SUN WEST ENGINEERING

SUN WEST ENGINEERING, INC.

SEVERE SERVICE | WORKSTAR

PHIL McCOY

President of Sun West Engineering

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> "International has really been flawless at supporting the product. Working with the dealer and with Navistar's engineers has been an incredible aid to what we do."

FLEET PROFILE

> **COMPANY:** Sun West Engineering, Inc.

> **HEADQUARTERS:** Phoenix, AZ

> **INDUSTRY:** Mobile Communications

> **YEARS IN BUSINESS:** 25

> **PROFILE:** 100% International

> **DISTRIBUTION:** North America

CUSTOMIZED CHASSIS WITH DIAMOND LOGIC MAKES NEW VEHICLE CONCEPT A REALITY

SUN WEST ENGINEERING, INC.

PHIL McCOY, PRESIDENT AT SUN WEST ENGINEERING, TURNS TO INTERNATIONAL FOR VEHICLE INTEGRATION SOLUTIONS

When Sun West Engineering, Inc., a manufacturer of mobile communications solutions for event coverage and disaster recovery, discovered that critical onboard equipment was going to exceed capacity on its new vehicle concept, the company's engineering team met with Navistar engineers to devise a solution. The result: A truck chassis that had never been built before-one totally customized for their business.

As the supplier of mobile fleets for major communications providers, Phoenix-based Sun West Engineering helps its customers temporarily expand their networks in areas where existing infrastructure is either insufficient or has been seriously damaged. For example, when a NASCAR event brings 120,000 fans to a town of only 20,000 or a hurricane knocks out key cellular towers, these fleets roll in with the equipment necessary to keep cell phones working or restore a functional power grid.

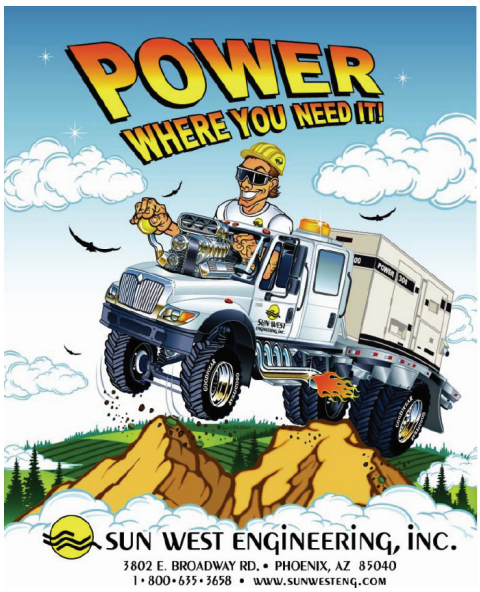
"The goal is to get people talking again," says Phillip McCoy, the company's president. "The real magic is in the electronics equipment, but our job is getting it there."

Along with the actual communications systems that create a roaming mobile footprint, many Sun West-built trucks feature environmentally-controlled cabinets with heating and cooling systems, plus alarms and onboard power generators that can be monitored remotely. Massive masts are also mounted on the truck to facilitate antennas that reach up to 60 feet in the air.

For the past ten years, the company has built its trucks exclusively on International® DuraStar® and International® WorkStar® chassis. With the help of the sales staff at their dealer, McCandless of Arizona, engineers at Sun West learned the subtleties of spec'ing the product for their unique application needs. For example, McCandless helped them determine the best components for hot or cold weather situations-to build trucks tough enough for the environments to which they'll be deployed.

However, about 5 years ago, the company realized the conceptual design for a new truck was rapidly approaching both axle and vehicle weight limits. Additionally, this new truck's onboard equipment would be consuming large amounts of fuel while on location: up to 50 gallons per hour!

"That's a pretty good sized appetite," notes McCoy. "And fuel weight gets to be pretty considerable when you have large quantities on board. With any chassis there are limitations; you will eventually reach that threshold where you either sacrifice the vehicles legally, by weight ratings, or mechanically."



> **"We build them with nice interiors, an ergonomic dash and air ride seats. If you're the one who gets the call at 2am that you have a 2,000-mile journey to a disaster site, you're going to appreciate those creature comforts."**
>
> *-Phil McCoy*

"So we went to Navistar and looked at everything," he recalls. "What can we modify? What can we do [to overcome this challenge] using the systems that already exist on the truck?" Navistar engineers and executives from Sun West came together to design a truck that was as robust yet as light as possible, to accommodate all of the required onboard equipment. And by creating special operational programs within the Diamond Logic system, they were able to design a fully-automatic transfer system capable of moving fuel to the trucks from on-site storage tanks.

The end result was a vehicle that could perform all necessary functions, was light enough to meet weight requirements, and smart enough to fuel itself.

"With Diamond Logic® software, we were able to send signals to the truck from our fuel cell, to tell the truck when to start, what RPM to run at, and when to shut *off,"* McCoy says. "A truck with this capacity configuration has never been done in this wheel base; and an electronics system like this has never been done. Navistar sent in a couple of engineers to literally write a program for these trucks to make this happen."

The entire project took about a year-and-a-half from design to execution. And while the vehicle was designed for one particular carrier network-who has taken delivery of 27 of these Sun West trucks since December 2009. McCoy says the prototype could be modified for other customers. "This project has a lot of potential," he says.

But Sun West isn't only excited about the functionality of the trucks. Another benefit of building their product on International chassis is the fact that their customers also get vehicles that are comfortable and driver friendly. "We build them with nice interiors, an ergonomic dash, and air ride seats," says McCoy. "If you're the one who gets the call at 2am that you have a 2,000-mile journey to a disaster site, you're going to appreciate those creature comforts."

"We don't do the general duty stuff. What we build is very specialized," he adds. "International has really been flawless at supporting the product. Working with the dealer and with Navistar's engineers has been an incredible aid to what we do."