ARMY TM 9-2320-272-24-2
AIR FORCE TO 36A12-1C-1155-2-2

This publication supersedes TM 9-2320-272-20-1, October 1985, and changes 1 through 4; TM 9-2320-272-20-2, October 1985, and changes 1 through 3; TM 9-2320-272-34- 1, June 1986, and changes 1 through 2; TM 9-2320-272-34-2, June 1986, and changes 1 and 2; and TM 9-2320-358-24&P, October 1992.

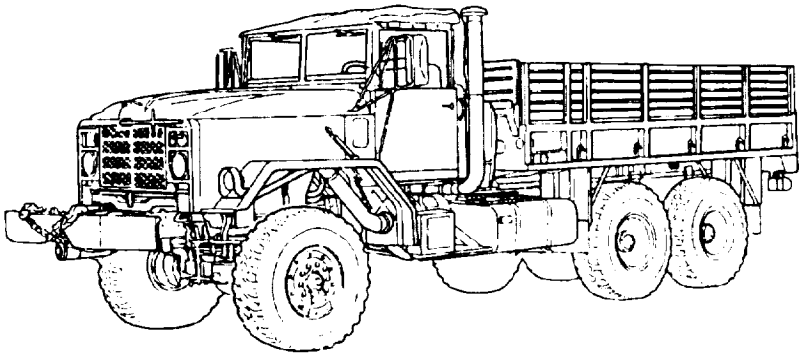
UNIT MAINTENANCE (Condt) 3-615

DIRECT SUPPORT (DS) MAINTENANCE 4-1

TECHNICAL MANUAL
VOLUME 2 OF 4

UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL FOR

TRUCK, 5-TON, 6X6, M939, M939A1, M939A2 SERIES TRUCKS (DIESEL)



TRUCK, CARGO: 5-TON, 6X6, DROPSIDE,
M923 (2320-01-050-2084) (EIC: BRY); M923A1 (2320-01-206-4087) (EIC: BSS); M923A2 (2320-01-230-0307) (EIC: BS7); M925 (2320-01-047-8769) (EIC: BRT); M925Al (2320-01-206-4088) (EIC: BST); M925A2 (2320-01-230-0308) (EIC: BS8);

TRUCK, CARGO: 5-TON, 6X6 XLWB,
M927 (2320-01-047-8771) (EIC: BRV); M927A1 (2320-01-206-4089) (EIC: BSW); M927A2 (2320-01-230-0309) (EIC: BS9); M928 (2320-01-047-8770) (EIC: BRU); M928A1 (2320-01-206-4090) (EIC: BSX); M928A2 (2320-01-230-0310) (EIC: BTM);

TRUCK, DUMP: 5-TON, 6X6,
M929 (2320-01447-8756) (EIC: BTH); M929Al (2320-01-206-4079) (EIC: BSY); M929A2 (2320-01-230-0305) (EIC: BTN); M930 (2320-01-047-8755) (EIC: BTG); M930Al (2320-01-206-4080) (EIC: BSZ); M930A2 (2320-01-230-0306) (EIC: BTO);

TRUCK, TRACTOR: 5-TON, 6X6,
M931 (2320-01-047-8753) (EIC: BTE); M931Al (2320-01-206-4077) (EIC: BS2); M931A2 (2320-01-230-0302) (EIC: BTP); M932 (2320-01-047-8752) (EIC: BTD); M932Al (2320-01-205-2684) (EIC: BS5); M932A2 (2320-01-230-0303) (EIC: BTQ);

TRUCK, VAN, EXPANSIBLE: 5-TON, 6X6,
M934 (2320-01-047-8750) (EIC: BTB); M934A1 (2320-01-205-2682) (EIC: BS4); M934A2 (2320-01-230-0300) (EIC: BTR);

TRUCK, MEDIUM WRECKER: 5-TON, 6X6,
M936 (2320-01-047-8754) (EIC: BTF); M936A1 (2320-01-206-4078) (EIC: BS6); M936A2 (2320-01-230-0304) (EIC: BTT).

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

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

JUNE 1998

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NO. 9-2320-272-24-2

TECHNICAL ORDER
NO. 36A12-1C-1155-2-2

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
Washington, D.C., 30 JUNE 1998

TECHNICAL MANUAL

VOLUME 2 OF 4

UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

FOR

TRUCK, 5-TON, 6X6, M939, M939A1, M939A2 SERIES TRUCKS (DIESEL)

TRUCK	MODEL	EIC	NSN WITHOUT WINCH	NSN WITH WINCH
Cargo, Dropside	M923	BRY	2320-01-050-2084	
Cargo, Dropside	M923A1	BSS	2320-01-206-4087	
Cargo, Dropside	M923A2	BS7	2320-01-230-0307	
Cargo, Dropside	M925	BRT		2320-01-047-8769
Cargo, Dropside	M925A1	BST		2320-01-206-4088
Cargo, Dropside	M925A2	BS8		2320-01-230-0308
Cargo	M927	BRV	2320-01-047-8771	
Cargo	M927A1	BSW	2320-01-206-4089	
Cargo	M927A2	BS9	2320-01-230-0309	
Cargo	M928	BRU		2320-01-047-8770
Cargo	M928A1	BSX		2320-01-206-4090
Cargo	M928A2	BTM		2320-01-230-0310
Dump	M929	BTH	2320-01-047-8756	
Dump	M929A1	BSY	2320-01-206-4079	
Dump	M929A2	BTN	2320-01-230-0305	
Dump	M930	BTG		2320-01-047-8755
Dump	M930A1	BSZ		2320-01-206-4080
Dump	M930A2	BTO		2320-01-230-0306
Tractor	M931	BTE	2320-01-047-8753	
Tractor	M931A1	BS2	2320-01-206-4077	
Tractor	M931A2	BTP	2320-01-230-0302	
Tractor	M932	BTD		2320-01-047-8752
Tractor	M932A1	BS5		2320-01-205-2684
Tractor	M932A2	BTQ		2320-01-230-0303
Van, Expansible	M934	BTB	2320-01-047-8750	
Van, Expansible	M934A1	BS4	2320-01-205-2682	
Van, Expansible	M934A2	BTR	2320-01-230-0300	
Medium Wrecker	M936	BTF		2320-01-047-8754
Medium Wrecker	M936A1	BS6		2320-01-206-4078
Medium Wrecker	M936A2	BTT		2320-01-230-0304

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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual, directly to: Director, Armament and Chemical Acquisition and Logistics Activity, ATTN: AMSTA-AC-NML, Rock Island, IL 61299-7630. A reply will be furnished to you. You may also provide DA Form 2028-2 information via datafax or e-mail:

- E-mail:amsta-ac-nml.@ria-emh2.army.mil
- Fax: DSN 783-0726 or commercial (309) 782-0726

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*This publication supersedes TM 9-2320-272-20-1,24 October 1985, and changes 1 through 4; TM 9-2320-272-20-2,25 October 1985, and changes 1 through 3; TM 9-2320-272-34-1, 10 June 1986, and changes 1 through 2; TM 9-2320-272-34-2 10 June 1986, and changes 1 and 2; and TM 9-2320-358-24&P, 21 October 1992.

This publication is published in four volumes. TM 9-2320-272-24-1 contains chapters 1,2, and 3 (though section IX). TM 9-2320-272-24-2 contains chapters 3 (sections X through XVI) and 4 (sections I through III). TM 9-2320-272-24-3 contains chapter 4 (sections IV through XVI). TM 9-2320-272-24-4 contains chapters 5 and 6 and appendices A through H. Volume 1 contains a table of contents for the entire manual. Volumes 1,2, and 3 contain an alphabetical index covering tasks found in their respective volume. Volume 4 contains an alphabetical index covering all tasks found in the entire manual.

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Section X. WHEELS, HUBS, DRUMS, AND STEERING MAINTENANCE

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3-218. WHEEL AND TIRE (M939) ROTATION

THIS TASK COVERS:

a. Wheel and Tire Removal
b. Inspection
c. Wheel and Tire Rotation
d. Inner Rear Wheel Installation
e. Outer Rear Wheel Installation
f. **Front Wheel Installation**

INITIAL SETUP:

APPLICABLE MODELS
M939

SPECIAL TOOLS
Inner wheel socket (Appendix E, Item 77)

TOOLS
General mechanic's tool kit (Appendix E, Item 1)
Torque wrench (Appendix E, Item 145)
Torque multiplier

REFERENCES (TM)
TM 9-2320-272-10
TM 9-2320-272-24P
TM 9-2610-200-24

EQUIPMENT CONDITION
- Parking brake set (TM 9-2320-272-10).
- Spare tire removed (TM 9-2320-272-10).

GENERAL SAFETY INSTRUCTIONS
Ensure inner and outer lug nuts are properly torqued.

a. Wheel and Tire Removal

1. Loosen sixty stud nuts (3) on four outside rear wheels (5) and two front wheels (2).
2. Using hydraulic jack, raise vehicle and place two jack stands under rear-rear axle (6), two jack stands under forward-rear axle (4), and two jack stands under front axle (1).

NOTE

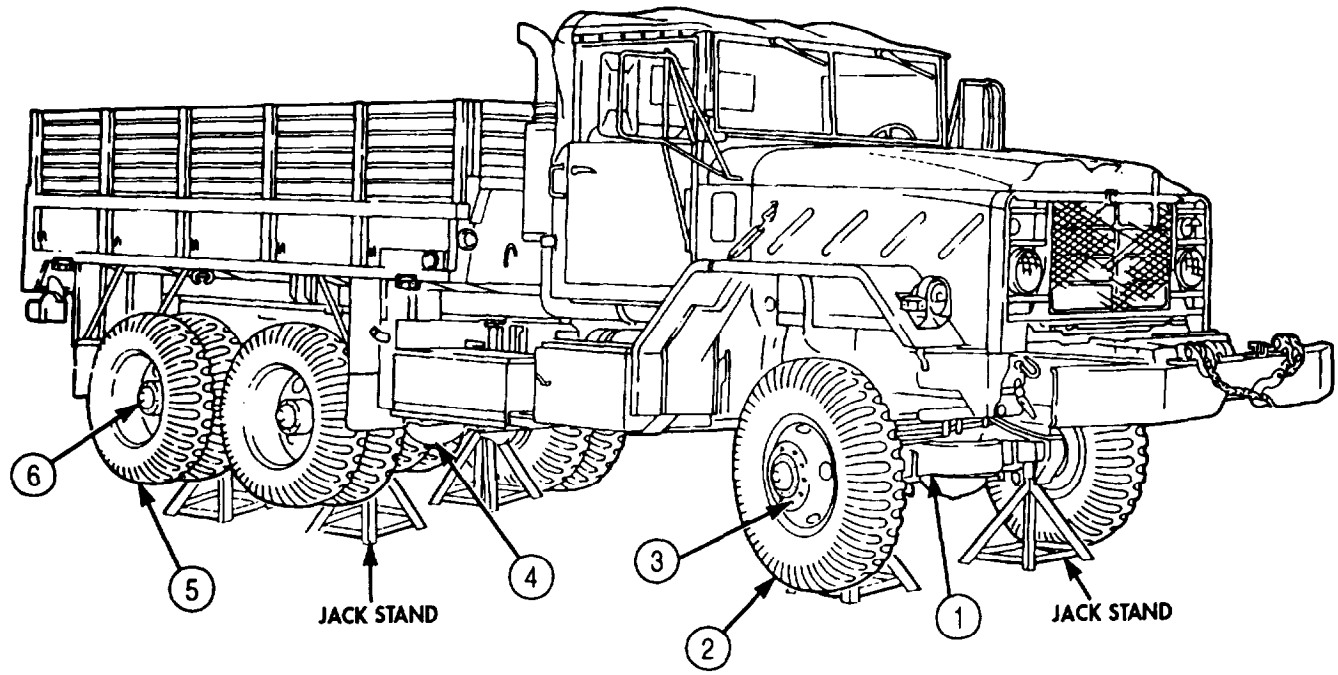
Tag wheels for rotation.

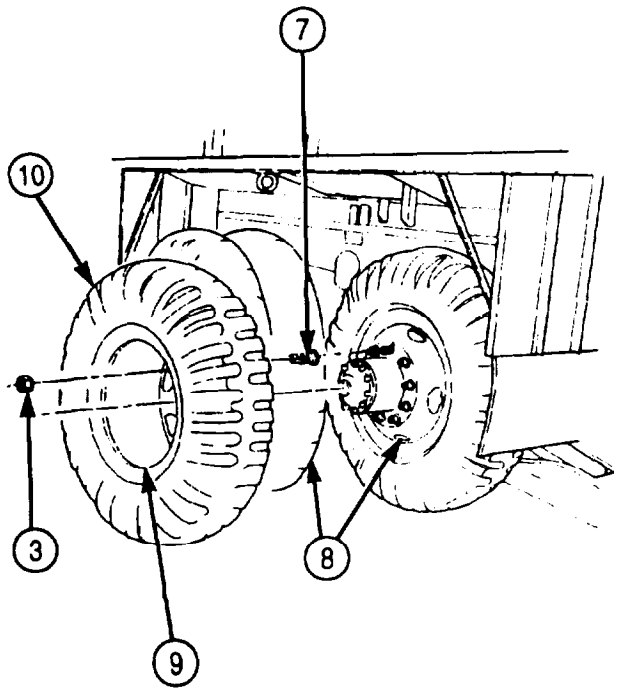
3. Remove sixty stud nuts (3), two front wheels (2), and four outside rear wheels (5) from vehicle.
4. Using inner wheel socket, remove forty inner wheel spacer nuts (7) and four inside rear wheels (8) from vehicle.

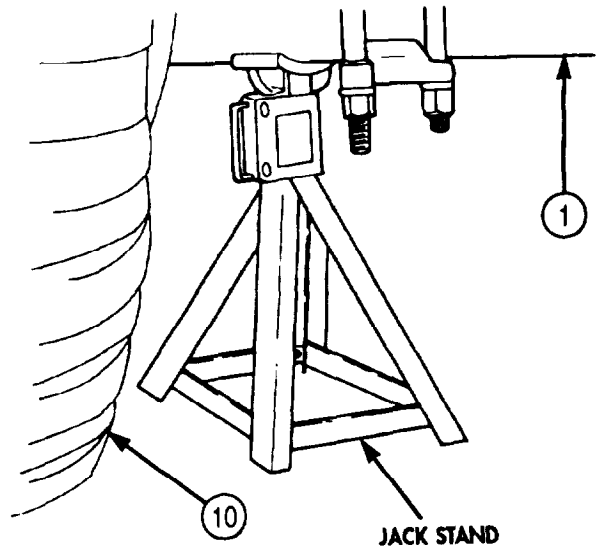
b. Inspection

1. Inspect wheel rims (9) for cracks, stud hole damage, and bends. Replace wheel rims (9), if cracked, damaged, or bent.
2. Inspect tires (10) for tread wear (TM 9-2610-200-24).

3-218. WHEEL AND TIRE (M939) ROTATION (Contd)







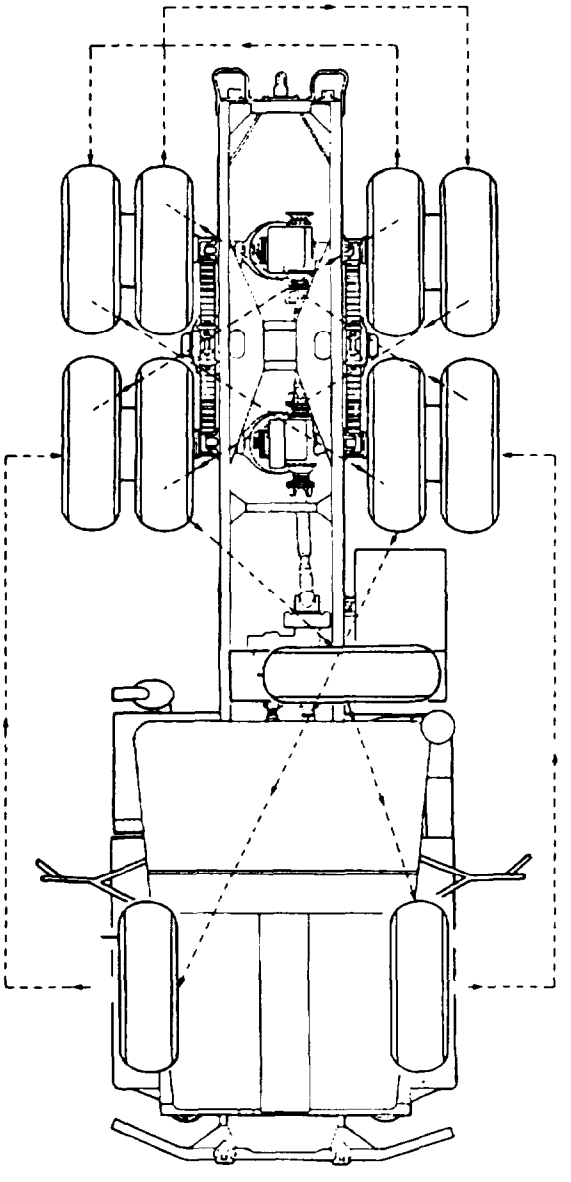
3-218. WHEEL AND TIRE (M939) ROTATION (Contd)

c. Wheel and Tire Rotation

NOTE

- Wheels and tires are rotated the same for all M939 series vehicles.
- To maintain tread depth and pattern of dual tires, tires must be rotated to match tread wear as closely as possible. (TM 9-2610-200-24.)

Rotate wheels and tires as shown.



3-218. WHEEL AND TIRE (M939) ROTATION (Contd)

d. Inner Rear Wheel Installation

NOTE

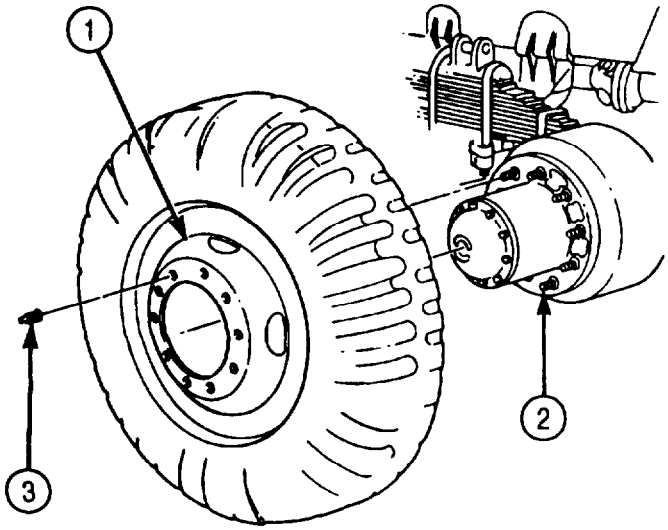
- Ensure inner rear wheels are installed so valve stems to both rear wheels are accessible.
- Start all threaded nuts by hand to prevent cross-threading. Left wheels have left-hand threaded wheel studs and right wheels have right-hand threaded wheel studs.

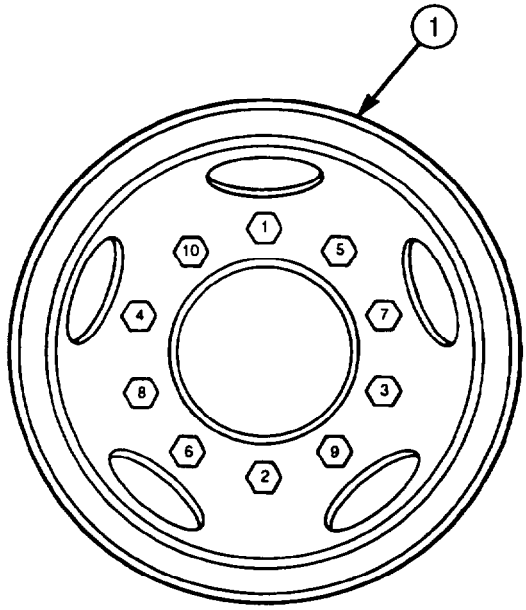
1. Position four rear inner dual wheels (1) over wheel hub studs (2).

WARNING

Apply proper torque to inner lug nuts. Failure to do so may result in injury to personnel or damage to equipment.

2. Using inner wheel socket, install four rear inner dual wheels (1) on wheel hub (2) with forty inner wheel spacer nuts (3).
3. Tighten spacer nuts (3) 325-355 lb-ft (441-481 N•m) in sequence shown.





TIGHTENING SEQUENCE

3-218. WHEEL AND TIRE (M939) ROTATION (Contd)

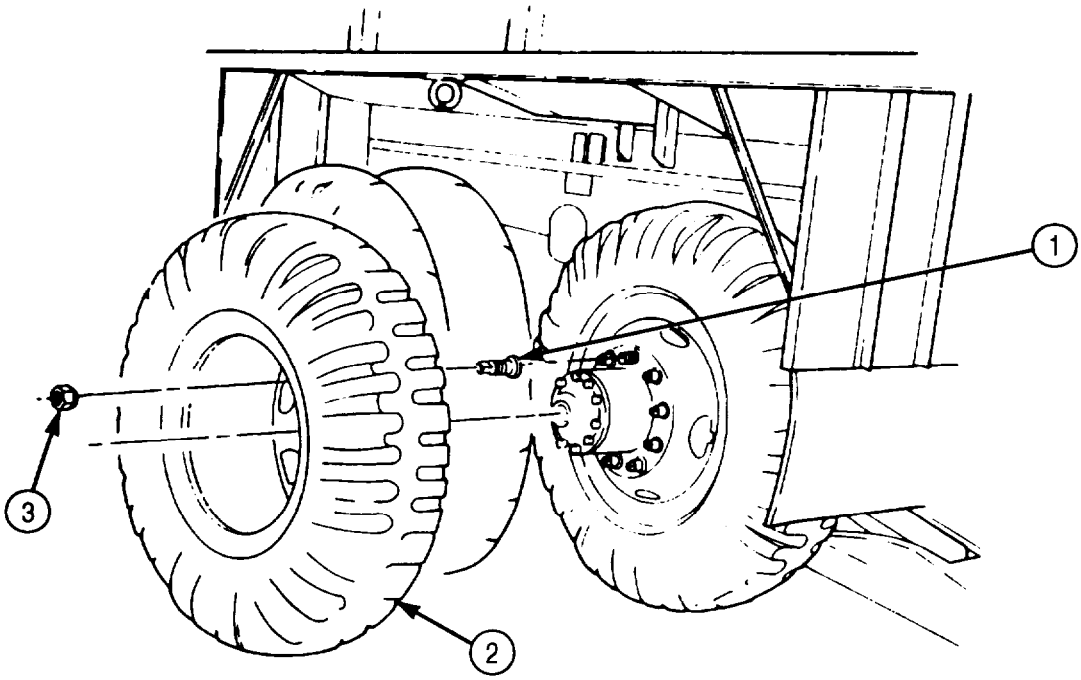
e. Outer Rear Wheel Installation

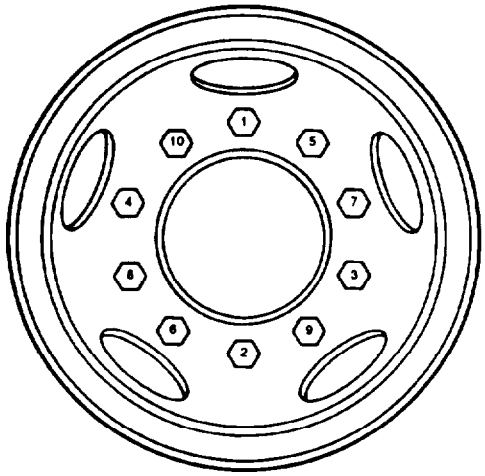
1. Position four rear outer dual wheels (2) on wheel adapter spacer nuts (1).

WARNING

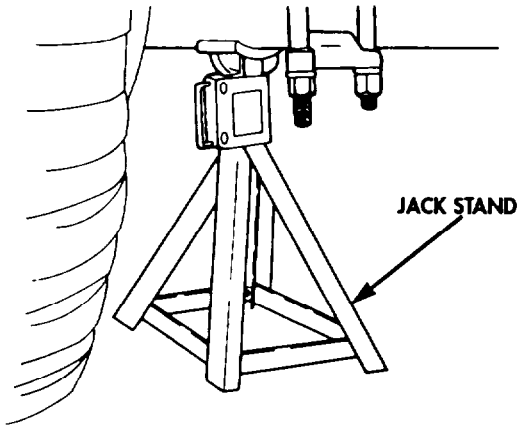
Apply proper torque to outer lug nuts. Failure to do so may result in injury to personnel or damage to equipment.

2. Install four rear outer dual wheels (2) on vehicle with forty stud nuts (3). Hand-tighten stud nuts (3).
3. Raise rear of vehicle, remove jack stands, and lower vehicle.
4. Tighten forty stud nuts (3) 325-355 lb ft (441-481 N-m) in sequence shown.





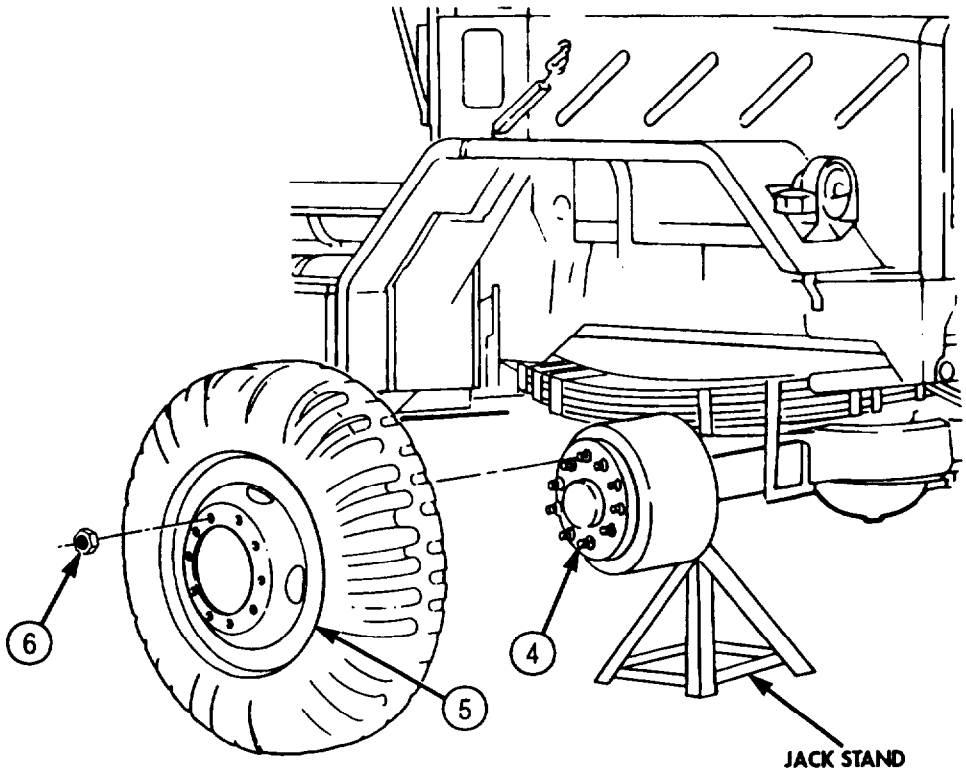
TIGHTENING SEQUENCE

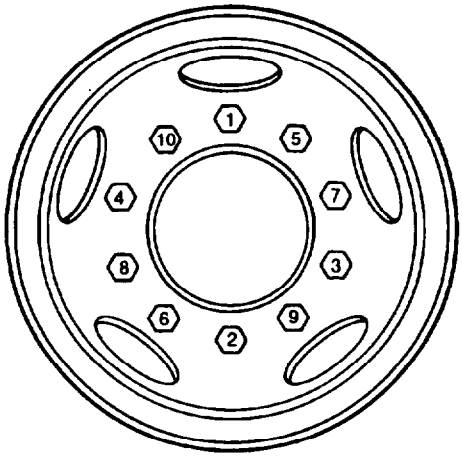


3-218. WHEEL AND TIRE (M939) ROTATION (Contd)

f. Front Wheel Installation

1. Install two front wheels (5) on wheel hub studs (4) with twenty wheel stud nuts (6). Hand-tighten stud nuts (6).
2. Raise front of vehicle clear of jack stands, remove jack stands, and lower vehicle.
3. Tighten twenty wheel stud nuts (6) 325-355 lb-ft (441-481 N•m) in sequence shown.





TIGHTENING SEQUENCE

3-219. WHEEL AND TIRE (M939A1/A2) ROTATION

THIS TASK COVERS:

a. Wheel and Tire Removal
b. Inspection
c. Wheel and Tire Rotation
d. Rear Wheel Installation
e. Front Wheel Installation

INITIAL SETUP:

APPLICABLE MODELS
M939A1/A2

TOOLS
General mechanic's tool kit (Appendix E, Item 1)
Torque wrench (Appendix E, Item 145)

REFERENCES (TM)
TM 9-2320-272-10
TM 9-2320-272-24P
TM 9-2610-200-24

EQUIPMENT CONDITION
- Parking brake set (TM 9-2320-272-10).
- Front wheel valve removed (para. 3-456).
- Rear wheel valve removed (para. 3-457).

GENERAL SAFETY INSTRUCTIONS
Ensure lug nuts are properly torqued.

a. Wheel and Tire Removal

NOTE
Perform step 1 for M939A2 vehicles only.

1. Remove two nuts (6) and wheel weights (5) from two front wheels (2) and studs (4).
2. Loosen sixty stud nuts (7) on four rear wheels (1) and two front wheels (2).
3. Raise vehicle and place two jack stands under rear-rear axle, two jack stands under forward-rear axle (9), and two jack stands under front axle (3).

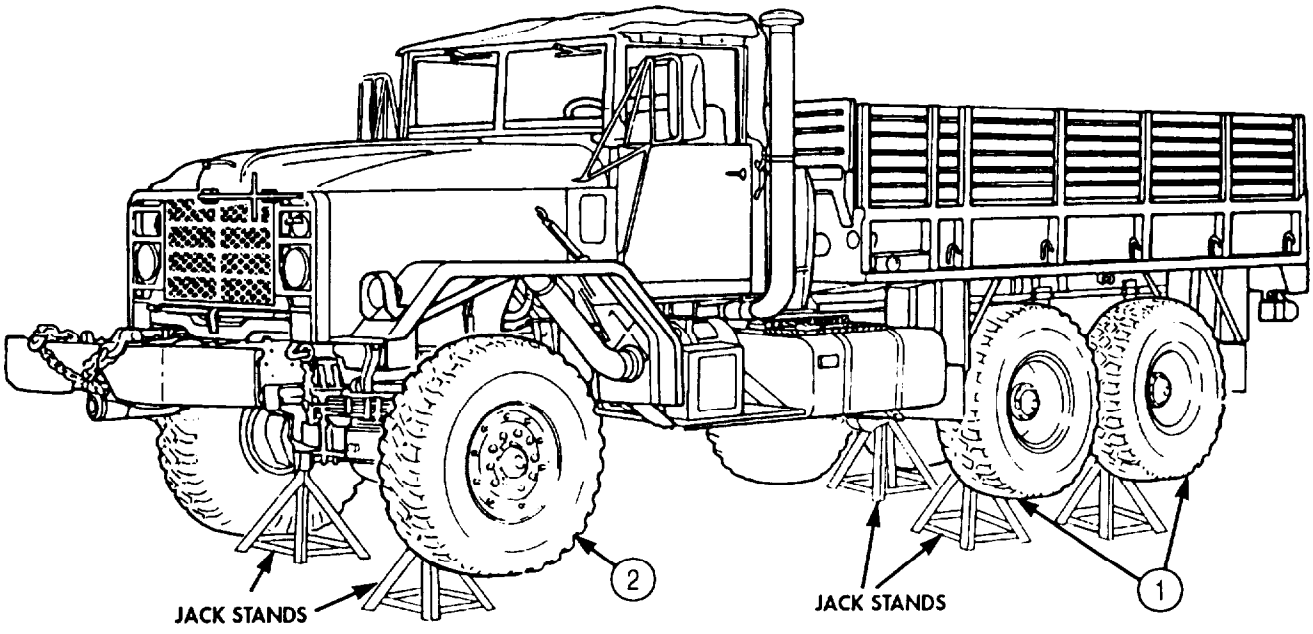
NOTE
Tag wheels for installation.

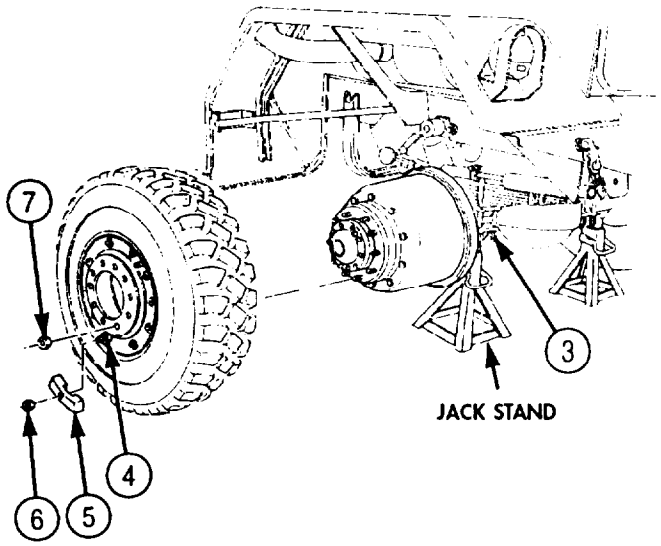
4. Remove sixty stud nuts (7), two front wheels (2), and four rear wheels (1) from vehicle.

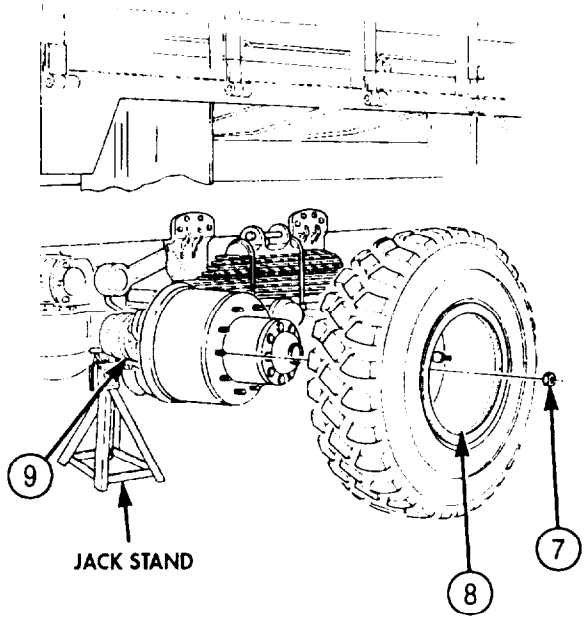
b. Inspection

1. Inspect wheel rims (8) for cracks, stud hole damage, and bends. Replace wheel rims (8) if cracked, stud holes damaged or bent.
2. Inspect tires for thread wear (TM 9-2610-200-24).

3-219. WHEEL AND TIRE (M939A1/A2) ROTATION (Contd)







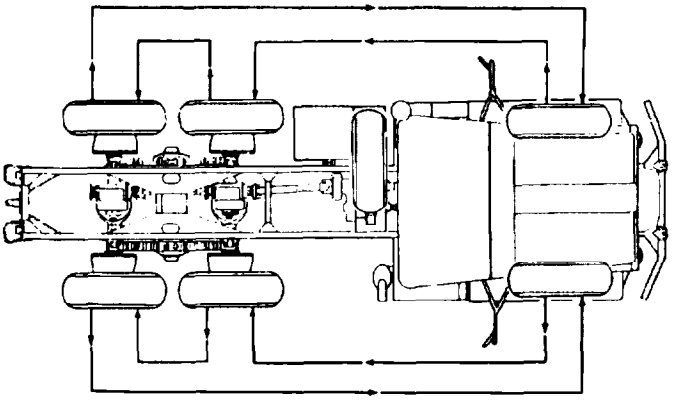
3-219. WHEEL AND TIRE (M939A1/A2) ROTATION (Contd)

c. Wheel and Tire Rotation

NOTE

- Wheels and tires are rotated the same for all M939A1/A2 series vehicles.
- To maintain tread depth, tires must be rotated to match tread wear as closely as possible (TM 9-2610-200-24).
- Tires (14:00xR20) have unidirectional tread design and can be installed in either direction.

Rotate wheels and tires as shown.

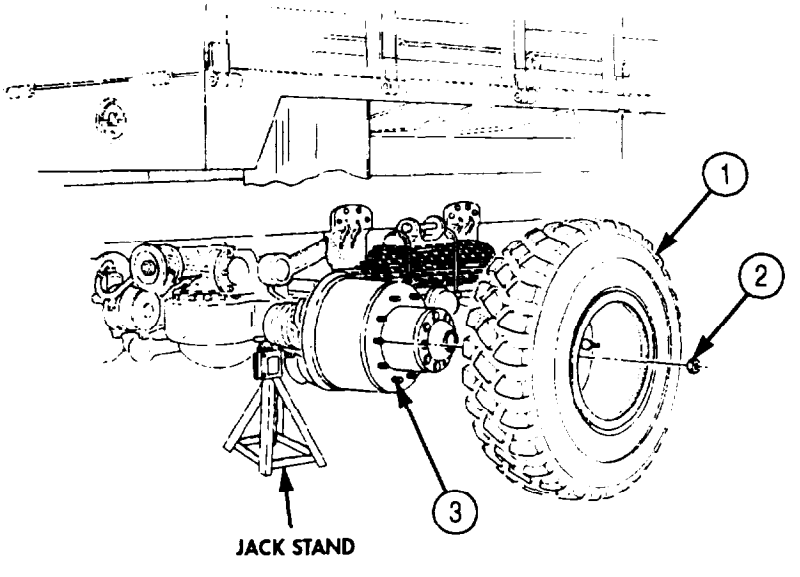


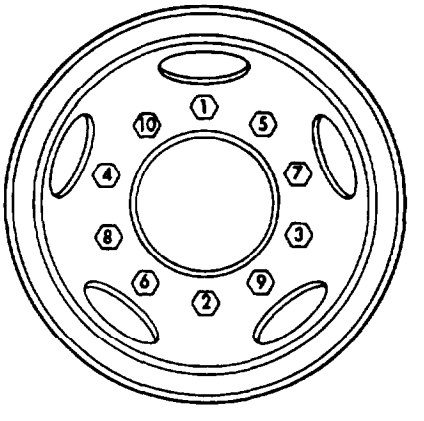
d. Rear Wheel Installation

WARNING

Apply proper torque to outer lug nuts. Failure to do so may result in injury to personnel or damage to equipment.

1. Install four rear wheels (1) on studs (3) with forty stud nuts (2). Hand-tighten stud nuts (2).
2. Raise rear of vehicle, remove jack stands, and lower vehicle.
3. Tighten forty stud nuts (2) 450-500 lb-ft (610-678 N•m) in sequence shown.





TIGHTENING SEQUENCE

3-219. WHEEL AND TIRE (M939A1/A2) ROTATION (Contd)

e. Front Wheel Installation

WARNING

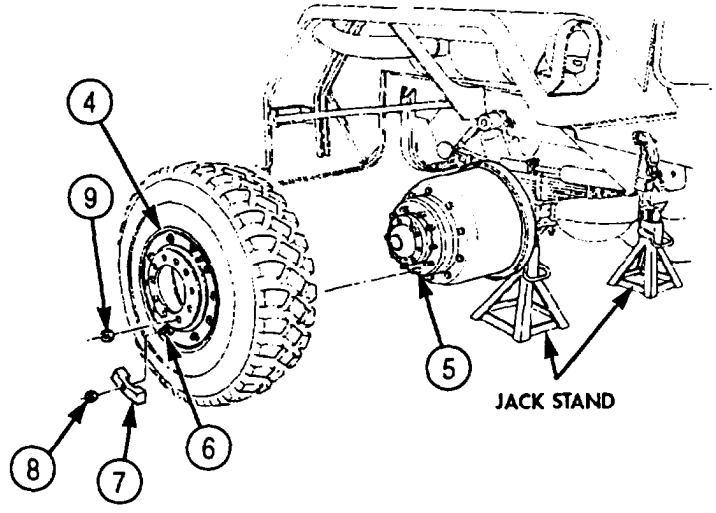
Apply proper torque to outer lug nuts. Failure to do so may result in injury to personnel or damage to equipment.

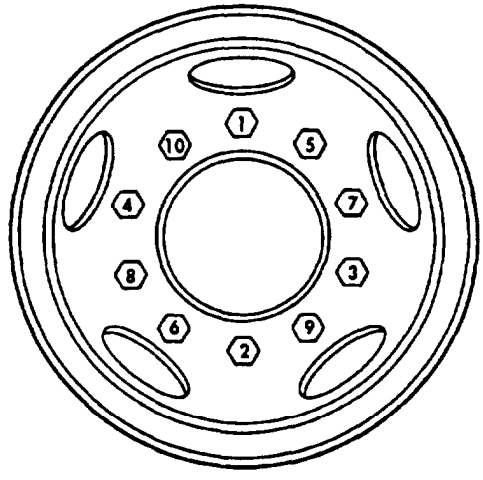
1. Install two front wheels (4) on studs (5) with twenty stud nuts (9). Hand tighten stud nuts (9).
2. Raise front of vehicle, remove jack stands, and lower vehicle.
3. Tighten twenty stud nuts (9) 450-500 lb-ft (610-678 N•m) in sequence shown.

NOTE

- Perform step 4 for M939A2 vehicles only.
- Install wheel weight with slot flush against rim nut.

4. Install wheel weights (7) on two front wheels (4) and studs (6) with two nuts (8). Tighten nuts (8) 40 lb-ft (54 N•m).





FOLLOW-ON TASKS: • Install front wheel valve (para. 3-456).
• Install rear wheel valve (para. 3-457).

3-220. TIRE AND TUBE (M939) MAINTENANCE

THIS TASK COVERS:

a. Removal
b. Inspection
c. Installation

INITIAL SETUP:

APPLICABLE MODELS
M939

TOOLS
General mechanic's tool kit (Appendix E, Item 1)

REFERENCES (TM)
TM 9-2320-272-10
TM 9-2320-272-24P

EQUIPMENT CONDITION
Wheel(s) removed (para. 3-218).

GENERAL SAFETY INSTRUCTIONS
- Never remove tire lockring without first deflating tire.
- Ensure lockring is properly seated around wheel before inflating tire.
- Never inflate tire with lockring facing personnel.
- Never attempt to seat lockring by striking while tire is inflating.

NOTE

Ensure tire inflation cage does not have cracked welds, cracked or bent components, or pitting from corrosion. If any of these are found, obtain new inflation cage.

a. Removal

1. Remove valve cap (11) and valve core (10) from inner tube valve stem (9).

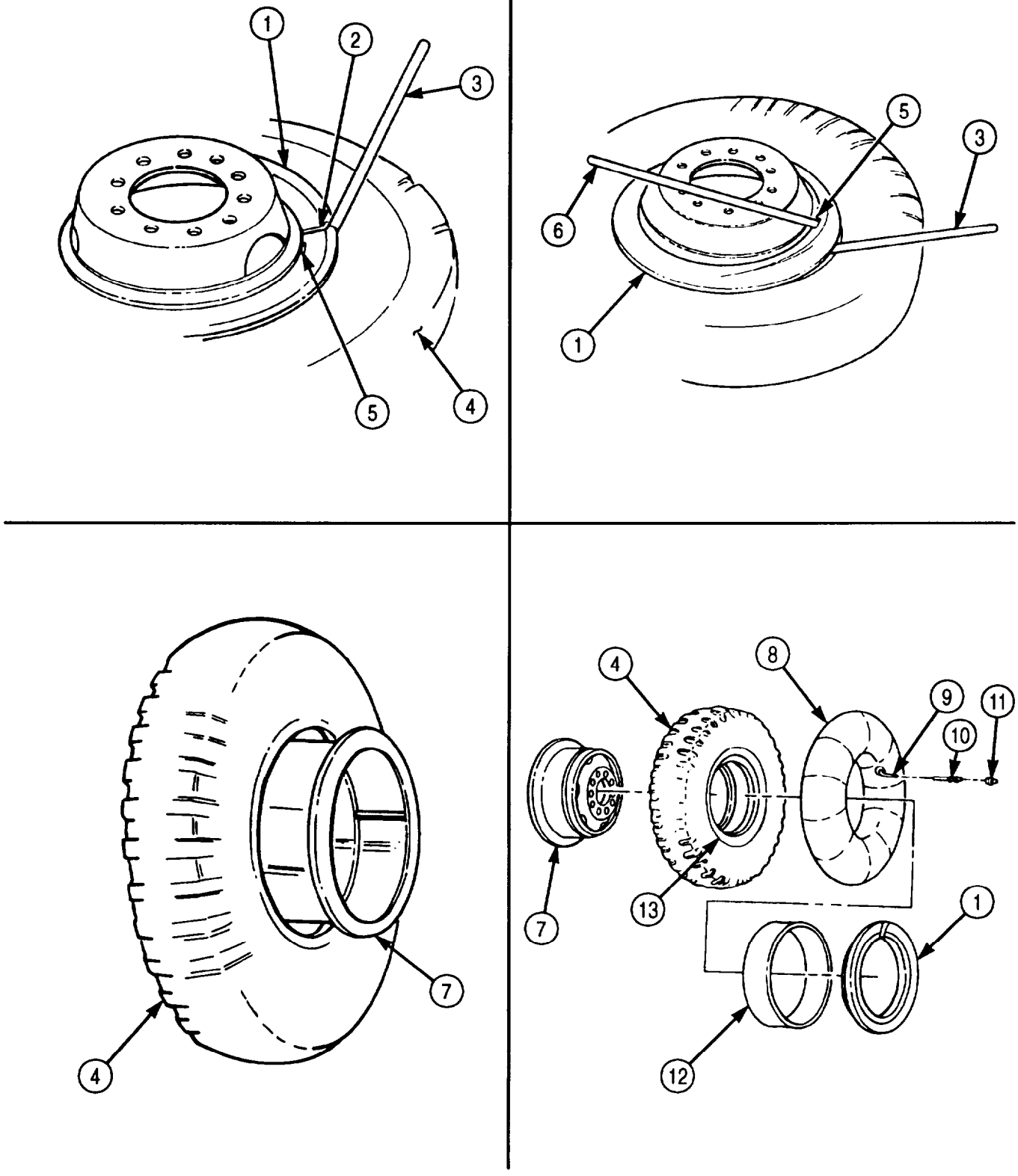
WARNING

Never remove tire lockring without first deflating tire. Lockring may explode off, causing injury to personnel.

2. Position tire (4) on side, with lockring (1) facing upward.
3. Break tire bead (13) from lockring (1).

NOTE

Assistant will help with step 3.

4. Insert first tire iron (3) in lockring slit (2) and pry upward until slot (5) is exposed.
5. Insert second tire iron (6) into lockring slot (5) and pry upward while running first tire iron (3) completely around and remove lockring (1).
6. Break tire bead (13) on opposite side of wheel (7).
7. Remove tire (4) from wheel (7).
8. Remove tire liner (12) and inner tube (8) from tire (4).

3-220. TIRE AND TUBE (M939) MAINTENANCE (Contd)