

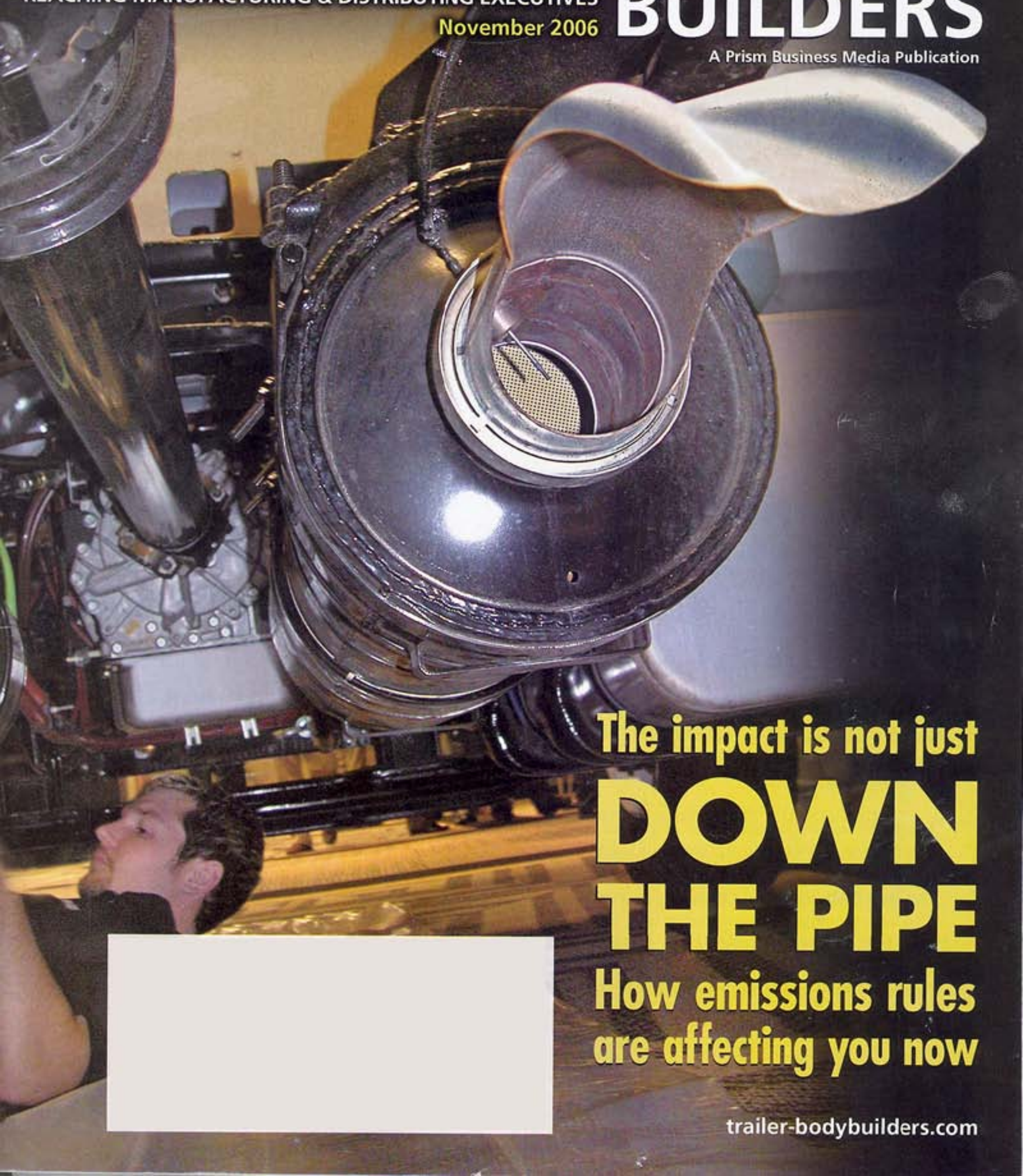
TRAILER BODY BUILDERS

REACHING MANUFACTURING & DISTRIBUTING EXECUTIVES

November 2006

BUILDERS®

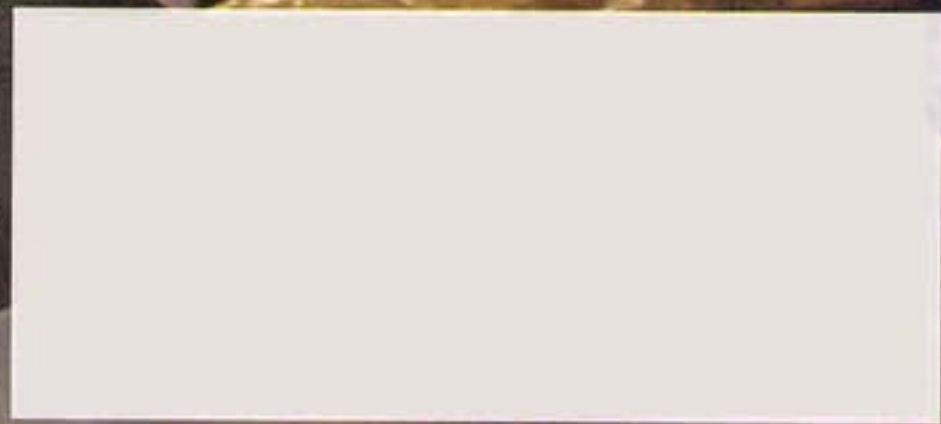
A Prism Business Media Publication



The impact is not just

**DOWN
THE PIPE**

How emissions rules
are affecting you now



trailer-bodybuilders.com

The sky's the limit

Clegg Industries pushes the engineering and manufacturing envelope with one-of-a-kind trailers, vehicles

BY RICK WEBER

JOHN CLEGG and Joseph Villarreal sit in a second-floor office overlooking the manufacturing facility at Clegg Industries in Victoria, Texas.

Clegg, the company's co-founder and vice president of sales, and Villarreal, one of three engineers, are examining Villarreal's drawings of a 57' emergency evacuation trailer.

Clegg Industries was hired by Jeffery Jacobs of Louisiana-based Industrial Erection and Maintenance Inc (IEM) to come up with a proof-of-design concept for a trailer that

would be put to use when a hurricane is bearing down on the Gulf Coast. The trailer could be dispatched to a nursing home or hospital, where the residents or patients would be evacuated and taken inland—thus preventing human disasters such as the loss of 34 lives at St Rita's Nursing Home when Hurricane Katrina floodwaters consumed the facility in St Bernard Parish.

"This is the way I configured it first," Villarreal says to Clegg, "but it was kind of cluttered because of the doorways. So I reconfigured it by opening up the doorway and nurses' seating. We have a kitchenette, nurses' station, communication center, toilets, and room for 14 stretchers

and also for some wheelchairs."

"How much length are you allowing for each stretcher?" Clegg says.

"He (Jacobs) said 57 1/2 inches each."

"That's too crowded. You're going to have some six-foot people on there. You could have some short positions and a couple of long positions."

They discuss a few more details, then Villarreal eases back into his seat and reflects on the work he and the other engineers have done at Clegg Industries.

"It's a lot of fun to create things like this," he says. "Being able to design it from concept to completion is very rewarding. It doesn't always work out the way you first



Clegg Industries...



A view of the H-E-B disaster-relief trailer during construction ...



... and after it was finished and deployed in Corpus Christi.

plan it. You adjust it until you get it the way you know the client is going to be happy. A lot of times it just takes some reconfiguration."

After Villarreal is finished with the design, it will be submitted to IEM, which will present it to the Federal Emergency Management Agency (FEMA) and officials in Louisiana and Texas to determine if there's any interest in building it.

There's no guarantee that Clegg Industries will ever build it—right now, the company is simply contracted to design it—but either way, it's a source of pride.

"It's a beautiful piece of equipment," says Villarreal, adding that it's the most challenging project he's ever done.

Custom work

Clegg Industries specializes in the design, engineering, and manufacturing of large, one-of-a-kind, custom-made vehicles and structures for industry, institutions, and defense. The company, operating out of a 40,000-square-foot manufacturing facility, employs ASME/AWS certified welders who can handle any steel or aluminum fabrication, and they also produce professional wood frame construction and cabinetry.

Clegg has earned the trust of some of the nation's elite companies, including: Boeing Aerospace, CDM Federal Program, Chemical Research & Licensing, Chevron-Phillips Chemical Co LP, Combat Mobile Support Systems, David Taylor Research Center/US Navy, Halliburton Co, LTV Aerospace & Defense Co, Panama Canal Commission, Schering-Plough Corp, Seattle-Tacoma Airport (SEATAC), Spill Response Inc, TRW Environment Services, United Space Alliance, US Veterans Administration, and Westinghouse Handford Co.

"We're constantly taking on new projects," Clegg says. "We've had the opportunity over the years to build some very interesting vehicles and trailers. But every job is different. It's always interesting to start a job and make it do

what you want it to do."

This isn't what Clegg and his wife, Judy, had in mind when they started the company in 1971. In fact, they had nothing in mind. Asked to describe the vision they had, John says, "Didn't know. Didn't have one."

They started off as Clegg Mobile Homes Service by transporting mobile homes and doing repairs on them, operating out of an 800-square-foot office on a quarter acre of land. They branched out into selling and servicing travel trailers and motor homes and customizing recreational vehicles.

In the 1980s, the company was asked to work on a custom manufacturing project—Clegg can't recall exactly what it was—and that led to a contract from the US Customs and Border Protection (CBP) to make a mobile lab. CBP had confiscated a 53' trailer on a drug bust, and it commissioned Clegg Industries to turn it into a mobile lab, including a separate office area in the front, two diesel generators, central AC and heating, a computer floor, fume hoods, a restroom, purified water system, gas chromatograph, and mass spectrometer.

That launched the company down a trail of steady work. Clegg Industries has taken on 260 projects and manufactured over 700 vehicles and trailers. The company still buys, sells, and transports mobile homes, but that's a small part of its business, and has been spun off into its own entity (Clegg Services). Clegg Industries is very much a family affair: Judy is the president; J.B., their son, is production manager, and his wife, Connie, is office manager.

Mobile postal fleet

Right now, the entire manufacturing facility is devoted to producing a 42-truck fleet of mobile retail units for the US Postal Service. Clegg first started producing them 15 years ago, with the first contract calling for the company to take USPS's existing step vans and convert them into mobile post offices. The next batch featured a new design using step vans. The third generation, starting in 1998, featured

Chevrolet Cutaway vans. And the fourth generation features the same body, but with more features and systems, including an energy-absorbing bumper instead of chrome. Clegg is in the first year of a new five-year contract.

Most of the units go to New York City, where they are deployed on sidewalks and parking lots to relieve the pressure on the overburdened post-office locations in buildings. They can perform all services normally associated with a post office, except mail pick-up.

The vehicle is a completely self-contained two-man post office on wheels, with features including: two clerk positions, a 5500-watt Onan Commercial Mobile Power gasoline generator, AC and heating, all-aluminum cabinet work, parcel pass-through, and hydraulic-activated, all-aluminum canopies.

To accommodate standing post office workers, Clegg cuts out the roof of the cab and replaces it with an aerodynamic fiberglass nose that is made from a mold in Clegg's facility. Clegg recently purchased a CNC AccurPress specifically for this project so that it can bend its own parts—particularly the canopy, which is the most difficult part to make.

"The specialized welding of the canopies is quite an art and requires a lot of care to make it look right," Clegg says. "We cut the aluminum to length and the individual components are brought in. Every part of the body has its own jig. Everything is very precise and repeatable.

"We extend the frame, put on the body mounts, modify the tailpipe, cut the roof out, then the body goes to the next station. The skin is put on with 3M tape, then it goes into paint. Then the interior is put in, the insulation is put in, and then we put the skin on. We install the power, lights, and generator. We move the line on Mondays and Wednesdays. It's in a station for two days."

To defray the exorbitant cost of transporting the units one at a time, Clegg designed a 53' trailer that can transport two of them.

To make the overall height of the trailer plus load 13'6" and meet the legal requirement, they had to cut out an area and make pockets to sink the wheels into the trailer. To fit two vans onto the trailer, they take off the bumpers and bring the vans within 2" of each other.

The trailer features a dovetail design retrofitted on, loading ramps with storage racks, aluminum wheels, low-profile tires, LED lights, air-ride suspension, and custom paint.

Disaster-relief trailer

Earlier this year, Clegg's primary project was a \$350,000 trailer that is part of a disaster-relief unit (DRU) for San Antonio-based H-E-B Grocery Co. It was the direct result of Hurricanes Katrina and Rita, which rocked the Gulf Coast within a month of each other in 2005. If one of the H-E-B stores is damaged by a storm, the DRU can be deployed on site in a matter of hours, offering services such as a pharmacy, ATM, and Western Union.

H-E-B, which had researched Clegg's work on the



The US Postal Service mobile units start with a jig for every part of the body and includes a Chevrolet Cutaway van.

Clegg Industries...

company's Web site, called Clegg in February and set up meetings to discuss different concepts. They decided that Clegg would start with a 57' trailer taken directly out of H-E-B's fleet.

"We had design meetings to figure out how much space would go to the pharmacy, business office, and cash control, and how we would fit everything in there and make it do what it needed to do," Clegg says. "There were a lot of drafts. All along, we're only dealing with 57 feet. All of the different groups wanted all the room they could get, but we compromised."

Devoting six workers specifically to the project, Clegg started building it in June with the goal of finishing it in time for at least part of the hurricane season. They ended up finishing it the final week of September—virtually on the one-year anniversary of Hurricane Rita—and delivered it to San Antonio October 1. It was later deployed to Corpus Christi.

The trailer features a generator system, security cameras, exterior flood lights, interior lighting with office space, custom awning, custom-built under-storage for the awning and other supplies, five clerk positions, a satellite system, and custom-built aluminum stairs.

"It was fairly routine for us, except that we were working with new materials—especially bulletproof liner," Clegg says. "It looks like a piece of paneling, and we used it for our interior wall, then finished it off and painted it. All the transaction drawers and windows are bulletproof. We've done everything else before—generators, AC system, interior finishes, electrical systems, awnings, doors, and windows—but every job is different, so it's always interesting to make it do what you want it to. The biggest challenge was creating the areas so that the staff can work comfortably in a confined space. And we managed to squeeze in a restroom and galley. They're not very big, but they're in there."

The DRU includes several other trailers that were not built by Clegg.

"It's the most thought-out, well-prepared disaster-relief package I've ever seen," Clegg says. "They have their own shower unit, and they turned a big 18-wheeler into a dorm for the staff. There's no point in having this big pharmacy if there's no place for people to stay. They have an 8000-gallon water tanker, 8000-gallon diesel tanker to keep the generators refueled, and a mobile kitchen.

"There's a huge tent along with 300 folding chairs, so people can get out of the weather. The whole area around the trailer is a WiFi zone because the trailer has two high-powered broadband satellite dishes. There's a place where people can charge up cell phones and laptops. I'm just really impressed with the way H-E-B paid attention to detail. They'll be ready."

Most challenging project

The toughest project Clegg has ever attempted? Easy. The antenna transport trailer for L3/Randtron. Clegg says it



The van progresses from siding installation to the paint booth to the final product, with John Clegg (left) and son JB. The company now uses a trailer to transport two units at a time.

Clegg Industries...

It's a family affair, with John Clegg (left), wife Judy and son JB.



was a "monster project."

Clegg customized a 53' drop trailer to house and transport a TRAC-A Rotodome AEW Surveillance Radar Antenna—an efficient rotodome antenna that is mounted on top of the carrier-based E-2C Hawkeye aircraft, providing fleet protection for the United States Navy. The US Coast Guard and US Customs have adapted the capabilities of this antenna for use in anti-narcotics smuggling operations mounted on P-3 Orions, and it's also used by the governments of Japan, Egypt, France, Taiwan, and Singapore.

Some of the features: hydraulics actuated by 25' long pendant cord for viewing safety, 12'x22' custom-built fold-down wall/trailer-side hydraulic door, electronic hydraulic, self-leveling system (operating at 110 volts or 120 volts), secondary access door, precision-contoured lightweight, welded

aluminum antenna storage cradles, folding aluminum wheeled carts for cradles, work bench and tool boxes at the rear compartment, and storage of antenna using removal-rail arrangement.

"Our task on this thing—the most difficult part—was to be able to put the entire antenna inside the trailer and go cross country with it at legal dimensions," Clegg says. "When everything is racked in there, there are only two inches between the parts. The antenna breaks down into three sections, and it all stows away inside."

The antenna, which costs \$1 million and is made out of carbon fiber, is produced in California and the airplane is built by Northrop Grumman Corp in Florida. So anytime the antenna is built, it is tested in California, broken down into pieces, put in this trailer, and shipped to Florida, where

Engineer Joseph Villarreal works on a design for a 57' emergency evacuation trailer.



Add Alcoa aluminum wheels.

Subtract \$1,750 from your annual fuel bill.

Alcoa aluminum wheels have always been designed to save you money. Today, buying Alcoa aluminum wheels instead of steel wheels could save you \$1,750 a year in fuel costs.*

And, lighter-weight Alcoa aluminum wheels allow for fuel-saving and/or increased payloads, reduce your maintenance costs over the life of the wheels and result in higher resale value for your truck. All of which adds up to a very compelling reason for choosing Alcoa aluminum wheels – keeping more money in your pocket. Find out more at alcoawheels.com.

Plus, now you can save even more with the new Alcoa 14-inch wide base wheels. Some fleets have experienced a 3%-7% fuel savings with wide base wheel and tire combinations.*

*Source: Based on the average truck running 100,000 miles per year at 6 miles per gallon and a \$3 per gallon fuel price. NDTC, 2002. Michelin states increased fuel savings of 3% - 7% with wide base wheel and tire combinations, depending on current duals. Actual fuel savings may vary.



SMART. STRONG.

© 2006 Alcoa Inc.



Are you looking for a profitable body line?
Is profit your objective?



DEALERSHIPS AVAILABLE

phone: 450-835-1777

www.lanau-industries.com

Circle #34 on Reader Service Card

GET IN. GET OUT.
AND GET ON
TO THE REST
OF THE FRAME...

**...WITH THE
HOUGEN HMD115
TRUCK FRAME DRILL.**

You won't have to remove the rear wheels or wrestle with floor drills to make attachment holes using the HMD115 Truck Frame Drill. Its heavy-duty gears and powerful motor help get all of your frame holemaking jobs done faster. It uses RotaLoc™ Annular Cutters with quick-release shanks so you can change sizes in seconds, and even drill stacked plate. And at just 21.3 pounds your people will find it easy to handle. The Hougen HMD115 Truck Frame Drill. Get in. Get out. Get on. Give us a call and ask for a demonstration.



P.O. Box 2005, Flint, MI 48501-2005
Phone: 810-635-7111 • Fax: 800-309-3299
E-mail: info@hougen.com
Online: www.hougen.com



Circle #27 on Reader Service Card

Clegg Industries...

it is re-assembled and installed on the airplane.

"The handling system on the trailer has to hold it very secure and not allow the parts to rub together," Clegg says. "We build a railroad track in the center of the trailer. The pedestal has a trolley track to deliver the antenna. The trolley track clamps it, rotates it, and trolleys it inward, where it engages another track and the part is stowed in the left rear corner of the trailer.

"That was a tough deal. Golly, we lost a lot of sleep over that. The door itself weighs 8000 pounds without the parts on it. We spent months on the design—the most on any project we've ever done. There were hundreds of man-hours of engineering time spent to make sure that when all three parts were racked, there was clearance. They were difficult parts to rack because all three were elliptical."

Pushing the envelope is something Clegg always has done. He built his first race car when he was 14—a 1953 Studebaker with a Chrysler Hemi engine. He became a drag racing aficionado, bought a 1973 Pontiac Firebird, modified it, took it to Indianapolis for the '73 US Nationals and won the Stock division.

He loves the mechanical process of designing and building something, then watching it work flawlessly. His imagination is fertile enough to make it happen. And people keep coming to him because he can.

Standing in the second-floor engineering office overlooking the floor where workers are assembling the US Postal Service mobile units, Clegg reflects on the stimulating environment in which he's immersed.

"One thing about this business is that people are out there making things happen," he says. ■

Do more online!

SIGN-UP
for weekly
e-newsletter.

Newsletter

trailer-bodybuilders.com