

Date: October 14, 2019

Subject: Wheel Attachment and Torque Requirements

Dexter would like to **REITERATE** the extreme importance of properly matching your axles, wheels, and tires when specifying or replacing your trailer wheels. It is of equal importance that you apply and maintain proper wheel mounting torque on your trailer axle. Please follow the wheel selection, torque requirement, and torque sequence guidelines below. This information can also be found on our website, www.dexteraxle.com.

Wheel Selection

Wheels are a very important and critical component of your running gear system. When specifying or replacing your trailer wheels it is important that the wheels, tires, and axle are properly matched. The following characteristics are extremely important and should be thoroughly checked when replacement wheels are considered.

1. **Bolt Circle:** Many bolt circle dimensions are available and some vary by so little that it might be possible to attach an improper wheel that does not match the axle hub. Be sure to match your wheel to the axle hub, bolt circle, hub pilot and wheel mount surface to hub face. Also confirm that proper studs stick out.
2. **Capacity.** Make sure that the wheels have enough load carrying capacity and pressure rating to match the maximum load of the axle tire and trailer.
3. **Offset.** This refers to the relationship of the center line of the tire to the hub face of the axle. Care should be taken to match any replacement wheel with the same offset wheel as originally equipped. Failure to match offset can result in reducing the load carrying capacity of your axle.
4. **Rim Contour.**

CAUTION

Replacement tires must meet the same specifications as the originals. Mismatched tires and rims may come apart with explosive force and cause personal injury to yourself or others. Mismatched tires and rims can also blow out and cause you to lose control and have an accident which can result in serious injury or death.

CAUTION

Do not attempt to repair or modify a wheel. Even minor modifications can have a great effect. Do not install a tube to correct a leak through the rim. If the rim is cracked, the air pressure in the tube may cause the pieces of the rim to explode with great force and can cause serious injury or death.

Torque Requirements

You should always consult with the wheel manufacturer to determine the appropriate torque level for you wheels. It is extremely important to apply and maintain proper wheel mounting torque on your trailer axle. Torque is a measure of the amount of tightening applied to a fastener (nut or bolt) and is expressed as length times force. For example, a force of 90 pounds applied at the end of a wrench one foot long will yield 90 Ft. Lbs. of torque. Torque wrenches are the proper method to ensure torque is applied correctly to a fastener.

CAUTION

Wheel nuts or bolts must be tightened and maintained 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 injuries or death.

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

1. Start all nuts/bolts by hand to prevent cross threading.



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2. The tightening should be done in stages:
 - a. Initially snug (10 ft-lb) the nuts/bolts to align and seat the wheel to the hub, in the order described in the torque sequence diagram below.
 - b. Tighten the nuts/bolts performing the wheel torque sequence below.
3. Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and re-torque after the first 10 miles, 25 miles and again at 50 miles. Check periodically thereafter, THIS IS VERY IMPORTANT.
4. Wheel nuts are designed to have full thread engagement with the wheel stud. Wheel stud threads should be visible outside the wheel nut. There will be varying amounts of thread stick out depending on variables such as center disc thickness and nut thickness. In general, there should be approximately three threads visible past the end of the nut.

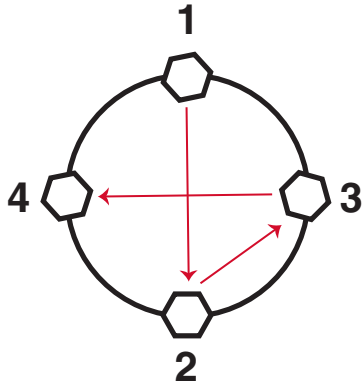
Wheel Installation Torque Sequence (Ft. Lbs.)

Wheel Size	Stud Size	1st Stage	2nd Stage	Final Torque	Cone Nut Degree
12" - 440 BC	1/2"-20	20-25	35-40	60-75	60° Cone Nut
12" - 545 BC	1/2"-20	20-25	35-40	60-75	60° Cone Nut
13" - 440 BC	1/2"-20	20-25	35-40	60-75	60° Cone Nut
13" - 545 BC	1/2"-20	20-25	35-40	60-75	60° Cone Nut
14" - 545 BC	1/2"-20	20-25	50-60	100-120	60° Cone Nut
15" - 545 BC	1/2"-20	20-25	50-60	100-120	60° Cone Nut
15" - 655 BC	1/2"-20	20-25	50-60	100-120	60° Cone Nut
16" - 655 BC	1/2"-20	20-25	50-60	100-120	60° Cone Nut
16" - 865 BC	9/16"-18	20-25	50-60	140-170	60° Cone Nut
16.5" - 655 BC	1/2"-20	20-25	50-60	100-120	60° Cone Nut
16.5" - 865 BC	9/16"-18	20-25	50-60	140-170	60° Cone Nut
16.5" x 9.75" 865 BC	5/8"-18	50-60	120-125	175-225	Special Stud Piloted With 90° Cone Nuts
17.5" Hub Pilot 865 BC	5/8"-18	50-60	100-120	190-210	Hub Piloted With Clamp Ring. 90° Cone Nuts & Greased Threads
17.5" Hub Pilot 865 BC	5/8"-18	50-60	90-200	275-325	Hub Piloted With Flange Nut
17.5" Hub Pilot 865 BC	5/8"-18	50-60	60-110	150-175	Hub Piloted With Swivel Flange Nut

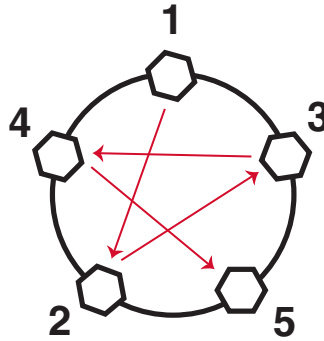
Medium & Heavy Duty Wheel Torque Requirements (Ft. Lbs.)

Description	Part No.	Application	Torque Min. Ft. Lbs.	Torque Max. Ft. Lbs.
5/8-18 90° Cone Nut	006-109-00	Clamp Ring 033-052-01	190	210 Greased Threads
3/4-10 Hex Nut	006-117-00	Demountable Rim Clamp	210	260
3/4-16 Spherical Nut	006-064-01, 02 006-069-01, 02	Single Wheel	450	500
		Inner Dual	450	500
1-1/8 - 16 Spherical Nut	006-070-01, 02	Outer Dual	450	500
5/8 - 18 Non-Swiveling Flange Nut	006-058-00	Wheels	275	325
5/8 - 18 Swiveling Flange Nut	006-209-00	Wheels	150	175
M22-1.5	006-118-00	Swiveling Flange Nut	450	500

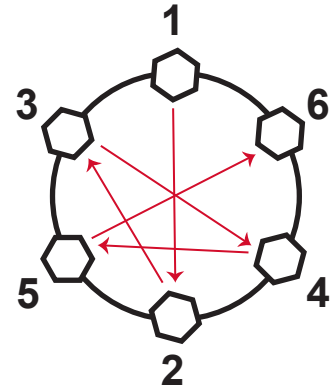
TORQUE SEQUENCE



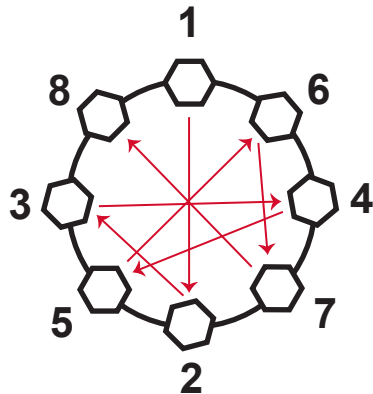
4 BOLT



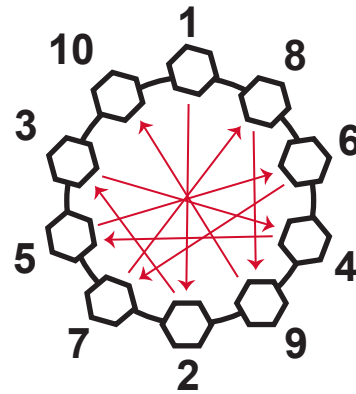
5 BOLT



6 BOLT



8 BOLT



10 BOLT

Chip Durren
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