TM 9-2320-211-10-4
T.O. 36A12-1C-421-4

TECHNICAL MANUAL

MAINTENANCE

OPERATOR LEVEL

5-TON, 6X6, M39 SERIES TRUCKS (MULTIFUEL)

TRUCK, CHASSIS: M40A2C, M61A2, M63A2; TRUCK, CARGO: M54A2, M54A2C, M55A2; TRUCK, DUMP: M51A2; TRUCK, TRACTOR: M52A2; TRUCK, WRECKER, MEDIUM: M543A2

Chapter 1
Equipment
Group
Maintenance

Chapter 2
Equipment
Group
Maintenance

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

SEPTEMBER 1980

WARNING

EXHAUST GASES CAN BE DEADLY

Exposure to exhaust gases produces symptoms of headache, dizziness, loss of muscular control, apparent drowsiness, and coma. Permanent brain damage or death can result from severe exposure.

Carbon monoxide occurs in the exhaust fumes of fuel burning heaters and internal combustion engines, and becomes dangerously concentrated under conditions of inadequate ventilation. The following precautions must be observed to insure the safety of personnel whenever fuel burning heater(s) or engine of any vehicle is operated for maintenance purposes or tactical use.

Do not operate heater of engine of vehicle in an enclosed area unless it is adequately ventilated.

Do not idle engine for long periods without maintaining adequate ventilation in personnel compartments.

Do not drive any vehicle with inspection plates or cover plates removed unless necessary for maintenance purposes.

Be alert at all times during vehicle operation for exhaust odors and exposure symptoms. If either are present, immediately ventilate personnel compartments. If symptoms persist, remove affected personnel from vehicle and treat as follows: expose to fresh air; keep warm; do not permit physical exercise; if necessary, administer artificial respiration.

If exposed, seek prompt medical attention for possible delayed onset of acute lung congestion. Administer oxygen if available.

The best defense against exhaust gas poisoning is adequate ventilation.

Use extreme care when removing radiator cap, especially when temperature gage shows above 180°F.

Always wear leather gloves when handling winch cable never allow cable to slip through hands. Do not operate winch with less than four turns of cable drum.

Do not drive truck until the low air pressure warning buzzer is silent and the air pressure gage shows at least 65 PSI. This is the minimum pressure required for safe braking action.

Do not use hand throttle to drive the vehicle.

Do not park truck with front transmission gearshift lever in gear.

When used to carry flammables, explosives, or other hazardous material, equip truck with a fire extinguisher.

If your vehicle class number is greater than the bridge class number, your vehicle is too heavy for the bridge; DO NOT CROSS.

TM 9-2320-211–10-4
TO 36A12-1C-421-4
C1

CHANGE
NO. 1

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington D.C., *26 February 1992*

TECHNICAL MANUAL

SCHEDULED MAINTENANCE

OPERATOR LEVEL

5-TON, 6X6, M39 SERIES TRUCKS
(MULTIFUEL)

TRUCK, CHASSIS: M40A2C,
M61A2, M63A2, TRUCK, CARGO:
M54A2, M54A2C, M55A2: TRUCK,
DUMP: M51A2; TRUCK, TRACTOR:
M52A2; TRUCK, WRECKER, MEDIUM: M543A2

TM 9-2320-211-10-4, dated 5 September 1980 is changed as follows:

1. Remove old pages and insert new pages as indicated below.

2. New or changed material is indicated by a vertical bar in the margin of the page.

Remove Pages	Insert Pages
none	b (c blank)
2-7 and 2-8	2-7 and 2-8
2-13 and 2-14	2-13 and 2-14

File this change sheet in front of the publication for reference purposes.

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WARNINGS (CONT)

If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your Unit NBC Officer or NBC NCO for appropriate handling instructions.

Wear safety glasses or goggles when checking batteries. Always check electrolyte level with engine stopped. Do not smoke or use exposed flame when checking battery, explosive gases are present and severe injury to personnel can result.

Remove all jewelry such as rings, dog tags, bracelets, etc. If jewelry contacts battery terminal, a direct short will result in instant heating of tools, causing damage to equipment and injury to personnel.

TECHNICAL MANUAL
NO. 9-2320-211-10-4
TECHNICAL ORDER
NO. 36A12-1C-421-4

DEPARTMENTS OF THE ARMY
AND
THE AIR FORCE
Washington, DC, 5 September 1980

TECHNICAL MANUAL

MAINTENANCE

OPERATOR LEVEL

5-TON, 6X6, M39 SERIES TRUCKS

(MULTIFUEL)

Model		NSN without Winch	NSN with Winch
Chassis	M40A2C	2320-00-969-4114	
	M61A2	2320-00-055-9264	2320-00-965-0321
	M63A2	2320-00-226-6251	2320-00-285-3757
Truck, Cargo	M54A2	2320-00-055-9266	2320-00-055-9265
	M54A2C	2320-00-926-0874	2320-00-926-0874
	M55A2	2320-00-073-8476	2320-00-055-9259
Truck, Dump	M51A2	2320-00-055-9262	2320-00-055-9263
Truck, Tractor	M52A2	2320-00-055-9260	2320-00-055-9261
Truck, Wrecker, Medium	M543A2		2320-00-055-9258

Current as of 25 March 1980.

*This manual, together with TM 9-2320-211-10-1, 5 September 1980; -10-2, 5 September 1980; and -10-4, 5 September 1980 supersedes so much of TM 9-2320-211-10, 20 November 1977 as pertains to multifuel vehicles.

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 procedure, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank Automotive Materiel Readiness Command, ATTN: DRSTA-MB, Warren, Michigan 48090. A reply will be furnished to you.

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CHAPTER 1

GENERAL MAINTENANCE INFORMATION

1-1. SCOPE. This volume of the technical manual covers maintenance tasks, authorized at the operator's level of maintenance, for the 5-ton, 6 x 6, M39 series trucks that have multifuel engines. The tasks given in this volume do not include those maintenance tasks done on a scheduled basis (PMCS).

1-2. GENERAL MAINTENANCE. The following technical manuals have general maintenance information for this type of equipment. Refer to these manuals if you need more information.

a. For operation and maintenance in cold weather (0 to -60°F), refer to TM 9-243.

b. For deep water fording, refer to TM 9-238.

c. For care and use of handtools and measuring tools, refer to TM 9-243.

1-3. CLEANING. General cleaning instructions for this type of equipment are given in TM 9-247.

1-4. LUBRICATING. Refer to LO 9-2320-211-12 for materials to be used and instructions for lubrication of the equipment covered in this technical manual.

CHAPTER 2

EQUIPMENT GROUP MAINTENANCE

Section I. SCOPE

2-1. EQUIPMENT ITEMS COVERED. This chapter gives equipment maintenance procedures for which there are authorized corrective maintenance tasks at operator's level. Procedures are given in equipment functional groups by sections and include the following tasks:

Access to Engine Compartment

Air Cleaner Filter Element Removal and Replacement

Battery Inspection

Spare Wheel Removal and Replacement

Jacking Procedure

Inner Rear Wheels Removal and Replacement

Front and Outer Rear Wheels Removal and Replacement

Installation and Removal of Bow and Tarp Kits

2-2. EQUIPMENT ITEMS NOT COVERED. All equipment items for which corrective maintenance is authorized at operator's maintenance level are covered in this chapter except for the Portable Decontaminating Apparatus. Refer to TM 3-4230-204-12&P for operating and maintenance instructions for this equipment.

Section II. ENGINE EQUIPMENT ITEMS MAINTENANCE

2-3. ACCESS TO ENGINE COMPARTMENT.

TOOLS: None

SUPPLIES: None

PERSONNEL: One

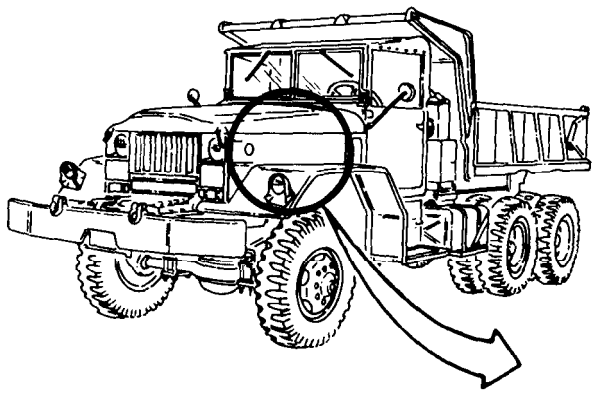
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

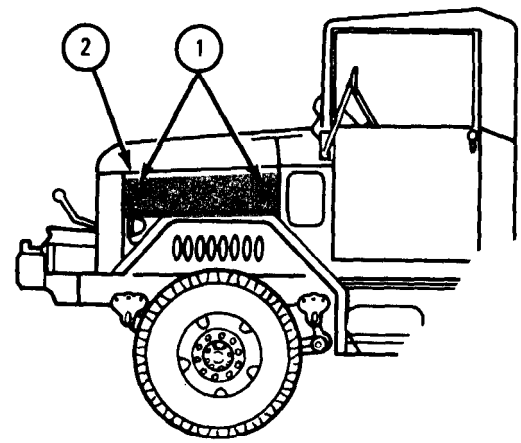
a. Open Hood and Side Panel.

FRAME 1

1. Turn two side panel latches (1) to the up position.
2. Lower left side panel (2).

GO TO FRAME 2



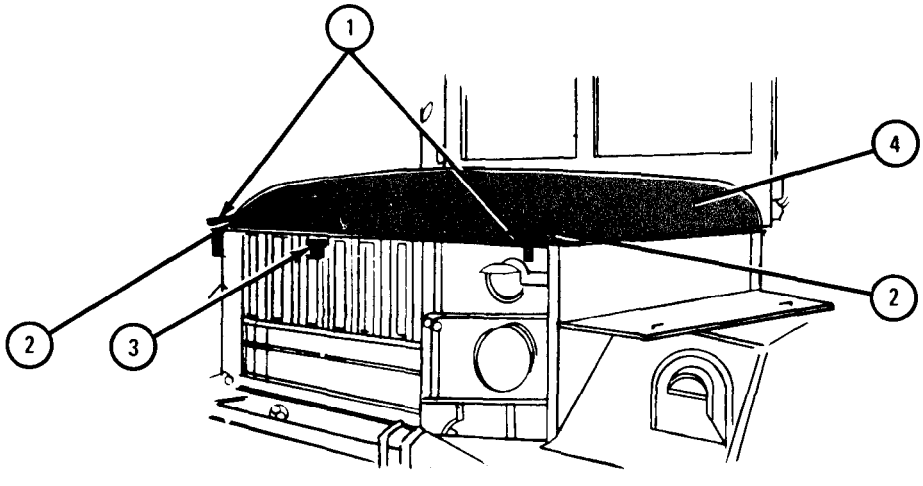


TA 045529

FRAME 2

1. Pull up on each hood holddown latch (1) until they clear each hood catch (2).
2. Push and hold in hood latch (3).
3. Lift hood (4) and then let go of hood latch (3).

GO TO FRAME 3

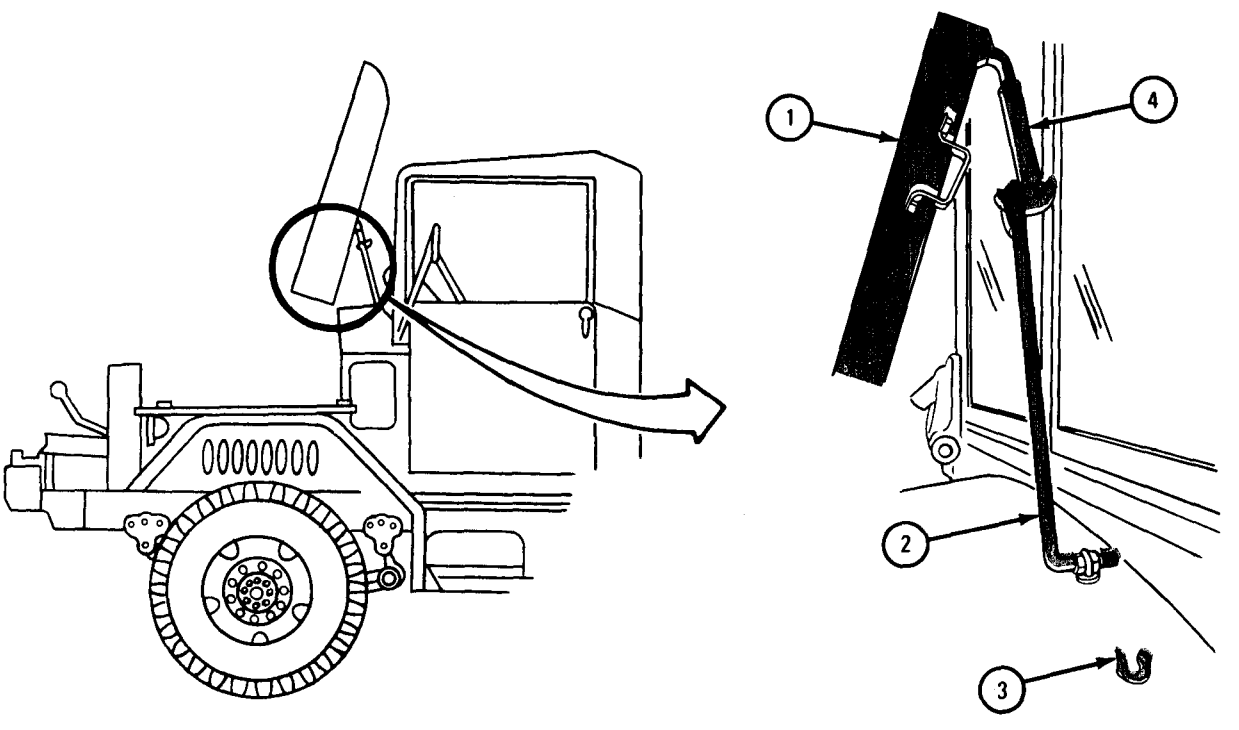


TA 053547

FRAME 3

1. Raise hood (1) to position shown.
2. Pull hood support hook (2) out of storage clip (3).
3. Swing hood support hook (2) up and join support hook with latch (4) as shown.

END OF TASK



TA 045528

b. Close Hood and Side Panel.

FRAME 1

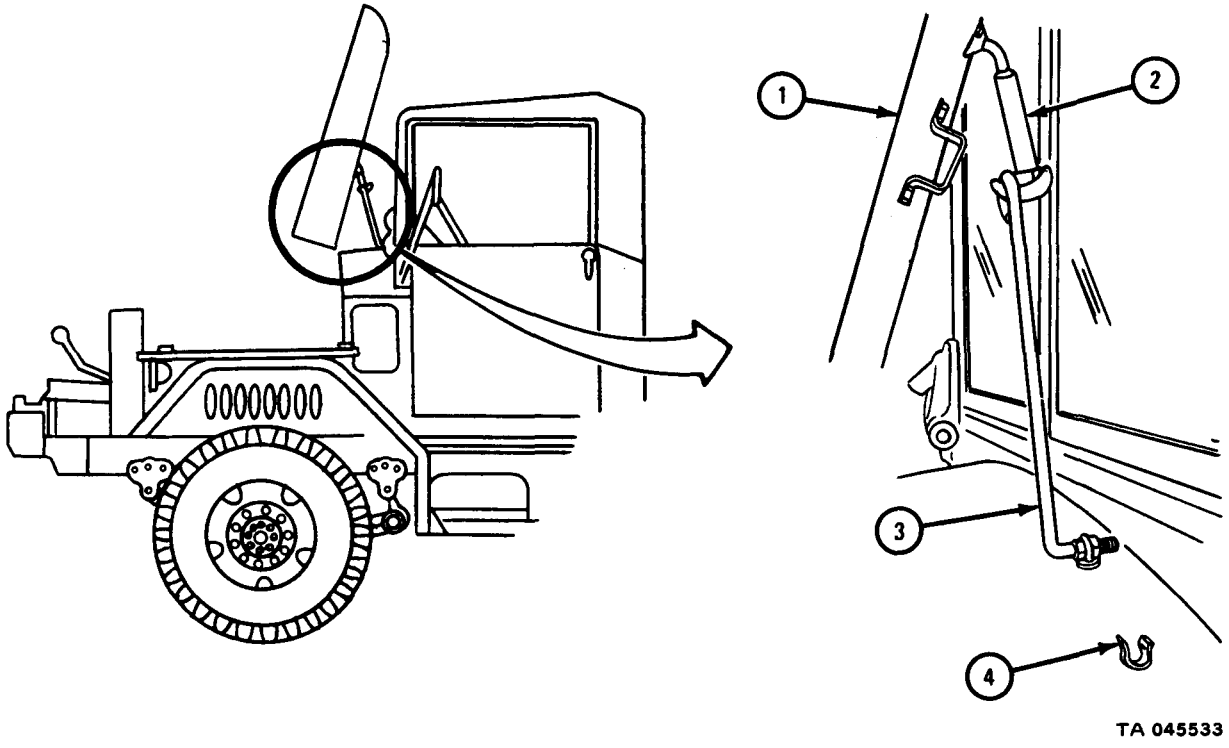
1. Push back on hood (1) so that latch (2) clears support hook (3).
2. Hold hood (1) and swing support hook (3) down into storage clip (4).

WARNING

Keep hands and feet clear of hood and body when closing the hood.

3. Lower hood (l).

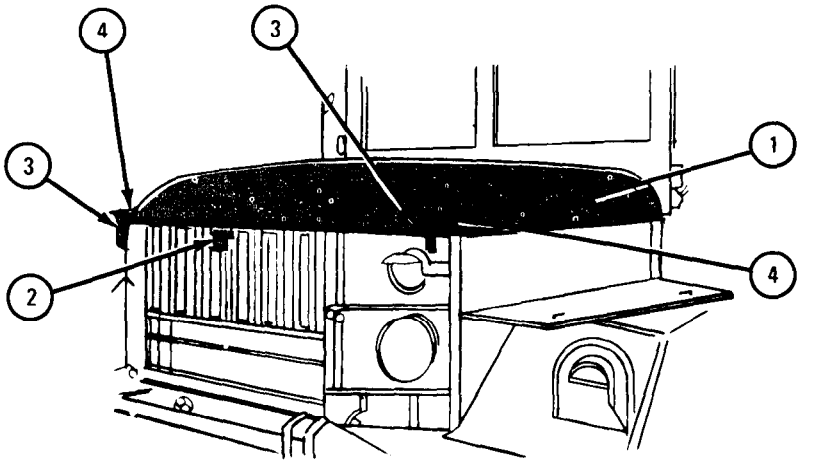
GO TO FRAME 2



FRAME 2

1. Push down on hood (1) to lock hood latch (2).
2. Pull up on each holddown latch (3) and join them to hood catches (4).

GO TO FRAME 3

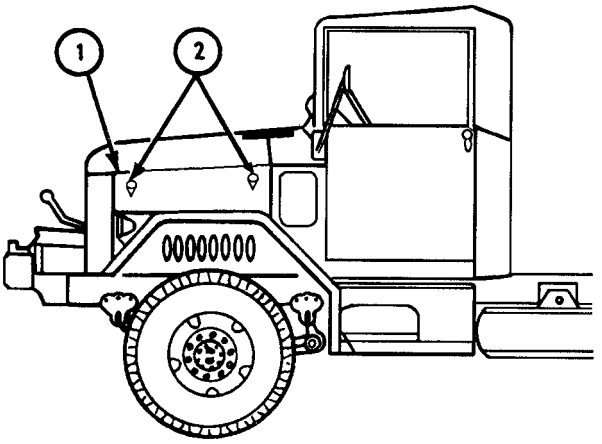


TA 053548

FRAME 3

1. Raise side panel (1).
2. Turn two side panel latches (2) to the down position.

END OF TASK



TA 045532

Section III. FUEL SYSTEM EQUIPMENT ITEMS MAINTENANCE

2-4. AIR CLEANER ELEMENT REMOVAL AND REPLACEMENT.

TOOLS: None
SUPPLIES: None
PERSONNEL: One
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

WARNING

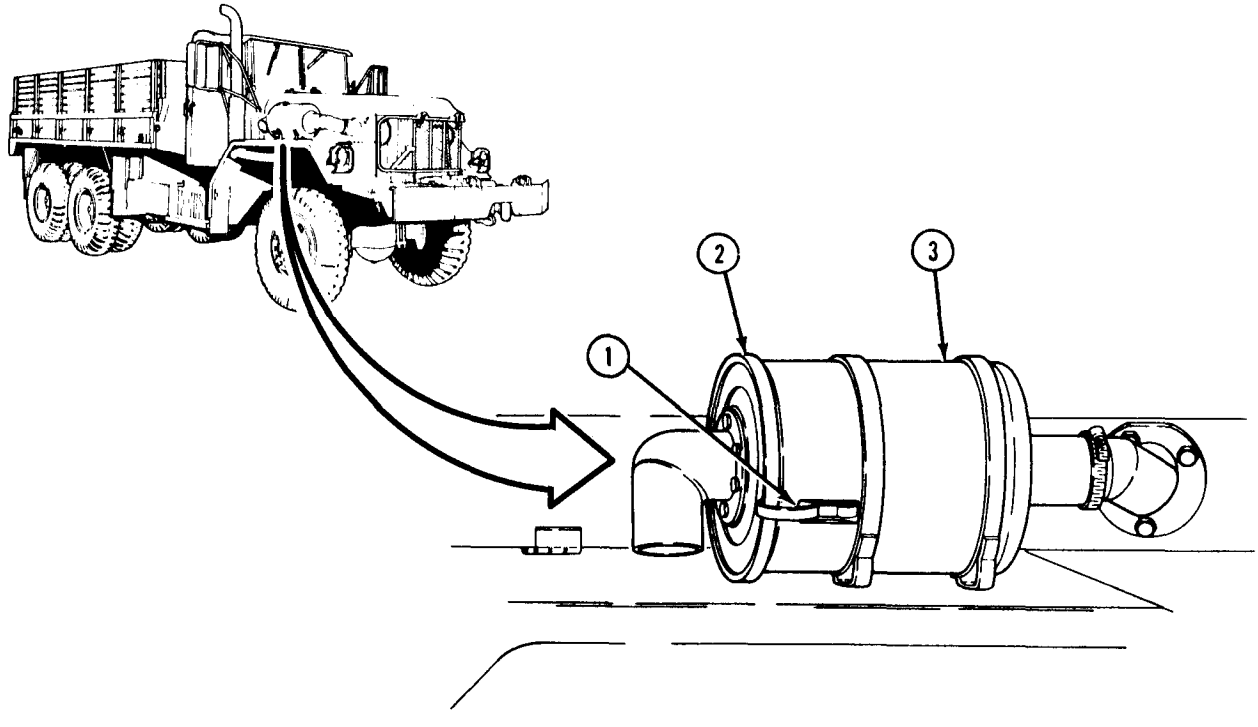
If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your unit NBC Officer or NBC NCO for appropriate handling or disposal instructions.

a. Removal.

FRAME 1

1. Open three latches (1) holding cover (2) to air cleaner housing (3). Take off cover.

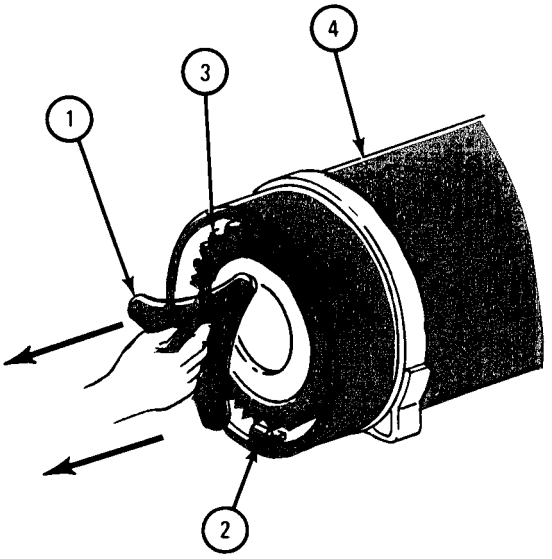
GO TO FRAME 2



FRAME 2

1. Turn locking device (1) to left until it is free of clamps (2). Pull out locking device.
2. Pull air cleaner element (3) from air cleaner housing (4).

END OF TASK



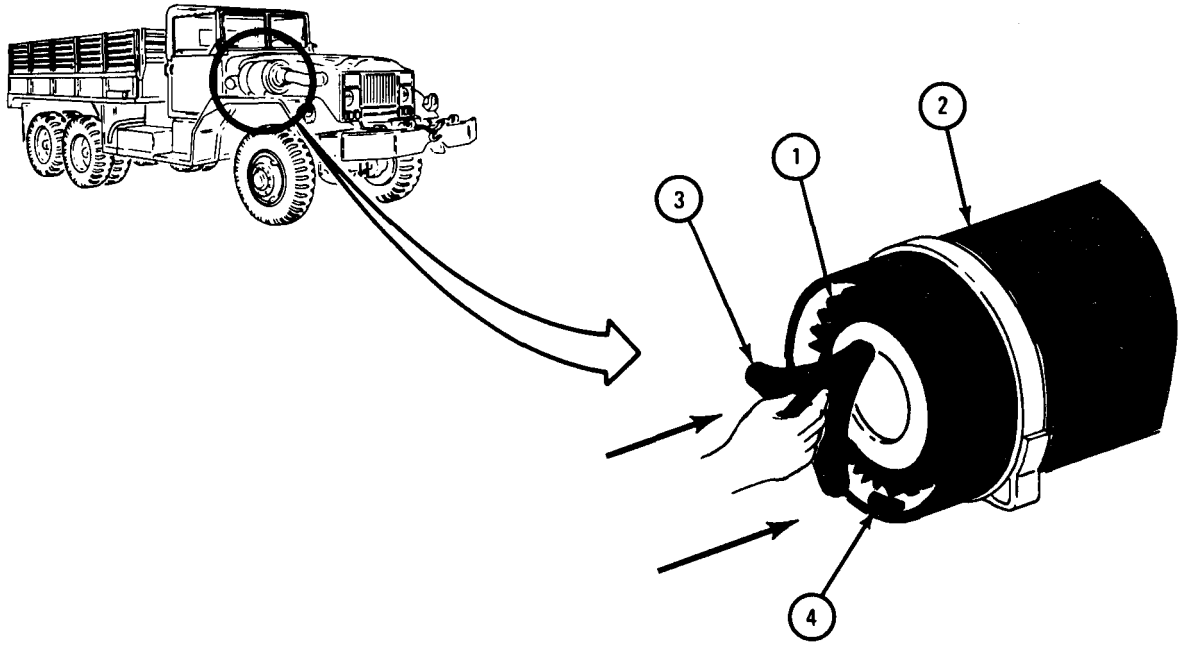
TA 053554

b. Replacement.

FRAME 1

1. Place air cleaner element (1) in air cleaner housing (2).
2. Press locking device (3) into air cleaner housing (2).
3. Turn locking device (3) to right until it is locked in clamps (4).

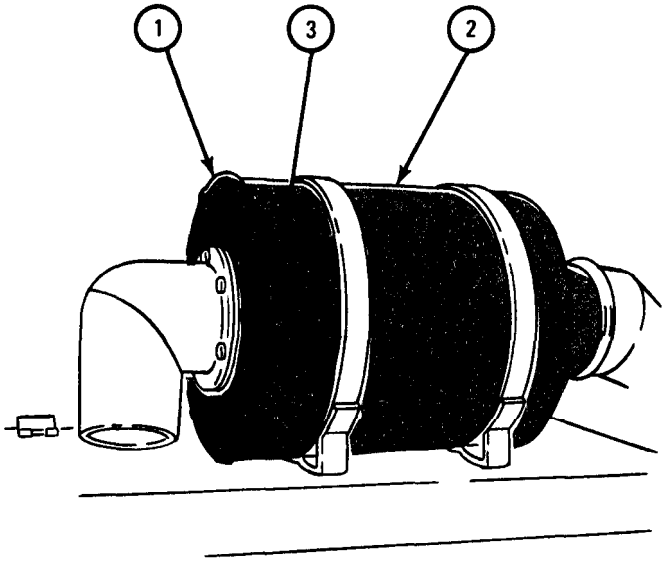
GO TO FRAME 2



FRAME 2

1. Place cover (1) on air cleaner housing (2).
2. Lock three latches (3).

END OF TASK



TA 053556

Section IV. ELECTRICAL SYSTEM EQUIPMENT ITEMS MAINTENANCE

2-5. BATTERY INSPECTION.

TOOLS: 9/16-inch wrench open end (2)
l/2-inch wrench open end (2)

SUPPLIES: None

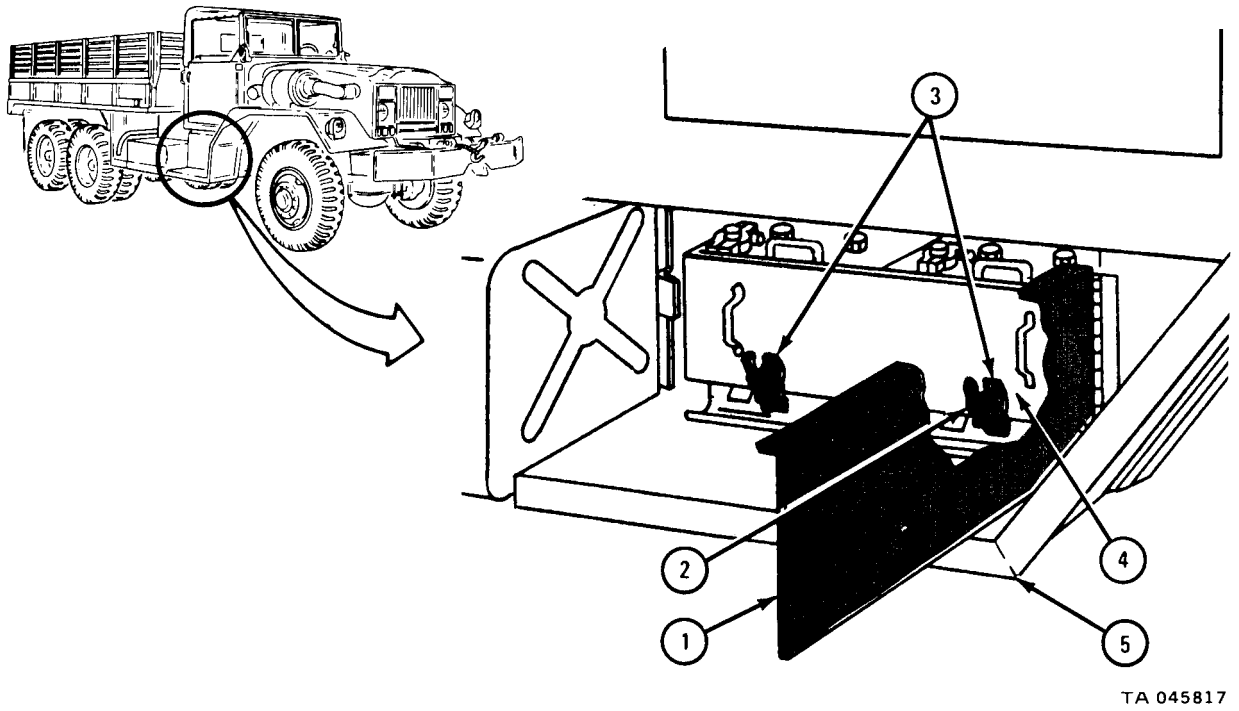
PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

FRAME 1

1. Open battery compartment door (1).
2. Loosen two thumbscrews (2) and push two clamps (3) down to clear battery box (4).
3. Pull battery box (4) out onto running board (5).

GO TO FRAME 2



TA 045817

FRAME 2

WARNING

Wear safety glasses or goggles when checking batteries. Always check electrolyte level with engine stopped. Do not smoke or use exposed flame when checking battery; explosive gases are present and severe injury to personnel can result.

Remove all jewelry such as rings, dog tags, bracelets, etc. If jewelry contacts battery terminal, a direct short will result in instant heating of tools, causing damage to equipment and injury to personnel.

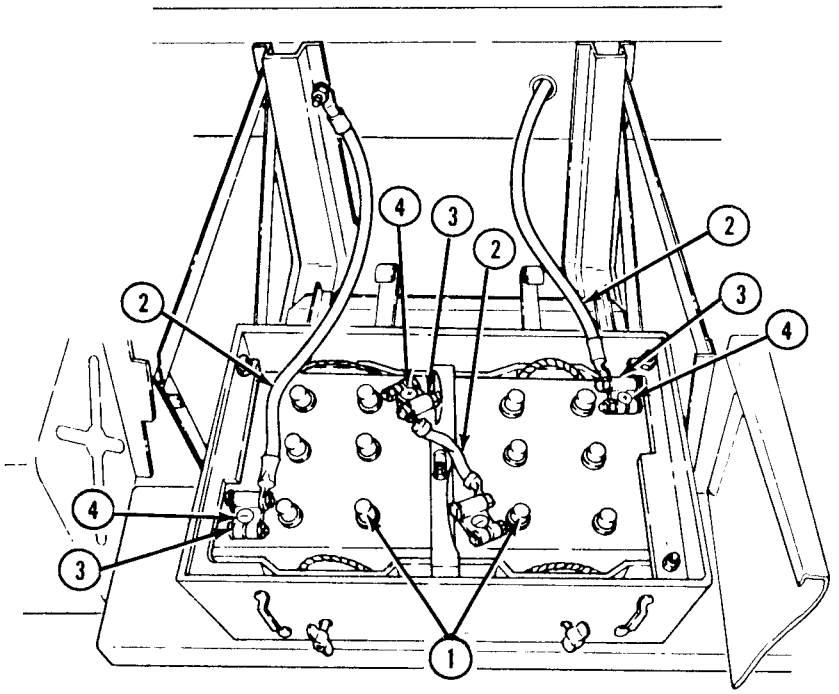
1. Unscrew and take off 12 battery filler caps (1).

2. Check the electrolyte level in each cell. Electrolyte level should be to the level/split ring in the battery filler opening. If fluid is low, fill with distilled water to the level ring. If fluid is boiling, notify next higher maintenance.

3. Screw on and tighten 12 battery filler caps (1).

4. Check tightness of cables (2) to clamps (3) and clamps (2) to terminal posts (4). Tighten connections if needed.

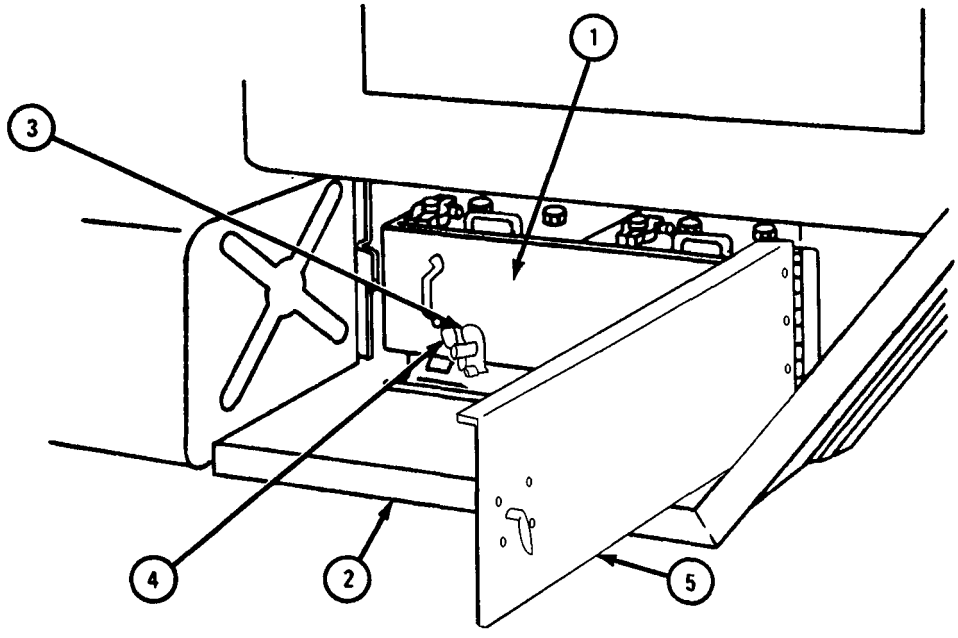
GO TO FRAME 3



FRAME 3

1. Push battery box (1) off of running board (2) into battery compartment.
2. Latch two clamps (3) on thumbscrews (4) and tighten thumbscrews.
3. Close battery compartment door (5).

END OF TASK



TA 047169

* U.S. GOVERNMENT PRINTING OFFICE: 1992 – 643-025/ 40190

PIN: 046783-001

Section V. WHEELS EQUIPMENT ITEMS MAINTENANCE

2-6. SPARE WHEEL REMOVAL AND REPLACEMENT.

TOOLS: Wheel stud nut wrench and handle

SUPPLIES: None

PERSONNEL: TWO

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

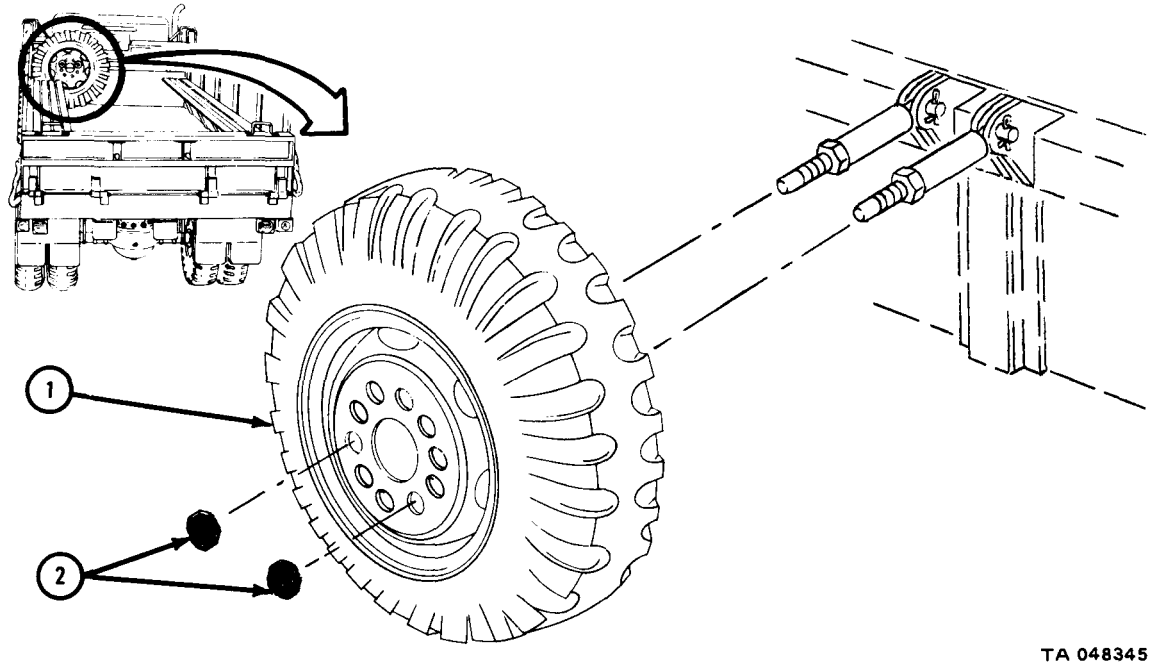
a. Removal.

(1) Trucks M54A2 without winch, M54A2C with winch, and M54A2C without winch.

FRAME 1

Soldier A	1.	Hold spare wheel (1) in place.
Soldier B	2.	Using wheel stud nut wrench and handle, unscrew and take off two nuts (2).
Soldiers A and B	3.	Take off spare wheel (1).

END OF TASK



(2) Trucks M54A2 with winch and M55A2 with winch.

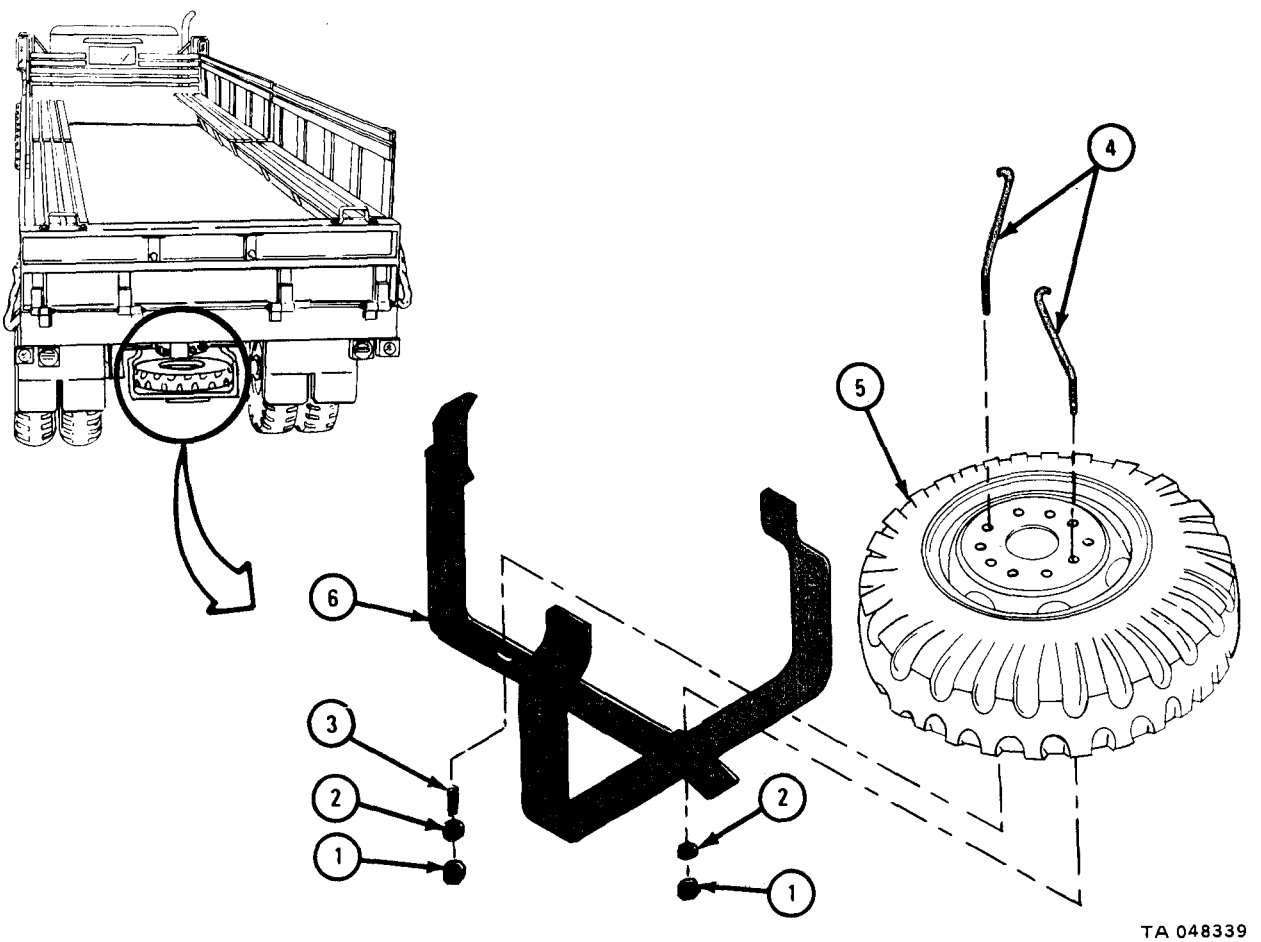
FRAME 1

1. Using wheel stud nut wrench, unscrew and take off two nuts (1), two washers (2), and one spring (3) from two tire bolts (4).
2. Lift out two tire bolts (4).

Soldiers A and B

3. Slide out spare wheel (5) from carrier (6).

END OF TASK



(3) Truck M51A2.

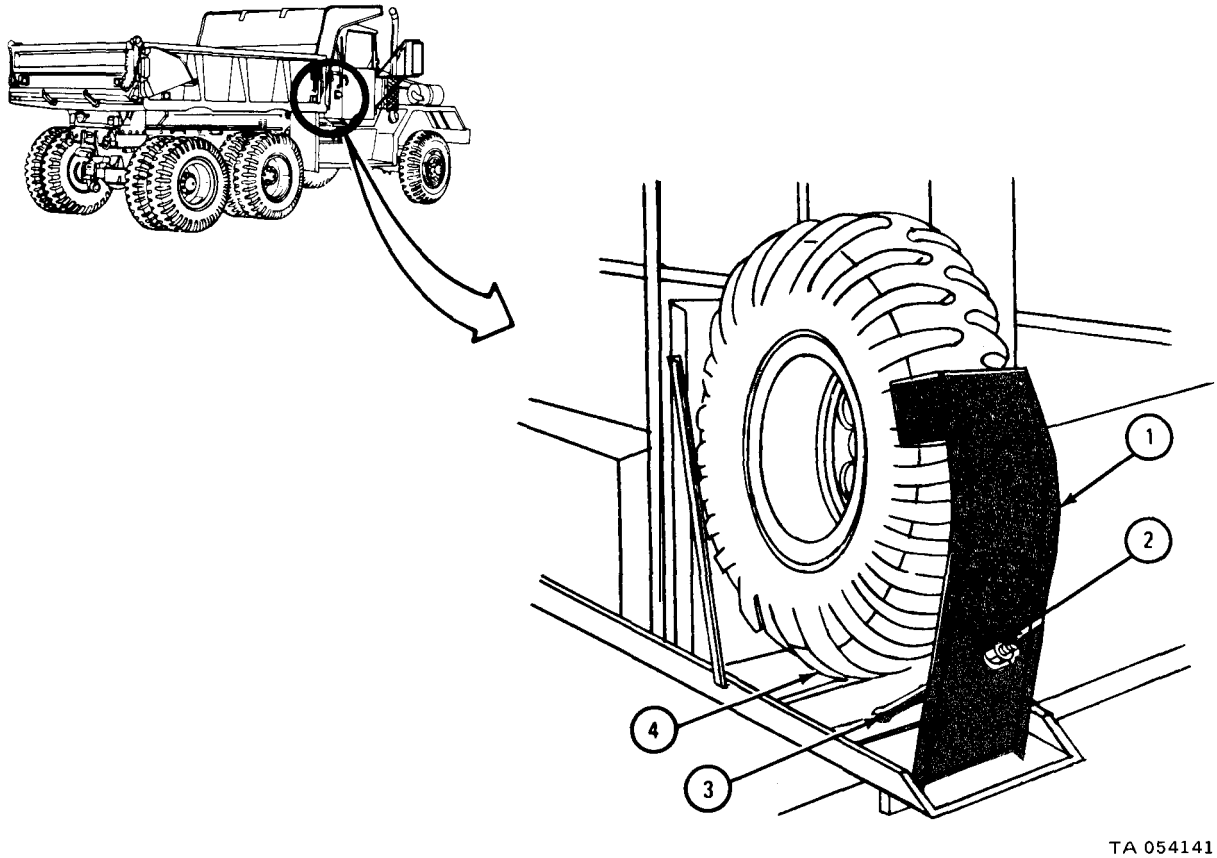
FRAME 1

Soldier A 1. Hold spare wheel clamp assembly (1) so it does not fall.

Soldier B 2. Using wheel stud nut wrench, unscrew and take off nut (2). Take out bolt (3) and lower spare wheel clamp assembly (1).

Soldiers A and B 3. Take spare wheel (4) off truck.

END OF TASK



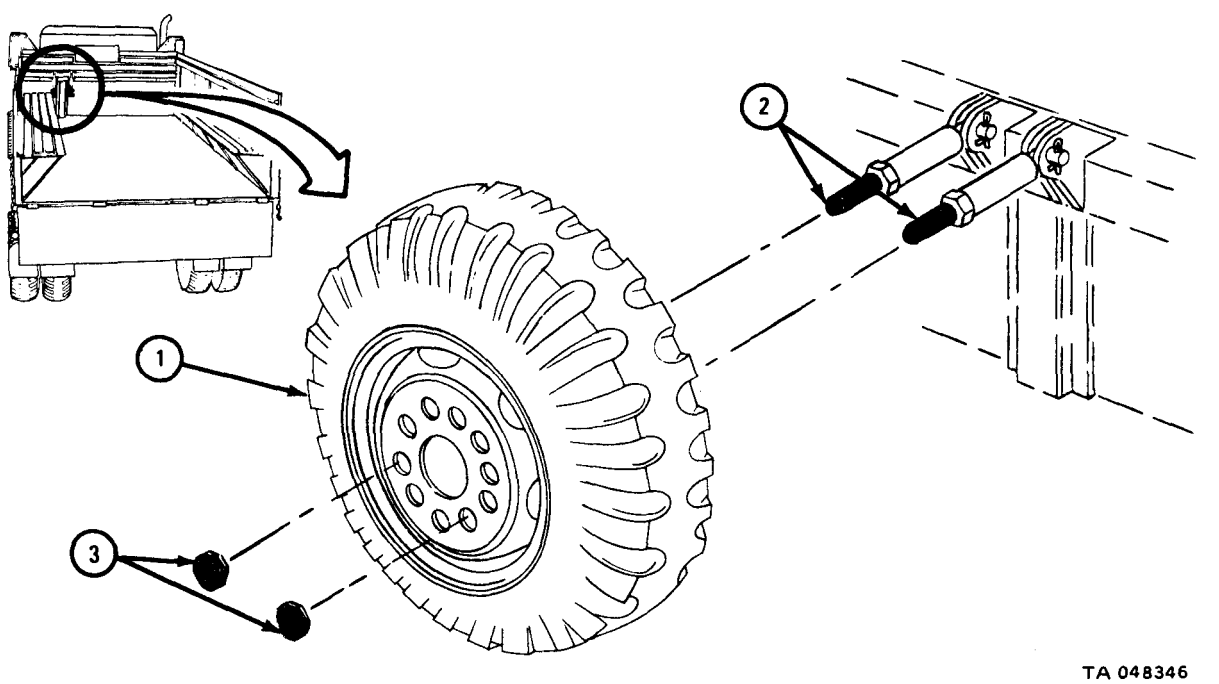
b. Replacement.

(1) Trucks M54A2 without winch, M54A2C with winch, and M54A2C without winch.

FRAME 1

Soldiers A and B	1.	Lift spare wheel (1) into truck and slide spare wheel (1) onto two studs (2).
Soldier A	2.	Hold spare wheel (1) in place,
Soldier B	3.	Using wheel stud nut wrench, screw on and tighten two nuts (3).

END OF TASK

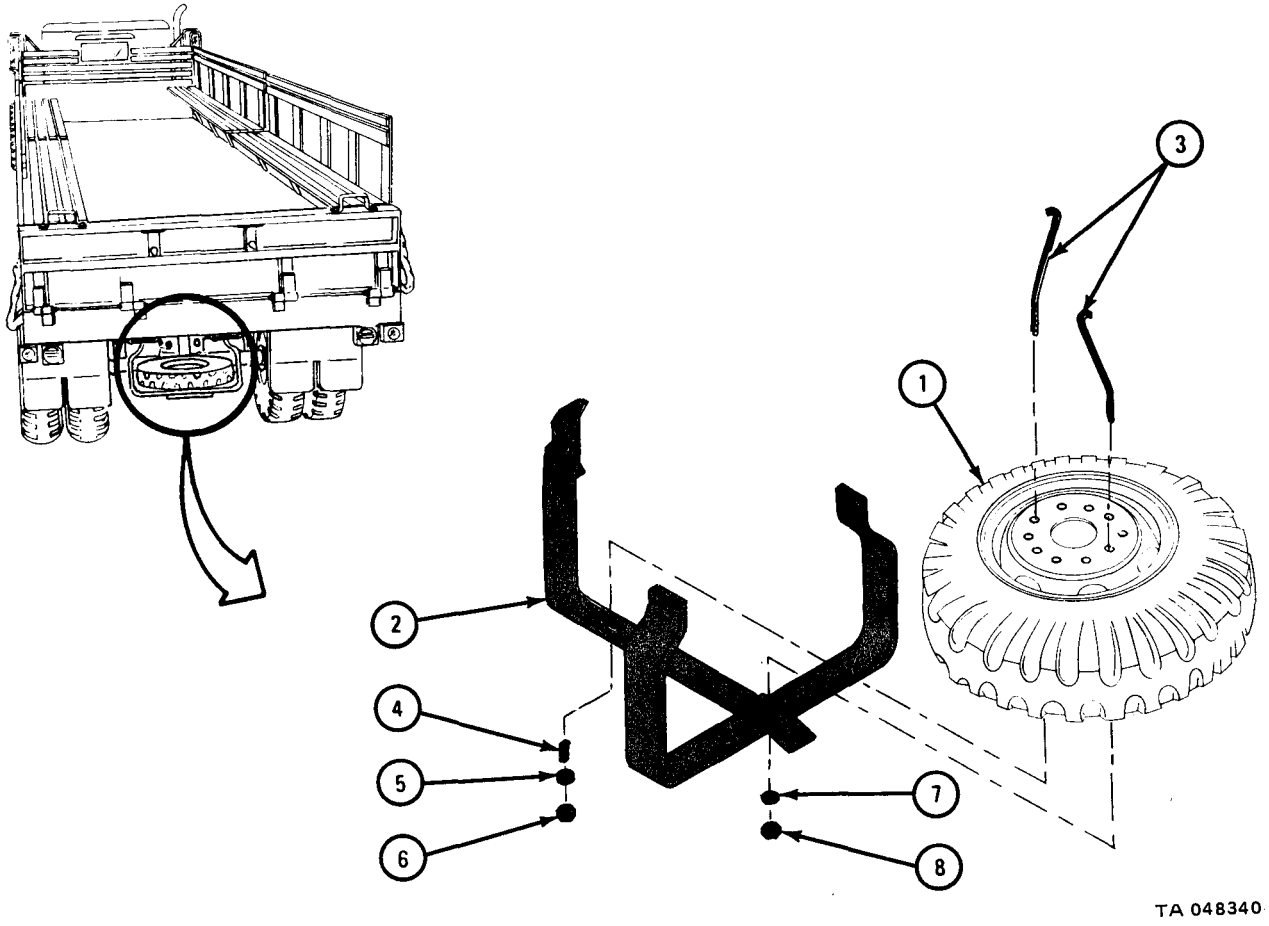


(2) Trucks M54A2 with winch and M55A2 with winch.

FRAME 1

Soldiers A and B	1.	Lift spare wheel (1) and slide it into carrier (2).
Soldier A	2.	Place two tire bolts (3) through holes in wheel (1) and carrier (2) as shown.
	3.	Slide spring (4) and washer (5) onto forward tire bolt (3). Screw on nut (6).
	4.	Slide washer (7) onto rear tire bolt (3). Screw on nut (8).
	5.	Using wheel stud nut wrench, tighten nuts (6 and 8).

END OF TASK

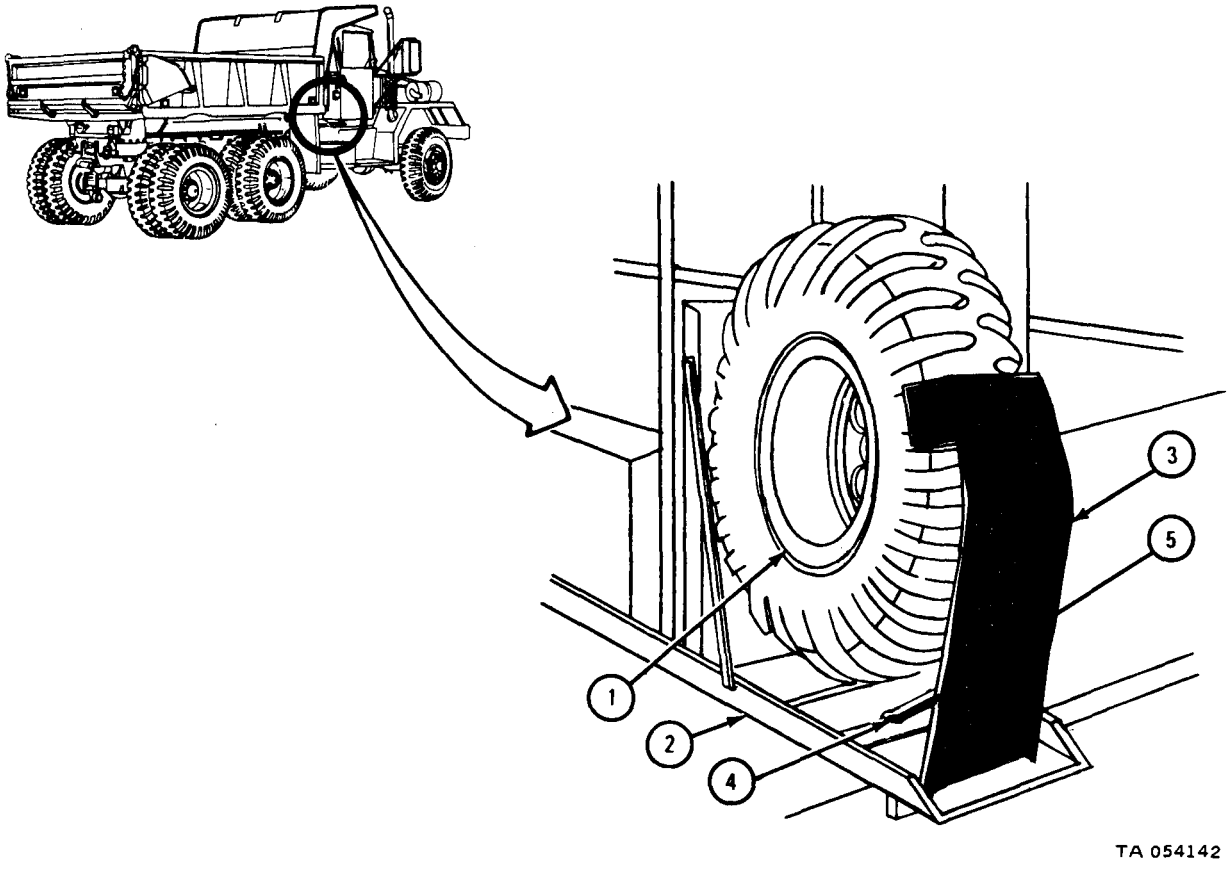


(3) Truck M51A2.

FRAME 1

Soldiers A and B	1.	Lift spare wheel (1) onto carrier (2).
Soldier A	2.	Put spare wheel clamp assembly (3) in place at end of carrier (2).
Soldier B	3.	Hook bolt (4) into hole in bottom of carrier (2) and through hole in spare wheel clamp assembly (3).
Soldier A	4.	Using wheel stud nut wrench, screw on and tighten nut (5).

END OF TASK



TA 054142

2-7. JACKING PROCEDURE

NOTE

This task is the same for all wheels. This task is shown for the left rear-rear wheel.

TOOLS: Hydraulic screw jack with handle.

SUPPLIES: Wood block

PERSONNEL: One

EQUIPMENT CONDITION: Truck parked, engine off, handbrake set, wheels chocked.

WARNING

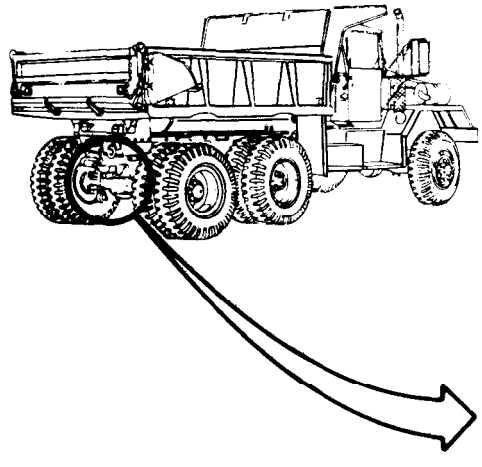
Never get underneath truck that is held up by jack only. Jack may slip, causing truck to fall resulting in severe injury to personnel.

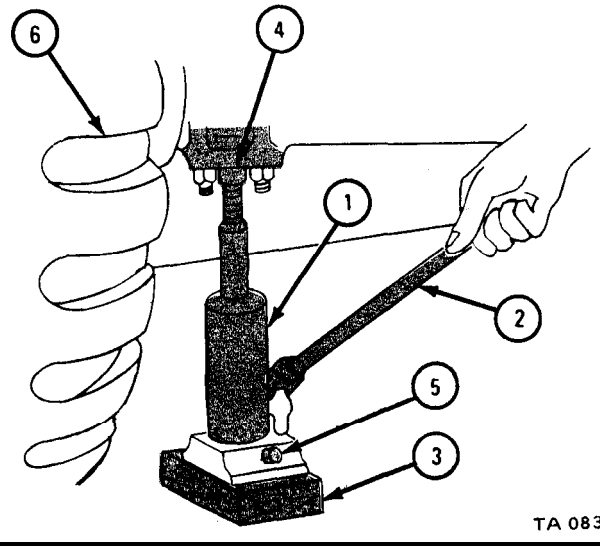
a. Raising Truck.

FRAME 1

1. Take hydraulic screw jack (1) and handle (2) out of stowage compartment above left running board.
2. Put wood block (3) on the ground under spring seat (4) and put screw jack (1) on wood block.
3. Turn out screw jack (1) until it touches spring seat (4).
4. Using slotted end of jack handle (2), turn bleeder valve (5) to the right. Put jack handle in screw jack (1).
5. Moving jack handle (2) up and down, raise wheel assembly (6) off ground.

END OF TASK





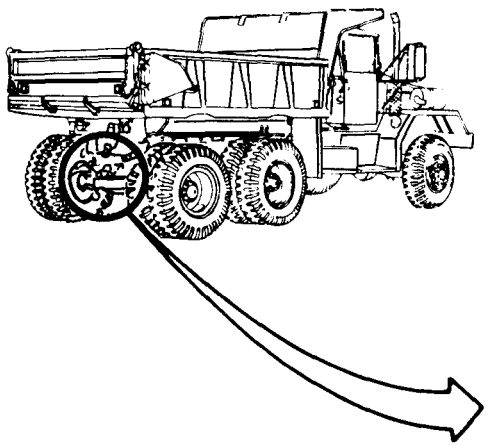
TA 083934

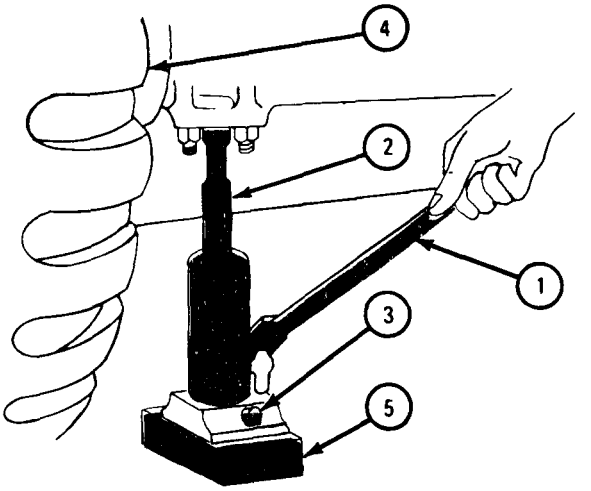
b. Lowering Truck.

FRAME 1

1. Take jack handle (1) out of hydraulic screw jack (2).
2. Using slotted end of jack handle (1), turn bleeder valve (3) to the left.
3. When wheel assembly (4) is firmly on the ground, take screw jack (2) out from under truck. Take wood block (5) away from truck.
4. Put screw jack (2) and handle (1) into stowage compartment above left running board.

END OF TASK





TA 083935

2-8. INNER GEARWHEELS REMOVAL AND REPLACEMENT.

NOTE

This task is the same for all four inner rear wheels.

TOOLS: Wheel stud nut wrench
Hydraulic screw jack with handle

SUPPLIES: None

EQUIPMENT CONDITION: Truck parked on level ground, engine off, handbrake set, wheels chocked.

a. Preliminary Procedures.

(1) Remove spare wheel if needed to replace damaged wheel. Refer to para 2-6.

(2) Jack up truck and remove outer rear wheel. Refer to para 2-7.

b. Removal.

FRAME 1

1. Using spare end of wheel stud nut wrench (1), unscrew and take off six inner wheel nuts (2).

CAUTION

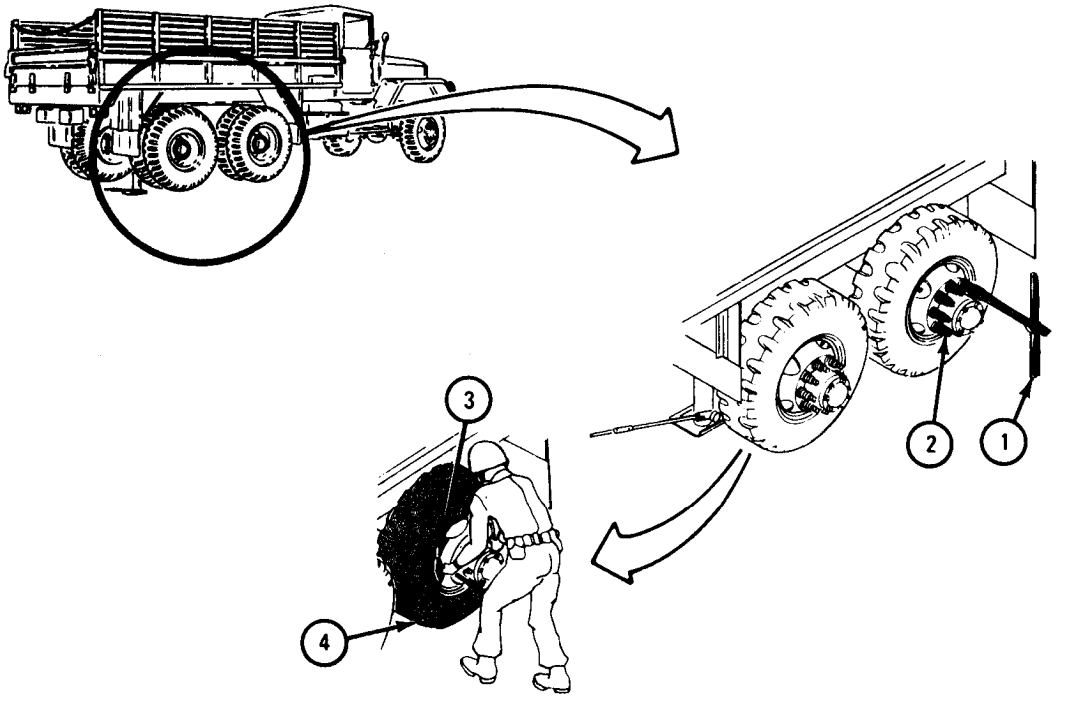
Do not slide wheel assembly on threaded studs. Sliding wheel assembly may damage threads.

NOTE

Nuts have left-hand threads on left wheel assembly and right-hand threads on right wheel assembly. Studs and nuts are stamped (L) left and (R) right.

2. Put fingers through vent holes (3) and grip wheel (4) as shown. Lift up on wheel, pull it toward you, and take it off.

END OF TASK



TA 053551

c. Replacement.

FRAME 1

1. Check that truck is jacked up at wheel to be replaced.

CAUTION

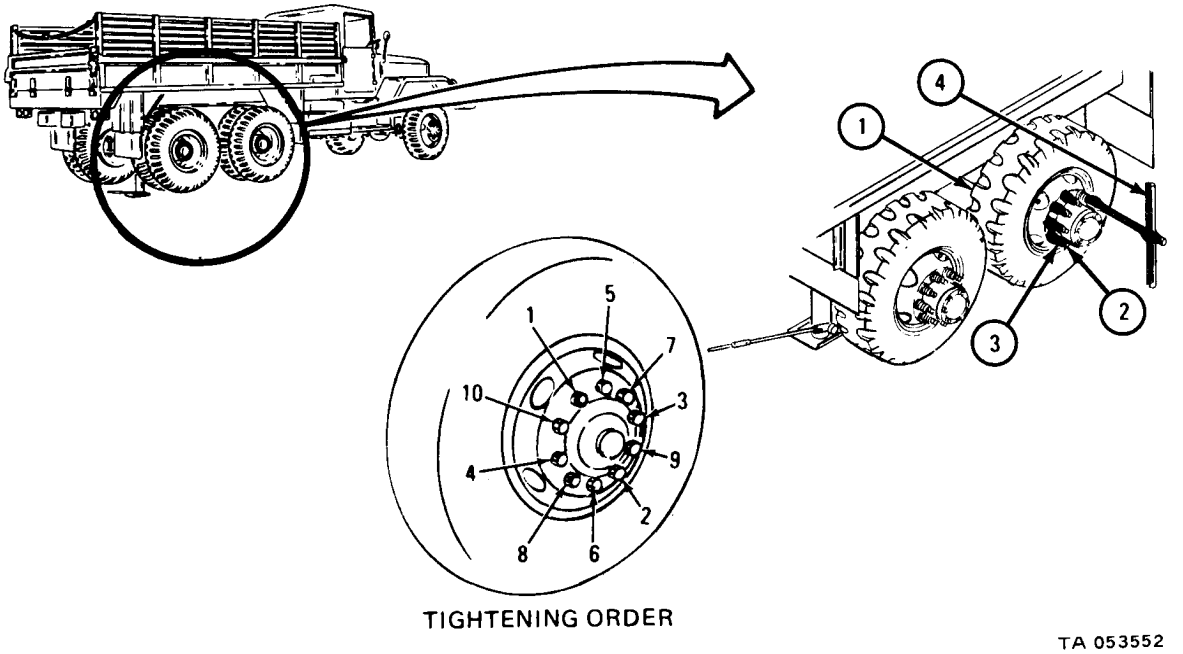
Do not slide wheel assembly on threaded studs. Sliding wheel assembly may damage threads.

2. Lift wheel assembly (1) up and onto wheel studs (2).

NOTE

Nuts have left-hand threads on left wheel assembly and right-hand threads on right wheel assembly. Stud and nuts are stamped (L) left and (R) right.

3. Screw on and hand tighten nuts (3) on wheel studs (2).
4. Using square end of wheel stud nut wrench (4), tighten nuts (3) in order shown. As soon as you can, take truck to organizational maintenance and have wheel stud nuts torqued to 450 to 500 pound-feet.
5. Put on outer rear wheel and jack down truck. Refer to para 2-7.



TIGHTENING ORDER

TA 053552

FRAME 2

NOTE

Follow-on Maintenance Action Required:

1. If damaged wheel was replaced, take damaged wheel to organizational maintenance shop for repair or replacement as soon as possible.
2. If damaged wheel cannot be taken immediately to organizational maintenance, store damaged wheel on spare mounting bracket. Refer to para 2-6.

END OF TASK

2-9. FRONT AND OUTER REAR WHEELS REMOVAL AND REPLACEMENT.

NOTE

The following task is the same for both front wheels and all four outer rear wheels.

TOOLS: Wheel stud nut wrench and handle
Hydraulic screw jack and handle

SUPPLIES: None

PERSONNEL: One

EQUIPMENT CONDITION : Truck on level ground, engine off, handbrake set, wheels chocked.

a. Preliminary Procedures. Remove spare wheel if needed to replace damaged wheel. Refer to para 2-6.

b. Removal.

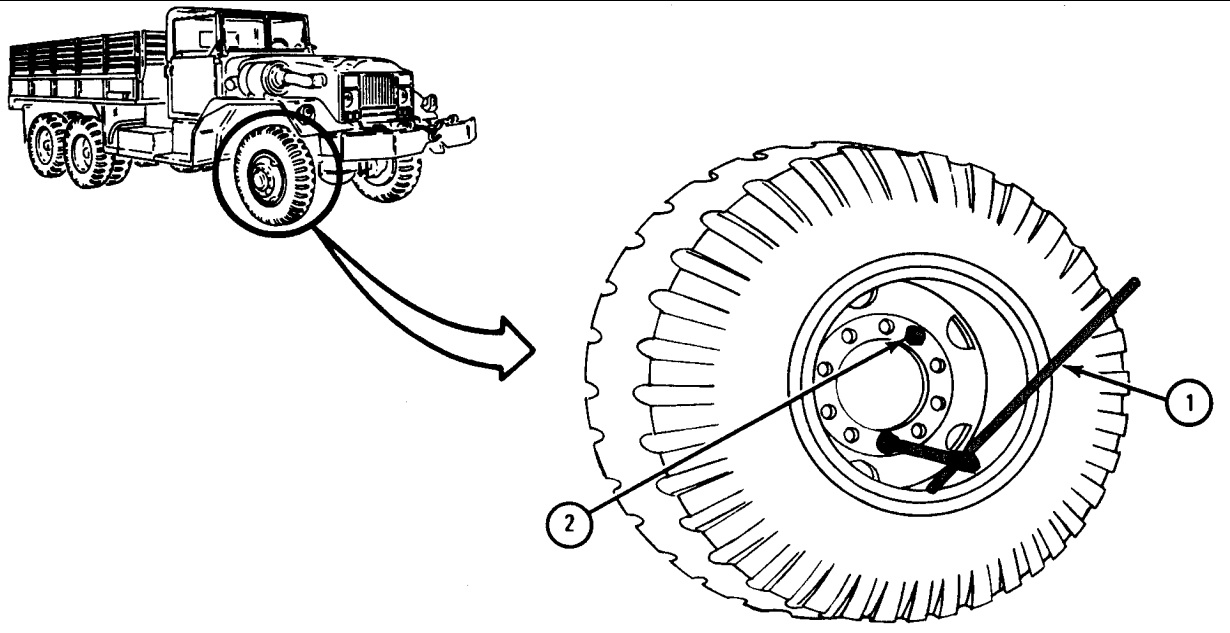
FRAME 1

1. Using wheel stud nut wrench (1), loosen 10 wheel stud nuts (2). Do not take off wheel stud nuts.

NOTE

Wheel stud nuts (2) on left side have left hand threads and must be turned to the right to loosen them. Wheel stud nuts on right side have right hand threads and must be turned to the left to loosen them.

GO TO FRAME 2



TA 053549

FRAME 2

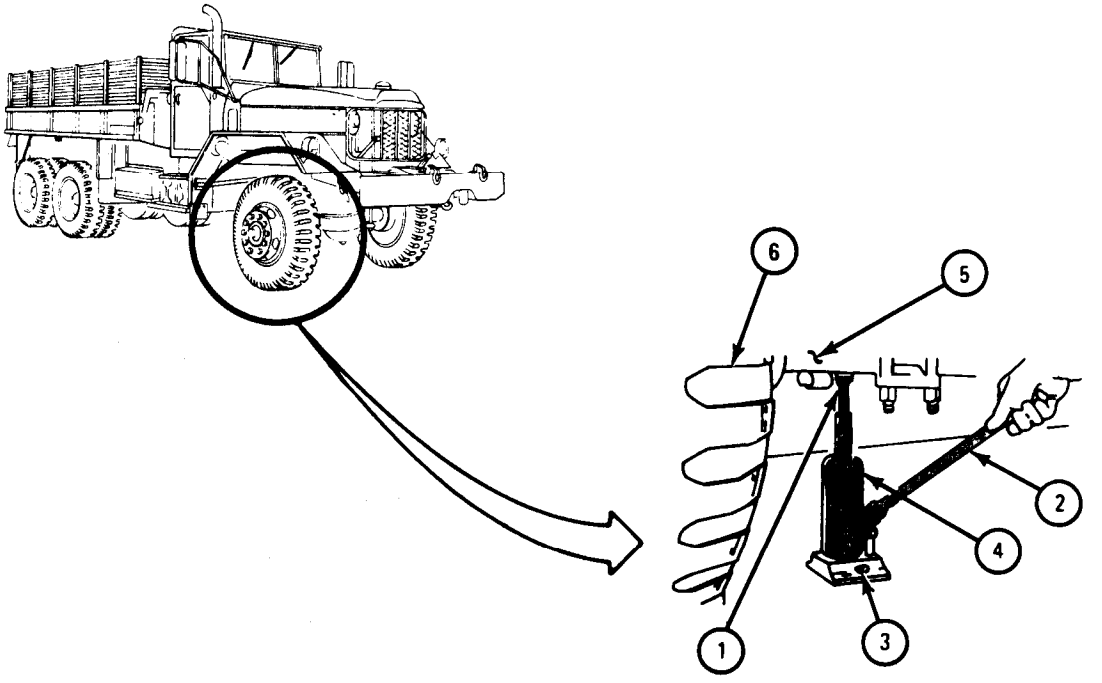
1. Turn out jack screw (1) about three inches.
2. Using slotted end of jack handle (2), turn bleeder valve (3) to right to close it.
3. Put hydraulic jack (4) under axle housing (5) near wheel assembly (6) to be taken off. Put jack handle (2) into hydraulic jack.

NOTE

Place a block between jack base and ground when truck is on loose or soft ground.

4. Move jack handle (2) up and down until wheel assembly (6) is off ground.

GO TO FRAME 3



TA 050720

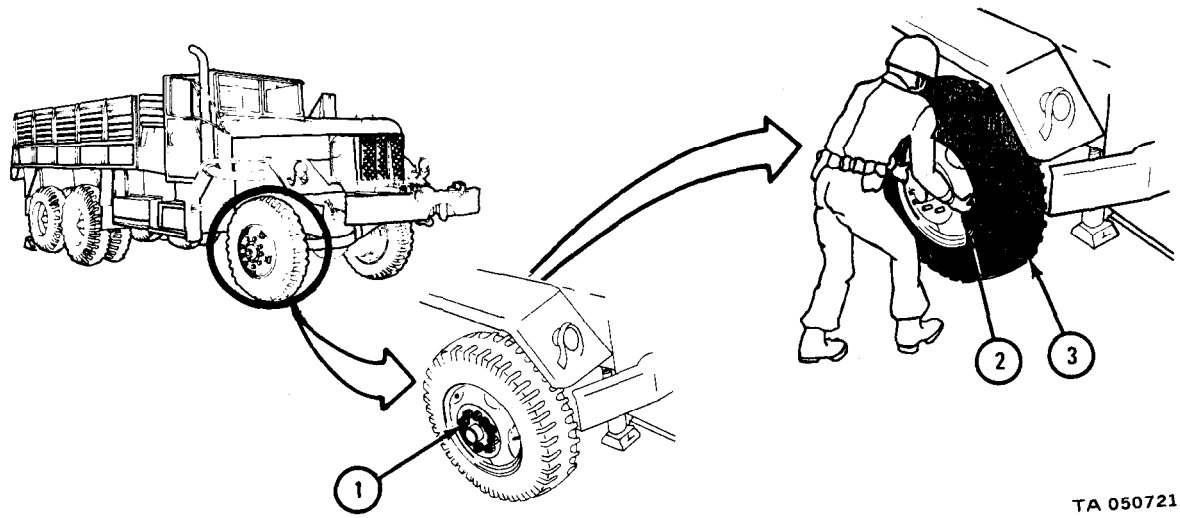
FRAME 3

CAUTION

Do not slide wheel assembly on threaded studs. Sliding wheel assembly may damage threads.

1. Using wheel stud nut wrench, unscrew and take off 10 wheel stud nuts (1).
2. Put fingers through vent holes (2) and grip wheel (3) as shown. Lift up on wheel, pull it toward you, and take it off.

END OF TASK



c. Replacement.

FRAME 1

1. Check that truck is jacked up at wheel to be replaced.

CAUTION

Do not slide wheel assembly on threaded studs. Sliding wheel assembly may damage threads.

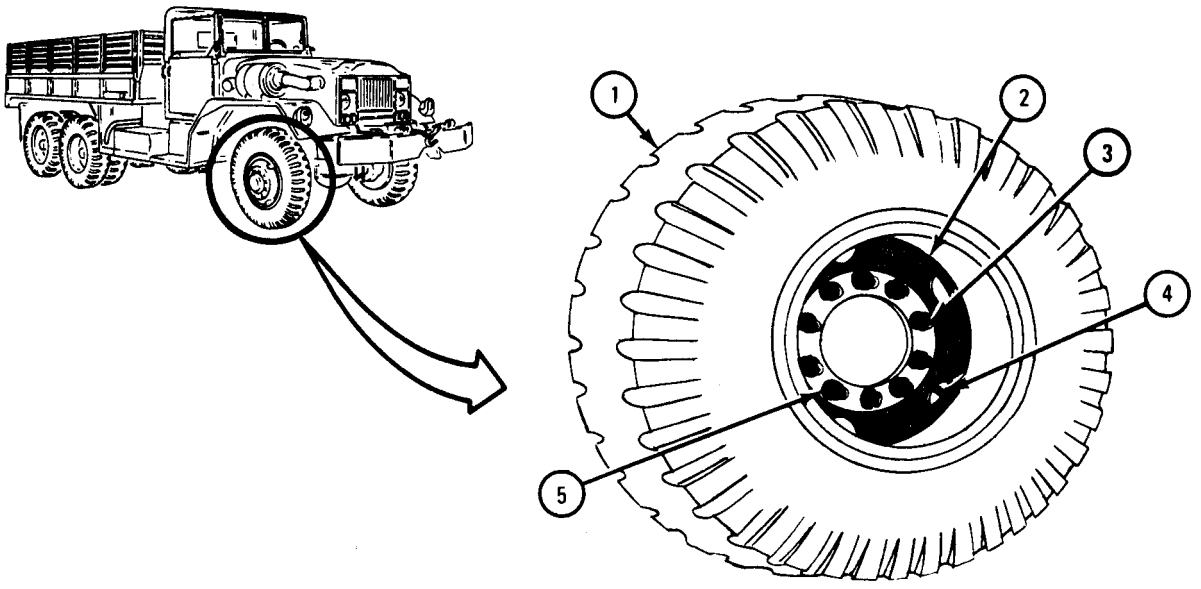
2. Put wheel (1) over hub and drum assembly (2) onto wheel studs (3).

NOTE

Tire threads of rear wheels must be matched as closely as possible and tire valves (4) must be across from each other as much as possible.

3. Screw on and finger tighten 10 wheel stud nuts (5).

GO TO FRAME 2

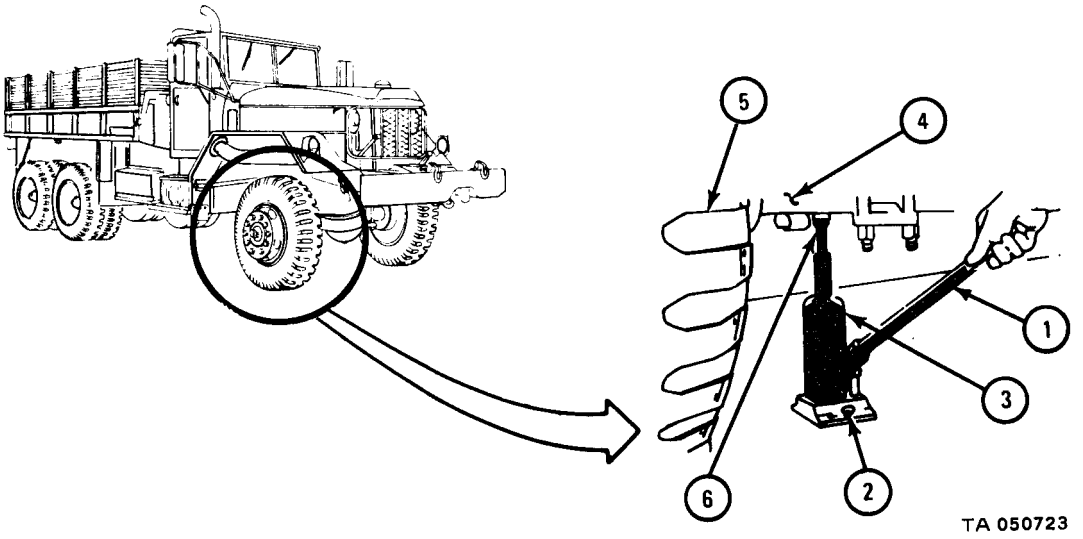


TA 053550

FRAME 2

1. Using slotted end of jack handle (1) turn bleeder valve (2) to left to open it.
2. Take hydraulic jack (3) from under axle housing (4) when tire (5) touches ground.
3. Turn jack screw (6) into hydraulic jack (3).

GO TO FRAME 3



FRAME 3

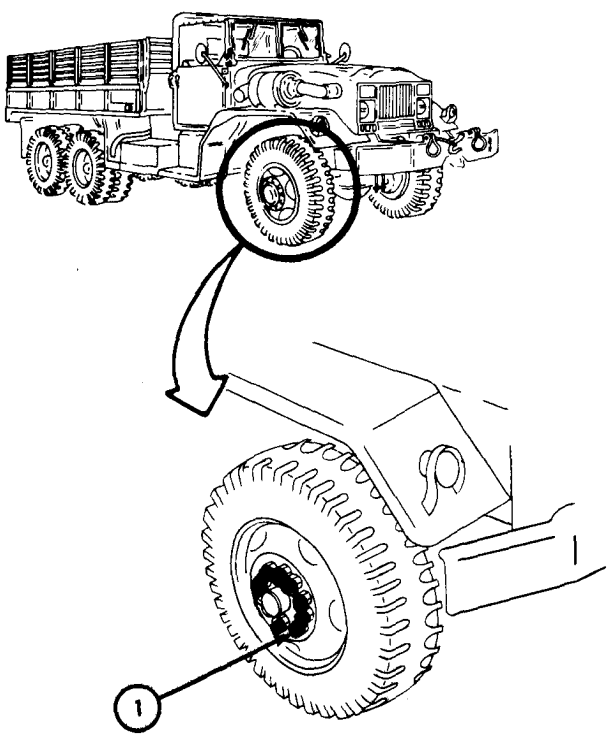
1. Using wheel stud nut wrench, tighten 10 wheel stud nuts (1) in the order shown. As soon as you can, take truck to organizational maintenance and have wheel stud nuts torqued to 450-500 pound-feet.

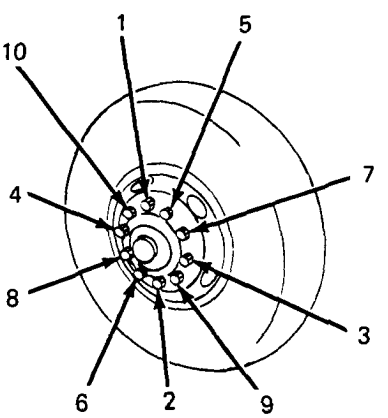
NOTE

Follow-on Maintenance Action Required:

1. If damaged wheel was replaced, take damaged wheel to organizational maintenance shop for repair or replacement as soon as possible.
2. If damaged wheel cannot be taken immediately to organizational maintenance, store damaged wheel on spare wheel mounting bracket. Refer to para 2-6.

END OF TASK





TIGHTENING ORDER

TA 102072

Section VI. SPECIAL PURPOSE KITS EQUIPMENT ITEMS MAINTENANCE

2-10. INSTALLATION AND REMOVAL OF BOW AND TARP KITS.

TOOLS: Cross-tip screwdriver (Phillips type)

SUPPLIES: Chalk

PERSONNEL: Two

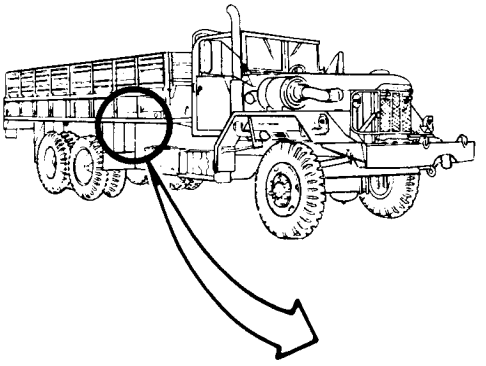
EQUIPMENT CONDITION: Truck parked, engine off, handbrake set.

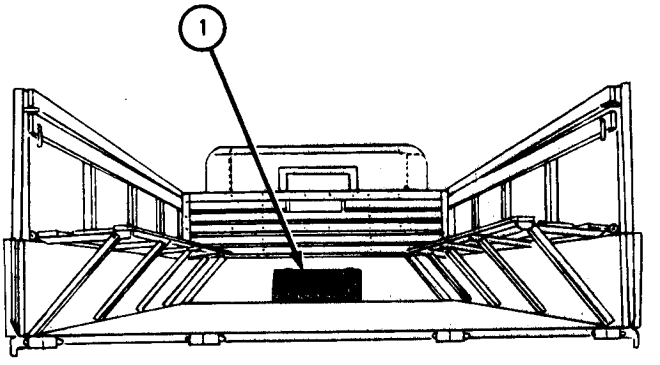
CAUTION

Do not fold or stow paulin or end curtains if they are wet. When folding, make sure surface they are spread on is dry. Canvas can be damaged if it is stowed while wet.

a. Installation of Bow Assemblies:

FRAME 1
1. Take corner and stake assemblies and bows (1) out of cargo bed. GO TO FRAME 2



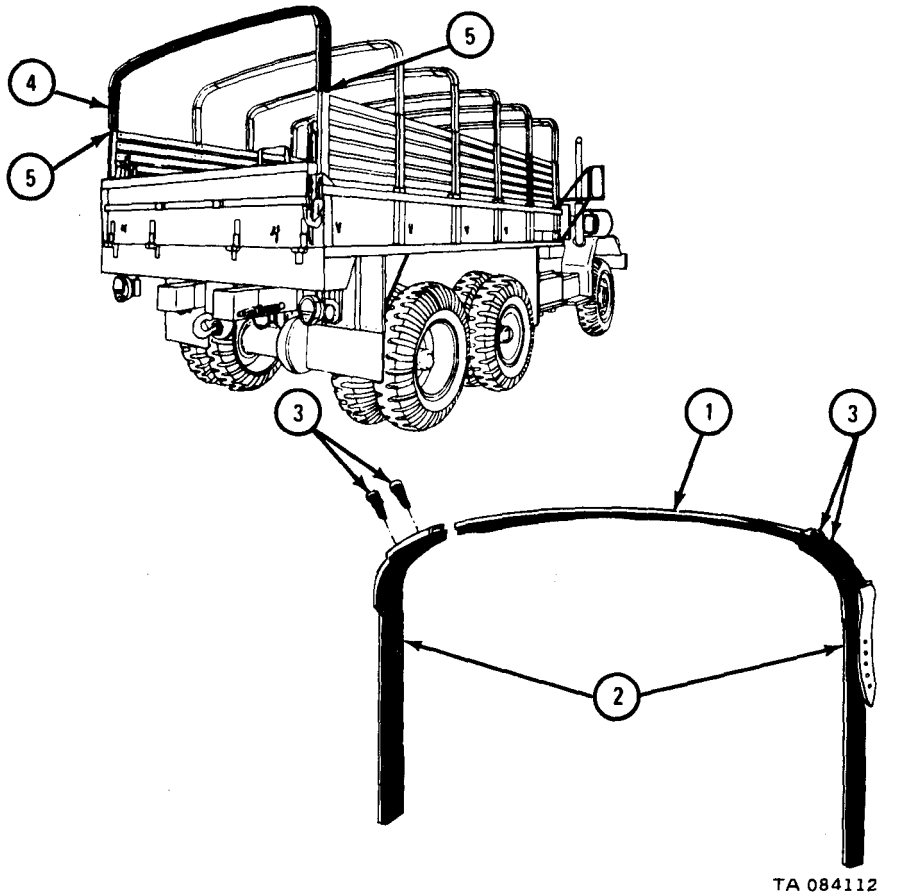


TA 084111

FRAME 2

1. Put bow (1) in place in two corner and stake assemblies (2) and align holes.
2. Using screwdriver, screw in and tighten two screws (3) on each corner and stake assembly (2).
3. Put bow assembly (4) in place in sockets (5).
4. Do steps 1 through 3 again for other five bow assemblies (4).

END OF TASK



b. Installation of End Curtains.

FRAME 1

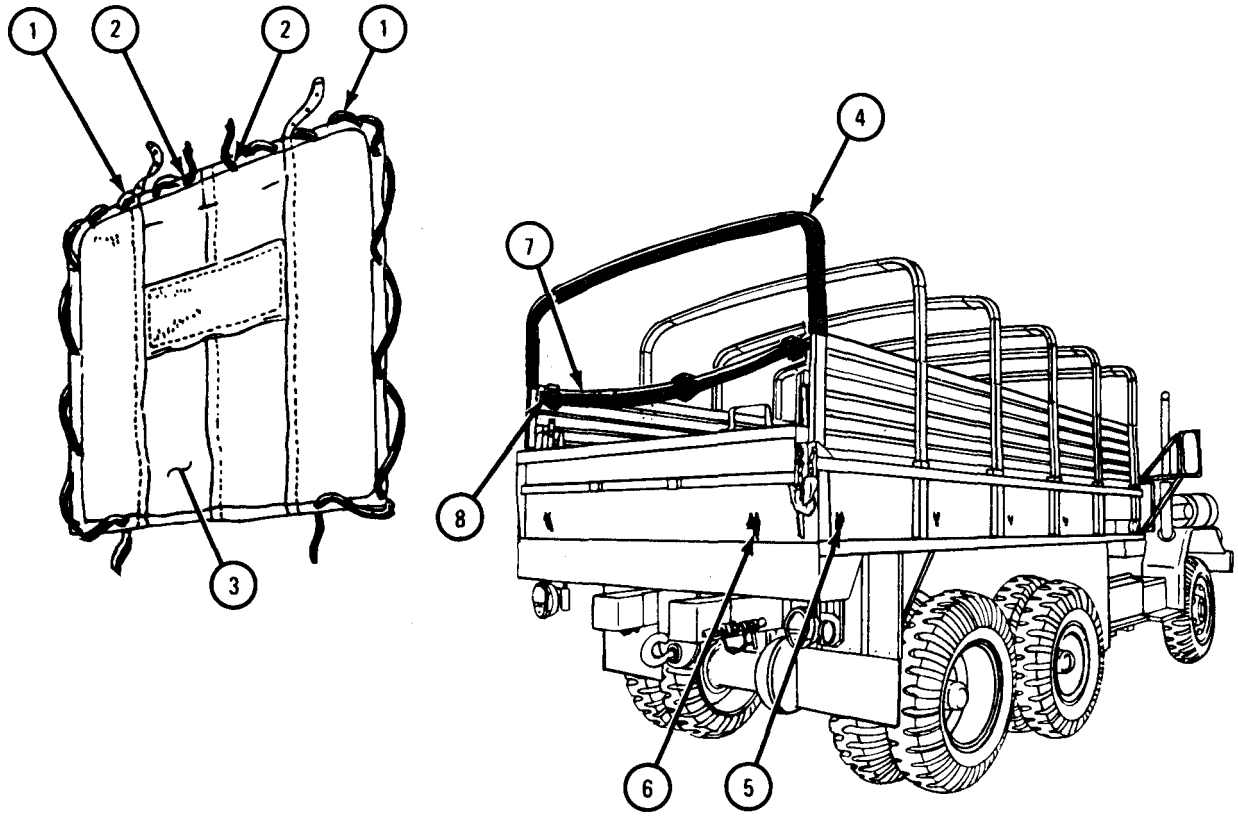
1. Put two lashing ropes (1) through two eyelets (2) on rear end curtain (3) and pull them through until knots at ends of lashing ropes are against eyelets.
2. Put rear end curtain (3) in place on bow (4).
3. Lace on lashing rope (1) around bow (4) and through all eyelets (2) on one side of rear end curtain (3). Do the same thing with other lashing rope.
4. Loop lashing rope (1) around hook (5) and pull lashing rope tight and tie it onto hook (6). Do the same thing with other lashing rope.

NOTE

Do not tie or lash bottom of rear end curtain when carrying passengers.

5. Join safety strap (7) to two eyelets (8) on top of side rail ends.
6. Do steps 1 through 4 again for front end curtain.

END OF TASK



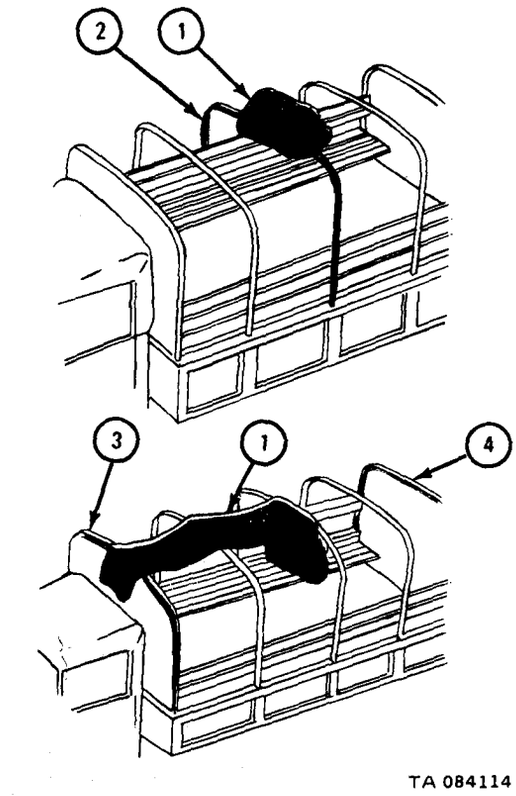
TA 084113

c. Installation of Paulin.

FRAME 1

Soldiers A and B	1.	Put paulin (1) on middle of center bow (2) with the word FRONT on top and open end facing to rear of truck as shown.
Soldier A	2.	Hold paulin (1) so it does not fall or slide.
Soldier B	3.	Unfold end of paulin (1) marked FRONT to front bow (3) and let it hang over bow as shown.
	4.	Hold paulin (1) in place on bows so that it does not move.
Soldier A	5.	Unfold end of paulin marked REAR to rear bow (4) and let it hang over bow.

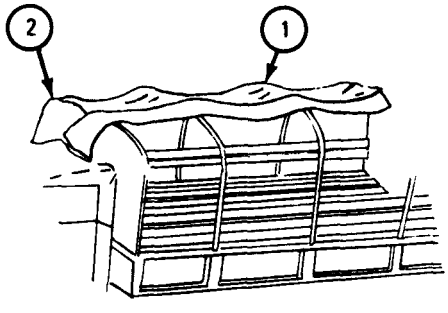
GO TO FRAME 2

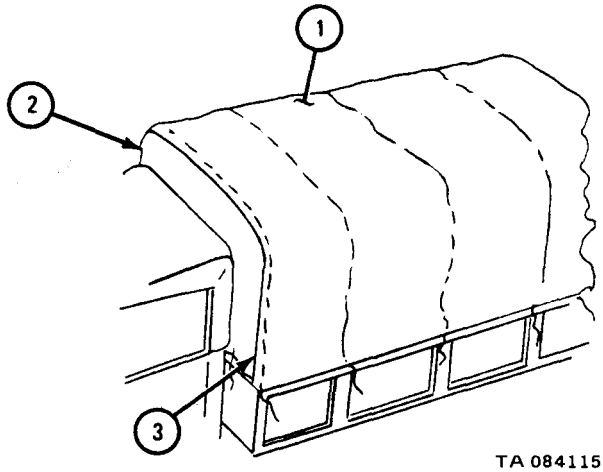


TA 084114

FRAME 2

Soldier A 1. Hold paulin (1) so that it does not move on bows.
Soldier B 2. Unfold side (2) of paulin (1), then unfold side (3).
GO TO FRAME 3





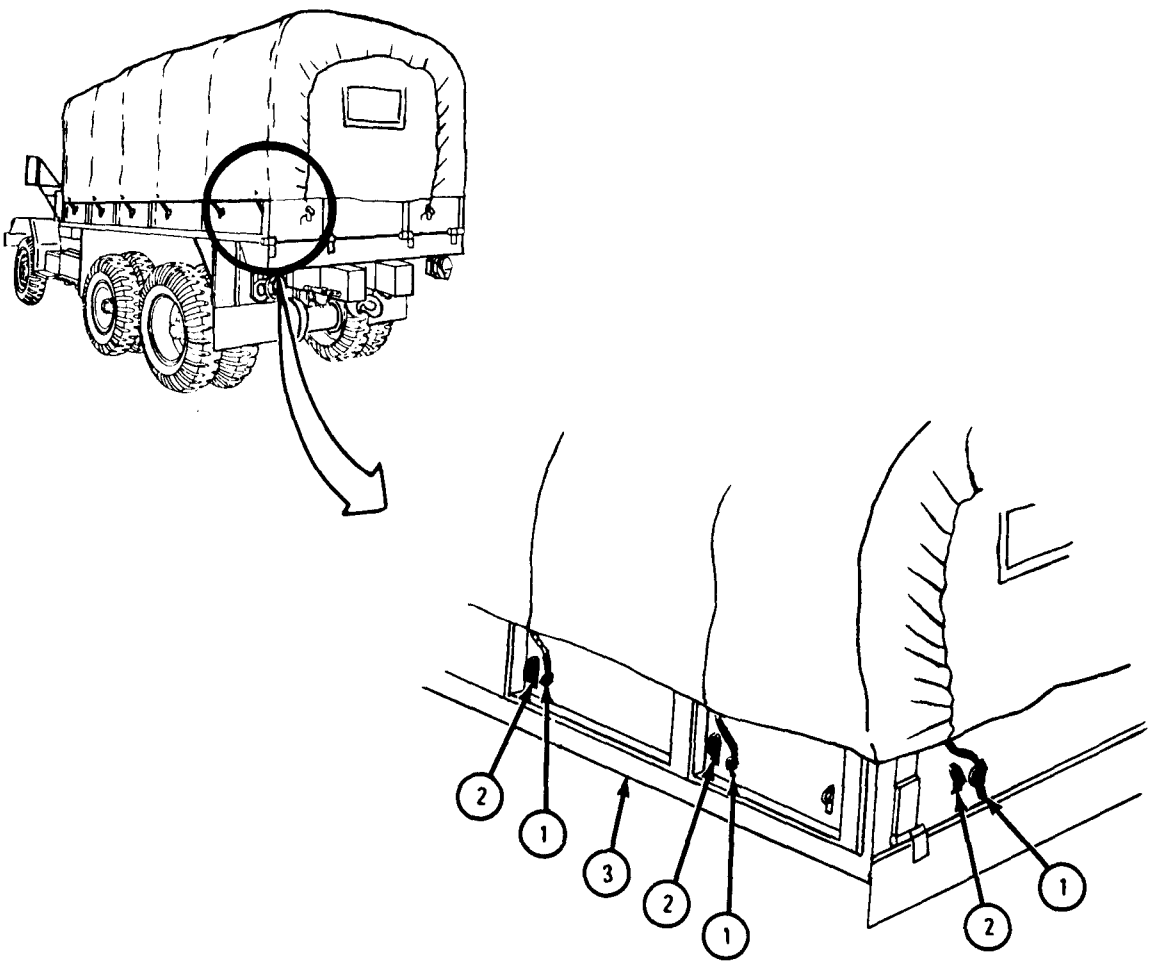
FRAME 3

CAUTION

If lashing ropes are tied too tightly, paulin will tear.

1. Pull all lashing ropes (1) until they are snug and tie ropes to hooks (2) on four sides of truck body (3).

END OF TASK

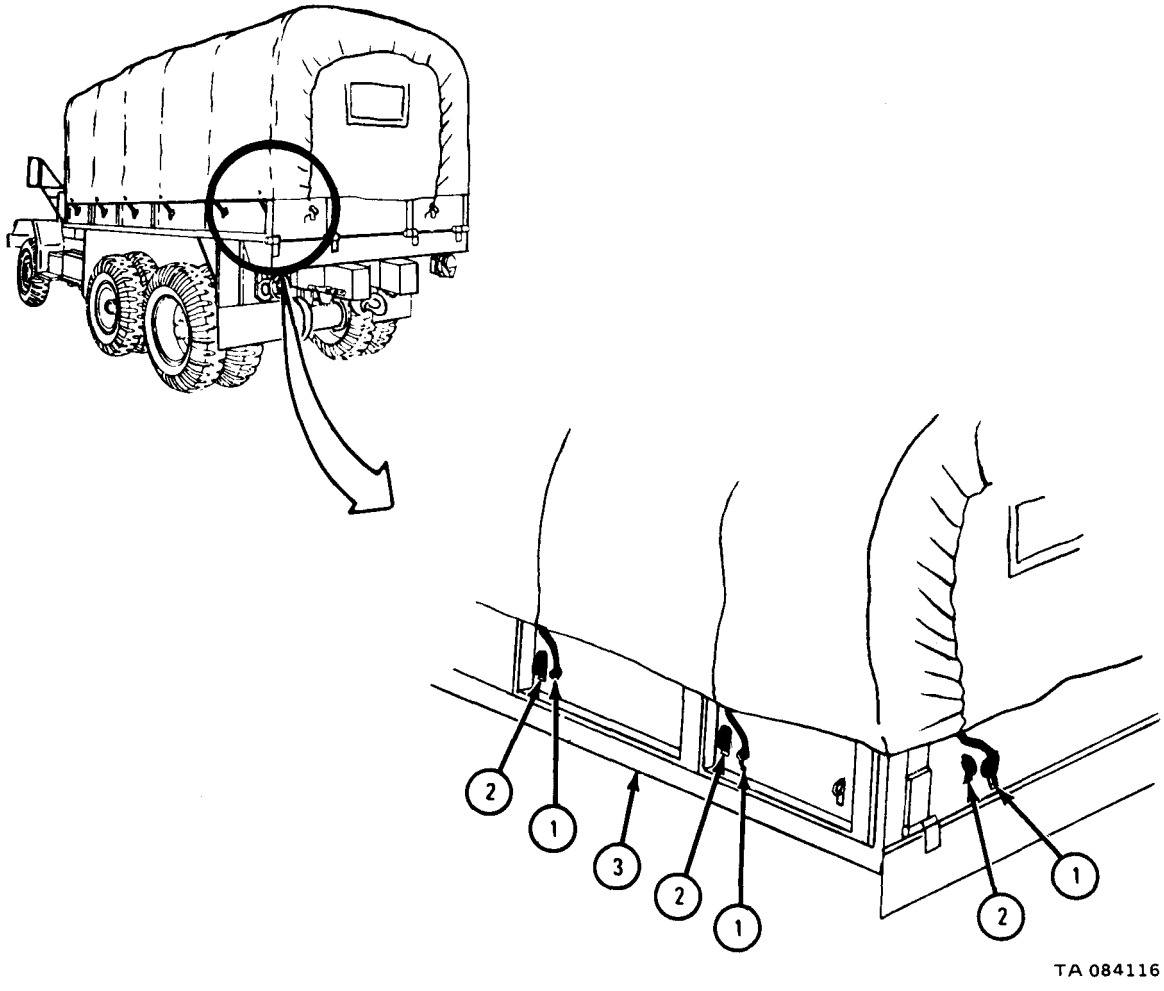


d. Removal of Paulin.

FRAME 1

1. Untie all lashing ropes (1) from hooks (2) on four sides of truck body (3).

GO TO FRAME 2

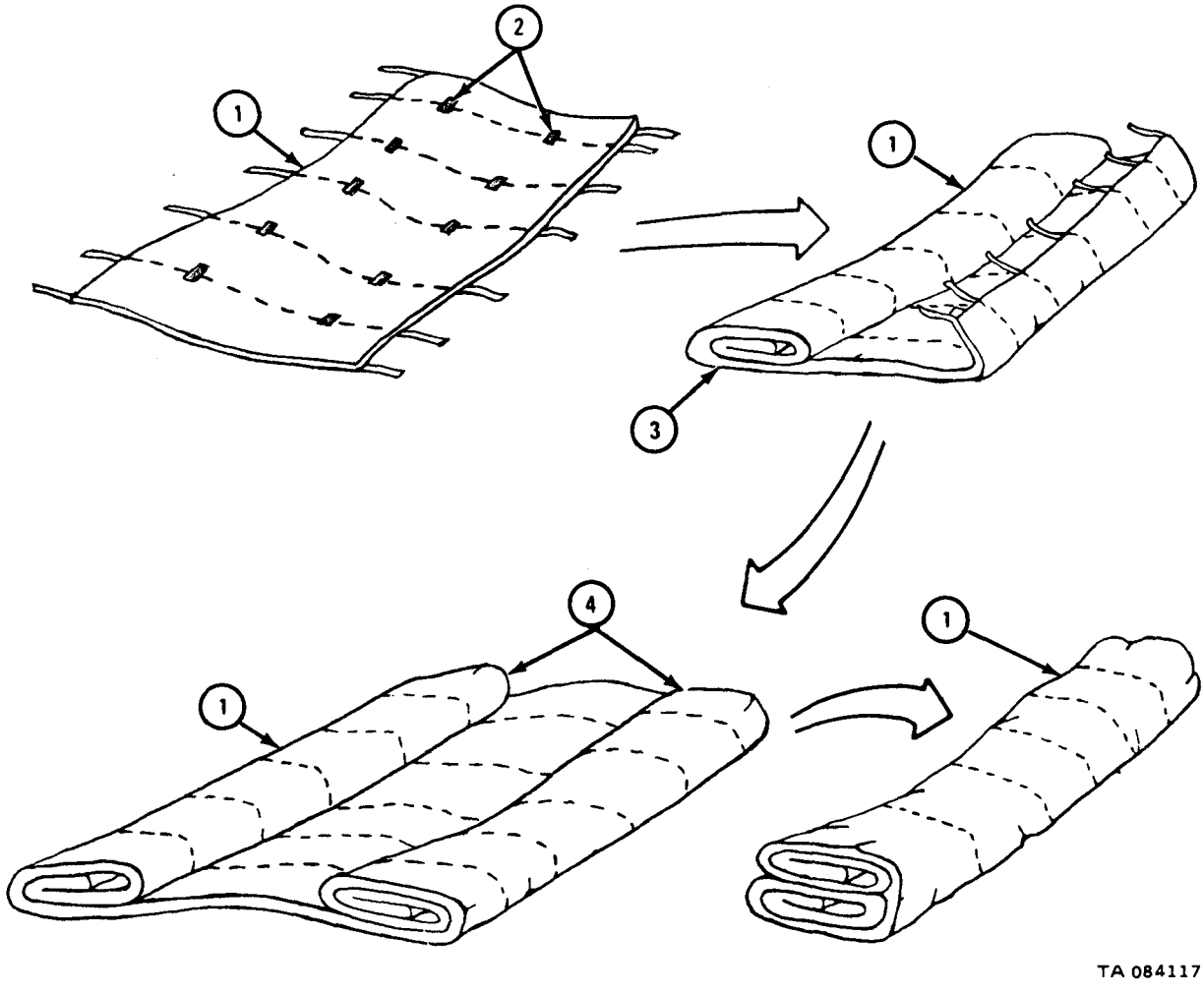


FRAME 2

Soldiers A and B

1. Take paulin (1) off truck and spread it out on a flat dry surface, with buckles (2) up.
2. Starting from one side of paulin (1), fold it to center, making each fold (3) about two feet wide.
3. Do step 2 again on other side of paulin (1) until two sides (4) meet.
4. Fold one side (4) of paulin (1) over the other.

GO TO FRAME 3

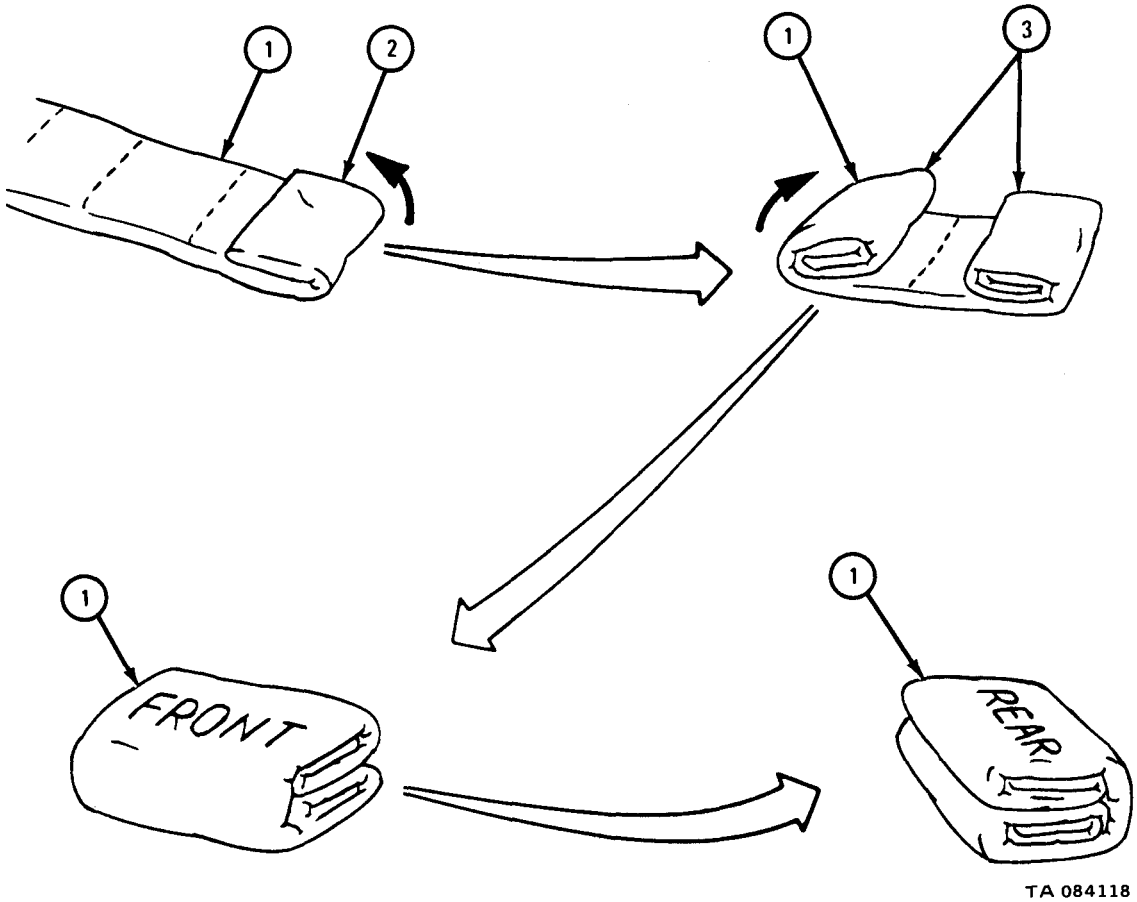


FRAME 3

Soldiers A and B

1. Starting from front or back of paulin (1), fold end to center, making each fold (2) about two feet wide.
2. Do step 1 again on the other side of paulin (1) until two ends (3) meet. Fold one end over the other.
3. Put front end of paulin (1) up. Using chalk, mark FRONT on paulin. Turn paulin over and mark REAR on the other side.
4. Stow paulin (1).

END OF TASK

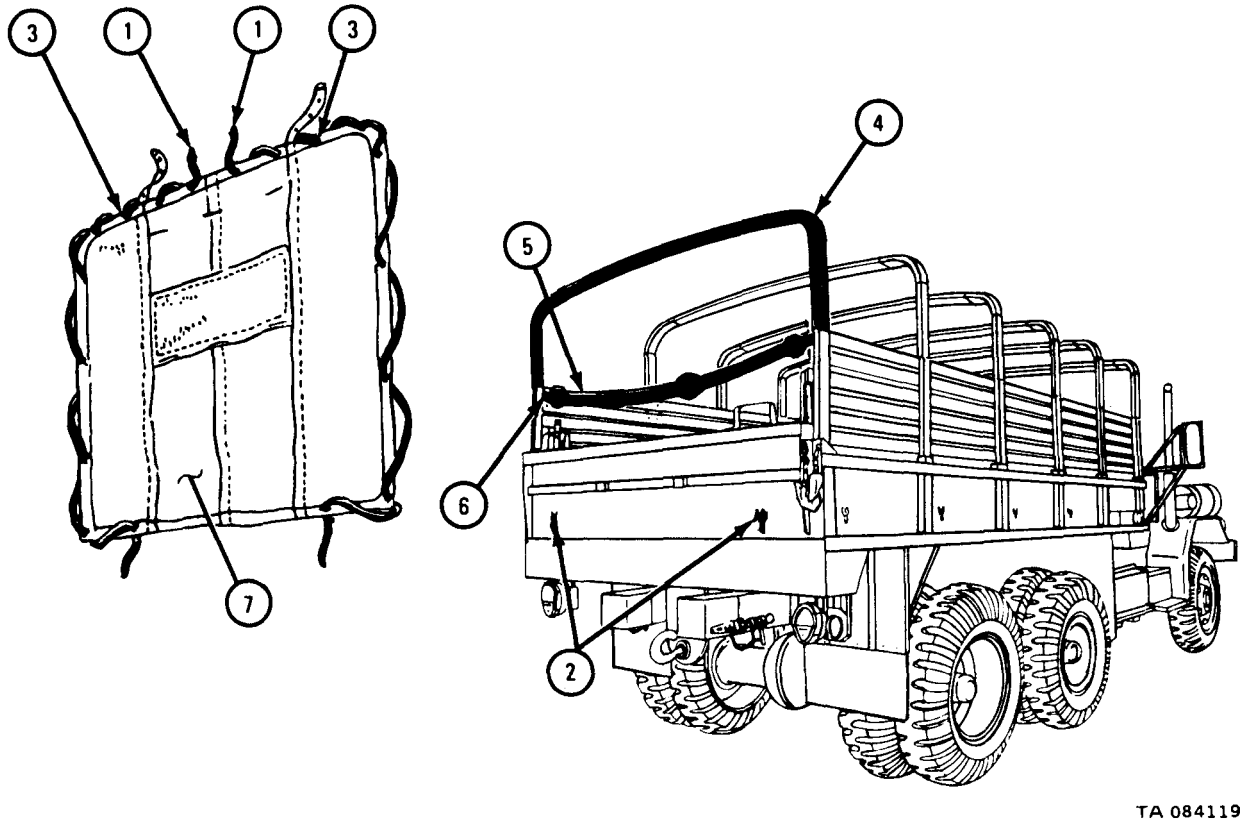


e. Removal of End Curtains.

FRAME 1

1. Untie two lashing ropes (1) from two hooks (2).
2. Unwind lashing ropes (1) from rear end curtain eyelets (3) and end bow (4) and take out two lashing ropes.
3. Take safety strap (5) out of two eyelets (6). Put end curtain (7) on a flat dry surface and put coiled ropes (1) on rear end curtain. Fold end curtain to about same size as folded paulin.
4. Do steps 1 through 3 again for front end curtain.
5. Stow end curtains with paulin.

END OF TASK

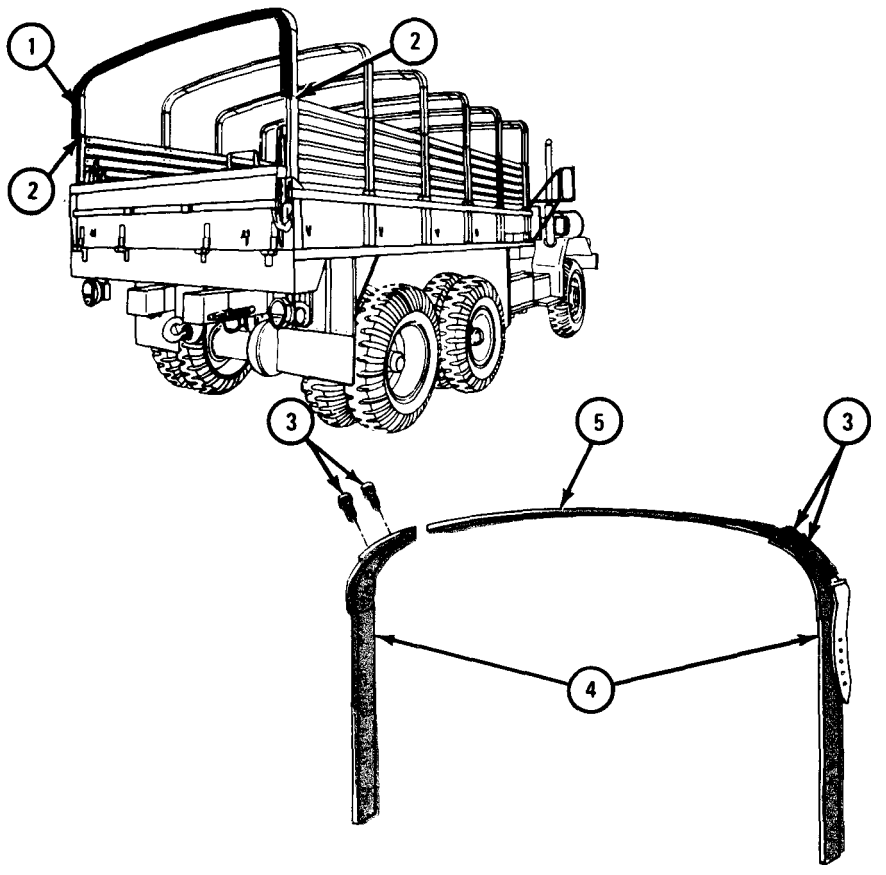


f. Removal of Bow Assemblies.

FRAME 1

1. Lift bow assembly (1) out of two sockets (2).
2. Using phillip screwdriver, unscrew and take out two screws (3) from two corners and stake assemblies (4).
3. Pull bow (5) out of two corner and stake assemblies (4).
4. Do steps 1 through 3 again for other five bow assemblies (1).

GO TO FRAME 2

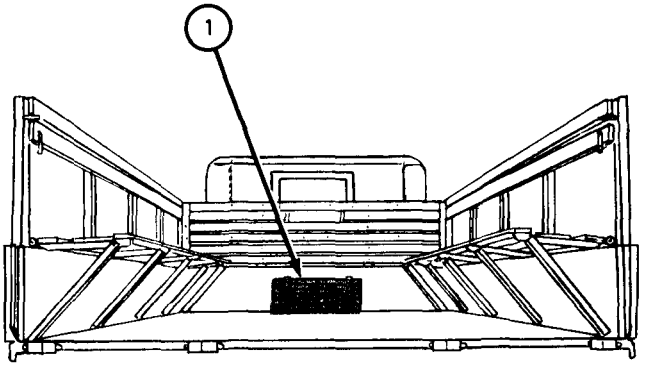


TA 084120

FRAME 2

1 . Stow corner and stake assemblies (1) and bows on cargo bed.

END OF TASK



TA 084121

By Order of the Secretaries of the Army and Air Force:

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TM 9-2320-211-10-4	5 Sept. 80	OPERATOR MAINTENANCE MANUAL

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PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO
2-2	2-3 a		
2-8	2-4 a		
2-32	2-4 c		

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

FRAME 1, step 1 reads "Turn two side panel latches (1)." Should read "Turn two side panel latches (1) to the up position."

FRAME 1, change illustration callouts. Reason: callouts for cover (2) and air cleaner housing (3) are reversed.

FRAME 3, Follow-on Maintenance Action, step 2 refers to para 2-8. Should refer to para 2-6.

SAMPLE

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SIGN HERE
Jane Idone

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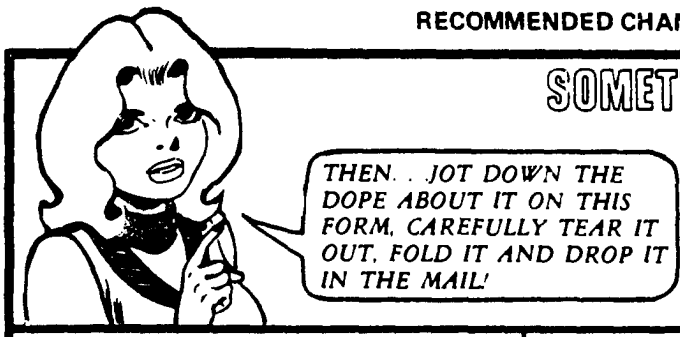
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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches
1 Kilo Meter = 1,000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces
1 Kilogram = 1,000 Grams = 2.2 Lb
1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1,000 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 = 1,000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

TEMPERATURE

5/9 (°F -32) = °C
212° Fahrenheit is equivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5 C° +32 = 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-Feet	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
Millimeters	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-Feet	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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