

Form # D50pto

## Operator's Instructions PTO Driven Hypro D50 Diaphragm Pump System

**Read the pump manufacturer's owners manuals prior to using your PBM Sprayer.**

Check the filter prior to loading chemical and/or beginning a spray session. If the filter becomes clogged when the tank is loaded, close the valve between the tank outlet and the filter. This will reduce the amount of chemical loss and spillage. Remove the bottom of the filter housing by turning counterclockwise. Rinse the filter element until clean and reassemble the filter. *The pump will not operate properly if the filter bowl is loose or the o-ring is missing or damaged.* **Always use protective clothing and refer to the chemical manufacturer's recommendations when handling chemicals.**

**Important Note:** When setting up your sprayer always test with clean water only.

### Starting up your sprayer

**(See the frame specific section or your tractor's owner's manual for instructions on hooking up the sprayer to the 3-point hitch.)**

Check pump oil level prior to engaging the PTO. Using an automotive air pressure gauge check the air pressure in the pulsation dampener. *(The red dome on the top of the pump.)* Set the pressure at 20% of your desired operating pressure. The minimum charge pressure recommended is 10 PSI. Attach the pump to the tractor PTO shaft by loosening the bolt going through the clamp attached to the splined coupler. Slide the clamp back towards the pump. Align the splines of the shaft with the splines in the coupler and slide the pump assembly onto the shaft until it bottoms out. Return the clamp to the original position and secure the bolt. *(The bolt will be aligned with the groove that is machined in the outside of the female coupler.)* Attach the torque chains to a rigid part of the tractor chassis. **Do not attach the torque chains to lift arms or any other moving components. Be sure lift arms and other moving parts do not come into contact with the pump or plumbing. It may be necessary to slowly lift the 3-point hitch to ensure no binds will occur.** Check that hoses are routed free of kinks and that no binding will occur. Keep the pump as close to level as possible. Before you engage the PTO make sure that any valves for booms, handguns or other accessories are in the closed positions. **Be careful around rotating shafts. (See the safety section of this manual.)** Set the tractor throttle at a low RPM and engage the PTO system. Once you are comfortable that the pump is secure increase the RPM. To obtain maximum performance set the RPM to the pump maximum. In this case 540 RPM. Set the pressure using the "T" handle on the pressure relief valve located on the front of your sprayer. Turn clockwise to increase pressure and counterclockwise to reduce pressure.

*Keep in mind the gauge pressure will be higher than the pressure at the nozzle. The amount of pressure differential depends on hose lengths and restrictions from fittings. A general rule of thumb is to set the pressure at the gauge between 5 and 10 PSI higher than your target PSI. For best results check the pressure at the nozzle. Your local dealer or the PBM sales staff can help you put a testing device together.*