



CARBON FIBER ROAD WHEELS MANUAL



**5TH EDITION
2019**

IMPORTANT

This manual contains important safety, performance and service information. Read it before you take the first ride with your new wheels, and keep it for reference.

In case of loss of this manual or for the most up-to-date manual, go to our website at www.irwincycling.com and download the on-line version.

If you have any questions or do not understand something, take responsibility for your safety and consult with your bicycle dealer or IRWIN.

NOTE

This manual is not intended as a comprehensive use, service, repair or maintenance manual. Please see your bicycle dealer for all service, repairs or maintenance.

Do not attempt to repair your wheels or any parts thereof on your own.

Improper use or repair of these wheels will void your warranty and may cause injury or death.

Ride within the limits of your ability, observe traffic rules and always use a helmet.

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MECHANIC QUALIFICATION

Please be advised that many bicycle service and repair tasks require specialized knowledge, tools and experience. General mechanical aptitude may not be sufficient to properly service or repair your IRWIN wheels. If you have any doubt regarding your service or repair ability, please take your wheels to a qualified mechanic or an authorized IRWIN dealer/distributor.

INTENDED USE

Use of road wheels: For road racing or general cycling on smooth, dry surfaces and paved road only. Not intended for use on motorized vehicles or for use on vehicles carrying more than one operator/rider.

COMPONENT WEAR INSPECTION REQUIREMENTS

The longevity of your IRWIN wheels depends on many factors. Factors includes but not limited to: rider size and riding style, environmental conditions, tire specifications and air pressure, terrain and geography, cleanliness and maintenance, brake pad composition, and impacts or falls. Improper or harsh use may also compromise the structural integrity and significantly reduce the lifespan of your wheels.

Some components of the wheels are subject to wear over time and are not covered under warranty as they are not due to defect. These items not covered under warranty due to normal wear and tear include:

- Bearings
- Brake pads
- Bushings
- Cassette body
- Dust seals
- Nipples and nipple washers
- Pawls
- Ratchet ring
- Rim braking surface
- Spokes
- Springs

Use only IRWIN recommended brake pads. Perform routine maintenance and cleaning on brake pads and braking surface of rim.

For care and usage recommendations, see Section 7 of this manual.

Have your wheels regularly inspected by a qualified mechanic for impact and stress marks, cracks, deformations, and signs of fatigue or wear. If the inspection reveals any damage, no matter how slight, immediately replace the component.

Components that have experienced excessive wear also need immediate replacement. Frequency of inspection depends on many factors; see Section 7 of this manual for further assistance.

Contact your authorized IRWIN dealer/distributor for suggested inspection/maintenance schedule that is best fit for your use, riding style and conditions. If you weigh 100kg/220lbs or more, you must be especially vigilant and have your bicycle and components inspected more frequently.

Before using IRWIN wheels please recognize that there are risks inherent in bicycle riding. A bicycle component can fail while riding resulting in an accident, injury or possibly death. By your purchase and use of IRWIN wheels you expressly, voluntarily and knowingly accept and assume these risks including, but not limited to: the risk of passive or active negligence of IRWIN or hidden, latent or obvious defect in the product. Furthermore, you agree to hold IRWIN harmless to the fullest extent permitted by law against any resulting damages.

WARNING: FAILURE TO FOLLOW ANY OF THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN FAILURE OF THE PRODUCT, RESULTING IN AN ACCIDENT, PERSONAL INJURY OR DEATH.

If you have any questions, please contact an authorized dealer/distributor or IRWIN customer service: info@irwincycling.com.

1. TECHNICAL SPECIFICATIONS

PRE-RIDE SAFETY CHECK

- Always wear a helmet when riding a bicycle. See the owner's manual that came with your bicycle for additional safety recommendations and mechanical warnings
- Check to see that all quick release levers, nuts and bolts are properly adjusted. See the "Quick Release Skewers" instructions in Section 5 of this manual. While bouncing the bike on the ground, look and listen for anything that may be loose
- Be sure that your tires are properly inflated to the correct pressure and that there is no damage to the tread or sidewall
- Be sure that none of the spokes are damaged, loose or missing. Make sure there also is no deformation, cracks or sign of fatigue or stress on the rims
- Be sure that the wheels are exactly centered in both frame and fork. Spin wheels to be sure that they do not wobble up and down or side to side, and that there is no contact with brake pads during rotation
- Check your brake pads and cables to be sure that they are in good condition and free of debris
- Test your brakes prior to your ride to ensure that they are operating properly
- Check reflectors and lights to ensure that they are clean, straight, securely mounted and operating properly where require by law. IRWIN wheels do not include reflectors. Proper reflectors meeting the Consumer Product Safety Commission (CPSC) regulation should be installed if bicycle will be used on public roads
- Learn and follow the local bicycle laws and regulations, and obey all traffic signals, signs and laws while you ride

WARNING: DO NOT RIDE YOUR BICYCLE IF IT DOES NOT PASS THE PRE-RIDE SAFETY CHECK LISTED ABOVE. CORRECT ANY DEFICIENT CONDITION(S) BEFORE YOU RIDE.

GENERAL SAFETY RECOMMENDATIONS

- Always wear a properly fitted and fastened bicycle helmet that has been approved by CE, JIS, DOT, ANSI or SNELL
- Be sure that the periodic maintenance is strictly followed (see Section 7 of this manual)
- Always use original IRWIN, or IRWIN-approved replacement parts
- DO NOT make modifications to IRWIN wheels. Modification, improper service, alteration or use of aftermarket parts void the warranty and could cause wheel malfunction resulting in an accident, injury or death
- Components that are bent, cracked or otherwise damaged in an accident or as a result of impact must not be straightened. They must be replaced immediately with original IRWIN parts
- Wear clothing that will make you visible to traffic such as neon, fluorescent or other bright colors
- Avoid riding at night. It's harder to see obstructions on the ground as well as being seen by oncoming traffic after dusk. If you do ride at night, you should equip your bicycle with headlights, taillights and reflectors, as required by law
- When riding in wet conditions, the stopping power of your brakes is greatly reduced and the grip your tires have to the ground is considerably reduced. Your braking power may also vary sharply, due to the progressive drying of the braking surface during brake use. This will make it harder to predict performance and control of your bicycle, making it harder to stop. When riding your bicycle in wet conditions, use extra caution to avoid an accident
- Please get in touch with your local dealer/distributor, or contact IRWIN directly with any questions, comments or concerns

2. TECHNICAL WHEEL SPECIFICATIONS

WHEEL SPECIFICATIONS

- E.T.R.T.O. (European Tire and Rim Technical Organization) wheel rim diameter information
 - a. 700C clincher/TLR: 622mm
 - b. 650B clincher/TLR: 584mm
 - c. 700C tubular: 633mm
- Inflation pressures: See “Operating Pressures” in Section 8 of this manual
- Hub specifications:
 - a. Front hub : 100mm \pm 0.5mm
 - b. Disc front hub : 12 x 100mm or 15 x 100mm \pm 0.5mm
 - c. Road rear hub : 130mm \pm 0.5mm
 - d. Track rear hub : 120mm \pm 0.5mm
 - e. Disc rear hub : 12 x 135mm or 12 x 142mm \pm 0.5mm

3. TIRE INSTALLATION

WARNING: RIM/TIRE COMPATIBILITY.

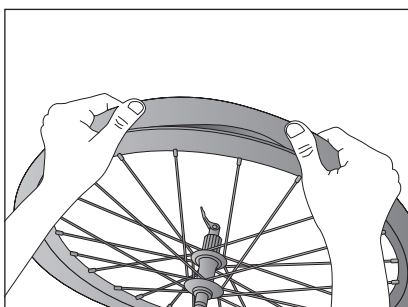
ALL IRWIN RIMS ARE BUILT IN STRICT ACCORDANCE WITH E.T.R.T.O. SPECIFICATIONS, AND ARE VERY DIMENSIONALLY PRECISE. IF A TIRE IS TOO EASY TO INSTALL ON AN IRWIN RIM, THAT TIRE IS PROBABLY TOO BIG AND WILL NOT SEAT PROPERLY ON THE RIM, WHICH CONSTITUTES A SIGNIFICANT SAFETY CONCERN. USE ONLY HIGH QUALITY TIRES (CLINCHER REQUIRE USE OF TIRE LEVERS) WITH REASONABLE INSTALLATION EFFORT. USING A TIRE THAT FITS LOOSELY ON THE RIM CAN CAUSE UNEXPECTED TIRE FAILURE RESULTING IN AN ACCIDENT, INJURY OR DEATH.

- Before installing the tires, cover the exposed spoke holes in the tire bed using IRWIN supplied rim strips or apply rim tape if not already pre-installed
- Ensure that the tire and wheel are compatible in accordance with E.T.R.T.O. Standards before installing the wheel

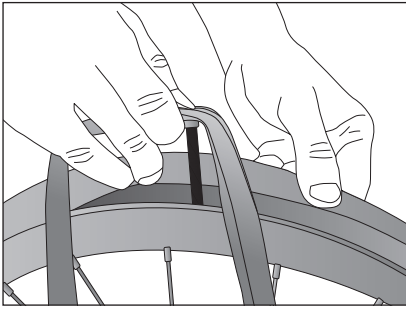
WARNING: FAILURE TO PROPERLY INSTALL THE TIRE CAN CAUSE SUDDEN AND UNEXPECTED LOSS OF TIRE PRESSURE, RESULTING IN AN ACCIDENT, INJURY OR DEATH.

INSTALLING CLINCHER TIRES

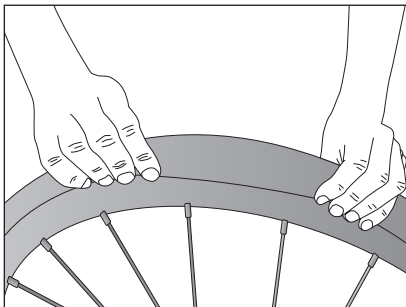
- The clincher wheel you have purchased is designed to use clincher tires only
- Ensure that the tire and wheel are compatible in accordance with E.T.R.T.O. standards before installing the wheel. For the clincher tire, check that the diameter indicated on the road tire is 622 and that the cross section is between 23mm and 25mm
- Use inner tubes with a long valve stem, or install IRWIN supplied valve extenders if necessary
- Be sure that you do not damage, scratch, crush or otherwise distort any portion of the rim when installing the tire. Use only plastic or nylon tire levers when installing
- Before installing tires onto new IRWIN wheels, take note of the serial numbers located on the rim. This serial number is required to register your IRWIN Cycling warranty
- Confirm installation of IRWIN supplied rim strip onto tire bed
- Install one side of the clincher tire into the tire seat provided on the rim



- Slightly inflate the inner tube to facilitate assembly
- TO INFLATE THE TIRE: Remove the valve cap, unscrew the presta-valve and inflate tire using a compressor or pump with a pressure gauge to obtain the required pressure. Tighten the valve and replace the cap
- Insert the valve stem through the hole in the rim, and position the remainder of the partially inflated inner tube inside of the tire, between the tire and rim seat (tire bed)



- Install the other side of the tire into the rim seat



- To properly set the tube and tire onto the rim, inflate the inner tube to between 30~45psi. Next, manually set the tube and tire on the rim, ensuring that the tire bead is evenly positioned around the outside circumference of the rim. Make sure that the tube is correctly positioned within the tire and that the tire is correctly positioned onto the rim. Lastly, inflate the tube fully to the correct pressure. Please inflate the tube slowly, making sure that you maintain the correct positioning of the valve stem, tube and tire on the rim
- TO DEFLATE THE TIRE: Remove the valve cap, unscrew the presta-valve, press and hold down the valve core to obtain required pressure. Tighten the presta-valve and replace the cap

INSTALLING TUBULAR TIRES

WARNING: TUBULAR TIRES REQUIRE TUBULAR GLUE. GLUING TUBULAR TIRES IS NOT FOR EVERYONE AND REQUIRES SEVERAL DAYS TO COMPLETE. IF YOU HAVE ANY DOUBT ON YOUR ABILITY TO MOUNT A TUBULAR TIRE, PLEASE TAKE YOUR WHEELS TO A QUALIFIED MECHANIC FOR PROPER MOUNTING.

- Ensure that the tire and wheel are compatible in accordance with E.T.R.T.O. standards before installing the wheel. For the tubular tire, check that the diameter indicated on the road tire is 633/28" and that the cross section is between 23mm and 25mm
- Use tubular tires with a long valve stem, or install IRWIN supplied valve extenders if necessary
- Before installing tires onto new IRWIN wheels, take note of the serial numbers located on the rim. This serial number is required to register your IRWIN Cycling warranty

INSTALLING TUBELESS TIRES ON IRWIN TUBELESS-READY RIMS

Be sure that you do not damage, scratch, crush or otherwise distort any portion of the rim when installing the tire. Use only plastic or nylon tire levers when installing.

- Before installing tires onto new IRWIN wheels, take note of the serial numbers located on the rim. These serial numbers are required to register your IRWIN Cycling warranty
- We recommended you to prepare these supplies and equipment before installing process:
 - a. Mountain tubeless rim tape
 - b. Tubeless (UST) or tubeless-ready tires
 - c. Tire sealant
 - d. Pencil or sharp pointed tool
 - e. Air compressor, floor pump or CO₂ air inflator
 - f. Dish soap water solution 50-50 ratio
 - g. Brush or sponge
 - h. Plastic tire levers

WE RECOMMEND THE FOLLOWING PROCEDURES FOR INSTALLING TUBELESS TIRES TO IRWIN RIMS IF TUBELESS READY KIT IS NOT ALREADY PRE-INSTALLED:

- Before starting, ensure that your IRWIN rim is tubeless-ready
- Inspect each rim for sharp edges and remove any dirt or debris from the rim, inspect the new tires as well
- With the valve stem hole at the 12 o'clock position, start at the 12 o'clock position and wrap rim tape tightly around the rim's interior channel. We recommend using two layers of tape to provide a better seal, and overlap tape over the valve hole 3 times
- Using a sharp pointed toll such as a pencil, punch holes through the tape at the valve stem of each rim, toward the hub
- Insert the tubeless valve stem through the valve hole, install and tighten the nuts by hand. Hand tighten only
- Using the brush or sponge to apply the dish soap water around the tire bead on both sides
- Check the fitting direction of the tire
- Install one side of the tubeless tire into the tire seat provided on the rim, starting at the valve stem, seat tire's bead in the rim channels. Simultaneously work around each rim in both directions. Do this slowly and carefully to avoid pinching your fingers between the rim and tire. Use a plastic tire lever if necessary
- Once one side of the tire is installed, begin installing the other bead starting at opposite side of the valve stem. Try to keep both tire beads in the center of the rim for easier tire installation. Leave a gap open for sealant application, and orient it to the bottom of each wheel
- Insert the open applicator tip of the tire sealant container into the gap at the bottom of the wheel, and apply sealant inside the tire sidewalls. Do not apply sealant directly to the rim
- Rotate the wheel slowly until the gap is on top. Now seal the final section of the bead into place. Repeat for the remaining wheel
- Inflate the tire with an air compressor, floor pump or CO₂ air inflator. You should hear large popping sounds when inflating. This is the sound of the tire being seated into the rim
- Hold each wheel on its side, slowly "shimmying" the sealant along the sidewalls to distribute it evenly. Let it sit for 5 minutes then flip each wheel over to do the same on the other side. Finally, hold the hub steady and spin each wheel to distribute sealant throughout the inside of the tire
- Let the wheels rest for approximately 1~2 hours. Monitor them regularly to check for leaks. After the allotted time, inflate or release air until you reach the desired tire pressure

WARNING: CHECK THAT THE CLINCHER RIM SHOWS NO SIGN OF SIGNIFICANT DAMAGE OR DEFORMATION ALONG THE SIDEWALL. THIS COULD CAUSE THE RIM TO UNEXPECTEDLY BREAK RESULTING IN AN ACCIDENT, INJURY, OR DEATH.

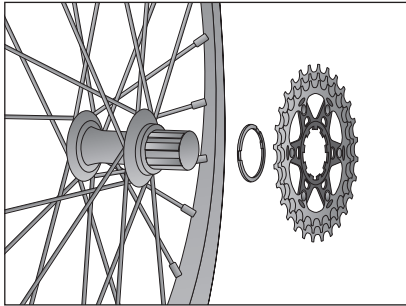
WARNING: NEVER EXCEED THE MAXIMUM INFLATION PRESSURE RECOMMENDED BY THE TIRE MANUFACTURER OF THE CLINCHER TIRE THAT YOU ARE USING. SEE THE "OPERATING PRESSURES" IN SECTION 8 OF THIS MANUAL. EXCESS TIRE PRESSURE REDUCES THE TIRE'S GRIP ON THE ROAD AND INCREASES THE RISK OF THE TIRE UNEXPECTEDLY BURSTING. INFLATION PRESSURE THAT IS TOO LOW REDUCES TIRE PERFORMANCE AND INCREASES THE PROBABILITY OF SUDDEN AND UNEXPECTED LOSS OF TIRE PRESSURE. IN ADDITION, PREMATURE WEAR AND DAMAGE TO THE RIM MAY OCCUR. INCORRECT TIRE PRESSURE COULD CAUSE TIRE FAILURE OR LOSS OF CONTROL OF THE BICYCLE RESULTING IN AN ACCIDENT, INJURY OR DEATH.

WARNING: IF YOU FEEL A PULSING OR SURGING SENSATION IN THE BIKE, STOP YOUR RIDE, TAKE YOUR BICYCLE TO A QUALIFIED MECHANIC AND CHECK IF THERE ARE ANY DEFORMS OR DAMAGES. A DEFORMED OR DAMAGED RIM MAY CAUSE THE CLINCHER TO SUDDENLY FAIL RESULTING IN AN ACCIDENT, PERSONAL INJURY OR DEATH.

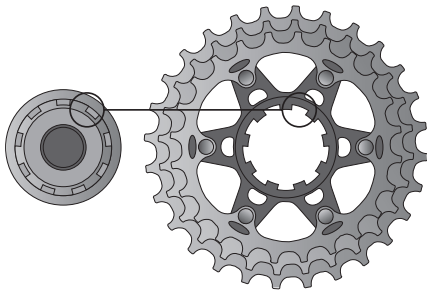
4. CASSETTE INSTALLATION

WARNING: ALWAYS WEAR PROTECTIVE GLOVES AND GLASSES WHEN WORKING ON CASSETTE AND COGS. ALWAYS TIGHTEN CASSETTE LOCK RING TO MANUFACTURER'S RECOMMENDED SPECIFICATION.

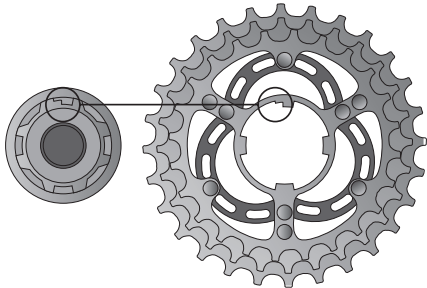
- Shimano/SRAM 10-speed cassette systems require a 1mm spacer installed behind the largest cassette cog on all Shimano 11-speed hubs. Install individual or preassembled spacers and cassette cogs onto cassette body of the hub by aligning the spline patterns



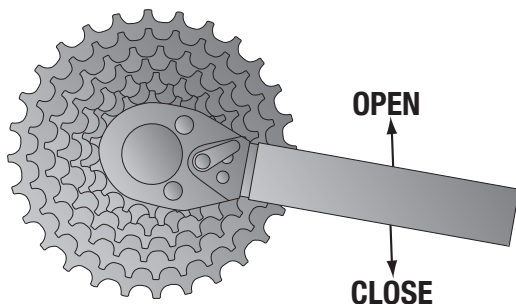
- SHIMANO/SRAM: Locate the widest spline on cassette cog and match it with the widest groove on the cassette body. The profile of the cassette body ensures automatic cassette cog alignment since there is only one installation option



- CAMPAGNOLO: Locate the narrowest spline on cassette cog and match it with the narrowest groove on the cassette body. The profile of the cassette body ensures automatic cassette cog alignment since there is only one installation option



- Apply grease/lubricant to lock ring threads located inside outer edge of cassette body
- Use a torque wrench to properly tighten cassette lock ring into place. Tighten Shimano, SRAM and Campagnolo lock rings to 40Nm. Always use correct lock ring tools



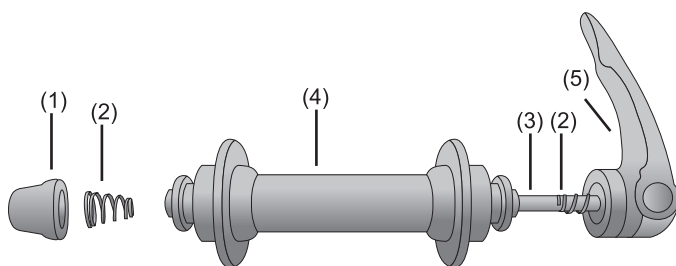
- NOTE: Tools supplied by manufacturers may not be compatible with IRWIN wheels. Always check with your mechanic, authorized dealer/distributor, IRWIN directly or the tool manufacturer to insure compatibility before using tools supplied by one manufacturer on wheels or components supplied by another

WARNING: FAILURE TO INSURE COMPATIBILITY BETWEEN TOOLS AND WHEELS/COMPONENTS COULD RESULT IN IMPROPER OPERATION OR THE FAILURE OF THE COMPONENT, AND ACCIDENT, INJURY OR DEATH.

5. QUICK RELEASE SKEWERS

WARNING: IRWIN QUICK RELEASE SKEWERS ARE DESIGNED AND MANUFACTURED SOLELY FOR FIXING A MANUFACTURED QUICK RELEASE HUB TO AN AVAILABLE BICYCLE FRAME OR FORK.

- DO NOT make modifications to IRWIN quick release skewers. Any modification, alteration or misuse of quick release skewers is considered as not in conformance and is strictly prohibited, voids the warranty and could cause wheel malfunction resulting in an accident, personal injury or death
- DO NOT USE tools to operate quick release skewers. Installing and removing, as well as opening and closing quick release skewers should always be done by hand
- DO NOT USE your IRWIN quick release skewers in combination with bicycle trailer, fender or rack
- Verify wheel centering position, adjustment and tightness of quick release skewers onto frame and fork. Also check skewers for damage (damaged threads, bent/deformed components, cracks and corrosion)
- Install the quick release skewers with shorter axle to the front wheel hub
- The axle nuts (1) of either quick releases are located on the right-hand side
- The smaller diameter of the centering spring (2) must face toward the hub
- Locking the handle must be possible with only moderate pressure

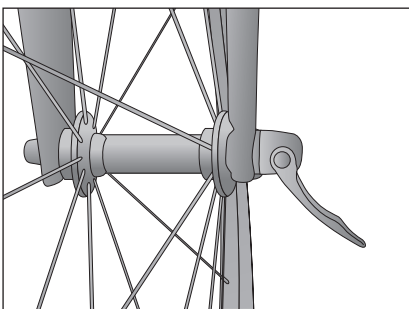


QUICK RELEASE SKEWERS INSTALLATION

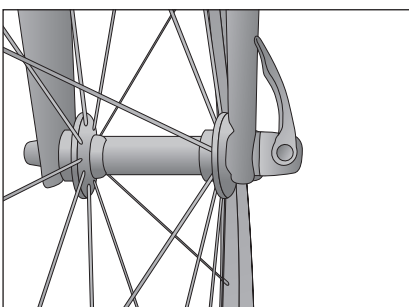
- Release the axle nut (1) and remove it from the axle (3)
- Apply grease to threads on axle (3)
- Pass the quick release axle through the hollow axle of the hub (4)
- Position the centering spring (2) on the quick release axle (3)
- Thread on the axle nut (1) about 10 turns

LOCKING THE QUICK RELEASE SKEWERS

- Ensure that the quick release lever (5) is in opened position. Thread on the axle nut (1) about 10 turns



- Insert the wheel up to the limit stop into the frame or fork
- Tighten the axle nut (1) until dropout and hub axle are in contact with each other
- Close quick release lever (5) into upright, forward facing and locked position

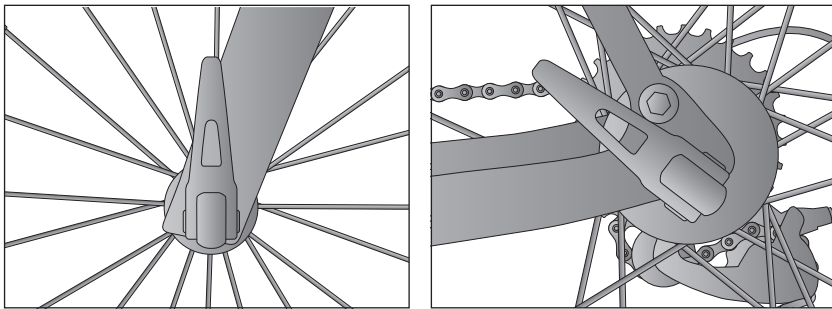


ADJUSTING THE QUICK RELEASE SKEWERS

- Quick release tension is too low if the lever can easily be turned in the closed position
- Quick release tension is too high if the tensioning lever (5) cannot be closed with moderate pressure
 - a. Open lever (5)
 - b. Turn axle nut turn clockwise to tighten
 - c. Turn axle nut turn counter-clockwise to loosen
 - d. Close quick release lever (5) into upright, forward facing and locked position
 - e. Repeat adjusting procedure as necessary

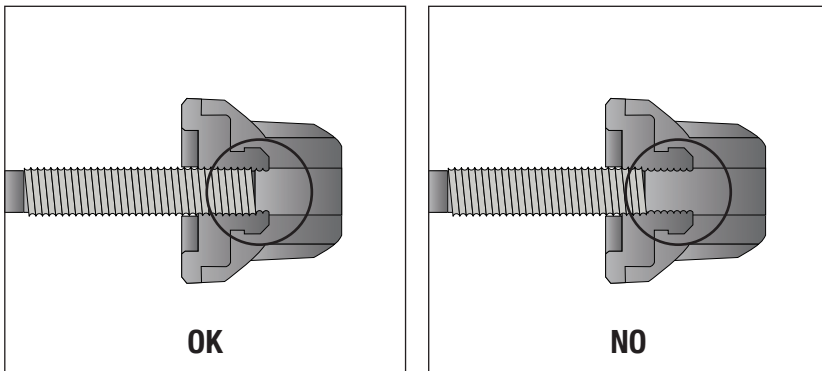
WARNING: MAKE SURE THE QUICK RELEASE LEVER IS SECURELY FASTENED. LOOSE QUICK RELEASE SKEWERS INCREASES THE DANGER OF ACCIDENT FROM OPENING THE QUICK RELEASE SKEWERS INADVERTENTLY.

- Always check your quick release skewers before each ride. Always check that the quick release handle has been completely and sufficiently tightened in the closed position
- Always ensure that the quick release handles are closed in position directly in front of the left-hand fork blade and directly in front of the left-hand seat stay



WARNING: DANGER OF ACCIDENT BY QUICK RELEASE SKEWERS MALFUNCTION, DUE TO DAMAGE OR INSUFFICIENT THREAD ENGAGEMENT.

- Always check that the threaded end of the quick release axle nut is securely fastened to the quick release axle with no more than 2mm inside of axle nut when the quick release skewer is locked



- Periodically check your quick release skewers for damage (damaged threads, deformed components, cracks or corrosion)

FOR THRU-AXLE INSTALLATIONS, PLEASE REFER TO INSTALLATION INSTRUCTIONS PROVIDED BY THE FRAME OR FORK MANUFACTURER.

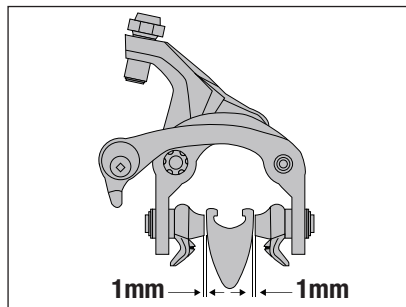
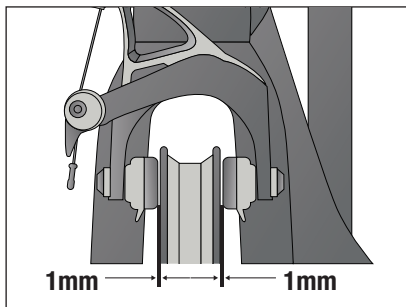
6. INSTALLING BRAKES

WARNING: FAILURE TO USE EXCLUSIVE BRAKE PADS PROVIDED WILL VOID THE WARRANTY ON YOUR CARBON WHEELS, AND MAY ALSO CAUSE WHEEL COMPONENT FAILURE, RESULTING IN AN ACCIDENT, INJURY OR DEATH.

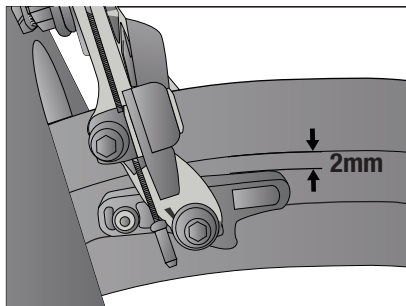
DO NOT USE CORK BRAKE PADS ON IRWIN CARBON WHEELS. THIS WILL VOID YOUR WARRANTY. USE ONLY IRWIN SUPPLIED BRAKE PADS ON YOUR CARBON WHEELS FOR BEST PERFORMANCE. IRWIN BRAKE PADS DISSIPATE HEAT BETTER THAN OTHER BRAKE PADS AND ARE LESS LIKELY TO OVERHEAT AND DEFORM THE WHEELS.

CAUTION: USING THE SAME SET OF BRAKE PADS FOR BOTH CARBON AND ALLOY WHEELS WILL INCREASE THE OPPORTUNITY FOR EXCESS WEAR, RIM DAMAGE AND HEAT DEFORMATION ON THE CARBON WHEEL.

- Periodically check the brake pads to insure that they are about 1mm from the braking surface of the rim



- For pad-holders equipped with orbital articulation which can be oriented in all conditions:
 - a. The brake pads are refitted into the pad-holders and secured with the pre-fitted screws
 - b. Adjust the brake pads so that they are 2mm lower from the top braking surface edge of the rim



- c. After this the brake pads are held against the rims with the brakes on lightly and precisely aligned to be just below the outer edge of the rim and parallel with it. The brakes are centralized and adjusted for clearance as necessary
- d. The final stage is the insertion of thin spacers, less than 1mm thick, to create a very small “toe in” so that the leading end of the block contacts first, and the remainder of the block contacts progressively. If this is not done the brakes squeal loudly and are less efficient
- e. The brake is then held tightly to the rim and the multi directional adjuster in the housing is released and then re-tightened after the brake pads have self-aligned both longitudinally and vertically
- f. The thin spacers are removed and the bike is ready for the next ride

7. PERIODIC WHEEL AND BRAKE PAD MAINTENANCE

After using the wheelset for the first time, check each wheel for trueness and circularity.

MAINTENANCE AND WHEEL CLEANING

Your IRWIN carbon wheels possess some of the best components and materials available in the cycling industry. Your rims have a specially engineered ceramic fiber composite reinforced braking surface to help insulate heat and increase durability. For the best results, keep brake pads and rims clean from debris and glazing on a regular basis.

- Debris can come from many sources. It is generated any time you apply brake pads to the rim, whether you are riding aluminum or carbon wheels. Both surfaces naturally wear on each other and remove small amounts of surface material at the point of contact. Debris is also picked up from the road and environment as you ride. It is not uncommon to see small stones, metal or other road debris embedded in bicycle brake pads. Wet and adverse climate riding conditions also increase debris build-up on pads, and on the rim surface, increasing abrasion between pads and rims
- Brake pad glazing most often occurs from overheating the brake pad and rim surfaces. Carbon and aluminum rims react differently to heat. Carbon rims tend to build up heat more rapidly under hard and prolonged braking conditions. Brake pads may glaze-over or surface-harden easily, especially if you are new to riding carbon wheels or in hilly or mountainous areas. Riding and braking style is also a contributor to pad glazing. For most riders, a simple change to their frequency and force of braking may reduce brake pad glazing and heat build-up. The biggest difference in riding wheels with aluminum or carbon braking surfaces is the impact of prolonged braking on rim longevity. Try not to “drag” or “grab a handful of brakes” when slowing your bike with carbon wheels - especially on long descents
- Use your brakes with lighter modulation. Try to “feather” the brakes rather than to “ride or drag” the brakes continuously against the rim. More frequent, short, quick, light applications of your brakes will offer the best results while still providing adequate stopping power; much like an ABS system does for your car. Prolonged application of the rear brake combined with shorter, faster, lighter application of the front brake may also provide less glazing, increase brake pad life and benefit safety in bike handling

FOR BEST RESULTS, PRACTICE THE FOLLOWING SIMPLE CLEANING TIPS

- Wheel cleaning may require you to remove the tires to access the entire braking surface. Routine rim and brake pad cleaning should be performed at least every 3-4 months. Contact your mechanic or an authorized dealer/distributor for recommended maintenance schedule
- Suspend your bicycle in a rack and drop the wheelset out of the frame
- Inspect the brake pad surfaces, front and rear, for embedded debris. Remove any embedded small particles in the pads with a fine pointed tool
- Abrade/scuff/sand the brake pads vertically and opposite the direction of rotation from the wheel. Do this until the pad surface is flat/non-shiny. Use an abrasive tool such as a clean metal file or 80-100-grit sandpaper to abrade the brake pad surfaces
- Run your fingers along the entire circumference of the wheel's brake surface feeling for changes in roughness. Inspect the braking surface for visible contamination or brake pad build up
- Use a clean rag and acetone to clean the braking surface on your wheels. We recommend that you wear latex gloves whenever using Acetone. **DO NOT USE ACETONE NEAR OPEN FLAME.** Acetone is highly flammable. Use only in well-ventilated area
- Clean the brake track only, beginning at the valve hole, along the outer edge of the rim circumference. Remove all discoloration, smears and non smooth areas. Focus on the areas with rough textures and those with obvious discoloration

CAUTION: DO NOT USE EXCESSIVE PRESSURE WHEN CLEANING YOUR WHEELS AS IT IS EASY TO REMOVE MORE THAN SURFACE CONTAMINATION AND DAMAGE THE BRAKING LAYER MOLDED INTO THE RIM

- You will detect dust or dirt accumulating on your cleaning rag. Rotate the cloth to a clean section and continue cleaning
- Clean brake track on both sides of both wheels. You may need to wipe down the rim several times until you no longer see deposits on your cleaning rag
- You may wipe down the entire rim surface with Acetone; it will remove most all road grime and oil deposits from your hands, but should not damage decals

WARNING: USING WHEELS THAT HAVE BROKEN OR DAMAGED SPOKES MAY RESULT IN AN ACCIDENT, INJURY OR DEATH.

- After every ride check the condition of the tires and inflation pressure
- Periodically take your bicycle to a qualified mechanic to lubricate the hubs, check spoke tension, and inspect rim and brake pads for excessive wear. Check with your mechanic to select a schedule that is best for you (approximately every 2,000-5,000 km or 1,200-3,000 miles)
- Every 10,000-20,000 km (6,000-12,000 mile) you should take your bicycle to a qualified mechanic to lubricate, remove, disassemble and check the hubs
- Periodically have a qualified mechanic verify the quality of every component that is susceptible to wear including rims, spokes, bearings and brake pads. And, if necessary, replace worn and damaged components with original IRWIN replacement parts
- At least once a month, please take your bicycle to a qualified mechanic to check the tension of the spokes, wheel centering, wheel dish and correct as necessary
- Periods and riding distances are purely indicative and may be significantly different in relation to conditions of use and the intensity of your activity (for example: racing, rain, salted winter roads, rider weight, terrain, etc.). Check with your mechanic to select a maintenance schedule that is best for you

NOTE: Never spray your bicycle with water under pressure. Pressurized water can seep through bearing seals and enter into components of your IRWIN wheels causing damage beyond repair. Wash your bicycle and IRWIN wheels by wiping them down with water and neutral soap or specific products designed for cleaning bicycles. Routine scheduled cleaning of your wheelset and brake pads will improve modulation and braking in all conditions.

TRANSPORT AND STORAGE

When transporting your IRWIN wheels separately from the bicycle or if the wheels will not be used for a long period of time, store them in a wheel bag to protect against impact and damage.

8. OPERATING PRESSURES

Never inflate a tire beyond the maximum pressure marked on the tire's sidewall. Exceeding the recommended maximum pressure may blow the tire off the rim, which could cause damage to the bike and injury to the rider and bystanders.

If you have more questions, please contact your mechanic, authorized dealer/distributor or IRWIN directly at info@irwincycling.com.



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FOR MORE INFORMATION ON IRWIN PRODUCTS,
VISIT OUR WEB SITE:

WWW.IRWINCYCLING.COM