

Report Date: 28 May 2014

Summary Report for Individual Task
091-91A-0048
Borescope the 120 MM Main Gun on the M1A1/M1A2 Series Track Vehicle
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD5 - This product/publication has been reviewed by the product developers in coordination with the Ft. Lee, Va. foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

Condition: In an operational environment (OE) given an M1 series Main Battle Tank; repair parts; general mechanics tool kit, multi-capable; additional tools; DA Form 5988-E (Equipment Inspection and Maintenance Worksheet) describing equipment malfunction; necessary tools and equipment as indicated in the TMs; test, measurement, and diagnostic equipment (TMDE); applicable publications and supervision/assistance. Some iterations of this task should be performed in MOPP. Standard MOPP 4 conditions do not exist for this task. See the MOPP 4 statement for specific conditions.

Standard: Borescope the main gun in accordance with applicable technical publications. When this task is completed, the equipment or end item is fully mission-capable or required maintenance actions to be performed by other than military occupational specialty (MOS) 91A skill level (SL) 1/2 personnel are identified.

Special Condition: None

Safety Risk: Low

MOPP 4: N/A

Task Statements

Cue: None

DANGER
None

WARNING
None

CAUTION
None

Remarks: None

Notes: Task may be taught, supported and evaluated in multiple lessons. Equipment identified at the task may not reflect what is required at formal training environment.

Performance Steps

1. Review work request.
2. Ensure task is within shop capability and authorization.

WARNING

TANK GUN TUBES WHICH HAVE FIRED DEPLETED URANIUM (DU) AMMUNITION MAY HAVE DU RESIDUE ON THE INSIDE SURFACES WHICH CAN CONTAMINATE BORESCOPE DEVICE AND PERSONNEL. THIS CONTAMINATION MAY BE BOTH REMOVABLE, AND FIXED (REMAINING FOR THE LIFE OF THE GUN TUBE). IF YOU SUSPECT, OR ARE UNSURE IF GUN TUBE HAS FIRED DU AMMUNITION, TREAT AS IF IT IS CONTAMINATED, AND INSURE GUN TUBE IS PROPERLY CLEANED TO ELIMINATE ANY POSSIBLE REMOVEABLE CONTAMINATION.

CAUTION

USE OF UNAUTHORIZED CLEANING MATERIALS AND/OR PROCEDURES COULD RESULT IN BORE DAMAGE WHICH MAY LEAD TO PREMATURE CONDEMNATION OF CANNON TUBE.

ENSURE EQUIPMENT RECORD FOLDER NUMBERS CORRESPOND WITH SERIAL NUMBERS ON WEAPON. DO NOT CONFUSE NUMBERS WHEN MAKING ENTRIES.

3. Ensure applicable technical publications are available.

Note: Viewing the bore surface from the end is not sufficient for making determinations on criticality of damage. The mirror is used to get a direct view down onto the bore surface. This must be done along the entire length of bore and chamber.

4. Ensure proper tools, equipment, and TMDE are available and inspected.

WARNING

Be careful when engage/disengaging the two pieces of borescope extension assembly tubes to avoid pinching the thumb.

5. Assemble and prepare for use Borescope devise
6. Perform Borescope procedures.
7. Identify repair parts and requisitioned, if required.
8. Ensure all safety precautions and procedures are followed.
9. Ensure maintenance forms are completed, as required.
10. Ensure tools, equipment, and TMDE are properly maintained and stored.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: None

Evaluation Preparation: None

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Reviewed work request.			
2. Ensured task is within shop capability and authorization.			
3. Ensured applicable technical publications are available.			
4. Ensured proper tools, equipment, and TMDE are available and inspected.			
5. Inspected and assembled Borescope devise.			
6. Performed borescope procedures.			
7. Identified repair parts and requisitioned, if required.			
8. Ensured all safety precautions and procedures are followed.			
9. Ensured maintenance forms are completed, as required.			
10. Ensured tools, equipment, and TMDE are properly maintained and stored.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	DA FORM 5988-E	Equipment Inspection Maintenance Worksheet	Yes	No
	TM 9-2350-264-23-2-1	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 1 of 7	No	No
	TM 9-2350-264-23-2-2	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 2 of 7	No	No
	TM 9-2350-264-23-2-3	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 3 of 7	No	No
	TM 9-2350-264-23-2-4	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 4 of 7	No	No
	TM 9-2350-264-23-2-5	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 5 of 7	No	No
	TM 9-2350-264-23-2-6	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 6 of 7	No	No
	TM 9-2350-264-23-2-7	Field Maintenance Manual for Tank, Combat, Full-Tracked: 120 MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret Volume 7 of 7	No	No
	TM 9-2350-264-24P-2	Unit, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for Tank, Combat, Full-Tracked: 120-MM Gun, M1A1 (NSN 2350-01-087-1095) (EIC: AAB) General Abrams Turret {T	No	No
	TM 9-2350-388-23-2-1	TANK, COMBAT, FULL-TRACKED: 120-MM GUN, M1A2 SYSTEM ENHANCEMENT PACKAGE (SEP) (NSN2350-01-328-5964)(EIC: AAF) GENERAL ABRAMS TURRET	No	No
	TM 9-2350-388-23-2-2	TANK, COMBAT, FULL-TRACKED 120-MM GUN, M1A2 SYSTEM ENHANCEMENT PACKAGE (SEP)(NSN 2350-01-328-5964)(EIC: AAF) GENERAL ABRAMS TURRET	No	No
	TM 9-2350-388-23-2-3	TANK, COMBAT, FULL-TRACKED: 120-MM GUN, M1A2 SYSTEM ENHANCEMENT PACKAGE (SEP)(NSN 2350-01-328-5964)(EIC: AAF) GENERAL ABRAMS TURRET	No	No

	TM 9-2350-388-23-2-4	FIELD MAINTENANCE MANUAL FOR TANK, COMBAT, FULL-TRACKED: 120-MM GUN, M1A2 SYSTEM ENHANCEMENT PACKAGE (SEP) (NSN: 2350-01-328-5964) (EIC: AAF) GENERAL ABRAMS TURRET VOLUME 4 OF 5	No	No
	TM 9-2350-388-23-2-5	FIELD MAINTENANCE MANUAL FOR TANK, COMBAT, FULL-TRACKED: 120-MM GUN, M1A2 SYSTEM ENHANCEMENT PACKAGE (SEP) (NSN: 2350-01-328-5964) (EIC: AAF) GENERAL ABRAMS TURRET VOLUME 5 OF 5	No	No
	TM 9-2350-388-24P-2	FIELD AND SUSTAINMENT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS)FOR TANK, COMBAT, FULL-TRACKED 120-MM GUN, M1A2, SYSTEM ENHANCEMENT PACKAGE (SEP)(NSN 2350-01-328-5964) (EIC: AAF) GENERAL ABRAM	No	No
4.	TM 9-1000-202-14	EVALUATION OF CANNON TUBES	No	No
4.	TM 9-6650-231-35P	DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR BORESCOPE: M1 (20-MM-40-MM) (NSN 6650-00-318-4426) AND M2 (57-MM, 8-INCH) (6650-00-587-0986) (REPRINTED W/BAS	No	No
4.	TM 9-6650-235-13&P	OPERATORS, ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS) FOR BORESCOPE, M3 (NSN 6650-01-0	No	No
5.	TM 9-6650-231-35P	DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR BORESCOPE: M1 (20-MM-40-MM) (NSN 6650-00-318-4426) AND M2 (57-MM, 8-INCH) (6650-00-587-0986) (REPRINTED W/BAS	No	No
5.	TM 9-6650-235-13&P	OPERATORS, ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS) FOR BORESCOPE, M3 (NSN 6650-01-0	No	No
6.	TM 9-6650-231-35P	DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST FOR BORESCOPE: M1 (20-MM-40-MM) (NSN 6650-00-318-4426) AND M2 (57-MM, 8-INCH) (6650-00-587-0986) (REPRINTED W/BAS	No	No

6.	TM 9-6650-235-13&P	OPERATORS, ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS) FOR BORESCOPE, M3 (NSN 6650-01-0	No	No
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Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. All operations will conform to the Army Environmental Policy, local, state, and federal environmental regulations, AR 385-10, the Clean Air Act (CAA), and CAA amendments.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. All operations will be performed to protect and preserve Army personnel and property against accidental loss. Procedures will provide for public safety incidental to Army operations and activities and safe and healthful work places, procedures, and equipment. Observe all safety and/or environmental precautions regarding electricity, fuel, lubricants, and high pressures. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required IAW AR 385-10, the Clean Air Act (CAA), the CAA amendments, and the OSHA Hazard Communication standard. Observe all safety precautions when using lifting devices and handling heavy parts.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
091-91A-3090	Maintain the 120MM Gun Cannon on the M1 Series Track Vehicle	091 - Ordnance (Individual)	Delete

Supported Individual Tasks : None

Supported Collective Tasks :

Task Number	Title	Proponent	Status
17-5-5692	Boresight an M1A1 Tank with a Muzzle Boresight Device	17 - Armor (Collective)	Analysis
17-5-5695	Boresight a M1A2 Sep Tank with a Muzzle Boresight Device	17 - Armor (Collective)	Analysis
43-2-7034	Perform Technical Inspections	43 - Maintenance (except missile) (Collective)	Approved

ICTL Data :

ICTL Title	Personnel Type	MOS Data
91A10 - M1 ABRAMS TANK SYSTEM MAINTAINER - SEP 2013	Enlisted	MOS: 91A, Skill Level: SL1, Duty Pos: OLK, SQI: Y