# SET-UP INSTRUCTIONS 



## WP840 WP870



## Always Put Safety First!

Read these assembly instructions thoroughly before beginning. Make sure each step is understood before attempting it. Be familiar with all safety signs on the machine and their meaning.

Tighten all fasteners to the torque value specified on the last page. Recheck before using the machine.

## WARNING!

Position the crate in a large open area to allow access from all sides during assembly.

Stay clear of overhead power lines and obstructions when lifting the machine during assembly. Contact with power lines can cause electrocution. Contact with obstructions can damage components or cause them to fail.

Keep the assembly area clean to prevent slipping or tripping.

Use a hoist when lifting components that weigh $50 \mathrm{lb}(23 \mathrm{~kg})$ or more to avoid back injury.

All lifting devices (straps, slings, chains, ratchet blocks) must comply with applicable local regulations and certifications. Wallenstein Equipment Inc. cannot accept responsibility for the use of sub-standard equipment and work practices.

Use lifting equipment with a capacity greater than the weight of the component. Place jack stands or wood blocking under the machine to securely stabilize it before working on it during assembly.

Use the correct tool for the job. Repair or replace broken or defective equipment or tools. Makeshift tools can create safety hazards. A tool that breaks or slips during use risks personal injury.

## A WARNING!

Avoid the risk of personal injury or machine damage! Read the operator's manual before using this equipment. Carefully read all safety messages in the manual and follow all safety signs on the machine.

Some parts are attached to skid with screws. Shipping brackets are not reused.

Assembly hardware is located inside operator's manual tube.

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|  | Pre-delivery Inspection |
| :--- | :--- |
| Inspect for damage from shipping. Immediately contact the <br> shipping company if damage is found. <br> Wood Processor <br>  Engine Starts and Runs |  |
|  | Hydraulic Splitter Controls Function |
|  | Hydraulic Cylinder Functions |
|  | Splitter Chute Folds Up |
|  | Wedge Height Adjuster Functions |
|  | Loader and Lead-in Chutes Fold Up and Latch Securely |
|  | Log Stabilizer Moves Freely |
|  | Fasteners Tight |
|  | Grease Zerks / Lubricate Pivot Points |
|  | Pivot Tongue Moves Freely |
|  | Hydraulic Connections |
|  | Review Operating and Safety Instructions |
| Safety Checks |  |
|  | All Safety Decals Installed |
|  | Guards and Shields Installed and Secured |
|  | All Jacks Function |
|  | Retainer Installed Through Hitch Points |
|  | Check Tire Pressure |
|  | Check Wheel Nuts |
|  | Check Operation of Running / Brake Lights |
|  | Review Operating and Safety Instructions |
| Hydraulic Winch |  |
|  | Check Winch Clutch Handle Control |
|  | Check Winch Rope / Hook / Fairlead |
|  | Check Hydraulic Function |
|  | Review Operating and Safety Instructions |
| Optional Equipment |  |
|  | Chain Saw Holster: Installed securely |
|  | 6 Way Wedge: Check Height Adjuster |
|  | Chainsaw Pivot: Check Pivot Function |

## Bolt Torque Specifications

## Checking Bolt Torque

The tables shown give correct torque values for various bolts and capscrews. Tighten all bolts to the torque values specified in the table, unless indicated otherwise. Check tightness of bolts periodically.

IMPORTANT! If replacing hardware, use fasteners of the same grade.

IMPORTANT! Torque figures indicated in the table are for non-greased or non-oiled threads. Do not grease or oil threads unless indicated otherwise. When using a thread locker, increase torque values by $5 \%$.

| Imperial Bolt Torque Specifications |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bolt <br> Diameter | Torque Value |  |  |  |  |  |
|  | SAE Gr. 2 |  | SAE Gr. 5 |  | SAE Gr. 8 |  |
|  | lbf •ft | $N \cdot m$ | lbf •ft | $\mathrm{N} \cdot \mathrm{m}$ | $\mathrm{lbf} \cdot \mathrm{ft}$ | N•m |
| 1/4" | 6 | 8 | 9 | 12 | 12 | 17 |
| 5/16" | 10 | 13 | 19 | 25 | 27 | 36 |
| 3/8" | 20 | 27 | 33 | 45 | 45 | 63 |
| 7/16" | 30 | 41 | 53 | 72 | 75 | 100 |
| 1/2" | 45 | 61 | 80 | 110 | 115 | 155 |
| 9/16" | 60 | 95 | 115 | 155 | 165 | 220 |
| 5/8" | 95 | 128 | 160 | 215 | 220 | 305 |
| 3/4" | 165 | 225 | 290 | 390 | 400 | 540 |
| 7/8" | 170 | 230 | 420 | 570 | 650 | 880 |
| $1{ }^{\prime \prime}$ | 225 | 345 | 630 | 850 | 970 | 1320 |

NOTE: Bolt grades are identified by their head markings.


| Metric Bolt Torque Specifications |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Bolt <br> Diameter | Torque Value |  |  |  |
|  | Gr. 8.8 |  | Gr. 10.9 |  |
| Ibffft | N•m | lbffft | N•m |  |
| M3 | 0.4 | 0.5 | 1.3 | 1.8 |
| M4 | 2.2 | 3 | 3.3 | 4.5 |
| M6 | 7 | 10 | 11 | 15 |
| M8 | 18 | 25 | 26 | 35 |
| M10 | 37 | 50 | 52 | 70 |
| M12 | 66 | 90 | 92 | 125 |
| M16 | 166 | 225 | 229 | 310 |
| M20 | 321 | 435 | 450 | 610 |
| M30 | 1,103 | 1495 | 1,550 | 2100 |
| M36 | 1,917 | 2600 | 2,700 | 3675 |



## Hydraulic Fitting Torque

Tightening Flare Type Tube Fittings

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Hand-tighten swivel nut until snug.
4. To prevent twisting the tube, use two wrenches. Place one wrench on the connector body and tighten the swivel nut with the second. Torque to values shown.
If a torque wrench is not available, use the FFFT (Flats From Finger Tight) method.

## Wheel Lug Torque

It is extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

Wheel lugs should be torqued before first road use and after each wheel removal. Check and re torque after the first 10 miles ( 16 km ), 25 miles ( 40 km ), and again at 50 miles ( 80 km ). Check periodically thereafter.

## ! WARNING!

Wheel lug nuts must be installed and kept at the proper torque value to prevent loose wheels, broken studs, or possible separation of wheels from axle.

- Start all lug nuts onto the threads by hand.
- Tighten lug nuts in stages, following the pattern shown in the Wheel Lug Nut Torque table.

| Hydraulic Fitting Torque |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Tube <br> Size <br> OD | Hex <br> Size <br> Across <br> Flats | Torque value |  | Flats From <br> Finger Tight |  |
| Inches | Inches | lbffft | N•m | Flats | Turns |
| $3 / 16$ | $7 / 16$ | 6 | 8 | 2 | $1 / 6$ |
| $1 / 4$ | $9 / 16$ | $11-12$ | $15-17$ | 2 | $1 / 6$ |
| $5 / 16$ | $5 / 8$ | $14-16$ | $19-22$ | 2 | $1 / 6$ |
| $3 / 8$ | $11 / 16$ | $20-22$ | $27-30$ | $1-1 / 4$ | $1 / 6$ |
| $1 / 2$ | $7 / 8$ | $44-48$ | $59-65$ | 1 | $1 / 6$ |
| $5 / 8$ | 1 | $50-58$ | $68-79$ | 1 | $1 / 6$ |
| $3 / 4$ | $1-1 / 4$ | $79-88$ | $107-119$ | 1 | $1 / 8$ |
| 1 | $1-5 / 8$ | $117-125$ | $158-170$ | 1 | $1 / 8$ |

Values shown are for non-lubricated connections.

| Wheel Lug Nut Torque |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Wheel Size | Units | 1st Stage | 2nd Stage | 3rd Stage |
| 8" | lbf•ft <br> $\mathrm{N} \cdot \mathrm{m}$ | $\begin{aligned} & 12-20 \\ & 16-26 \end{aligned}$ | $\begin{gathered} 30-35 \\ 39-45.5 \end{gathered}$ | $\begin{gathered} 45-55 \\ 58.5-71.5 \end{gathered}$ |
| 12" | $\begin{aligned} & \text { lbf•ft } \\ & \mathrm{N} \cdot \mathrm{~m} \end{aligned}$ | $\begin{gathered} 20-25 \\ 26-32.5 \end{gathered}$ | $\begin{gathered} 35-40 \\ 45.5-52 \end{gathered}$ | $\begin{aligned} & 50-60 \\ & 65-78 \end{aligned}$ |
| 13" | lbf•ft <br> $\mathrm{N} \cdot \mathrm{m}$ | $\begin{gathered} 20-25 \\ 26-32.5 \end{gathered}$ | $\begin{gathered} 35-40 \\ 45.5-52 \end{gathered}$ | $\begin{aligned} & 50-60 \\ & 65-78 \end{aligned}$ |
| 14" | $\begin{aligned} & \text { Ibf.ft } \\ & \mathrm{N} \cdot \mathrm{~m} \end{aligned}$ | $\begin{gathered} 20-25 \\ 26-32.5 \end{gathered}$ | $\begin{aligned} & 50-60 \\ & 65-78 \end{aligned}$ | $\begin{gathered} 90-120 \\ 117-156 \end{gathered}$ |
| 15" | $\mathrm{lbf} \cdot f t$ <br> $\mathrm{N} \cdot \mathrm{m}$ | $\begin{gathered} 20-25 \\ 26-32.5 \end{gathered}$ | $\begin{aligned} & 50-60 \\ & 65-78 \end{aligned}$ | $\begin{gathered} 90-120 \\ 117-156 \end{gathered}$ |
| 16" | $\begin{aligned} & \text { Ibf•ft } \\ & \mathrm{N} \cdot \mathrm{~m} \end{aligned}$ | $\begin{gathered} 20-25 \\ 26-32.5 \end{gathered}$ | $\begin{aligned} & 50-60 \\ & 65-78 \end{aligned}$ | $\begin{gathered} 90-120 \\ 117-156 \end{gathered}$ |

Wheel Lug Torque Pattern


