

roval

ROAD, GRAVEL & MOUNTAIN WHEELSETS

OWNER'S MANUAL



INTRODUCTION

This user manual is specific to Roval road, gravel, and mountain wheelsets. It contains important safety, performance, and technical information which you should read before your first ride and keep for reference. You should also read the entire Specialized Bicycle Owner's Manual ("Owner's Manual") as it has additional important general information and instructions you should follow. If you do not have a copy of the Owner's Manual, you can download it at no cost at www.specialized.com, or obtain it from your nearest Authorized Specialized/Roval Retailer or Specialized Rider Care.

Additional safety, performance, and service information for specific components, such as suspension or pedals on your bicycle or for accessories such as helmets or lights, may also be available. Make sure that your Authorized Specialized/Roval Retailer has given you all the manufacturers' literature that was included with your bicycle or accessories. If there is a difference between the instructions in this manual and the information provided by the component manufacturer, please refer to your Authorized Specialized/Roval Retailer.

When reading this user manual, you will note various important symbols and warnings, which are explained below:



WARNING! The combination of this symbol and word indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death. Many of the Warnings say, "you may lose control and fall." Because any fall can result in serious injury or even death, we do not always repeat the warning of possible injury or death.



CAUTION: The combination of the safety alert symbol and the word CAUTION indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury, or is an alert against unsafe practices.

The word CAUTION used without the safety alert symbol indicates a situation which, if not avoided, could result in serious damage to the bicycle or the voiding of your warranty.



INFO: This symbol alerts the reader to information which is particularly important.



TECH TIP: Tech Tips are useful tips and tricks regarding installation and use.

SPECIALIZED BICYCLE COMPONENTS

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0000164421_UM_R3, 05/21

Please note all instructions and notices are subject to change and updates without notice. Please visit www.specialized.com for periodic tech updates.
Feedback: techdocs@specialized.com

1. INTENDED USE

Depending on the model purchased, your Roval wheelset may be for road or mountain bike use. It may have carbon or alloy rims and may be intended to be used with rim brakes or disc brakes, with clincher tires or with tubular tires. Make sure you know exactly which model you have as you read through this manual so you know what applies to you.

Generally, Roval road wheelsets are intended and tested for road, general condition, and cyclocross riding use only (conditions 1 and 2). Roval MTN wheelsets are intended and tested for mountain biking use only (conditions 3 and 4).

For more information on intended use and structural weight limits, please refer to the Owner's Manual.



WARNING! Roval wheelsets are generally designed and tested for a maximum weight of 240 lbs (109 kg), unless otherwise noted in writing by Roval. Do not use your wheelset if your weight plus the weight of any gear and accessories you are wearing or carrying exceeds the weight limit of your wheelset. Failure to follow this warning may result in an accident, which can cause serious injury or death. To learn more about weight limits, visit www.rovalcomponents.com.



WARNING! Make sure your Roval wheelset is compatible with your bicycle frame and fork (hub/rotor spacing, chainline, wheel size). Using an incompatible wheelset with your bicycle may cause you to lose control and fall.



WARNING! Your Roval wheelset is designed for use with either rim or disc brakes. Do not use rim brakes on wheels intended for use with disc brakes.

2. WARRANTY

Warranty information is available from your Authorized Specialized/Roval Retailer. It is also available for download at www.specialized.com and www.rovalcomponents.com.

3. GENERAL NOTES ABOUT ASSEMBLY, RIDING, & MAINTENANCE

- This manual is not intended as a comprehensive assembly, use, service, repair or maintenance guide. Please see your Authorized Specialized/Roval Retailer for all service, parts, repairs, or maintenance. Your Authorized Specialized/Roval Retailer may also be able to refer you to classes, clinics, or books on bicycle use, service, repair, and maintenance.
- Before every ride, perform a Mechanical Safety Check as described in the Owner's Manual. This includes making sure the wheels are true, the tires are correctly inflated and in good shape, and the rims are clean and undamaged.

Refer to www.rovalcomponents.com or the Owner's Manual for recommended tire pressures. Do not exceed the maximum rim or tire pressure (whichever is lower).



WARNING! There is a safety risk in using gas station air hoses or other air compressors. They are not made for bicycle tires. They move a large volume of air very rapidly and will raise the pressure in your tire very rapidly, which could cause the tube or tire to explode.

- Only wash the wheels using mild soapy water, then dry the wheels using a clean, soft cloth.
- To true a wheel, access the nipple from the tire side of the rim using a spoke holder tool to keep the spokes from twisting.
- Regular maintenance of the rear hub internals is recommended. For information about your DT Swiss rear hub internals, visit the support section at www.dtswiss.com/en/support, or visit your Authorized Specialized/Roval Retailer.

4. GENERAL NOTES ABOUT ALL ROVAL WHEELSETS

The following applies to all Roval wheelsets:

- Use only originally supplied or compatible wheelset components at all times.
- If a pulsing feeling is felt through the bike when applying the brakes, the rim or rotor surface and/or brake pads may be excessively worn. Stop riding immediately and have your bike inspected by your Authorized Specialized/Roval Retailer.
- If the rims have a brake track for rim brakes, the rims should be periodically inspected to make sure the brake track is not showing excessive wear. This includes dents, cracks, surface irregularities, grooves through multiple layers of carbon, or a braking surface that is concave instead of flat. If the brake tracks have any of these things, stop riding immediately and have your Authorized Specialized/Roval Retailer replace the rims.
- While riding, listen for any creaks as a creak can be a sign of a problem with one or more components. Periodically examine all surfaces in bright sunlight to check for any small hairline cracks or fatigue at stress points, such as welds, seams, holes, and points

of contact with other parts. If you hear any creaks, see signs of excessive wear, discover any cracks (no matter how small), or find any damage to the wheels, immediately stop riding the bicycle and have it inspected by your Authorized Specialized/Roval Retailer.

- Certain rims and brake pads have wear indicators. Periodically inspect the brake pads to ensure they are clean and the wear indicators are not too worn. Remove any glazing and any particles from the rim that may be embedded in the brake pads. If the wear indicators are worn off or almost worn off, replace the brake pads.

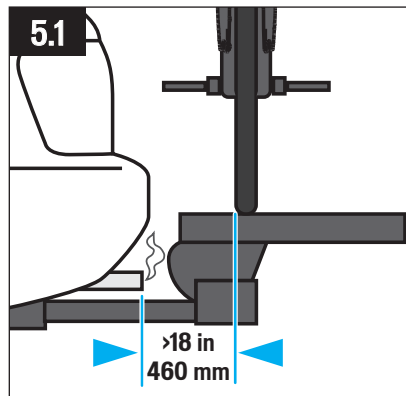


WARNING! Failure to follow the instructions in this section may result in damage to the components on your bicycle and will void your warranty, but, most importantly, may result in serious personal injury or death. If your wheelset exhibits any signs of damage, do not use it and immediately bring it to your Authorized Specialized/Roval Retailer for inspection.

5. GENERAL NOTES ABOUT ALL ROVAL CARBON WHEELSETS

Carbon rims are high performance components that are very strong, but nonetheless require regular maintenance, inspection, care, and the use of specific parts in order to maximize lifespan and performance. For general information about composites, please refer to the Owner's Manual. Below are some important tips and instructions relating to carbon wheels:

- Do not use latex tubes with carbon rim-brake rims. If a latex tube is exposed to excessive heat from braking forces, it can fail and deflate.
- Certain Roval carbon rim-brake rims are equipped with a brake surface treatment, which gradually wears off as the braking surface wears in, exposing the carbon finish beneath the treatment. This does not affect performance and is only cosmetic.
- If unidirectional carbon fibers are visible in the brake track, the rim may be excessively worn. In that case, immediately stop riding and have the wheel inspected by an Authorized Specialized/Roval Retailer.
- Great care should be taken to not damage carbon fiber or composite material. Any damage may result in a loss of structural integrity, which may result in a catastrophic failure. This damage may or may not be visible in inspection. Before each ride, and after any crash or hard impact, you should carefully inspect your wheels for any fraying, gouging, scratches through the paint, chipping, bending, or any other signs of damage. Do not ride if your wheels show any of these signs. After any crash or hard impact, and before you ride any further, take your bicycle to an Authorized Specialized/Roval Retailer for a complete inspection.
- When installing tires on carbon rims, do not use tire levers such as a Park Tool TL-1 lever which applies a point load to the thin carbon sidewall. If not careful, it can damage the rim.
- For rotor limits, tire inserts, and tire size compatibility, visit www.rovalcomponents.com.



WARNING! Do not expose carbon components to prolonged direct sunlight or excessive heat, such as inside a car parked in the sun or near a heat source such as a radiator or car exhaust. When transporting a bike on a hitch mounted rack, be sure there is at least an 18 in / 460 mm gap between your vehicle's exhaust and the rim to allow for enough heat to dissipate (Fig. 5.1). Check wheels for damage if they have been exposed to temperatures greater than 122 °F / 50 °C.



WARNING! Failure to follow the instructions in this section may result in damage to the components on your bicycle and will void your warranty, but, most importantly, may result in serious personal injury or death. If your wheelset exhibits any signs of damage, do not use it and immediately bring it to your Authorized Specialized/Roval Retailer for inspection.

RECOMMENDED BRAKE PADS FOR BEST PERFORMANCE

- SwissStop Black Prince for carbon rims

APPROVED COMPATIBLE BRAKE PADS

- SwissStop Yellow King for carbon rims
- Roval red pads for carbon rims



WARNING! Only use recommended or approved brake pads. Using brake pads that are not approved may result in a loss of braking power and can overheat the rim, which can result in rim failure. Also, do not use the same brake pads when interchanging between carbon and alloy rims. Alloy particles may be embedded in the pads, which will damage the carbon surface.

6. TIRE INSTALLATION

Read the Owner's Manual regarding general information about your tires. Below is some guidance on tire installation, including clincher (with tube and tubeless) as well as tubular. Be sure to read these instructions carefully and follow any instructions from the tire manufacturer.



WARNING! Riding with a tire that is not installed correctly (e.g., that is not seated all the way) or using too high or too low of a pressure may cause the tire to come off the rim while riding, which can result in a loss of control.

CLINCHER TUBE INSTALLATION

6.1

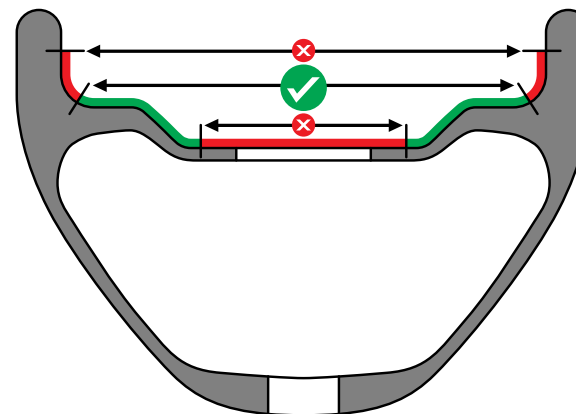


Fig. 6.1

If you are using a clincher tire and tube with your Roval wheelset, follow the tube and tire manufacturers' instructions for installing the tube and tire. Below are additional instructions you should follow:

1. Install a rim strip or rim tape on the rim to cover the spoke holes and protect the tube from punctures. Make sure the rim strip is the correct width so it covers the spoke holes but does not come up the sides of the sidewall. If you are using rim tape, limit rim tape overlap. Too much tape overlap will increase the thickness of the rim tape, which can make tire installation difficult.



If necessary, puncture a hole in the rim tape where the valve hole is located using a screwdriver or other round tool.

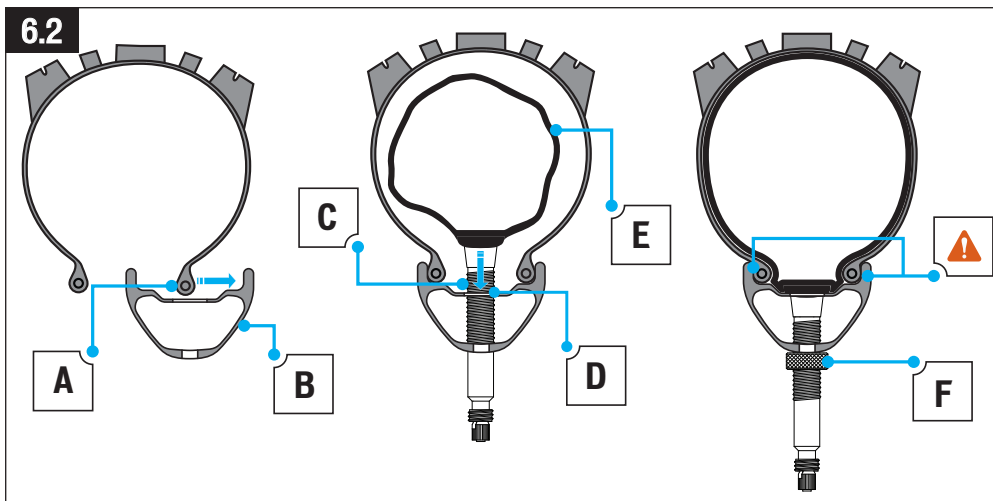


Fig. 6.2

2. Ensure the tube is the correct size for your tire.
3. Install one tire bead (A) onto the rim (B) using plastic tire levers if necessary.
4. Guide the tube valve (C) through the valve hole (D) in the rim.
5. Slightly inflate the tube (E) so it has some shape, then push the tube up inside the tire.
6. Push the tube up and over the rim, then install the second bead onto the rim. As the bead gradually gets mounted onto the rim, make sure the tube is fully seated inside the tire.



WARNING! Before moving to step 7, make sure the tube is correctly installed inside the tire and is not pinched between the rim and the tire. Failure to follow this warning may cause a tube blowout which can lead to a loss of control.

7. Inflate the tire slightly, then press the tire beads together to make sure the tube is completely inside the tire.
8. Once the tube and tire are correctly installed, install the valve stem nut (F), then inflate the tube while making sure the tire bead is evenly seated all around the rim.
9. Continue inflating the tire to the desired pressure. Eventually, any section of tire bead that is not fully seated should pop into place leaving an even mold line position relative to the rim. If the mold line is below the rim in any area around the circumference of the rim, add slightly more pressure until it pops. Do not exceed the maximum rim or tire pressure (whichever is lower). If the tire bead will not seat properly, deflate the tire, push the beads away from the rim, and try inflating the tire again until the tire bead seats properly.
10. Once the tire is evenly seated, inflate the tire to the desired pressure.



If you have any questions about installing tires and tubes on your wheels, please refer to your Authorized Specialized or Roval Retailer.

CLINCHER TUBELESS TIRE INSTALLATION

If your Roval wheel is 2Bliss ready, you have the option of using a tube or running a tubeless setup. Your 2Bliss ready Roval Wheelset comes with most accessories needed for tubeless conversion. When properly installed, the tubeless option is less prone to pinch flats and punctures, has lower rolling resistance, and allows for lower tire pressure.



WARNING! While riding tubeless may provide better protection against pinch flats and allow the user to run lower pressures, it also means pressurized air is held directly by the tire and rim system compared to a tubed setup. In case of an event causing rapid deflation, e.g., when cracking the wheel in an impact, the released pressure may further damage your wheel which can result in a loss of control.



When riding tubeless, as a rule of thumb, use less air pressure than you would use with a tube, but be careful not to go too low either. The right amount of air depends on multiple factors, including rider weight, intended use, terrain, etc.

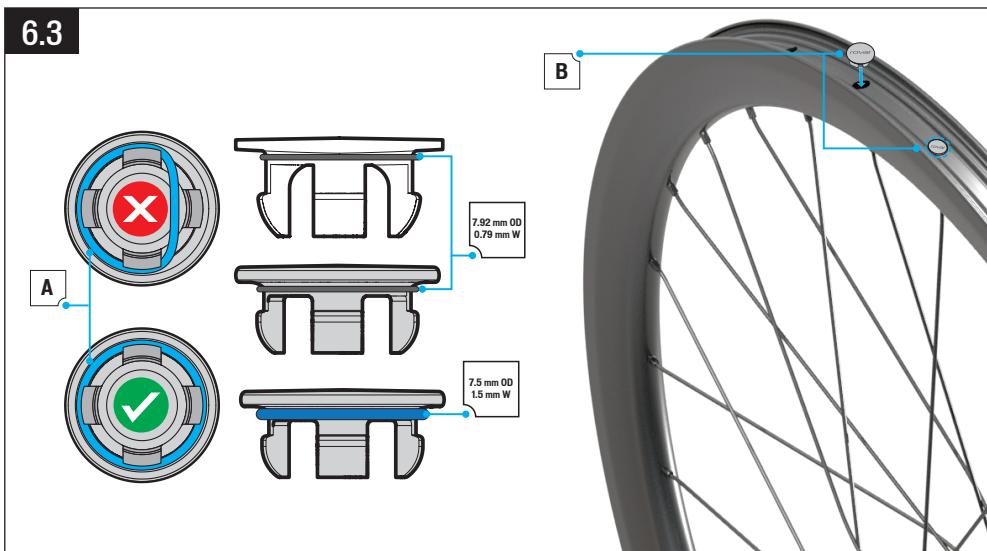


Some older model wheelsets may still use rim strips.

For more information on tubeless set up including sealing a rim, tape, valve length, and plug compatibility, visit www.rovalcomponents.com.

PREPARING THE RIM

6.3



6.4

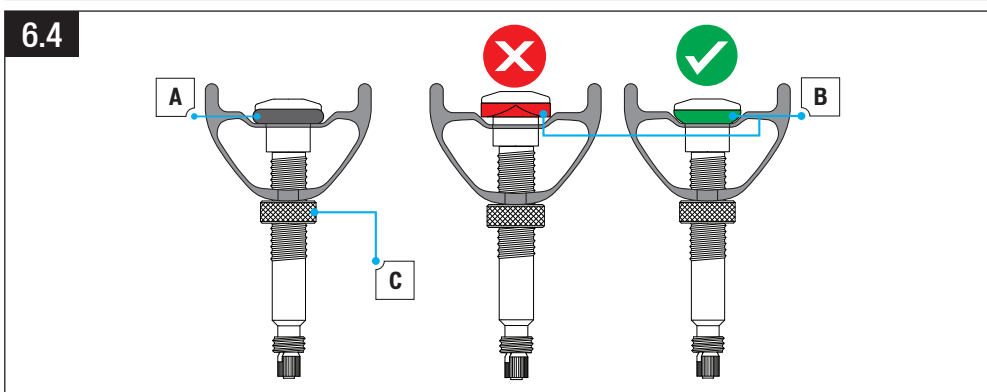


Fig. 6.3 and Fig. 6.4

1. Prepare your rims for a tubeless setup by sealing them. You can use either tubeless plugs, rim strips, or rim tape.
 - Inspect all the plugs to ensure the o-ring goes around all four plug tabs (Fig. 6.3 A). Position the plugs over the plug holes, then press to snap them into place (Fig. 6.3 B). If installed correctly, they should sit flat on the rim surface (Fig. 6.3 B).
 - If you are using Roval tubeless plugs (compatible rims only), make sure you have the correct plugs for your wheel model (see the table). There are two styles of o-rings: standard (Fig. 6.4 A) and tapered (Fig. 6.4 B).



WARNING! Do not use tubeless Roval plugs with a tube. Any sharp edges around the plug could result in a hole in the tube which could lead to a rapid deflation and loss of control.



Roval tubeless plugs vary in diameter and depth and may have different o-rings. Make sure you have the correct plugs for your wheel model, as using incorrect plugs will prevent it from sealing properly.

- If you are using rim strips or rim tape, make sure the rim strip is the correct width (Fig. 6.1) so it covers the spoke holes, but does not come up the sides of the sidewall.



Do not install tubeless rim tape over a plug. Use one or the other.

- If you are using rim tape, limit rim tape overlap. Too much tape overlap will increase the thickness of the rim tape, which can make tire installation difficult.

2. Install the correct Roval tubeless valve stem for the wheel model (see the table), and make sure it is fully seated and oriented correctly, and that the nut (Fig. 6.4 C) is tight.



For best results, use Roval valve stems with Roval rims as they are specifically designed to fit Roval rims.



Some o-rings are tapered to fit inside the center of the rim, in which case the valve must be positioned so it fits inside the profile of the rim (Fig. 6.3).

INSTALLING THE TIRE AND SEALANT

6.5

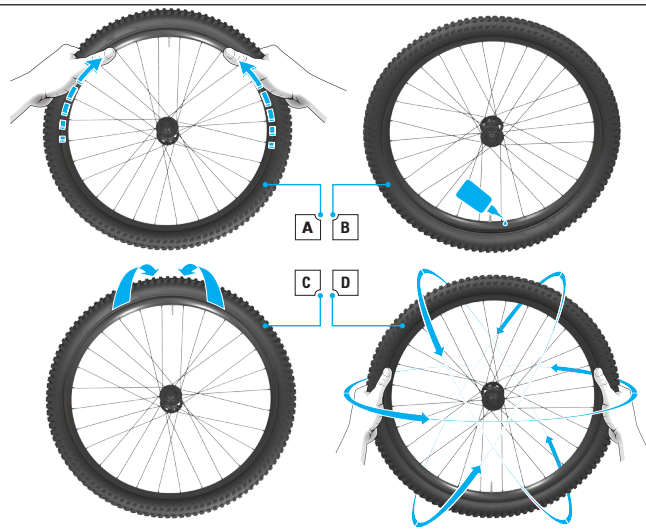


Fig. 6.5

1. Install the first tire bead onto the rim and make sure it is seated in the low portion of the rim's tire well. Also make sure the valve stem is between the two tire beads.
2. Start mounting the second tire bead onto the rim opposite the valve stem (A).



Tire sealant installation alternative: If the valves have removable valve cores, you can disregard step 3 and 4, complete the installation of the second bead, then remove the valve cores and pour the sealant in through the valve using a syringe with a plastic nozzle or a squeeze bottle with a nozzle just small enough to fit inside the valve.

3. Before fully mounting the second tire bead onto the rim, leave a gap of a few inches long to pour tire sealant into the tire. Please refer to the tire sealant manufacturer's instructions for the recommended amount of sealant for your tire size (B). Rotate the wheel 180 degrees so the sealant is at the bottom of the tire and the remaining section of tire to be installed is at the top of the rim, then finish installing the tire bead onto the rim (C).

4. Make sure the base of the valve stem is positioned between the tire beads, not underneath either tire bead. If the base of the valve stem is under either tire bead, it will not seal and air could leak out.
5. Inflate the tire slightly to start seating the bead, then rotate the tire in multiple directions to spread the sealant around the inside of the tire (D).

6.6

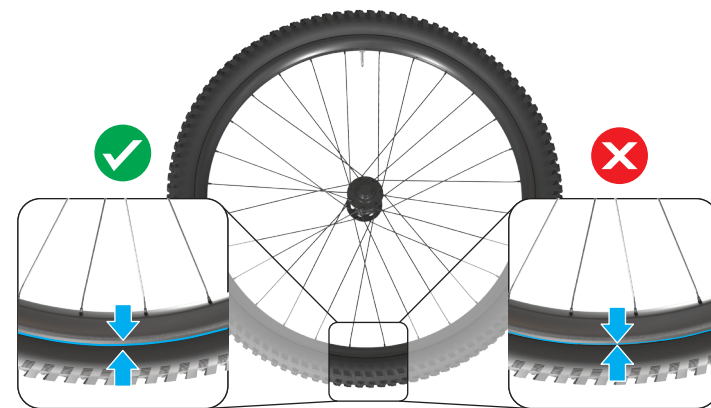


Fig. 6.6

6. Continue inflating the tire to the desired pressure. Eventually, any section of tire bead that is not fully seated should pop into place leaving an even mold line position relative to the rim. If the mold line is below the rim in any area around the circumference of the rim, add slightly more pressure until it pops. Do not exceed the maximum rim or tire pressure (whichever is lower). If the tire bead will not seat properly, deflate the tire, push the beads away from the rim, and try inflating the tire again until the tire bead seats properly.

6.7

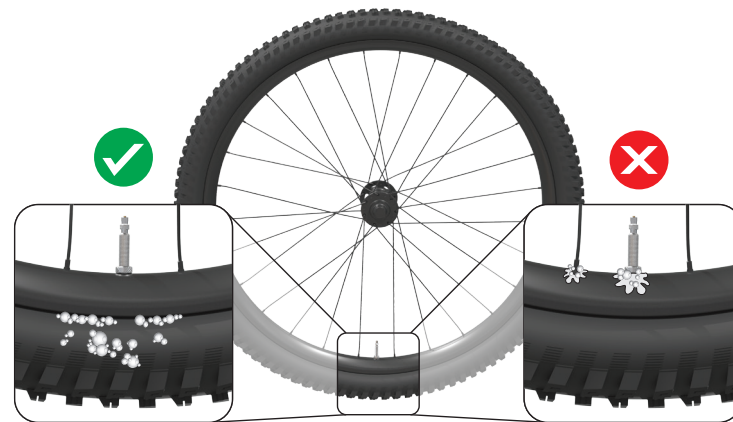


Fig. 6.7

7. Some sealant may seep out of the sidewall as it seals the tire. This is perfectly fine. However, if any sealant comes out of the valve or spoke holes, the rim is improperly sealed and must be inspected for either a loose valve or an exposed spoke hole. Either one will prevent the system from sealing and holding air.



WARNING! Do not exceed the maximum rim or tire pressure (whichever is lower).



If using non-Specialized branded tires and/or sealant, further refer to the tire and/or sealant manufacturer's instructions. To assure proper and safe installation, please visit your Authorized Specialized or Roval Retailer.



Over time, the tire sealant will dry up and the tires will deflate more quickly between rides. Periodically inspect the inside of the tire to see how much sealant is left and add more if necessary.



You should ride the bike immediately after adding tire sealant to allow the sealant to work into the pores of the tire. It may take a few rides before the tubeless tires are fully sealed.

TUBULAR INSTALLATION

Tubular tires (also known as sew-ups) are specific types of tires that do not require a separate tube. They are designed to be glued and mounted to tubular rims, which are special rims with a concave tire contact surface and no sidewalls. Installation is more time consuming and significantly more difficult than for clincher tires.



WARNING! Proper installation of tubular tires is critical for your safety and require specialty tools and advanced techniques. Tubular tires should therefore be installed by your Authorized Specialized/Roval Retailer.

To install tubular tires, you will need the following items:

■ Truing stand	■ Tubular glue for road conditions	■ Isopropyl alcohol	■ Plastic scraper
■ Floor pump	■ Tubular glue brush	■ Clean rags	■ Gloves (use when applying glue)

PREPARING THE RIM AND TIRE

6.8



Fig. 6.8

1. Before applying glue to the rim and tire, install the tire on the rim.
2. Inflate the tire according to the tire manufacturer's instructions (usually around 6.9 BAR / 100 PSI) and let it sit overnight.
3. Remove the tire from the rim.
4. Deflate the tire to around 1.4 BAR / 20 PSI.



Certain rims come pre-finished from the factory and do not require any roughing of the surface. If the surface of the rim is smooth, rough it up slightly using a fine grit sandpaper.

5. If the rims have residue on the tire gluing surface from previously mounted tires, use a plastic scraper to remove any large or uneven sections of glue.
6. Clean the rim with isopropyl alcohol before applying layers of glue.



WARNING! Do not use a heat gun, or anything similar, to remove old glue from the rim. Excessive heat can cause rim failure, which can result in serious injury or death.



CAUTION: Do NOT use acetone or other harsh solvents. Use of harsh solvents can damage the paint and/or decals.

APPLYING GLUE

6.9

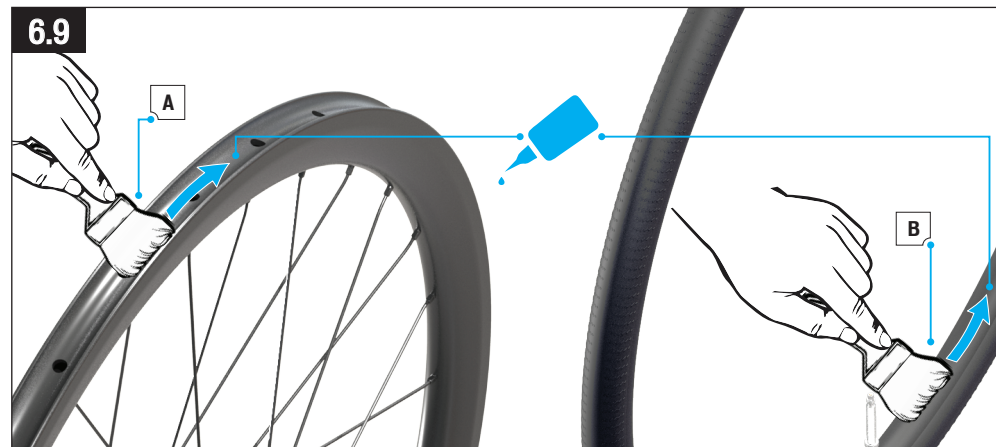


Fig. 6.9

1. With the wheel in a truing stand, apply a thin, even layer of glue all the way around the tire contact surface of the rim (A).
2. Apply a thin, even layer of glue to the underside of the tire (also known as the base tape) (B).
3. Allow the glue on the rim and tire to cure according to the glue manufacturer's instructions.
4. Repeat the steps for applying glue to the rim (A) and tire (B), and once again allow to cure according to the glue manufacturer's instructions.
5. Refer to your tire and glue manufacturer's instructions for additional information about applying glue.



CAUTION: This final round of steps is time-sensitive since the tire must be installed and aligned before the final layer of glue dries.

6. Deflate the tires.
7. Apply a third thin layer of glue to the rim (A).

MOUNTING THE TIRE TO THE RIM

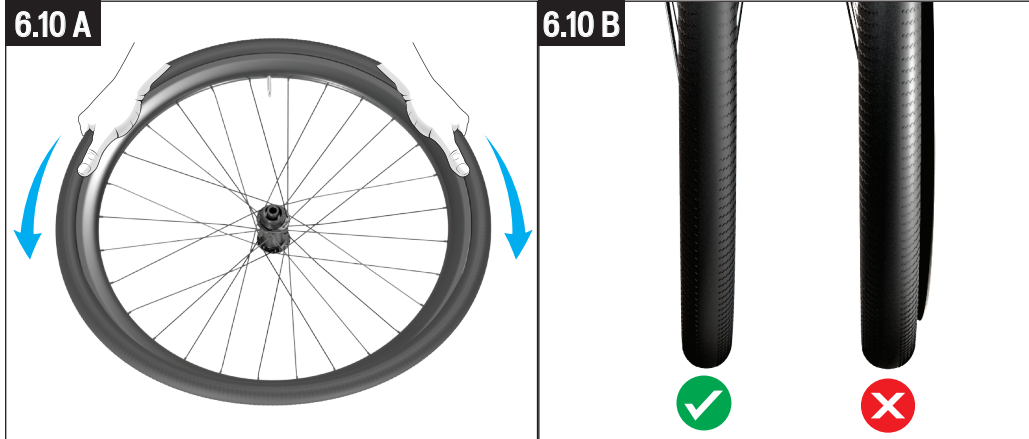


Fig. 6.10

1. After a few minutes, place the valve stem of the tire into the valve hole of the rim.
2. Place the tire onto the bed of the rim and gradually work the tire around the circumference of the rim until it is fully seated on the rim (Fig. 6.10 A). Make sure the valve is straight in the valve hole. Otherwise, work the tire around the rim until the valve is straight in the valve hole.
3. Inflate the tire according to the tire manufacturer's instruction, usually around 1.4 BAR / 20 PSI.
4. Place the wheel in the truing stand and spin the wheel to make sure the tire is properly centered on the rim (Fig. 6.10 B).
5. Inflate the tire slightly below your desired pressure, then recheck the alignment of the tire on the rim, and make sure the glued surfaces of the rim and tire are fully in contact with each other without any gaps.



It is important to work quickly and be sure the tire is centered and true. Once the glue dries, it will not be possible to realign the tire without redoing the entire procedure.

6. Ensure there is no glue on the braking surface. If there is, remove the glue using isopropyl alcohol and a clean rag.

FINAL STEPS



Fig. 6.11

1. Inflate the tire to the maximum tire pressure written on the side of the tire, then let the wheel sit to fully cure for 24 hours. Do not exceed the maximum rim or tire pressure (whichever is lower).
2. Once fully cured, test the tire/rim interface by trying to remove the tire with a moderate amount of force.
3. Deflate the tire and check that it is fully bonded to the rim from edge to edge without any gaps. If the bond is proper all the way around the rim, re-inflate the tire to the desired pressure.



WARNING! If removing a tubular tire, do not use a metal object to pry the tire off the rim. Use of a metal object can damage the rim.