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Knights in *shining armor*

O'Gara-Hess & Eisenhardt is providing the protection that military and business needs in an uncertain world. Ruari McCallion reports

It's no secret that a posting to Iraq or Afghanistan isn't at the top of any soldier's wish-list. The trouble with an insurgency—or any campaign involving irregular forces—is that the enemy is difficult to distinguish from peaceful civilians. And they don't fight in a conventional way, either: One of the biggest threats to the troops on the ground is roadside bombs and remote-controlled mines. But the news is getting better. The vehicles that the soldiers move around in are

being reinforced with better armor, which offers greater security and protection against exactly the kind of attacks that have become commonplace.

"These vehicles have saved a lot of lives and the US Army is already pushing to get as many as possible out to Southern Asia. We've had soldiers come here and talk to people in the plant and tell them: 'It's because of you guys that I'm here talking to you,'" says Jay Tepe, plant manager at O'Gara-Hess & Eisenhardt's (OHE) facility in

Above
Humvee Military Vehicle

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Greater Cincinnati. The vehicles he is referring to are, principally, Humvees. OHE receives Humvee chassis from American General Corporation and installs its own armor package. "The vehicle is known by the US Army as the M1114 Up Armored HMMWV (pronounced Humvee). The armor is resistant to bullets, of course; it's also designed to protect against anti-tank mines and improvised explosive devices—the roadside bombs." The armoring is truly all-round: It covers the sides, the roof and—very importantly, when soldiers are facing concealed ground-deployed explosive—it seals the underside, too. You may see them driving



Soldiers have said to people in the plant 'it's because of you guys I'm here'

around without shielding on the windows. That isn't simply because the personnel onboard need to have good all-round vision, it's because the windows themselves are made of transparent armor. Inquiries as to the nature of the armor—whether it's depleted uranium, or what the metallurgy is—are politely turned aside.

"All our technology is home-grown," was as much as Tepe would say. "The design was born here in Cincinnati and was created in response to requests from the US Army to develop an armored package that could be deployed on to wheeled vehicles, quickly. The experience in Mogadishu, Somalia (depicted in the movie "Black Hawk Down") led to the development of the Uparmored Humvee. We were able to turn around a working prototype in less than three months." The demand for the vehicles has led to a huge increase in output. "Last year, we armored 860 Humvees and that was our biggest year to date. This year, we expect to make three times that." The output isn't

just Humvees: OHE armors Toyota Landcruisers, Ford and Chevrolet passenger vehicles in Cincinnati and others elsewhere: Range Rovers in Europe, for example. About 90 percent of production in Cincinnati is for the military and government agencies but there is also a growing demand from the commercial sector, from business and industrial leaders.

OHE became part of the Mobile Security Division of Armor Holdings in 2001 and, with seven sites around the world, is the largest and most experienced wheeled vehicle armoring company in the world. It has been in existence for 125 years and was the first to provide an armored vehicle—a bullet-proof car—to an American President: Harry S Truman, during World War II. Since then, more than 60 heads of state and a long list of diplomats and business leaders around the world have benefited from OHE protection. The current high level of demand is unlikely to fall, as terrorist activity and security threats around the world are, if anything, increasing. OHE's increased output has required more floor space—it now has four facilities in the Greater Cincinnati area—and more employees. And it's important to get as much out of the workforce as possible.

Above

(Left) Military production

(Right) Commercial production

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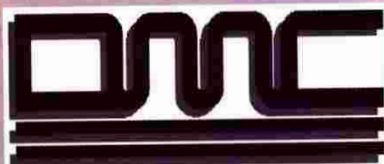
"We've undertaken time studies on all the jobs, looked carefully at what we need to produce and we've gone from 12 to 24 cells in the production area," says Ron Carson, production manager. The work has been arranged so that the new people coming on board don't have to learn so much before they start being productive. Cross-training follows. "We have carried out value stream mapping on all our production and we continue to do so on a daily basis. We move component parts directly to lineside, and set them up so that everything is easy to get hold of."

"We take advantage of the fact that we're dealing with wheeled vehicles. We roll them from cell to cell when the takt time has expired—it's a well-scripted, well-choreographed dance. Even the spaces on the floor for the garbage cans are identified—and we're constantly improving," Tepe says. Where the company was producing 70 vehicles a month early last year, it's now turning out 70 a week. Every month, OHE will be ramping up

production until it reaches the Army's requirement. The focus on improved output and efficiency has been at least matched by quality improvements, too. At the beginning of last year, the faults level stood at an average of 10 per vehicle—all of which were fixed before dispatch, and could include something like a windshield wiper not sitting properly or a washer directing to the wrong part of the screen. But a fault is a fault, no matter how trivial—and the level is now down to less than one per vehicle.

If there is a fly in the ointment of OHE's improved output and quality, it's to be found in the supply chain. Not in the component area: The company buys close to 400 parts for the Humvee and suppliers are on board with JIT deliveries and are practicing Kaizen themselves. It's about the specialist items.

"The way we armor the vehicles isn't a capacity issue for us. We can do more if we have more orders," Tepe says. "We expect the industry as a whole—the supplies of steel and transparent armor—will reach capacity before we do." ■



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