Read the operator’s manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!
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Important Safety Information

Look for Safety Symbol
The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Be Aware of Signal Words
Signal words designate a degree or level of hazard seriousness.

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
Be Familiar with Safety Decals
▲ Read and understand “Safety Decals,” page 4, thoroughly.
▲ Read all instructions noted on the decals.

Keep Riders Off Machinery
Riders obstruct the operator’s view. Riders could be struck by foreign objects or thrown from the machine.
▲ Never allow children to operate equipment.
▲ Keep all bystanders away from machine during operation.

Shutdown and Storage
▲ Lower drill, put tractor in park, turn off engine, and remove the key.
▲ Secure drill using blocks and supports provided.
▲ Detach and store drill in an area where children normally do not play.

Use Safety Lights and Devices
Slow-moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
▲ Use flashing warning lights and turn signals whenever driving on public roads.
▲ Use lights and devices provided with implement.
Transport Machinery Safely
Maximum transport speed for implement is 20 mph. Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

▲ Do not exceed 20 mph. Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.

▲ Comply with state and local laws.

▲ Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.

▲ Carry reflectors or flags to mark drill in case of breakdown on the road.

▲ Keep clear of overhead power lines and other obstructions when transporting. Refer to transport dimensions under "Specifications and Capacities," in your operator's manual.

Avoid High Pressure Fluids
Escaping fluid under pressure can penetrate the skin, causing serious injury.

▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines.

▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.

▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.
Practice Safe Maintenance
▲ Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.
▲ Work in a clean, dry area.
▲ Lower the drill, put tractor in park, turn off engine, and remove key before performing maintenance.
▲ Make sure all moving parts have stopped and all system pressure is relieved.
▲ Allow drill to cool completely.
▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on drill.
▲ Inspect all parts. Make sure parts are in good condition and installed properly.
▲ Remove buildup of grease, oil or debris.
▲ Remove all tools and unused parts from drill before operation.

Prepare for Emergencies
▲ Be prepared if a fire starts.
▲ Keep a first aid kit and fire extinguisher handy.
▲ Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

Wear Protective Equipment
▲ Wear protective clothing and equipment.
▲ Wear clothing and equipment appropriate for the job. Avoid loose-fitting clothing.
▲ Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection such as earmuffs or earplugs.
▲ Because operating equipment safely requires your full attention, avoid wearing radio headphones while operating machinery.
Handle Chemicals Properly
Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.

▲ Read and follow chemical manufacturer's instructions.
▲ Wear protective clothing.
▲ Handle all chemicals with care.
▲ Avoid inhaling smoke from any type of chemical fire.
▲ Store or dispose of unused chemicals as specified by chemical manufacturer.

Use A Safety Chain
▲ Use a safety chain to help control drawn machinery should it separate from tractor drawbar.
▲ Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
▲ Attach chain to tractor drawbar support or other specified anchor location. Allow only enough slack in chain to permit turning.
▲ Replace chain if any links or end fittings are broken, stretched or damaged.
▲ Do not use safety chain for towing.

Tire Safety
Tire changing can be dangerous and should be performed by trained personnel using correct tools and equipment.

▲ When inflating tires, use a clip-on chuck and extension hose long enough to you to stand to one side—not in front of or over tire assembly. Use a safety cage if available.
▲ When removing and installing wheels, use wheel-handling equipment adequate for weight involved.
Safety at All Times

Thoroughly read and understand the instructions in this manual before operation. Read all instructions noted on the safety decals.

▲ Be familiar with all drill functions.
▲ Operate machinery from the driver’s seat only.
▲ Do not leave drill unattended with tractor engine running.
▲ Do not dismount a moving tractor. Dismounting a moving tractor could cause serious injury or death.
▲ Do not stand between the tractor and drill during hitching.
▲ Keep hands, feet and clothing away from power-driven parts.
▲ Wear snug-fitting clothing to avoid entanglement with moving parts.
▲ Make sure all persons are clear of working area.
▲ Do not turn tractor too tightly, cause drill to ride up on wheels. This could cause personal injury or equipment damage.
Introduction

Great Plains Manufacturing wants you to be satisfied with any new machine delivered by the Great Plains Trucking network. To ease the assembly task and produce a properly working machine, read this entire manual before assembling or setting up new equipment.

Description of Unit
The 1205NT Drill is a 12' grain drill of end wheel design which couples Great Plains spring mounted coulter with a straight arm design of our solid stand opener to achieve no-till drilling capabilities. The end wheel design keeps the ground-working components in line with the end wheels for accurate coulter depth and seed placement over uneven terrain and allows the unit to follow field curves without side-loading the openers.

Intended Usage
This machine is intended to be used primarily for No-Till drilling. It can easily be adapted for conventional drilling applications.

Models Covered
1205NT
Using This Manual
This manual was written to help you assemble and prepare the new machine for the customer. The manual includes instructions for assembly and setup. Read this manual and follow the recommendations for safe, efficient and proper assembly and setup.

An operator’s manual is also provided with the new machine. Read and understand “Important Safety Information” and “Operating Instructions” in the operator’s manual before assembling the machine. As a reference, keep the operator’s manual on hand while assembling.

The information in this manual is current at printing. Some parts may change to assure top performance.

Definitions
The following terms are used throughout this manual.

Right and left as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated.

**IMPORTANT**: A crucial point of information about the preceding topic. For safe and correct operation, read and follow the directions provided before continuing.

**NOTE**: Useful information about the preceding topic.

Assembly and Setup Assistance
To order additional copies of predelivery instructions or operator’s and parts manuals, write to the following address. Include model numbers in all correspondence.

If you do not understand any part of this manual or have other assembly or setup questions, assistance is available. Contact

**Product Support**
Great Plains Mfg. Inc., Service Department
P.O. Box 5060
Salina, KS 67402-5060
Assembly

The following headings are step-by-step instructions for assembling the 1205NT Drill. Begin with “Tools Required” and “Pre-Assembly Checklist” to make sure you have all necessary parts and equipment. Follow each step to make the job as quick and safe as possible and produce a properly working machine.

The 1205NT Drill is shipped via flat bed truck. It is the dealer’s responsibility to unload the new machine. Unload all equipment before beginning assembly. Do not attempt any assembly work while the 1205NT Drill is on the truck.

Tools Required
- Fork lift, overhead hoist, or loader
- General hand tools

Pre-Assembly Checklist
2. Have at least two people on hand while assembling.
3. Make sure assembly area is level and free of obstructions (preferably an open concrete area).
4. Have all major components.
5. Have all fasteners and pins shipped with the drill.

IMPORTANT: If a pre-assembled part or fastener is temporarily removed, remember where it goes. Keep the parts separated.

6. Have a copy of the parts manual on hand. If unsure of proper placement or use of any part or fastener, refer to the parts manual.
7. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
8. Check for proper tension and alignment on all drive chains.
9. Check that all safety decals and reflectors are located correctly and legible. Replace if improperly located or damaged. Refer to “Safety Decals” in the operator’s manual.

10. Inflate tires to recommended pressure as listed on the “Tire Inflation Chart,” page 17. Tighten wheel bolts as specified on “Torque Values Chart,” page 16.

**Tongue Assembly**

See Figure 1. With the aid of a fork-lift, overhead hoist or loader, lift the tongue (1) into place on the front center of tongue mounting brackets (2) and bolt it into place with the eight 3/4 x 6 x 5 3/4 inch u-bolts (3), lock-washers (4) and nuts (5).

Use Figure 2 as a reference for tongue location.
Hydraulic Attachment

NOTE: The SAE O-RING and JIC 37 (deg) flare type hose connections do not require sealant for reconnecting. They do not require high torque for a good seal.

IMPORTANT: When using sealant on pipe threads the friction between the threads is reduced; therefore, be certain not to over tighten which may cause damage to a valve, cylinder port or fitting.

See Figure 3:

Attach the relief valve (6) to the mounting bracket on the rear cross tube of the tongue with two 5/16 x 2 3/4 inch long bolts (7), lock washers (8), and nuts (9). Connect the two hydraulic hoses (10) that are routed through the tongue to the relief valve with one connecting to the upper port on the left hand side and the other connecting to the lower port on the right hand side.

Connect the 1/2 inch hose (11) leading from the depth stop valve, to the lower left hand port of the pressure relief valve (6) located on the tongue. Connect the 1/2 inch hose (12) leading from the rod end of the right hand transport cylinder to the upper right hand port of the same valve.

Wiring Attachment

Refer to Figure 3. Route the main lead of the light wiring harness (13) through the tongue and connect it to the wishbone harness (14) that is connected to the lights on the drill.

Clutch Linkage

See Figure 4. The clutch to gauge wheel arm linkage (1) is left un-attached for shipping purposes. Once the unit has been set on the ground, it may be attached to the gauge wheel arm. Make sure that the clutch cam plate (4) is rotated to the bottom of center as shown before the arm linkage is connected so that the cam rotates down and rearward when the drill is raised. Remove the nylock nut (2) from the arm linkage. Insert arm linkage through the tab (3) on the gauge wheel arm and reinstall the nut. Do not cinch the nut down tight, the linkage must rotate freely.
Hitching Tractor to Drill

⚠️ DANGER
You may be severely injured or killed by being crushed between the tractor and drill. Do not stand or place any part of your body between drill and moving tractor. Stop tractor engine and set park brake before installing the hitch pin.

Hitch Assembly
1. See Figure 5. Insert upper hitch plate (1) into clevis hitch (2) with a spacer tube (3) on each side of ball swivel.
2. Bolt in place with 1 x 5 1/2 inch bolt (4), flat washer (5) and nylock nut (6).

Hitch Height
1. For proper field operation, drill tongue should run level in field position. See Figure 6.
   a. With drill in field position, adjust tongue jack to level tongue.
   b. Measure tractor drawbar height to determine proper hitch height on drill.
   c. Attach hitch to tongue with two 3/4 x 6 inch bolts (1), lock washers (2) and nuts (3).

NOTE: Mounting holes in drill hitch are offset so hitch can be turned over and attached in three different positions, giving six different hitch heights.

NOTE: When hitching drill to a different tractor, check for a difference in drawbar heights. If heights are different, readjust accordingly.
**Hitching to Tractor**

Refer to Figure 7.

1. Back tractor to drill. Using the screw jack, adjust drill tongue to get drawbar under upper hitch plate (1).

2. Align rear hole in upper hitch plate with large hole in drawbar. Place lower hitch plate (4) under drawbar and attach to upper hitch plate with two 5/8 x 4 inch bolts (5), flat washers (6) and nylock nuts (7).

3. Bolt top upper hitch plate through hole in drawbar to lower hitch plate with 1 x 5 1/2 inch bolt (8), USS flat washer (3) and nylock nut (2).

4. Securely attach safety chain to drill hitch with a 3/4 x 2 1/4 inch bolt (10), safety washer (11), lock washer (12) and nut (13). Then attach to tractor drawbar.

5. Store jack on top of tongue as shown in Figure 8.
Hydraulic Hose Hookup

Great Plains hydraulic hoses are color coded to help you hookup hoses to your tractor outlets. Hoses that go to the same remote valve are marked with the same color.

<table>
<thead>
<tr>
<th>Color</th>
<th>Hydraulic Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Transport Lift Cylinders</td>
</tr>
<tr>
<td>Orange</td>
<td>Marker Cylinders</td>
</tr>
</tbody>
</table>

To distinguish hoses on the same hydraulic circuit, refer to plastic hose holder. Hose under extended-cylinder symbol feeds cylinder base ends. Hose under retracted-cylinder symbol feeds cylinder rod ends.

Bleeding Hydraulics

⚠️ WARNING

Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result. Check that tractor hydraulic reservoir is full.

The drill lifting system is equipped with rephasing type hydraulic cylinders that require a special procedure for bleeding air from the hydraulic circuits. Read and follow this procedure carefully. Rephasing type cylinders will not function properly with air in hydraulic circuit.

1. Check hydraulic fluid in tractor reservoir and fill reservoir to proper level. Drill-system capacity is about 1 gallon. Add fluid to system as needed. A low reservoir level may draw air back into the system, causing jerky or uneven cylinder movements.
2. With drill attached to tractor, jack drill up and support frame at ends near gauge wheels.

3. With drill raised and supported, unpin cylinders from gauge wheel arms and frame. Turn cylinders "rod end up". Wire or otherwise safely support rod ends higher than base ends.

NOTE: In order to prevent trapped air pockets, rod end must be higher than any other part of cylinder during bleeding operation.

4. With tractor engine idling, engage tractor hydraulics to extend cylinder rods. When cylinder rods are completely extended, hold remote lever on for one minute.

5. Retract cylinders. Extend cylinders again and hold remote lever on for one more minute. Repeat this step two more times to completely bleed system.

6. Repin cylinders to drill frame and gauge wheel arm with transport cylinder locks in place. If any air still is trapped in either cylinder, the cylinder will have a spongy, erratic movement and drill will not raise evenly. If necessary, repeat bleeding process.

7. Refill tractor hydraulic fluid reservoir to its proper level.

NOTE: After the drill is raised, a slight settling will occur due to the action of the rephasing cylinders.
## Torque Values Chart for Common Bolt Sizes

<table>
<thead>
<tr>
<th>Bolt Size (Inches)</th>
<th>Bolt Head Identification</th>
<th>Bolt Size (Metric)</th>
<th>Class 5.8</th>
<th>Class 8.8</th>
<th>Class 10.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-tpi¹</td>
<td>N · m²</td>
<td>ft-lb³</td>
<td>mm x pitch⁴</td>
<td>N · m</td>
<td>ft-lb</td>
</tr>
<tr>
<td>1/4&quot; - 20</td>
<td>7.4</td>
<td>5.6</td>
<td>11</td>
<td>8</td>
<td>16</td>
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<tr>
<td>1/4&quot; - 28</td>
<td>8.5</td>
<td>6</td>
<td>13</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>5/16&quot; - 18</td>
<td>15</td>
<td>11</td>
<td>24</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>5/16&quot; - 24</td>
<td>17</td>
<td>13</td>
<td>26</td>
<td>19</td>
<td>37</td>
</tr>
<tr>
<td>3/8&quot; - 16</td>
<td>27</td>
<td>20</td>
<td>42</td>
<td>31</td>
<td>59</td>
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<td>3/8&quot; - 24</td>
<td>31</td>
<td>22</td>
<td>47</td>
<td>35</td>
<td>67</td>
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<td>7/16&quot; - 14</td>
<td>43</td>
<td>32</td>
<td>67</td>
<td>49</td>
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<td>36</td>
<td>75</td>
<td>55</td>
<td>105</td>
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<tr>
<td>1/2&quot; - 13</td>
<td>66</td>
<td>49</td>
<td>105</td>
<td>76</td>
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<td>1/2&quot; - 20</td>
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<td>115</td>
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<td>150</td>
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<td>205</td>
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<td>110</td>
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<td>395</td>
<td>1210</td>
<td>890</td>
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<td>500</td>
<td>1520</td>
<td>1120</td>
<td>2460</td>
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<tr>
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<td>555</td>
<td>1680</td>
<td>1240</td>
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<td>655</td>
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<td>745</td>
<td>2270</td>
<td>1670</td>
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<td>870</td>
<td>2640</td>
<td>1950</td>
<td>4290</td>
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<td>1330</td>
<td>980</td>
<td>2970</td>
<td>2190</td>
<td>4820</td>
</tr>
</tbody>
</table>

1. in-tpi = nominal thread diameter in inches-threads per inch
2. N · m = newton-meters
3. ft-lb = foot pounds
4. mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.
## Tire Inflation Chart

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>Inflation PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.50 x 20” 4-Ply Drill Rib</td>
<td>28</td>
</tr>
<tr>
<td>9.0 x 22.5 10-Ply Highway Service 70</td>
<td>70</td>
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<tr>
<td>9.0 x 24” 8-Ply Rib Implement</td>
<td>40</td>
</tr>
<tr>
<td>9.5L x 15” 6-Ply Rib Implement</td>
<td>32</td>
</tr>
<tr>
<td>9.5L x 15” 8-Ply Rib Implement</td>
<td>44</td>
</tr>
<tr>
<td>9.5L x 15” 12-Ply Rib Implement</td>
<td>60</td>
</tr>
<tr>
<td>11L x 15” 6-Ply Rib Implement</td>
<td>28</td>
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<tr>
<td>11L x 15” 12-Ply Rib Implement</td>
<td>52</td>
</tr>
<tr>
<td>12.5L x 15” 8-Ply Rib Implement</td>
<td>36</td>
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<tr>
<td>12.5L x 15” 10-Ply Rib Implement</td>
<td>44</td>
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<tr>
<td>16.5L x 16.1” 10-Ply Rib Implement</td>
<td>36</td>
</tr>
<tr>
<td>41 x 15” x 18 - 22-Ply Rib Implement</td>
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