



Ferry County Noxious Weed Control Board

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BOOM SPRAYER PUMP INSTRUCTIONS

AR 30 PUMPS

AR 30 Pumps are twin hydraulic diaphragm pumps with a chamber, which balances pressure on oil diaphragms.

The movement of oil and this method ensures high efficiency at highest performances.

A plastic heat-treating lining protects all parts in contact with corrosive liquids. This treatment permits the use with all chemicals particularly used in agricultural sector.

Another particular of this pump is the high working pressure, which permits economic use for washing.



BEFORE RUNNING THE PUMP ENSURE THAT:

- ✓ Oil is halfway in the sump (#29, drawing 1). If necessary, top up to correct level with ESSO Motor oil 20W/30.
- ✓ The suction line is tightly screwed to the suction union and that the filter is always in place. Any air suction will lower the working efficiency of the pump.
- ✓ Check air in compression cylinder. The ideal pressure in the top of the dome is one tenth that of the working pressure.
- ✓ It is important that the pump does not exceed 540 R.F.M. Above this speed there is no advantage in pressure or output. Unnecessary wear and damage will result, should the pump be used at a higher speed than the above mentioned. The manufacturer declines all responsibility for it.

MAINTENANCE

1. After use, clean out the pump by running it through for a few minutes with clean water. This will prevent the formation of chemicals, which could interfere with normal working. Let the pump work with the suction line out of the water to ensure a complete emptying of the pump.
2. Owing to the particular acid-resisting material employed for valves and diaphragms and the full oil baths for every moving part, these pumps require no maintenance at all. From time to time check oil level and top up to correct level, if necessary.
3. Lubrication of the pump is essential. Change oil every 200 hours of use at the end of each season, whichever is the least. To drain, turn the pump upside down, first removing the oil filter cap (#31, drawing 1) by hand until oil stops flowing. Re-fill with 0.470 liters of ESSO Motor Oil 20W/30. To ensure complete evacuation of air from the pump body, rotate the shaft (# 36, drawing 1), by hand and introduce the oil. The correct level will be obtained when oil is completely introduced in the sump.
4. For the winter storage drain pump completely, particularly the pipelines (# 37-47, drawing 1) of the lower half compression cylinder and the heads.
5. In this case, it is recommended to examine diaphragms at the end of each season and if necessary, replace them.



POSSIBLE TROUBLES, THEIR CAUSES AND REMEDIES

| Problem | Cause | Solution |
|---|--|---|
| The pump does not draw water. | One or more valves seating improperly. | Examine the valve settings and clean. |
| Pressure gauge fluctuates badly. | The pump is sucking in air through the suction union or air has not been entirely evacuated from the pump. | Examine the suction hose and ensure it is firmly secured. Rotate the pump with the outlet hose and taps open. |
| The liquid flow is irregular. | The air in the compression cylinder is incorrectly set. | Check pressure in compression cylinder, 1/10 of working pressure. |
| Water is pumped at little or no pressure. | The sealing washer on the pressure control valve is worn. | Renew washer and, if necessary, also its seating. |
| Output drops and the pump is noisy. | Oil level is too low. | Top up with oil to correct level, up to two studs axis. |
| Oil comes out of the discharge pipe. | One or more diaphragms split. | Drain the pump of oil. Dismantle the heads and fit new diaphragms. Fill to correct oil levels with ESSO Motor Oil 20W/30. |

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The goal of the weed board program is to aid in the containment, slow the spread and when possible, the eradication of noxious weed infestations and the identification and prevention of new infestations of other problem weeds under r.c.w. 17. 10.