STC TY-24 Technician Skill Based Training Course Titles & Course Scopes

COURSE TITLE: Tactical Water Purification System (TWPS) 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of TWPS Maintenance operations or M-Day Soldier MOS Qualified in 91J.

COURSE SCOPE: This course contains instruction on conducting unit and field level maintenance, inspection and repair. The maintenance student will receive instruction on operation of Tactical Water Purification System (TWPS) in order to troubleshoot the electrical system to include the areas of principles of the pump operations and repair, automatic valve repair and troubleshooting. Particular attention is given to the areas of gauge and pressure readings. Focusing on the correct procedures for service of air compressor and related air system, replace, remove, install, adjust, test, purge, and troubleshooting of components. Theory of operation and advanced instruction on the troubleshooting of the electrical control panel, plumbing (water flow thru butterfly valves) and mechanical systems controlling operations.

COURSE TITLE: M1A1 Hull/Turret Basic 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must have Maintenance Background**.** Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of M1A1ED/SA Abrams Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field maintenance, inspection, and evaluation of the Hull and Turret Systems. Students receive instruction on the operation of the Hull and power-pack. Focus is on procedures for service, replace, remove, install, adjust, test, and purge components and Line Replaceable Units (LRU) of the Hull and Turret. Service the Fire Control System (FCS), the Primary Optical Sighting Instruments, the Gun/Turret Drive Electro-Hydraulics, and the Ballistics Computation System, including removal and installation of the Gunner's Primary Sight, M256 gun tube and Elevating Mechanism. Students receive training that will develop more in-depth abilities of the System Repairer's basic knowledge and skills in maintaining the M1A1ED/SA Hull and Turret.

COURSE TITLE: M1A2 System Enhancement Program Version 2 (SEPv2) 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must have Maintenance Background. Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of M1A2 Abrams Maintenance operations. Mandatory completion of the 160hr Military Technician M1 Abrams Maintenance Course (964-M1MIC) or the 80hr M1A1 Abrams Basic Hull/Turret Maintenance Courses taught at Camp Dodge, IA, or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on field level maintenance and troubleshooting procedures on the M1A2 SEPv2 tank for both the Hull and Turret Systems. Students receive instruction on the components of the Hull and Turret systems and how each system interacts with each other. Particular attention is given to the replacement of line replaceable units (LRU) and how to use the on-board diagnostic system for troubleshooting the Hull and Turret tank systems.

COURSE TITLE: M1A1 Embedded Diagnostic (ED/SA) Advanced 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of M1 Abrams Tank operations. Mandatory completion of the 160hr Military Technician M1 Abrams Maintenance Course (964-M1MIC) or the 80hr M1A1 Abrams Basic Hull/Turret Maintenance Courses taught at Camp Dodge, IA, or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting troubleshooting procedures utilizing the embedded diagnostic system of the M1A1ED/SA tank for both the Hull and Turret Systems. Students receive instruction on the components of the embedded diagnostics system and how they interact with the tank systems. Particular attention is given to the procedures for using the embedded diagnostic software in troubleshooting the tank systems. Instruction is given on how to trace electrical schematics, perform Direct Support Electrical System Test Set (DSESTS) operations and troubleshoot the M1A1ED/SA Tank.

COURSE TITLE: M2A2 ODS-SA Bradley Fighting Vehicle (BFV) Hull 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of BFV Family of Vehicles Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field level maintenance on the M2A2 ODS-SA BFV Hull. Students receive instruction on the Chassis Mounted Embedded Diagnostic System (CMED) and in conjunction with maintenance publications and electrical schematics will troubleshoot the hull of the M2A2 ODS-SA. Students receive instruction on power-pack operations and troubleshooting. Students replace, install, adjust, test and troubleshoot components and Line Replaceable Units (LRU).

COURSE TITLE: M2A2 ODS-SA Bradley Fighting Vehicle Turret 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of BFV Family of Vehicles Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field level maintenance on the M2A2 ODS-SA BFV Turret. Students receive instruction on the fundamentals and principles of operation and maintenance of the M2A2 ODS-SA BFV Turret. Students use maintenance publications, electrical schematics, On Board Diagnostics and special tools to service and troubleshoot the turret system of the M2A2 ODS-SA BFV Turret. Students replace components of the turret and perform On Board Diagnostic testing and troubleshooting of the turret system. Students evaluate gun elevation and turret drive systems. Students receive instruction on the fundamentals and principles of operations and maintenance of the M242 25MM Gun. Students use maintenance publications, electrical schematics, and special tools to service and troubleshoot the M242 25MM Gun.

COURSE TITLE: M2A3 Bradley Fighting Vehicle Turret 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of BFV Family of Vehicles Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field level maintenance on the M2A3 BFV Turret. Students receive instruction on the fundamentals and principles of operation and maintenance of the M2A3 BFV Turret. Students receive instruction on electrical schematics and on-Board Diagnostic system to service and troubleshoot the turret system of the M2A3 BFV Turret. Students replace components of the turret, operate and troubleshoot the turret system. Students evaluate gun elevation and turret drive subsystems. Students receive instruction on the fundamentals and principles of operations and maintenance of the M242 25MM Gun. Students use maintenance publications, electrical schematics, TMDE, and special tools to service and troubleshoot the M242 25MM Gun.

COURSE TITLE: M88A1 Recovery Vehicle 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Technician working in a State Maintenance Equipment Site or in direct support of M88A1 Recovery Vehicles or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field level maintenance, inspection, and repair of the M88A1 Recovery Vehicle. Students receive instruction on operator controls, engine, transmission, suspension, auxiliary power unit (APU) and hydraulics. Focus is on procedures for service, lubricate, replace, remove, install, adjust, test, and troubleshooting the above systems. Electrical schematics will be discussed and used to troubleshoot those systems. Theory of operation and advanced instruction on troubleshooting of electrical control, mechanical systems, hydraulic function and the performance of on-board Field Maintenance tasks on the M88A1 Recovery Vehicle. Students use Test Measurement and Diagnostic Equipment (TMDE) to test and troubleshooting equipment to perform system diagnostic evaluation to improve readiness and support for the M88A1 Recovery Vehicle. Students receive training that will develop more in-depth abilities of the System Repairer's basic knowledge and skills in electrical, hydraulic, and mechanical applications.

COURSE TITLE: M88A2 (HERCULES) Recovery Vehicle 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Technician working in a State Maintenance Equipment Site or in direct support of M88A2 Recovery Vehicles or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field level maintenance, inspection, and repair of the M88A2 HERCULES Recovery Vehicle. Students receive instruction on operator controls, engine, transmission, suspension, auxiliary power unit (APU) and hydraulics. Focus is on the procedures to replace, remove, install, adjust, test, and troubleshooting of the above systems. Electrical schematics are discussed and used to troubleshoot the systems. Students receive instruction on the theory of operation and troubleshooting of electrical, mechanical, and hydraulic systems. Students perform on board Field Maintenance tasks on the M88A2 HERCULES Recovery Vehicle. Students use Test Measurement and Diagnostic Equipment (TMDE) to test and troubleshooting equipment to perform system diagnostic evaluation to improve readiness and support for the M88A2 HERCULES Recovery Vehicle. Students receive training that will develop more in-depth abilities of the System Repairer's basic knowledge and skills in electrical, hydraulic, and mechanical applications.

COURSE TITLE: Wheel Vehicle Training Instruction/Repair Electrical & Troubleshooting 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on diagnostic procedures of wheel vehicle electrical systems utilizing a digital multimeter and an inductive current clamp. Students receive instruction on electrical theory, schematic interpretation, wiring harness repair, batteries, starting, charging, lighting systems, sensors, and how to utilize this equipment to test and troubleshoot wheel vehicle electronic systems to support readiness.

COURSE TITLE: Wheel Vehicle Training Instruction/Repair MSD V3/V4 Diagnostic Procedures 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: This course contains instruction on Diagnostic Procedures and Use of the Maintenance Support Device (MSD) V3, V3T3 and V4. The student receives instruction on the use of all versions (V3, V3T3, V4) of the MSD and diagnostic tools, and how to utilize this equipment to test and troubleshoot Light, Medium, and Heavy wheel vehicle systems to support readiness. The student receives instruction on IETMs, software updates, and downloads. This training will assist in the development of a more in-depth understanding of all versions (V3, V3T3, V4) of the MSD and diagnostic tools to enhance the repairer's basic knowledge and skill in diagnostics.

COURSE TITLE: Wheel Vehicle Training Instruction/Repair Hydraulic Systems & Fuel Systems 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on diagnostic procedures for wheel vehicle hydraulic and fuel systems. Students receive instruction on hydraulic and fuel system theory, components, controls, basic engine operation, Common Rail, Hydraulically Actuated Electronically Controlled Unit Injector (HEUI) fuel system and Mechanically Actuated Electronically Controlled Unit Injection (MEUI) fuel system. Students utilize the TM required equipment to test and troubleshoot wheel vehicle hydraulic and fuel systems to support/enhance readiness. Students receive training that will develop a more in-depth understanding of current vehicle hydraulic and fuel systems and the ability to enhance the repairer’s basic knowledge and skills in diagnostics.

COURSE TITLE: Wheel Vehicle Training Instruction/Repair Brake & Axle Systems 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: This two week course contains instruction on diagnostic procedures of Brake and Axle systems utilizing current Technical Manuals and TMDE. Students receive instruction on theory, components, controls, and operation of axles, hydraulic and air braking systems, Central Tire Inflation Systems (CTIS) and Antilock Braking System (ABS). Students utilize the TM required to test and troubleshoot wheel vehicle braking and axle systems to support/enhance readiness. Students receive training that will develop a more in-depth understanding of current vehicle braking and axle systems that will allow them to troubleshoot and repair these systems effectively.

COURSE TITLE: Rough Terrain Container Handler (RTCH) 80hr Technician Maintenance Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of RTCH Maintenance operations or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: This two-week (80hr) course contains instruction on conducting field level maintenance of the RT240 V1R, V2 and V3 Rough Terrain Container Handler (RTCH). Designed to provide a working foundation for diagnosing and troubleshooting of the KALMAR (RTCH) V1R, V2 and V3 platforms with particular attention given to the electrical and hydraulic systems. The course covers system functionality, theory of operation and PMCS; including procedures for replace, remove, install, adjust, test, purge and calibrate components. Students receive advanced instruction on diagnosing and troubleshooting of electrical schematics, mechanical systems, and performance of critical Field level task.

COURSE TITLE: Stryker Family of Vehicle (FOV) Maintenance Course, 80hr Technician Maintenance Course

COURSE LENGTH: _2____Weeks and/or ___10___ Days

COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of Stryker Vehicle Maintenance or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: The two-week course contains instruction on conducting field level maintenance on the Stryker FOV. The students receive instruction on the fundamentals and principles of maintenance of the Stryker FOV. The student receive instruction on Services of the Stryker FOV. The students receive instruction on the characteristics and principles of operation for the Full-Up Power Pack (FUPP) to include Engine, Transmission and Cooling Module repair. The students remove and replace the FUPP. The students receive instruction on the fundamentals, principles of operations, and maintenance of the Steering, Suspension, and Height Management System. The students use maintenance publications, TMDE and special tools to service the Steering, Suspension, and Height Management System of the Stryker FOV.

COURSE TITLE: Stryker Family of Vehicle (FOV) Troubleshooting Course, 80hr Technician Maintenance Course

COURSE LENGTH: _2____Weeks and/or ___10___ Days

COURSE PREREQUISITE: Must be an ARNG Full Time Maintenance Technician working in a State Maintenance Equipment Site or in direct support of Stryker Vehicle Maintenance or M-Day Soldier having a 91 Series MOS.

COURSE SCOPE: This course contains instruction in conducting onboard and alternate troubleshooting procedures on the Stryker FOV. The student will receive instruction on the On-Board Diagnostic System with Built-In Test (BIT) and Built-In Test Equipment (BITE). The student will use the On-Board Diagnostic System, in conjunction with the Maintenance Support Device (MSD), maintenance publications (IETM), TMDE, and special tools to troubleshoot the various systems of the Stryker. The students will receive instruction on how to interpret electrical, hydraulic and air system schematics to assist in troubleshooting the Stryker.

COURSE TITLE: Phase 1, Calibration Course, 80hr Electronic Measurement Equipment Mechanic Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Electronic Measurement Equipment Mechanic/Technician working in a UTES, MATES, CSMS, FMS Shop or in direct support of Military TMDE/Electronic Measurement Equipment operations or M-Day Soldier MOS Qualified in 94H.

COURSE SCOPE: This course contains instruction in conducting calibration tasks on items listed in TB 43-180 requiring physical calibration. The student receives instruction on the theory of metrology as it applies to torque wrenches, linear measurement devices, pressure measurement devices and thermometers. Focus is on understanding the theory of standards and verifying items under calibration using the appropriate standards within physical calibration systems. The student uses the Test Measurement and Diagnostic Equipment (TMDE) to perform calibration on representative items requiring physical calibration.

COURSE TITLE: Calibration DC and Low Course, 80hr Electronic Measurement Equipment Mechanic Course
COURSE LENGTH: _2____Weeks and/or ___10___ Days
COURSE PREREQUISITE: Must be an ARNG Full Time Electronic Measurement Equipment Mechanic/Technician working in a UTES, MATES, CSMS, FMS Shop or in direct support of Military TMDE/Electronic Measurement Equipment operations or M-Day Soldier MOS Qualified in 94H.

COURSE SCOPE: Calibrators receive instruction on operating the workstation controller and core workstation standards to include cross checks. Instruction on how to calibrate multi-meters, oscilloscopes, watt meters, signal generators and digital counters. Instruction will allow the calibrator to perform a multitude of DC and Low calibration functions. This course was developed to train newly hired calibrators, but, will benefit calibrators who desire sustainment training on DC and Low calibration functions.