TM 9-4910-626-14&P

TECHNICAL MANUAL

OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS LIST
FOR

LIFT, TRANSMISSION AND DIFFERENTIAL

MODEL 24-51404-4

(AUTO SPECIALTIES MFG. CO.)

(NSN 4910-00-585-3622)

HEADQUARTERS, DEPARTMENT OF THE ARMY

22 MAY 1981

Technical Manual
No. 9-4910-626-14&P

Headquarters
Department of the Army
Washington, DC, 22 May 1981

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST FOR LIFT, TRANSMISSION AND DIFFERENTIAL MODEL 24-51404-4 (NSN 4910-00-585-3622)

REPORTING 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 Pubications and Blank Forms) direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this lift is issued.

Manufactured by: Auto Specialties Mfg. Co.
643 Graves Street
St. Joseph, MI 49085

Procured under Contract No. DAAA09-77-C-6379

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

1 - Manufacturer’s Federal Supply Code Number - 04720

2 - Manufacturerfs Part Number exactly as listed herein.

3 - Nomenclature exactly as listed herein, including dimensions, if necessary.

4 - Manufacturer’s Model Number - Model 24-51404-4

5 - Manufacturerfs Serial Number (End Item)

6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.

7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

(a) In blocks 4, 5, 6, list manufacturer’s Federal Supply Code Number - 04720 followed by a colon and manufacturer’s Part Number for the repair part.

(b) Complete Remarks field as follows:

Noun: (nomenclature of repair part)
For: NSN: 4910-00-585-3622
Manufacturer: Auto Specialties Mfg. Co.

* Model: 24-51404-4
Serial: (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

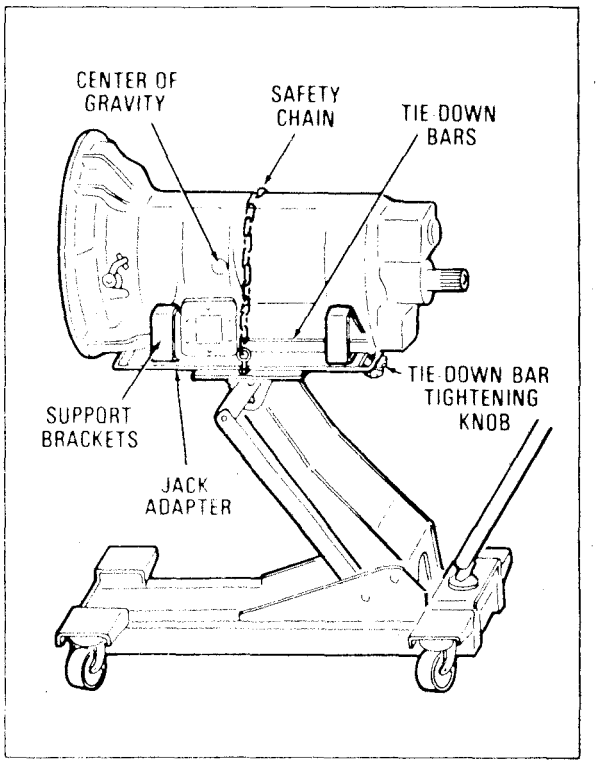
NSN 4910-00-585-3622
MODEL 24-51404-4
CAPACITY 2000 LBS.

LIFTS, TRANSMISSION & DIFFERENTIAL

TRANSMISSIONS

FIND CENTER OF GRAVITY

In handling the newer large transmissions, it will be noted that they have grown considerably in length It is important, first, to gauge as accurately as possible the center of gravity of the unit to be removed where you will want to place the jack adapter. On many transmissions this center of gravity is identified by small projecting lugs on the bottom of the case. On others it is located on the drawing of the transmission included in the truck service manual In any case, you will find it to be toward the rear of the case, from the center. It is important that the transmission be generally in balance when being supported by the jack.



PREPARE TRANSMISSION FOR REMOVAL

Prepare transmission for removal in normal manner, by dropping drive shaft, removing projecting levers, accessories, etc , and other components of the truck which might interfere when the transmission is lowered. If desired, the parking brake assembly may be removed also

Remove all but three or four bell housing bolts, leaving those near the top, which can be reached when the jack is in place

(1) Place jack beneath transmission, raising lift arm so that adapter contacts transmission case as near to the center of balance as possible This normally is rearward of the dimensional center of the unit.

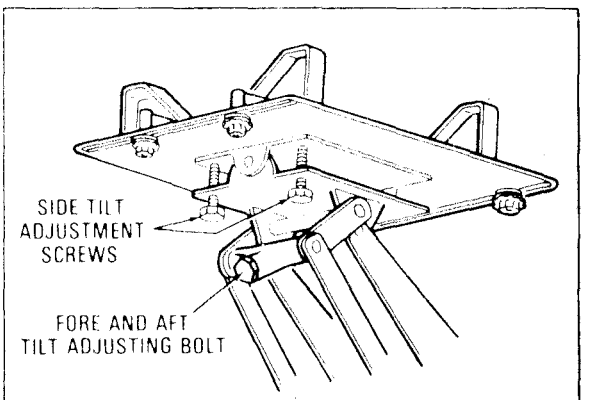
(2) Loosen all four tightening knobs and slide triangle supports and tie down bars to extreme edges of top platform

(3) Transmission case bottom must rest firmly on jack adapter face If necessary, due to transmission case irregularities, the jack adaptor may be tilted forward or backward slightly to match bottom contour of transmission case. This tilt adjustment is accomplished through adjustment screw located on the end of the lift arm below the adaptor

(4 With transmission bottom on adaptor plate, slide triangle support to firmly support transmission. (It is important to secure tie down bar bolt knobs with wrench.) Securely fasten safety chain to hold transmission firmly in place while removing.

(5) With jack firmly supporting transmission, complete bell housing bolt removal Frequently this joint is firmly stuck together and must be forced slightly to break loose. This may be done with the jack by raising then lowering slightly.

(6) When transmission has been lowered, it may be necessary, depending on the size of the unit, to jack up the front or rear axle of the truck to get the transmission out from under the truck.



Replacement of the transmission is performed in reverse order to removal Keep in mind the adaptor tilt features which permit minute adjustments for alignment

DIFFERENTIAL TRANSFER CASES

The adapter, as supplied with the jack, may be adjusted to firmly support most differential carriers currently in use

After the drive shaft has been disconnected:

(1) Remove all but three or four flange bolts, leaving several engaged on both sides of the horizontal center line of the differential

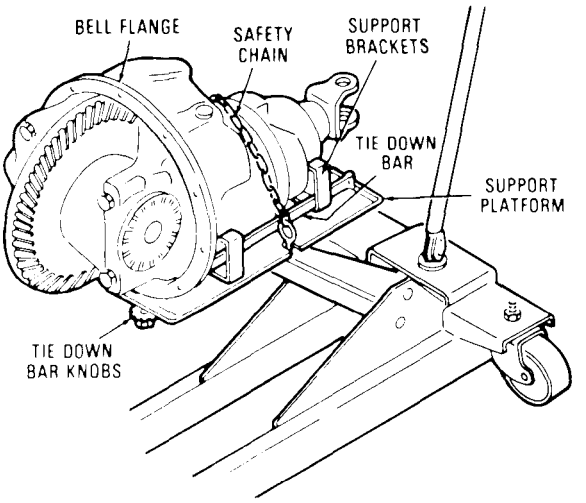
(2) Place jack under case with operating handle toward front of truck.

(3) Loosen all four tightening knobs and slide triangle support and tie down bars to edge of top platform. Tilt adapter so differential base is parallel to adapter plate and in middle of platform making sure bell flange is on edge of platform.

(4) With differential resting on adapter plate, slide triangle supports to firmly support differential (it is important to secure tie down bolt knobs with wrench.) Securely fasten safety chain to hold differential firmly in place while removing.

(5) Loosen slightly the remaining flange bolts until flange faces separate. The flange joint on the differential often is firmly stuck together, and needs working loose. This may be done by pushing sideways or with the jack by jacking slightly.

(6) Remove remaining holding flange bolts while watching the security of jack anchorage to case, and withdraw differential assembly.



LIFTS, TRANSMISSION & DIFFERENTIAL

NSN 4910-00-585-3622
PARTS SHEET
MODEL 24-51404-4
CAPACITY 2000 LBS.

OPERATING INSTRUCTIONS

1. Upon receiving Jack, open release valve and pump handle several times. This will eliminate any airbound condition that may have occurred during shipment.
2. To raise Jack, close release valve and operate pump handle.
3. To lower, open release valve.

FAILURE TO OPERATE

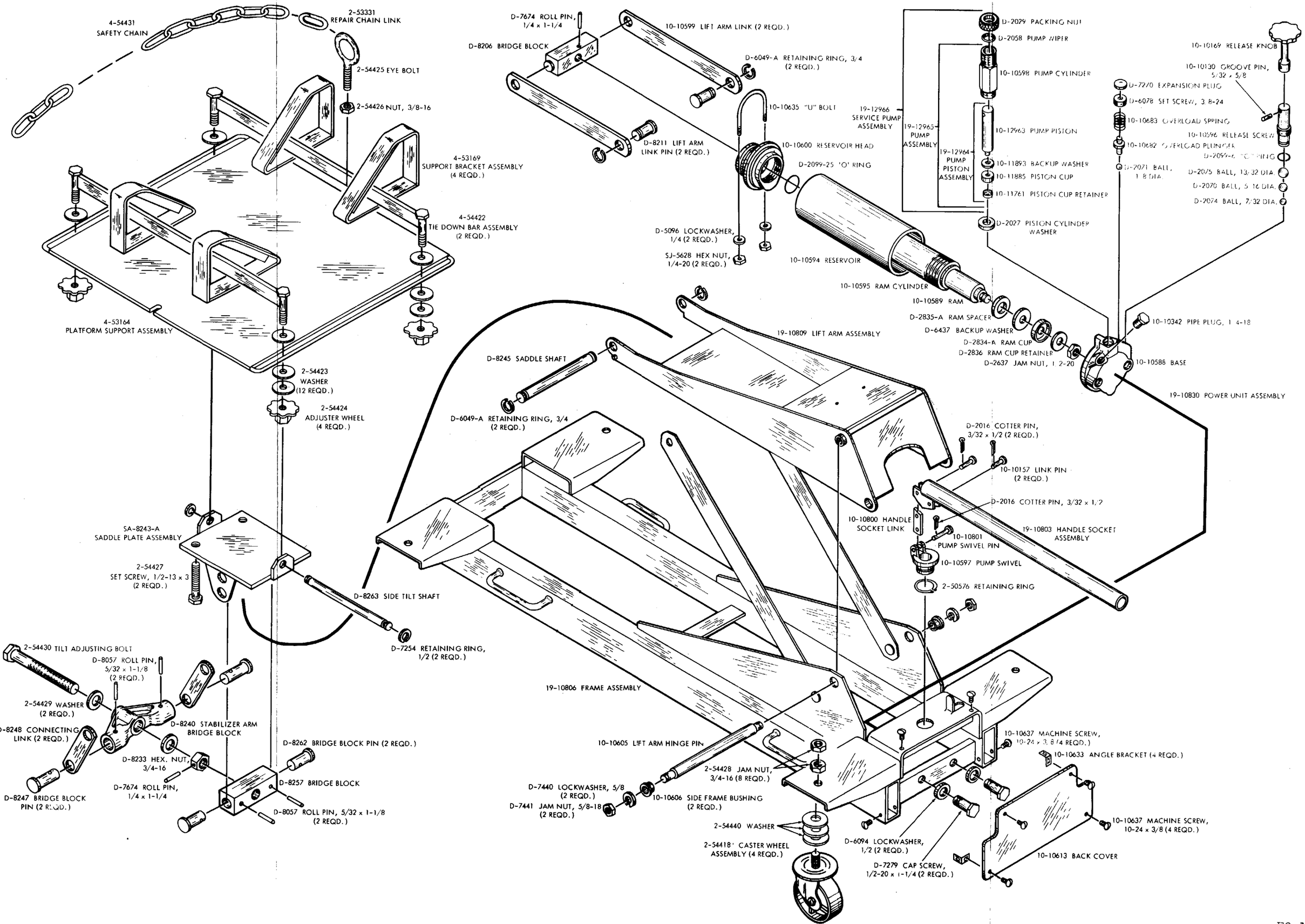
1. Release may not be completely closed.
2. Air-bound - See instruction No. 1.
3. Foreign matter in valve line - Repeat instruction No. 1.
4. Too much oil - Lower to filler screw level.
5. Interior parts may be worn allowing oil to bypass. Contact nearest franchised service depot.

MAINTENANCE INSTRUCTIONS

1. To add oil, remove 10-10613 back cover. Then remove 10-10342 pipe plug. With lifting arm lowered, fill to pipe plug level. Use recommended hydraulic oil only.
2. Keep moving parts clean and well lubricated.

TO REMOVE POWER UNIT

1. Remove roll pin on bridge block at front of ram.
2. Disconnect handle socket pin on top of pump piston assembly.
3. Disconnect release knob by removing groove pin.
4. Remove "U" bolt at front of power unit.
5. Remove two (2) bolts holding base to frame.


4-54431
SAFETY CHAIN
2-53331
REPAIR CHAIN LINK
2-54425 EYE BOLT
2-54426 NUT, 3/8-16
4-53169
SUPPORT BRACKET ASSEMBLY
(4 REQD.)
4-54422
TIE DOWN BAR ASSEMBLY
(2 REQD.)
4-53164
PLATFORM SUPPORT ASSEMBLY
2-54423
WASHER
(12 REQD.)
2-54424
ADJUSTER WHEEL
(4 REQD.)
D-7674 ROLL PIN,
1/4 x 1-1/4
D-8206 BRIDGE BLOCK
10-10599 LIFT ARM LINK (2 REQD.)
D-6049-A RETAINING RING, 3/4
(2 REQD.)
D-8211 LIFT ARM
LINK PIN (2 REQD.)
10-10635 "U" BOLT
10-10600 RESERVOIR HEAD
D-2099-25 'O' RING
D-5096 LOCKWASHER,
1/4 (2 REQD.)
SJ-5628 HEX NUT,
1/4-20 (2 REQD.)
10-10594 RESERVOIR
19-12966
SERVICE PUMP
ASSEMBLY
19-12965
PUMP
ASSEMBLY
19-12964
PUMP
PISTON
ASSEMBLY
D-2029 PACKING NUT
D-2058 PUMP WIPER
10-10598 PUMP CYLINDER
10-12963 PUMP PISTON
10-11893 BACKUP WASHER
10-11885 PISTON CUP
10-11761 PISTON CUP RETAINER
D-2027 PISTON CYLINDER
WASHER
10-10595 RAM CYLINDER
10-10589 RAM
D-2835-A RAM SPACER
D-6437 BACKUP WASHER
D-2834-A RAM CUP
D-2836 RAM CUP RETAINER
D-2637 JAM NUT, 1 2-20
10-10169 RELEASE KNOB
10-10130 GROOVE PIN,
5/32 x 5/8
D-7270 EXPANSION PLUG
D-6078 SET SCREW, 3 8-24
10-10683 OVERLOAD SPRING
10-10596 RELEASE SCREW
10-10682 OVERLOAD PLUNGER
D-2099-6 'O' RING
D-2071 BALL,
1 8 DIA.
D-2075 BALL, 13/32 DIA.
D-2070 BALL, 5 16 DIA.
D-2074 BALL, 7/32 DIA.
10-10342 PIPE PLUG, 1 4-18
10-10586 BASE
19-10830 POWER UNIT ASSEMBLY
19-10809 LIFT ARM ASSEMBLY
D-8245 SADDLE SHAFT
D-6049-A RETAINING RING, 3/4
(2 REQD.)
D-2016 COTTER PIN,
3/32 x 1/2 (2 REQD.)
10-10157 LINK PIN
(2 REQD.)
D-2016 COTTER PIN, 3/32 x 1/2
10-10800 HANDLE
SOCKET LINK
10-10801
PUMP SWIVEL PIN
19-10803 HANDLE SOCKET
ASSEMBLY
10-10597 PUMP SWIVEL
2-50576 RETAINING RING
SA-8243-A
SADDLE PLATE ASSEMBLY
2-54427
SET SCREW, 1/2-13 x 3
(2 REQD.)
D-8263 SIDE TILT SHAFT
D-7254 RETAINING RING,
1/2 (2 REQD.)
2-54430 TILT ADJUSTING BOLT
D-8057 ROLL PIN,
5/32 x 1-1/8
(2 REQD.)
2-54429 WASHER
(2 REQD.)
D-8248 CONNECTING
LINK (2 REQD.)
D-8240 STABILIZER ARM
BRIDGE BLOCK
D-8233 HEX. NUT,
3/4-16
D-7674 ROLL PIN,
1/4 x 1-1/4
D-8247 BRIDGE BLOCK
PIN (2 REQD.)
D-8262 BRIDGE BLOCK PIN (2 REQD.)
D-8257 BRIDGE BLOCK
D-8057 ROLL PIN, 5/32 x 1-1/8
(2 REQD.)
19-10806 FRAME ASSEMBLY
10-10605 LIFT ARM HINGE PIN
2-54428 JAM NUT,
3/4-16 (8 REQD.)
D-7440 LOCKWASHER, 5/8
(2 REQD.)
D-7441 JAM NUT, 5/8-18
(2 REQD.)
10-10606 SIDE FRAME BUSHING
(2 REQD.)
2-54440 WASHER
2-54418 CASTER WHEEL
ASSEMBLY (4 REQD.)
D-6094 LOCKWASHER,
1/2 (2 REQD.)
D-7279 CAP SCREW,
1/2-20 x 1-1/4 (2 REQD.)
10-10637 MACHINE SCREW,
10-24 x 3/8 (4 REQD.)
10-10633 ANGLE BRACKET (4 REQD.)
10-10637 MACHINE SCREW,
10-24 x 3/8 (4 REQD.)
10-10613 BACK COVER

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

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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.

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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: 048824-000