TITLE: EWB Sorghum Press Assembly REV A

EFFECTIVE DATE: 5/19/12 Page 1 of 8
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Design Engineer Project Supervisor

1. PURPOSE

To provide instruction and ensure consistent quality in the assembly and installation of the EWB Sorghum Press.

2. REFERENCES

2.1. Assembly drawing and BOM: Sorghum_Press_6.slddrw

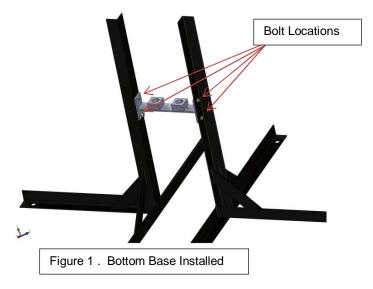
3. REQUIRED EQUIPMENT

- 3.1. Safety glasses
- 3.2. Two crescent wrenches
- 3.3. Hammer or Rubber Mallet
- 3.4. (6) Rebar stakes appx .25m length 1.5cm dia.
- 3.5. All parts and weldments for Sorghum Press (see BOM)

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4. ASSEMBLY PROCEDURE

- 4.1. Install bottom base weldment.
 - 4.1.1. Align frame posts. Secure base to frame with four hex bolts and nuts.



4.2. Insert two Roller Bushings, then Rollers into base.

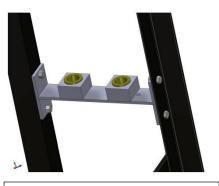


Figure 2. Roller Bushings Installed

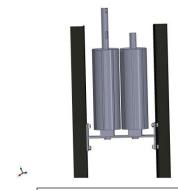


Figure 3 . Rollers Installed

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- 4.3. Install top Base and top Roller Bushings.
 - 4.3.1. Bushings may be tapped with hammer in order to seat against Base.
 - 4.3.2. Verify Rollers spin freely.



Figure 4 . Top Base Installed With Four Bolts and Nuts

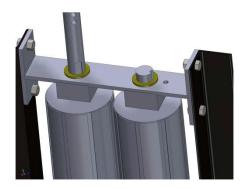


Figure 5 . Roller Bushings Installed

4.4. Install Square Key in Drive Shaft. Then slide Drive Gear over assembly.

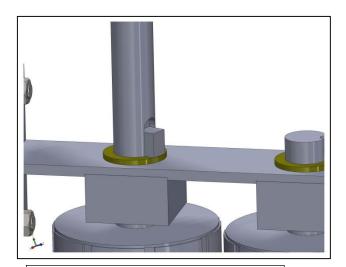
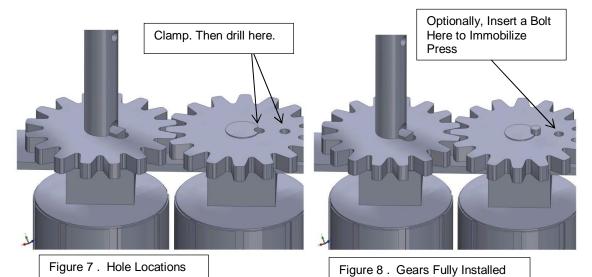


Figure 6 . Square Key Seated in Drive Shaft

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- 4.5. Install 16 Tooth Gear on small shaft.
 - 4.5.1. Clamp Gear in place, then drill holes for Scotch Key and Safety Bolt. Safety Bolt Hole goes through gear and base. Scotch Key hole goes through Gear only.
 - 4.5.2. Use Hammer to Tap Scotch Key into place to secure gears. Remove Clamps.



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4.6. Install optional Safety Shroud and Funnel. The Safety Shroud and Funnel can be custom built for each press.



Figures 9 &10 . Example Safety Shroud and Funnel Made From Corrugated Roofing

Two-Piece Design Can Be Bolted To Frame



Figure 11 . Safety Shroud and Funnel Installed on Press

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4.7. Install Crank Fixture by inserting two Dowel Pins in holes.

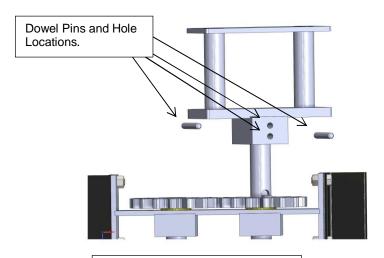


Figure 12 . Installation of Crank

4.8. Complete assembly and stake in place.

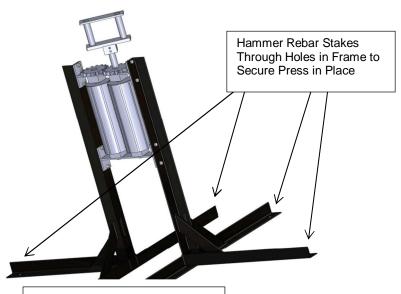


Figure 13. Complete Assembly

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4.9. To operate press:

Remove Safety Bolt.

Insert a long pole or board through opening in crank.

One user feeds sorghum stalks into rollers while a second user pushes the long pole around the press.

SPECIAL NOTE ON ASSEMBLY:

Through testing, it was later found out that the Base_Weldment is not strong enough. Thus when making the press, please weld on this triangular reimforcement. The plates are very important, else the base plate might break.

