



West Ashley Center for Advanced Studies

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West Ashley CAS Students Breathe New Life into Emergency Vehicle Bound for Honduras

Student-Led Repair Project Showcases Technical Excellence While Supporting International Humanitarian Mission

Charleston, SC — Students in the West Ashley Center for Advanced Studies' Automotive Technology program recently completed a repair project on a donated ambulance destined for humanitarian service in Honduras, demonstrating both technical expertise and community impact.

The project brought together current and former students, including seniors Axel Rodriguez, Colten Leto, Jesus Salazar-Garcia, and Cole Maerlender, as well as junior Christian Dawson, who is currently completing his fourth semester in the program.

Automotive Technology Teacher MacKenzie Heath says the project came together through a remarkable series of connections, involving Kyle Prothro (who works for Roper St. Francis and oversees the Charleston County School District's athletic trainer program) and his relationship with the IC13 organization, as well as Heath's own background working on commercial and emergency vehicles.

A Complex Diagnostic Challenge

The students had to work through some challenges when the ambulance arrived at the facility. The vehicle's engine ran properly, but the entire emergency services compartment, including all lights, sirens, and essential functions, was non-functional.

The ambulance body, built and installed by a Georgia-based company on a Ford chassis, contained nearly 15 miles of wiring, fuses, and switches throughout the system. Without access to wiring diagrams from the manufacturer, students spent three intensive days testing, tracing, and troubleshooting to identify the source of the failure.

Their persistence paid off when they discovered a failed master relay buried deep within the main electrical panel. This critical \$100 component, responsible for transferring large amounts of power controlled by dashboard switches, had disabled the entire emergency services system. After replacing the relay and addressing additional issues with lighting and air conditioning from prolonged storage, the students successfully restored the ambulance to full operational status.

Real-World Skills Leading to Career Success

The program's emphasis on practical, hands-on experience is already yielding results. Three members of the Class of 2025, Colten Leto, Jesus Salazar-Garcia, and Cole Maerlender, are now employed as Automotive Technicians at dealerships in West Ashley, directly applying the

skills learned in the program. Axel Rodriguez, also a 2025 graduate, chose to pursue a different career path, while Christian Dawson continues to advance his automotive education.

“The ambulance is now ready for its new mission, serving communities in Honduras, and represents both the technical capabilities of the West Ashley CAS Automotive Technology program and its commitment to making a meaningful difference beyond the classroom,” explained Heath.

For more information, contact Principal Dale Metzger at (854) 216-0800.

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About the Charleston County School District

Charleston County School District (CCSD) is a nationally accredited school district committed to providing equitable and quality educational opportunities for all its students. CCSD is the second-largest school system in South Carolina and represents a unique blend of urban, suburban, and rural schools spanning 1,300 square miles along the coast. CCSD serves approximately 51,000 students in 90 schools and specialized programs.

CCSD offers a diverse portfolio of educational options and specialized programs delivered to the students of CCSD through neighborhood, magnet, IB (international baccalaureate), Montessori, and charter schools and programs. Rich educational opportunities for students include programs in science, technology, engineering, and mathematics (STEM); music and other creative and performing arts; career and technical preparation programs; military; dual credit; and many more.