

## **Technician Maintenance Course Titles & Course Scopes**

**COURSE TITLE:** Tactical Water Purification System (TWPS) 80hr Technician Maintenance Course

(ATRRS Course Title 964-TWPSMT)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of TWPS Maintenance operations or M-Day Soldier MOS Qualified in 91J.

**COURSE SCOPE:** This two week (80hr) course contains instruction on conducting field level maintenance on the TWPS. This course covers the Electrical, plumbing, and air systems of the TWPS. Focusing on the correct procedures for troubleshooting of components. Theory of operation and advanced instruction on troubleshooting of electrical control, interpret schematics, mechanical systems, air systems and the performance of on board Field Maintenance tasks on the TWPS. Review current maintenance procedures while receiving training in the use of special tools.

**COURSE TITLE:** M1A1 Hull/Turret Basic 80hr Technician Maintenance Course

(ATRRS Course Title 964-M1A1 HULL/TURRET BASI)

**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 UTES, MATES, FMS Shop or in direct support of M1A1 Abrams Maintenance operations or M-Day Soldier MOS Qualified in 91A.

**COURSE SCOPE:** This is a two week course that contains instruction in conducting unit level/field maintenance, inspection, and evaluation of both the Hull and Turret System. The student will receive instruction on the Hull and Turret System to include the areas of principles of operation of the turret and hull. Focusing on the correct procedures for service, replace, remove, install, adjust, test, and purge components and Line Replaceable Units (LRU) of the turret or hull. 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. Receive training that should develop more in-depth abilities of the System Repairer's basic knowledge and skills in maintaining the M1A1 Hull and Turret.

**COURSE TITLE:** M1A2 System Enhancement Program Version 2 (SEPV2) 80hr Technician Maintenance Course

(ATRRS Course Title 964-M1A2)

**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 UTES, MATES, FMS Shop or in direct support of M1A2 Abrams Maintenance operations. Mandatory completion of the 160hr Military Technician M1 Abrams Maintenance Course (964-M1MIC) taught at Camp Dodge, IA or the 160hr Military Technician M1 Abrams Maintenance Course taught at Camp Shelby, MS prior to 2007 or the 80hr M1A1 Abrams Basic Hull/Turret Maintenance Course taught at Camp Dodge, IA. Or M-Day Soldier MOS Qualified in 91A.

**COURSE SCOPE:** This is a two week course that contains instruction on maintenance and conducting troubleshooting procedures on the M1A2 tank for both the Hull and Turret System. You will receive instruction on the components of the hull and turret systems and how they interact with the tank systems. 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

(ATRRS Course Title 964-M1ADV)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of M1 Abrams Tank operations. Mandatory completion of the CAMP DODGE, IOWA Military Technician M1 Abrams Maintenance Course (964-M1MIC), or previous years CAMP SHELBY, MS 160 Hour Course or completion of the Camp Dodge M1A1 Hull/Turret Basic Course (964-M1A1 Hull/Turret Basic). Proof of completion of the Camp Shelby course must be available and provided upon request. Or M-Day Soldier MOS Qualified in 91A.

**COURSE SCOPE:** This is a two week course that contains instruction on conducting troubleshooting procedures utilizing the embedded diagnostic system of the M1A1 tank for both the Hull and Turret System. You will receive instruction on the components of the embedded diagnostics system and how they interact with the tank systems. Particular attention is given to the areas of correct procedures for using the embedded diagnostic software in troubleshooting the tank systems. Instruction will be given on how to trace the latest schematics, perform Direct Support Electrical System Test Set (DSESTS) operations and troubleshoot the M1A1ED Tank.

**COURSE TITLE:** M2/3A2 Bradley Fighting Vehicle ODS SA Hull 80hr Technician Maintenance Course

(ATRRS Course Title 964-M2/3 HULL)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of BFV Family of Vehicles Maintenance operations or M-Day Soldier MOS Qualified in 91M.

**COURSE SCOPE:** This two week (80hr) course contains instruction on conducting field level maintenance on the M2/M3 (ODS SA) BFV Hull. Particular attention is given to the areas of fuel, exhaust, cooling, and electrical systems. Focusing on the correct procedures for replace, remove, install, adjust, test, and troubleshooting of components and Line Replaceable Units (LRU). Theory of operation and advanced instruction on troubleshooting of electrical control using CMED or alternate troubleshooting procedures, interpret schematics, mechanical systems, and the performance of on board Field Maintenance tasks on the M2/M3 (ODS SA) BFV hull. Review current TMDE and traditional maintenance procedures while receiving training in the use of special tools and DSESTS.

**COURSE TITLE:** M2/3A2 Bradley Fighting Vehicle ODS SA Turret 80hr Technician Maintenance Course

(ATRRS Course Title 964-M2/3 TURRET)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES and FMS Shop or in direct support of BFV Family of Vehicles Maintenance operations or M-Day Soldier MOS Qualified in 91M.

**COURSE SCOPE:** This two week (80hr) course contains instruction on conducting field level maintenance on the M2/M3 (ODS SA) BFV Turret. The student will receive instruction on the fundamentals and principles of operation and maintenance of the M2/M3 (ODS SA) BFV Turret. They will use maintenance publications, electrical schematics, TMDE, and special tools to service and troubleshoot the turret system of the M2/M3 (ODS SA) BFV Turret. Students will replace components of the turret and perform On-Board Diagnostic testing and troubleshooting of the turret system. The student will evaluate gun elevation and turret drive systems. They will receive instruction on the fundamentals and principles of operations and maintenance of the M242 25MM Gun. The student will use maintenance publications, electrical schematics, TMDE, and special tools to service and troubleshoot the M242 25MM Gun.

**COURSE TITLE:** M2A3 Bradley Fighting Vehicle Turret 80hr Technician Maintenance Course

(ATRRS Course Title 964-M2A3 BFV TURRET)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of BFV Family of Vehicles Maintenance operations or M-Day Soldier MOS Qualified in 91M.

**COURSE SCOPE:** This two week (80hr) course contains instruction on conducting field level maintenance on the M2A3 BFV Turret. The student will receive instruction on the fundamentals and principles of operation and maintenance of the M2A3 BFV Turret. They will receive instruction on the Chassis Mounted Embedded Diagnostic System (CMED) and use in conjunction with maintenance publications, electrical schematics, TMDE and special tools to service and troubleshoot the turret system of the M2A3 BFV Turret. Students will replace components of the turret, perform and troubleshoot the turret system. The student will evaluate gun elevation and turret drive subsystems. They will receive instruction on the fundamentals and principles of operations and maintenance of the M242 25MM Gun. The student will 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

(ATRRS Course Title 964-M88A1MT)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Technician working in a UTES, MATES, or FMS Shop in maintenance support of M88A1 Recovery Vehicles or M-Day Soldier MOS Qualified in 91H.

**COURSE SCOPE:** This is a two week course that contains instruction in conducting field maintenance, inspection, and repair of the M88 Recovery Vehicle. You will receive instruction on operator controls, engine, transmission, suspension, auxiliary power unit (APU) and hydraulics. Focus will be on the correct procedures for 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. The student will use of the latest 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. Receive training that should 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

(ATRRS Course Title 964-M88A2MT)

**COURSE LENGTH: 2 Weeks and/or 10 Days**

**COURSE PREREQUISITE:** Must be an ARNG Technician working in a UTES, MATES, or FMS Shop in maintenance support of M88A2 Recovery Vehicles or M-Day Soldier MOS Qualified in 91H.

**COURSE SCOPE:** This course contains instruction in conducting field maintenance, inspection, and repair of the M88A2 Hercules Recovery Vehicle. The student will receive instruction on operator controls, engine, transmission, suspension, auxiliary power unit (APU) and hydraulics. Focus will be on the correct procedures for 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 M88A2 Hercules Recovery Vehicle. The student will use of the latest 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. Receive training that should 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

(ATRRS Course Title 964-WHEEL ELECTRICAL)

**COURSE LENGTH: 2 Weeks and/or 10 Days**

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier MOS Qualified in 91B.

**COURSE SCOPE:** This course contains instruction on proper diagnostic procedures of wheel vehicle electrical systems utilizing a digital multimeter and an inductive current clamp. The students will receive instruction on electrical theory, schematic interpretation, cable repair, batteries, starting, charging, and lighting systems, sensors, and how to utilize this equipment to properly test and troubleshoot wheel vehicle electronic systems to support readiness.

**COURSE TITLE:** Wheel Vehicle Training Instruction/Repair MSD V2/V3 Diagnostics 80hr Technician Maintenance Course

(ATRRS Course Title 964-WHEEL MSD V2/V3 Dia)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier MOS Qualified in 91B.

**COURSE SCOPE:** This course contains instruction on proper Diagnostic Procedures and Use of TMDE. The students will receive instruction on the use of the Pro Link, MSD-V2, MSD-V3 and ICE Kit Diagnostic tools, and how to utilize this equipment to properly test and troubleshoot Light, Medium, and Heavy wheel vehicle platforms to support readiness.

**COURSE TITLE:** Wheel Vehicle Training Instruction/Repair Hydraulic Systems & Fuel Systems 80hr Technician Maintenance Course

(ATRRS Course Title 964-WHEEL HYDRAULIC/FUEL)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier MOS Qualified in 91B.

**COURSE SCOPE:** This course contains instruction on diagnostic procedures of wheel vehicle hydraulic and fuel systems utilizing required Technical Manual (TM) diagnostic equipment. Students will receive instruction on hydraulic and fuel systems theory, components, controls, basic engine operation, Common Rail and Hydraulically Actuated Electronically Controlled Unit Injector (HEUI) fuel systems. Students will utilize the TM required equipment to test and troubleshoot wheel vehicle hydraulic and fuel systems to support/enhance readiness. Students will 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

(ATRRS Course Title 964-WHEEL BRAKE/AXLE)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, FMS Shop or in direct support of Military Wheel Vehicle Maintenance operations or M-Day Soldier MOS Qualified in 91B.

**COURSE SCOPE:** This course of instruction is on current brake and axle systems utilized on wheel vehicles. It contains instruction on air and hydraulic braking systems, axles, operation, adjustments and troubleshooting procedures on various Light, Medium and Heavy wheel vehicles utilizing various pieces of Test Measurement Diagnostic Test (TMDE) equipment. The students will receive instruction on the latest braking and axle systems and how to properly adjust, test and troubleshoot wheel vehicle braking systems and to correctly perform system diagnostic evaluations and solutions to properly maintain the current wheel fleet and to support readiness. Students will receive training that should develop a more in-depth understanding of current Braking and Axle systems and the ability to enhance the repairer's basic knowledge and skills on these systems.

**COURSE TITLE:** Rough Terrain Container Handler (RTCH) 80hr Technician Maintenance Course

(ATRRS Course Title 964-RTCHMT)

**COURSE LENGTH:** 2 Weeks and/or 10 Days

**COURSE PREREQUISITE:** Must be an ARNG Full Time Maintenance Technician working in a UTES, MATES, , FMS Shop or in direct support of RTCH Maintenance operations, or TACOM LAR, or Army Civilian Contractors, or MOS 91B Qualified Soldier in direct support of RTCH Maintenance Operations.

**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 will receive advanced instruction on diagnosing and troubleshooting of electrical schematics, mechanical systems, and performance of critical Field level task.