

# Quick Guide to ATV Tire Ball Installation

*(Note: some important steps and safety considerations are highlighted in red. Please pay particular attention to these steps and cautions)*

1) Rim Preparation.

Inspect and debur any sharp gouges or weld spatter that may be present on the interior surface of the rim.

- 2) Lubricate the inside of the tire carcass and the surface of each Tire Ball. Use either aerosol or **liquid silicone oil**. We find that the pure liquid silicone oil (included in the installation kit) lasts longer and offers the best lubrication.



- 3) Install quick clamps onto the tire side-wall so that they project into the interior of the tire carcass to use as a backstop for the balls, two clamps work the best.



Insert partially inflated Tire Balls™ into the tire carcass pressing them against the clamps. Make sure that the inflation inserts are accessible and that all the inserts are facing the same direction.

- 4) Install Tire Balls™ into the tire carcass in a partially inflated state. Typically, the number required will be 12-14 Tire Balls™ in either a front or rear ATV tire.



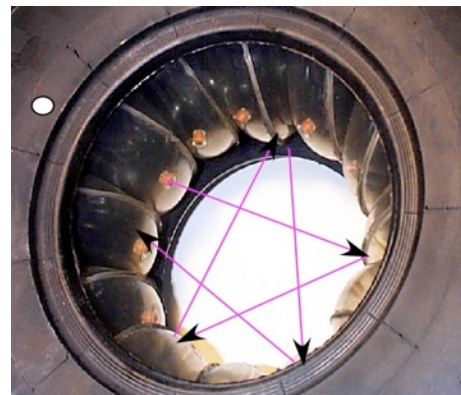
- 5) Bring each ball up to the final pressure gradually, alternating between every other ball, much as you would torque a cylinder head, using the inflation regulator and pressure gauge. The intent is to bring the pressure up gradually so that all the balls are the same size and pressure, to accomplish this you must inflate each ball for 3 seconds then move to the next until you reach the desired final pressure. This procedure may require several rotations of inflating each ball. The typical final pressure is 5 psi.



- 6) Lubricate the rim with the water-based tire bead lube as well as the tire beads.



- 7) After checking and aligning for tire direction and wheel direction, force the tire over the rim flange that is closest to the recessed center of the rim. For bead lock rims force the tire over the bead lock flange.



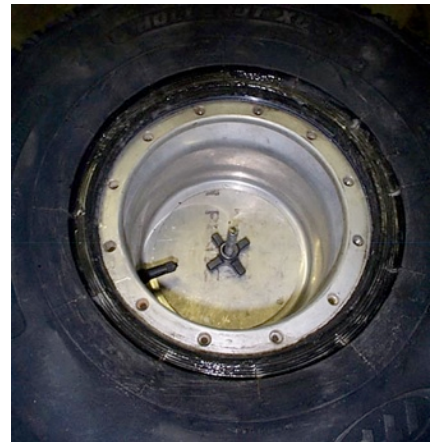


8) Force the tire onto the rim as far as possible so that the remaining bead is as close to the rim flange as possible.

9) If you are using bead lock wheels follow step 10a.

Mounting the remaining tire bead over the rim flange will require the use of a Bead Hold Down Clamp (Bessey Clamp and UHMW low friction shoe). This clamp and shoe hold the tire bead down in the recessed portion of the rim. Smearing some bead lube under the clamps makes the installation easier.

Once the Bessey clamp is in place, long tire irons can be used to force the remainder of the tire bead over the rim.



10a) For Bead-Lock Wheels - Use three long studs screwed into equally spaced holes around the rim. Install the bead lock ring and pull the ring down gradually until the bolts supplied with the rim can be started by hand. Tighten the bolts and replace the long studs with the remaining bolts supplied with the rim.



10) After removing the Bead Hold Down Clamps, apply additional bead lube onto the exposed tire bead and rim. Laying the wheel flat on the ground, attach an inflation hose to the valve stem (core removed) and inflate to seat the tire beads onto the rim.



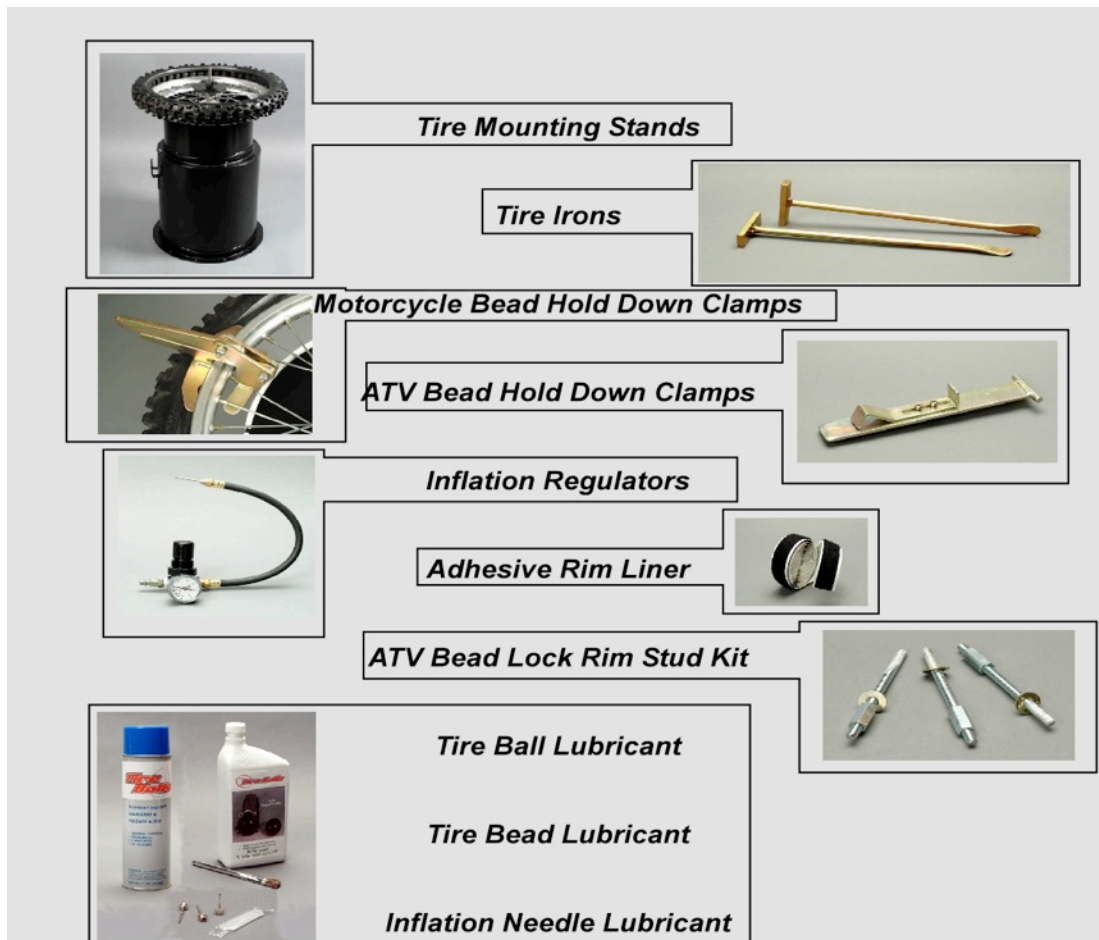
For your own personal safety, never use an air chuck applied to the valve stem, use a remote inflator as shown.

Never exceed either the tire or rim manufacturer's maximum pressure rating when seating the beads. If you are seating a bead lock wheel make sure you can visually see the side that needs seating.

Exhaust all internal pressure before moving the wheel; do not move the wheel before exhausting the pressure so that the balls do not come out of alignment.

If when exhausting the air, the flow of air suddenly stops, there may be a Tire Ball™ blocking the valve stem hole. If you suspect this has happened force a small diameter rod through the valve stem opening to push the Tire Ball™ aside and allow all of the internal pressure to be released.

12) Remove the remote inflator and install the valve core and cap. The tire is now ready for mounting on the vehicle.





# Installing TireBalls

**SO, YOU'VE FINALLY PULLED THE TRIGGER** and bucked-up for those TireBalls you've been dreaming about owning. Sure they're expensive, but if you're a racer, it's hard to argue the fact that they just might be the most innovative invention to hit the industry in years. Once the TireBalls are in your possession for the first time, you might be scratching your head trying to figure out how to stuff fourteen balls into a tire without first wanting to stick a tire iron in your eye. It's not that hard to do it in reality, though. Read on to cash in your ticket to TireBall euphoria!

## STEP 1



**GET PREPPED.** Before getting started, get everything you'll need for the install spread out and prepared. Organize your work area, pick up some heavy-duty rubber gloves, gather some paper towels and rags, and make sure to wear old clothes! TireBalls are a fantastic invention, but they are incredibly messy to install. If the TireBalls are brand-new, it's a much less messy proposition. If they are a used set, being prepared will help keep yourself and your work area much cleaner.

## STEP 2



**PREP YOUR WHEEL.** Clean the inside and outside of the wheel and check for any burrs in the aluminum by rubbing a cloth over it. If the cloth snags, you must de-burr it with a piece of fine-grit sandpaper. Follow up by thoroughly recleaning the wheel. If you miss this step, the TireBalls could end up toasted before you ever get a chance to abuse them. You definitely don't want them to snag or tear themselves on any sharp burrs in the wheel!

## STEP 3



**PREP THE TIREBALLS.** Lay the TireBalls out on a clean, flat surface and place a dab of silicone needle grease on the inflation valve of each TireBall. This will expedite the process of inserting the inflation needle into each one. Also at this time, we partially inflate the balls with a three- to four-second burst of air from the TireBalls' standard inflation regulator. This makes it easier to place them loosely in the tire carcass.

## STEP 4



**LUBE THE TIRE CARCASS AND TIREBALLS.** Spray the inside of the tire liberally with some silicone Ball Lube. Next you'll want to rub the lube into the carcass of the tire, making sure to cover the whole inside of the tire. After that, cover each of the TireBalls with the silicon Ball Lube, making sure not to leave any part of it dry. This is why we mention you'll want to wear old clothes ... this is when the steps start to really get messy!

## STEP 5



**INSTALL THE TIREBALLS.** Using a shop clamp as a backstop, stuff each TireBall into the tire with the inflation valves lined up and pointing in the same direction. This will ensure you have access to the valve on each one. Continue adding a small amount of air to each ball until all of the balls have roughly five pounds. It is totally normal for the TireBalls to move around, but make sure the inflation valve always stays exposed. If not, it will be nearly impossible to wrestle them into place later. Generously spray more Ball Lube on the TireBalls. The lubricant is the lifeline that keeps friction-induced heat from destroying them.

## STEP 6



**MOUNT THE TIRE ON THE WHEEL.** Place the outside edge of the tire on the floor of your garage. Lube the backside of the tire with tire bead lubricant. Wedge the front lip of the wheel over the inside bead of the tire. You should be able to work it in by hand by inserting the wheel at an angle and twisting. After the outer lip of the wheel is within the tire, evenly put pressure on the wheel until it falls through the center of the balls. If you can't push it by hand, don't be afraid to stand on the wheel to exert some extra pressure on it.

## STEP 7



**SECURE THE BEAD LOCK.** Line the bead-lock ring up with the wheel and draw it tight with the bead-lock stud kit. We chose to arrange the stud kit in an equilateral-triangle pattern to more easily and more evenly mate the bead-lock ring with the wheel. Once you have the ring and wheel drawn close enough for the bead-lock studs to reach the wheel, run those in and tighten them to the recommended torque specs.

## STEP 8



**SEAT THE BEAD.** Remove the valve stem core, lube the inside bead of the tire, then inflate the tire until the bead pops onto the wheel. After deflating the tire by letting the air flow back out of the valve stem, we like to put a few squirts of Ball Lube in the valve stem before replacing the core. At this point, you can choose to run the tires with zero pressure or a bit of over-pressure within the tire itself. We've seen them run both ways with much success. This step is more of a preference item than anything else. 🚫