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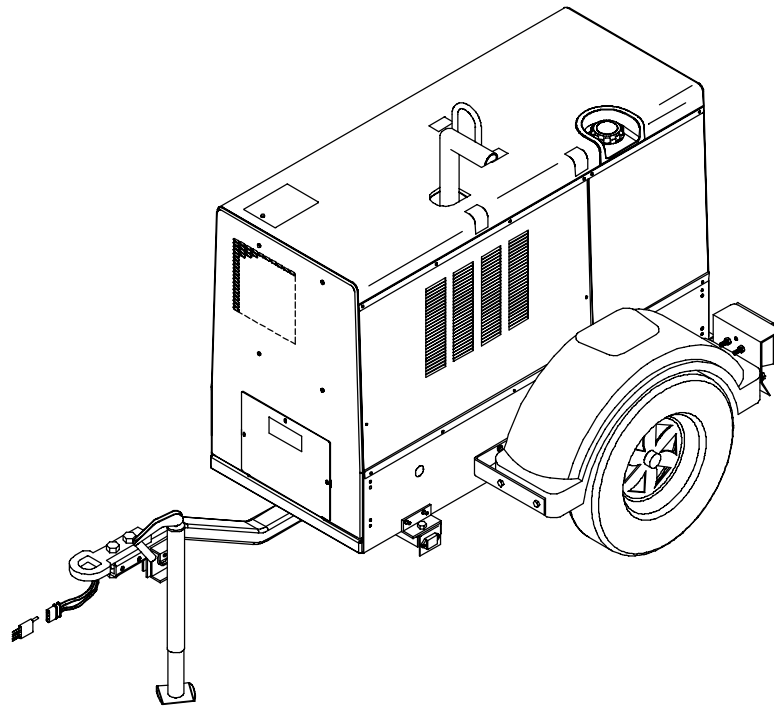
September 2004

### Description

Two-Wheel Trailer For Engine-Driven  
Welding Generators

# RCT-224 Trailer

*This Trailer Is Not Compatible With Equipment  
Made Prior To Serial No. LB033208*



**OWNER'S MANUAL**



Visit our website at  
[www.MillerWelds.com](http://www.MillerWelds.com)

# From Miller to You

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*Thank you and congratulations* on choosing Miller. Now you can get the job done and get it done right. We know you don't have time to do it any other way.

That's why when Niels Miller first started building arc welders in 1929, he made sure his products offered long-lasting value and superior quality. Like you, his customers couldn't afford anything less. Miller products had to be more than the best they could be. They had to be the best you could buy.

Today, the people that build and sell Miller products continue the tradition. They're just as committed to providing equipment and service that meets the high standards of quality and value established in 1929.

This Owner's Manual is designed to help you get the most out of your Miller products. Please take time to read the Safety precautions. They will help you protect yourself against potential hazards on the worksite.

We've made installation and operation quick and easy. With Miller you can count on years of reliable service with proper maintenance. And if for some reason the unit needs repair, there's a Troubleshooting section that will help you figure out what the problem is. The parts list will then help you to decide the exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.



Miller is the first welding equipment manufacturer in the U.S.A. to be registered to the ISO 9001:2000 Quality System Standard.



Miller Electric manufactures a full line of welders and welding related equipment. For information on other quality Miller products, contact your local Miller distributor to receive the latest full line catalog or individual catalog sheets. **To locate your nearest distributor or service agency call 1-800-4-A-Miller, or visit us at [www.MillerWelds.com](http://www.MillerWelds.com) on the web.**



Working as hard as you do – every power source from Miller is backed by the most hassle-free warranty in the business.



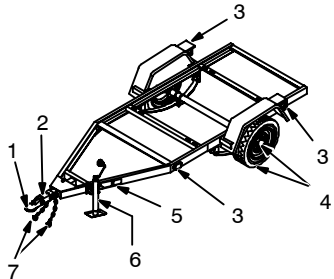
# TRAILER TOWING SAFETY PRECAUTIONS

## ⚠ WARNING

**TRAILER TOWING can be hazardous.**

In trailer towing, as in most driving situations, exposure to certain hazards occurs. Trailer towing is safe when precautions are taken. The following safety information is only a summary of the more complete information found in the Safety Standards listed at the end of these precautions. Read and follow all Safety Standards. In addition, the end user must check and comply with all federal, state, and local laws before use.

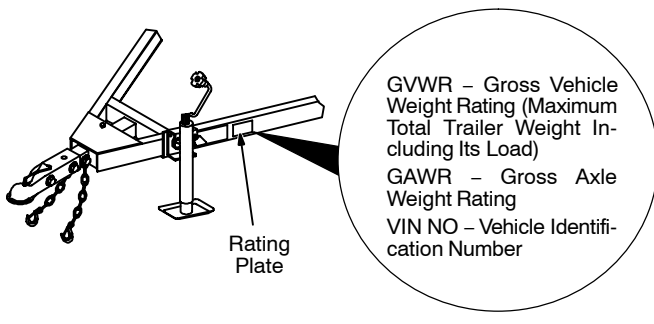
**HAVE ALL INSTALLATION, OPERATION, MAINTENANCE, AND REPAIR WORK PERFORMED ONLY BY QUALIFIED PEOPLE.**



- 1 Coupler  
Hitch is on towing vehicle.
- 2 Tongue
- 3 Lights
- 4 Wheels And Bearings
- 5 Rating Plate
- 6 Jack Stand
- 7 Safety Chains

1. Use a towing vehicle prepared and capable of handling the load.
2. Towing any trailer requires special awareness because of the changed driving situation.

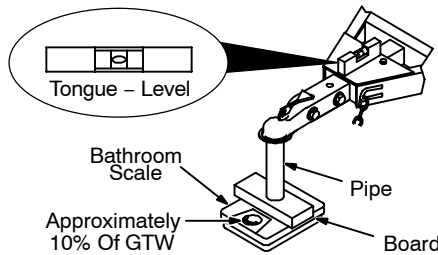
3. When towing, it takes longer to start, stop, and pass – use training and practice to avoid accidents.
4. Turning and backing up present new problems – plan ahead.
5. Require each driver to be fully trained and experienced in trailer towing before going out on the road.
6. Holes are provided for mounting weld/power generator.
7. Be sure trailer is fully prepared and connected to towing vehicle.
8. Observe maximum speed of 45 mph (72 kph) when towing.
9. Do not modify or change the trailer in any way – changes void the warranty. Read Owner's Manual.
10. Use only genuine factory parts as replacements.
11. Adjust load on trailer so tongue weight is approximately 10% of the gross trailer weight and center load side-to-side to reduce fishtailing.
12. Tighten all parts, bolts, nuts, and mounting hardware.



GVWR – Gross Vehicle Weight Rating (Maximum Total Trailer Weight Including Its Load)  
 GAWR – Gross Axle Weight Rating  
 VIN NO – Vehicle Identification Number

**OVERLOADING can cause serious injury or equipment damage.**

1. Do not overload the trailer.
2. The Gross Vehicle Weight Rating (GVWR) is the maximum total trailer weight with the engine driven welding generator and all equipment, such as tools, cables, and shielding gas cylinder, installed.
3. The Gross Axle Weight Rating (GAWR) is the maximum load-bearing capacity of the axle(s).
4. Weigh trailer – adjust weight by removing accessory equipment if necessary – call local authorities for nearest scale location.
5. Use gross trailer weight to select a proper towing vehicle.



Approximately 10% Of GTW

Trailer And Coupler Class <sup>1</sup>	Gross Vehicle Weight Rating GVWR lb (kg)	Gross Trailer Weight GTW <sup>2</sup> lb (kg)	Maximum Tongue Weight <sup>3</sup> lb (kg)
1	Up to 2000 (Up to 910)	1000 (455) 2000 (910)	100 (45) 200 (90)
2	2000 to 3500 (910 to 1590)	2000 (910) 3500 (1590)	200 (90) 350 (158)
3	3500 to 5000 (1590 to 2270)	3500 (1590)	350 (158)

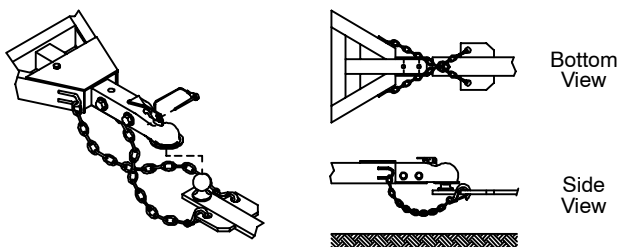
<sup>1</sup> Information From SAE J684 May 1987  
<sup>2</sup> Gross Trailer Weight (Actual Loaded Weight)  
<sup>3</sup> 10% Of GTW Recommended

**UNCONTROLLED TILTING OF TRAILER can result in personal injury or equipment damage.**

1. Install generator according to Owner's Manual with engine end toward hitch end of trailer.
2. Distribute weight so that trailer tongue weight is approximately 10% of the gross trailer weight.

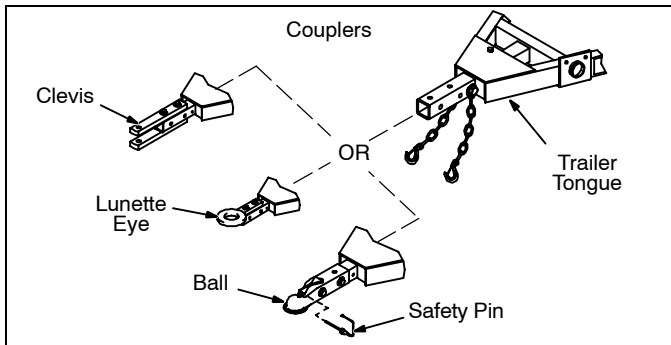
**INCORRECT TONGUE WEIGHT can cause fishtailing and loss of control of towing vehicle resulting in serious injury and equipment damage.**

3. Tongue weight is the amount of trailer weight that rests on the towing vehicle hitch – that is, the downward pressure on the coupler.
4. Remove or adjust trailer load to get correct tongue weight.
5. Do not let tongue weight exceed coupler and hitch rating.
6. Use slower speeds when towing a trailer – never above 45 mph (72 km/h) – to prevent fishtailing.



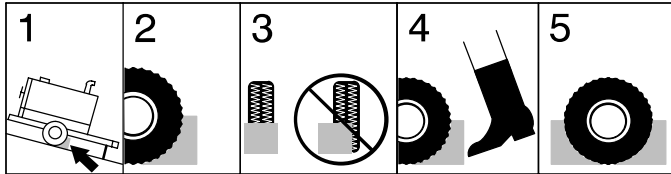
**SAFETY CHAINS CAN PREVENT RUNAWAY TRAILER in case hitch/coupler fails.**

1. Always use safety chains when towing.
2. Cross safety chains under coupling to prevent tongue from dropping to ground.
3. Allow only enough slack for tight turns.
4. Do not let safety chains drag on ground.
5. Twist safety chains equally from hook ends to take up slack.
6. Use safety chains rated equal to or greater than twice the maximum gross trailer weight rating.



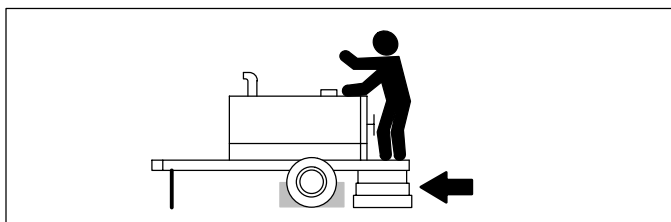
**INCORRECT SIZE OR RATING OF HITCH can cause trailer to break loose from towing vehicle.**

1. Be sure towing vehicle hitch is correct type, size, and rating to match coupler.
2. Be sure the hitch is properly installed onto towing vehicle.
3. On optional ball couplers, always insert hitch safety pin before towing.
4. Make sure hitch and ball are properly sized and match each other.



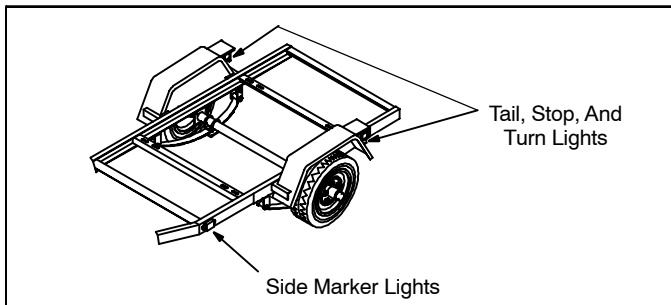
**WHEELS MUST BE CHOCKED when trailer is uncoupled from vehicle.**

1. Chock in direction of grade.
2. Position chock snugly behind tire.
3. Place chock square to the tire.
4. Tap chock into place.
5. For added protection, chock both sides of tire.



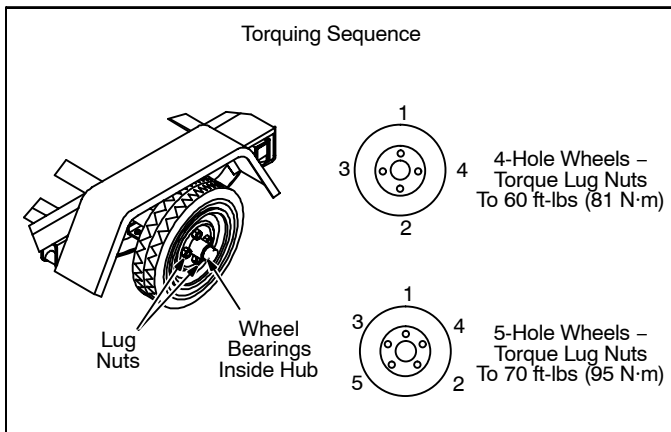
**UNEXPECTED TILTING OF TRAILER can cause injury and damage.**

1. When trailer is uncoupled from towing vehicle, use jack on front and block rear to prevent tilting.
2. Use proper blocks that are large enough and able to support the necessary weight.
3. Always chock the wheels when uncoupled.



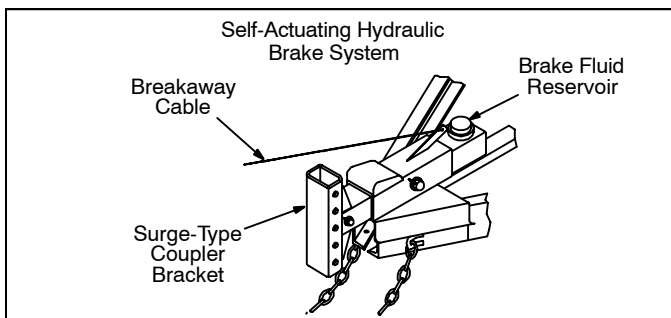
**INCORRECTLY WORKING LIGHTS can cause accidents.**

1. State and Federal regulations require trailers used on highways to have tail, stop, turn, and side marker lights.
2. Lights are not required for trailers designed for off-road use only.
3. Check all lights and connectors for proper installation and operation before using the trailer.
4. Check condition of wiring harness leads, plugs, and connections regularly. Repair or replace damaged parts or wires.
5. Replace any broken lenses, reflectors, or bulbs.



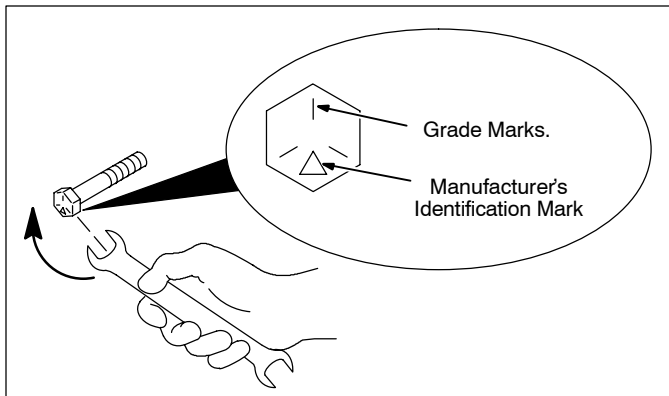
**INCORRECT TORQUE on lug nuts or INCORRECT TIRE PRESSURE or BEARING MAINTENANCE can cause loss of control resulting in serious injury and equipment damage.**

1. Recheck lug nut torque after first 50 miles (80 km) and once each year or every 12,000 miles (19,500 km) thereafter, whichever comes first.
2. When checking lug nuts, keep them clean, dry, and unlubricated.
3. Check and repack wheel bearings once each year or every 12,000 miles (19,500 km), whichever comes first.
4. Maintain correct tire pressure according to sidewall data on tire – underinflation is the most common cause of tire trouble.
5. Check tires for wear every six months.
6. Use only replacement tires of the same size, rating, and capacity.



**INOPERATIVE SURGE-TYPE BRAKES OR WRONG BREAKAWAY CABLE CONNECTION can cause accidents.**

1. Check brake fluid level before use.
2. Do not use sway control devices – keep coupler free to telescope during braking.
3. Always connect breakaway cable to towing vehicle – be sure it has a direct free pull.
4. Do not wrap cable around safety chains, tongue, wiring, or any other parts.
5. The breakaway cable automatically applies the trailer brakes if separation occurs.



**LOOSE OR INCORRECT HARDWARE AND FASTENERS can cause injury and damage.**

1. Periodically double-check all nuts and bolts for tightness and condition.
2. If necessary, always replace any fastener with one of equal size, grade, and type.
3. Be sure the grade marks on replacement fastener match the original bolt. The manufacturer's identification mark is not critical and does not matter for the replacement fastener.

**PRE-TOWING CHECKLIST**

- Check gross trailer weight, tongue weight, and total weight distribution – do not overload this trailer.
- Check that the correct hitch is properly installed on towing vehicle.
- When coupling, check that coupler locking device (safety pin), safety chains, and breakaway cable (if applicable) are properly connected.
- Check that tires are properly inflated and that wheel nuts are properly torqued.
- If applicable, check that all lights are working properly.

**CALIFORNIA PROPOSITION 65 WARNINGS**

▲ **Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)**

▲ **Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.**

**PRINCIPAL SAFETY STANDARDS**

*Trailer & Camper Safety*, Publication # DOT HS-802586, from U.S. Department of Transportation, National Highway Traffic Safety Administration, Washington, D.C. 20590

*Safety and Health Standards*, OSHA 49 CFR 200 to 999, from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

SAE Handbook. 1996. Volume 4. *On-Highway Vehicles and Off-Highway Machinery*, from Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001.

**REPORTING SAFETY DEFECTS**

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying MILLER Electric Mfg. Co.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become

involved in individual problems between you, your dealer, or MILLER Electric Mfg. Co.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

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# Section 1 – ASSEMBLY SAFETY PRECAUTIONS

## 1-1. Symbol Usage



Means Warning! Watch Out! There are possible hazards with this procedure! The possible hazards are shown in the adjoining symbols.

▲ Marks a special safety message.

☞ Means "Note"; not safety related.



This group of symbols means Warning! Watch Out! possible FALLING EQUIPMENT and TILTING OF TRAILER hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

## 1-2. Assembly Hazards

▲ The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the Safety Standards. Read and follow all Safety Standards.

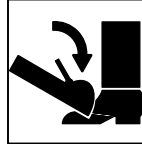
▲ Only qualified persons should install, operate, maintain, and repair this unit.

▲ During operation, keep everybody, especially children, away.



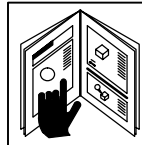
### FALLING UNIT can cause injury.

- Use equipment and blocks of adequate capacity and size to lift and support unit.
- If using lift forks to move unit or parts, be sure forks are long enough to extend beyond opposite side of unit or parts to prevent tipping.
- Have two people of adequate physical strength lift trailer parts.



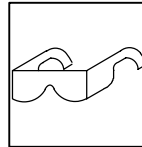
### TILTING OF TRAILER can cause injury.

- Use tongue jack or blocks to support weight.
- Properly install welding generator onto trailer according to instructions.



### READ INSTRUCTIONS.

- Use only genuine replacement parts from manufacturer.
- Perform maintenance according to this manual.



### FLYING METAL, DIRT can injure eyes.

- Wear approved safety glasses with side shields when assembling and maintaining trailer.



Read and follow all trailer towing Safety Precautions at beginning of manual before using this trailer.

# SECTION 2 – SPECIFICATIONS

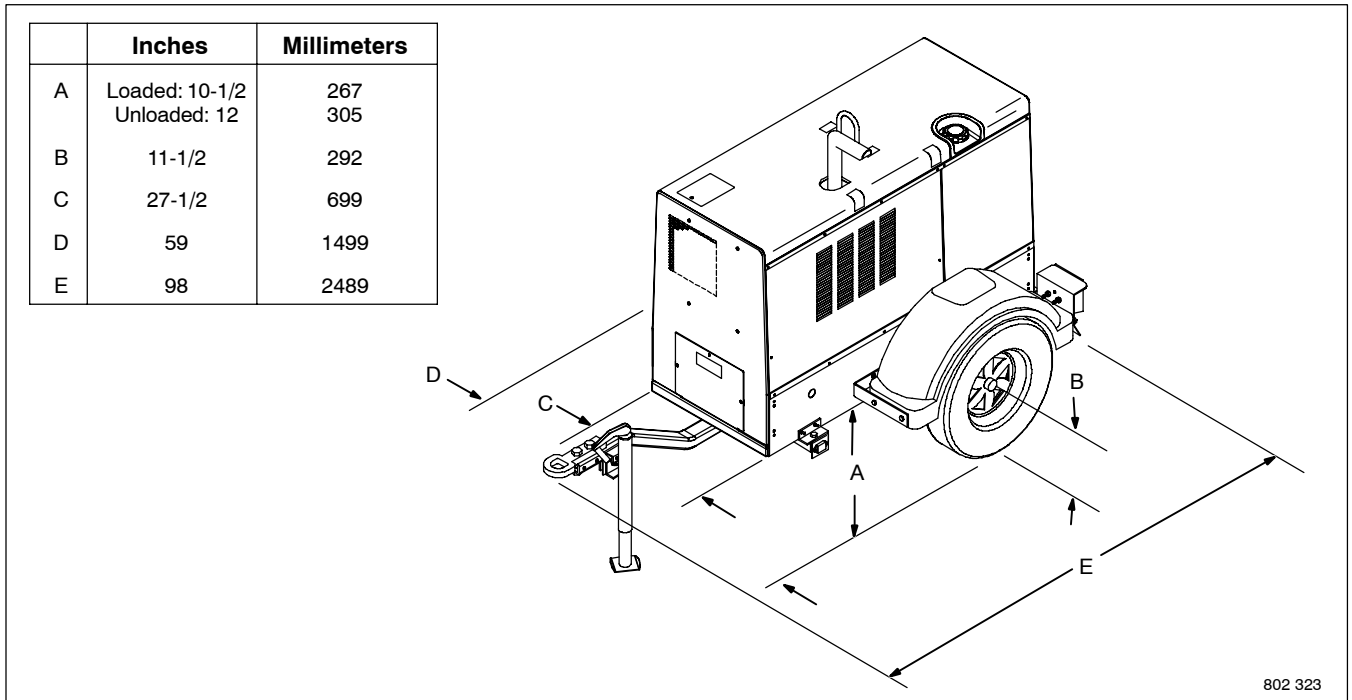
## NOTE

*This trailer is not compatible with equipment made prior to Serial No. LB033208.*

### 2-1. Trailer Specifications

Specification	Description
Gross Axle Weight Rating	2700 lb (1225 kg)
Gross Vehicle Weight Rating	2500 lb (1134 kg)
Net Payload	2250 lb (1021 kg)
Road Clearance	Unloaded: 8 in (203 mm); Loaded: 6-1/2 in (165 mm)
Height Of Bed	Unloaded: 12 in (305 mm); Loaded 10-1/2 in (267 mm)
Track (Center To Center)	49-1/2 in (1257 mm)
Standard Tires	B-78-13C
Weight	Net: 285 lb (129 kg)

### 2-2. Overall Dimensions

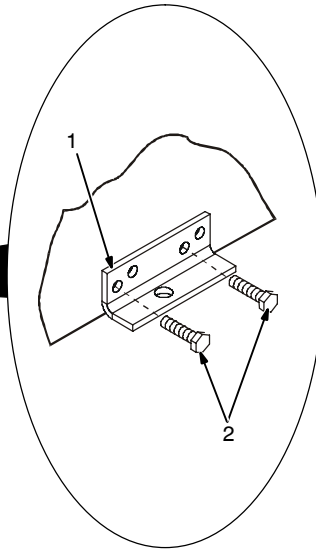
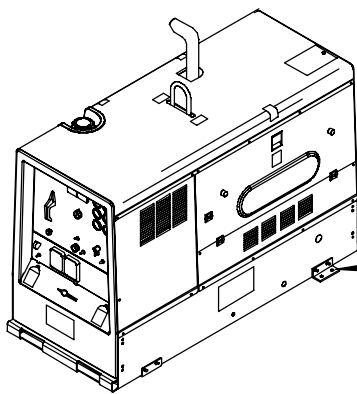
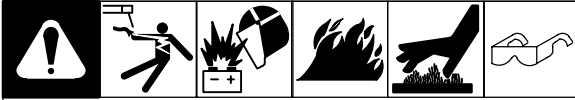


# SECTION 3 – ASSEMBLY


## NOTE

*This trailer is not compatible with equipment made prior to Serial No. LB033208.*  
*All directions are given as facing the towing vehicle. The word “front” means the hitch end of the trailer.*

### 3-1. Preparing Unit For Kit Installation



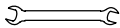
- ▲ **Stop engine, and let cool. Disconnect battery negative (-) cable.**
- ▲ **Do not weld on base. Welding on base can cause fuel tank fire or explosion. Weld only on the four mounting brackets or bolt unit down.**

 *Go to Section 3-2 if mounting brackets are already installed as shown.*

- 1 Mounting Bracket
- 2 3/8-16 x 1 in Screws (Supplied)

Remove hardware securing the rear mounting brackets to the base. Reverse rear brackets and reattach to base with original hardware.

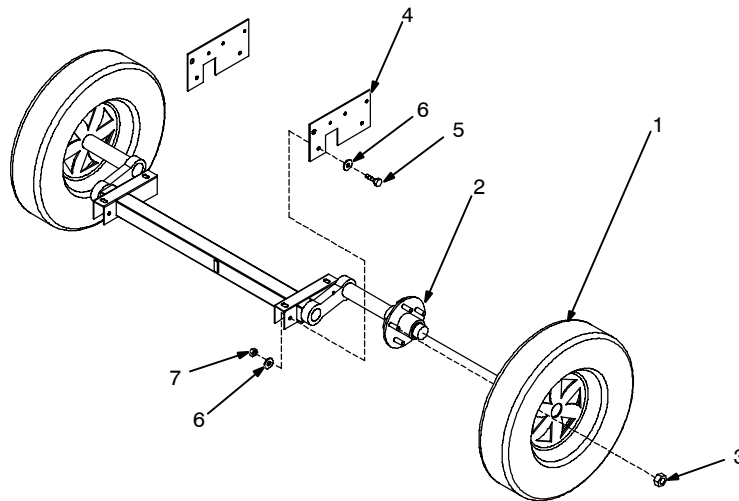
Tighten hardware to 30 ft lb (41 N-m).

Tools Needed:  
 9/16 in

Ref. 190 250-A / Ref. 802 729



### 3-2. Mounting Wheels And Brackets On Axles



☞ Use hardware in Red bag to mount wheels.

- 1 Wheel
- 2 Hub
- 3 Lug Nut

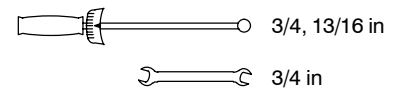
Install wheels on hubs. Install lug nuts and tighten to 70 ft lb (95 N·m).

- 4 Mounting Bracket
- 5 1/2-13 x 1-1/2 in Screw
- 6 1/2 ID Flat Washer
- 7 1/2 ID Lock Nut

Attach mounting brackets to brackets on axle. Save remaining hardware to mount unit on trailer (see Section 3-7).

☞ Do not tighten hardware until unit is mounted on trailer (see Sections 3-7 and 3-8).

Tools Needed:



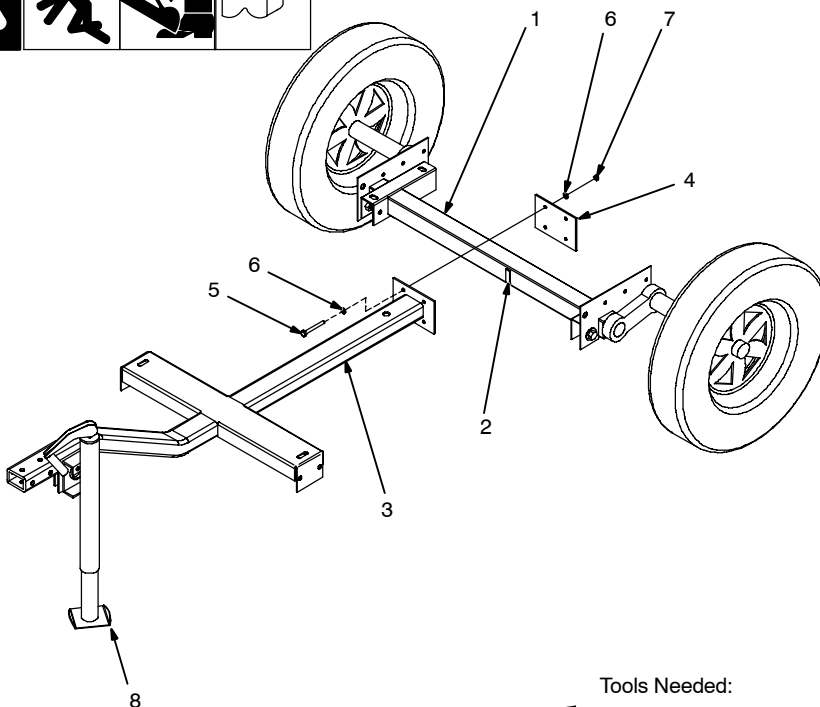
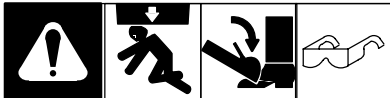
802 812

### 3-3. Mounting Axle On Frame

#### NOTE



All directions are given as facing the towing vehicle. The word "front" means the hitch end of the trailer.



- 1 Axle Assembly
- 2 Welded Stop
- 3 Frame
- 4 Plate
- 5 3/8-16 x 4 in Screw
- 6 3/8 ID Flat Washer
- 7 3/8 ID Lock Nut

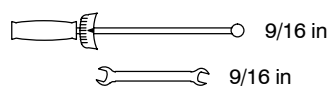
Position frame against the right side of the welded stop on the axle. Attach axle to frame using supplied hardware. Tighten hardware to 30 ft lb (41 N·m).

8 Jack

Pull pin and rotate jack to vertical position. Pin locks jack in place. Turn handle to raise or lower trailer.

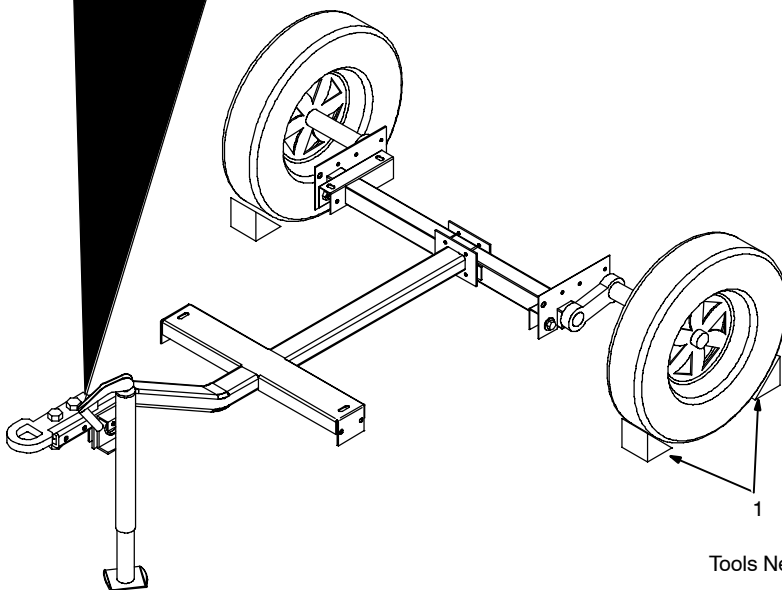
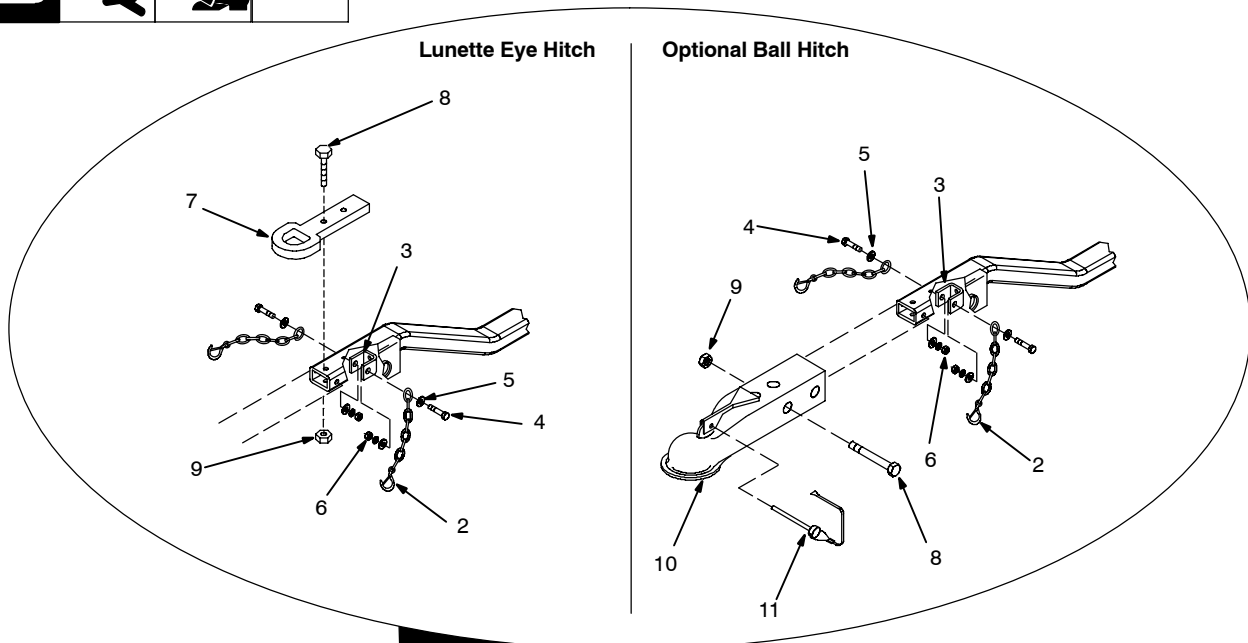
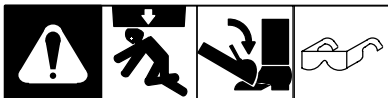
When jack is not needed, pull pin and rotate jack to horizontal position.

Tools Needed:

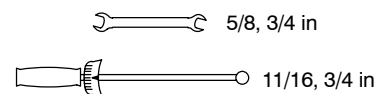


802 813

### 3-4. Installing Hitch And Safety Chains



**Tools Needed:**



Ref. 802 813

▲ **Use adequate blocks or lifting device to support frame while installing parts.**

▲ **Support trailer with jack. Block wheels.**

- 1 Wheel Block
- 2 Safety Chain
- 3 Chain Bracket
- 4 7/16-14 x 2-1/2 Screw
- 5 7/16 ID Flat Washer
- 6 7/16 ID Lock Nut

Attach chain to bracket with 7/16 in hardware. Tighten hardware to 31 ft lb (40 N·m).

- 7 Lunette Eye Hitch
- 8 1/2-13 x 4 in Screw
- 9 1/2 ID Lock Nut

Attach lunette eye to top of tongue as shown using supplied 1/2 in hardware.

Tighten hardware to 75 ft lb (102 N·m).

Connect trailer to towing vehicle.

Cross safety chains under tongue and attach to towing vehicle.

- 10 Ball Hitch (Optional)
- 11 Safety Pin

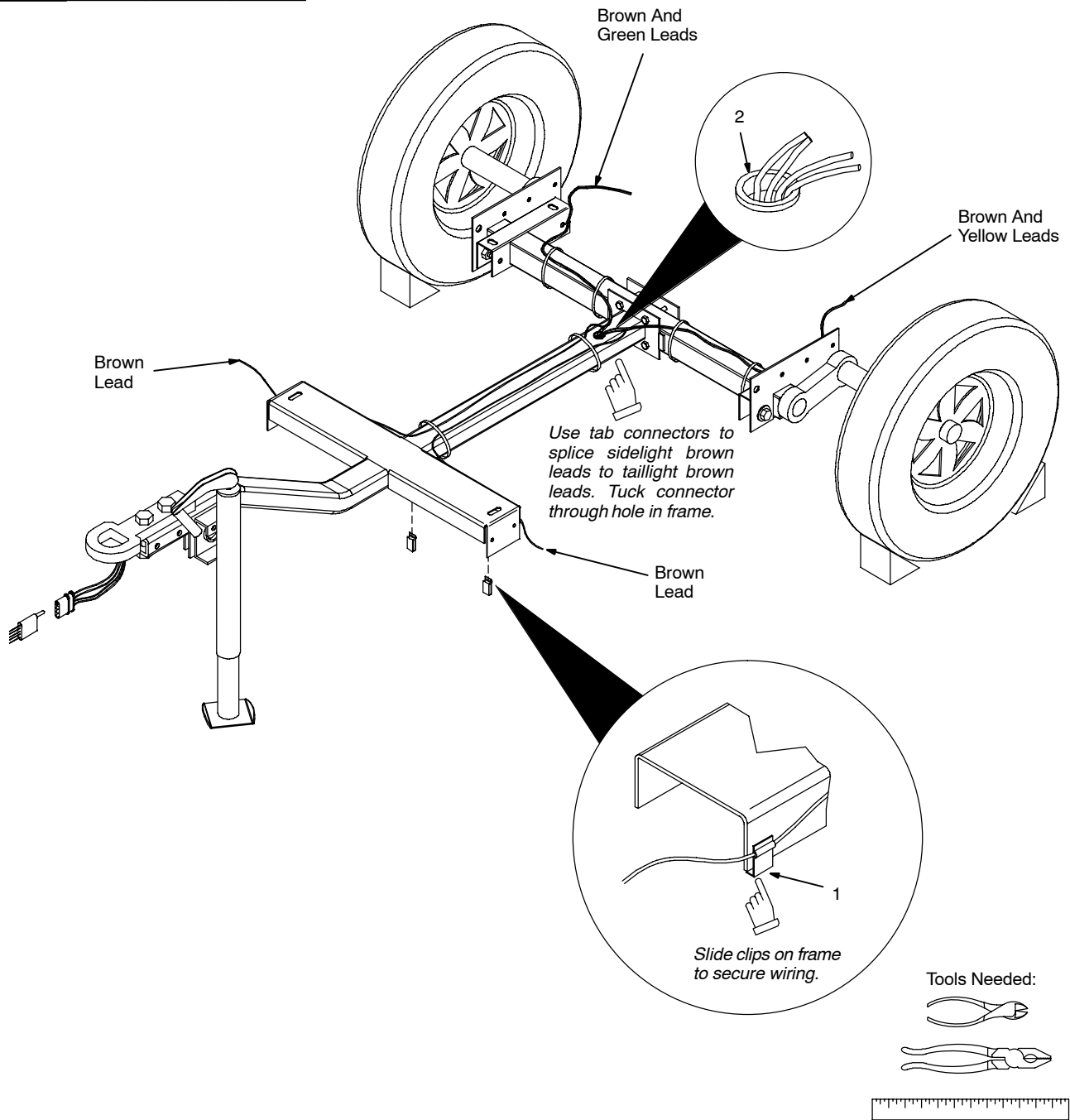
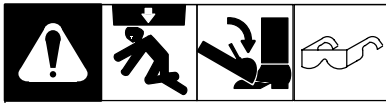
Attach hitch to tongue as shown using supplied 1/2 in hardware. Make sure bolts are installed horizontally as shown.

Tighten hardware to 75 ft lb (102 N·m).

Set trailer onto towing ball and push lever down. Insert safety pin through hole in lever to secure hitch.

Cross safety chains under tongue and attach to towing vehicle.

### 3-5. Installing Taillight And Sidelight Wiring



802 814

**▲ Support trailer with jack. Block wheels.**

- 1 Wiring Clips
- 2 Grommet

Locate wiring harness (packaged with taillights).

Route wiring harness leads through trailer frame and out hole near axle. Slide grommet over leads and install grommet in hole.

Route brown and green leads along axle to-

ward right wheel and brown and yellow leads along axle to left wheel. Secure wiring to axle with supplied cable ties.

Cut 45 in (1143 mm) from brown, green, and yellow leads. Save cutoff wiring for connecting side lights. Install taillights and sidelights according to Section 3-10.

**To install sidelight wiring:** Use 45 in (1143 mm) wiring saved from taillight wiring to wire sidelights. Separate brown leads from green

and yellow leads. Discard green and yellow leads.

Splice sidelight short leads to wiring harness brown leads using supplied tab connector (see Section 3-6). Route brown leads along top of frame and along back of crossmember. Secure leads with wiring clips and cable ties.

Install wiring for other sidelight the same way.

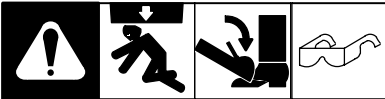
Install sleeving on taillight and harness plug electrical leads.



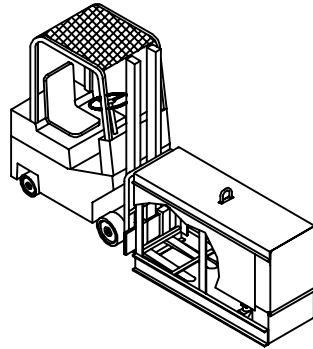
### 3-7. Mounting Welding Generator

#### NOTE

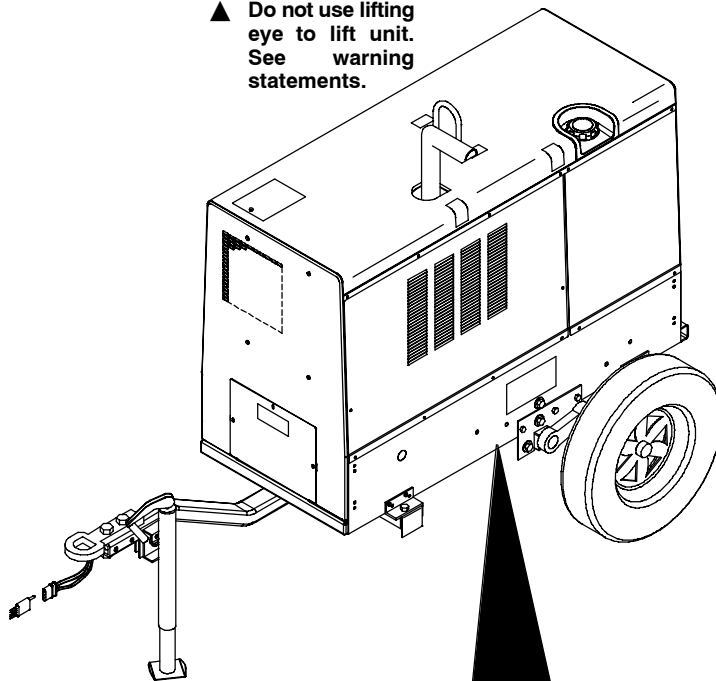
*This trailer is not compatible with equipment made prior to Serial No. LB033208.*




#### Recommended Lifting Procedure




▲ Do not use lifting eye to lift unit. See warning statements.



- ▲ Do not use lifting eye to lift unit during this procedure. Mounting the unit requires removal of center upright hardware and lifting eye will not safely support unit with hardware removed.
- ▲ Use equipment of adequate capacity to lift the generator.
- ▲ Support front of trailer with jack. Support rear of trailer with blocks. Block wheels.
- ▲ If trailer is not installed on vehicle, use trailer jack to obtain desired height and to support tongue weight while installing welding generator.
- ▲ Install welding generator on trailer with engine end toward hitch end of trailer.

 Use remaining mounting bracket hardware to mount welding generator (see Section 3-3).

 When properly installed, tongue weight is 7 - 8 % of gross trailer weight.

- 1 5/8-11 x 1-1/2 Screw
- 2 5/8 ID Lock Nut
- 3 3/8-16 x 3/4 Self Tapping Screw

Remove bottom screws securing welding generator center upright. Discard screws.

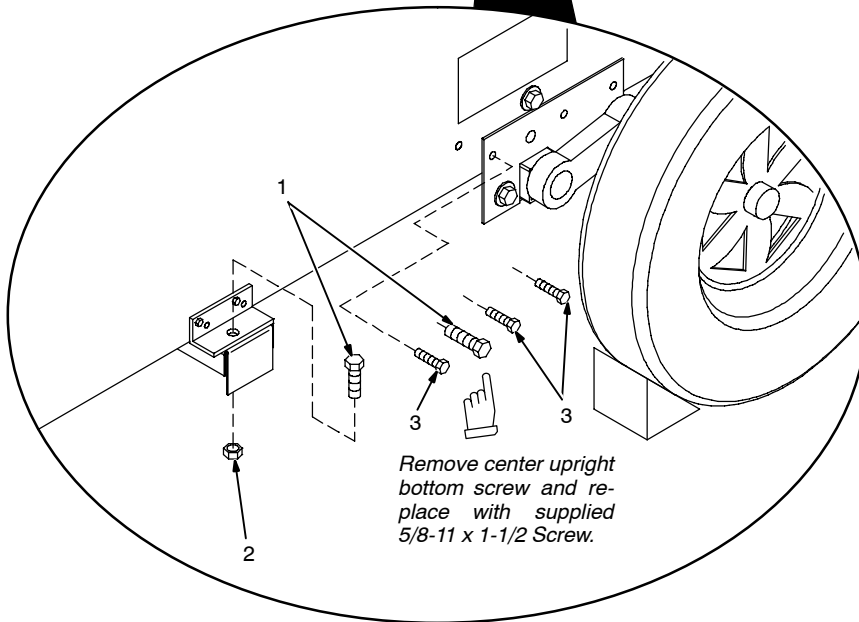
Install mounting screws in base far enough to tap holes. Remove mounting screws.

Place generator on trailer so front panel faces rear. Align holes in base with holes in trailer mounting brackets. **Install 3/8 in. self-tapping screws and tighten to 30 ft lb (41 N-m).**

**Install 5/8 in. center upright screws and tighten to 150 ft lb (203 N-m).**



**Tighten 1/2 in hardware (installed in Section 3-2) on bottom of mounting bracket to 75 ft lb (101 N-m).**

**Tighten 5/8 in. front mounting bracket hardware to 150 ft lb (203 N-m).**



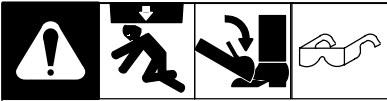
Remove center upright bottom screw and replace with supplied 5/8-11 x 1-1/2 Screw.

#### Tools Needed:

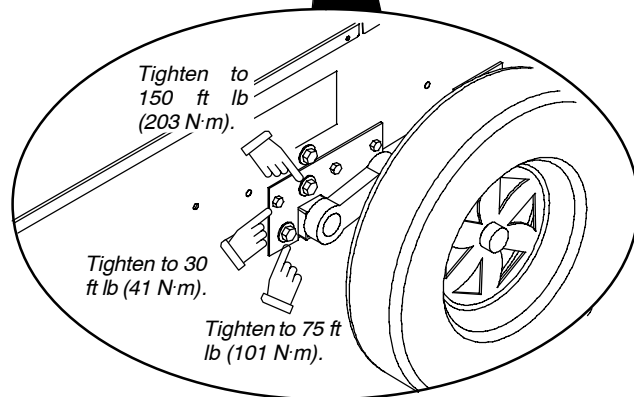
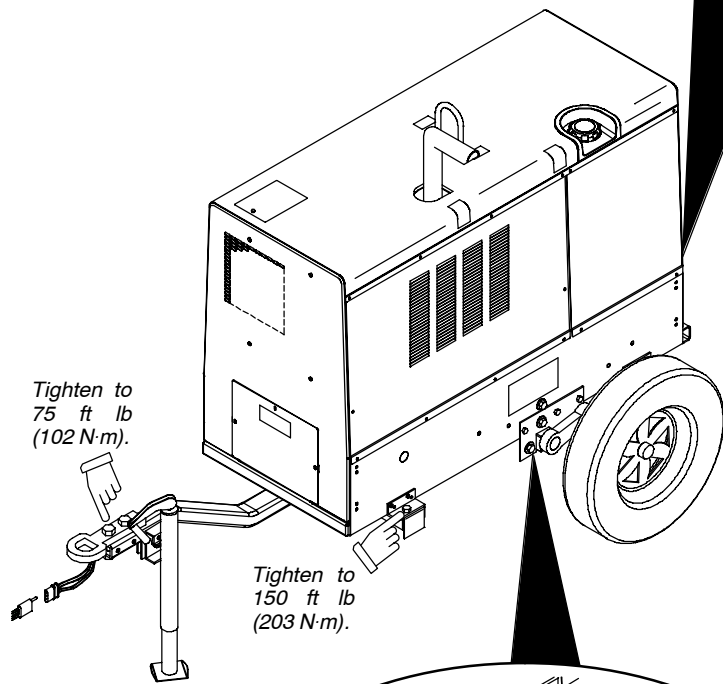
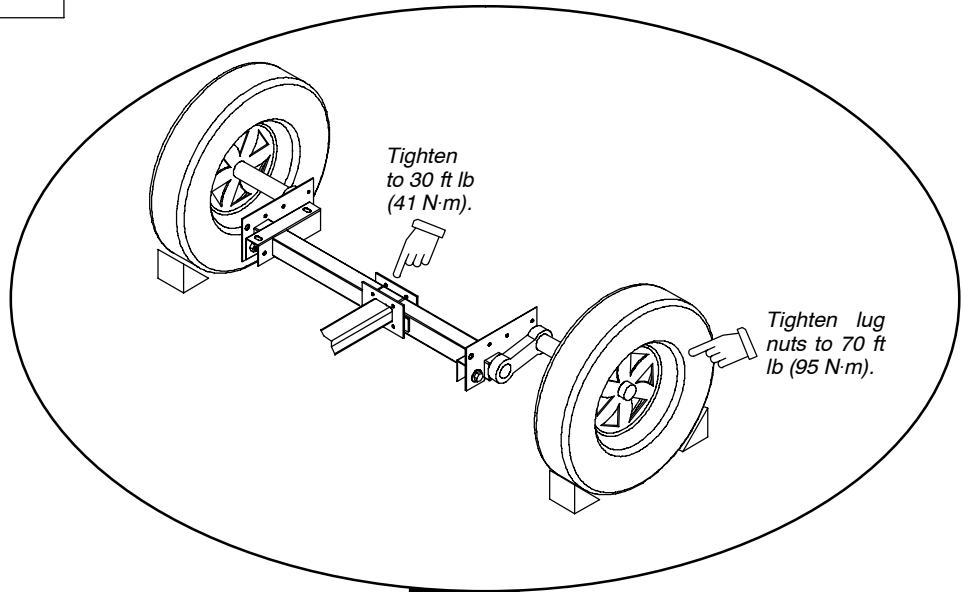
-  1/2, 9/16, 3/4, 15/16 in
-  9/16, 3/4, 15/16 in

802 817 / 802 818

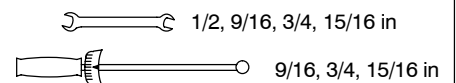
### 3-8. Tightening Trailer Hardware



Final-tighten trailer hardware installed in earlier steps to torque values shown.

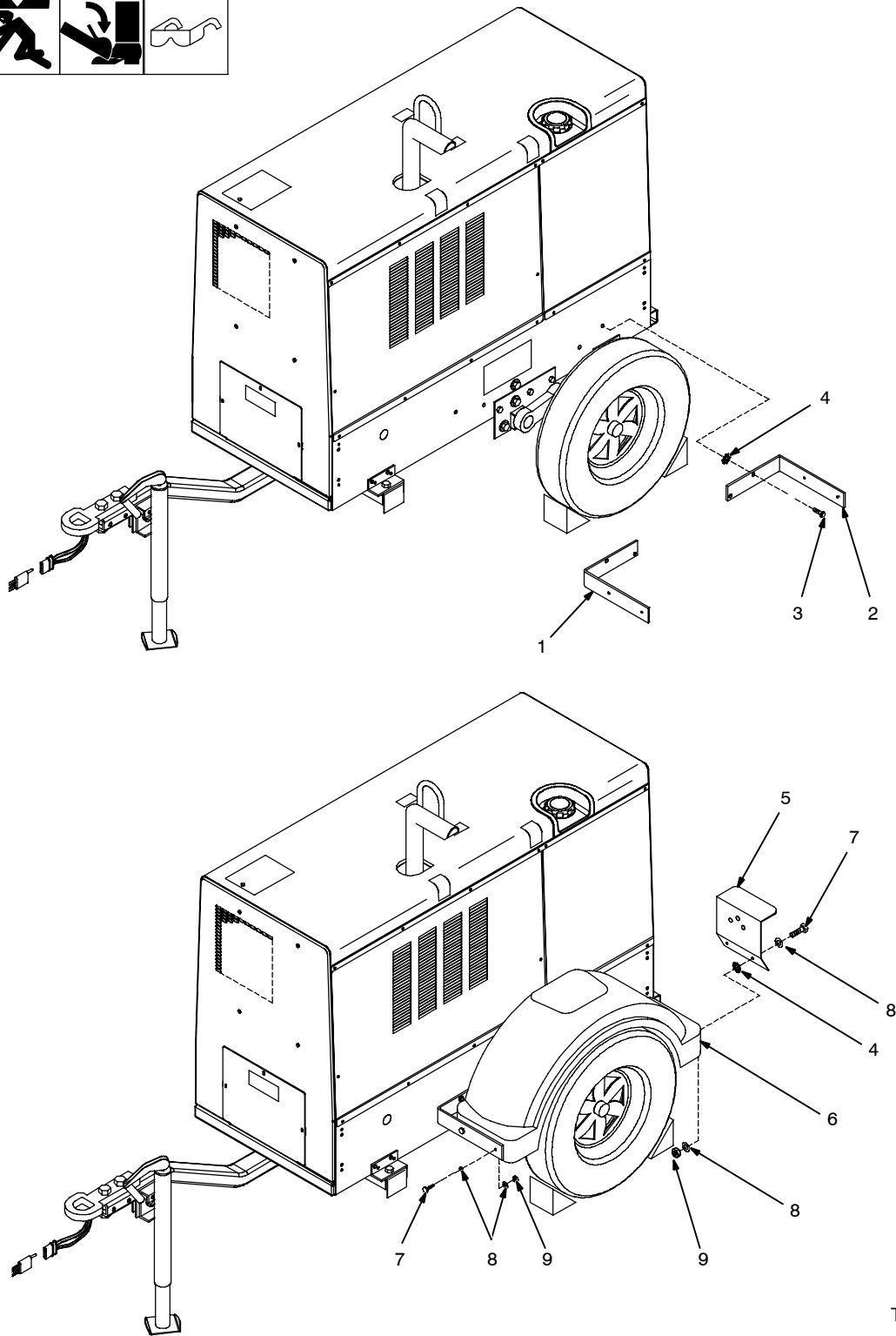
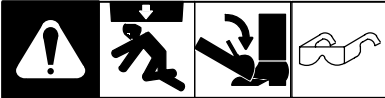


Tools Needed:

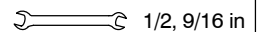


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### 3-9. Mounting Fenders



**Tools Needed:**



802 818

☞ Use hardware in green bag to mount fenders

☞ The front and rear fender brackets are not interchangeable.

- 1 Front Fender Bracket
- 2 Rear Fender Bracket
- 3 3/8-16 x 3/4 Self-Tapping Screw

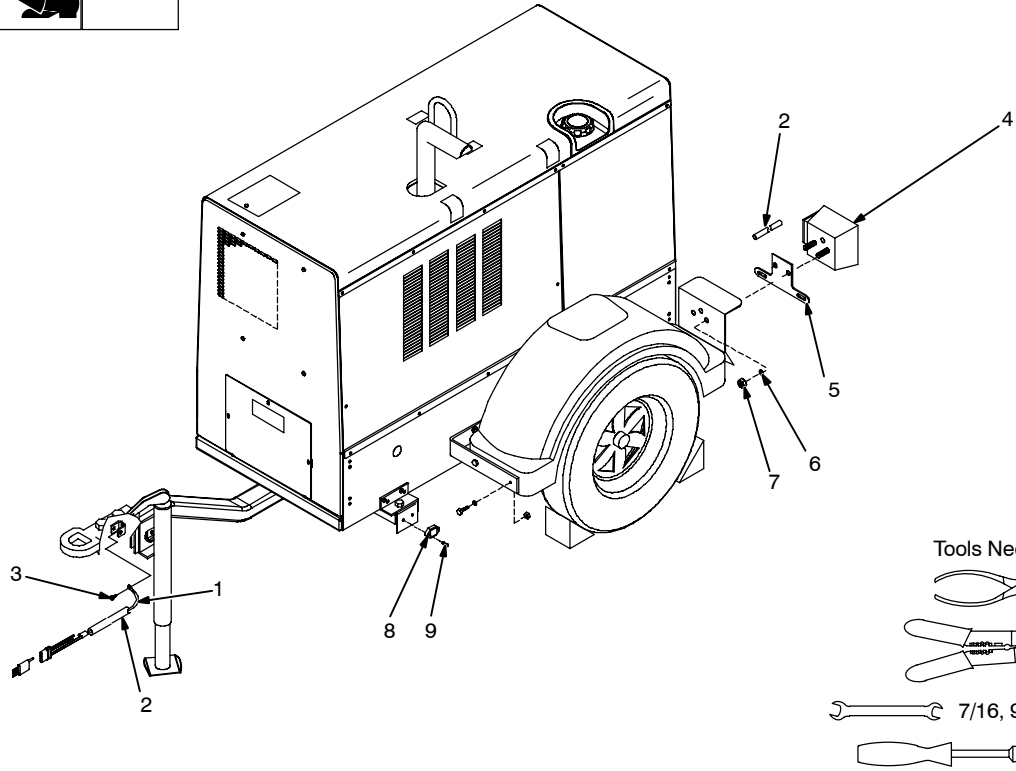
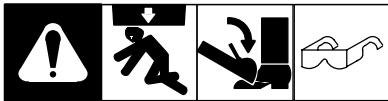
- 4 3/8 Star Washer
- 5 Light Bracket
- 6 Fender
- 7 3/8-16 x 1-1/2 Screw
- 8 3/8 ID Flat Washer
- 9 3/8 Lock Nut

Mount front and rear fender brackets using supplied 3/8 in self-tapping screws, star washers, and existing holes in welding generator base.

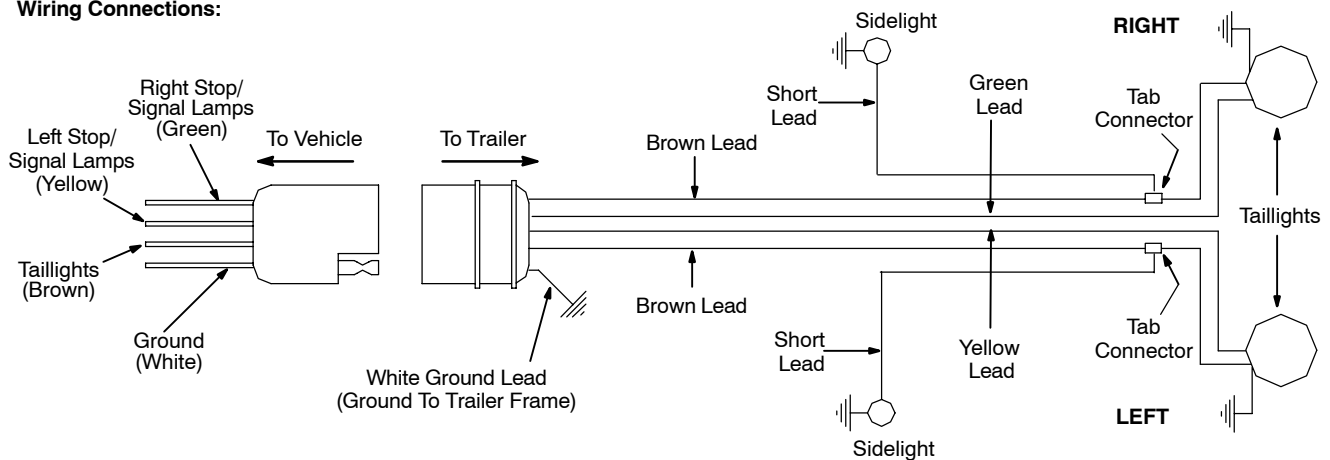
Be sure to install star washers between rear fender brackets and base, and between rear fender brackets and light brackets.

Mount fenders on fender brackets using supplied 3/8 in hardware.

### 3-10. Installing Taillight And Sidelight Wiring



#### Wiring Connections:



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▲ **Support trailer with jack. Block wheels.**

☞ Use hardware in green bag to install lights.

- 1 Wiring Harness White Ground Lead
- 2 Sleeving
- 3 3/4 Sheet Metal Screw
- 4 Taillight
- 5 License Plate Holder
- 6 1/4 ID Lock Washer
- 7 1/4 ID Nut

- 8 Sidelight
- 9 8-32 x 5/8 Self-Tapping Screw

**To connect taillights:** Strip insulation from end of white ground lead and crimp on supplied ring terminal to chain bracket using 3/4 in sheet metal screw.

Strip 1/2 in (12.7 mm) insulation from ends of taillight brown, green, and yellow leads.

Insert stripped end of green lead into right taillight hole marked STOP & TURN (GREEN). Insert stripped end of yellow lead into left taillight hole marked STOP & TURN (YELLOW).

Insert stripped end of brown leads into TAIL (BROWN) holes in each light.

Mount taillights and license holder on brackets using supplied 1/4 in hardware.

**To connect sidelights:**

Connect brown lead to sidelight.

Mount sidelight on frame using supplied self-tapping screws.

Install other sidelight the same way.

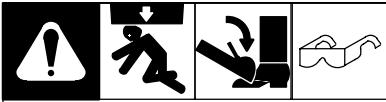
Install sleeving on taillight and harness plug electrical leads.




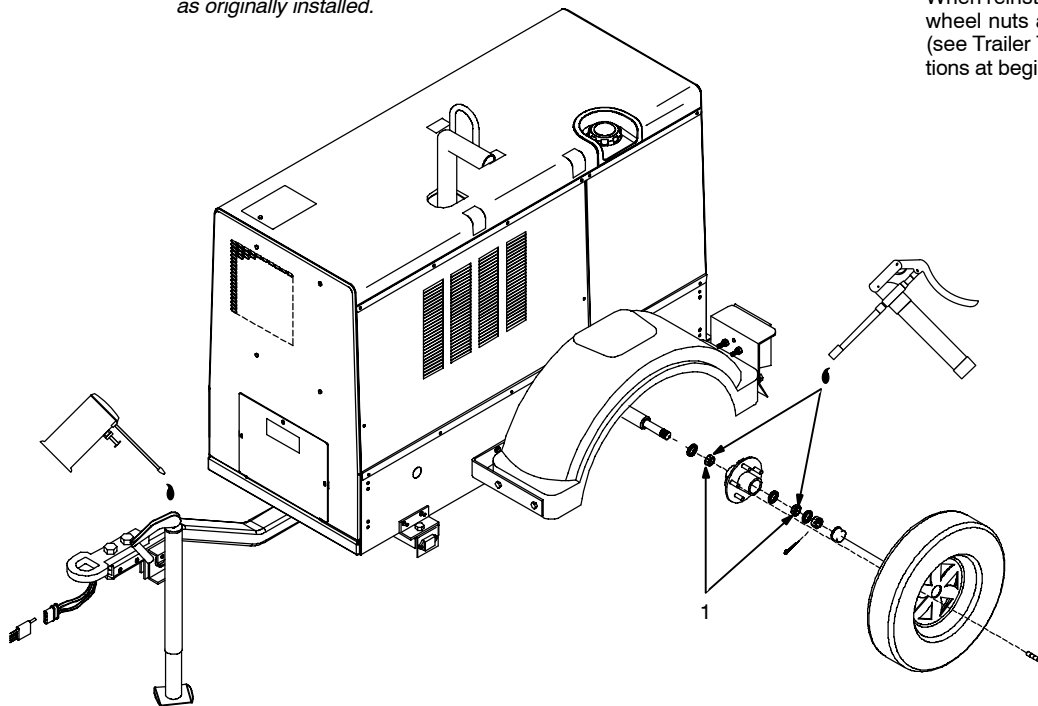
### 3-11. Maintenance

## NOTE

*Do not use trailer if any part is damaged or not working properly. When performing maintenance, check trailer for worn, damaged, or non-working parts. Check for free rotation of assemblies mounted on bushings or bearings.*



 *Replace trailer hardware only with SAE hardware of same grade, type and size as originally installed.*



▲ **Support trailer with jack. Block wheels.**

▲ **Do not put any body part under trailer while lifting or performing maintenance.**

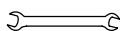
Once a year, lubricate all moving parts on trailer with SAE 20W oil. Lubricate more often if trailer is exposed to elements or subject to frequent off-road use.

#### 1 Wheel Bearings

Every 12,000 miles, check wheel bearings. Repack bearings if necessary using a good quality lithium-based extreme pressure grease.

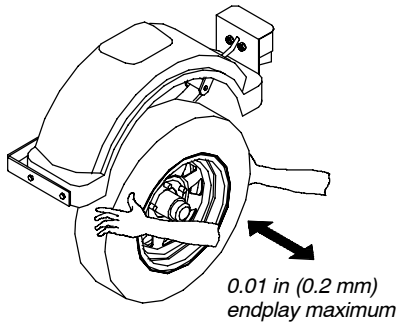
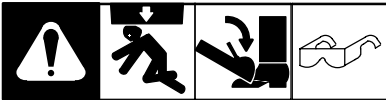
When reinstalling wheels, be sure wheel nuts are properly tightened (see Trailer Towing Safety Precautions at beginning of manual).

Tools Needed:

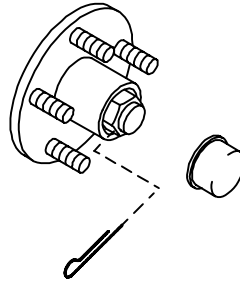


802 819

### 3-12. Torquing Wheel Bearings



Check hub endplay. If loose, remove wheel and go to next step.



Remove cap and cotter pin.

▲ **Loss of control hazard.** To prevent injury and damage, check and repack wheel bearings once a year or every 12,000 miles (19,500 km), whichever comes first.

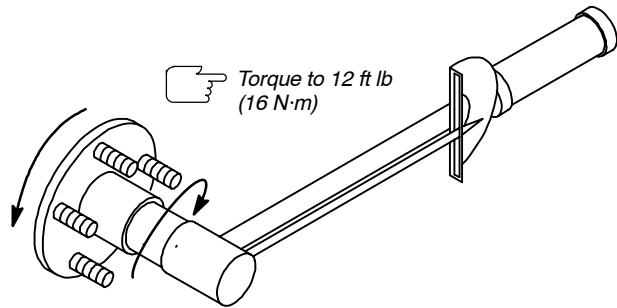
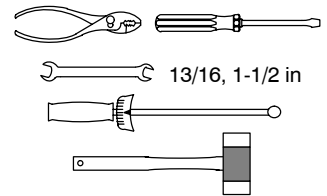
▲ **Use proper equipment to lift and support unit.**

▲ **Do not put any body part under trailer while lifting or performing maintenance.**

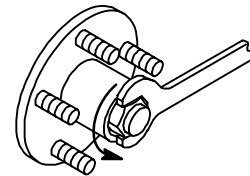
☞ *Torque wheel bearings whenever hub nut is removed or hub is too loose.*

Repack bearings according to Section 3-11.

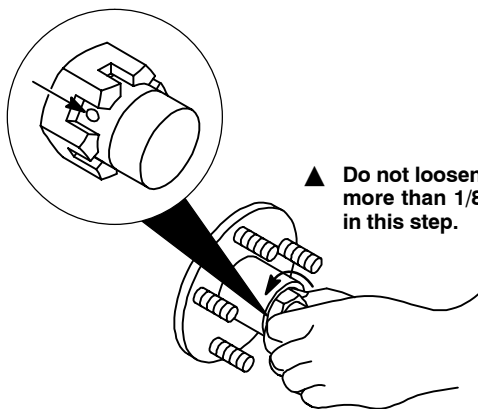
Tools Needed:



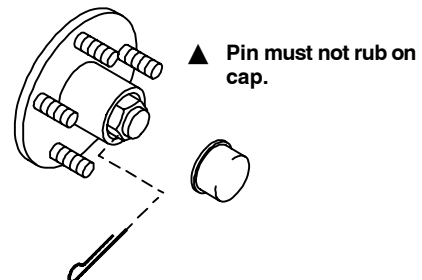
Torque nut while turning hub forward.



Turn nut until "just loose."



Further loosen nut until first slot in nut aligns with hole in spindle.




Install new cotter pin and bend ends around nut. Install cap. Install wheel (See Safety Precautions) and recheck endplay.

# Notes

## DECIMAL EQUIVALENTS

	$\frac{1}{64}$	.015625
	$\frac{2}{64}$	.03125
	$\frac{3}{64}$	.046875
$\frac{1}{16}$	$\frac{4}{64}$	.0625
	$\frac{5}{64}$	.078125
	$\frac{6}{64}$	.09375
	$\frac{7}{64}$	.109375
$\frac{1}{8}$	$\frac{8}{64}$	.125
	$\frac{9}{64}$	.140625
	$\frac{10}{64}$	.15625
	$\frac{11}{64}$	.171875
$\frac{3}{16}$	$\frac{12}{64}$	.1875
	$\frac{13}{64}$	.203125
	$\frac{14}{64}$	.21875
	$\frac{15}{64}$	.234375
$\frac{1}{4}$	$\frac{16}{64}$	.25
	$\frac{17}{64}$	.265625
	$\frac{18}{64}$	.28125
	$\frac{19}{64}$	.296875
$\frac{5}{16}$	$\frac{20}{64}$	.3125
	$\frac{21}{64}$	.328125
	$\frac{22}{64}$	.34375
	$\frac{23}{64}$	.359375
$\frac{3}{8}$	$\frac{24}{64}$	.375
	$\frac{25}{64}$	.390625
	$\frac{26}{64}$	.40625
	$\frac{27}{64}$	.421875
$\frac{7}{16}$	$\frac{28}{64}$	.4375
	$\frac{29}{64}$	.453125
	$\frac{30}{64}$	.46875
	$\frac{31}{64}$	.484375
$\frac{1}{2}$	$\frac{32}{64}$	.5
	$\frac{33}{64}$	.515625
	$\frac{34}{64}$	.53125
	$\frac{35}{64}$	.546875
$\frac{9}{16}$	$\frac{36}{64}$	.5625
	$\frac{37}{64}$	.578125
	$\frac{38}{64}$	.59375
	$\frac{39}{64}$	.609375
$\frac{5}{8}$	$\frac{40}{64}$	.625
	$\frac{41}{64}$	.640625
	$\frac{42}{64}$	.65625
	$\frac{43}{64}$	.671875
$\frac{11}{16}$	$\frac{44}{64}$	.6875
	$\frac{45}{64}$	.703125
	$\frac{46}{64}$	.71875
	$\frac{47}{64}$	.734375
$\frac{3}{4}$	$\frac{48}{64}$	.75
	$\frac{49}{64}$	.765625
	$\frac{50}{64}$	.78125
	$\frac{51}{64}$	.796875
$\frac{13}{16}$	$\frac{52}{64}$	.8125
	$\frac{53}{64}$	.828125
	$\frac{54}{64}$	.84375
	$\frac{55}{64}$	.859375
$\frac{7}{8}$	$\frac{56}{64}$	.875
	$\frac{57}{64}$	.890625
	$\frac{58}{64}$	.90625
	$\frac{59}{64}$	.921875
$\frac{15}{16}$	$\frac{60}{64}$	.9375
	$\frac{61}{64}$	.953125
	$\frac{62}{64}$	.96875
	$\frac{63}{64}$	.984375
1	$\frac{64}{64}$	1.

# SECTION 4 – PARTS LIST

 Hardware is common and not available unless listed.

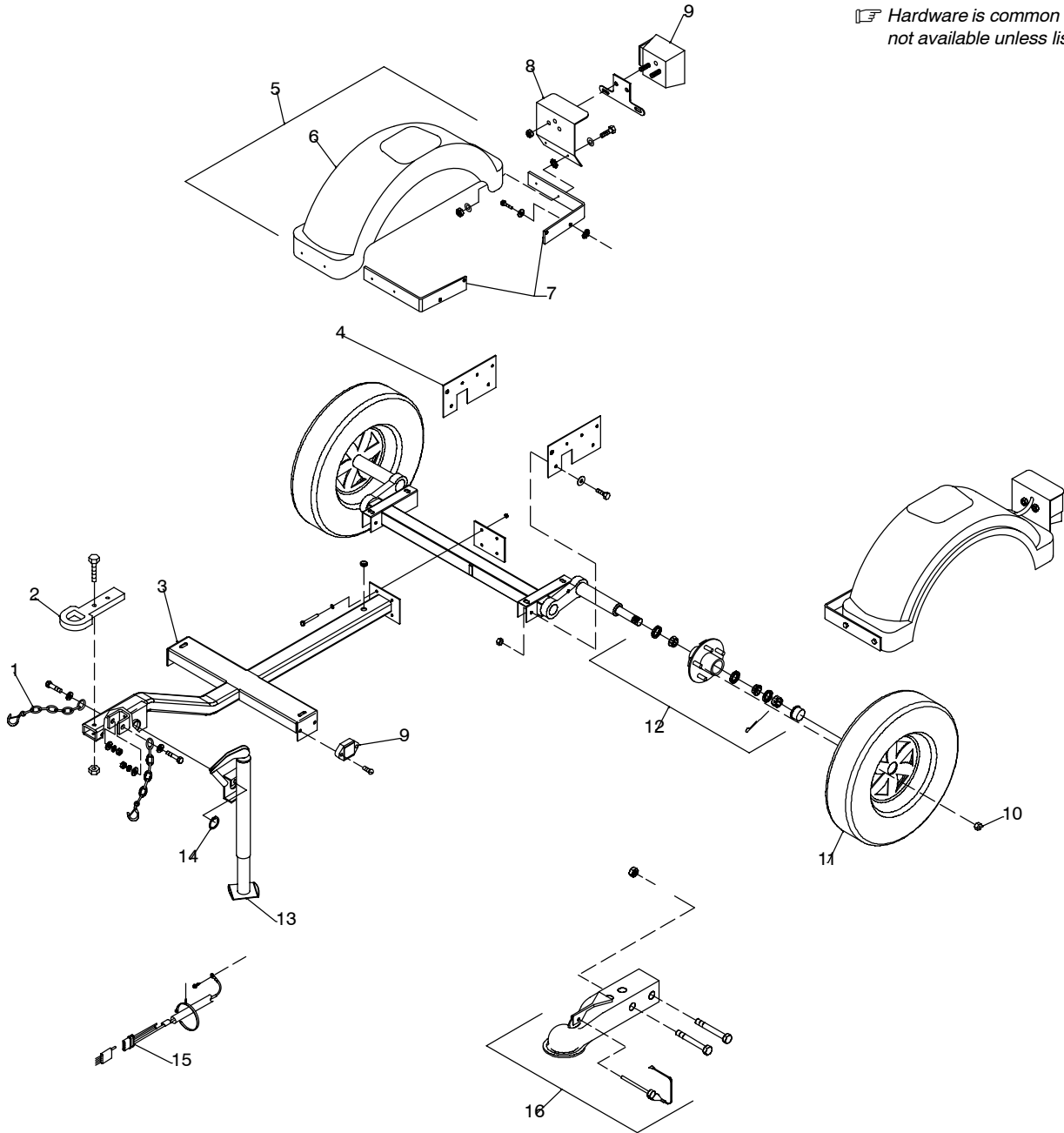


Figure 4-1. Complete Assembly

802 736-A

Item No.	Part No.	Description	Quantity
<b>Figure 4-1. Complete Assembly</b>			
... 1	199 860	Chain, Safety Kit W/Latch	1
... 2	043 824	Hitch, 2-1/2 In Lunnette Eye	1
... 3	202 542	Axle, Drawbar Assy (consisting of)	1
...	202 541	Axle, 2700	1
...	202 543	Drawbar Assembly	1
...	202 544	Brkt, Mtg Axle W/Hardware	1
... 4	202 545	Plates, Mtg Machine W/Hardware	2
...	202 693	Hardware Kit, Mounting Machine 7/16 Rct	1
... 5	202 835	Fender Assy (consisting of)	1
... 6	189 580	Fender, Poly (80)	2
... 7	202 685	Bracket, Mtg Fender Lh	2
... 7	202 686	Bracket, Mtg Fender Rh	2
...	202 690	Fender, Hrdw Kit	1
... 8	189 582	Guard, Light	2
... 9	189 577	Light, Kit (includes trailer wiring harness)	1
... 10	088 879	Wheel Nuts, .500-20	10
... 11	189 576	Tire, 13 in C	2
... 12	189 575	Hub, Axle #2	2
...	167 787	Kit, Bearing 1-3/8 - 1-1/16 Tapered Axle	1
... 13	189 586	Jack, Screw W/Pad	1
... 14	189 587	Jack, Ret Ring	1
... 15		Harness, Trailer (included with Item 9, Light Kit)	1
... 16	◆ 189 585	Hitch, ball 2 in	1

◆OPTIONAL

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**



# TRUE BLUE<sup>®</sup>

## WARRANTY

Effective January 1, 2004

(Equipment with a serial number preface of "LE" or newer)

This limited warranty supersedes all previous Miller warranties and is exclusive with no other guarantees or warranties expressed or implied.

### Warranty Questions?

Call  
1-800-4-A-MILLER  
for your local  
Miller distributor.

Your distributor also gives  
you ...

#### Service

You always get the fast,  
reliable response you  
need. Most replacement  
parts can be in your  
hands in 24 hours.

#### Support

Need fast answers to the  
tough welding questions?  
Contact your distributor.  
The expertise of the  
distributor and Miller is  
there to help you, every  
step of the way.

**LIMITED WARRANTY** - Subject to the terms and conditions below, Miller Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

Within the warranty periods listed below, Miller will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Miller must be notified in writing within thirty (30) days of such defect or failure, at which time Miller will provide instructions on the warranty claim procedures to be followed.

Miller shall honor warranty claims on warranted equipment listed below in the event of such a failure within the warranty time periods. All warranty time periods start on the date that the equipment was delivered to the original retail purchaser, or one year after the equipment is sent to a North American distributor or eighteen months after the equipment is sent to an International distributor.

1. 5 Years Parts — 3 Years Labor
  - \* Original main power rectifiers
  - \* Inverters (input and output rectifiers only)
2. 3 Years — Parts and Labor
  - \* Transformer/Rectifier Power Sources
  - \* Plasma Arc Cutting Power Sources
  - \* Semi-Automatic and Automatic Wire Feeders
  - \* Inverter Power Sources (Unless Otherwise Stated)
  - \* Water Coolant Systems (Integrated)
  - \* Intelligig
  - \* Maxstar 150
  - \* Engine Driven Welding Generators  
**(NOTE: Engines are warranted separately by the engine manufacturer.)**
3. 1 Year — Parts and Labor Unless Specified
  - \* DS-2 Wire Feeder
  - \* Motor Driven Guns (w/exception of Spoolmate Spoolguns)
  - \* Process Controllers
  - \* Positioners and Controllers
  - \* Automatic Motion Devices
  - \* RFCS Foot Controls
  - \* Induction Heating Power Sources and Coolers
  - \* Water Coolant Systems (Non-Integrated)
  - \* Flowgauge and Flowmeter Regulators (No Labor)
  - \* HF Units
  - \* Grids
  - \* Maxstar 85, 140
  - \* Spot Welders
  - \* Load Banks
  - \* Arc Stud Power Sources & Arc Stud Guns
  - \* Racks
  - \* Running Gear/Trailers
  - \* Plasma Cutting Torches (except APT & SAF Models)
  - \* Field Options  
**(NOTE: Field options are covered under True Blue<sup>®</sup> for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)**
4. 6 Months — Batteries
5. 90 Days — Parts
  - \* MIG Guns/TIG Torches

- \* Induction Heating Coils and Blankets
- \* APT & SAF Model Plasma Cutting Torches
- \* Remote Controls
- \* Accessory Kits
- \* Replacement Parts (No labor)
- \* Spoolmate Spoolguns
- \* Canvas Covers

Miller's True Blue<sup>®</sup> Limited Warranty shall not apply to:

1. **Consumable components; such as contact tips, cutting nozzles, contactors, brushes, slip rings, relays or parts that fail due to normal wear. (Exception: brushes, slip rings, and relays are covered on Bobcat, Trailblazer, and Legend models.)**
2. Items furnished by Miller, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer's warranty, if any.
3. Equipment that has been modified by any party other than Miller, or equipment that has been improperly installed, improperly operated or misused based upon industry standards, or equipment which has not had reasonable and necessary maintenance, or equipment which has been used for operation outside of the specifications for the equipment.

MILLER PRODUCTS ARE INTENDED FOR PURCHASE AND USE BY COMMERCIAL/INDUSTRIAL USERS AND PERSONS TRAINED AND EXPERIENCED IN THE USE AND MAINTENANCE OF WELDING EQUIPMENT.

In the event of a warranty claim covered by this warranty, the exclusive remedies shall be, at Miller's option: (1) repair; or (2) replacement; or, where authorized in writing by Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Miller service station; or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at customer's risk and expense. Miller's option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a Miller authorized service facility as determined by Miller. Therefore no compensation or reimbursement for transportation costs of any kind will be allowed.

TO THE EXTENT PERMITTED BY LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL MILLER BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT TORT OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MILLER IS EXCLUDED AND DISCLAIMED BY MILLER.

Some states in the U.S.A. do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, so the above limitation or exclusion may not apply to you. This warranty provides specific legal rights, and other rights may be available, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be waived, the limitations and exclusions set out above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.





# Owner's Record

Please complete and retain with your personal records.

Model Name	Serial/Style Number
Purchase Date	(Date which equipment was delivered to original customer.)
Distributor	
Address	
City	
State	Zip



## For Service

**Call 1-800-4-A-Miller or see our website at [www.MillerWelds.com](http://www.MillerWelds.com) to locate a DISTRIBUTOR or SERVICE AGENCY near you.**

Always provide Model Name and Serial/Style Number.

Contact your Distributor for:

- Welding Supplies and Consumables
- Options and Accessories
- Personal Safety Equipment
- Service and Repair
- Replacement Parts
- Training (Schools, Videos, Books)
- Technical Manuals (Servicing Information and Parts)
- Circuit Diagrams
- Welding Process Handbooks

Contact the Delivering Carrier to:

File a claim for loss or damage during shipment.

For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.

### Miller Electric Mfg. Co.

An Illinois Tool Works Company  
1635 West Spencer Street  
Appleton, WI 54914 USA

### International Headquarters—USA

USA Phone: 920-735-4505 Auto-Attended  
USA & Canada FAX: 920-735-4134  
International FAX: 920-735-4125

### European Headquarters – United Kingdom

Phone: 44 (0) 1204-593493  
FAX: 44 (0) 1204-598066

[www.MillerWelds.com](http://www.MillerWelds.com)

