

# SETTING YOUR DIAPHRAGM PUMP

## Pressure

Varies with components: valves, hoses, etc

All components must exceed or meet operating pressure    Max Pressure = 90 +

- High: Hand Gun and Boom = 90 PSI Limit of Unit
- Low: Nozzles = 40 PSI Or desired rate per acre at pressure below maximum

**Note:** Maximum pump pressure is much higher than components found on this unit. NEVER allow maximum pressure of pump to exceed pressure stated above. Pressure above component pressure will cause failure of parts and may cause personal injury. Do not operate until pressure is stated.

## YOU MUST ALWAYS:

1. Adjust PTO length
2. ALWAYS start with control lever OFF in dump position – goes unrestricted to top of the tank
3. Start with agitation open
4. Know GPM's required and PSI
5. Start with booms off
6. Set air pressure in diaphragm and adjust pressure to reduce pulsation before connecting.
7. Start with dump valve knob out – turn counter clockwise out, need to balance with agitation control and boom GPM. Have agitation valve open, move dump valve lever to on position, do not allow PSI over 90 PSI. Turn dump valve knob clockwise increasing PSI. Close agitation valve until PSI on control stand in above the desired spray PSI. Open all boom valves. Adjust agitation until desired spray pressure is reached, yielded by the correct speed (mph) and tip size. Be mindful of spray droplet size and need for agitation. If pressure goes over 90 PSI need to increase flow back to tank thru agitation, dump or regulator.

## SET PRESSURE (see above):

1. Control lever off in dump position – *Failure to do so VOIDS WARRANTY- start with pressure knob out*
2. Agitation opened
3. Boom closed
4. Desire more flow to boom, close agitation and adjust pressure knob to change boom nozzles, PSI to high, change nozzle.
5. Lower pressure open agitation (be mindful of size in agitator), open regulator, open flow by turning knob on dump valve counter clockwise.

## CAN NOT BUILD PRESSURE – Check these items:

1. Jet nozzle, decrease size of restrictor inside tank
2. Lines – collapsed or kinked on suction
3. Pump – not primed
4. Valves – not open – restriction in suction
5. Strainer – Blocked or larger than 20 mesh
6. Opening – to top (regulator or dump) to open
7. RPM to run pump incorrect



#### **MAINTENANCE SUGGESTIONS:**

1. Oil 10W40 – once a year – verify with manufacturer’s instructions
2. Replace diaphragm – once a year
3. Look at oil in reservoir. Cloudy, change.
4. Set PSI on diaphragm. Damper – 20% operating PSI

#### **WORKING THE UNIT:**

1. Test with water before starting – NO CHEMICALS added
2. Check the strainer – 16 mesh required. Clean if necessary. Close valve before opening strainer.
3. Attach to proper battery terminals (if applicable, use clean power). Select tip for job. Adjust machine by balancing dump, agitation on spray.
4. NEVER allow pump to pulsate. Check the pressure in the diaphragm head to stop pulsating
5. See the pump’s operating instructions from the manufacturer for further safety precautions.
6. Verify PTO length



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