INSTRUCTIONS FOR WHEELS AND RIMS

Thank you for purchasing a Nox rim or wheelset. We hope you'll enjoy riding them as much as we do. We're passionate about what we do and want to make sure that you have the best experience possible with our products, so feel free to contact us at any time if you have questions or problems. We've included some instructions below to help answer common questions, but feel free to give us a call or email if we can help.

MOUNTING TIRES

Tires should fit tightly and snap securely into the bead when inflated. Because of tire manufacturing variations, some tires will be tighter than others. If you are using a tire that is particularly hard to mount by hand, you can use *plastic* tire levers. Never use metal tire levers, screwdrivers, etc. to mount a tire on a carbon rim. Using metal tire levers or a screwdriver can cause stress fractures in the carbon! Don't do it! If a tire is particularly tight, try these tips:

- Ensure the tire bead is in the middle of the drop channel
- Use soap and water to help the bead slid over the rim
- Use good plastic tire levers to add leverage (no not use metal!)
- Use a Kool-Stop™ Tire Bead Jack

If the above fails (which should be very rare) then you may have a tire which is simply incompatible with our rims. In this case, the only solution is to use a different tire.

TUBELESS SETUP

All of our rims are designed to run with or without tubes, but in general you will see the best performance both on and off road by running tubeless.

Taping: Using the right tape is critical! Use only Nox heavy-duty tensilized polypropylene (TPP) tape or equivalent**.** *Do NOT use thicker rim tape, duct tape, gorilla tape, packing tape or electrical tape as you will have a difficult time getting the bead to seat or you will have reliability issues*. Apply the tape to a CLEAN and OIL FREE surface. Use denatured alcohol or a light swipe of acetone to clean the rim bed if it has residue, oil or old sealant fluid on it. Apply the tape with some tension and ensure that it is centered in the rim. You may find you have to use more pressure to get the tape to stick since tape does not adhere to carbon quite as strongly as it does to a smooth aluminum surface. Overlap the tape by several inches. Use 1 layer of tape for applications below 50psi and 2 layers of tape for applications above 50psi (Note maximum pressure of your rims listed on page 5.)

Valve Stem: Use an awl or other sharp instrument to poke a hole in the tape for the valve stem. Use a 44mm (or greater) "road" tubeless valve stem available from Nox (these are provided with pre-built wheels) or other suppliers. You can use the standard 35mm length for the mountain rims, but the 44mm "road" version makes using a pump head easier.

Using Tubes: Keep in mind that our mountain rims are deeper than most traditional mountain rims, so *you may find it difficult or impossible to use tubes with short (~32mm) valve stems.* There are mountain tubes available with 44mm valve stems or you can carry a presta valve extender. Just don't let yourself get caught in the woods or a deserted country road before you find out you can't inflate your backup tube!

Sealant: Any of the major sealants available on the market are compatible with our rims.

Helpful Tips: If you have a tire that is being stubborn to inflate tubeless, try putting a tube in, mounting the tire, airing it up to about 30 psi and letting it sit overnight. This will help smooth out the folds in the tire, which should help with initial sealing. Also try using some soap and water (this can also help with tires that are difficult to mount onto the rim). If all else fails, an air compressor is invaluable for getting tubeless tires to seat. Air compressors work best when you first remove the presta valve core so you can get maximum air flow into the tire. A good starting point is an air compressor with the regulator at 80-100 psi. Be

careful to stop air flow IMMEDIATELY once the bead pops in, **DO NOT EXCEED THE RATED RIM PRESSURE AS IT MAY DAMAGE THE RIM!**

WHEEL BUILDING TIPS

If you or your wheel builder is building up a wheelset using Nox rims, the notes below will help ensure you get the best build possible. Wheel building with carbon wheels is somewhat easier because the wheels are very true from the factory and the natural stiffness helps maintain roundness. However, you must still be diligent to ensure even spoke tension! A "true" wheel with uneven spoke tension will come out of true sooner and is more prone to broken spokes.

Orientation: The rims are asymmetrical and the spoke holes are drilled at an angle, *so you must make sure you have the hub, rim and key spoke oriented correctly before you begin lacing the wheel!* There is a sticker on each rim to help you with orientation of the hub and the key spoke. The drive side of the front hub should be on the 'short' side of the rim and the drive side of the rear hub should be on the 'long' side of the rim.

Lacing: We recommend 2-cross in most cases in order to maximize lateral stiffness while supporting the disc brake forces. 3-cross is fine as well. Never use radial lacing with disc brakes! There is much more information related to spokes, tension, orientation, etc. on our website at http://www.noxcomposites.com/wheel_building

Nipple Lubrication: Lubricate the interface between the nipple shoulder and the rim using your favorite thin lubricant such as Triflow, Progold, etc. You may find that nipples are a bit harder to turn than with an aluminum rim due to the added friction of the carbon nipple seat.

Spoke Lengths: Remember that our rims are asymmetrical, meaning there is an offset between the center of the rim and the spoke holes. You need to compensate for this when calculating spoke lengths. We have a spoke length calculator on our website which will do this for you, http://www.noxcomposites.com/spoke_calc

Nipples: Note that nipple choice may affect your spoke length calculation. All nipples vary in their thread engagement and some nipples (i.e. DT Hex Head Nipples) are effectively longer than others and warrant using a longer spoke. The ideal spoke length is one in which the spoke is near the top of the slot once the wheel is at full tension. This maximizes thread engagement while leaving enough threads for future adjustments.

Spoke Tension: Our rims can take some seriously high tension, but that does NOT mean you should build them with super high tension. Anything over 120kgf is overkill and does not make the wheel stiffer, it's just extra stress on the spokes, nipples, rim and hubs. Aim for the high side spoke tension to be at 120kgf. Check the wheels after a few days of riding and adjust tension if necessary. It is not uncommon to lose a little tension due to the spokes and nipples seating into the hubs and rims.

Truing: If you maintain even tension during the build, very little truing will be necessary. Lateral truing is done just like you would on an aluminum rim. Radial truing can be more challenging due to the stiffness of the rims but the procedure is the same. The best method is to avoid out of round problems by maintaining very even spoke tension as you build up the wheel. Focus on correcting radial trueness early in the build when the wheel is at low tension (~ 40 kgf). If you have a large hop or a serious out-of-round problem, sometimes it's best to de-tension and start over.

WARRANTY

Nox Composites guarantees its wheels and rims to be free from defects in materials or workmanship for a period of two (2) years from the date of purchase. If Nox Composites determines the product to be defective during this period, we will either repair or replace the product at Nox Composite's discretion. This warranty does not apply to defects caused by negligence, accidents, misuse, incorrect installation, modifications, or normal wear and tear. Cosmetic issues such as decals are excluded from this warranty. This warranty does not apply to parts not manufactured by Nox Composites (ex. hubs, spokes, nipples). For an issue related to these parts, the manufacturer of those parts must be consulted. This warranty is non-transferrable and is only valid for the original owner. Valid proof of purchase is required for a warranty claim.

CRASH REPLACEMENT PROGRAM

Nox Composites understands that cycling is often an extreme sport, and from time to time crashes happen that destroy any rim, no matter how strong it is. We don't want to leave you high and dry if this happens to you, so we offer a crash replacement program for as long as you own the rims. Just contact us and let us know what happened and we'll work with you to get you back up and running with as little out of pocket expense as possible.

RIM SPECIFICATIONS

Rim	Weight	Inner Width	Outer Width	ERD	Max Pres.
XCR-29	380g	23mm	29mm	592	60psi
AM-275	420g	29mm	35mm	551	45psi
AM-29	430g	29mm	35mm	591	45psi
Farlow 275	420g	29mm	35mm	551	45psi
Farlow 29	430g	29mm	35mm	591	45psi
Teocalli 275	350g	26mm	32mm	560	45psi
Teocalli 29	385g	26mm	32mm	599	45psi
Skyline 275	335g	23mm	29mm	560	45psi
Skyline 29	345g	23mm	29mm	600	45psi

F*inally, thanks for buying from a small business owned and operated by cyclists! We are passionate about our products and want to ensure that we are always designing and manufacturing things the best way we can. We love to get feedback from customers on what you like and also what you don't like. Please let us know what you think! We depend on our customers to keep us in business, so if you like our products, tell your friends. If you don't, contact us so we can make it right!*

www.noxcomposites.com
sales@noxcomposites.com
1.888.545.1282
Knoxville, TN