ROUTINE

MWO effective date is 18 November 1994 and completion date 31 May 1996

***MWO 10-1670-240-20-2**

MODIFICATION WORK ORDER

MODIFICATION OF THE RELEASE, CARGO, PARACHUTE, M-2
NATIONAL STOCK NUMBER (NSN) 1670-01-097-8817

Headquarters, Department of the Army, Washington, D.C.
10 MARCH 1995

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: Destroy when superseded, obsolete, or no longer needed.

1. PURPOSE. The purpose of this modification is to upgrade the maximum weight capacity of the M-2 Cargo Parachute Release to 42,000 pounds.

2. PRIORITY. This modification is classified ROUTINE.

a. **Equipment In Use**: Equipment in use will be modified and completed no later than the scheduled completion date. Equipment not modified after the expiration of the Modification Work Order (MWO) completion date will be reported as Not Mission Capable (NMC), in accordance with applicable Army regulations.

b. **Equipment in Wholesale Depot Supply or Maintenance Activities**. The MWO will be accomplished on serviceable material prior to issue and/or subsequent to the scheduled completion date. Issue of material not modified is prohibited. The MWO will be applied to unserviceable material during scheduled Depot Maintenance.

3. END ITEM OR SYSTEM TO BE MODIFIED. The following end items shall be modified in accordance with the instructions contained in Paragraph 10.

Nomenclature	NSN	Serial Number
Release, Cargo Parachute, M-2	1670-01-097-8817	None

4. MODULES (Components, Assemblies, Subassemblies, Boards, and Cards) TO BE MODIFIED. Not applicable.

5. PARTS TO BE MODIFIED. Not applicable.

6. APPLICATION.

a. **Time Compliance Schedule**: The MWO time compliance period begins on 18 November 1994. The completion date is 31 May 1996.

b. **Level of Maintenance**: Unit.

c. **Applied By**: Depot/Unit.

d. **Time Required**: (Time for completion of MWO application to one end item.)

WORK FORCE/SKILLS	MAN-HOURS
Parachute Rigger (MOS 43E)	0.5

e. **MWO to be applied to or concurrently with this MWO**: Not applicable.

* This MWO supersedes MWO 10-1670-240-20-2, dated 30 November 1994

7. TECHNICAL PUBLICATIONS. Affected/changed technical publication, TM10-1670-240-20, will be changes as a result of this MWO. Information will be incorporated in the next change which will be printed prior to or in conjunction with this MWO per Interim Operating Instructions for U.S. Army Material Change Management (replaces AR750-10), paragraph 6-7.

8. SUPPLY KITS/PARTS AND DISPOSITION.

a. **Kit(s)/Parts needed to apply this MWO**. Modification Kit, M-2Cargo Parachute Release (Upgrade 42K), NSN 1670-01-328-8014, PN 11-1-3909, CAGEC 81337.

b. **Contents of MWO Kit**. The contents of the MWO kit is authorized to make this modification are as follows:

NOMENCLATURE	CAGEC	PART NUMBER	QUANTITY
Slide. Toggle Lock	81337	11-1-567	2
Shaft, Toggle	81337	11-1-3724	1
Sleeve, Clevis	81337	11-1-3441	2
Bolt, Clevis	81337	11-1-3514	2
Sleeve, Lower Suspension Link	81337	11-1-3723	4
Bolt, Sleeve	81337	11-1-3515	4
Guide, Sling	81337	11-1-3725	8
Retaining Clamp Assembly	81337	11-1-512	1
Nut, Hex, Self Locking, 5/8-18UNF	96906	MS21044-N10	6

c. **Bulk and Consumable**: Webbing, Cotton, 1/4-inch wide, 801bs.

d. **Parts Disposition**: Items removed during installation will be returned to Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MPEB, 4300Goodfellow Boulevard, St. Louis, MO 63120-1798. Units that are currently using 42K upgrade kits provided by Natick Mechanical Engineering Branch will return all components supplied to Natick, Soldiers System Command, ATTN: STRNC-UAM, Natick, MA 01760-5000. The original components will be sent to U.S. Army Aviation and Troop Command.

9. SPECIAL TOOLS, JIGS, TEST, MEASURE AND DIAGNOSTIC EQUIPMENT (TMDE), AND FIXTURES REQUIRED. None required.

CAUTION

It is of the utmost importance that part integrity is maintained during installation of this MWO. Failure to separate the 35K toggle shaft from the installed parts will ultimately cause a malfunction resulting in destruction of equipment. All Parts requiring upgrade shall be removed and isolated prior to opening the MWO kit for installation.

10. MODIFICATION PROCEDURES. The M-2 Cargo Parachute Release MWO will be installed as follows:

a. Place the release on a table or other suitable fiat surface with the side plate containing the arming wire guide block facing up.

b. If the arming wire is installed, pull the wire clear of the guide block and allow the delay release timer to run down.

c. Using a -inch wrench to remove the two 5/8-inch nuts from the clevis studs, and a 3/4-inch wrench to remove the nut from the lower stud securing the front side plate to the release and lift the face side plate from the release.

d. Remove the exposed toggle, toggle lockslide, and the delay release timer from the release body.

e. Remove the toggle shaft and the upper suspension link with the retaining clamp from the release.

f. Remove the retaining clamp from within the upper suspension link by sliding the clamp down and out through the opening of the link.

g. Remove the remaining toggle and toggle lockslide from the release back side plate.

h. Lift each of the lower suspension links from two clevis studs on the release plate.

i. Remove the two clevis studs from the back plate by removing the two 5/8-inch nuts.

j. Using a 1-inch wrench, remove the four nuts from the lower suspension link and remove the lower suspension link sleeve bolts, sleeves, and sling guides.

k. Place the following items, which have been removed from the release, in a suitable place away from the work area:

two each toggle lockslides,
one each toggle shaft,
two each clevis studs
four each lower suspension link sleeves,
four each sleeve bolts from the lower suspension link,
eight each sling guides,
the retaining clamp,
and the nuts removed from the clevis studs and lower suspension link.

l. From the modification kit, install the four lower suspension link suspension link sleeves and eight sling guides using the 4.24-inch long sleeve bolts. Place a 5/8-inch nut on each bolt. Tighten with a 1-inch wrench.

m. From the modification kit, install the two each 3.73-inch long clevis bolts through the back side plate.

n. From the modification kit, Install the two each clevis sleeves on the clevis bolts.

o. Place the two lower suspension links onto the clevis on the back side plate.

p. From the modification kit, install one each toggle lockslide in the recess on the back side plate. From the disassembled release, replace one of the toggles in the recess on the back side plate.

q. From the modification kit, Install the toggle shaft.

r. From the modification kit, install the retaining clamp into the upper suspension kit. Place the upper suspension link assembly on the toggle shaft. Ensure the retaining clamp pin is seated into the back side plate slot.

s. From the disassembled release, replace the delay timer on the toggle lockslide pin and recess on the back-side plate.

t. From the modification kit, install the remaining toggle lockslide with the delay timer.

u. From the disassembled release, replace the remaining toggle.

v. Replace the front side plate by placing it onto the clevis bolts and lower stud. Ensure that the delay timer, toggle lockslide, toggle, and the retaining clamp pin aline with the recesses in the front side plate.

w. From the modification kit, install the 5/8-inch nuts on the clevis bolts. Tighten with a 1 -inch wrench. From the disassembled release, replace the nut to the lower stud. Tighten with a wrench.

x. Perform a functional test in accordance with TM 10-1670-240-20&P.

11. CAUBRATION REQUIRED. None.

12. WEIGHT AND BALANCE DATA. Weight and balance are not significantly affected.

13. QUAUTY ASSURANCE REQUIREMENTS. Inspection of the completed MWO application for full compliance with the technical requirements of the instructions and will be accomplished by an Air Drop Technician.

14. RECORDING AND REPORTING OF THE MODIFICATION RECORDS AND REPORT FORMS. Completion of DA Form 2407/5504 will be in accordance with DA PAM 738-750. The serial number to be reported in Block 2 must be In the hull range stated in Paragraph NO TAG of this MWO. The NSN for End Items to be reported in Block 6 must be the same as the NSN shown In paragraph NOTAG. The NSN of the item actually modified will be entered in Block 20h. This NSN must match the NSN shown in Block 6. The Unit Identification Code to be reported in Block 1c must be the six character code that Is put on the Unit/Organization shown in Block 1a. (Normally, this will be the code that Is put on the Unit/Organization Morning/Report.) If more space is needed, use DA Form 2407. After completing the form, mail the National Maintenance Point (Copy 2) to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MMM, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. Forward the Organizational Copy (Copy 4) as directed by the local commander

15. MATERIAL CHANGE (MC) NUMBER The MWO is authorized by MC Number 1-91-08-3505.

16. MODIFICATION IDENTIFICATION. Each modified release will be marked by stamping or etching the new PN 11-1-565-2 on the front plate. The -1 will be obliterated and the -2 placed to the right of where the -1 had previously been.

By Order of the Secretary of the Army:

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

Official:
JOEL B. HUDSON
Acting Administrative Assistant to the
Secretary of the Army
00127

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25-E, block no. 6255, requirements for MWO 10-1670-240-20-2.

*U.S. GOVERNMENT PRINTING OFFICE: 1995-655-121/20140

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 PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

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

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 **2028-2**

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN NO: 073402-000