



TACTICAL VEHICLE SYSTEMS STEWART & STEVENSON

TVS



Stewart & Stevenson began over 100 years ago as a carriage builder and blacksmith shop, and grew to become a technological leader in the design and manufacture of diesel and gas turbine powered equipment and wheeled military vehicles. A broad range of industries around the world have relied on our highly innovative products, from turbine-driven, high-shock ship service generator sets to 2,000 H.P. truck-mounted, high-pressure oilfield fracturing pumpers, and more recently the world's most capable tactical vehicles.

Headquartered in Houston, Texas, Stewart & Stevenson has annual revenues of over \$1 billion and is consistently rated in the Top 100 of the world's defense companies.



From its founding, Stewart & Stevenson has been involved in wheeled vehicles. Early carriage making evolved into assembling Army trucks and overhauling Willys Jeeps in WWII. In the 1980's Tactical Vehicle Systems, LP (TVS) was formed to build the Family of Medium Tactical Vehicles (FMTV) for the United States Army. Since then TVS has established itself as a world-class designer, manufacturer and through-life supporter of specialist on/off-road vehicles and their associated systems. In 2005, through the acquisition of Automotive Technik, the Pinzgauer light tactical vehicle was added to the TVS stable, broadening the tactical family offering from 1 to 17 tons payload capacity.

TVS manufactures the FMTV at its home facility in Sealy, Texas, and the Pinzgauer vehicle line in Guildford, UK.

The principal customers of Stewart & Stevenson Tactical Vehicle Systems have highly demanding jobs and consequently place high demands on their equipment. They must be able to move high-value cargos of soldiers, weapon systems, supplies, fuel, water and ammunition through harsh terrains and environmental extremes. So we see it as our mission to give them the most reliable, agile, cost-effective and capable vehicles ever designed.

TVS vehicle systems incorporate the latest proven commercial automotive technology, configured professionally to ensure operator safety, overall efficiency and capability in the unpredictable environments in which the machines will predominately operate. But even as they meet current environmental and on-road legislation, they offer maximum utilization across a spectrum of customers and applications.

FRONT AND CENTER

TVS

PERFORMANCE IS PROOF Over 60,000 FMTV and Pinzgauer vehicles have proven and continue to prove themselves in the field, logging millions of the world's most treacherous miles. This demonstrated performance translates into data that TVS uses to corroborate results from a wide range of analytical tools, which impact new designs. This focus allows us to improve our service to the customer and the performance of our vehicles.

Our goal at TVS is to help our customers maintain the highest possible state of fleet availability and operational readiness at the best value for their money. Our record speaks for itself. The FMTV has exceeded all U.S. Army reliability requirements by a huge factor (over six times the original U.S. Army specification). This resulted in the U.S. Army's designation of the FMTV as an "ultra-high reliability" system. This success is a result of a stubborn TVS philosophy to continue to improve upon all our products.

**“The truck went
places where only
mountain goats
had gone before.”**

3rd Special Forces Group





DESIGN TO DELIVERY, ONE CAMPUS



TVS provides complete vehicle solutions, incorporating a full OEM capability of concept, design, testing, evaluation, analysis, fabrication, assembly, delivery and through-life support and management across two international sites. We

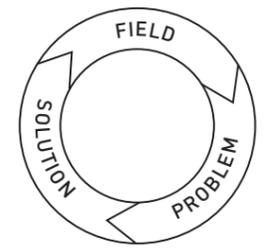
consistently meet short time to market on all our advanced systems with no trade-off of our record-breaking reliability. Our record is exemplary, with over 60,000 vehicles fielded. All our vehicles are actively supported with parts and service anywhere in the world.

From our state-of-the-art 600,000-square-foot (56,000 m²) U.S. assembly facility and advanced fabrication shop, with daily production rates of over 20 vehicles, we're delivering 6 Sigma level quality that is renowned in the industry. In our UK fabrication and assembly facilities of almost 40,000 square feet (3,500 m²), highly flexible short-line technology facilitates lean manufacturing concepts with build-to-order capability, all certified under ISO 9001:2000 quality systems.

Our philosophy is to build on our quality levels and develop the constant implementation of lean ideas through manufacturing, R&D and management processes, which bring management, engineering, assembly, suppliers and customers into a close interactive and responsive cycle. Processes are optimized, inefficiencies are eliminated, value is increased and feedback is immediate.



CAPABILITY



TVS offers a single, responsive, strong through-life program focus for every customer.

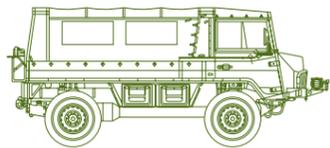
INTERNATIONAL PRESENCE

TVS vehicles are proven around the world. We have designed, built and delivered over 30,000 FMTV vehicles, and more than 30,000 Pinzgauer vehicles are in operation today. Our complete range is in full volume production.

TVS is accredited with ISO/TS 16949:2002, manufacturing to the highest automotive and manufacturing industry quality standards – standards that can be applied to any product needing assembly.



RELIABILITY



TVS products consistently achieve the highest availability levels of all tactical vehicle fleets. Availability means productivity.

FIT FOR PURPOSE



TVS vehicles are fit for purpose, built to reliably perform everywhere, from the predictable on-road environment to the most unforgiving terrains and under the worst possible conditions. Every part, component and system is designed for long life, rapid readiness and easy maintenance through unpredictably rugged duty-cycles. However, being “rugged” has not meant simply adding metal and weight. A key design feature of all our vehicle systems has been intelligent configurations that are durable, yet flexible and light, delivering a tactical agility and efficiency second to none.

Pinzgauer, in service with elite forces worldwide, epitomizes this philosophy. The FMTV is the largest capacity payload truck approved to fit fully loaded into the C-130 cargo aircraft, and certain variants of all our products are certified for low-velocity airdrop (LVAD). The smaller Pinzgauer easily fits the C-130 envelope, can be slung beneath a range of helicopters and can be carried inside a CH47 Chinook helicopter or MV-22 Osprey.

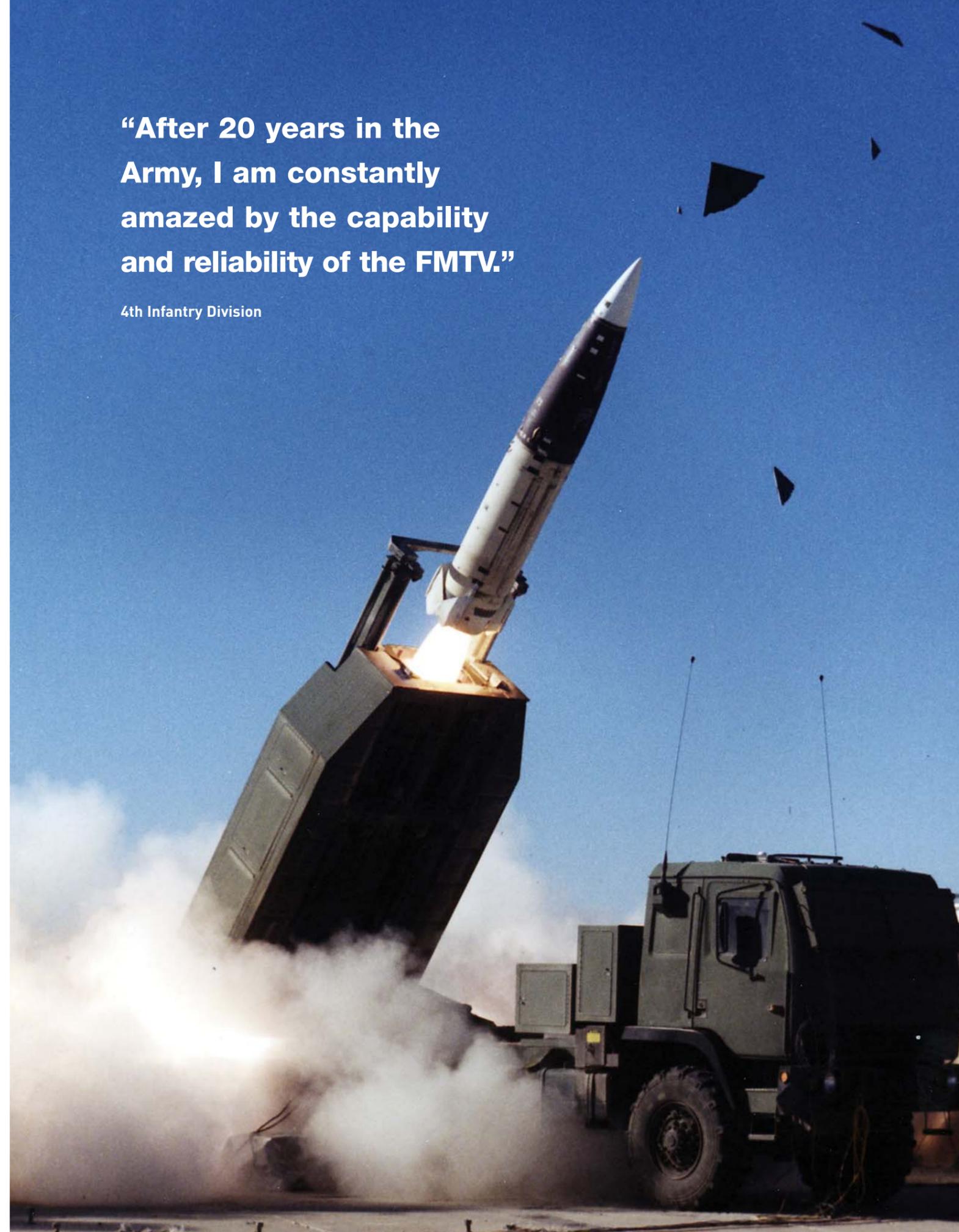
SUPER RUGGED DUTY THROUGH INTELLIGENT DESIGN TVS vehicles are not fortified commercial vehicles, but rather are system-designed from the ground up, utilizing commercially available components to withstand constant, unpredictable off-road operation. All systems are engineered to fail-safe, avoid single-point failures and ensure completion of the mission.

State-of-the-art corrosion protection further adds to life. Investment in key processes such as electrodeposition (E-coat), combined with unparalleled manufacturing engineering, has made TVS the only vehicle manufacturer to successfully complete the U.S. Army’s demanding 22-year corrosion and durability test. The result: a 22-year corrosion guarantee.



“After 20 years in the Army, I am constantly amazed by the capability and reliability of the FMTV.”

4th Infantry Division





DIRECT FIELD FEEDBACK – LESSONS LEARNED

TVS has Field Service Representatives (FSRs) embedded with military units around the world. FSRs provide training and maintenance support, and fast feedback combined with the latest on/off-highway automotive analytical design tools and modeling techniques (some developed in concert with the U.S. National Automotive Center), which allows us to quickly design in-field enhancements, and enables our customers to maintain maximum operational readiness.

“My best truck – greatly exceeded everyone’s expectations.”

544th Maint Bn

EXTRAORDINARY PRODUCT SUPPORT



We recognize the need to support our sales through their long life. Streamlined spares provision is enhanced by our on-the-spot representatives. Our Interactive Electronic Technical Manuals (IETMs) have reduced 28,000 pages to three CDs. This rapid-access program seamlessly incorporates operating, maintenance and illustrated parts manuals, and provides troubleshooting guides and diagnostic capability. Prognostic systems are being integrated that maximize the advantage of our high vehicle reliability and allow accurate mission planning.

In short, TVS vehicles offer world-class performance in every sense: demonstrated capability, high commonality, ease of maintenance and very low through-life costs.

MORE WITH LESS Every TVS system is designed to reduce our customers’ logistical footprint and increase value. Through-life support is designed in to all TVS products to help achieve this. Each vehicle family has 80% commonality within platforms, and improvements are backward-compatible to earlier models, continually modernizing the fleet. Our through-life spares requirements are low, reducing inventories. Combined with achieving nearly a 1:1 ratio between curb weight and payload, TVS products significantly increase transport efficiency and significantly reduce through-life costs.



Every TVS system is designed to reduce our customers’ logistical footprint and increase value.

SUPPORT



VERSATILITY IN ACTION

TVS's mobile utility vehicle, the Pinzgauer, allows for easy adaptation to special purposes whether it be to a fire tender, troop carrier or high volume application. The base platform may also be fitted with shelter bodies or other specialist equipment. A high load capacity of up to 2,500 kg further enhances this versatility. Whilst primarily designed for off-road applications, its superb road handling characteristics enable it to fulfil mixed roles with ease.

TVS vehicle families offer world-class performance, demonstrated capability, high commonality, ease of maintenance and low through-life costs.

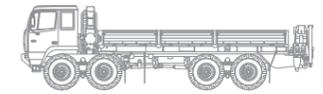
A WORLD-PROVEN LINEUP



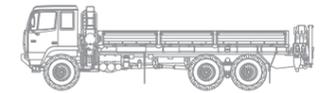
TVS offers the full spectrum of tactical wheeled systems, from 1 to 17 tons payload capacity. The FMTV 4X4 and 6X6 family, with over 14 configurations and capacities from 2.5 to 17 tons, includes cargo, cargo with MHE, van, chassis, wrecker, dump, load handling systems and tractor variants, plus three highly compatible trailers. Due to its versatility, the FMTV is the platform of choice for modern weapon systems, supporting the U.S. Army's C-130 deployable High Mobility Artillery Rocket System (HIMARS), Height-Reducible Electronic Enclosure (HREE), 9-ton Load Handling System (LHS), tilt bed transporter of the M777 Light-Weight Howitzer and Hybrid Electric Vehicle (HEV) propulsion system.

The Pinzgauer is considered the most advanced and mobile light utility vehicle in its class. Built in 4X4 and 6X6 versions, it is offered in 10 configurations, including several specialist variants such as armored, waterproofed, trauma units and weapons platforms. It allows capacities up to 4 tons and 100% gradeability fully loaded. And the X-M Extreme Mobility model takes all-terrain performance, mobility and driveability to the highest level, with anti-lock braking systems (ABS), electronic brake distribution (EBD) and electronic traction control (ETC).

TVS has also become a world leader in crew protection, protected cab design and their volume production. The successful large-scale fielding of its Low Signature Armored Cab (LSAC) to the U.S. military was the first step in this developing marketplace. Other designs to date include advanced, adaptable appliqué kits and cab systems for a variety of vehicles fitted for but not with appliqué protection.



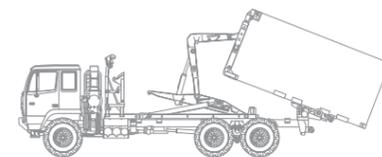
17-ton FMTV 8x8



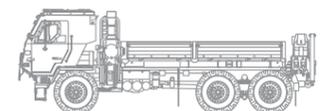
11-ton FMTV 6x6



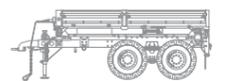
5, 7.5 & 10-ton FMTV Dump



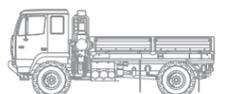
9-ton FMTV
Load Handling System



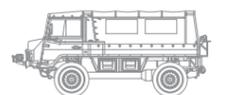
5-ton FMTV with armored cab
(available on all models)



2.5 & 5-ton Trailer



2.5-ton FMTV 4x4



2 & 3-ton Pinzgauer
(4x4 & 6x6)

INGENUITY

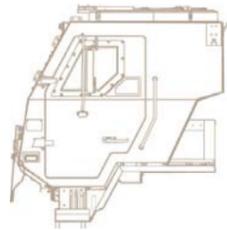
VEHICLES OF THE FUTURE



As part of the Stewart & Stevenson heritage, TVS has always worked in close collaboration with its customers. Working this way over the decades has given us experience and a unique perspective on the military and specialist vehicle marketplace. Our continuous and significant

R&D investment, aimed at maintaining the leading edge of tactical vehicle technological developments, continues this approach, ensuring that our product range is applicable well into the future.

TVS WILL BE THERE History and current events tell us that the nature of war and complex conflicts around the world is evolving. The future is difficult to predict, but you can always be certain that TVS will be there – on time, on target. Our people will always reach beyond current assumptions of what military vehicles should be. Just as we’ve done throughout our history, TVS will face the future by taking the strongest new ideas and technology, combining them with our understanding of the customers’ needs and pushing them intelligently and appropriately out into the specialist vehicle and tactical military world.



Advanced systems from TVS include: crew safety, ballistic and mine protection, situational awareness, networking, mission efficiency and mobility.



Our track record has shown that when the defense world sees a need, we’re already well on our way to meeting it.

TVS Around the World



● Plant ■ Field Service Representatives ◆ Headquarters ◆ CLS

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