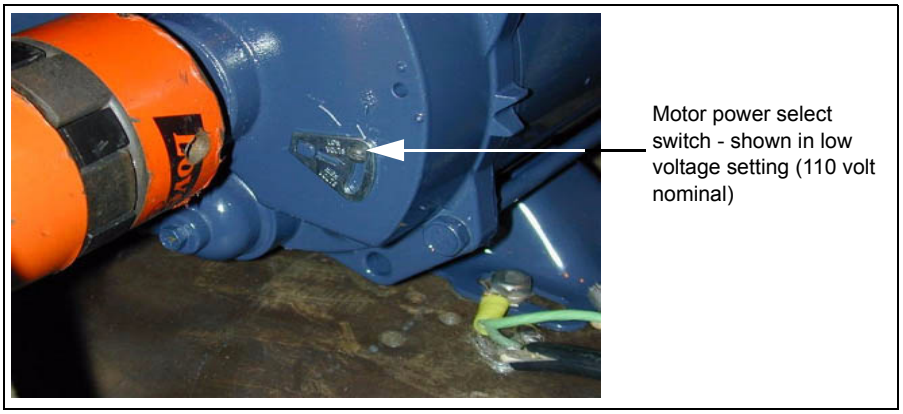
12 Tighten the two shoulder bolts on the bottom of the deck plate.

13 Check belt alignment and tension. Readjust, if necessary.

14 Connect the motor wires in the junction box.

15 Ensure that the voltage on the motor is set correctly by checking the motor power select switch in front of the motor. Adjust, if necessary. Refer to Figure 3.

Figure 3: Atlas Pump - Motor Select Switch.



Verifying Performance

1 Verify completion of the reassembly.

2 Connect the amp probe to a power leg of the motor.

3 Operate the unit and record the initial readings.

Parameter	Reading
Full Flow Amperage	
Bypass Amperage	
Bypass Voltage	

Note: To maximize the flowrate, the pumping unit bypass valve spring preload will need to be adjusted. The maximum allowable load on the new motor is 5.5 amps at 220 volts (nominal) and 11 amps at 110 volts nominal.

Optimizing the Adjustment on the Bypass Spring Preload

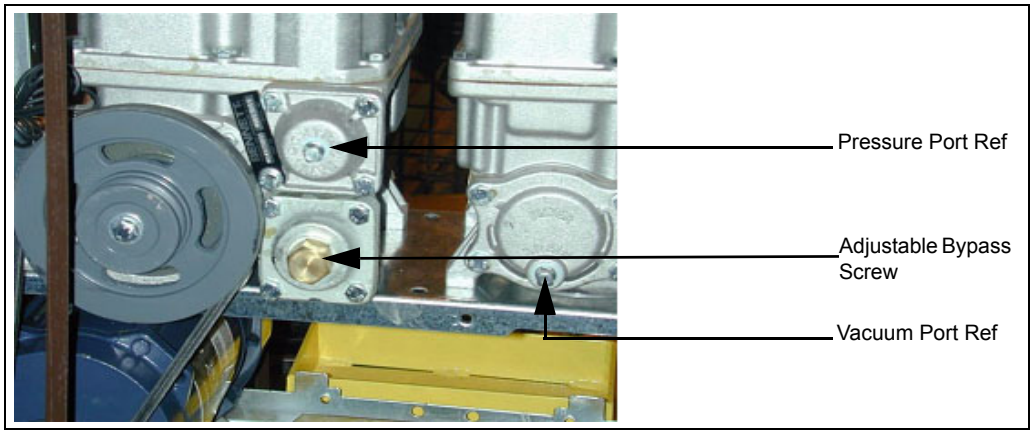
If the amperage from the initial test is low and the flowrate needs increasing, follow this procedure to adjust the bypass preload. Do not increase the preload if the amperage is at the maximum.

Note: Before making adjustments, ensure that the motor has been switched off.

To optimize the adjustment on the bypass spring preload, proceed as follows:

1 Remove the adjustment cap on the pumping unit. Refer to Figure 4, which shows adjustment cap removed.

Figure 4: Atlas Pump - Pressure Pump and Bypass Screw



2 If the amperage from the initial test is low, turn the adjustment screw clockwise and increase the preload (and thus the flowrate and motor load).

Note: If the initial bypass voltage is below 205 volts for a 220-volt system, or below 100 volts on a 110-volt system, the wiring is insufficient to handle full motor loads. In this case, the maximum amperage needs to be set to a maximum of 4.9 amps on a 220-volt system and 9.5 amps on a 110-volt system. Refer to Figure 3.

3 Check the amperage at full flow and at bypass (both must be checked to verify proper loading on the motor).

4 Adjust the screw to obtain just below the maximum amperage setting (4.9 amps on a 220-volt system and 9.5 amps on a 110-volt system).

5 Replace the adjustment screw cap. Disconnect the amp probe, replace the junction box cover and button-up the unit.

Completing Installation

Inform the manager/owner that power will be restored to the unit and then restore power using normal procedures. Remove the lockout/tagout and return to normal operation.

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Phone 1-800-444-5529 • http://www.gasboy.com • Printed in the U.S.A.
MDE-4541 Atlas™ Motor Kit M06699KXXX Installation • February 2006