

We make it **possible**

Mounting an Engineering Partnership

Problem:

A customer approached Hutchinson with a complicated engine mount assembly that consisted of too many components, ultimately affecting throughput and cell supply to the production line.

Solution:

Hutchinson suggested a welded engine mount assembly design, as opposed to a cast design, to eliminate assembly and reduce costs, while maintaining the capability to replace internal isolation mounts when necessary.

Results:

The customer, impressed with the welded engine mount design, decided to expand the partnership to create a broader chassis design that will include Hutchinson's recommendations.

While dealing with a complicated engine mount assembly consisting of several components and higher than desirable production costs, a customer in the utility tractor manufacturing field sought out Hutchinson to help design a solution. Our extremely knowledgeable engineering and materials team put their heads together and came up with a resolution to improve throughput and cell supply to the production line, while also lowering costs, leading to an expanded role within the project.

The Problem

Hutchinson has long worked with the customer, as well as with the project in question—creating and designing isolation mounts to reduce vibration and shock within its engine mount assemblies. The customer noted how the resilience of the elastomer in our isolation mounts allowed the engines and bracketry to last longer. With that in mind, when they decided the larger engine mount design needed to be improved upon, we were selected as an engineering partner to devise a solution that would both simplify the process and lower costs.

When the project began, each engine mount included 3–4 pieces that needed an additional sub-assembly step involving welding, prep, cleaning and painting—all prior to being able to install the mount on the tractor chassis on the line. The isolation mount sat within that assembly. Given that production involved 32,000 tractors, with each tractor consisting of 4 engine mounts in a chassis, eliminating this step was a high priority, as this change alone would have major impacts on the overall time and cost savings.

The Solution

The customer originally requested a cast assembly, which was then considered as an option by the Hutchinson team. Our project engineer brought the proposition back to the department and held an extensive brainstorm session.

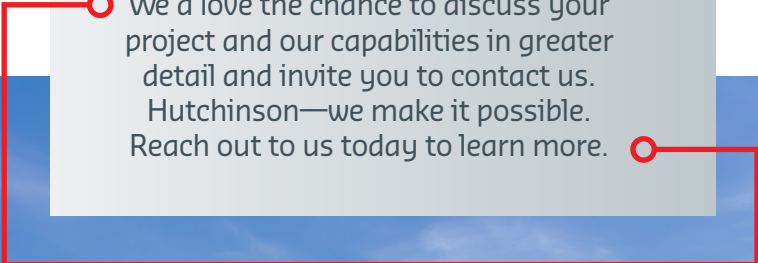
The team came up with nearly twenty different possibilities, which they then pared down to two—a molded assembly and a welded assembly—that were presented to the customer.

After multiple conference calls, design reviews and a thorough understanding of the cost goals associated with the effort, we suggested a design that incorporated the isolation mount within the welded engine mount assembly. While the customer originally sought a cast assembly, we demonstrated how the welded approach would substantially reduce the parts count while maintaining the ability to access and replace the isolation mount when necessary.

The Result

From the very first inquiry to the final design presented, the entire process took only sixty days. By involving Hutchinson as an engineering partner early on in the process, our customer was able to quickly devise a plan to meet their production and cost goals. Ultimately, the customer was impressed with the design, and decided further savings could be achieved from a larger overhaul to the entire system. We are now continuing our partnership with the customer as a part of this expanded design scope.

At Hutchinson, we combine our system design and analysis skills with our ability to develop innovative, custom vibration and isolation products that provide unrivaled results. If you are looking for a supplier capable of out-of-the-box thinking, who will always work in your best interests, you've found one in Hutchinson.



We'd love the chance to discuss your project and our capabilities in greater detail and invite you to contact us. Hutchinson—we make it possible. Reach out to us today to learn more.

