OWNER’S MANUAL

3P-55 HORIZONTAL

HYPRO 6 ROLLER PUMP

BOOMJET, BOOM EXTENDER, HAMILTON & BA4R DELUXE BOOM
Congratulations on purchasing your new three point hitch field sprayer. This manual is designed to aid you in operating your new sprayer. Also enclosed is a parts breakdown on your roller pump, pressure regulator, StreamJet spray gun, and calibration on the Boomjet, Hamilton, Boom Extender boomless nozzles & 4 row deluxe boom.

**WARRANTY**

All Field Sprayers are under warranty by Bell Equipment LLC, for a one year period from the date of purchase. This warranty only applies to defects in workmanship or manufacturers defects in their components. This warranty does not cover any misuse, abuse or parts that may freeze & break. Owners are responsible for these issues. Parts proven defective within the one year period will be replaced at no charge.

Bell Equipment LLC, must be notified immediately of any defects or parts broken due to shipping during the warranty period. After the one year period, all warranty is void. No product will be accepted for return without authorization. All returned goods must be packaged securely and shipped with transportation charges prepaid.

For further information regarding parts or warranty, contact:

Bell Equipment LLC,
104 Eastman Street
Greenwood, MS 38930
Phone: 1-800-392-7440

**Operation & Instructions of New Sprayer**

First, back your tractor up to the sprayer, let lift arms all the way down and insert the lift pins into the lift arms of the tractor and secure with lock pins. Secondly, hook up the top link on the tractor to the very top hole of the frame. Connect the pump to the PTO shaft on your tractor by pulling the orange coupler back while sliding it onto the PTO shaft until the balls lock into the grooves on the shaft. After pump is secure take the chain and wrap it around the drawbar of the tractor using the snap link to snap the chain together to keep pump from twisting hoses when PTO is engaged.

Next, fill the tank at least half full of plain water with no chemicals. Screw the pressure regulator (PRV34) part of the way out (brass T handle). This ensures that you do not over pressurize and break the gauge. Also, make sure valve underneath tank is open (handle should be turned going with the line).

You are now ready to try out your sprayer. Engage the PTO lever and pull throttle to the 540RPM mark on the RPM gauge. Turn boom valve on & adjust to the desired operating pressure with the pressure regulator (brass T handle).
CALIBRATING YOUR SPRAYER

HAMILTON NOZZLE 654101

CALIBRATING YOUR SPRAYER

To determine pressure & GPA with a boomless nozzle use this calibration formula.

\[
GPA = \frac{495 \times \text{GPM}}{\text{MPH} \times \text{Swath in feet}}
\]

EXAMPLE:

\[
495(\text{constant}) \times 4.2 \text{GPM} = 2079
\]

\[
\frac{2079}{4 \text{mph} \times 50 \text{ft swath}} = 10.395 \text{ GPA}
\]

Refer to Chart

OPERATING DATA OF 180° NOZZLES

SPRAYERS ARE SUPPLIED WITH #10

<table>
<thead>
<tr>
<th>Office Number</th>
<th>GPM 180°</th>
<th>Swath 180°</th>
<th>GALLON PER ACRE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PSI</td>
<td>3 MPH</td>
<td>4 MPH</td>
</tr>
<tr>
<td>#10</td>
<td>30</td>
<td>12.2</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>13.9</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>14.6</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>15.8</td>
<td>11.9</td>
</tr>
</tbody>
</table>

GPM = Gallons Per Minute
GPA = Gallons Per Acre
MPH = Miles Per Hour
PSI = Pressure Per Square Inch
**SPRAYING SYSTEMS 5880 BOOMJET NOZZLE**

*NOTE*: BOOMJET SPRAYERS ARE STANDARD WITH #10 NOZZLE & HYPRO 6 ROLLER PUMP.

**HYPRO BOOM X TENDER TIPS**

Recommended Spray Height is 48”

*NOTE*: YELLOW TIP-XT024 IS USED
TEEJET SPRAY TIP CALIBRATION

BA4DSQ

All standard booms come w/ 8003VP poly tips.
The 4 Row booms have 9 nozzles.

Formula:

\[
GPM = \frac{GPA \times MPH \times \text{Nozzle Spacing}}{5940}
\]

Example:

\[
\frac{20 \text{ GPA} \times 4 \text{ MPH} \times 20 \text{ in.}}{5940} = \frac{1600}{5940} = .27 \text{ gpm}
\]

Take the GPM that you figured & look down the GPM chart to figure what pressure you need to run at that desired speed.

*NOTE: If spraying liquid nitrogen you will need to multiply the conversion factor w/ the gpa, mph, & nozzle spacing.

Conversion Factor:

- 28% Nitrogen - 10.65 lbs. per gal. - 1.13
- 32% Nitrogen - 11.00 lbs. per gal. - 1.15

Example:

\[
\frac{20 \text{ GPA} \times 4 \text{ MPH} \times 20 \text{ in.} \times 1.13}{5940} = \frac{1808}{5940} = .31 \text{ gpm}
\]

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1. Snap Link (SL14)
2. Breakaway Spring (SP4-6)
4. 18636-112-406 – 3/8” QJ Body – Tee
5. T38 N
6. NTT38 N
7. QJT-NYB Quickjet adapter
8. 50 Mesh Poly Strainer (8079-PP-5O)
9. EPDM Gasket (CP19438-EPR)
10. 8003VP Tip (TP8003VP)
11. Quick Jet Slotted Cap (25612-2-NYR)
12. Center Section
13. Left Arm Boom Tubing
14. Right Arm Boom Tubing
15. Boom Clamp (QJ111SQ-1) *Not Shown*
HYPRO 6500C, 6500N, & 6500XL

Repair Parts Kits:

# 3430-0380 Consists of: (6) Ref. 7 Super Rollers, (1) Ref. 6 O-ring and (2) Ref. 3 Viton Seals

# 3430-00175 Consists of: (6) Ref 7 Polypropylene Rollers, (1) Ref. 6 O-ring, and (2) Ref. 3 Viton Seals

# 3430-0621 Consists of: (1) Ref 8 Phenolic rotor, (1) Ref 9 Metal insert and (1) Ref 10 Shaft

Note: When ordering parts, give quantity, part number, description and complete model number. Reference numbers are used ONLY to identify parts in the drawing and NOT to be used as order numbers.
## TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. NO PRESSURE</td>
<td>A. STRAINER CLOGGED</td>
</tr>
<tr>
<td></td>
<td>B. PUMP SUCKING AIR or PUMP HAS AIR LOCK. CHECK HOSES FOR CRACKS or HOLES. MAKE SURE FITTINGS ARE TIGHT.</td>
</tr>
<tr>
<td></td>
<td>C. SUCTION LINE COLLAPSING – NEED STIFFER HOSE.</td>
</tr>
<tr>
<td></td>
<td>D. WORN or LEAKING SEALS.</td>
</tr>
<tr>
<td>2. PUMP RUNS, BUT LOW PRESSURE</td>
<td>A. SUCTION LINE &amp; FITTINGS STOPPED UP or HOSE KINKED.</td>
</tr>
<tr>
<td></td>
<td>B. WORN ROLLERS or PUMP HOUSING.</td>
</tr>
<tr>
<td></td>
<td>C. STOPPED UP STRAINER.</td>
</tr>
<tr>
<td>3. PUMP PRESSURE GOOD BUT LOW OUTPUT THROUGH NOZZLES</td>
<td>A. NOZZLE SIZE MAY BE TOO SMALL. CHECK CALIBRATION &amp; GALLONS PER ACRE.</td>
</tr>
<tr>
<td></td>
<td>B. INLET LINE TOO SMALL or BLOCKED OFF.</td>
</tr>
<tr>
<td></td>
<td>C. BY-PASS OPEN TOO MUCH. CLOSE SLIGHTLY.</td>
</tr>
<tr>
<td>4. EXCESSIVE VIBRATION or NOISE FROM PUMP</td>
<td>A. POSSIBLE LOOSE COUPLER – DAMAGED SHAFT.</td>
</tr>
<tr>
<td></td>
<td>B. EXCESSIVE PTO or ENGINE SPEED.</td>
</tr>
<tr>
<td></td>
<td>C. ROTOR or INTERNAL PROBLEM.</td>
</tr>
</tbody>
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