Instructions for

Venco 75mm (3") pugmill De-airing upgrade kit

Please follow these instructions in a step-by-step fashion to convert your Venco 75mm (3") *standard* pugmill into a *de-airing* model. Although this upgrade may seem like a daunting task, Venco have taken time to design the pugmill to make the process as straight forward as possible. If you are not confident in using hand tools or have little experience in basic mechanical tasks it is recommended to get the assistance of an experienced person.

For operating instructions please refer to the separate owner's manual –this is available from your supplier or may be downloaded from Venco's website, **www.venco.com.au**

Tools required:

- 13mm (1/2") spanner
- 14mm (9/16") spanner
- 16mm (5/8") spanner
- screwdrivers –phillips (cross) and flat blade
- pair of long-nose pliers.
- small tin of multi-purpose grease.

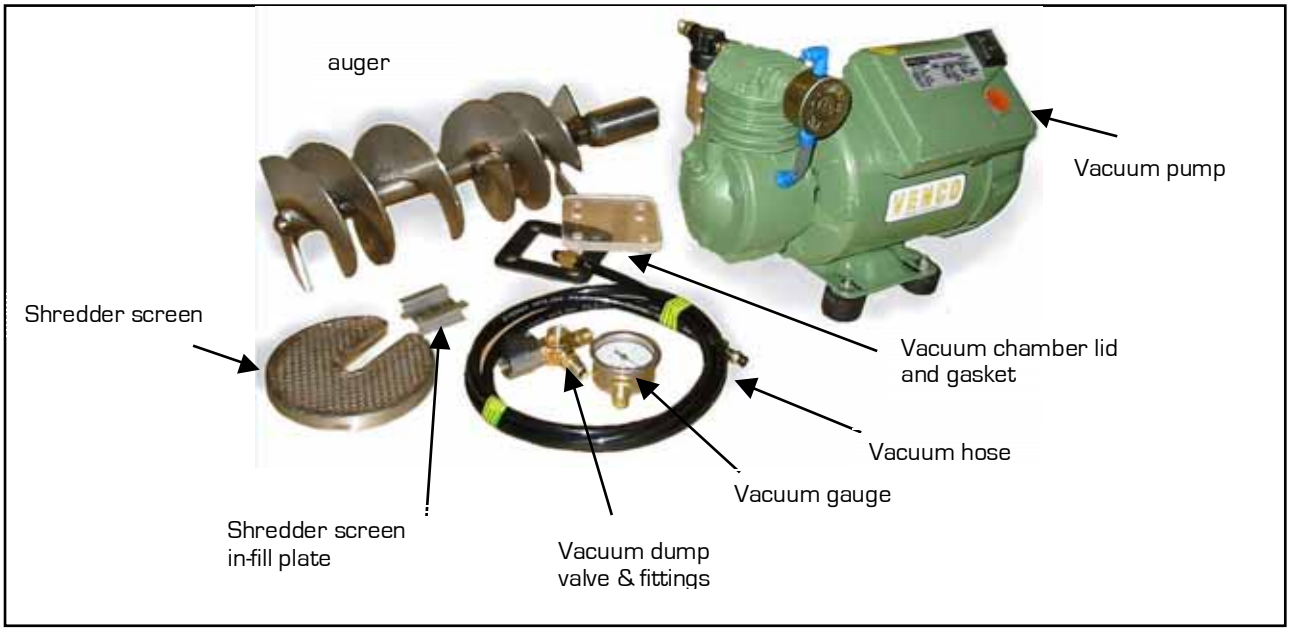

Figure 1: Components of the up-grade kit.

Please follow step 1 through to 5.

1/ REMOVING THE AUGER LOCKING SCREW.

Before starting disassembly, it is important to have the auger rotated into the correct position to access the auger locking screw. Two holes of approximately 40mm (1 ½") diameter are located in the auger support assembly. See figure 2.These holes provide access to the auger locking screw. While looking into the hole(s) flick the on/off switch quickly until the locking screw becomes visible and in a convenient location to loosen with a screwdriver.

Unplug the cord from the power outlet before loosening the locking screw.

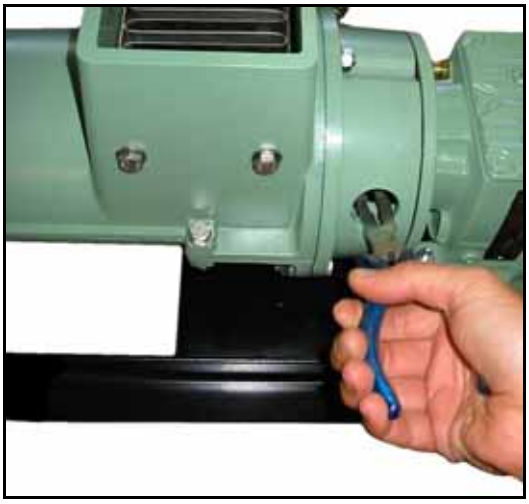

Figure 2. Removing the Auger locking screw.
It is recommended to first loosen the auger locking screw with a screwdriver then use a pair of long-nose pliers to fully remove the screw. Using pliers will reduce the risk of dropping the screw inside the housing.

2/ DISASSEMBLING THE BARREL.

Important: Ensure the power cord is disconnected from the power supply before proceeding.

a) remove the single nut located outside the rear face of the feed hopper (above the auger screw access hole) and the six bolts around the barrel seam with a 13mm (1/2") spanner.
b) carefully pry the two halves of the barrel apart, taking care not to scratch the mating surfaces of the barrel halves. Remove and set aside the upper barrel half.
c) locate and remove two bolts that fasten the lower barrel half to the auger support assembly (below the auger screw access hole). Remove and set aside the lower barrel half.

3/ REPLACING THE STANDARD AUGER WITH THE DE-AIRING MODEL.
Grasp the auger firmly and withdraw the auger away from the motor and gearbox. A piece of timber may be used as a lever between the first auger blades and the auger support assembly. Fully withdraw the auger and set aside.
a) Get the newly supplied de-airing auger. Notice that there is a keyway (groove) milled into the bore of the coupling end of the auger. A corresponding key (peg) is fitted to the drive shaft of the gearbox.

Apply a little grease to the bore of the auger shaft and also to the outer surface to aid assembly. Carefully align the slot with the key on the gearbox drive shaft and push the auger into place. To ensure the auger is fully located, tap the end of the auger shaft with a rubber mallet or with a piece of timber.

b) Insert the auger locking screw – first start the thread while holding the screw with a pair of long nose pliers. Tighten firmly with a screwdriver.

4/ RE-ATTACHING THE BARREL AND INSTALLING THE SHREDDER SCREEN.
Thoroughly clean and dry the mating surfaces of both barrel halves. Apply the foam gasket tape along the mating flange of the lower barrel half. This gasket tape is essential to ensure an airtight seal which is necessary when the pugmill is used to de-air clay.

Hint: Apply a thin layer of grease to all fasteners before re-using them. This will make it easier to remove them when the pugmill is next cleaned.

Fixing the barrel back is a reversal of the removal process.
a) Attach the lower barrel half to the auger support assembly with the two bolts previously removed.
b) The shredder screen must be installed before the barrel is assembled. The screen is to be located on the gearbox side of the raised ridge about half way along the barrel. The slot in the screen is designed to go over the auger shaft.

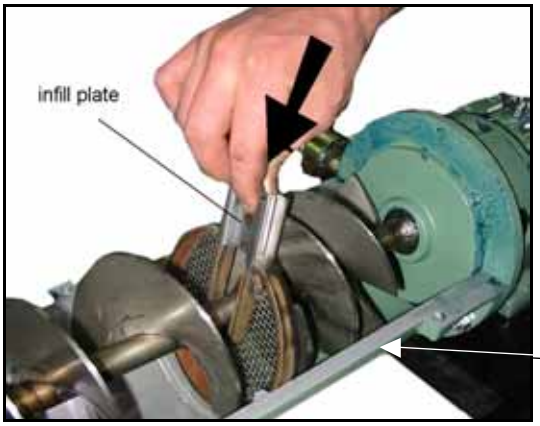

Figure 3. Installing the shredder screen
Slide the infill plate in the slot to retain the shredder screen. The screen goes against the gearbox side of the raised ridge.

Important: The screen **MUST** be installed with the mesh side facing the motor/gearbox

c) Tap the infill plate in to secure the shredder screen
d) re-fit the upper barrel half using the bolts previously removed.

5/ ATTACHING THE VACUUM COMPONENTS.
Accessing the vacuum slot.
A small curved plate is fastened with one screw within the vacuum chamber of the non-de-airing pugmill. See figure 4. Remove this screw and plate and set both aside. This small plate covers the slot though which the air will be drawn from the clay when the pugmill is operating.

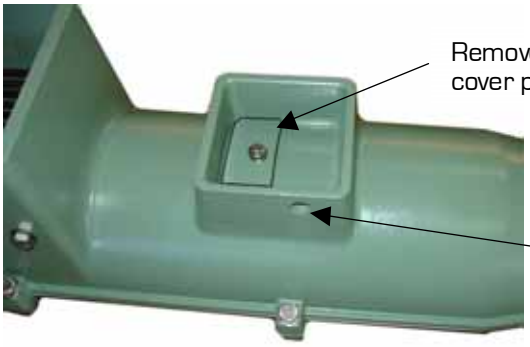

Figure 4. The vacuum chamber

Attaching the vacuum fittings and gauge.
a) Locate the brass vacuum fittings, gauge, plexiglass vacuum chamber lid and one black gasket.
b) Rub a little grease onto the thread of the brass fitting before installing it into the threaded hole on the side of the vacuum chamber. Fit it as shown in figure dd. Likewise rub a little grease onto the thread of the vacuum gauge. To tighten use a 14mm (9/16") spanner on the square section adjacent to the thread.- do not over tighten. A layer of plumber's thread tape on the thread may make it easier to align the gauge.
c) Fit **one** of the black vacuum chamber gaskets onto the posts of the clear plastic vacuum chamber. Place the cover onto the vacuum chamber, as seen in figure 5..

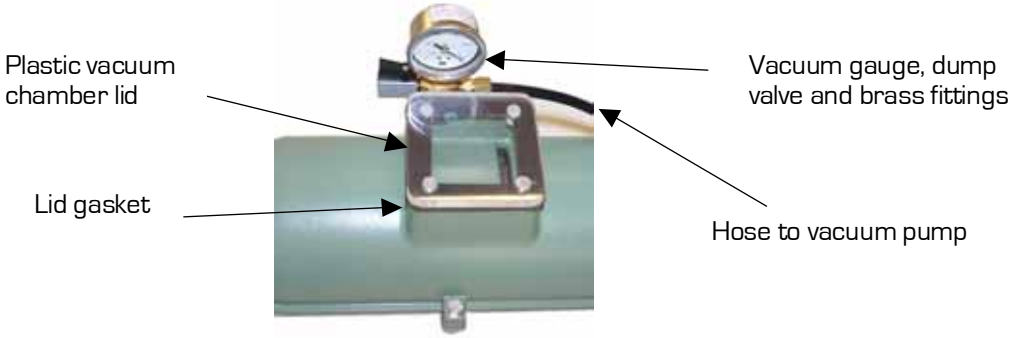

Figure 5: Vacuum chamber fittings

Vacuum Pump

a) Screw the filter / water trap onto the brass fitting on the cylinder of the vacuum pump. The clear bowl should face downward.
b) The black hose connects the pugmill to the vacuum pump. Connect one end to the vacuum pump filter and the other to the fitting next to the vacuum gauge. Use a 16mm (5/8") spanner to tighten

Figure 6: Vacuum hose and filter location on the vacuum pump

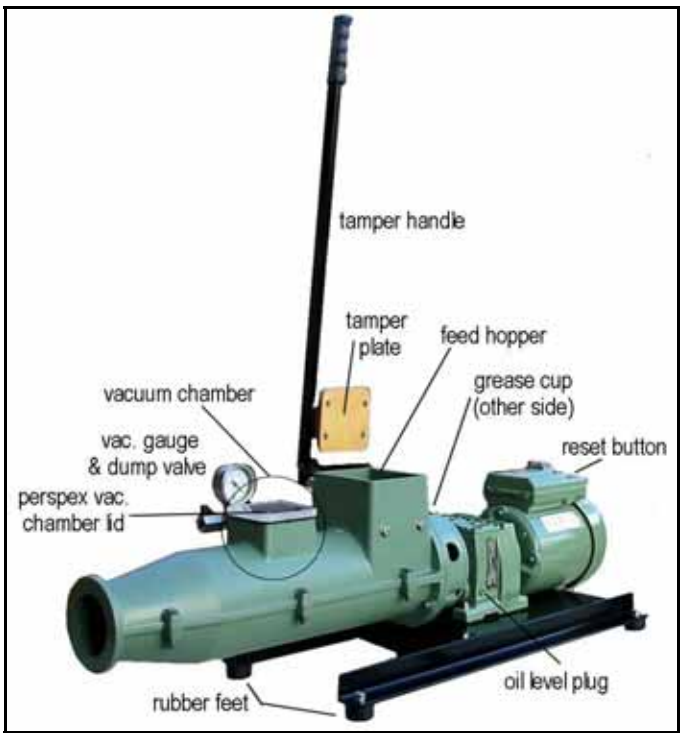

Figure 7. Components of the VENCO 75mm de-airing pugmill.

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