

THE SUSTAINMENT TRAINING CENTER: Training for the Future of Machining Technology Today

Submitted by [CW3 Darren Madole](#), Allied Trades/Recovery Trainer



The Army National Guard Sustainment Training Center (STC), has long been recognized as one of the premier training sites in the ARNG for maintenance and logistic units. One of the many functions of a maintenance organization is to provide allied trades support, which consists of the fabrication and repair of metallic and non-metallic parts and tools using both machining and welding capabilities. The 91E Soldiers (Allied Trades Specialist) will soon have a new shop set with modern capabilities to perform these tasks.

The Metal Working and Machining Shop Set (MWMSS) modernizes the Army's machining and welding systems by replacing 24 outdated and unsupported systems. This is a mobile machine and welding shop set within a specially designed cargo container that can be deployed into any field situation. These machine tools are adapted to fit into the cargo container, and survive the transport. This equipment enhances capabilities far beyond the legacy equipment that Soldiers presently have available; increasing quality and precision of fabricated tools and repair parts.



MWMSS System in the containerized, deployable configuration.



MWMSS System container unloading after transport.

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The MWMSS has two standard systems, Type I and Type II. Forward Support Companies will have the Type I systems. Field Maintenance and Support Maintenance Companies will have both Type I and Type II systems.

The Type I MWMSS features include:

- a Computer Numerical Controlled (CNC) lathe,
- mill drill,
- multi-process welder,
- thermal cutting equipment,
- air-arc gouging equipment,
- air compressor,
- grinder,
- Mobile Electric Power (MEP) generator,
- Environmental Control Unit (ECU),
- assortment of hand and air tools.

The Type II MWMSS augments Type I and contains:

- CNC milling machine,
- CNC plasma table,
- ECU,
- assortment of hand and air tools.

The STC began training 91E Soldiers in 2011 on the basic function, setup and operation of the Haas TM-1 CNC milling machine, and the Haas TL-1 CNC lathe, which are standard equipment in the MWMSS. It is STC's goal to use the Soldier's conventional machining abilities as the foundation for building the fundamental skills required to operate the CNC equipment.



Soldiers from B Co. 181st BSB WAARNG training on the Haas TL-1 CNC Lathe

Soldiers also receive training on computer aided design and computer aided manufacturing (CAD/CAM) software. The CAD/CAM training allows Soldiers to build proficiency in converting a paper drawing of a part to a computer based drawing. The computer drawing is then used in the CAM process to develop computer code which enables the machining of the part. The STC Allied Trades Section is a valuable resource for keeping Soldiers skills updated on the latest technology. We look forward to providing high quality and challenging training opportunities for Soldiers in the 91E MOS.

I am your point of contact for the Allied Trades training program. You may write to darren.j.madole.mil@mail.mil or call 515-727-3563

The [ARNG Sustainment Center](#) is located at Camp Dodge Joint Maneuver Training Center (CDJMTC), Johnston, Iowa.