Turbo-Chisel

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Models Affected: TC5109, TC5111, TC5113, TC5115, TC5313, TC5315, TC5317, TC5319, TC5321, TC5323, TCN5107, TCN5309, TCN5311, TCN5313

General Information

Proper servicing and adjustment is key to the long life of all farm equipment. With careful and systematic inspection of equipment, costly maintenance, time and repair can be avoided. The following information will assist with recommended servicing and adjustments:
Tire Inflation Chart:
Ensure all tires are inflated to the proper operating pressure per the table to the right. **Note: Proper inflation is important to ensure safe transport and level operation of the Turbo-Chisel.**

<table>
<thead>
<tr>
<th>Position</th>
<th>Size</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>12.5Lx15 F-Ply</td>
<td>90 PSI</td>
</tr>
<tr>
<td>Wings</td>
<td>12.5Lx15 12-Ply</td>
<td>55 PSI</td>
</tr>
</tbody>
</table>

Hydraulic Hose Hookup:
Great Plains hydraulic hoses have colored coded handle grips to help hook up hoses to the tractor remotes. Hoses with the same color use the same remote.

<table>
<thead>
<tr>
<th>Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>Lift (2 Hoses)</td>
</tr>
<tr>
<td>Green</td>
<td>Fold (2 Hoses)</td>
</tr>
<tr>
<td>Red</td>
<td>Gang (2 Hoses)</td>
</tr>
</tbody>
</table>

Front to Rear Leveling:
1) If applicable, completely unfold the machine while observing the unit for any hydraulic leaks or loose fittings.

2) Raise the machine to re-phase the lift circuit. Hold the lift circuit open for 30 seconds to ensure all air is purged from the hydraulic system.

3) Lower the machine so that the front row of shanks are 1 to 2” above the ground.

4) Remove the snap wire pin (1) from the turnbuckle lock (2) and swing the lock off the turnbuckle.

5) Adjust the hitch turnbuckle (3) so that the front corner of the main frame is 1/2 to 1” lower than the rear.

6) Once adjusted, the turnbuckle lock (2) may be swung back onto the hitch turnbuckle and the snap wire pin (1) can be re-installed.

Wing Adjustment (TC5313-TC5315):
**Note: Prior to leveling the wings, ensure that the machine is level front to rear.**

1) With the machine raised, completely extend the wing fold cylinder and check the wings for levelness.

2) If the machine does not appear to be level, fold the wings back up and install shims as needed. **Note: Extra shims (4) are stored behind the wing stops. The extra shims may be needed in the future if the hinge holes or bolts begin to wear.**

3) To add or remove shims, remove the two bolts (5) holding the shim(s) in place and either add more shims to raise the wings or remove shims to lower the wings.

4) With the desired shims in place, re-tighten the bolts (5) down to spec.
**Wing Adjustment (TC5317-TC5323):**

Note: Prior to leveling the wings, ensure that the machine is level front to rear.

1) With the machine raised, completely extend the wing fold cylinder and check the wings for levelness.

2) If the machine does not appear to be level, adjust the turnbuckles on the wing cylinder mounts.

3) Loosen the jam nut (6) and either shorten the turnbuckle to raise the wings or lengthen the turnbuckle to lower the wings.

4) Once level, re-tighten the jam nut (6).

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**Hydraulic Down Pressure (TC5317-TC5323):**

Note: This setup procedure is for tractors with closed-center or pressure compensated flow hydraulic systems only. Open center hydraulics are not supported.

1) Adjust the bypass/pressure reducing valve by turning the knob (7) clockwise all the way in and then backing it out 1 full turn.

2) In the tractor, adjust the flow-control valve so that the hydraulics have a low flow rate. Note: The faster the hydraulic flow the great the potential for oil heating, premature wear and tractor damage.

3) Lock the fold hydraulic lever for continuous downward flow.

4) Adjust the bypass/pressure reducing valve knob (8) so the pressure gauge (9) reads 1200 psi. Never exceed 1400 psi.

5) While watching the pressure gauge (9), slowly open the knob (7) until the gauge reads 1100 psi. Note: The pressure may rise then fall off. If the pressure exceeds 1400 psi during this step, the tractor flow is too high.

6) Adjust valve (8) to the desired wing down pressure. Never exceed 900 psi.

In field operation, lock the fold hydraulic lever for continuous downward oil flow. If the wings are running too high, increase the pressure to level the machine with knob (8). If the center is too high, decrease the pressure setting with knob (8) on the valve.
Hydraulic Single Point Depth Stop Adjustment:

The hydraulic depth stop will ensure a consistent depth every time the implement is lowered.

1) Prior to setting the single point depth stop, ensure that the machine is completely level front to back and side to side.

2) Lower the implement to the desired working depth and pull forward. Once satisfied with the working depth, adjust the depth stop handle (10) to make contact with the depth stop valve. **Note:** If a change in depth is desired, 1 full turn of the depth stop handle either in or out will change the depth of the machine approximately 1/4” up or down.

Hydraulic Coulter Adjustment:

Once the machine is leveled and set to the desired operating depth, the coulters can then be adjusted.

**Note:** Do not run the coulters deeper than 5”. The optimum operating depth is 3-4” of depth.

Initially set the coulter depth gauge to “C”. Adjust the coulters as needed to ensure adequate working depth.

**Note:** Do not force coulters into the ground in hard soils as the coulters can force the front of the machine out of the ground.
Chopper Reel Adjustment:

Note: Chopper reels are designed to help size the soil and residue. The reels should be run as far forward as possible without causing plugging. In wetter conditions, the chopper reels may need to be moved back some to allow the soil to settle. Also, in wet conditions, it is not advisable to apply down pressure on the reels.

1) To raise or lower the chopper reels, adjust the eyebolt (11) by loosening the jam nuts (12).

2) Extend the eyebolt to lower the chopper reels or retract the eyebolt to raise the chopper reels.

3) Once adjusted, re-tighten the jam nuts (12).

4) To adjust the chopper reels in and out, remove the bolt (13) and slide the tubes in or out. Each adjust hole is approximately 3” or adjustment. Note: Due to weight concerns, the choppers should be run as far forward as possible while still allowing soil and residue to flow properly.

Chopper Reel Down Pressure Adjustment:

1) For slight down pressure changes, loosen the set screw (14) from the collar and slide the collar (15) up for more pressure or down for less. Once adjusted, tighten the set screw (14).

2) To add more down pressure, tighten the lock nut (16) on top of the down pressure spring. As the spring is tighten, it will raise the chopper reel so the eyebolts may need to be adjusted as well.