

NORMAL

MWO effective date April 1985 and completion date September 1989

MWO 9-2350-259-20-2 DEPARTMENT OF THE ARMY MODIFICATION WORK ORDER

**MODIFICATION OF COMBAT VEHICLE,
ANTI-TANK, IMPROVED TOW VEHICLE,
M901 & M901A1 TOW II
(2350-01-045-1123)
(2350-01-103-5641)**

**TO REPLACE EXISTING GUNNERS HATCH HOLD-DOWN
LATCH ASSY MECHANISM WITH AN IMPROVED LATCHING DEVICE**

Headquarters, Department of the Army, Washington, DC

29 MARCH 1985

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Tank Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

1. PURPOSE OF MODIFICATION

The purpose of this modification is to replace the existing gunner’s hatch hold down latch assembly with an improved latching device.

2. PRIORITY CLASSIFICATION

This modification is classified NORMAL.

a. Equipment in use (including equipment in supply or maintenance activities below depot level and equipment in administratlve storage.) Equipment in use will be modified as soon as practical, but no later than the scheduled completion date. Equipment not modified after expiration of this MWO completion date will be reported as NORM/NOT READY in accordance with applicable Army Regulations.

b. Equipment in wholesale depot supply or maintenance activities. All MWO’S to include MWO’S which have been incorporated into Depot Maintenance Work Requirements (DMWR’s) will be accomplished on serviceable materiel prior to issue and/or subsequent to scheduled completion date. Operational Project Stock stored at depots will be modified currently with depot stock. Issue of unmodified materiel is prohibited. The MWO will be applied to unserviceable materiel during scheduled depot maintenance.

c. Pre-positioned stock. Equipment which is pre-positioned will be modified during cyclic maintenance and will be consistent with TM 38-45. The Modification shall be accomplished prior to the MWO completion date.

3. END ITEM OR SYSTEM TO BE MODIFIED

Combat Vehicle, Anti-tank, Improved TOW Vehicle, M901 and M901/AI TOW H.

Table 1.

<u>NSNs</u>	<u>PART NUMBERS</u>
2350-01-045-1123	8736977 or 676000
2350-01-103-5641	8750063

4. MODULES (COMPONENTS, ASSEMBLIES, SUBASSEMBLIES, BOARDS, AND CARDS) TO BE MODIFIED.

<u>NOUN</u>	<u>NSN</u>	<u>PN</u>
Gunner’s hatch, cover	2510-01-077-5140	19207-12277451
cupola	2510-01-105-0777	19207-12277420

5. PARTS TO BE MODIFIED. See Table 2

6. APPLICATION. Application of the modification is described in the following paragraphs:

Time compliance schedule. MWO effective date is April 1985 and the completion date is September 1989.

b. Level of maintenance. The lowest level of maintenance authorized to perform the modification described by this MWO is organizational maintenance.

c. Applied by. This modification shall be performed by 45T or equivalent.

d. Time required.

NOTE

Hours indicated do not include administrative time,

(1) Time for completion of MWO application to one end item. Time for completion of MWO application to one end item is less than one hour.

(2) Time for completion of one assembly or component: 0.4 hour

(3) Time for completion of one part: See 6.d.2.

(4) MWOS to be applied prior to this MWO:

MWO 9-2350-259-50.1, 50.2, and 50.3

7. TECHNICAL PUBLICATIONS AFFECTED/CHANGED AS RESULT OF THIS MWO.

TM 9-2350-259-10

TM 9-2350-259-20

TM 9-2350-259-20P

TM 9-2350-259-34P

8. SUPPLY KITS, PARTS, AND DISPOSITION.

a. Kits/parts required to accomplish MWO.

(1) General. See Table 3 for the Kit required to accomplish this MWO.

(2) Kit. See Table 4 for approximate Kit Packaging dimensions.

b. Distribution and Issue Instructions.

(1) US Forces. Do not requisition Kits. They will be shipped automatically as detailed in the Modification Work order Field plan (MWOFP).

(2) US Army Depots. Requisition required Kit through supply channels.

(3) Multiservice. Not applicable.

(4) MAP/MAS countries. Not applicable.

c. Bulk and consumable materials: Bulk and consumable materials required to accomplish this MWO, but not supplied is conversion coat per MIL-C-5541, Class 1A (or equivalent).

d. Parts disposition. Dispose of all removed parts in accordance with local salvage regulations.

TABLE 3. MODIFICATION KIT COMPONENTS

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY/PART NUMBERS</u>
2590-01-154-5989	Gunner's hatch latch assy	1 EA 12298879
5340-00-07 ?-2066	Thread screw insert	2 EA MS51830-202L
5340-01-154-9996	Latch strike	1 EA 12298873
5365-01-155-0111	Spacer plate	* EA 12298878
5340-01-154-9987	Strike support latch	1 EA 12298876
5305-00-068-0511	Hex head cap screw	2 EA MS90728-62
5310-00-844-4872	Self locking hex nut	2 EA MS21043-4
5310-00-809-4058	Flat washer	2 EA MS27183-10
5310-00-637-9541	Lock washer	2 EA MS35338-46
5310-00-080-6004	Flat washer	2 EA MS27183-14
5305-00-044-4167	Machine screw	2 EA MS246935295

*Approximately five will be required; however, more or less could be required. Use enough of these shims to provide a watertight seal between the cupola and the gunner's hatch cover when the hold down latch is secured.

TABLE 4. WEIGHT DIMENSIONS, CUBE, AND SECURITY CLASS

<u>WEIGHT</u>	<u>DIMENSIONS</u>	<u>CUBE</u>	<u>SECURITY CLASS</u>
Two Pounds	1.0X.5X.5	1.5	None

9. COMMON TOOLS, SPECIAL TOOLS, JIGS, TEST, MEASUREMENT AND DIAGNOSTICS EQUIPMENT (TMDE) AND FIXTURES REQUIRED. No special tools are required- Table 5 provides a list of common tools. Tools in the common tools list may have several NSNs even though only one is given. However, in most cases similar tools may be substituted.

TABLE 5. COMMON TOOLS

<u>NOMENCLATURE</u>	<u>PART/REF NO.</u>	<u>NSN</u>
Shop Equipment, Automotive Maintenance and Repair Organizational Maintenance	SC4910-95CLA72	4910-00-754-0650

10. MODIFICATION PROCEDURE.

- a. Preparation for modification.
Remove existing hold down latch hardware in accordance with TM 9-2350-259-20 para 3-36 (b.) (1) and 3-37 (a.) (1).

CAUTION

Be sure to shim hardware in gunner's hatch cover so that you have watertight seal between the hatch cover and cupola when you secure the hold down latch. Shim as required with spacer plate 12298878.

- b. Install new hold down latch hardware in accordance with TM 9-2350-259 -20, para 3-36 (f.) (9) (torque hex head cap screws MS90728-62 250-300 inch pounds) and 3-37 (e) (2).

- c. Final inspection.

(1) Ensure that all marred painted areas are touched up in accordance with TM 43-0139.

(2) Ensure that all debris and foreign objects are removed from the vehicle.

11. CALIBRATION REQUIREMENT.

None required.

12. WEIGHT AND BALANCE DATA.

No significant impact.

13. QUALITY ASSURANCE REQUIREMENTS.

Perform quality assurance inspection including performance testing, appearance and uniformity, in accordance with TM 750-245-4.

14. RECORDING AND REPORTING OF THE MODIFICATION.

- a. The following are instructions for recording and reporting the modification:
1. DA Form 2408-5 or DA Form 2409. Record the modification on DA Form 2408-5, Equipment Modification Record, when multiple form assembled equipment logbook is applicable or DA Form 2409, Equipment Maintenance Log (Consolidated, as indicated in TM 38-750).
 2. Completion of DA Form 2407, Maintenance Request. The NSN for End Items to be reported in Block 6 must be one of those shown in Para 3. The NSN for components, assemblies, and subassemblies to be reported in Block 6 must be one of those delineated in Paragraphs 4 and 5. The NSN of the item actually modified will be entered in Block 20h and must be the same as indicated in Block 6. The UIC in Block 1c must be the six character code that is put in the unit/organization shown in Block 1a. (Normally this is the code that is put in the Unit/Organization Morning Report).

List by NSN the number of Kits used to accomplish this MWO using Block 20 and/or Block 35. If more space is needed, use DA 2407-1, Continuation Sheet. After completing the form, mail the NMP Copy (Copy 2) to: Commander, US Army Tank-Automotive Command, ATTN: AMSTA-MR, Warren, MI 48397-5000. Mail the Control Copy (Copy 3) to: Commander, US Army Depot System Command, ATTN: DRSDS-SM-MOAT M, Chambersburg, PA 17201, for PAC 98 (Non-AIF Field Activities). Forward the organization Copy (Copy 4) as directed by local commander (see Appendix A, Figures A-1 and A-2 for examples to be followed).

3. DA Form 24082408-9. Not applicable.

4. Marking Equipment. Not applicable.

15. COMPLETE PRODUCT IMPROVEMENT PROPOSAL (PIP) NUMBER 1-81-05-6607.

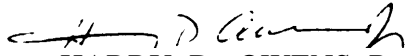
HEADQUARTERS
US ARMY TANK-AUTOMOTIVE COMMAND
WARREN, MICHIGAN

This Modification Work Order (MWO) has been prepared under the supervision and control of the Commanding General, US Army Tank-Automotive Command, Warren, Michigan, by the Maintenance Directorate, National Maintenance Point (NMP) and is published for the information and guidance of all concerned.

FOR THE COMMANDER:

OFFICIAL:

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Chief of Staff


HARRY D. OWENS R.
CPT,GS
Adjutant

DISTRIBUTION:

To be distributed in accordance with DA Form 12-37, Operator's; Organizational Maintenance and Direct and General Support Maintenance requirements for Improved TOW Vehicle, M901, M901A1.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

SFC JOE DURLOFSKY
1st. Inf Div. FT. LEWIS, WA 68821

DATE SENT

29 MAR 1983

PUBLICATION NUMBER

MWO 9-2350-259-20-2

PUBLICATION DATE

29 MAR. 85

PUBLICATION TITLE

MODIFICATION OF GUNNER'S HATCH HOLD-DOWN LATCH ASSY.

BE EXACT. PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
3			4

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

METRIC DIMENSIONS SHOULD BE ADDED TO THE TABLE

SAMPLE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SFC JOE DURLOFSKY

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DA FORM 2028-2
1 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

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TEAR ALONG PERFORATED LINE

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

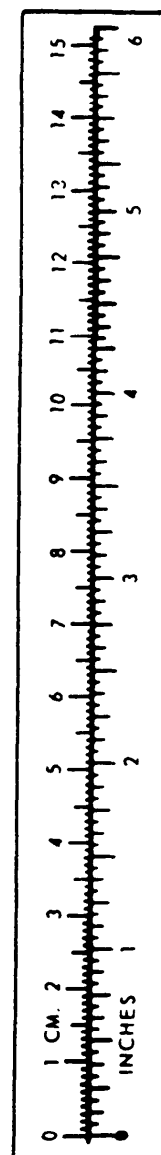
TEMPERATURE

$\frac{5}{9}(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $\frac{9}{5}(^{\circ}\text{C} + 32) = ^{\circ}\text{F}$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Foot	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Foot	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



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PIN: 057515-000