

Assembly and Fabrication Drawings for Water Blasting Equipment

Case Study Highlights

Client Profile:

Roadline Removal Equipments Manufacturer, USA

Objective:

To develop detailed assembly and fabrication drawings using CAD tools for water blasting system

Challenges:

- Converting hand drawn sketches into CAD models
- Ensuring dimensional accuracy for exact assembling of components
- Developing 3D models and fabrication drawings for manufacturing purposes

Solution:

The inputs received from client in terms of PDF and hand drawn sketches were successfully converted into CAD models using Solidworks. Detailed assembly drawings and fabrication drawings were developed with bill of materials to support the manufacturing team.

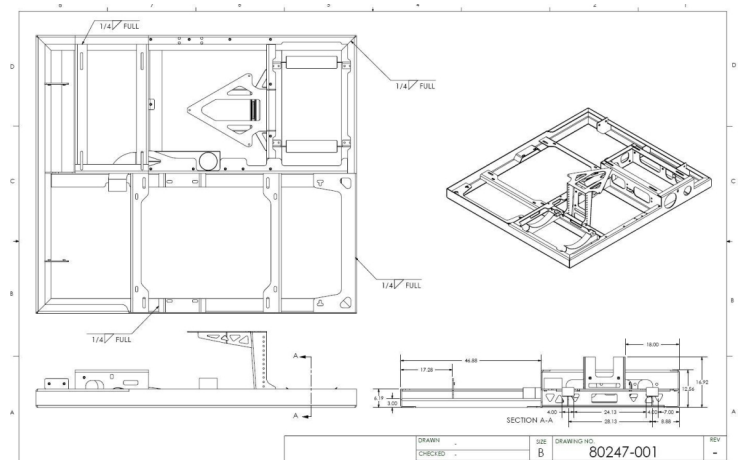
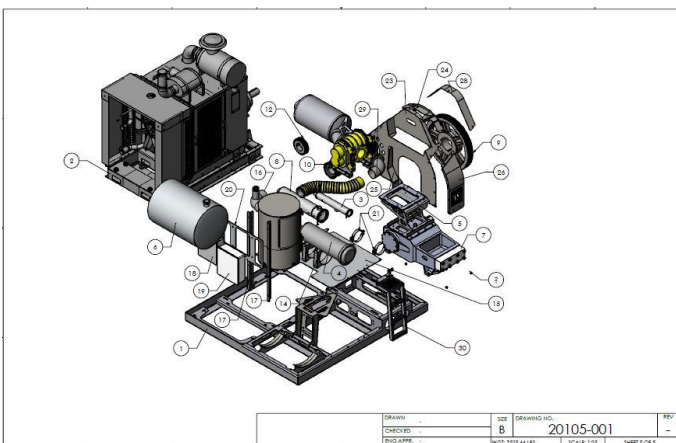
Software Used: Solidworks 2013

Water blasting systems are extensively used in removal of roadway markings, retexturing and paint cleaning. Developing detailed manufacturing information such as dimensions, fits and tolerances as well as assembly logic is essentially required due to number of complex components assembled together.

A leading manufacturer of roadline removal equipments from USA partnered with us to develop digital design information for manufacturing ease and future reference for modifications. The client provided hand drawn sketches, partly designed CAD files and PDFs to be re-designed using CAD tools.

Solution

The water blasting equipment design was re-designed from the available hand drawn sketches and PDFs using Solidworks. In order to comprehensively include the design information, individual components were separately modeled along with a detailed bill of materials. Apart from 3D modeling, fabrication drawings were also developed for manufacturing requirements.



Benefits

- 40% reduction in manufacturing time due to comprehensive design information availability
- Easier modification in assembly as well as component design for future requirements
- Significant reduction in time to market the product

About Mechanical 3D Modelling

Mechanical 3D Modelling is an India based company that caters for global clientele and plans to penetrate deeper into the existing and emerging markets. Proficiency lies in offering qualitative, cost effective and time bound mechanical engineering design services, including 2D, 3D CAD drafting, 3D solid modeling, FEA, CFD, rapid prototyping, reverse engineering. Professional and highly experienced team can handle all kind of CAD projects with the use of AutoCAD, Wildfire, 3D Max, Inventor, Solid Works, Solid-edges and Pro-e tools.