McNally Industries
Where we are

- McNally Industries LLC is Small Business located in Grantsburg, WI serving DOD and DoD primes continuously since 1942
- 80 employees
- Expanded and modernized (in 2005) manufacturing facility
What we do

- **Capabilities**
  - Design Engineering
  - Assembly and Test
  - Overhaul and Repair
  - CNC Turning and Milling
  - Wire and Sinker EDM
  - Surface, OD and ID grinding
  - Welding and metal finishing

- **Facilities (Grantsburg Campus)**
  - 50,000 ft² main facility
    - 10,000 ft² office space
  - 6,000 ft² Design Engineering facility
  - 10,000 ft² overhaul and assembly facility

- **Robust Quality Control Systems**
  - Resident QAR
Who we serve

- ATK
- Alliant Techsystems
- United States Department of Defense
- ITT
- Raytheon
- BAE Systems
- Lockheed Martin
- General Dynamics
- Northrop Grumman
- L3 Communications
- U.S. Air Force
- McNally Industries
Quality Systems

- McNally is certified to the following standards
  - ISO 9001-2008 (DNV and PRI)
  - AS9100 (PRI – pending May. 2012 audit)
- On-site DCMA QAR
- Lean Manufacturing concepts
  - Utilizing Quick Response Manufacturing methods
McNally Overview
Not an Easy Elevator Speech

**Design Engineering**

**Proprietary Products**
- Phalanx Pumps
- Helicopter Tooling
- Bradley Pumps
- Northern Pumps (Comm'l)
- Mk 6 Ammo Hoist

**Overhaul & Repair Services/Assembly & Test**
- Phalanx Pumps
- Northern Pumps
- Mk-6 Ammunition Hoists
- Pilot Valves

**Precision Machining and Fabrication**
- Sonar-related parts
- Mk 45 (5" gun) parts
- Bushmaster Gun Components
- Mortar Components and Systems
- Many and varied components for other military systems
Design Engineering

- Primary focus is on the sustainment and upgrade of legacy military equipment, much of which was designed decades ago by companies that no longer exist.
  - Issues – availability, lead time and price

- Our services include:
  - Rapid Prototyping
  - Design Engineering
  - Life Cycle Enhancement
  - Re-engineering and Reverse Engineering
  - TDP Development and Modernization
  - ASME Solid Modeling

- Our major advantage – engineering for manufacturability
Design Engineering
The McNally Advantage

**Design Engineering**
- Form, Fit, Function
- Product Design
- Documentation
- Test Requirements

**Manufacturing Engineering**
- Manufacturability
- Cost Analysis
- Process Development
- Quality Planning

**One Service Covering Both**
- Integrated Design and Manufacturing Review
- Prototypes
- Test Assets
- Testing
- Production Readiness Review
Design Engineering
Bradley Transmission Pump

- Issue – with all the weight added to the Bradley (armor, etc), the vehicle does not meet its design specs for acceleration, top speed or range.
- L-3 has developed an up-powered transmission.
- McNally specifically designed a pump for the application
- 5,000 BFVs and 1,000 Paladins in the US arsenal
- Army plans to upgrade to the new drive train for both vehicles
- McNally has the only pump for the application
Design Engineering
Phalanx Gun Projects

- Reverse engineering of the M61 Gatling Gun manufactured by General Dynamics
  - Lead time and cost issues for Raytheon

- Improve the Life Cycle of the electronic cooling pumps
  - Will result in the replacement of all competing pumps in the US Fleet with McNally pumps
Design Engineering
M134 Gatling Gun

- Complete re-engineering program for the gun system
- Delivered a fully qualified Technical Data Package to the Army.
  - Drawings
  - Fully qualified, manufactured and tested components
- McNally is now a qualified second source to manufacture systems and components
Design Engineering
Other Projects

- ATK - 7.62mm Chain Gun
  - Project is to provide full TDP to ATK
  - Under Teaming Agreement, McNally would manufacture entire gun system and have marketing rights
- ISEA – replacement of obsolete EP3 Panel on MK 6
- WRALC - 30mm bolt and ASME Modeling
- Redstone Arsenal - Helicopter blade removal tool
- L3 - next generation transmission pumps
  - 2 projects to improve efficiency
- M3P gun mount – Kiowa Warrior Helicopter
Proprietary Products
Ammunition Handling

- MK6 Ammunition Hoist for the MK45 – 5” gun manufactured by BAE Systems.
  - 2-3 stories tall when assembled
  - Comprised of 1,500 parts, most of which we machine. We assemble, fully functionally test, crate and deliver.

- Sell a) directly to DoD, b) in conjunction with BAE Systems and c) Direct Foreign Military Sales.

- Units installed with the US Navy, Canada, Australia, New Zealand, Spain, Japan, and others.
Proprietary Products
Military Pumps

- The Army’s Bradley and Paladin GCV transmission pumps in collaboration with L3 - Combat Propulsion Systems

- Electronic cooling pumps in collaboration with Raytheon Missile Systems for the Navy’s Phalanx Close-in-Weapons-System
Proprietary Products
Helicopter Maintenance Tooling

- Tools developed from Design Engineering program
- “RUPHIS” Blade Clamp, Blackhawk and Apache
- A variety of special hand tools
- Support both the Army and Sikorsky
Proprietary Products
Commercial Pumps (Northern Pump)

- A line of specialty gear pumps uniquely designed to provide high discharge pressures, accurate flow rates, and perform at high temperatures.

- Markets include:
  - Oil & Gas
  - Chemical Processing
  - Power Industry
  - Food Processing
  - Specialty Coating
Overhaul and Repair

- Major ongoing program with the US Navy to overhaul, repair and upgrade Ammunition Hoists for Cruiser Fleet
- Perform all overhauls for Phalanx Pumps – formerly performed by Raytheon
- Will upgrade all existing pumps – over time – to new design configuration
- The Northern Pump product line is over 100 years old; we have been overhauling those pumps for a very long time
Precision Machining

- Contract manufacturing for DoD and Primes
- Full range of milling, turning, wire and sinker EDM, grinding, welding, metal finishing, assembly and test.
- All metal including hard to machine materials such as maraging steel
- Very precise – tight tolerances
- Supports the machining needs of the other products.