



Sgt. 1st Class Dustin Forgey from the Ordnance School tests Spc. Daniel Larios, 308th Brigade Support Battalion, on his knowledge of memos located in the tool room as part of the evaluation for the Chief of Staff Army Award for Maintenance Excellence competition, at Joint Base Lewis-McChord, Washington, on Feb. 24, 2017. (Photo by Sgt. Jacob Kohrs)

The Evolution of the Ordnance Corps Maintenance Mission

Ordnance Corps Soldiers have played a vital role in the history of the Army, and their mission has continued to evolve with advancements in technology.

■ By Capt. Shaisha M. Ferguson

The Ordnance Corps' primary mission is to support the sustainment of weapon systems, ammunition, and missiles, and the production of new equipment and ground mobility materiel. Over the past 100 years, technology developments in areas such as mechanization, missiles, nuclear weapons, ammunition, and logistics support have greatly affected the mission of the Ordnance Corps.

Branch Beginnings

The Ordnance Corps is a multi-

functional branch whose roots lie in the country's colonial beginnings. The Ordnance Department was founded on May 14, 1812. However, the branch's history goes back to 1629 when Samuel L. Sharpe was appointed as the master gunner of ordnance in the Massachusetts Bay Colony.

Col. Decius Wadsworth became the Army's first chief of ordnance in 1812. Wadsworth's installation as chief of ordnance marked the beginning of the history of ordnance as an Army branch.

The Ordnance Department was originally a manufacturing organization that produced cannons and small arms. Early conflicts such as the Mexican and Civil Wars saw the Ordnance Department producing most of the weaponry used by the Federal Army. The Ordnance Department was responsible for the design and production of the Army's artillery and small arms, and the branch was devoted primarily to the acquisition of armaments. At the turn of the 20th century, however, new technologies introduced

new requirements for the Ordnance Department.

World War I

During World War I, the Army's expanded use of trucks placed a greater emphasis on maintenance. Ordnance units supported the American Expeditionary Forces in Europe and were typically located near the front lines. This was the beginning of the forward maintenance concept. The primary focus for the Ordnance Department was supply, maintenance, and ammunition. In support of the American Expeditionary Forces in France, 165 unit-level mechanics worked in mobile ordnance repair shops, heavy artillery mobile ordnance repair shops, and ordnance base shops.

The ordnance Soldiers' workload in France included fusing bombs and performing maintenance on 3,500 artillery pieces, 265 tanks, 1,740 artillery tractors, and more than 2 million small arms. They also repaired the French army's 75 millimeter guns, Renault tanks, recovery and ammunition trucks, and reconnaissance cars.

The lessons learned in World War I helped shape the Ordnance Department into a modern support branch with an increasingly important role in maintenance. This set the stage for its expanded role in World War II.

World War II

The focus on maintenance was even more important during World War II as the Army became more mechanized and increased its use of armored forces. As it did during the mobilization for World War I, the Ordnance Department grew significantly in terms of size and requirements.

During the war, ordnance branch missions included replacing fractured gun tubes on M3 tanks, assembling vehicles overseas, and managing ammunition supply points. The Ordnance Department supplied 47 billion rounds of small-arms ammunition, 11 million tons of artillery

ammunition, 12 million rifles and carbines, and 3.5 million military vehicles.

This workload required a change in maintenance doctrine that resulted in an echelon-based organization. During World War II, the Army used five echelons of maintenance, with the highest echelon being the fifth. Also known as base shop maintenance, this level included rebuilding vehicles, weapons, and major assemblies.

The fourth echelon of maintenance was called heavy maintenance. It was located at the field Army level between the base level and the combat corps. The third echelon was called medium maintenance and included the units supporting the fighting divisions.

At the front lines, the first and second echelons were called organizational maintenance. These levels of maintenance were performed by the equipment operators and unit mechanics. The Army currently uses a two-level system: field maintenance and sustainment maintenance.

Preventive maintenance was one innovation that resulted from the five-level maintenance systems. Soldiers conducted daily checks and services, identified problems with vehicles, and created a tracking system for each vehicle. This system evolved into today's preventive maintenance checks and services program.

Training Today

The Ordnance Department was renamed the Ordnance Corps in the Army Organization Act of 1950. The Ordnance Corps underwent a major transformation under the 2005 Defense Base Realignment and Closure Commission, which consolidated all ordnance training under one school at Fort Lee, Virginia.

Today, the Ordnance School consists of six departments: Wheeled Maintenance, Track Metalworking and Recovery, Munitions and Explosive Ordnance Disposal, Armament and Electronics Maintenance, Ord-

nance Electronics Maintenance, and Tactical Support Equipment.

Soldiers now use advanced technology and computer systems to troubleshoot equipment during training, and the Ordnance School is constantly adapting training as new technology is introduced into the Army.

When the Army fields new vehicles, it creates the need for specialized mechanics to maintain them. For example, the fielding of the Abrams tank, Bradley fighting vehicle, and Stryker required a new generation of mechanics such as Bradley fighting vehicle system maintainers, track vehicle repairers, and Abrams system maintainers.

Support vehicles such as the heavy expanded-mobility tactical truck, palletized load system, and the family of medium tactical vehicles also require specialized maintainers. Up-to-date, comprehensive training programs are required to prepare ordnance Soldiers to support new systems.

Throughout history, a driving factor in the evolution of the missions and training of the Ordnance Corps has been the advancement of technology. New systems have been developed to take maintenance tracking and repair parts acquisition to the next level. New vehicles and weapon systems are continually being developed.

Ordnance Soldiers must be ready to meet the maintenance demands that these systems will place on them. When technology evolves, the Ordnance Corps will adapt to the challenges ahead. And Ordnance Soldiers will continue to play a vital role in the success of the Army.

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