WARRANTY & EQUIPMENT DAMAGE DISCLAIMER

!! IMPORTANT !!

READ BEFORE ASSEMBLY OR OPERATION

Failure to follow instructions may void warranty

Failure to read, understand, and follow these instructions in their entirety may result in damage to the pump, shaft seals, engine, hoses, fittings, valves, or other components of the system.

Certain operating procedures contained in this manual are critical to the proper operation and protection of the equipment. Failure to follow these procedures may result in equipment damage that is considered the result of improper assembly, improper operation, misuse, or inadequate maintenance and may not be covered under the manufacturer's normal warranty. Additional details in **Section 7.0**

FULL ATTENTION MUST BE GIVEN TO THE FOLLOWING:

- The pump **MUST** be properly primed before starting the engine. **Section 7.1.1**
- Install Oil in the engine upon first use. See **Section 7.1.2** for details.
- **NEVER** close the blue recirculation/discharge valve more than halfway while the pump is operating. **Section 7.1.3**
- Ensure all fittings, hoses, valves, and connections are assembled and operated according to these instructions.
- Follow all startup, operating, flushing, maintenance, and storage procedures contained in this manual.

Improper priming or running the pump dry can destroy the pump seals, while excessive back pressure caused by closing the recirculation valve beyond the specified position can also damage the shaft seal.

WARRANTY NOTICE

Damage resulting from failure to follow the assembly, operating, maintenance, or storage instructions contained in this manual is not considered a manufacturing defect and may not be covered under applicable manufacturer warranty coverage. Failure to properly prime the pump will void the seal warranty.

BY ASSEMBLING OR OPERATING THIS EQUIPMENT, THE USER ACCEPTS RESPONSIBILITY FOR READING, UNDERSTANDING, AND FOLLOWING THE COMPLETE INSTRUCTION MANUAL BEFORE USE.

IF YOU DO NOT FULLY UNDERSTAND ANY PORTION OF THESE INSTRUCTIONS, DO NOT OPERATE THE EQUIPMENT UNTIL YOU HAVE CONTACTED ASPHALT SEALCOATING DIRECT FOR ASSISTANCE.

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BIG-A ASSEMBLY AND OPERATING INSTRUCTIONS

ASD-PK (Pump Kit) | ASD-275 (Tote System) | ASD-PBK (Pump Barrel Kit)

ASD-PK Portable Kit

ASD-275 Tote Kit

ASD-PBK Barrel Kit

INTRODUCTION

The BIG-A ASD-275, BIG-A ASD-PK (Pump Kit) and the BIG-A ASD-PBK (Pump & Barrel Kit) all utilize the same Honda/Banjo low-pressure centrifugal pump/engine; however, the ASD-275 System includes a 275-gallon tote. The ASD-PK (Pump Kit) and ASD-PBK (Pump & Barrel Kit) do not include a tote or barrel, and you will need to use your own container.

BEFORE WE BEGIN

ALWAYS use Teflon tape on all threads

ALWAYS prime the pump by filling the suction or discharge hose with water before starting your pump (section 7.1.1)

ALWAYS test your system using water to ensure you do not have leaks and the system works correctly.

ALWAYS add oil on first use and check oil level of the motor prior to regular use.

NEVER close recirculation valve more than ½ closed, THIS WILL DAMAGE THE SHAFT SEAL from excessive pressure buildup.

NEVER allow the pump to run dry for more than 10 seconds, THIS WILL DAMAGE THE SHAFT SEAL and cause the seal to leak between the pump and engine.

Download a copy of the full manual at www.asphaltsealcoatingdirect.com.

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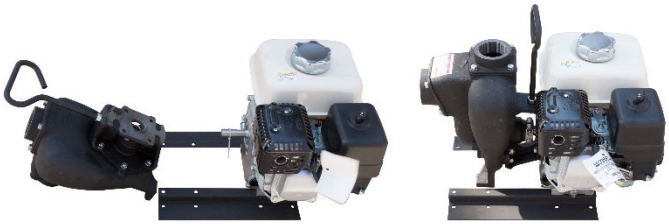
1.0 – PUMP & MOTOR ASSEMBLY

The engine and pump assembly is common to all systems. The included Honda motor is already setup with no assembly needed, however it **will require** oil and fuel prior to running.



1.1 – REQUIRED TOOLS

You will need a 1/2" box open end and a 1/2” socket set with extension. A crescent may be too large.

1.2 – TOP PORT STRAP DISCLAIMER

IMPORTANT the metal or plastic strap that is inside the top port of the pump coming from the factory, maintains the proper spacing between the impellor and wear plate during pump to motor mating. REMOVAL OF THIS STRAP IS THE **LAST STEP** (section 1.7) of the pump to motor assembly. Removing this strap prior to mating will throw off the alignment!

1.3 – MOTOR MOUNTING BRACKETS

Install the mounting brackets that came with the pump, to the bottom of the motor. Decide whether you want the long side of the bracket facing inward, or outward, then tip the motor backwards and install the brackets and included bolts.

1.4 – INSPECTION & INFORMATION

Looking at the shaft face of the pump, you will notice the four (4) mounting holes on the face and several slits in the shaft with one being larger than the other. You will also notice a collar around the shaft. The collar may need loosened but does not need removed. The collar has a built-in key for aligning the pump to the motor. Note the direction of the large keyway slit on the pump shaft for alignment of the motor in the next section.

1.5 – ALIGNMENT

If the motor keyway and pump keyway are not in alignment prior to mating, gently pull the engine start rope until both keyways are pointing the same direction. You have a small amount of tolerance to rotate the pump on the engine shaft for the keyways to align, so the shaft does not need perfect alignment before sliding the pump onto the shaft. Just make sure they are close. The key on the collar is designed to guide the pump shaft onto the motor shaft keyway.
NOTE: If key was included with motor, remove key and discard.
DO NOT rotate the shaft of the motor with pliers or similar tools as this may create a poor mating surface to the pump.
DO NOT rotate the shaft of the pump with force. This may dislodge the shim (section 1.2) that helps with alignment.

1.6 – PUMP INSTALLATION

Gently slide the pump onto the engine shaft until the pump mounting face is completely flush to the engine housing. Insert the four (4) mounting bolts and snug. Do not tighten until all 4 are started and snug. Once the mounting bolts are tight, tighten the two nuts on the shaft collar. Make sure to do even tightness, alternating back and forth between the two nuts in equal sequence.

1.7 – TOP PORT STRAP REMOVAL

Once the pump and motor are properly aligned and secure, it is time to remove the strap that goes into the top port of the pump. If the strap is plastic, it is easy to pull by hand, however if it is a metal band, we recommend using a metal bar, screwdriver, socket extension etc. Pull straight up.

The pump and motor are now set up and ready for the hose kit assembly.

2.0 – HOSE KIT ASSEMBLY

2.1 – PUMP PORT PREPARATION

Install the two short 2” all thread nipples into the pumps discharge and suction ports. Be sure to wrap the nipples with Teflon tape before installation to ensure a proper seal.

2.2 – SUCTION CAM-LOCK INSTALLATION

Screw on the cam-lock fitting onto the suction manifold nipple located at the front of the pump.

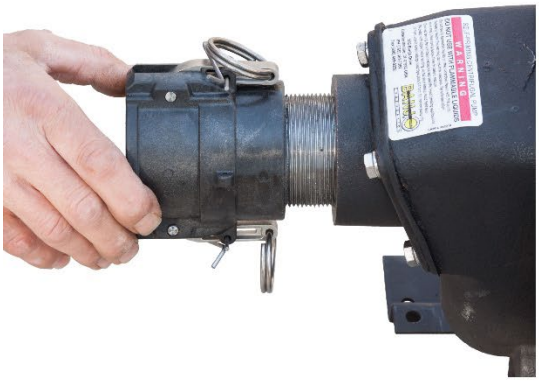
2.3 – DISCHARGE MANIFOLD INSTALLATION

Install the discharge re-circulation manifold onto the pumps upper discharge port. The discharge manifold will have the 2” blue ball valve. Tighten to a location that works best for your setup and valves are easy to get to.

(HOSE KIT ASSEMBLY continued)

2.4 – SPRAY HOSE VALVE INSTALLATION

Install the short 3/4 inch spray hose nipple into the discharge manifold.



2.5 – PUMP HOSE HOOKUP & INSTALLATION

Install the long cam-lock hose onto the top cam-lock nipple of the manifold with the blue valve. Next, install the short hose on the lower pump fitting. Use the included cotter pins to secure the lock levers. Finally, slip the included hose clamp over one end of the 3/4" rubber hose and slide the rubber hose onto the spray hose valve nipple located on the lower part of the discharge manifold. Tighten hose clamp.

Helpful Tip: Installing the cam-lock hose and locking the levers can sometimes be a little tricky. If you have difficulty, use the levers to “wiggle” the hose onto the fitting by applying pressure on one at a time. As these fittings build up sealer over time, this becomes even more difficult. Keep a can of WD-40 on hand and squirt a little into cam-lock fitting to soften the sealer and lubricate the fitting.

(HOSE KIT ASSEMBLY continued)

2.6 – SPRAY WAND SETUP & INSTALLATION

Unsnap the zip-ties from the spray wand, apply Teflon tape to the threaded nipple and screw the spray wand together. Take the open end of the 3/4" rubber hose and slip the hose clamp onto it. (spray wand hose clamp is located on the nipple of the spray wand) Finally, insert the spray hose over the nipple of the spray wand and securely fasten the hose clamp.

This concludes the assembly of the pump and motor. Continue to the next sections for assembly instructions on the respective BIG-A unit you purchased or final instructions in the **System Operation** section.

Points to remember for all three systems

1. Always use Teflon tape on all threaded fittings
2. Always fill the discharge or suction hose with water before using pump
3. Never run pump dry more than 10 seconds
4. Never close recirculation valve more than ½ closed

3.0 – BIG-A ASD-PK ASSEMBLY

Once the pump & motor have been assembled (section 1.0) and the hoses have been installed (section 2.0), your BIG-A ASD-PK is ready to use. At this point, you will need to supply a sealer container to use this unit. The BIG-A ASD-PK Pump Kit will include both suction and discharge hoses, however, you may need to supply additional connection components depending on your containers fittings and configuration. Skip to the **System Operation** section for final instructions on properly using this unit.

4.0 BIG-A ASD-275 ASSEMBLY

4.1 – FILL CAP ELBOW INSTALLATION

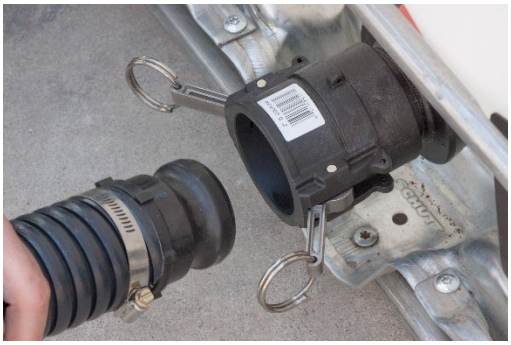
Remove the tank fill cap and install the 90-degree elbow into the lid using Teflon tape. If a vent hole was not pre-drilled before you received your tote, we recommend drilling a 1/8-inch to 1/4-inch hole in the tote cap to allow the tank to "vent". This prevents the tank from creating a vacuum and collapsing during normal operation.

4.2 – LOWER VALVE FITTING INSTALLATION

Install the cam-lock fitting on the lower valve of the tote.

4.3 – HOSE INSTALLATION

Attach the short 2" hose and couplings between the suction port on the pump and the totes bottom valve, and then install the long 2" hose between the totes top cap elbow and the discharge re-circulation valve on the pump discharge manifold.



This concludes the setup for the BIG-A ASD-275. Skip to the **System Operation** section for final instructions on properly using this unit.

5.0 – BIG-A ASD-PBK ASSEMBLY

5.1 – BARREL MANIFOLD INSTALLATION

Your ASD-PBK will include a barrel manifold that will slide down into a plastic or steel barrel that has a 2” NPT threaded bung. Pre-measure the height of your barrel and make sure the plastic manifold suction tube has approximately 1/2" of distance between the bottom of the barrel before installing the manifold into the barrel, otherwise you may damage the plastic suction tube, and it will not pick up the sealer because it is too close to the bottom of the barrel. Screw the manifold into the barrel.

5.2 – HOSE INSTALLATION

5.2.1 – PUMP HOSE INSTALLATION

Attach the large hose to the pump’s lower suction port.
Attach the smaller hose to the pump upper discharge port.

5.2.2 – BARREL HOSE INSTALLATION

Attach the large hose to the top of the barrel fitting manifold and the small hose to bottom of the manifold. Ensure the lid to barrel has a vent to allow air to be replaced as you remove sealer during spraying, if the lid does not have a removable vent, we recommend drilling an 1/8-1/4" hole (in a pinch use a nail and simply punch a single hole to allow venting) you can tape the hole shut to keep sealer from drying during storage.

6.0 – AVAILABLE ACCESSORIES

Inline Banjo Y-Strainer – Banjo strainer that fits in-line with the lower suction line. A strainer will protect your pump from large debris and helps keep your spray tip from clogging.
Flush Kit – Suction side flush kit that mounts in-line and includes a cap to block the suction line and a T-Fitting complete with shut-off valve and standard garden hose fitting. A flush kit will allow you to flush your pump and hoses with minimal effort.

7.0 – SYSTEM OPERATION

HELPFUL TIP: We highly suggest that you practice with water, checking for leaks before filling your system with sealcoat liquid.

DISCLAIMER – BURNED UP SEALS: Failure to prime the pump prior to engine operation will destroy the pump seals. Also, NEVER run the pump dry for longer than 10 seconds. This will destroy the seals.
NOTE: FAILURE TO PRIME THE PUMP WILL VOID THE SEAL WARRANTY.

DISCLAIMER – RECIRCULATION VALVE: NEVER fully, close the blue discharge/re-circulation valve while the pump is running. Normal operation is 1/2 open, which is sufficient to create enough pressure for spraying. Fully closing this valve can potentially destroy the pump seals. Full open is for re-circulation only.

7.1 – FIRST TIME OPERATION

7.1.1 – PUMP PRIMING

Disconnect the top hose from the manifold. Fully open the blue re-circulation valve, then pour water into the manifold until it is up to the opening. Re-connect the hose to the manifold. This will prime the pump and lubricate the seals, keeping them from burning up. This process **MUST** be repeated any time the pump is empty prior to engine start. For example, draining the system for winter storage.

7.1.2 – ENGINE OIL

Fill engine crankcase with SAE 30 weight motor oil to correct level. See respective engine manual for full list of instructions.
NOTE: Engine has a safety switch for oil level. Low oil or un-level surface will keep motor from starting.

7.1.3 – VALVE OPERATION

Open

1/2 way open

Open

Closed

7.2 – BEFORE STARTUP

- Add the desired amount of sealcoat to your storage tank and ensure all hoses are properly connected. **Helpful Tip: ALWAYS** add the correct amount of water to the tank **FIRST** for a recommended maximum ratio of 30% water and 70% sealer.
- Close the spray wand valve.
- Close the discharge spray hose valve, located on the re-circulation manifold. (valve on smaller 3/4-inch pipe)
- ASD-275 ONLY: Open the suction valve (This valve is located on the bottom of your tote.)
- Open the blue re-circulation valve 1/2, way which is located on the upper discharge manifold.
- Using the pull rope on the engine, start the engine. See engine manual for details on proper starting sequence.
- If you run into problems, see section 8.0 for Troubleshooting tips.

7.3 – AFTER STARTUP

- Fully open the blue re-circulation valve and allow it to recalculate the material for several minutes.
- If you run into problems, see section 8.0 for Troubleshooting tips.

(SYSTEM OPERATION continued)

7.4 – NORMAL OPERATION

- With the pump and motor running, close the blue re-circulation valve (1/2 way) to create proper operating pressure. (**NEVER** close blue valve more than 1/2 way.)
- Open the spray hose valve located on the lower part of the discharge re-circulation manifold
- Grab the spray wand and while holding it, slowly open the valve until you reach the desired flow of sealer for the job. Close valve when pausing or finished.
- If pausing for breaks, it is acceptable to open the re-circulation valve all the way to allow the sealer to agitate.

7.5 – FINISH SEQUENCE

- When finished, close all valves and flush with water before sealcoat can dry in the pump and hoses.

7.6 – FLUSH SEQUENCE

- **Helpful Tip:** If you plan to use the system over the course of several days, you can leave sealer in the system without harming anything. We recommend flushing the system if you don't plan to use it for a week or more.
- To flush the system after use, disconnect the suction hose and return hose from the sealcoat container.
- Insert the suction and return hoses into a container with clean water. Stick the spray wand into the container and open both valves for the spray wand.
  NOTE: If possible, use two containers, one with clean water for the inlet and another for the dirty water. (optional)
- Open the return valve halfway and start the motor. Allow the motor to idle until clean water is coming out of both the return hose and spray hose. Stop the motor
- Discard any dirty water in accordance with local city, state and federal laws.
- **ACCESSORY:** You can easily create a flush mount out of common parts from the hardware store, or you can purchase a flush kit through us.

7.7 – STORAGE

- To store the system for extended periods such as between seasons, make sure the system has been flushed in accordance with section 7.6.
- Remove or use up any fuel within the motor or use a fuel stabilizer. If you decide to run the system out of fuel, you can simply run the flush system technique in section 7.6 until the motor stops. Make sure pump is not run dry.
- Ensure all water is drained from the hoses. The rubber spray hose can be easily drained by opening the spray wand valve and elevating the hose, starting from the manifold, then walking to the spray wand.
- Unscrew the drain plug from the bottom of the pump and allow all water to drain from the pump. Leave the pump open for 24 hours to allow sufficient drying time. If storing for last minute freezing temperatures, block off the front port of the motor, cap the top port with a 1/4-inch hole and spray compressed air into the top port to force any excess water out of the pump.
- Re-install the drain plug into the front of the pump
- System is ready for storage

8.0 - TROUBLESHOOTING

System will not pump or spray:

A. Because air is leaking into the suction side of the system, check all hoses, threads and fittings making sure they are clean and tight.
B. Sealer viscosity and solids settling to the bottom of the drum tote or tank. ensure proper mixing so that solids have not blocked the entrance to spray system (suction tube or tank valve)
C. Blockages, this includes all valves and piping connections and fittings from the supply all the way to the spray tip, any place a solid could stop the flow. back flush the entire system to find the blockage and consider using a filter strainer to prevent it in the future.
D. Low pressure or not enough material reaching the spray tip. We recommend During spraying that the engine throttle is set to full throttle.
E. Ensure the lid to a barrel, Tote or Tank has a vent to allow air to be replaced as you remove sealer during spraying, if the lid does not have a removable vent, we recommend drilling an 1/8-1/4" hole (in a pinch use a nail and simply punch a single hole to allow venting) you can tape the hole shut to keep sealer from drying during storage.

Engine will not start: Check engine for level, (the oil sensor must be level) check fuel.

Sealer is leaking between pump and engine: The shaft seal has been damaged. Replace the seal.
NOTE: Shaft seal damage is caused by running the pump dry; too much sand/slate in the sealer (maximum should be approximately 3 lbs. per gallon if you use sand); closing the recirculation valve more than ½ way, which creates excessive backpressure on the seal.

- Seal replacement instructions and video are located on our website: www.asphaltsealcoatingdirect.com

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