

ASSEMBLY INSTRUCTION

TITLE: **EWB Sorghum Press Assembly**

REV A

EFFECTIVE DATE: 5/19/12

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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

Assembly drawing and BOM: Sorghum_Press_6.sldrw

3. REQUIRED EQUIPMENT

Safety glasses

Two crescent wrenches

Hammer or Rubber Mallet

(6) Rebar stakes appx .25m length 1.5cm dia.

All parts and weldments for Sorghum Press (see BOM)

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4. ASSEMBLY PROCEDURE

Install bottom base weldment.

Align frame posts. Secure base to frame with four hex bolts and nuts.



Figure 1 – Bottom Base Installed

Insert two Roller Bushings, then Rollers into base.



Figure 2 – Roller Bushings Installed

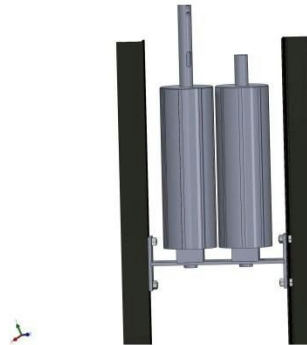


Figure 3 – Rollers Installed

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Install top Base and top Roller Bushings.

Bushings may be tapped with hammer in order to seat against Base.

Verify Rollers spin freely.

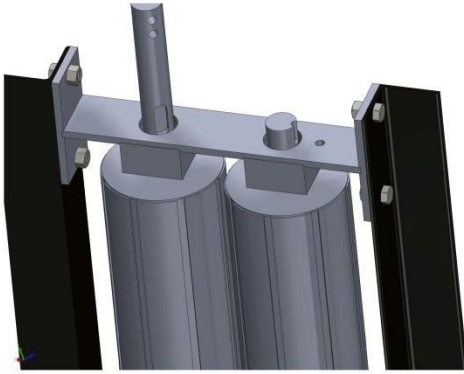


Figure 4 – Top Base Installed With Four Bolts and Nuts



Figure 5 – Roller Bushings Installed

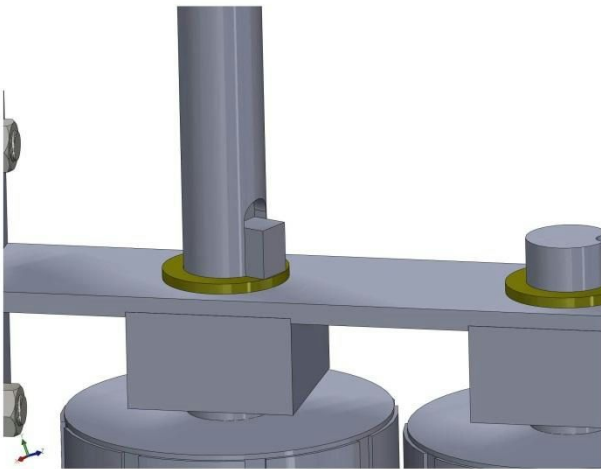


Figure 6 – Square Key Seated in Drive Shaft

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

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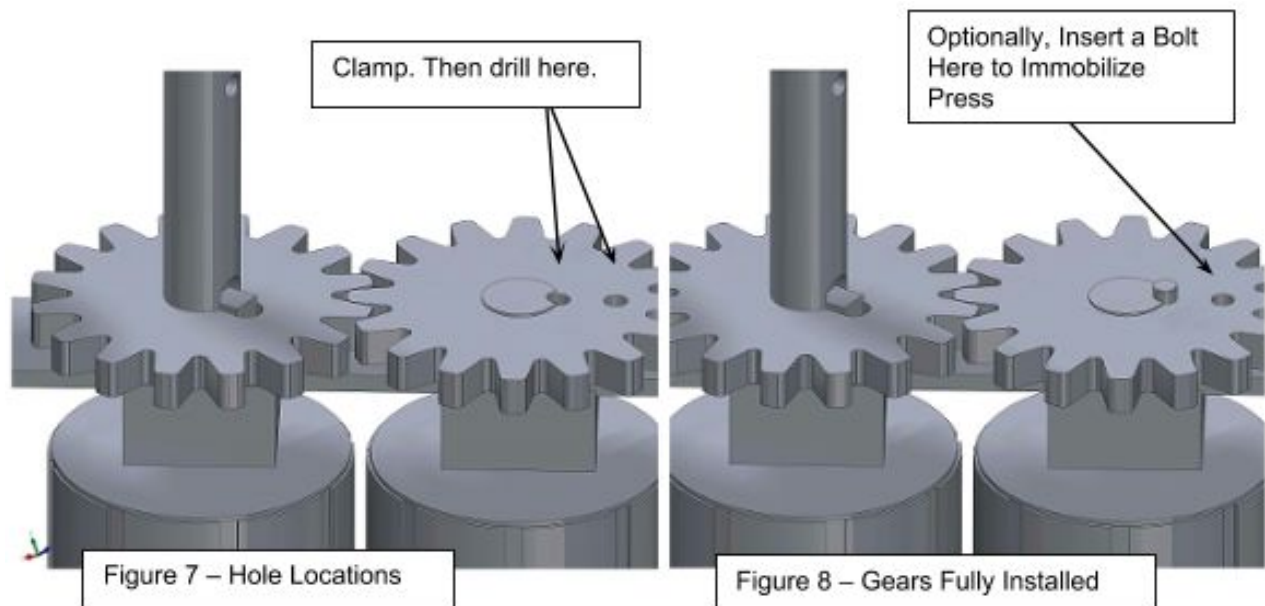
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Install 16 Tooth Gear on small shaft.

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.

Use Hammer to Tap Scotch Key into place to secure gears. Remove Clamps.



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

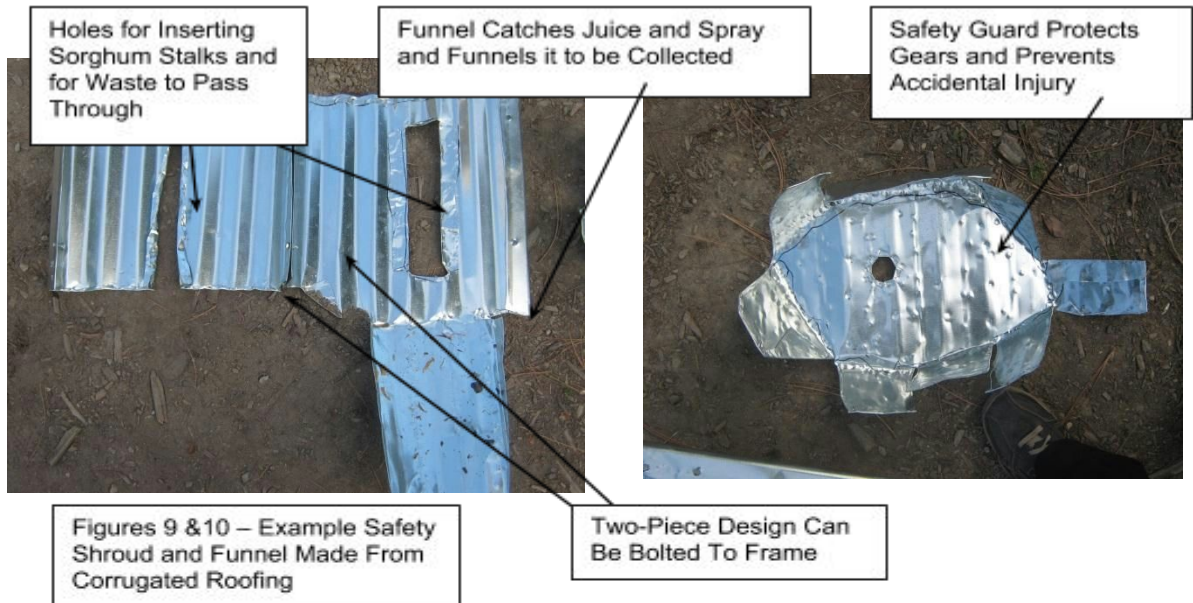


Figure 11 – Safety Shroud and Funnel Installed on Press

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Install Crank Fixture by inserting two Dowel Pins in holes.

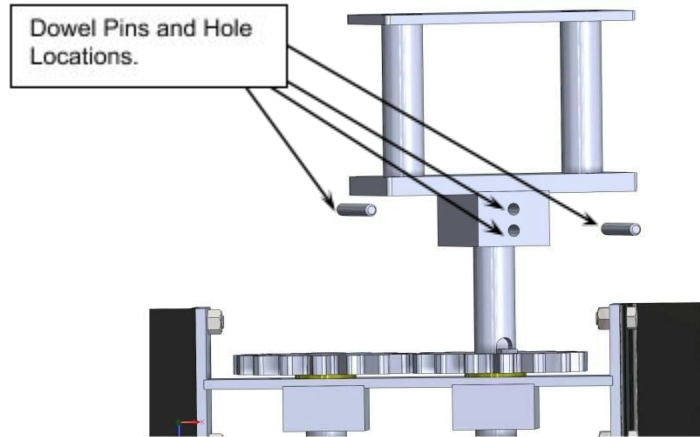


Figure 12 – Installation of Crank

Complete assembly and stake in place. *Important: See addendum below.



Figure 13 – Complete Assembly

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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.

Addendum:

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 reinforcement. The plates are very important, or else the base plate might break.

