

**WELCOME**

**UNISOFT INDIA PVT LTD.**

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**GRAVITY SEPERATOR**

*Seed/Grain Processing Machinery*



## Problem Statement of Customer

- The drawings of the complete machine are not available.
- Most of the drawings does not have the manufacturing & fabrication details.
- Some of the parts does not have the drawings but are manufactured by the machine operator as he is the only person who has been working on those parts since many years. Thereby management has to depend on him only.
- Assembly problems due to mismatch of parts (parts manufactured using existing drawings).
- Some drawings are in inches and some are in millimeters.
- No holes are made in most of the components (approx. 90% of the components) and there are drilled on the assembly by marking & clamping parts together.

This process leads to the following flaws like:

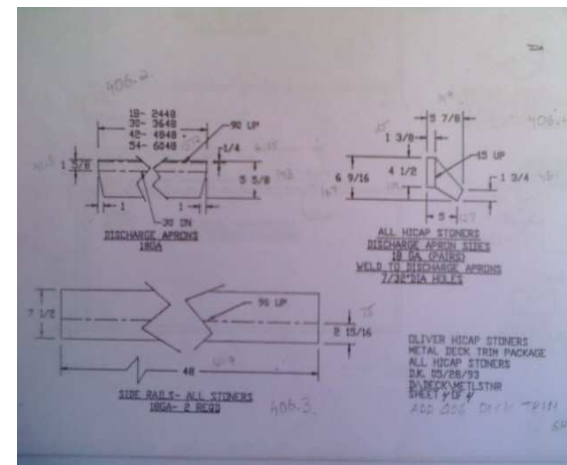
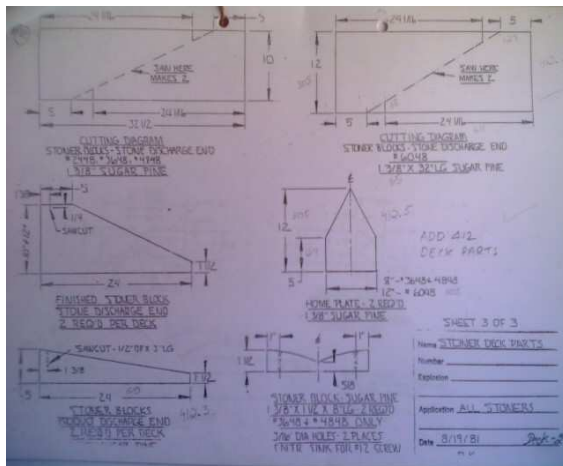
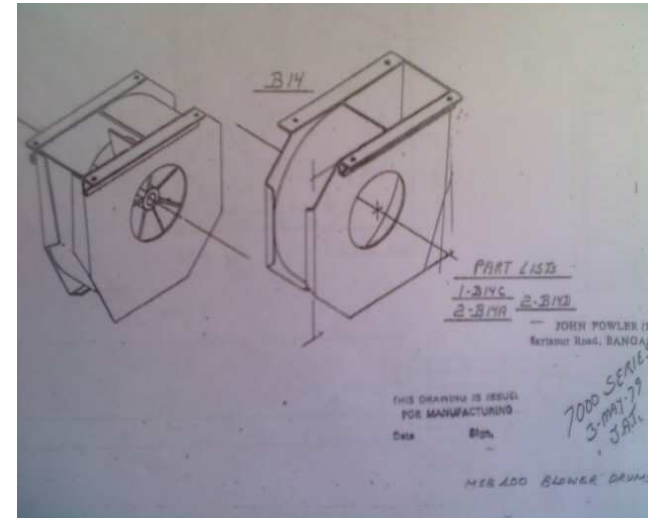
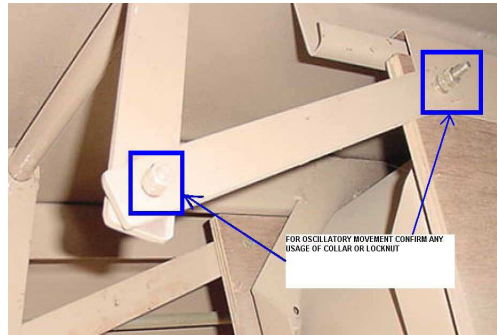
- > More Assembly time
  - > Inaccuracy in hole pitches
  - > Difficulty in replacement of parts (maintenance)
  - > Marks of marking on the parts to have paint touch up
  - > Sometimes difficult to position the hand drilling machine to drill the hole
- Parts are not fool-proof (Poka-yoki).
  - More members are required while assembling.
  - No 3D form of the machine is available for giving a demo for their customer

## Scope of Work

- Study of the machine
- Reverse engineering of parts for which drawings are not available
- 3D model of all parts & assemblies
- Conversion of all drawing units to millimeters
- Analyzing and rectifying assembly problems by modifying the parts
- Creation of standard part library
- Applying DFMA (Design for manufacturing & assembly)
- Planning & positioning of fastening hole on all components so as to avoid drilling on assembly
- Creation of 2D manufacturing details of all parts & assemblies (Incorporating fabrication, welding, surface finish and GD&T symbols)
- Bill of Material (BOM)

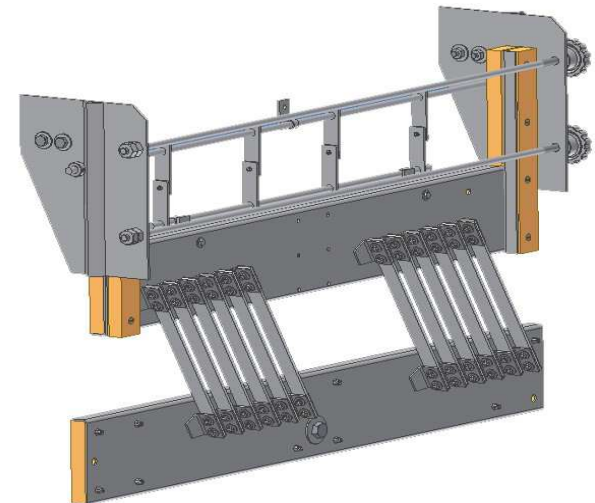
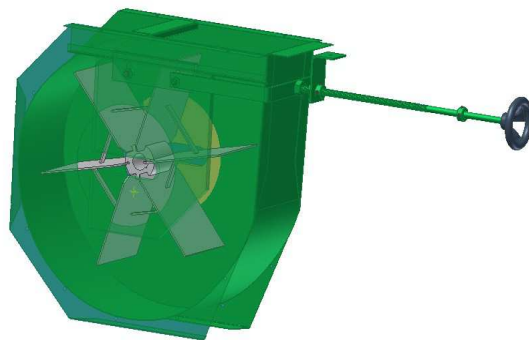
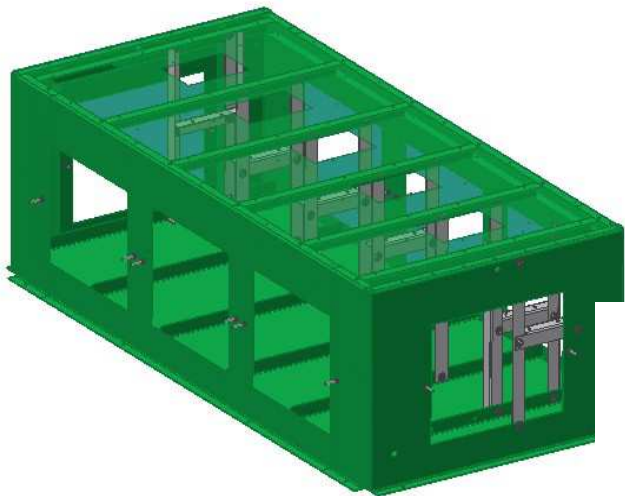
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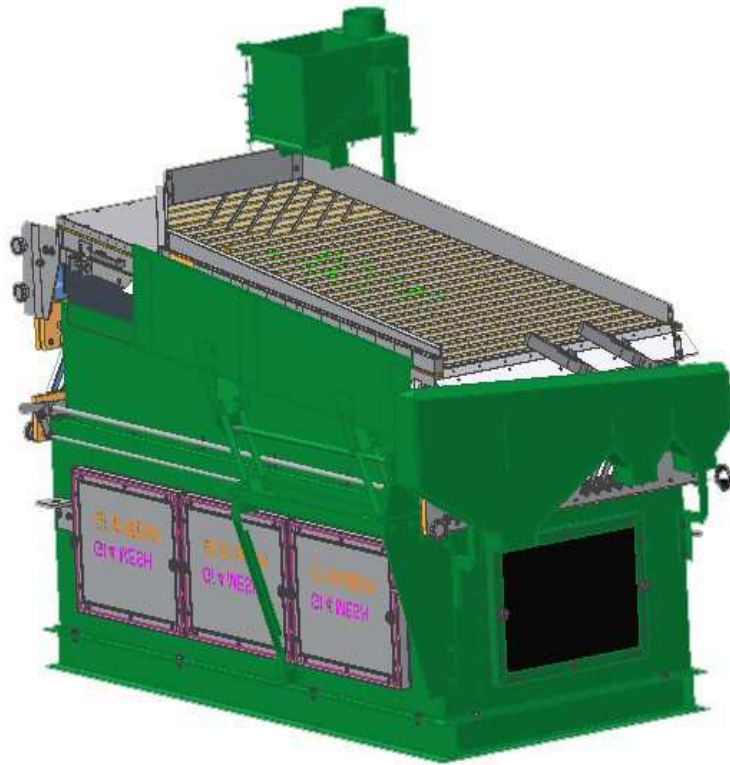
- Photo copy of available part drawings
- Photos of the machine for assembly reference
- Physical parts for reverse engineering



## Deliverables

- 3D model of Parts & Sub-Assembly & main Assembly
- 2D manufacturing details of all parts & assemblies (Incorporating fabrication, welding, surface finish and GD&T symbols)
- Bill of Material (BOM) [ready to upload in SAP]
- Nesting
- Standard part library
- 2D drafting template
- Documentation as per company standards





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