



Zeal Motor Connects Electrical Design and Production for the Fat Truck with Zuken

Using Harness Builder for E3.series, Zeal Motor improved wire harness documentation, reduced manual work, and connected engineering data with production.

“ *Traditional documentation methods were no longer sufficient to manage the complexity of our electrical systems. We chose E3.series because it provides a comprehensive environment for electrical and wire harness design.*

— *Nicholas Gauthier*
Supply Chain Director, Zeal Motor

ZEAL
MOTOR

FAT X TRUCK
INDUSTRIAL OFF-ROAD UTILITY VEHICLES

Built for Demanding Environments

Zeal Motor designs and manufactures the Fat Truck, a rugged off-road utility vehicle built to transport people and equipment safely through difficult terrain.

Fat Truck is built for mud, snow, water, swampy ground, Arctic conditions, desert heat, and remote locations where reliability matters.

As platforms, variants, and customer options increased, wire harness complexity grew. Before using Zuken software, Zeal Motor relied on traditional CAD tools, Excel spreadsheets, paper drawings, and manual checks. Each harness had its own files, making updates difficult to manage.

Zeal Motor needed a connected process to keep electrical design

data, wire lists, formboards, and production documentation synchronized.

“With complex wiring systems, the risk of error in design, manufacturing, and documentation is not negligible. That can lead to longer assembly time, troubleshooting, and potential reliability issues in the field.”

— Nicholas Gauthier
Supply Chain Director, Zeal Motor



Fat Truck is built for extreme terrain and demanding field operations.

Key Challenges

- Increasing harness complexity
- Separate files for each harness
- Manual updates and checks
- Risk of outdated production data
- Errors in wires, connectors, and lengths
- Need for better engineering-production communication

Results

- 75% reduction in development time
- Production preparation time cut in half
- Updates reduced from hours to minutes
- Assembly errors significantly reduced
- Faster response to service issues

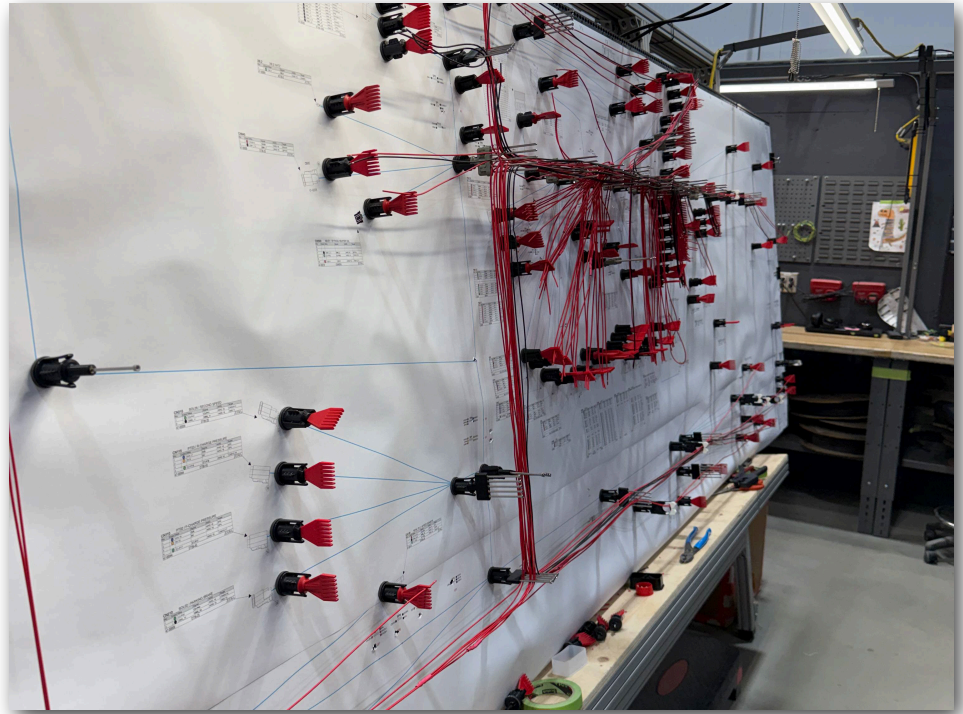
Connecting Engineering and Production

Harness Builder for E3.series extends the connected E3.series design environment into wire harness documentation and production. It helps manufacturers turn design data into production-ready wire lists, formboard/nailboard documentation, manufacturing instructions, and wire preparation data.

Teams can document harnesses from drawings or wire lists, manage datasheets, and support design variations with dash number variables. Automated pricing, lead time, and assembly time calculations improve planning and efficiency.

By reducing manual effort and connecting design data with downstream processes, Harness Builder helps manufacturers minimize errors, lower costs, and increase throughput.

**Harness
Builder**
for **E3**.series®



Formboard for the Fat Truck

Zeal Motor uses Harness Builder for E3.series to connect electrical design data with wire harness production.

The team can manage electrical logic, wire lists, form board data, and assembly information in a synchronized workflow. When a schematic changes, related production data updates as well.

That connection helps engineering and production work from the same data and reduces the risk of missed changes.

“In reality, we turned hours into minutes because all information is within the same file. For us, it’s a game changer. You modify one place and everything is updated.”

— Joël Blackburn
Product Engineer, Zeal Motor

Speed, Accuracy, and Consistency

For Zeal Motor, the value of Harness Builder for E3.series extends beyond design documentation. By connecting engineering data with production needs, the team can move faster, reduce manual interpretation, and build with greater confidence.

With Harness Builder for E3.series, Zeal Motor improved communication between engineering and production while reducing manual work.

Development time was reduced by 75%. Production preparation time was cut in half. Updates that once took hours can now be completed in minutes.

On the production floor, clearer instructions help reduce assembly errors and improve consistency from concept to final vehicle.

Looking Ahead

As electrification increases vehicle complexity, Zeal Motor expects design and production demands to keep growing.

Harness Builder for E3.series gives the team a connected foundation to manage that complexity and build Fat Truck with greater speed, accuracy, and confidence.

“We saved a lot of time in preparation for production. Before, all the wires were measured and cut manually, one by one.

Now with the wire list generated through Harness Builder, the system automatically generates wire lists and assembly instructions.

We cut working time by half.”

— François Martel
Electrical Manufacturer
Supervisor, Zeal Motor

Learn how Harness Builder for E3.series connects electrical design data with wire harness production.

[Explore Harness Builder](#)



Fat Truck FT5 8x8 Wagon on the test track.

*Fat Truck images
courtesy of Zeal Motor.*