

MAGNETEK ENGINEERED SYSTEMS

Summit Truck Bodies



Project — Summit Truck Bodies

Application — Service Truck Crane Wireless Control Replacement

Integrator — Hartfiel Automation

Location — Wathena, Kansas

Products Used

- Mini-PGT Transmitters
- PGT Transmitters
- MHR Radio Controllers
- CAN-2® Receivers

CHALLENGE

- Incorporate compact transmitters into service crane truck control systems
- Extend battery life of wireless systems to improve operation
- Custom engineer miniature joysticks to meet control needs

SOLUTION

- Developed Mini-PGT transmitters to enable finer, more precise movements
- Provided both a traditional and advanced design for flexible control options
- Incorporated miniature joysticks onto transmitters for smoother control

Summit Truck Bodies, of Wathena, Kansas, custom designs trucks used for the service and maintenance of heavy equipment such as bulldozers and excavators. Each of Summit's trucks requires the strength of a crane along with the flexibility of wireless controls to assist with repairs ranging from hydraulic cylinder leaks to concrete pillar installations. The original crane controls on Summit's trucks experienced reliability issues and insufficient battery life, resulting in unstable operations and potentially unsafe working conditions.

Magnetek first supplied Summit with ergonomically styled pistol-grip PGT transmitters to replace the trucks' poorly functioning wireless systems. Simultaneously, Magnetek also began developing a smaller, "mini" product that could be easily integrated into Summit's truck control systems due to its backwards compatibility with full-sized PGT transmitters. The Mini-PGT transmitter offers many of the same features found on Magnetek's larger pistol-grip transmitters, but in a weight and style similar to most handheld transmitters. Two Mini-PGT transmitter types were designed for Summit's truck applications: a primary control package and a retrofit control package.

The primary Mini-PGT design, packaged with Magnetek's CAN-2 receivers, interfaces directly with the trucks' computer systems and communicates radio data through its control module and sensors. It includes an LCD display that relays diagnostics and signal strength, and provides access to menu settings for making system adjustments. Also included are special field guided mini-joysticks that allow operators to move the cranes in smoother, more precise movements. Compared to the original controls, Magnetek's precise hydraulic controls enable movements by inches rather than previous less exact margins. The joysticks run cranes along x- and y-axes with steadier movements than were previously possible.

ADVANTAGES OF USING MAGNETEK'S RADIO CONTROLS GROUP

- Experts in providing innovative, cost-effective, custom-engineered wireless communication products
- Meets application specifications to reduce internal engineering, improves time to market and enhances performance
- Products manufactured and tested at our U.S. facility
- Customized application software
- Aftermarket service and support

Paired with MHR radio controllers, the retrofit Mini-PGT wireless system is able to interface with the trucks' hydraulic systems. The retrofit transmitter includes toggle switches to turn functions on and off, LED lights, and a trigger that operates the functions proportionally, similar to a gas pedal in a car.

Utilizing the wireless Mini-PGT reduces a dependence on cables and introduces improved flexibility to the work area. Operators can freely move around the trucks, improving sightlines, and are no longer limited to a particular distance, which removes them from potentially hazardous environments. Designed to minimize power consumption, the Mini-PGT transmitters provide one of the longest lasting batteries in the industry today, far exceeding the capacity of the truck cranes' previous controls.

Magnetek's wireless control products are flexible enough to allow customers to choose the exact system that fits their needs — from the simplest of operations to the most complex. Magnetek and Summit continue collaborating to develop the most efficient, flexible wireless truck crane control systems. Advancements in technology ensure Magnetek wireless controls are able to meet the needs of almost any application.

