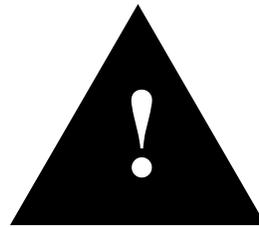
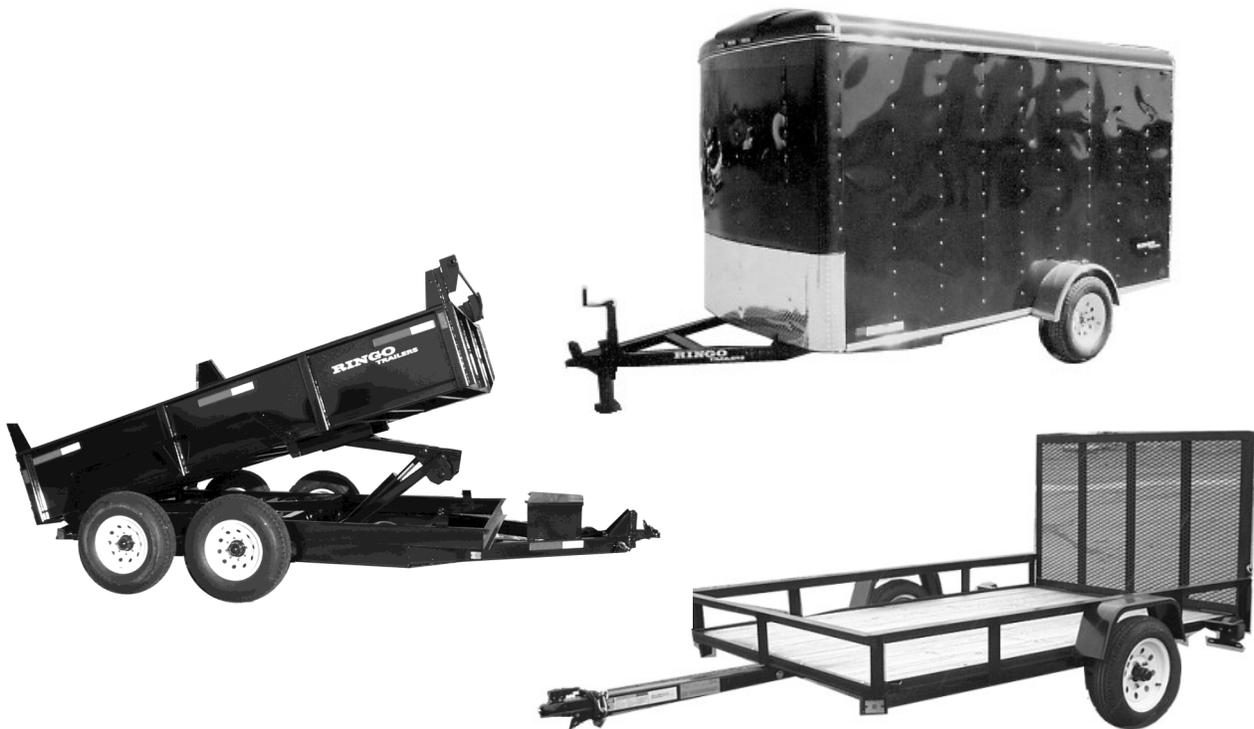


RINGO

TRAILER

Trailer Wheel Safety Guide

Wheel Mounting & Application For Utility, Dump, and Enclosed Trailers



**Please Read All warnings &
Instructions Carefully Before Use!**

1624 Route 212 Quakertown, Pa 18951 Phone: (610)-346-7340

Fax: (610)-346-8041 E-mail: Sales@RingoHill.com

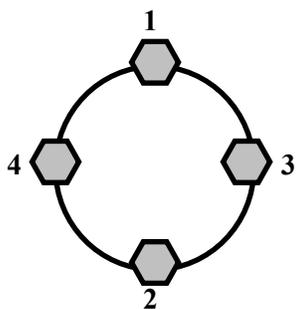
www.RingoHill.com

Component Guidelines

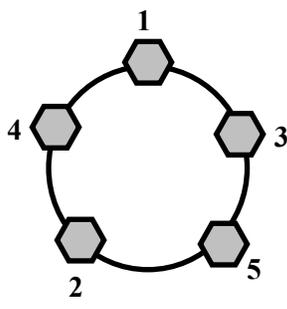
Guidelines

1. Surfaces of contact on an aluminum wheel (the nut seat and the mounting surface) must be free of paint, contamination and damage. Smooth, clean surfaces provide the most uniform clamping pressure and best retain torque.
2. Surfaces of contact on a steel wheel (the nut seat and the mounting surface) must be free of excessive paint, contamination and damage. Smooth, clean surfaces provide the most uniform clamping pressure and best retain torque.
3. Surfaces of contact on the axle (the flat hub surface and the threaded studs) must be free of excessive paint, oils, and grease, contamination and physical damage.
4. Lug nut geometry must match that of the wheel nut seat. The threads and nut seat must be free of paint, oils, grease, and other contamination.
5. Stud length must be sufficient that after mounting the wheel to the hub, the lug nut is engaged to a depth at least equivalent to the diameter of the stud. For example, a lug nut threaded on a 1/2 inch diameter stud should thread on for a depth of at least a 1/2 inch.

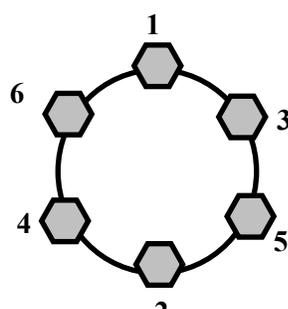
Wheel Size	1st Stage	Torque Sequence 2nd Stage	3rd Stage
12"	20-25	35-40	50-75
13"	20-25	35-40	50-75
14"	20-25	50-60	90-120
15"	20-25	50-60	90-120
16"	20-25	50-60	90-120
16.5" x 6.75"	20-25	50-60	175-225
16.5" x 9.75"	55-60	120-125	85-95
14.5"	20-25	50-60	90-120
17.5" Hub Pilot Clamp		100-120	190-210
Ring & cone Nuts	50-60		
17.5" Hub Pilot 5/8"		90-200	275-325
Flange Nuts	50-601		



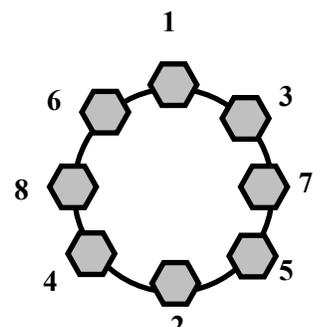
4 BOLT



5 BOLT



6 BOLT



8 BOLT

Assembly Instructions

Instructions:

Assembly of the wheel onto the hub is critical, safety related process. The proper method of assembly and the consistency of the torque applied to wheel fastening system and retention of the wheel to the trailer. The trailer manufacturer/distributor/dealer and end user must consistently follow proper torquing technique in order to ensure the hub and wheel are properly seated and use caution to prevent anything from interfering with the flat, full designed mating contact of wheel mounting surface and hub. Excess paint, oil and grease must be removed from the fastener contact surfaces (the mounting surfaces, studs, and lugs) or not applied at all. Adherence to the recommended “do’s” and don’ts” set out below will minimize the likelihood of fastener torque-loss and wheel separation.

Do’s

- Remove all oil and grease from threaded fasteners (studs & lugs). Mask or shield (cover) all fastener contact surfaces (mounting surfaces and studs) before painting axles, weather for improved cosmetics or for improved cosmetics or for corrosion protection.
- Only use an impact wrench with torque stick as a tool initially to lightly secure the wheel, applying a crisscross or star pattern. (See figure 1).
- Use a calibrated torque wrench to complete the torque fastening process applying the same criss cross or star pattern.
- Re-torque periodically during the trailer’s initial towing and thereafter in accordance with the component supplier’s recommendations.
- Maintain records of the maintenance and torque checks performed by transporters, noting any loss of torque or any corrective measures taken.

Don’ts:

- Don’t deviate from the component manufacturers recommendations regarding compatible components without a complete engineering review.
- Don’t substitute any component for the component the supplies have specified without a competent engineering review.
- Don’t deviate from the component’s suppliers fastener torque specified without a competent engineering review.
- Don’t use adhesive products to maintain fastener attention.
- Don’t use lubricates or oils on thread fastener (studs or lugs) to make applying the torque easier unless assembly specifications require it.
- Don’t apply any additional paint on fastener contact surfaces (mounting surfaces / hub faces or studs).

Assembly Instructions



Do not attempt to repair or modify a damaged wheel.

Even minor modifications can cause a dangerous failure of the wheel and result in personal injury or death.

Torque Requirements

It is extremely important to apply and maintain proper wheel mounting torque on your trailer axle. Torque is the measure of the amount of tightening applied to a fastener (nut or bolt) and is expressed as length force. For example, a force of 90 pounds applied at the end of a wrench one foot long will yield 90 pounds foot torque. Torque wrenches are the best way to assure the proper amount of torque is being applied to a fastener.



Wheel nuts or bolts must be tightened and maintain at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle, which can lead to an accident, personal injury or death.

Be sure to use only the fasteners matched to the cone angle of your wheel, (usually 60 or 90 degrees.) The proper procedure for attaching your wheels is as follows:

1. Start all bolts or nuts by hand to prevent cross threading.
2. Tighten bolts or nuts in the sequence shown for Wheel Torque Requirements.
3. The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque chart.
4. Wheel nuts/bolts should be torqued before first road use and after each wheel removal.

**** Check and retorque after the first 10 miles, 25 miles and again at 50 miles.**

**** Check periodically thereafter.**