

P L Custom Body Inc. Automate the Configuration of Their Custom Ambulances Using DriveWorks Pro



P L Custom Body are a custom vehicle manufacturer that were founded in 1946 and are based in Manasquan, New Jersey.

They make type 1 and type 3 ambulances, as well as custom rescue trucks. They have approximately 185 members of staff, 97 of whom work in production, 26 in sales and the rest are engineers, admin and internal sales. They have 17 dealers who cover 29 states and 1 dealer covering parts of Canada.

They've been using DriveWorks Pro to automate the configuration process of their custom ambulances. At DriveWorks World 2017, their Engineering Lead, Shawn Casebolt, took the stage to tell us more about how they use DriveWorks.

Why DriveWorks?

"When telling people what I do, one of their first questions is always 'are ambulances different?'. The answer is yes they are the same...but different. This is why DriveWorks was such a good fit."

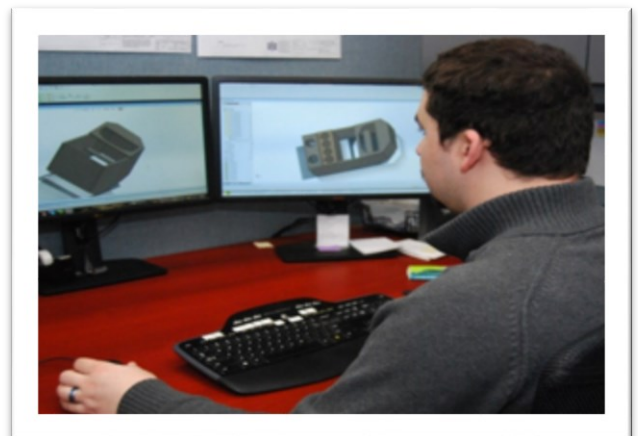


"The above pictures show just a couple of the light configurations on the front body of some trucks currently in production. We have hundreds of standard options available, but custom work is a whole other subject."

"Approximately 2–3 years ago, we were tasked with getting our designs fully into SOLIDWORKS. We knew that we wanted our engineers to focus on the custom aspects of the design and not the configurable options, so we purchased DriveWorks and began implementation." says Shawn.

Setting Up The Project

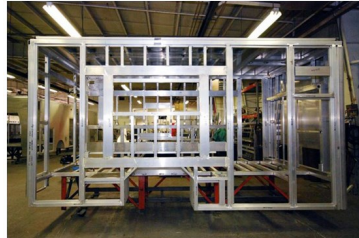
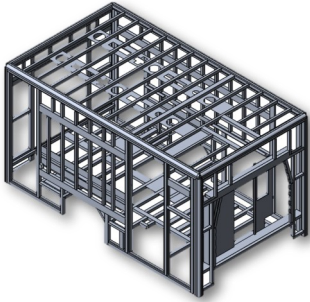
"We started by laying out what we thought we wanted our model structure to consist of. This was then revised and it continues to be revised as we further develop it."



"All part numbers are stagnant and are tagged with a job number. This allows departments such as sales, purchasing and manufacturing to always find what they're looking for inside our SOLIDWORKS PDM system without having to browse. They can just search and DriveWorks has tagged the job number to the job specific parts so they're easier to find."

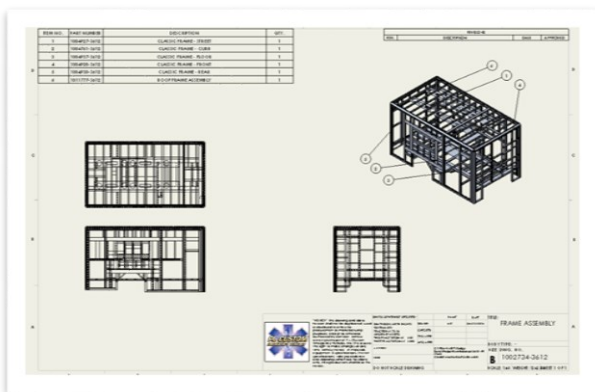
"We decided that we'd pick our most popular model and begin with the basic exterior frame. Then we'd bring more models into the mix based upon their popularity. Once we achieved around 80% of our models (by sales) then we would move on to content."

DRIVEWORKS PRO CUSTOMER CASE STUDY



“DriveWorks configured the compartment sizes you see above, as well as the body length and height. These walls all have our custom proprietary extrusions that have been created as weldments in SOLIDWORKS.”

“The framing drawings and framing assemblies are created by DriveWorks and our purchasing team will always be looking to send the same numbers to the vendor for cutting to satisfy demand for this type of vehicle.”



“Once we had all of our truck models with framing, we moved on to adding the exterior skins and we used DriveWorks to drive our most popular lighting selections and combinations. Once all of our chassis models were at this level, we moved on to the next phase of the project.”

“Even small parts, such as door trims, have their own assembly and drawing. But this is simple as DriveWorks is consistent with numbering and allows us to drive the lengths based on door heights. Compartments, like most other items, also have their own sub assembly. These fit into the door openings that DriveWorks is generating in the frames.”

The Current Project

“This is a screenshot of the DriveWorks form where our engineers input their options. Some options will give them a visual preview of the model, either through an image or by showing them the model. They complete the form based on the contract or specifications for the vehicle and DriveWorks then creates the full assembly structure.”



“In its current state, DriveWorks outputs 245 files, 60 of which are assemblies, 85 are drawings and the rest are parts files. With DriveWorks handling these repetitive tasks, our engineers are freed up to focus on the customized aspects of our designs—such as the internal cabinets of the vehicle.”

The Future

“Our primary focus is to increase our content level and our ability for interference detection and to drive purchasing. This will include adding the cots, attendant seats, doors and metal inserts for the cabinets. In the long term future, we will focus on the exterior of the vehicles and all lights, bumpers and other items.”

“We would like to eventually transition driving all purchasing from our models and being able to utilize DriveWorks for quoting projects.”

**Shawn Casebolt—Engineering Lead at
P L Custom Body Inc.**