



The Ordnance Corps Quarterly

U.S. Army Combined Arms Support Command

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Chief's Corner

The U.S. Army Ordnance School (USAOS) celebrated a huge milestone this past quarter. Construction of the **Ordnance Training Support Facility (TSF)** is now complete! We are very excited to finally have a permanent home for more than 13,000 historical

treasures. This unique collection of artifacts was displaced when the 2005 Defense Base Realignment and Closure (BRAC) decision merged the schools at Aberdeen Proving Ground, Maryland and Redstone Arsenal, Alabama, moving them to a new Ordnance campus at Fort Lee, Virginia.

The BRAC move ended in 2011 with hundreds of Ordnance personnel (staff, cadre, and students) and millions of pounds of equipment settling into the new barracks and state-of-the-art training facilities. However, having no suitable place to accommodate our artifacts, they remained crated and distributed across multiple storage facilities at Fort Lee.

In 2015, the Army approved construction of a climate-controlled Ordnance TSF with two classrooms, a library, an arms room, a high-bay for macro artifacts, and storage areas for micro artifacts and ammunition. The **U.S. Army Center of Military History** was instrumental in obtaining funding for the project, which allowed the USAOS to break ground in the summer of 2017. When I arrived in May 2018, the foundation was about 75% complete, and for two years, we all watched with anticipation as each phase of the construction was finished. In December 2019, we moved the bulk of the macros in, and on February 4, 2020, 12 Allied Trades Specialist (91E) students were the first to enter the TSF for a 2-hour block of instruction on Ordnance history and heritage using the historical objects that were intended for this purpose. Limited training (one class per week) continued throughout the month as we further developed and refined lesson plans, organized the micro

artifacts, and set up the research library.

The Ordnance TSF is a tremendous resource for **training, education, and leader development**. It will enhance basic, advanced, specialized, noncommissioned officer, and officer instruction at the U.S. Army Ordnance School and the Army Logistics University. Additionally, the TSF houses one of the largest collections of tanks, vehicles, and weapons in the Army, which makes it an excellent resource for **research and development (R&D)**. The macro collection includes obsolete, prototype, first production, experimental, and field modified materiel that highlight technological advancements. Likewise, the ammunition collection is unparalleled in its breadth. It contains examples of munitions that the Joint Force encountered in Afghanistan, Iraq, and Syria, which serve as a valuable resource to the Joint Explosive Ordnance Disposal (EOD) community. As one example, approximately 400 artifacts provided insights for the development of the Joint EOD training manual published in 2016.

The Ordnance TSF is the first of four training facilities the Army is constructing to house historical objects for the exclusive purpose of training Soldiers and supporting R&D. The other three will be at Fort Sill, Fort Benning, and Fort Rucker, but we are thrilled

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Advanced Individual Training students learn about the history and heritage of the Ordnance Corps from Mr. Karl Rubis, Historian, U.S. Army Combined Arms Support Command.



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to have the first of them here at Fort Lee. I look forward to the **TSF ribbon-cutting ceremony** on May 6. This is truly a landmark event for Ordnance, and I couldn't be happier that the timing allows us to share it with the broader logistics community that will be here for Sustainment Week.

Sustainment Week is a three-day annual event that brings senior sustainment leaders together to synchronize initiatives, promote a shared understanding across commands, and promote dialogue across the sustainment enterprise. On May 6 and 7, the U.S. Army Combined Arms Support Command in concert with the U.S. Army Materiel Command will host a variety of senior leader forums and mentoring sessions. May 8 is reserved for branch-specific activities; here's what we have planned for Ordnance:

Hall of Fame Induction Ceremony. On the evening of May 7, I will have the privilege of officially inducting 17 members into our Ordnance Corps Hall of Fame (HoF) and hosting a reception in their honor. The class of 2020 brings the total number of HoF members to 487, each one recognized for their extraordinary contributions to our Corps, our Army, and our Nation. Together, they reflect the highest standards of our profession, but you don't have to take my word for it! Read their short biographies on the [HoF webpage](#); you will be inspired! (Note that the biographies for the class of 2020 will be added to the website *after* they are formally presented as a part of our ceremony.)

HoF Selection Board. On May 8, the HoF selection board will devote much of the day to reviewing nominations and making selections for the Ordnance Corps Hall of Fame class of 2021. Unless you have served on the board, it's difficult to imagine what an arduous task this is. The board carefully reviews dozens of candidates and narrows the field to those who are wholly deserving of this honor. Their dedication to choosing only the most worthy has upheld the prestige of our Ordnance Hall of Fame for more than 50 years.

Sustainment Ball. That evening, the branches (Ordnance, Quartermaster, and Transportation) will come back together for the Sustainment Ball to reaffirm their bonds as Army logisticians and our shared commitment to *Sustinendum Victoriam!*

Of course, only a few of our 90,000+ Ordnance professionals will attend Sustainment Week, but there are other ways to stay connected. This newsletter

provides quarterly updates on USAOS initiatives and other topics of interest to our operational Army audience; back issues are available on our [website](#). The LIVE **Ordnance Connect**, and *now*, the LIVE **EOD Connect** quarterly video-teleconferences will keep you informed on the latest observations, issues, and challenges impacting the sustainment warfighting community. CAC login (with Authentication certificate) is required. If you want to broaden your insights, check out the **Quartermaster Connect!** Like us on **Facebook** to keep informed on these and other opportunities to engage with the broader Ordnance, EOD, and sustainment communities.

Go Ordnance!

BG Heidi J. Hoyle
41st Chief of Ordnance



Ordnance students learn about 19th century ammunition (top) and WWII German armor (bottom) at the Ordnance Training Support Facility.



*The
Ordnance
Training
Support
Facility*

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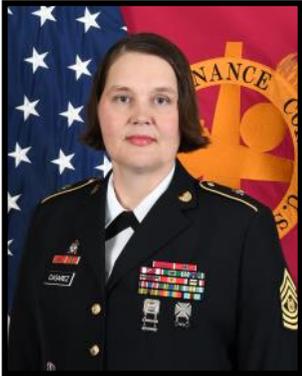
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Ordnance Corps Command Sergeant Major Highlights

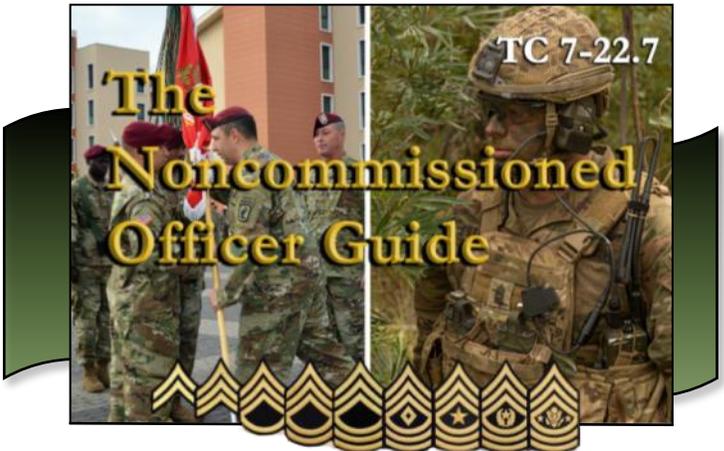


Greetings from the Home of Ordnance! Fiscal year 2020 is progressing at a fast and furious pace. I am seeing many of our noncommissioned officers (NCO) and enlisted Soldiers along the **extra mile** I talked about in my last article. It looks like there have even been numerous traffic jams,

as NCOs and Soldiers are making things happen! As you continue to navigate the extra mile, my message for *this* quarter is to use **your GPS!** Just like any road trip you take, your Army career and daily missions should involve careful planning and reconnoitering. Otherwise, the route you take could be wrong or unsafe, and that could delay your arrival. To get where you want (and need) to be without getting lost, add these “coordinates” to your GPS and share them with your troops.

Read, Understand, and Live by the New NCO Guide. As the backbone of our Army, NCOs must train, educate, and ensure the readiness of every Soldier in the U.S. Army. Our NCO Common Core Competencies, regardless of military occupational specialty (MOS), are: Readiness, Leadership, Training Management, Communication, Operations, and Program Management. The newly published **Noncommissioned Officer Guide** (TC 7-22.7) gives guidelines by rank on the Army’s leadership model of BE, KNOW, DO; the roadmap to effective leadership; guidance on training, mission command, and officer and NCO relationships; and basics on Army programs. Set the NCO Guide as ‘home’ on your GPS tracker and make it a frequent stop along the extra mile. There is also no better resource for Soldiers transitioning to

the NCO ranks. Give it to them during their Induction Ceremony and use it during professional development sessions.



Work Toward a College Education. The USAOS has created fantastic opportunities with partner schools (links below) that allow our Soldiers to pursue a college education using Tuition Assistance (TA). The partner schools will give Soldiers credit for MOS skills, meaning that most Soldiers can earn an associate’s degree with as few as 21 credit hours of general education requirements. Once complete, they can start working toward a bachelor’s degree. What a great way to grow and learn while getting a civilian degree that will help you in your military career and after you leave the Army!

Pursue Credentials and Certifications. The Army’s **Credentialing Opportunities On-line (COOL)** is another excellent place to visit on your road trip to a *better you*. COOL allows you to use TA to get technical certifications in addition to or in place of college credit. There are many certifications available

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Excelsior College

- Associate of Applied Science (AAS) in Administrative Management Studies (All OD MOSs)
- Associate of Science (AS) in Liberal Arts with an Area of Focus in Logistics (All OD MOSs)
- AAS in Technical Studies – Electromechanical Studies (CMF 91/94 Soldiers)

Coastline Community College

- Associate of Arts (AA) in Logistics/Supply Chain Management (All OD MOSs)
- AA in Supervision and Management (All OD MOSs)

Kansas State Education Board of Regents

Offers degree plans for 91B, 91C, 91E and soon will have a plan for 91L



OCSM Highlights [Continued from page 4](#)

to our Ordnance professionals now, and the USAOS continues to work additional opportunities. As we learn more skills, we become better leaders and Soldiers for our Army.

Enroll in the New Apprenticeship Program. To get a Department of Labor Apprenticeship Certificate, visit the [United Services Military Apprenticeship Program](#) website and start the process. Encourage your Soldiers to do the same; it's a great way to get the entire team together and get credit for those things you do every day. Do not let this year go by without exploring this new tool and signing up for an apprenticeship. This program is free of cost and will make you a better professional now, while expanding your earning potential after the Army.

Download the Army Physical Readiness Training (Army PRT) Application. Get ready! October is just around the corner, and so is the new Army Combat Fitness Test (ACFT). To help you prepare, the U.S. Army Training and Doctrine Command offers a mobile application that comes with helpful tools like the ACFT calculator, metronome for counting cadence, videos, and layouts for workouts. Download the application from [Google Play](#) (Android) or the [App Store](#) (iOS) today.

As you continue your trip **on the extra mile, use your GPS**, and take your team with you. Let the



NCO Guide *guide* you; get a degree and/or certification; start your apprenticeship; and prepare for the ACFT. I appreciate all you do to keep our Army Strong. Your superior support through maintenance, ammunition management, explosive ordnance disposal, and explosives safety makes the U.S. Army Ordnance Corps our Nation's Armament for Peace!

Go Ordnance!

CSM Petra Casarez
14th Ordnance Corps Command Sergeant Major

Ordnance CSM Spotlight



Regional Training Site-Maintenance, Fort Custer, Michigan

The hardworking professionals at RTS-M Fort Custer conduct quality instruction in Ordnance specialties: 91B Wheeled Vehicle Mechanics at the 10-30 skill levels, H8 Wheeled Recovery Operations, and R1 Rough Terrain Container Handler. The One Army School System ensures the same standards of training across all the Ordnance training locations whether they are staffed by Active Army, Army National Guard or US Army Reserve.



Ordnance Corps Chief Warrant Officer Highlights



Seven of our nine Ordnance warrant officer specialties are *accession* specialties, meaning qualified Ordnance Corps noncommissioned officers (NCO) can apply for them. The accession specialties are Ammunition, Armament Systems Maintenance, Allied Trades, Automotive Maintenance, Engineer

Equipment Maintenance, Electronic Systems Maintenance, and Electronic Missile Systems Maintenance Warrant Officer. These technical specialties are distributed across numerous organizations and echelons within the active component, National Guard, and Army Reserve. In fact, 60 percent of all Ordnance Corps warrant officer authorizations reside in the National Guard and Army Reserve; however, all three components have challenges with filling particular specialties.

Currently, in the active component, the Ordnance Corps is understrength in four specialties at the Chief Warrant Officer Two grade: Ammunition, Automotive Maintenance, Engineer Equipment Maintenance, and Electronic Missile Systems Maintenance Warrant Officer. This can be attributed to several factors, such as low density enlisted feeder specialties and an insufficient number of qualified NCOs. Additionally, Warrant Officer One and Chief Warrant Officer Two shortages exist in the National Guard and Army Reserve for Ammunition, Armament Systems Maintenance, Allied Trades, and Electronic Missile Systems Maintenance Warrant Officer specialties.

All warrant officer application requirements and prerequisites can be found on the [United States Army Recruiting Command](#) website. There are specific administrative requirements that are mandatory, including United States citizenship, high school diploma or GED, secret security clearance, and a GT score of 110 or higher. Ordnance Corps NCOs must also be graduates of the Ordnance Advanced Leader Course (ALC), with a minimum of 48 months in MOS-related supervisory positions as documented on evaluation reports when they apply. Duty positions outside of their Ordnance specialties such as Recruiter, Operations NCO, Training NCO, and Drill Sergeant do not count as supervisory. Additionally,

exception to policy requests for having over 12 years of active federal service and moral incidents such as Uniform Code of Military Justice infractions also decrease the number of qualified NCOs. Typically, applicants having 12 to 14 years of service are approved. However, exceptions to policy are less likely to be approved for those with more than 14 years of service.

Some recent trends in warrant officer accession packets include NCOs not meeting the minimum 48 months of documented ammunition or maintenance supervisory positions on evaluation reports, lack of technical experience in the enlisted Ordnance specialty, failure to include a senior warrant officer

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Warrant Officer Accession Specialties

890A

Ammunition

913A

Armament Systems Maintenance

914A

Allied Trades

915A

Automotive Maintenance

919A

Engineer Equipment Maintenance

948B

Electronic System Maintenance

948D

Electronic Missile Systems Maintenance



OCWO Highlights [Continued from page 6](#)

letter of recommendation from within the applicant's organization, and not completing ALC (National Guard and Army Reserve). For active component applications, moral and active federal service exceptions to policy must be endorsed by the Ordnance Corps, but ultimately, Headquarters, Department of the Army G-1 is the final approval or disapproval authority. If an NCO does not meet all of the requirements, warrant officers must be candid, explain what is lacking, and help them develop a plan to address their shortfalls.

In closing, Ordnance warrant officers have a responsibility to teach, coach, and mentor officers, warrant officers, and enlisted Soldiers. Part of this responsibility includes identifying, training, and grooming NCOs who have the potential to serve as future Ordnance Corps warrant officers.

Go Ordnance!

CW5 Danny K. Taylor
11th Ordnance Corps Chief Warrant Officer



CW4 Amado Mena Jr., Ordnance Personnel Developer, talks to NCOs about qualifications needed to apply for one of seven Ordnance warrant officer specialties during a Warrant Officer Recruiting Briefing at Fort Sill, Oklahoma.

Administrative Requirements

What it takes to join the Army's technical elite...

- U.S. Citizen **(No Waiver)**
- General Technical (GT) score of 110 or higher **(No Waiver)**
- High school diploma or GED **(No Waiver)**
- Final Secret or Top Secret security clearance **(No Interim; No Waiver)**
- Pass commissioning physical for Technician or flight physical for Aviators (Exception to Policy [ETP] Available)
- Must have ≥ 12 months remaining on enlisted contract (ETP Available)
- Age: no older than 46 years for Technicians / 32 years for Aviators at the time the packet is boarded (ETP Available)
- Active Federal Service: Technicians < 12 years / Aviators < 8 years at the time the DA 61 is signed by applicant (ETP Available)
- Pass the standard 3-event Army Physical Fitness Test (APFT) and meet height/weight standards



Click **>> HERE <<** for Army Warrant Officer Recruiting Briefings Near You!

Warrant Officers in the News!

CASCOM hosted the first Senior Sustainment Warrant Officer forum on February 5, 2020 at the Army Logistics University, Fort Lee, Virginia.



Click [HERE](#) for the article.

Left to right: MG Rodney D. Fogg, CASCOM and Fort Lee commanding general; forum attendees; and CW5 Mark Parr, Army munitions planner for CENTCOM J4, MacDill Air Force Base, Florida.



Opt-Out: Flexible Timelines Support Talent Development

The Army is modernizing talent management in all areas of assessing, manning, and retaining talent. The U.S. Army Ordnance School (USAOS) is working with the Army Talent Management Task Force (ATMTF) to implement the National Defense Authorization Act authorities granted in 2019. *The Ordnance Corps Quarterly* will include a series of articles on Talent Management to keep our readers informed on progress toward ATMTF initiatives. We start in this issue with a discussion of ‘Opt-Out’ authorities.

Opt-Out aims to encourage flexible timelines and reduce time-based promotion boards that may discourage opportunities for greater talent development. Beginning with the February 2020 Lieutenant Colonel promotion board, officers in the primary zone can opt-out of promotion consideration without prejudice for three reasons:

- ♦ to complete an assignment of significant value to the Army (i.e., the promotion board convenes before completion of a joint qualification)
- ♦ to complete an ongoing funded resident advanced civilian education program (i.e., a major attends Command and General Staff College with follow on to the School of Advanced Military Studies but lacks enough time to complete their key developmental position before the board)
- ♦ to complete a career progression requirement (i.e., the captain’s promotion board convenes before completion of company command)



Officers can opt-out twice at each grade without changing their date of rank; however, their year group will be adjusted. To apply for this option, officers must submit a DA Form 4187 with COL approval and a memorandum describing the qualifying circumstances no earlier than five months before the board. Opt-Out is not intended to improve promotion potential, but to enable more significant talent development and management.

Our next article will discuss the outcomes of the second annual Talent Management Conference. For more information, please contact the USAOS Ordnance Personnel Development Office at (804) 765-7277, or review [MILPER message 19-378](#).

CPT Andrew K. Umstead
Future Requirements Officer



The Next Generation Automatic Test System is Here!

In September, the U.S. Army Ordnance School (USAOS) fielded the Next Generation Automatic Test System (NGATS). The NGATS will modernize the Army's aging automatic test equipment, reduce the current battlefield footprint, and give units and maintainers the ability to support multiple combat systems.

The NGATS replaces the Direct Support Electrical Systems Test Set and provides off-system diagnostics and fault isolation of Line Replaceable Units (LRU). Currently, the NGATS supports the M1A2 Abrams Main Battle Tank, the M2A3 Bradley Fighting Vehicle, and is configurable to support a range of other existing and future weapon systems. The backward and forward compatibility of NGATS makes it the only test set that supports current and future systems.

During NGATS fielding, the USAOS received its initial operational capability, which consisted of three NGATS consoles and one full-up tactical system. The school's consoles are used for NGATS training in a classroom environment, while the tactical system

supports training in a field environment. The NGATS consists of two heavy expanded-mobility tactical trucks, two twenty-foot shelters, one sixty-kilowatt generator, and test cables and hardware to connect and perform LRU diagnostics checks. The final operational capability, scheduled to arrive by August 2020, will add five consoles and one tactical system, for a total of eight consoles and two tactical systems.

Ordnance instructors and training developers received four weeks of new equipment training to prepare them to incorporate NGATS into the *Integrated Family of Test Equipment Operator and Maintainer (94Y)* course and the *Electronic System Maintenance Warrant Officer (948B)* course. To date, the Test Measurement Diagnostic Equipment Division has trained two 94Y classes and two 948B classes. Four 94Y classes are currently in session.

Mr. Luis Ortiz
Division Chief, Test, Measurement, and
Diagnostic Equipment



PVT Andrew Placencia and PVT Sebas DaSilva prepare the Hoist Assembly for use. The Hoist Assembly has the capability of lifting Line Replaceable Units up to 600 lbs.



PVT Andrew Placencia checks the ethernet connection to the station control during NGATS troubleshooting procedures.



ODX Integration Across the 73rd Ordnance Battalion

Over the past year, the 73rd Ordnance Battalion and its subordinate units at Fort Gordon, Georgia; Fort Sill, Oklahoma; and Eglin Air Force Base, Florida have developed, executed, and continued to refine their Ordnance Field Training Exercises (ODX) to enhance training and align with the U.S. Army Ordnance School's (USAOS) Advanced Individual Training (AIT) Warriorization initiative. This development seeks to incorporate technical training into the ODX to certify aspiring professional Ordnance Soldiers on their Warrior Tasks and Battle Drills (WTBD) while testing their military occupational specialty (MOS) skills in a realistic field environment. Each location faced unique challenges in their efforts to meet this intent.

The Ordnance Training Detachment at Fort Sill established MOS training in a field scenario to replicate maintenance operations commonly found during large-scale combat operations. The Fires Center of Excellence assisted them by supporting the 94M Radar Repairer and 94S Patriot System Repairer Soldiers with equipment that enabled training on the PATRIOT system and radar associated equipment in an austere environment.

Alpha Company, 73rd Ordnance Battalion and the Ordnance Training Detachment at Fort Gordon worked together to integrate MOS training into a 72-hour field training exercise. The Soldiers validated key MOS knowledge and skillsets by simulating the use of Air-Traffic Control equipment with UH-60 Blackhawk helicopters during tactical night operations. Night vision goggles were utilized during the repair of equipment in the ASM-189 Electronics Shop Van, which was powered by generators employed by AIT Soldiers as part of the field training exercise.



The culminating ODX certifies WTBD and MOS skills in a rigorous and realistic field environment. Above, students troubleshoot faults on a Q37 radar system; below, students don protective masks.

Echo Company, at Eglin Air Force Base, worked diligently with Naval School Explosive Ordnance Disposal (NAVSCOLEOD) to integrate with the IED division's OCONUS lesson plan. By integrating Army-specific training into pre-existing curriculum, Echo Company was able to replicate an austere environment with real-world scenarios commonly experienced by EOD professionals.

The 73rd Ordnance Battalion is committed to producing professional Ordnance Soldiers capable of immediate inclusion into maintenance operations in the operating force. Units at each installation worked tirelessly to synergize resources and requirements to build a rigorous culminating event for EOD professionals. The support of the 1-78 Field Artillery Battalion, 428 Field Artillery Brigade, 15th Signal Brigade, and NAVSCOLEOD is instrumental to the success of the AIT Warriorization initiative.

MAJ Jeff Muir
Executive Officer (EOD), 73rd Ordnance Battalion

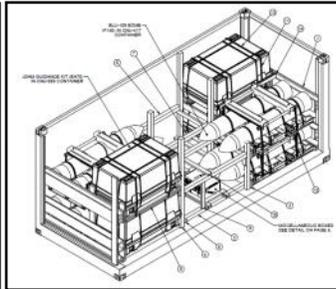


Usage and Importance of Approved Drawings for A&E

One facet of the Defense Ammunition Center's (DAC) mission is to serve as the Army's sole provider of ammunition transportation drawings. These drawings are based on a regimented testing program that validates each load, ensuring sufficient protection.

ask, "Is this change creating a greater burden on the retaining capacity of items designed to secure the load?"

Consider how many loading possibilities exist based on various ammunition configurations. There is a small probability of finding a drawing that precisely matches the actual load requirement. The best approach is to become familiar with load patterns depicted in drawings to build a sound understanding of how specific dunnage and load placement are used. With a firm understanding of loading principles, you should be able to merge the ideas of various



An Air Force pre-positioned load is prepared for transportability testing (left) in accordance with drawing AMC 19-48-8723-SP15M17 (right).

Shipment procedures are founded on an extensive database of information, including test and development records dating back to the 1940s; however, situations may arise that require deviation from these drawings. General notes allow for a combination of loading procedures as long as drawings are followed "as closely as possible." If a deviation from the drawing is necessary, consider whether the proposed loading changes will add additional stress to load restraint. It is always best to

depicted loads to create the correct load to meet your shipping criteria. This methodology will ensure a shipment that is both efficient and safe.

When the drawing doesn't adequately address your specific shipping situation, please contact the Defense Ammunition Center at (918) 420-8072. We are happy to assist you.

Spencer Hovey
Mechanical Engineer, DAC



RTS-M Camp Ripley Sends H8 MTT to South Korea

In January 2019, the 8th Army requested a mobile training team (MTT) to conduct (H8) wheeled and tracked recovery operations training at Camp Humphreys, Korea. Regional Training Site-Maintenance (RTS-M), Camp Ripley, Minnesota is one of the few RTS-Ms with the capacity to teach both wheeled and tracked recovery operations. Since tours in Korea are often short, the RTS-M and supporting units immediately began planning so they could provide the training before the Soldiers rotated back to CONUS.

An MTT of 10 certified U.S. Army National Guard instructors arrived at Camp Humphreys on September 9, 2019. Within three days, the MTT and the 2nd Infantry Division (2ID) set up classrooms and training areas. The instructors, 2ID G4 Maintenance Section, and Sustainment Brigade engineers enlarged the mire pit to support the wheeled and tracked courses simultaneously. The 2-week course concluded on September 27 with 25 Soldiers fully qualified to conduct recovery operations for their units.



A U.S. Army National Guard MTT conducts (H8) Recovery Operations training at Camp Humphreys, Korea.

This was the first time an RTS-M MTT visited South Korea. The mission was a success. The lessons learned from this experience will inform future iterations of training under the One Army School System.

SFC David Przybylski
Chief Instructor, RTS-M Camp Ripley



M4 Sherman Tank



M4 Sherman tanks of the 10th Tank Battalion near St. Vith, Belgium during the Battle of the Bulge.

The M4 Sherman tank formed the backbone of the U.S. Army and Marine armored forces during World War II. Because they were reliable, relatively cheap to produce, and available in great numbers, the U.S. distributed the tanks to the British, French, Soviet Union, and Canadian allies through the Lend-Lease Program. The British named the tank after Major General William Tecumseh Sherman, the renowned Civil War Union Army general. The name was quickly adopted by the Americans.

The U.S. Army Ordnance Department started designing the M4 in 1940. Between February 1942 and July 1945, more than 49,000 were manufactured. Due to the many variants (too many to describe in this short article), specifications were not consistent.

Specifications. The tanks varied between 66,800 to 84,000 pounds; 19 feet 2 inches to 20 feet 7 inches long; 8 feet 7 inches to 9 feet 10 inches wide; and 9 feet 0 inches to 9 feet 9 inches tall. Armor ranged from a minimum of 0.5 inches to a maximum of 7 inches. The M4's cast hull was cheap and quickly produced, but it did not provide the strength necessary to protect the crew. Later, welded hulls compensated for this shortfall.

The main armament consisted of a 75mm gun M3, which replaced the 37mm gun of the M2 and M3 tank series. Later the 76mm gun M1A1, M1A1C, or M1A2 replaced the 75mm gun. Secondary armament included a .50 caliber Browning M2HB machine gun (300-600 rounds) and two .30 caliber Browning M1919A4 machine guns (6,000-6,750 rounds). The crew of five consisted of a commander, gunner, loader, driver, and assistant driver/bow gunner.

The Sherman was comparable to its contemporaries in mobility. On a level road, it could travel at 25 mph; but, it performed better on dry terrain because of the narrow width of its tracks. In mud and snow, it did not perform as well as the German Panther or Tiger which had wide tracks.

History. The M4 was first used in combat in North Africa and continued in campaign operations until the war's end. Early on, the 75mm gun was the prevalent weapon, but in 1944, the 76mm gun replaced most of the 75s as the Allied forces needed a stronger gun to penetrate the armor of the German tanks. The 76mm had a higher velocity and better penetration capability.

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M4 Sherman Tank Continued from page 12



"Soldiers of the 55th Armored Infantry Battalion and tank of the 22nd Tank Battalion move through Wernberg, Germany April 22, 1945." - National Archives.

By January 1944, General Eisenhower asked that only M4s with the 76mm guns be sent to Europe because of its better firepower.

By mid-to-late 1944, the U.S. Army preferred the M4A3 over the other two major Sherman types because it had a better engine, and it was more reliable and durable. The M4 and M4A1 engines were underpowered and needed more torque at lower speeds. However, the M4A3 Ford GAA engine was more powerful and performed well as long as it did not over speed.

Sherman tanks were used during the Korean War, where the M4A3E8 was quite successful against the Russian supplied North Korean tanks. Eventually, the M26 and M46 tanks replaced the M4, which gradually disappeared from the American arsenal during the 1950s.

Mr. James Blankenship
Director, Training Support Facility



Ordnance Knowledge Center

On January 13, 2020, the widely anticipated Ordnance Knowledge Center (OKC) opened after over a year of planning. A dedicated group of Ordnance professionals spearheaded the project from start to finish, focusing on two main objectives. The first was to create a space for professionals from varying backgrounds to collaborate and share best practices. The second was to ensure the facility enhanced the learning experience of instructors, training developers, and others who support the U.S. Army Ordnance School (USAOS) mission.



The Ordnance Knowledge Center located in room 326, Hatcher Hall, Ordnance Campus at Fort Lee, Virginia.

The USAOS mission of developing Ordnance professionals is critical to Army readiness and our success depends on the expertise of our instructors. The OKC's features are intended to help instructors increase their knowledge and become more effective

communicators. The center's non-traditional design is intended to relax its users and promote productive think sessions. The OKC boasts technology such as dedicated desktop computers, tablets, and laptops that house various Interactive Multimedia Instruction (IMI) products. The computers also contain numerous training related videos, course-specific games, all created in concert with the U.S. Army Combined Arms Support Command Technology Division. Users have access to Virtual Oculus Goggles, wall-mounted flat screens capable of

displaying multiple programs simultaneously, as well as a mobile 70-inch touch screen display. For our competitive military and civilian populations, the center has a dedicated space with a podium and a ceiling-mounted HD camera instructors can use to assess their performance in preparation for local and command level competitions. Great thought went into every stage of planning to ensure the

OKC is as relevant and useful 10 years from now, as it is today.

Mr. Timothy Travis
Division Chief, Land Combat Training



EOD Connect

To improve communication with the Explosive Ordnance Disposal (EOD) community at large, the Office of the EOD Commandant is hosting a **LIVE** EOD Connect teleconference on March 17, 2020, from 1300 to 1500 hours (EST).

The EOD Connect will serve as a forum to update EOD technicians in the field on various Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities - Policy topics. This forum will also serve as an opportunity to share ideas and voice concerns that affect daily operations.

The initial meeting will include updates from the Personnel Development Office, Human Resources Command, Army Capability Manager-EOD, formerly (TCM)-EOD, and Army Futures Command. Click [HERE](#) to connect. CAC login (with Authentication certificate) is required.

EOD Publication Updates

- ✓ AR 75-15, *EOD Policy* was published on December 17, 2019 and can be found on the [Army Publishing Directorate](#) website.
- AR 75-14, *Inter-Service Responsibilities for EOD* is in the final stages of revision and the target publication date is March 2020.
- AR 611-105, *Selection, Training, and Suitability for Explosive Ordnance Disposal* is in review and the target publication date is early fiscal year 2021.
- JP 3-42, *Joint EOD* is being updated and the target publication date is late 2021.
- DA PAM 75-15, (*Untitled*) will spell out HME, VIP Support, CREW use, EODIMS reporting and the target publication date is early 2022.

Save the Date!

12 March

**Quarterly Ordnance Connect
Video-Teleconference**
Broadcast LIVE from Fort Lee, Virginia

17 March

**Quarterly EOD Connect
Video-Teleconference**
Broadcast LIVE from Fort Lee, Virginia

2-6 April

**Ammunition Transfer Holding Point
Team of the Year**
Fort Pickett, Virginia

2 May

EOD Memorial Ceremony
Eglin Air Force Base, Florida

6-8 May

Sustainment Week
Fort Lee, Virginia

6 May

**Training Support Facility
Ribbon-Cutting Ceremony**
Fort Lee, Virginia

7 May

HoF Induction Ceremony
Ball Auditorium, Fort Lee, Virginia

8 May

Sustainment Ball
Altria Theater
Richmond, Virginia

14 May

Ordnance Corps' Birthday
Worldwide!

