

EMERGENCY

MWO effective date is 1 October 1992 and completion date
is 30 June 1993

MWO 9-4910-59320-1

MODIFICATION WORK ORDER

MODIFICATION OF THE TOWBAR, MOTOR VEHICLE WHEELED
(4910-00-433-7094)

Headquarters, Department of the Army, Washington, DC
18 August 1992

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find technical errors that could cause personal injury or damage to material, please let us know. Contact Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAE, Rock Island, IL 61299-6000 and report the needed correction by telephoning DSN 793-2314 or Commercial (309) 782-2314. Additionally, complete a DA Form 2028, Recommended Changes to publications and Blank Forms, and mail to Commander, U.S. Army Armament, Munitions and Chemical command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be provided.

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1. PURPOSE The purpose of this Modification Work Order is to strengthen the towbar against minor cracks or complete weld breakthroughs. The new procedure will assure proper loading, pulling and disengagement without metal fatigue breakage.

2. PRIORITY: This modification is classified EMERGENCY as a result of an Emergency Safety of Use/Flight Message, SOUM AMCCOM, AMSMC-MAE-ES, 121422Z March 1992, which deadlined/grounded the equipment. The restriction remains in effect until this modification is applied.

3. END ITEM(S) OR SYSTEM(S) TO BE MODIFIED: See Table 1.

TABLE 1. END ITEM(S) OR SYSTEM(S) TO BE MODIFIED

Nomenclature	NSN	Part No.	Line Item No.	serial No.
Towbar, Motor Vehicle, Wheeled	4910-00-433-7094	7551058	W69528	N/A

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4. MODULE(S) TO BE MODIFIED: Not applicable.

5. PART(S) TO BE MODIFIED The following item(s), whether installed or in depot stock, shall be modified. See Table 2.

TABLE 2. PART(S) TO BE MODIFIED

Nomenclature	NSN	Part No.	
		Old	New
Leg, Fixed	4910-00-624-0547	7551059	7551384
Leg, Movable	4910-00-624-0545	7551062	7551385
Leg, Male	4910-01-005-2822	7551064	7551386

6. APPLICATION:

a. Time Compliance Schedule: MWO effective date is 1 October 1992 and its completion date is 30 June 1993.

b. Lowest Level of Maintenance Authorized to Apply this MWO: Organizational.

c. Work Force and Man-Hour Requirements for Application of the MWO to a Single Unit, End Item or System:

WORK FORCE/SKILLS	MAN-HOURS
MOS 44B	4.0

Total man-hours required for a single application of this MWO is 4.0 hours.

d. MWOs to be Applied Prior to or Concurrently with the Application of this MWO: Not applicable.

e. Additional Information Deemed Necessary to Assist in the Application of this MWO: Not applicable.

7. TECHNICAL PUBLICATIONS AFFECTED/CHANGED:

TABLE 3. TECHNICAL PUBLICATIONS AFFECTED/CHANGED

Publication Number	Date
TM 9-4910-593-12&P	May 83

8. MWO KIT(S)/PART(S) AND THEIR DISPOSITION:

a. Kit(s)/Part(s) Needed to Apply the MWO: See Table 4.

TABLE 4. MWO KIT(S)/PART(S) NEEDED TO APPLY THE MWO

NSN	Nomenclature	Part No.	Security Classification
4910-01-359-5667	Kit, Towbar	7551379	U

b. Requisitioning of Kits: For assistance in ordering additional kits, contact your Logistics Assistance Representative. Direction will be forthcoming by way of a Maintenance Advisory message for initial issue of kits.

c. Content of MWO Kit(s): Sleeve Tube, Tempilstik, Weld Procedures, Towbar Field Fix Instructions.

d. Bulk and Expendable Materials: See Table 5.

TABLE 5. BULK AND EXPENDABLE MATERIALS

Nomenclature	NSN	Part No.	Qty.
Wire, .045 in. dia.	None assigned.	ER 80S-D2	Bulk
Rod, 5/32 in. dia.	None assigned.	E10018-M	Bulk

Optional additions for rod:

NOTE All rods must be totally dry.

- E8018-C3
- E9018-B3
- E9018-CM
- E7018-A1

e. Parts Disposition: Not applicable.

9. SPECIAL TOOLS; TOOL KITS; JIGS; TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE): AND FIXTURES REQUIRED: Not applicable.

10. MODIFICATION PROCEDURES: Correct towbar welding procedures can be found on DWGs 7551381 and 7551382.

a. Tempilstik usage instructions can be found physically on the tempilstik.

b. Optional weld process: TIG (GTAW)

1. Shielding medium: Argon plus 0-2 percent oxygen.

2. Weld energy - TIG two pass:

a. Arc current 50/205 amp.

b. Source of power and polarity: DC, negative.

3. Filler metal:

a. TIG - Tectic 66 (EUTECTIC): 1/8 inch or

b. MG 540 (MG Industries): 1/8 inch.

c. Paint procedures:

1. Remove paint rust, scale and degrease area where sleeves are to be welded.

2 After Welding and visual inspection of welds, prime and paint all exposed areas. Use olive drab green paint. Exact color match is unnecessary.

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11. CALIBRATION REQUIREMENTS: Not applicable.
12. WEIGHT AND BALANCE, DATA Weight and balance data not significantly affected.
13. QUALITY ASSURANCE REQUIREMENTS: Inspect in accordance with DWG 7551381.
14. RECORDING AND REPORTING OF THE MODIFICATION:
 - a. Records and Reports: Detailed recording and reporting shall be in accordance with DA Pam 738-750, DA Pam 738-51, and TB 9-1100-80-15.
 - b. Marking Equipment Stencil with 1/2 inch to 1 1/2 inch black letters 'MWO 9-4910-593-20-1 applied' to fixed leg.
 - c. Identification Data: Changes to items caused by this modification. See Table 6.

TABLE 6. IDENTIFICATION DATA

	Before Modification	After Modification
Nomenclature Part No. NSN	Leg, Fixed 7551059 4910-00-624-0547	Leg, Fixed 7551384
Nomenclature Part No. NSN	Leg, Movable 4910-00-624-0545	Leg, Movable 7551385
Nomenclature Part No. NSN	Leg, Male 7551064 4910-01-005-2822	Leg, Male

15. MATERIEL CHANGE (MC) NUMBER This MWO is authorized by MC Number 1-92-08-7894.

16. MODIFICATION IDENTIFICATION: Identification through physical appearance of added sleeves and stenciled black letters: 'MWO 9-4910-59-20-1 applied.'

17. Towbar WARNING After Modification: Do not perform U-turns. Do not back up while towing. Avoid all sharp turns. Reduces speed and use as large a radius as possible while turning. During cold Weather (below 32 degrees F) special care is required. Reduce speed for turns, takeoffs and stops during cold weather. Use towbar as close to fully retracted as possible but not too close that binding (jackknife) could occur during towing operation.

It is strongly recommended that even after field fix is applied, care must be taken to avoid bending movements that could cause weld to fail. Weld failure could result in catastrophic failure from abuse or misuse.

Towbar modification releases speed restriction on towbar imposed by SOUM 92-06.

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NOTES:

1. APPLICABLE STANDARDS/SPECIFICATIONS:
 A. MIL-STD-100
 B. ANSI-Y14.5M-1982.

2. KIT TO BE USED FOR REPAIR
 TOW BAR-7551058,
 NSN 4910-00-433-7094

REVISIONS					
MF	ZONE	LTR	DESCRIPTION	DATE	APPROVED

QTY	PART# OR NSN	DESCRIPTION
2	7551380	TUBE, SLEEVE (3.50 O.D.)
1	NSN 6685-00-275-9060	TEMPILSTIK 450 DEG F
1	NSN 6685-00-145-8901	TEMPILSTICK 950 DEG F
2	7551390	TUBE, SLEEVE (2.87 O.D.)
1	7551381	WELD PROCEDURE
1	7551382	INSTRUCTION TOW BAR FIELD FIX

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PART NO 7551379

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING		DEPARTMENT OF THE ARMY U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER ROCK ISLAND, ILLINOIS 61299-7300	
YS MIN		TOLERANCES ON DECIMALS	XX ±	DESIGNER <i>David Muller</i>	CHECKER	KIT, TOW BAR FIELD FIX	
YS MAX		ANGLES ±	XXX +	TRACER	CHECKER		
EL 2	7551386	MATERIAL	LEG MALE	ENGINEER	ENGINEER	DWG SIZE B	
RA	7551385	HEAT TREATMENT	LEG MOVABLE	SUBMITTED			
BH	7551384	FINAL PROTECTIVE FINISH	LEG FIXED	APPROVED		7551379	
RH	APPLICATION						

MW0 9-4910-593-20-1

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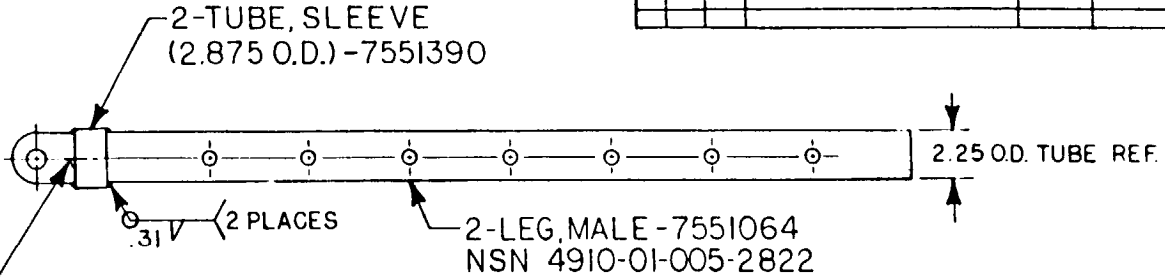
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NOTES:

- 1. APPLICABLE STANDARDS/SPECIFICATIONS:
 - A. MIL-STD-100.
 - B. ANSI-Y14.5M-1982.
 - C. WELDING SYMBOLS, SEE ANSI/AWS A2.4.
- 2. WELD IAW 7551381.

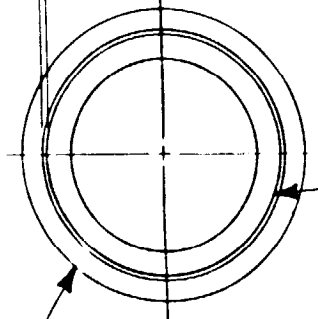
REVISIONS					
MF	ZONE	LTR	DESCRIPTION	DATE	APPROVED

D

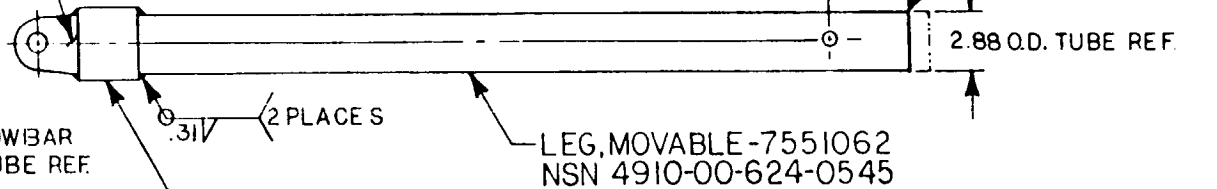


C

CENTER SLEEVE FOR EQUAL WELD GAP.



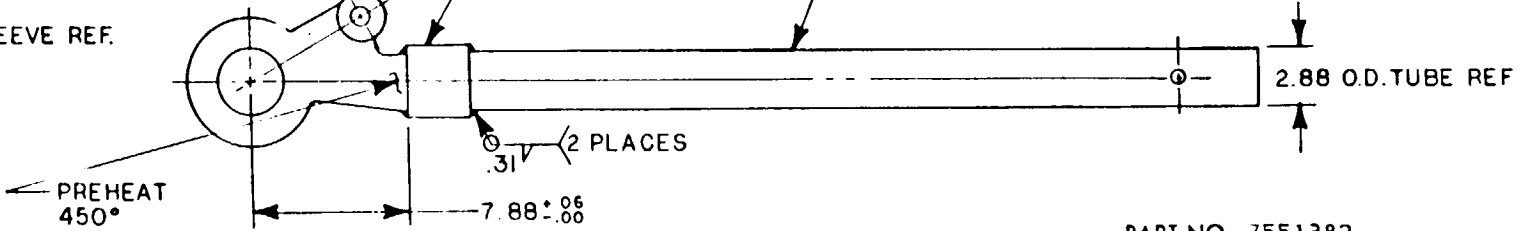
TOWBAR TUBE REF.



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B

SLEEVE REF.



PREHEAT 450°

PART NO. 7551382

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING	
YS MIN		TOLERANCES ON DECIMALS		PREPARED BY	CHECKED BY
YS MAX		ANGLES & XXX &		L. N. H.	
EL 2		MATERIAL		DESIGNED BY	APPROVED BY
RA		HEAT TREATMENT		DATE	
BM		FINAL PROTECTIVE FINISH		SUBMITTED	
RH		APPLICATION		APPROVED	

DEPARTMENT OF THE ARMY U.S. ARMY ARMAMENT RESEARCH DEVELOPMENT AND ENGINEERING CENTER ROCK ISLAND, ILLINOIS 61299-7308		
INSTRUCTIONS TOWBAR FIELD FIX		
DWG. SIZE C	CODE IDENT NO 80070	7551382
SCALE	UNIT WT	SHEET OF

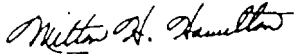
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By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:



MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

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