Employee Spotlight

Lauren Stuelp, an electronics mechanic at Anniston Army Depot, installs a remote switch control assembly on an M1A1 Abrams tank turret destined for Poland.

ANNISTON ARMY DEPOT
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Executive Excursions

SHOP EMPLOYEES TEAM UP WITH DEPOT LEADERS

COMBAT VEHICLE CENTER OF THE FREE WORLD

EXECUTIVE EXCURSIONS

EXCURSIONS PLACE LEADERSHIP IN MECHANICS SHOES

BY CHRISTIAN PETTUS

At the Anniston Army Depot, the continuous process improvement division has implemented a program known as executive excursions.

Executive excursions are designed to allow shop floor employees the chance to work with senior leaders, such as the commander, deputy to the commander, chief of staff, and directors across the depot.

This concept derived from an executive training session in which senior leaders were taken to various shops across the installation to get a "real life" visual of what was being taught in the classroom.

Following the walk through, the leaders discussed what they had seen.

"Many of the executives took note of how excited the shop employees were to have them showing interest in their day-to-day duties," said Jeff Hines, a CPI specialist who spearheaded the program.

This observation got the CPI division thinking about how they could best capitalize on that excitement; thus, the executive excursion was developed.

"To separate these excursions from other visits, it was made clear that they would be designed to put leadership in the mechanic's shoes," Hines explained. "The leader is to assume the worker's role and understand that today they are not a boss, but a mechanic."

In April 2021, Hines reported that

U.S. Army Photo by Christian Pettus

Celeste Goodwin, electro-optics Mechanic shares with Mike Mathews, director of Public Works, what her job duties entail.

the first excursion was a hit.

"Shop floor employees, as well as executives, including ANAD's commander, loved it," he said. "It has given the shop floor employees an opportunity to teach leadership quick skills, share personal experiences, and it puts a face to the job for executives."

Each month, CPI researches the next area to visit and meets with the shop floor supervisor who then assigns a mechanic to each executive attending.

On the day of the excursion, CPI hands out leadership assignments, then the group travels to the shop.

Only after the group arrives at the shop will the executives learn to which job they will be assigned.

There, the senior leaders meet their assigned mechanics, learn the job they will be performing and then work the job for half a day.

After the excursion, the entire group, including some of the shop floor mechanics, return to a conference room and discuss how it went. This gives leadership an opportunity to address issues they encountered and to receive feedback from the shop workers.

"The excursions provide leadership with an in-depth look at the issues workers face on the shop floor," Hines said.

He explained that this concept not only gives leadership an opportunity to observe and witness shop conditions firsthand, but it also provides shop employees a platform to discuss and explore issues and remedies with leadership to improve their operations.

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ENGINE SHOP

UP TO SPEED

BY ED WEDGE

After being removed from the hull, the first stop for the power pack is an inspection.

There, inspection analysts take the field service reports and the induction inspections and create "work scopes," or work checklists for the mechanics to follow while repairing and overhauling the engine.

The engine comes in from building 400 in a joined power pack which consists of the turbine engine and transmission.

During this initial phase, mechanics un-mate or disconnect the transmission from the power pack and send it off the to have it repaired or rebuilt.

The turbine engine is a AGT1500 air gas turbine. It goes to disassembly and then is taken through several stages, some of which include metalizing, machine shop, weld shop, balancing area, fuel control, and re-compensators.

The re-compensators for the rear module are welded at the resistance welder. This weld provides 30 welds per inch at a rate of 1 inch per second.

Once the engine is assembled and re-mated with the transmission, it is sent to the test cell.

At the test cell, the engine rolls in onto a stand and gets attached to the test cell via scavenge lines, flow meters, thermal couples, and pressure probes.

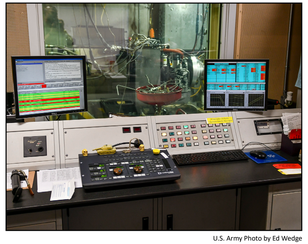
Yisdro Morales, supervisor, Test Cell #5, explained that "it takes approximately one hour to connect the engine to the test cell."

Here, the engine is cranked and given time to warm the oil temperature up to approximately 140 degrees Fahrenheit.

There are several different runs that the engine will perform during its time at the test cell. Each of the runs provide specific parameters at different revolutions per minute, or rpms and loads.

Several different 600-horsepower runs, 750-horsepower runs, open air, and max power runs, which adjust all flow pressures, temperatures, and speeds of all components are accomplished.

The test cell looks for the acceleration and deceleration



U.S. Army Photo by Ed Wedge

The control room for the number 5 test cell where mechanics run the engine.

time of the engine from full power to idle and back. It takes approximately five seconds to go from idle to full power on these turbine engines.

"If it fails the oil consumption test, it likely has a bad seal, the flare on a fitting is bad, or an O-ring is cut, nicked, or even missing," Morales said.

The last run is called the idle run to set the oil pressure of the engine. All test components are removed, and hard lines are reinstalled if it passes.

Then, there's a final run for adjustments at 750 horsepower.

The final inspection takes place after the engine has been thoroughly cleaned.

Here, the engine gets sprayed and brushed with brake cleaner and other solvents to remove any residual grease, hydraulic fluid, or fuel from all the lines. Then, the lines are meticulously inspected with mirrors and flashlights for any leaks.

All inspection documents and test strips are collected and packaged with the engine.

"The test cell calibrates the engine to ensure the accuracy of the test cell itself," Morales said. "It is calibrated every six months."

DISSASSEMBLY SHOP

TAKING IT ALL APART

BY ED WEDGE

U.S. Army Photo by Ed Wedge

Jason Parks, heavy equipment mechanic, controls the crane, moving the tank body to the next station in the disassembly process.

The process of overhauling a tank at Anniston Army Depot is multifaceted. Each department does a specific job, moving it through an intense refurbishment process that takes each tank from preservation to disassembly.

"The disassembly shop is, just as the name implies, the part of the repair cycle that strips down the tank into its component parts," said Jason Parks, heavy vehicle mechanic of 22 years. "The best part of my job is the close, friendly relationships that develop with the people I work with."

The disassembly crew sends a tow tractor to get the next tank to be worked on and bring it into the disassembly bay. The departments are divided into bays, assembly, or disassembly areas, where specific actions occur.

In the first bay of the disassembly process, mechanics remove all exterior components, skirts, as well as the turret. The tank rolls forward from the first bay and rolls off the track onto a second bay. Here, the track is rolled up and sent off for repair.

"The second bay is called the pit," Parks said. This bay's crew drains the hydraulics out of the final drive and the rest of the hydraulic systems on board. It is also in this bay that they begin the engine removal process.

The next is the engine bay, where mechanics remove the entire power pack, including the engine, transmission, and final drive.

"After this bay, they move on to the component bay," said Parks.

The component bay is where they remove all internal components, hydraulics, mechanical, and electrical.

They move the tank to the following bay, called the suspension bay, and remove the road wheels, torsion bars, rod arms, and housings.

Upon completion, they move on to the final bay in the disassembly shop, where the bare hull is craned onto a suspension buggy and sent to the wash rack. The tow tractor crew moves the bare hull to the wash rack and then to sandblasting.

ASSEMBLY SHOP

PUTTING IT ALL BACK TOGETHER

BY ED WEDGE

Kaverick White, a heavy mobile equipment repair mechanic works on the wiring in the rear of the M1A1 Abrams tank. The electrical cabling from the front of the tank comes through to the back, where he connects the bus bars for the battery and the power pack hookup panel.

"I love my job working on the depot because of the people and the leadership" White said. "The leadership promotes safety and encourages us to do our best possible job."

In building 400, six bays (A through F) make up the assembly shop.

The quality team inspects for paint and clean out before any work begins in the assembly bay. Here, they also confirm that the fuel cell has no sandblasting material left in it, and all areas that need to be free of paint have no overspray on them.

The hull's trip through the assembly shop begins in the suspension bay, designated "A" bay, where the undercarriage torsion bars, suspension, arms, and housings are installed.

Putting the wheels on the hull gives the impression that the massive steel block is a tank again.

The mechanics in B bay install the fuel cells, fuel parts, and water separators. They also install the armor plates called skirts, electronics and wiring harnesses.

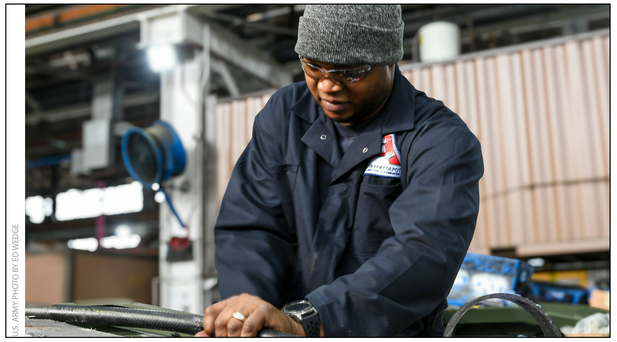
The C bay is where they install new brake cables, steering cables, a personnel heater, and batteries.

The D bay is for components, including the fire system, the filter plenum box, and the turret slip ring.

The preparation bay, or E bay is where mechanics carry out all testing for the fire control, fuel, and hydraulic systems. They add hydraulic fluid and fuel for pressure testing. They set the throttle response and install the engine pack, which is the engine and transmission, top deck, and doors, while also building and installing the track.

At the F bay, final testing is conducted before being senting the tank to the test track. This bay is the last stop in building 400, where the mechanics review all systems one last time before the tank is released.

"The assembly shop is a high-tempo, integral part of Anniston Army Depot," White said. "A huge blocky hull of a machine comes in, and a tank rolls out."



U.S. ARMY PHOTO BY ED WEDGE

White is a Navy veteran who served as a third-class petty officer on the USS George Washington.

TACOM recognizes depot with Industrial Operations Safety Award

BY CHRISTIAN PETTUS

The Anniston Army Depot has always kept safety as a high priority. Fiscal years 2022 and 2023 certainly illustrated that.

On Nov. 3, the depot was notified that it had been recognized with the U.S. Army Tank-Automotive and Armaments Command Industrial Operations Safety Award. This achievement was awarded to the depot for exceptional achievement in the administration of its industrial safety and occupational health programs.

"This great achievement came from a combined effort of safety staff members that worked hard all year to improve and grow safety programs throughout ANAD," said Katie Hawkins, safety specialist.

The criteria used to evaluate the nominations for this award included management and employee involvement, worksite analysis, hazard prevention and control, safety and health training, and injury rates.

"The ANAD safety office was proud to submit a detailed nomination packet that described the intentionality and persistence of safety personnel and management to achieve FY23 goals and objectives," Hawkins said.

The award states: "The 2023 U.S. Army Tank-Automotive and Armaments Command Industrial Operations Safety Award is awarded to Anniston Army Depot for exceptional achievement in the administration of the industrial safety and occupational health program from October 2022 to September 2023. The command and the SOH team continues to prioritize employee engagement while modeling best practices with regards to industrial safety. Their efforts reflect great credit upon themselves, the U.S. Army Tank-Automotive and Armaments Command, the U.S Army Materiel Command and the Department of the Army."

There are several standout practices and improvements that contributed to the depot's recognition.

Throughout the fiscal year, ANAD saw a 55% decrease in recordable Occupational Safety and Health Administration cases.

The depot also underwent two successful audits of the ISO 45001 Occupational Safety and Health Certification, with no major nonconformities, and has completed 47% of Stage III, the final stage, of the OSHA Challenge.

In January 2023, Army Materiel Command conducted an audit to assess the depot's safety programs.

Throughout this four-day visit, AMC subject matter experts audited programs and elements at the deskside and the worksite.

During these audits, ANAD was scored on training, hazard analyses, accident investigations, worksite inspections, and specific special tasks. Each program audited was rated from 1 to 3, with one being the lowest and three being the highest. The overall rating for the ANAD Safety Program was 2.73 out of 3.0, and many of the programs and elements were noted as best practices.

The ANAD Safety Office provides weekly safety meeting records to supervisors that identify, address, and explain safety requirements and topics. Before the safety office provided meeting records, supervisors were responsible for establishing and discussing requirements daily during their 6-minute huddles at the start of each shift, which proved unsuccessful.

Since the safety office has provided specific safety topics to the workforce, general safety knowledge and understanding have improved significantly.

As Anniston Army Depot seeks to continue safety excellence in the new year, remember that safety is everyone's job.

The Anniston Army Depot's Safety Office team stands ready to support and protect the depot's workforce.

CARPENTRY SHOP

WHY DOES TANK DEPOT NEED A CARPENTRY SHOP?

BY ED WEDGE

Tanks are made of iron and steel, not wood! Why does Anniston Army Depot, a tank refurbishment facility, need a carpentry shop?

It might surprise you to know all the different jobs assigned to the carpentry shop.

Some of the vast and varied types of work the shop does daily, include door repair, ceiling tile replacement, floor tile installs, laminate flooring, cabinets repair, painting, and drywall.

Jeremy Burns, carpenter, and maintenance mechanic has enjoyed woodworking for over 30 years, three of which have been with Anniston Army Depot.

"Working as a carpenter is one of the best jobs on the depot," Burns said.

"The best part of the job is meeting everyone on the base," he said. "We work in different buildings every day."

Ralph Mange has worked on the depot as a carpenter and maintenance mechanic for 18 years.

In the event, there's a need to create more office space within a building, the carpentry team will divide up the space into individual offices by setting up stud walls, flooring, drywall, paint, and finishing up the offices with doors and windows as necessary.

"Having the carpentry shop as part of the depot is more cost efficient than bidding it out to a local contractor," Mange said.

"Being proactive is a big part of the job," Burns added. "If we see something that we can quickly fix or repair, we get right on it. "

It's interesting to think that a tank base has carpenters, let alone carpenters with this vast and varied capability and background.

U.S. ARMY PHOTO BY ED WEDGE

Ralph Mange has been working with Anniston Army Depot as a carpenter and maintenance mechanic since 2006. Some of his hobbies include hunting and fishing.