

# AAMCOR Case Study

*Superior Electro-Hydraulic Control Systems*



## The Customer & Scope of Project:

A mining equipment specialist company known as AAMCOR, has been a customer of Elite Controls, Inc. (ECI) from when they were doing business as Logical Control Concepts. Since 2006, this partnership with AAMCOR allows ECI to provide superior electro-hydraulic control systems for Bulk Explosive trucks, or Bulk Trucks, as they are typically referenced in the industry. Bulk Trucks are mobile equipment that drive on to mining or construction sites to mix and deliver explosives where needed to blast rock. Utilizing a series of Augers and/or pumps, the chemicals to make the explosives are mixed on site and delivered to the hole.

## Requirements:

The control system had to have the ability to accurately control the speed of up to 6 different functions in order to mix the necessary chemicals/ingredients to produce a high-quality explosive product. The system had to be user friendly and integrate the safety control functions within a single system.

## Challenges:

The biggest challenge was providing a single system with variations that can be configured for the several styles of trucks. Bulk trucks include trucks that produce ammonium nitrate – fuel oil (ANFO), Heavy ANFO (ANFO & Emulsion Blend), Quads to produce Heavy ANFO as a pumpable product and finally, Pumper Trucks that pump emulsion, which is a pre-mixed blasting agent. Along with the different styles of trucks, trucks have ancillary differences such as hand rails, auxiliary hydraulics, Single or Two-Part Gassing, DOT Valves and a myriad of other options that may need to be added or removed from the controls as required. With ECI's expertise in electronics and hydraulics, they were up for the challenge.

## Solutions:

ECI provided a Danfoss Plus +1 Control system that is easily scalable to run a simple ANFO Truck all the way up to a Sophisticated Quad. The control systems came with options for multiple operator control stations in the cab of the truck or for use outside. ECI also used a system that utilizes simple point-to-point wiring, making the installation easy and troubleshooting substantially simpler. The system provides a robust user interface giving the operator complete control of mixing and a delivery process without over complicating the controls. ECI supplied systems that are used for new trucks while partnering with AAMCOR for refurb of the systems of existing trucks in the field.

The system ECI provided has steadily gained wide acceptance in the industry and is now considered by many as the leading and most respected control system in the industry. ECI's reputation has grown and people trust their systems to work reliably and accurately mix the chemicals/ingredients to produce a quality explosive product. In addition, these systems are easy to troubleshoot and fix when there is a problem which substantially reduces downtime for the trucks.