

ALLMAND BROS. INC.

Accelerating parts manual development with SolidWorks Composer



SolidWorks Composer software enables Allmand Bros. to accelerate the development and maintenance of parts manuals for its products.

Driving down the road, you're likely to see a piece of equipment manufactured by Allmand Bros. Inc. That's because work crews rely on the Nebraska-based manufacturer's products for a host of construction, repair, and maintenance projects. Allmand offers complete lines of light towers, compact loader backhoes, light stands, trailer-mounted arrowboards, and industrial heaters.

With such a diverse product offering, the company faces a range of product development challenges. Although Allmand uses SolidWorks® design tools to develop its machines, documenting the operation, maintenance, service, and replacement parts for its products was once problematic, according to Drafting Manager Roger Kelso.

"Until recently, we struggled with publishing and updating our parts books," Kelso recalls. "Our assemblies are quite large. Using traditional engineering drawings made it difficult to keep up with design and equipment changes, leaving our parts manuals in a state of flux. Some were out-of-date, and we faced a growing backlog of updates that we needed to make."

Technical Illustrator Shane Staggs says that the update backlog and attempts to overcome it had reached a breaking point. "Because our assemblies are so large, using CAD drawings to create isometric and exploded views, and then outputting the illustrations as PDF files for printing, was taking too long," Staggs explains. "It became clear that we needed a more efficient solution."

Challenge:

Accelerate product parts manual development to eliminate a backlog of required changes and make product parts manuals current and up-to-date.

Solution:

Implement SolidWorks Composer software to automate the development of technical documentation and communications.

Results:

- Cut parts manual development time by 50 to 75 percent
- Eliminated change backlog, brought manuals up-to-date
- Improved quality of illustrations
- Automated creation of animated assembly instructions



Click here to view animated assembly instructions created in SolidWorks Composer.

Staggs was searching the web when he came across SolidWorks Composer technical communication software. "I checked out the SolidWorks Composer demo and sent the link to our engineering manager," Staggs recounts. "A couple weeks later, the software showed up on my desk."

Kelso says that management authorized the SolidWorks Composer software purchase as soon as he showed them the application. "Our management quickly understood what this software could do for us—not only in solving the difficulties with our parts manuals, but also in addressing other areas of the business," Kelso stresses. "They realized that this application would allow us to run into the future by making a quantum leap in our ability to communicate and leverage design information."

Making parts manuals up-to-date

After implementing SolidWorks Composer, Staggs began developing parts manual materials while concurrently working through the backlog of necessary changes. The software enabled Staggs to cut the time required to produce a manual from a month to two weeks—and even to a single week in some cases—while simultaneously bringing the manuals up-to-date.

"SolidWorks Composer has made a huge difference," Staggs notes. "It's amazing how much easier it is to produce these manuals. I take the SolidWorks assembly into SolidWorks Composer and do my different views. Then, I output the illustrations into Microsoft® Publisher and create the PDF for printing. What makes this process so much faster is that when we need to make a change, I can take the newly modified assembly into SolidWorks Composer and generate a new SMG file to update the manual.

"In the past, there were times when these manuals were a couple days behind," Staggs adds. "Now, with SolidWorks Composer, we are getting them out on time, even with updates and changes."

Improved illustrations, better resolution

In addition to accelerating the development of parts manuals, SolidWorks Composer has allowed Allmand to improve the quality and increase the resolution of its illustrations. "Our exploded views used to look like a giant spider web, with route lines running to all the parts. When combined with the lower resolution, they were difficult to read," Staggs explains. "With SolidWorks Composer, we have dramatically cleaned them up and sharpened the image."

"We also have the flexibility to use and change colors in SolidWorks Composer, without changing the SolidWorks files," Staggs notes. "This gives us the option to produce our manuals in color."

This is how you assemble it

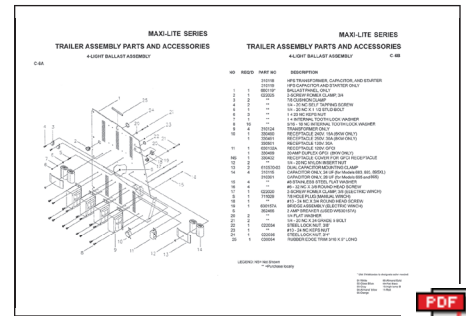
Shortly after Allmand acquired SolidWorks Composer, the software caught the eye of Quality Assurance Engineer Kevin Robinson, who perceived how he could use the application to create assembly animations to automate the manufacturer's production processes. Instead of using written documents and digital photos, Robinson realized he could more quickly create animated videos for use as assembly instructions, which would be more effective.

"Creating assembly instructions with SolidWorks Composer is as simple as taking a completed assembly apart and inverting the process," Robinson points out. "Operators can pause the video, spin it around to change the view, and identify part numbers by moving the mouse over the part. Simply put, the software's going to make us faster and better at assembling quality products."

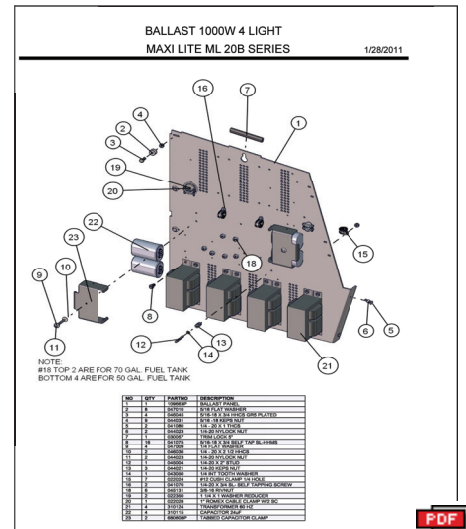
"OUR EXPLODED VIEWS USED TO LOOK LIKE A GIANT SPIDER WEB... WITH SOLIDWORKS COMPOSER, WE HAVE DRAMATICALLY CLEANED THEM UP AND SHARPENED THE IMAGE."

Shane Staggs
Technical Illustrator

Assembly instructions before SolidWorks Composer



Assembly instructions after SolidWorks Composer



In addition to cutting parts manual development time by more than half, SolidWorks Composer software is helping Allmand Bros. improve the quality of its documentation, replacing cluttered diagrams (top) with clean, easy-to-understand information (bottom).

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