



## 40In. X 48In. Utility Trailer

### Owner's Manual



**WARNING:** Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #37560

**READ & SAVE THESE INSTRUCTIONS**

Thank you very much for choosing an Ironton product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This trailer is designed for certain applications only. Northern Tool and Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

## Table of Contents

Intended Use.....	4
Packaging Contents.....	4
Technical Specifications .....	4
Important Safety Information .....	5
Specific Operation Warnings .....	6
Main Parts of Trailer.....	7
Assembly Instructions.....	8
Before Each Use.....	15
Operating Instructions.....	15
After Each Use.....	21
Maintenance .....	21
Troubleshooting.....	23
Parts Diagram.....	24
Parts List.....	24
Replacement Parts .....	25
Limited Warranty.....	26

## Intended Use

This trailer is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this trailer is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the trailer until you have first contacted distributor to determine if it can or should be performed on the product.

## Packaging Contents

Part	Description	Qty.	Part	Description	Qty.
1	M10x20mm Hex Bolts	32	19	ϕ 22x3mm Washers	2
3	M10 Nylon Nuts	42	20	Slotted Nut	2
4	Cross Member	3	21	4mm Cotter Pins	2
5	Left Side Rail	1	22	Dust Caps	2
5A	Right Side Rail	1	23	Couper	1
6	Towbar	1	24	M10x85mm Hex Bolts	2
7	Spring Hangers	4	25	Safety Chain	1
8	Spring Slide Plates	2	27	Tail Light Bracket	2
9	Slipper Spring	2	28	License Plate Bracket	1
10	M12x80mm Hex Bolts	4	29	Left Tail Light	1
11	M12 Nylon Nuts	4	29A	Right Tail Light	1
12	Axle	1	30	Side Running Lights	2
13	M10 U-Bolts	4	31	Self Tapping Screw	4
14	Spring Plates	2	34	Fenders	2
15	Hub Assembly	2	35	Seal	2
16	Tire/Wheel Assembly	2	36	ϕ 3mm R Pin	1
17	Lug Nuts	8	37	ϕ 8x25mm Safety Pin	1
18	Bearing	4			

## Technical Specifications

Property	Specification
Tires	4.8-12 Tubeless
Wheel	4 Bolt Demountable
Bed Dimensions	40 x 48 Inch
Ball/Coupler Size	1-7/8 Inch
Load Capacity	1060 lbs. Max
GAWR	1200 lbs. with 4.8-12 Tires at 60 PSI Cold
GVWR	1200 lbs

## Important Safety Information

### **⚠WARNING**

- Keep the work area clean and dry. Damp or wet work areas can result in injury.
- Keep children away from work area. Do not allow children to handle this product.
- Always wear ANSI-approved safety glasses and heavy-duty work gloves during assembly and use. Do not wear loose clothing or jewelry which can get caught in moving parts.
- Check for damaged parts. Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace damaged or worn parts immediately.
- Do not overreach. Keep proper footing and balance at all times to prevent tripping, falling, back injury, etc.
- DO NOT use this trailer when tired or distracted.
- Industrial applications must follow OSHA requirements.

### **⚠WARNING**

#### **WORK AREA SAFETY**

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- Do not use the product where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.

### **⚠WARNING**

#### **PERSONAL SAFETY**

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.

- Do not overreach. Keep proper footing and balance at all times.
- Remove keys or wrenches before connecting the tool to an air supply, power supply, or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may cause personal injury.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

## **⚠CAUTION**

### **TRAILER USE AND CARE**

- Do not force the trailer. Products are safer and do a better job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.
- Do not leave the tool running unattended.

## **Specific Operation Warnings**

### **⚠WARNING**

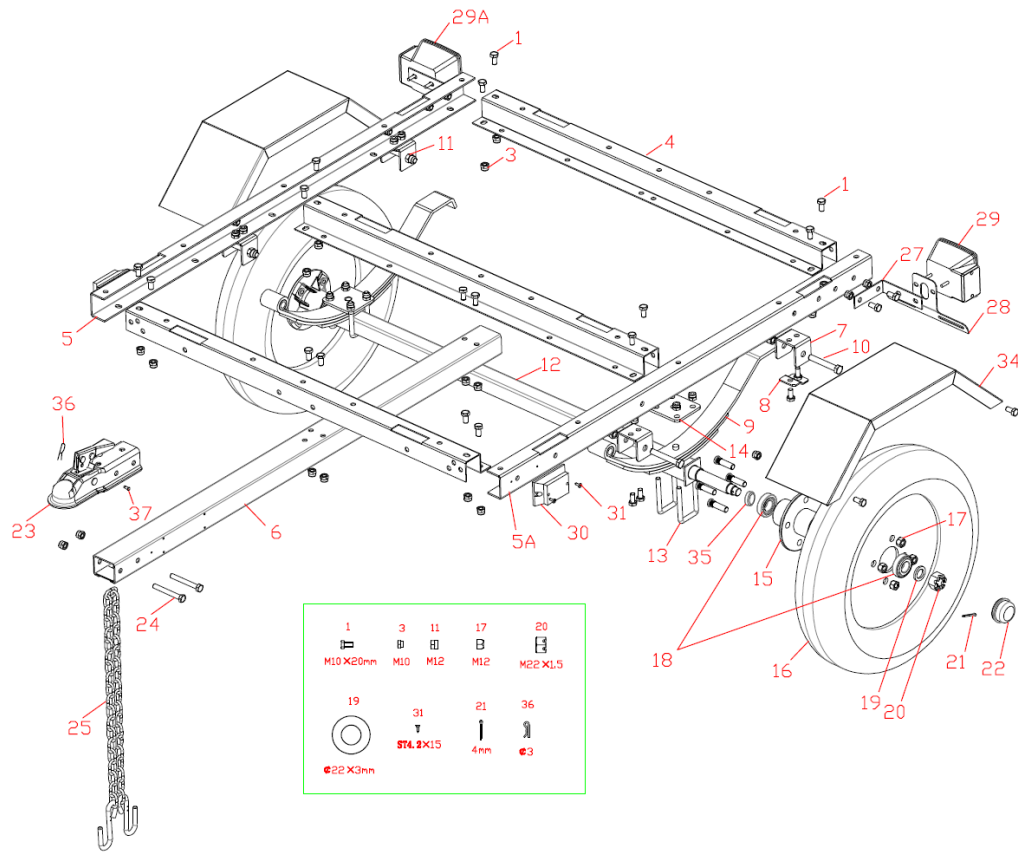
- Before each use, always examine the trailer for proper tire condition and air pressure, damaged Tail Lights, damaged Side Running Lights, loose bolts and nuts, structural cracks, bends and any other condition that may affect its safe operation. Do not use the Trailer even if minor damage appears.
- Before each use, always attach the Safety Chains of the trailer to the towing vehicle. Make sure the Safety Chains are attached to the towing vehicle with the equal length at each side. Do not allow the Safety Chains to drag on the ground.
- Always check to make sure the payload being transported properly and safely secured in the trailer. Load the Trailer evenly from side to side with 60% of the load forward of the Axle.
- Make sure the towing vehicle is capable of towing this trailer and its payload. Make sure the hitch on the towing vehicle is capable of towing the Trailer and its payload. The towing capacity of the hitch is typically stamped on the hitch drawbar.
- Make sure the hitch coupler and the vehicle's Ball Hitch (not included) are of equal mating size (1-7/8in.) and are rated equal to or greater than the weight of the trailer and its payload.
- Do not exceed 45 miles per hour when towing the trailer. Excess speed is a major cause of

vehicle-trailer accidents.

- The Tail Light Bulbs supplied with this trailer are for a 12 Volt DC electrical system only. Do not attempt to power the Light Bulbs with any other type or voltage electrical current.
- Whenever possible, park the trailers on a flat, level, paved surface and chock both tires to keep the trailer from accidentally moving.
- Before attempting to fold up the trailer, make sure it is on a flat, level, solid surface and chock both tires.
- Never attempt to fold up the trailer without assistance.
- DO NOT exceed the 870 pound weight capacity.
- DO NOT allow anyone to ride in the towed vehicle or on the trailer.
- The coupler must be properly secured to the hitch ball. After assembly and attachment, pull up and down on the hitch coupler to make sure the hitch ball is snug in the hitch coupler. If the coupler is not secured properly, it could come loose while the trailer is in motion, causing property damage, serious personal injury or even death.
- Make wide turns when towing a loaded trailer, avoiding both sharp turns and U-turns. Turning too sharply can cause damage to the trailer and/or the tow vehicle.

## **Main Parts of Trailer**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS.



## Assembly Instructions

### ⚠WARNING

- Beams have sharp edges. Wear work gloves to prevent cuts on hands and fingers.
- Wear ANSI Z87.1 compliant safety goggles.

#### NOTE:

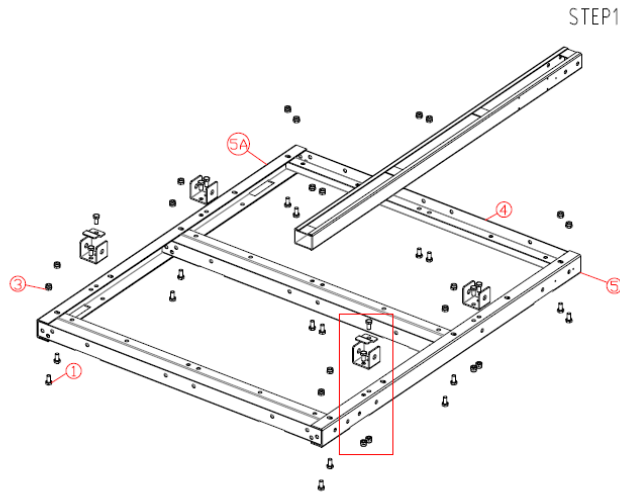
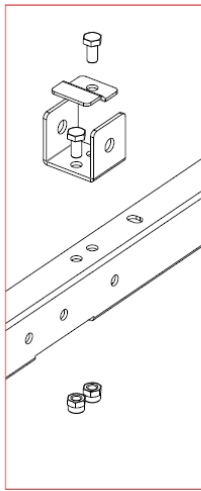
- Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set-up or use of this trailer. If there is no female plug for the wires, have one installed by a qualified service technician.
- For additional information regarding the parts listed in the following pages, refer to the Parts List and diagram.
- It is recommended that only a qualified technician perform the electrical service that may be needed to enable your particular make/model vehicle to power the trailer's 12-volt DC lighting system.

#### STEP 1:

1. Lay out three cross members (#4) to right and left side rail (#5, #5A) shown in figure below. Notice the "Front" cross member is reversed.
2. Assemble (#4, #5, #5A) by using M10 x 20mm Hex Bolts and nuts, with flat flanges of cross members positioned as shown in figure.
3. Do not tighten nuts until all bolts are positioned in place.

#### PARTS NEEDED

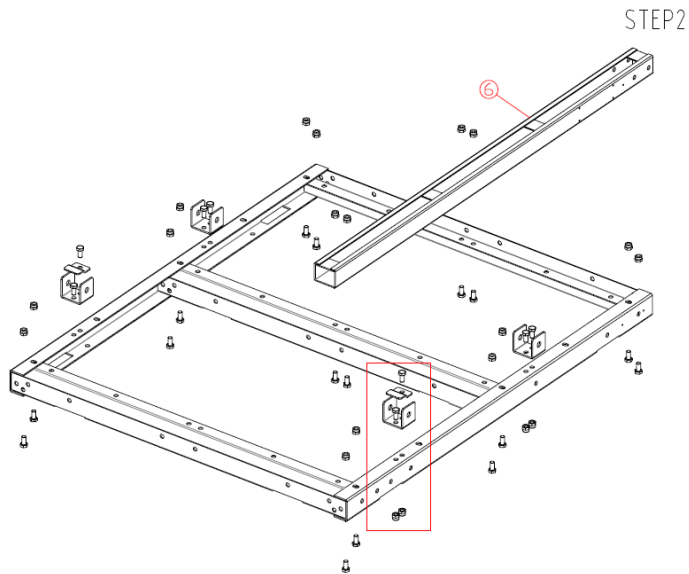
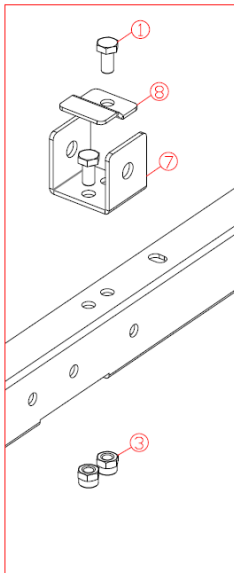
PART	QTY	DESCRIPTION
1	12	M10x20mm Hex Bolts
3	12	M10 Nylon nuts
4	3	Cross Members
5	1	Left Side Rail
5A	1	Right Side Rail



**STEP 2:**

1. Turn the trailer assembly upside down.
2. Bolt tow bar (#6) with hex bolts, and nuts (#1, #3). Notice the bolt direction as shown in figure below.
3. Bolt front spring hangers (#7) to side rails (#5, # 5A) with hex bolts and nuts (#1, #3). Attach other spring hangers with one bolt to the rear end, tighten nuts and attach spring slide plates (#8) through other hole in spring hanger, as shown in figure below

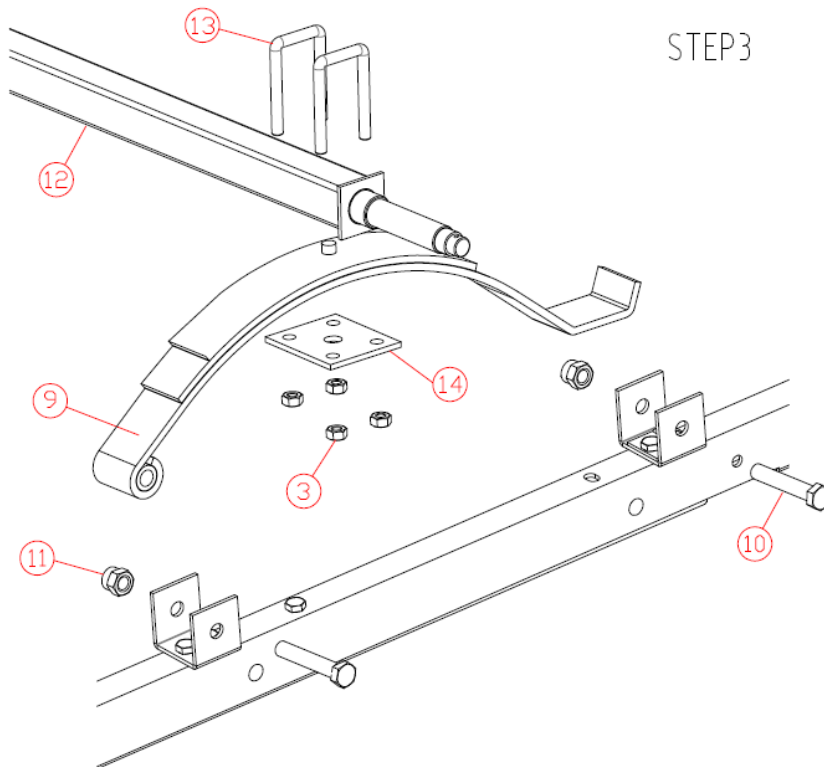
PARTS NEEDED		
PART	QTY	DESCRIPTION
1	12	M10x20mm Hex Bolts
3	12	M10 Nylon Nuts
6	1	Tow bar
7	4	Spring Hangers
8	2	Spring Slide Plates



**STEP 3:**

1. Put the springs (#9) on the spring hangers (#7) with spring eyes forward. Secure with M14 x 80mm bolt (#10) by going through the spring hangers, lock it with M14 nuts (#11). Then push a cotter pin (#33) through the hole in the end of the bolt and spread it.
2. Place axle (#12) on top of spring (#9). Place spring plate (#14) under spring; using M10 U-Bolt (#13) pass through axle, spring, and spring plate, then lock with M10 nuts (#3).
3. Repeat above steps for the other side of trailer.

PARTS NEEDED		
PART	QTY	DESCRIPTION
3	8	M10 Nylon Nuts
9	2	Springs
10	4	M14 x 80 Bolts
11	4	M14 Nuts
12	1	Axle
13	4	M10 U-Bolts
14	2	Spring Plates
33	4	3mm Cotter Pins



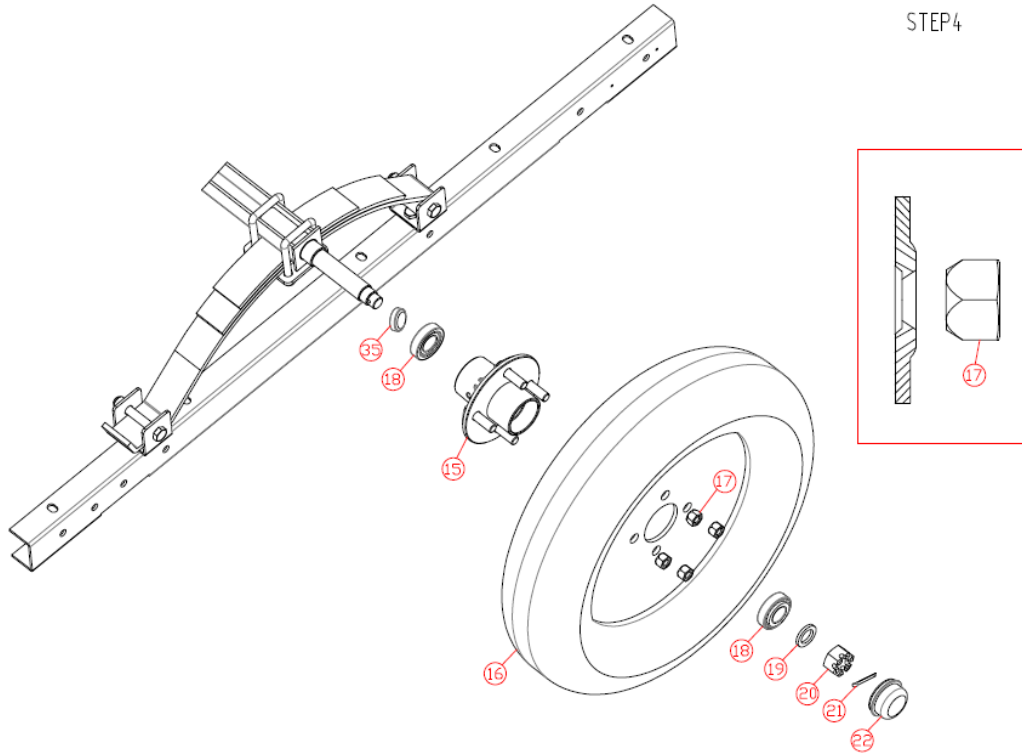
**STEP 4:**

1. Remove dust cap (#22), take out cotter pin (#21), carefully slide hub assembly onto axle. Place flat washer (#19) on axle, apply and tighten castle nut (#20) snugly, back it off slightly until wheel turns freely. Insert and spread cotter pin (#21). Fill dust cap (#22) 1/4" full of Automotive Grease and replace firmly on hub.
2. Put tire/wheel assembly (#16) on hub dry. Then lock with 4 lug nuts (#17). Tighten with socket or lug wrench to 90 ft-lbs.

**NOTE:** Air valve should be on outside of rim. Be sure that axle is perpendicular to side rails and springs are parallel to side rails.

PARTS NEEDED		
PART	QTY	DESCRIPTION
15	2	Hub Assembly
16	2	Tire/Wheel Assembly

17	8	Lug Nuts
18	4	Bearings
19	2	∅ 22x3mm Washers
20	2	Slotted Nut
21	2	4mm Cotter Pins
22	2	Dust Caps
35	2	Grease Fitting



STEP 4

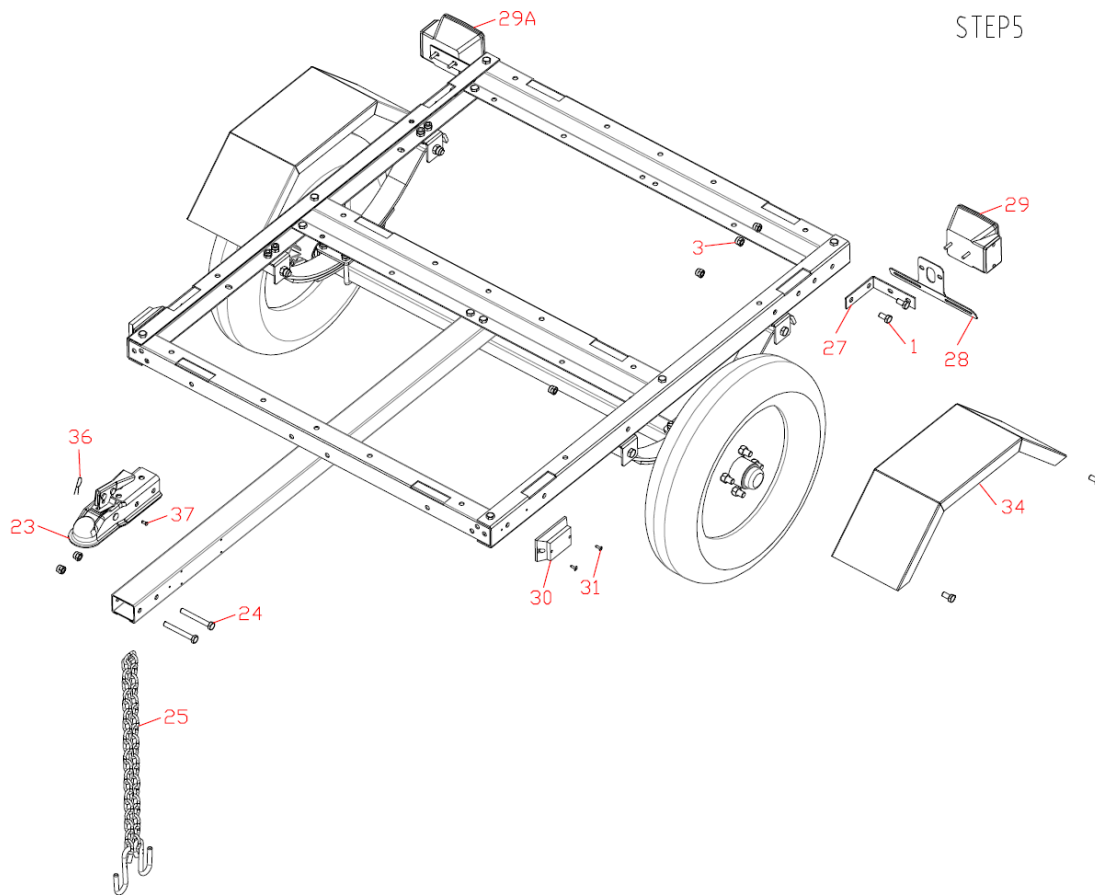
**STEP 5:**

1. Turn trailer assembly over, right-side-up.
2. Bolt coupler (#23) to tow bar (#6) with hex bolts and nuts, (#24, 3), attach safety chain (#25), then lock it.

**NOTE:** Make sure the safety chain is the same length on each side.

3. Attach tail light brackets (#27) with bolts, and nuts (#1, 3) as shown in figure. Install license plate bracket (#28) and left tail light (#29) (with clear lens facing down) with nuts. Install right tail light (#29A).
4. Remove lens of side running lights (#30), feed the wire through the hole in the center of the light and the center hole in the frame and attach to frame with self-tapping screws (#31).
5. Bolt fenders (#34) to side rails by using hex bolts (#1), lock nuts (#3).

PARTS NEEDED					
PART	QTY	DESCRIPTION	PART	QTY	DESCRIPTION
1	8	M10 x 20mm Bolts	29	1	Left Tail Light
3	10	Nylon Nuts	29A	1	Right Tail Light
23	1	Coupler	30	2	Side Running Lights
24	2	M10 x 90mm Bolts	31	4	Self Tapping Screw
25	1	Safety Chain	34	2	Fenders
27	2	Tail Light Bracket	36	1	3mm R-Pin
28	1	License Plate Bracket	37	1	Safety Pin

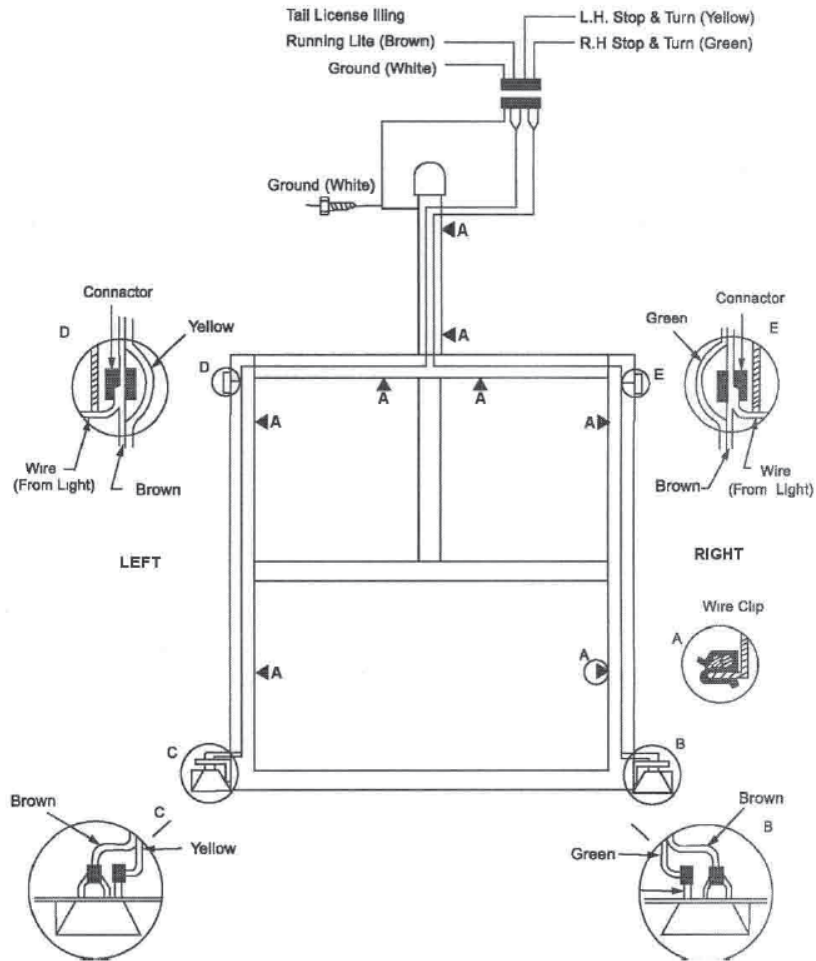


## TRAILER LIGHT AND WIRE ASSEMBLY INSTRUCTIONS

### WIRING DIAGRAM AND INSTRUCTION

1. Check alignment of all parts and install the 4-wire vehicle connector in the trunk area of your car.
2. Locate the connector plug near the hitch ball and lay out wires.
3. Connect the white wire to the frame or body of the car;
4. Connect the brown wire to the tail light by stripping, wrapping, and taping connector; similarly connect the yellow wire to the left signal and stop light wire and the green wire to the right signal and stop light wire.

**NOTE:** Some foreign vehicles may require an adapter to convert their 5-wire system to the wire vehicle connector.



1. Attach white ground wire at plug end of wiring harness to the small hole in tow bar with self-tapping screw.
2. Leave about 18" of wire beyond the coupler and lay out wire on the inside of tow bar and Front cross-member as shown in the diagram. From here, split the yellow/brown and green/brown wires. Push on the wire clips. See Figure A above.
3. Refer to Figures D and E above. Connect the wire lead from the side running lights to the brown wire on each side with the wire connectors. Use pliers to squeeze the connector closed.
4. Push on wire clips to hold wires down the side rails of the trailer.
5. Cut yellow/brown and green/brown wires to appropriate lengths and strip ends of wire 3/4".
6. Refer to Figures B and C above. Make tail light connections as per color code:

Left Side

Yellow – yellow wire

Brown – Two brown wires

Right Side

Green – green wire

Brown – Two brown wires

## SAFE USE AND OPERATION RULES

### 1. TOWING VEHICLE

- Make sure vehicle is capable of towing the load.
- Excess speed is the second highest cause of car-trailer accidents. Recommended maximum speed for all passenger cars towing trailers is 45 MPH.

## **2. HITCH, BALL, COUPLER**

- Check that the hitch on the towing vehicle is capable of towing the trailer. The towing capability of the hitch is normally stamped on the hitch drawbar.
- Make sure the coupler and the ball are the same sizes and are rated equal to or greater than the load.
- Never attach anything other than the proper size coupler to the ball for towing.
- **CAUTION: Care must be taken when backing up the Trailer; only back up the trailer on a straight path.** If the Trailer is allowed to turn off the straight path while backing up, the Trailer could jackknife, causing sever damage to the trailer and to the towing vehicle.

## **3. SAFETY CHAINS:**

- Be sure to use safety chains.
- Check that the safety chains are attached to towing vehicle with the safety chains the same length for each side.
- Do not allow chains to drag on the ground.

## **4. LOADING:**

- Never overload the trailer. Maximum load is 1060 lbs.
- Load trailer evenly from side to side with 60% of the load forward to the axle. It is important that the tongue be pressing down on the hitch, but not exceeding a downward force of 1060 lbs..
- Reduce weight in car trunk and rear seat areas by amount of tongue weight of your trailer.
- It is against the law to carry passengers in any trailer.

## **5. LIGHTING:**

- Check lighting before each use and every 100 miles to be sure the stop, tail, and turn signals are working properly. REPLACE ANY BROKEN LENSES, REFLECTORS, OR BULBS.
- Check wires for good connections and possible fraying or wearing of insulation.
- Bulbs supplied with this trailer are for 12-volt systems.
- Bulbs used in tail light are: Number – 1157 – Stop and Tail.
- Bulb for clearance is: Number – 194

## **6. TIRES:**

- Check tires for wear and proper inflation before each use and every 100 miles.
- Tire pressure should be kept at 60 PSI.
- Check and tighten lug nuts. Torque to 85-90 FT-LBS.
- Re-torque after first 50 miles.

## **7. OPERATION:**

- Know how to properly control your towing vehicle – trailer combination on the highway under all conditions. Remember the loaded weight of the trailer will increase your braking and stopping distances appreciably.
- When towing a trailer over long distances, stop and check the tightness of all connections, lights, and running gear every 100 miles.
- Carry emergency flares, and fire extinguisher if required for operation in your state.
- It is recommended to carry extra bulbs and fuses if you are towing the trailer at night over any great distance

## **8. MAINTENANCE**

- Check and maintain the trailer, coupler, ball and hitch before each use and every 200 miles.
- Inspect coupler, hitch and ball for damage before each use.
- Ball or hitch can be damaged in parking, hitting curbs, dragging when crossing ditches or railroad tracks.
- Check safety chains and hooks for wear and do not allow safety chains to drag on ground.
- To prevent bearing damage, disassemble and repack wheel bearing with a good grade of

wheel bearing grease every 2000-3000 miles or yearly.

- If you do not know how to repack wheel bearing, take your trailer to a qualified technician.

### **⚠WARNING**

Use care to secure the tail light wiring inside the fenders and away from the tires.

## **Before Each Use**

### **⚠WARNING**

- Before each use, always examine the trailer for proper tire condition and air pressure, damaged Tail Lights, damaged Side Running Lights, loose bolts and nuts, structural cracks, bends and any other condition that may affect its safe operation. Do not use the Trailer even if minor damage appears.
- Before each use, always attach the Safety Chains of the trailer to the towing vehicle. Make sure the Safety Chains are attached to the towing vehicle with the equal length at each side. Do not allow the Safety Chains to drag on the ground.
- Make sure hitch, coupler, draw bar, and other equipment that connect the trailer and the tow vehicle are properly secured and adjusted.
- Make sure the hitch coupler and the vehicle's Ball Hitch (not included) are of equal mating size and are rated equal to or greater than the weight of the trailer and its payload.
- The coupler must be properly secured to the hitch ball. After assembly and attachment, pull up and down on the hitch coupler to make sure the hitch ball is snug in the hitch coupler. If the coupler is not secured properly, it could come loose while the trailer is in motion, causing property damage, serious personal injury or even death.
- Make sure wiring is properly connected — not touching the road, but loose enough to make turns without disconnecting or damaging the wires.
- Check that all items are securely fastened on and in the trailer.
- Be sure the trailer jack, tongue support, and any attached stabilizers are raised and locked in place.
- Check the load distribution to make sure the tow vehicle and trailer are properly balanced front to back and side to side.
- Check side- and rear-view mirrors to make sure you have good visibility.
- Check routes and restrictions on bridges and tunnels.
- Make sure you have wheel chocks and jack stands.
- Always check to make sure the payload being transported properly and safely secured in the trailer. Load the Trailer evenly from side to side with 60% of the load forward of the Axle.
- Make sure the towing vehicle is capable of towing this trailer and its payload. Make sure the hitch on the towing vehicle is capable of towing the Trailer and its payload. The towing capacity of the hitch is typically stamped on the hitch drawbar.

## **Operating Instructions**

### **⚠WARNING**

- Always check to make sure the payload being transported properly and safely secured in the trailer. Load the Trailer evenly from side to side with 60% of the load forward of the Axle.

- Make sure the towing vehicle is capable of towing this trailer and its payload. Make sure the hitch on the towing vehicle is capable of towing the Trailer and its payload. The towing capacity of the hitch is typically stamped on the hitch drawbar.
- Make sure the hitch coupler and the vehicle's Ball Hitch (not included) are of equal mating size and are rated equal to or greater than the weight of the trailer and its payload.
- Do not exceed 45 miles per hour when towing the trailer. Excess speed is a major cause of vehicle-trailer accidents.
- The Tail Light Bulbs supplied with this trailer are for a 12 Volt DC electrical system only. Do not attempt to power the Light Bulbs with any other type or voltage electrical current.
- Whenever possible, park the trailers on a flat, level, paved surface and chock both tires to keep the trailer from accidentally moving.
- DO NOT exceed the rated load capacity.
- DO NOT allow anyone to ride in the towed vehicle or on the trailer.
- The coupler must be properly secured to the hitch ball. After assembly and attachment, pull up and down on the hitch coupler to make sure the hitch ball is snug in the hitch coupler. If the coupler is not secured properly, it could come loose while the trailer is in motion, causing property damage, serious personal injury or even death.
- This trailer was not designed for use in commercial applications. Commercial use will void warranty. DO NOT USE FOR AIRCRAFT PURPOSES.
- Make wide turns when towing a loaded trailer, avoiding both sharp turns and U-turns. Turning too sharply can cause damage to the trailer and/or the tow vehicle.

## Connecting

1. Hitch the trailer to the tow vehicle before loading the items to be towed. Only use a 1-7/8" ball hitch (not included) on the towing vehicle.

**NOTE:** To reduce friction between the hitch ball and hitch coupler (7), apply a thin layer of heavy weight grease over the hitch ball.

2. Pull up on the trigger and lift up on the handle.
3. With assistance, place the hitch coupler over the vehicle's hitch ball, pull back on the trigger, and push down on the handle until the trigger locks in the slot.

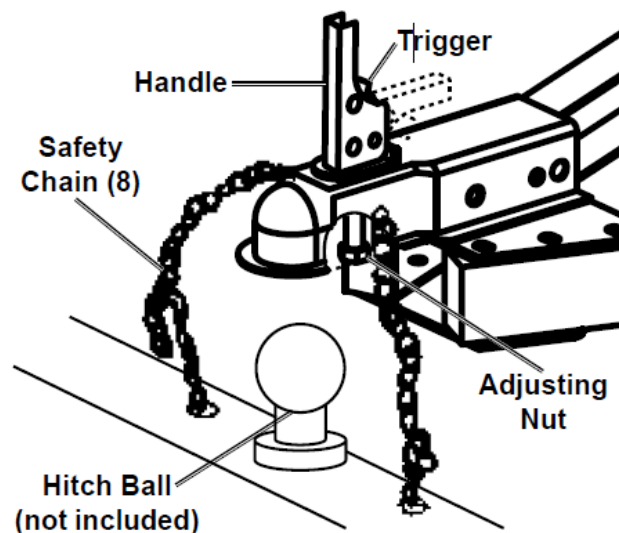


Figure G: Ball Connection

4. Pull up and down on the coupler to make sure the hitch ball is fitting snugly in the coupler. There must be no play between the hitch ball and coupler. If there is play, tighten the adjusting nut until no play is present.

After unlocking the handle, the nut retaining plate (holding the adjusting nut in place) needs to be pressed back while the nut is tightened. After the nut is tightened, **the retaining plate needs to fit in place against the flat of the nut to prevent it from moving**. This adjustment should be done by two people. If the nut is adjusted too tightly, the handle will not lock.

5. After the adjusting nut is properly adjusted, pull back on the trigger and push down on the handle until the trigger locks in the slot. **Pull up on the handle firmly** to make sure the trigger is locked in place and the handle cannot move. **Replace the locking pin and 2mm R-clip.**
6. Attach each of the safety chains (8) equally to the towing vehicle's rear bumper or frame. Make sure the safety chains are secured safely to the trailer and the tow vehicle. Do not allow the safety chains to touch the ground while towing the trailer.
7. Connect the wiring harness to the vehicle's 12-volt DC system. Connect the tail light wiring to the tow vehicle, and then test all functions (turn signals, on/off status, and brake lights) after connecting, and before towing. The blue and white wires plug into the tail lights by pushing them through the existing holes on the back of the lights. They are held in place by a spring. To remove them, push a large paper clip through one of the holes to remove the spring tension and pull the wires out. At the front of the trailer the wires are contained in a female electrical plug that connects to a male outlet on the tow vehicle.

#### **Note:**

- a) If there is no female plug for the wires, have one installed by a qualified service technician.
  - b) Consult the owner's manual of the towing vehicle for proper connection instructions.
8. Load the trailer forward. Lock the upper shell (14) and secure both the key and the trailer before towing.
  9. When towing the trailer over long distances, stop and check the tightness of all connections, side running lights (9), and tail lights (10L, 11R) *at least* every 100 miles.
  10. Carry emergency flares and fire extinguisher, if required for operation in your state. Carry extra bulbs and fuses if towing the trailer at night over long distances.

#### **Glossary**

**Accessory Weight**- the combined weight of automatic transmission, power steering, power brakes, power windows, power seats, radio, and heater, to the extent that these items are available as factory-installed equipment.

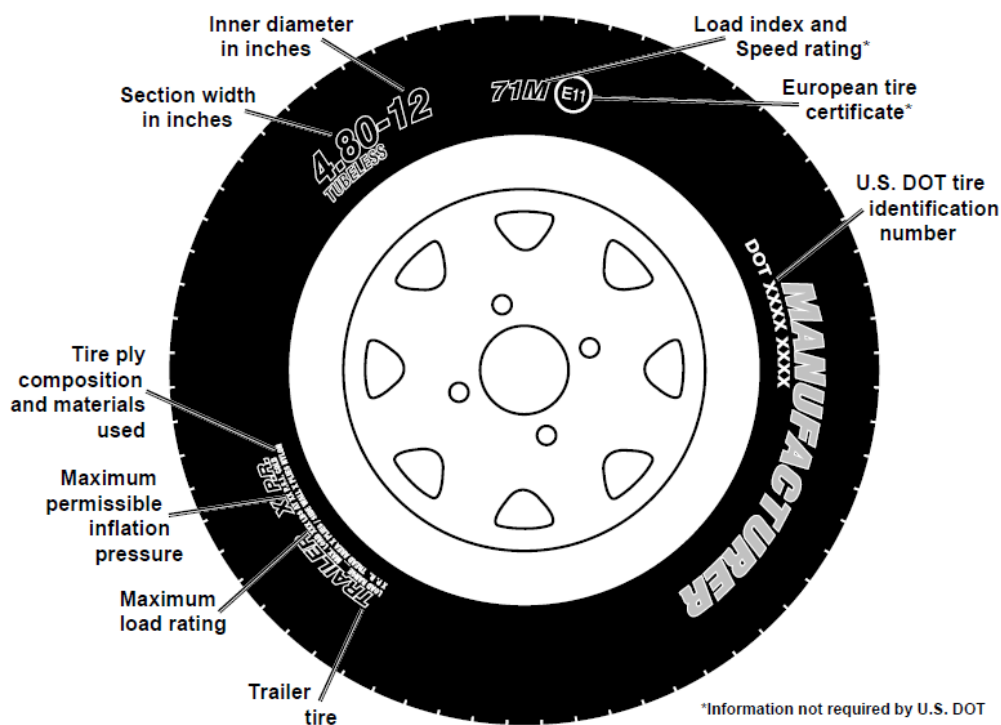
- **Carcass**- the tire structure, except for the tread, which provides the major portion of the tire's capability to deflect in response to the vertical loads and tractive forces that the tire transmits from the roadway to the non-pneumatic rim, the wheel center member, or the vehicle and which attaches to the vehicle or attaches, either integrally or separable, to the wheel center member or non-pneumatic rim.
- **Carcass Separation**- the pulling away of the carcass from the non-pneumatic rim or wheel center member.
- **Chunking**- the breaking away of pieces of the carcass or tread.
- **Cracking**- any parting within the carcass, tread, or any components that connect the tire to the wheel center member.
- **Curb Weight**- the weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine.
- **Load Rating**- the maximum load a tire is rated to carry.
- **Maximum Loaded Vehicle Weight**- the sum of:
  - Curb weight
  - Accessory weight
  - Vehicle capacity weight
  - Production options weight

**Maximum Tire Width**- the greater of either the linear distance between the exterior edges of the carcass or the linear distance between the exterior edges of the tread, with both being measured

parallel to the rolling axis of the tire.

- **Normal Occupant Weight**- 68 kilograms times the number of occupants.
- **Occupant Distribution**- distribution of occupants in a vehicle.
- **Production Options Weight**- the combined weight of those installed regular production options weighing over 2.3 kilograms in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.
- **Tread**- that portion of the tire that comes in contact with the road.
- **Tread Separation**- pulling away of the tread from the carcass.
- **Vehicle Capacity Weight**- the rated cargo and luggage load plus 68 kilograms times the vehicle's designated seating capacity.
- **Vehicle Maximum Load on the Tire**- that load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two.
- **Vehicle Normal Load on the Tire**- that load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight and dividing by 2.

### Tire Markings



**Section Width**- This number gives the width of the tire in inches; the larger the number, the wider the tire. (The markings on the example tire diagram show 4.80. The markings on your tire may differ.)

**Inner Diameter**- This number gives the inner diameter of the tire in inches. This is also the rim diameter in inches. (The markings on the example tire diagram show 12. The markings on your tire may differ.)

**U.S. DOT Tire Identification Number**- This begins with the letters DOT and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year that the tire was built. For example, the numbers 2107 mean the 21st week of 2007. Any other numbers used are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

**Maximum Load Rating**- This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

**Load Index-** This is a measurement of how much weight each tire can support. See Table A below. (The markings on the example tire diagram show 71. The markings on your tire may differ.)

**Note:** You may not find this information on all tires because it is not required by law.

Code	Pounds	Code	Pounds	Code	Pounds	Code	Pounds	Code	Pounds
71	761	79	963	87	1,201	95	1,521	103	1,929
72	783	80	992	88	1,235	96	1,565	104	1,984
73	805	81	1,019	89	1,279	97	1,609	105	2,039
74	827	82	1,047	90	1,323	98	1,653	106	2,094
75	853	83	1,074	91	1,356	99	1,709	107	2,149
76	882	84	1,102	92	1,389	100	1,764	108	2,205
77	908	85	1,135	93	1,433	101	1,819	109	2,271
78	937	86	1,168	94	1,477	102	1,874	110	2,337

**Table A: Load Index Rating Codes**

**Speed Rating-** The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. This does not indicate that the vehicle or rims can safely reach or maintain that speed. These ratings are listed in Table B. (The markings on the example tire diagram show M. The markings on your tire may differ.)

Code	MPH	Code	MPH	Code	MPH
F	50	N	87	U	124
G	56	P	94	H	130
J	62	Q	100	V	149
K	68	R	106	Z	149
L	75	S	112	W	168
M	81	T	118	Y	186

**Table B: Tire Speed Rating Codes**

**Note:** You may not find this information on all tires because it is not required by law.

**Tire Ply Composition and Materials Used-** The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

**Maximum Permissible Inflation Pressure-** This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

### **Tire Care**

#### **Checking Tire Pressure**

**Note:** Underinflated tires can decrease handling, stopping performance, traction, tire life, and load-carrying capability, in addition to causing other negative and hazardous effects, including tire failure. Overinflated tires are at greater risk of an impact break, where the tread and casing break when striking a hard edge, often opening a huge gash across the tread. Incorrect inflation pressure also increases tires wear rate. Therefore, it is important to keep tires inflated properly.

Check all tires' pressure at least monthly, due to the following factors:

- Most tires naturally lose air gradually.
- Tires can suddenly lose air if the tire strikes a pothole, curb, or other object.
- It is usually not possible to determine under inflation of radial tires by visual inspection.

This vehicle has 60 PSI recommended cold tire inflation pressure. The term "cold" in this manual does not refer to the temperature outside, but it refers to the fact that a tire that has not been driven for a period is cooler (and therefore has lower pressure) than a tire that has been driven on. Tires heat up while being driven on. To check (or fill to) a tire's cold inflation, the tire must have not been driven for

more than a mile or two for at least three hours. If you check a tires pressure when it is not “cold”, the pressure will appear higher than the actual cold tire inflation.

### **Steps for Maintaining Proper Tire Pressure**

1. Locate the recommended tire pressure on the vehicle’s tire information placard, certification label, or in the owner’s manual. This Trailer has 60 PSI recommended cold tire inflation pressure.
2. Measure and record the tire pressure of all tires.
3. If the tire pressure is too high in any of the tires and the tires have not been driven for at least three hours, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure. If the vehicle has been driven within the past three hours and the tire pressure is too high on any tires, then recheck the pressure once the tires have been allowed to sit motionless for at least three hours.
4. If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These “missing” pounds of pressure are what you will need to add.
5. At a service station, add the missing pounds of air pressure to each tire that is underinflated.
6. Check all the tires to make sure they have the same air pressure.
7. If the tires’ pressure were not measured “cold”, then the pressure should be rechecked when the tires are cold as soon as possible.

### **Tire Size**

To maintain safety, only purchase new tires of the same size as the original tires. Look at the Tire and Loading Information Placard, the Specifications Chart in this manual, or the sidewall of the tire being replaced. If you have any doubt about selecting the correct size, consult a tire dealer.

### **Tire Tread**

The tire tread provides traction that prevents your vehicle from slipping, especially if the road is wet or icy. Tires are unsafe and should be replaced when the tread is worn down to 1/16". Measure tread depth using a tread depth indicator (not included).

### **Tire Rotation**

Every 5,000 miles the left and right tires should be switched. This will cause the tires to wear more evenly and last longer.

### **Tire Balance and Alignment**

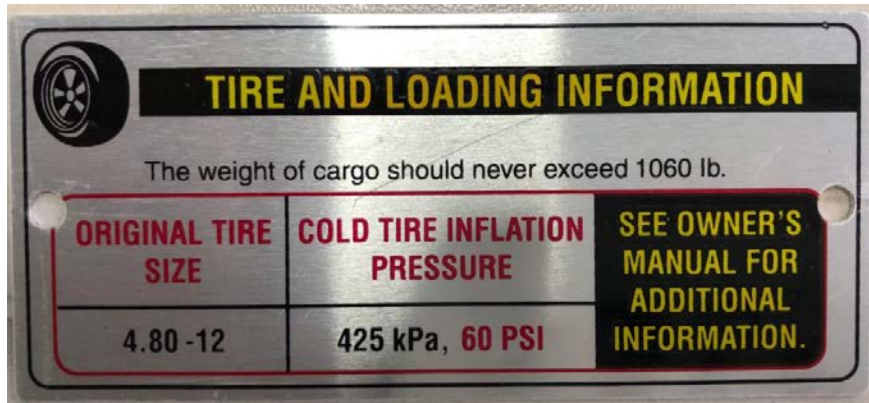
The tires need to be balanced to prevent vibration when driving. This involves attaching small weights to the rim to offset small differences in rim and tire weight. The tires also need to be aligned properly. Alignment is the orientation of the tires to the road surface and their being parallel. This helps the tires to wear evenly, and provide better traction. Both tire balance and alignment require specialized equipment that is not provided with this vehicle.

### **Tire Repair**

To properly repair a punctured tire, the hole needs to be properly plugged and patched from the inside of the tire. Tread punctures can be repaired if they are not too large. Sidewall punctures should not be repaired, the tire needs to be replaced if the sidewall is damaged. Tires should be removed from the rim to be inspected before being plugged and patched. A qualified mechanic should remove the tire from the rim, perform the repair, and remount the tire.

### **Vehicle Load Limit**

#### **Tire Inflation and Load Limit**



The tire and loading Information Placard displays the cold tire inflation pressure and the load limit for this vehicle. See the tire care section starting on the following page for an explanation of tire pressure and see the Vehicle Load Limit following that for an explanation of load limit.

### **Steps for Determining Correct Load Limit**

1. Locate the statement “The weight of cargo should never exceed 271 kilograms or 600 pounds” on your vehicle’s placard.
2. That figure equals the available amount of cargo and luggage load capacity.
3. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity.
4. If the trailer’s load exceeds the cargo and luggage load capacity, then the trailer will be unsafe resulting in hazardous effects, such as: trailer’s tires will not be able to maintain traction properly, and stopping distance will be increased significantly.

## **After Each Use**

- Check for damaged or cracked parts on the trailer after each use, including the tire condition and pressure. Replace damaged parts before next use.
- Wash off the trailer to prevent dirt and road grime from hardening on the components.

## **Maintenance**

### **Tires**

1. Periodic inspection and maintenance of tires and wheels are essential to towing safety, including spare tires. Proper tire pressure affects vehicle handling and the safety of your tires. You can find the correct tire pressure for your tow vehicle on the tire information placard.
2. Under inflation reduces the load-carrying capacity of your tow vehicle or trailer, may cause sway and control problems, and may result in overheating, causing blowouts or other tire failure.
3. Over inflation causes premature tire wear and affects the handling characteristics of the tow vehicle or trailer.

### **Wheel Bearings**

1. **EVERY 2,000 TO 3,000 MILES OF USE** lubricate the Hub Assemblies with a heavy weight bearing grease, following the instructions in **Hub Bearing Maintenance**.
2. After each hub assembly is reassembled, tighten the castle nut until the wheel starts spinning with slight resistance. Loosen the castle nut about 1/6 turn from this point.
3. Insert a new cotter pin through the castle nut and the hole in the axle.

4. Bend the cotter pin back, locking it and the nut in place.

### **Hub Bearing Maintenance**

**If the following procedure is not adhered to, it may result in wheel locking and tire blowout, causing an automobile accident or road hazard. Whenever a hub on a new unit requires assembly (or a hub is disassembled for maintenance), the following procedures MUST be followed:**

- Using a suitable solvent, thoroughly clean the bearings, dust hub cap, and the rest of the parts of the hub assembly of all grease, dirt, metal shavings, or any other foreign object. The parts must be cleaned even if they are new or appear clean.
- Allow all parts to dry completely.
- Make sure your hands are clean and bearing packer (not supplied) is also clean.
- Place fresh, clean bearing grease in the bearing packer.
- With the grease-filled bearing packer in one hand and the bearing in the other, press the bearing into the grease, forcing the grease inside the slots in the bearing. Continue doing this until every slot in the bearing is completely full of grease.
- As you finish assembling the hub, be careful not to get any dirt or debris on any part of the assembly.
- Replace the dust hub cap over each bearing.

### **Hitch**

Check the nuts, bolts, and other fasteners to ensure that the hitch remains secured to the tow vehicle and the coupler remains secured to the trailer. The connection point may require periodic lubrication to permit free movement of the coupler to the hitch ball.

### **Wiring**

1. Make sure connector-plug prongs and receptacles, light bulb sockets, wire splices, and ground connections are clean and shielded from moisture. Lightly coat all electrical terminal connections with non-conducting (dielectric), light waterproof grease.
2. Clean the prongs with very fine sandpaper, being careful not to damage the contact area.
3. Turn lights off, and then clean the surface deposits in the connector holes. Try to clean off only the deposits and lubricate lightly with dielectric, light waterproof grease.

### **Maintenance Chart**

The following chart serves as a basic guideline for scheduling your trailer maintenance. Maintenance may be different based on your local conditions, type of trailer, and frequency of trailer use.

<b>⚠ CAUTION</b>
All maintenance, service, or repairs listed in this manual are only to be attempted by a qualified service technician.

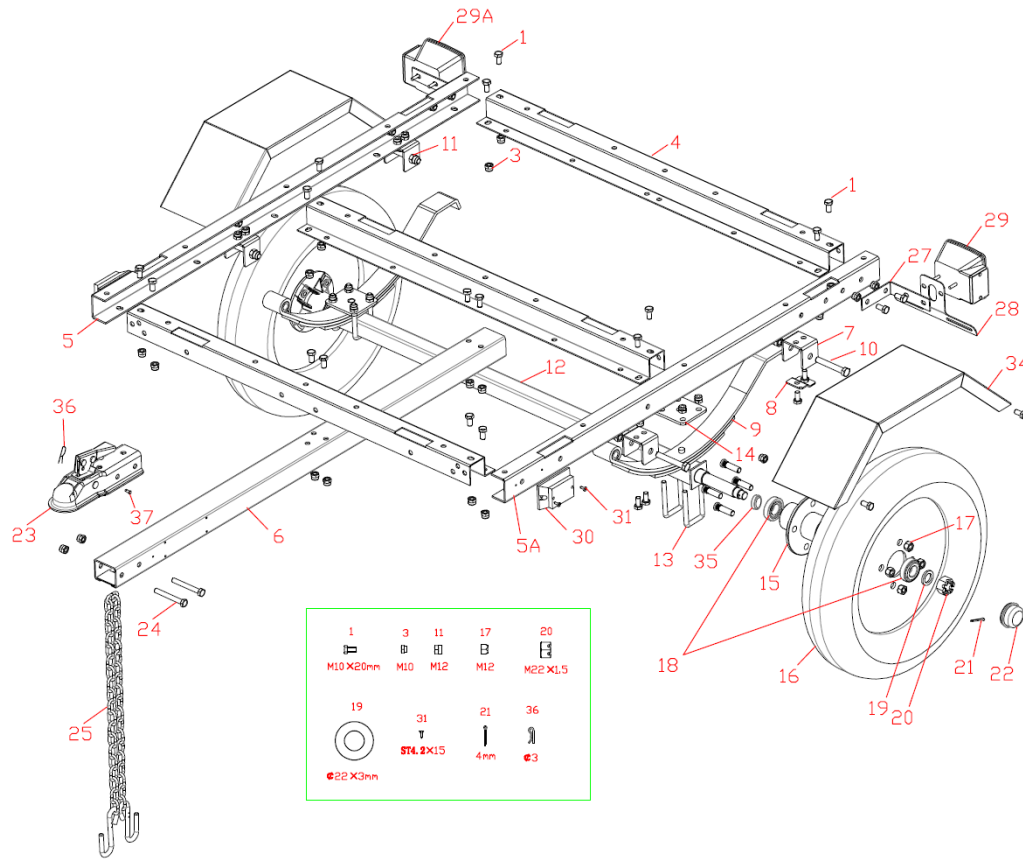
Maintenance Type		Before Use	Before Long Storage	After Storage	After First 50 Miles	Every 3 Months	Every 6 Months	Yearly
Hitch Coupler	Ensure Proper Fit	X						
	Check Lubrication		X	X		X		
Wheels & Hubs	Check Lug Nuts	X	X	X	X			
	Grease Bearings			X		X		
	Repack Bearings		X					X
Tires	Check Pressure (60 PSI) and Visual Inspection	X	X	X				
	Check Tread Depth		X	X		X		
Electrical	Check Tail and Brake Light Operation	X		X				
	Check Electrical Ground Wiring	X						

## Troubleshooting

### General Handling

1. Use the driving gear that the towing vehicle manufacturer recommends for towing.
2. Drive at moderate speeds. This will place less strain on your tow vehicle and trailer. Trailer instability (sway) is more likely to occur as speed increases. **Do not exceed 45 miles per hour when towing the trailer.**
3. Avoid sudden stops and starts that can cause skidding, sliding, or jack-knifing.
4. Avoid sudden steering maneuvers that might create sway or undue side force on the trailer.
5. Slow down when traveling over bumpy roads, railroad crossings, and ditches.
6. Make wider turns at curves and corners. Because your trailer's wheels are closer to the inside of a turn than the wheels of your tow vehicle, they are more likely to hit or ride up over curbs.
7. To control swaying caused by air pressure changes and wind buffeting when larger vehicles pass from either direction, release the accelerator pedal to slow down and keep a firm grip on the steering wheel.

## Parts Diagram



## Parts List

Part	Description	Qty.	Part	Description	Qty.
1	M10x20mm Hex Bolts	32	19	ϕ 22x3mm Washers	2
3	M10 Nylon Nuts	42	20	Slotted Nut	2
4	Cross Member	3	21	4mm Cotter Pins	2
5	Left Side Rail	1	22	Dust Caps	2
5A	Right Side Rail	1	23	Couper	1
6	Towbar	1	24	M10x85mm Hex Bolts	2
7	Spring Hangers	4	25	Safety Chain	1
8	Spring Slide Plates	2	27	Tail Light Bracket	2
9	Slipper Spring	2	28	License Plate Bracket	1
10	M12x80mm Hex Bolts	4	29	Left Tail Light	1
11	M12 Nylon Nuts	4	29A	Right Tail Light	1
12	Axle	1	30	Side Running Lights	2

13	M10 U-Bolts	4	31	Self Tapping Screw	4
14	Spring Plates	2	34	Fenders	2
15	Hub Assembly	2	35	Seal	2
16	Tire/Wheel Assembly	2	36	∅ 3mm R Pin	1
17	Lug Nuts	8	37	∅ 8x25mm Safety Pin	1
18	Bearing	4			

## Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and improvements to product lines and manuals without notice.

## Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Ultra-Tow product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

### Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

### Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

### Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

### Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

### Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.



Distributed by:

Northern Tool & Equipment Company, Inc.

Burnsville, Minnesota 306

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

Made in China