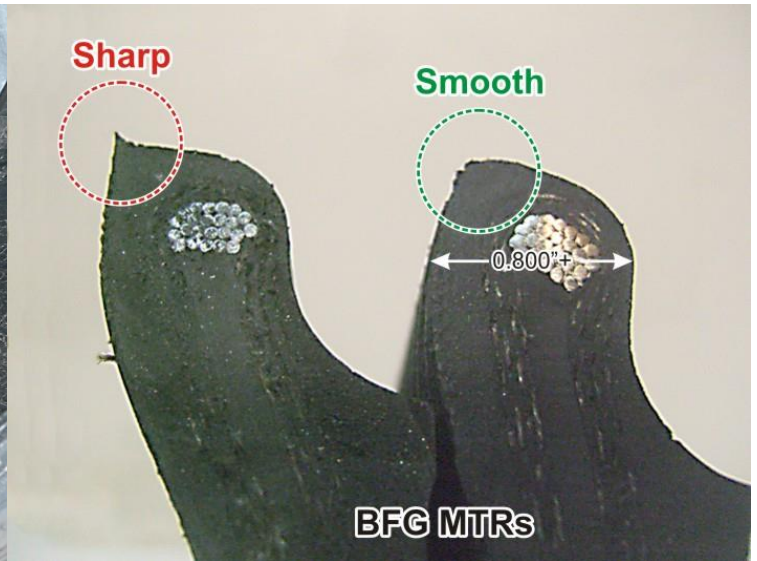


WIDE TIRE BEAD HELP

Problem: The inside edge of the tire bead is very sharp. This is accentuated with large tires that have wider than normal beads. This applies to Interco, Maxxis, BFG, ProComp, Goodyear and virtually all other brands of tires. If the inner tube is pinched between this shape edge of the tire bead and the drop center of the rim when mounting the final tire bead, it will most likely cause inner tube failure as pictured. Inner tube failure ranges from long slits (right) to a series of small holes (below). The problem is caused by the tire bead's sharp, saw-tooth edge (lower right).



Solution: Step 1: Using a small diameter drum sander or stone as shown (below left), smooth off/round the sharp tire bead edge (below right). Look closely around the sanding drum versus to the left of the operator's fingers. Remove a small portion of the ribs and the sharp edge on both beads of all tires.



Step 2: When mounting the final tire bead, move the inner tube toward the inside of the drop center and place the tire bead directly on the metal of the rim in the drop center. Ensure that the inner tube is not pinched by tire bead.

POWDERING BEADLOCK HELP

Problem: You are blowing tubes or finding that the beadlock Case is not properly seating within the tire.

Discussion: The problem is almost always from using insufficient powder on the beadlock Case, tube, Air Channel and the inside of the tire beads. It may also be due to untrimmed wide tire beads (see BLIN-01 Wide Tire Bead Help).

Solution: Use lots of powder on the beadlock Case, tube, Air Channel and inside of the tire beads as shown in these pictures. First shake sufficient powder on the component and then spread it evenly across the entire surface of the component leaving nothing unpowdered. Pay particular attention to both sides of the inside and outside Beads (the black webbing at the ID) of the beadlock Case.

NOTE: These pictures are of the original, Australian, Staun beadlocks, but the principle also applies to the Coyote Boltless Beadlocks.



LOCATING THE BEADLOCK TUBE VALVE STEM HOLE

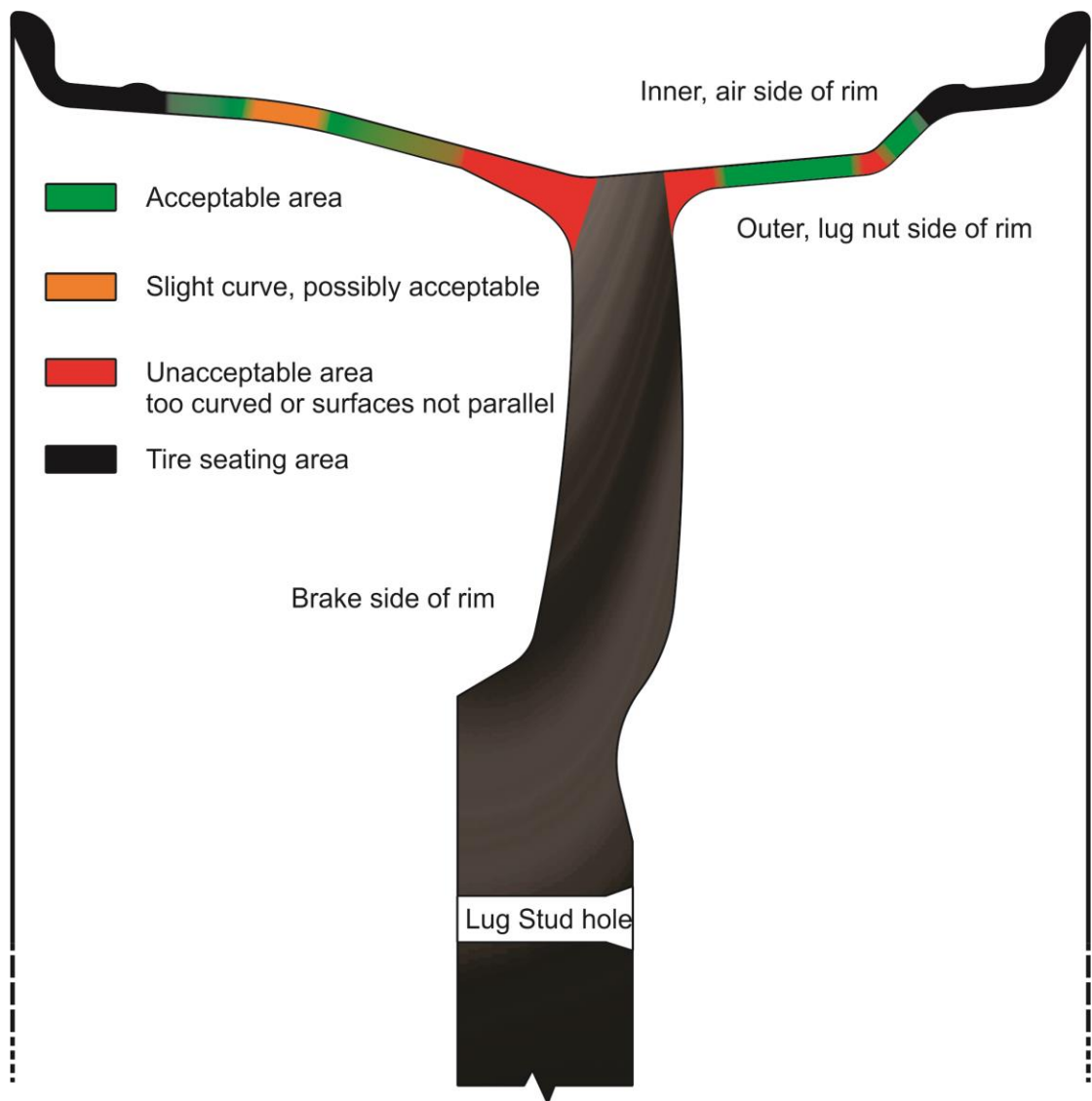
Problem: How do I determine the best location for the Coyote Enterprise Dual, Internal, Pneumatic, Boltless Beadlock inner tube valve stem hole?

Solution: A) To determine the “perfect” inner tube valve stem hole location, mount the tube on the flat lying rim, valve stem up (toward the outside of the wheel), about 6 to 8 inches (150 to 200mm) clockwise from the standard valve stem hole, then inflate the tube to take shape, but do not over inflate it. Valve stem distortion is expected and will not hurt the inner tube. Center the tube vertically on the rim, then mark the valve stem location. Finally, since this is not always a practical location, “optimize” that location to accommodate your rims as described in the next paragraph, B.



B) The inner tube valve stem hole requires that both the outer (lug nut side) and inner (air side) rim surfaces be parallel and not too curved as shown in green. This accommodates the inner and outer O-rings on the threaded tube valve stem. Also, the rim should be no thicker than ½ inch (13mm).

IMPORTANT: Before drilling a hole on the inside (brake side) of the rim, be **completely** sure that there will be **no** interference between any brake component (caliper, disc, etc.) and the beadlock tube valve stem. With a 1 inch piece of regular wood pencil or similar dowel, stick it with chewing gum/putty to the potential hole location on the wheel. Mount and rotate the wheel to make sure that it does not interfere with any brakes or other inboard components and that you can get a standard air chuck and gauge on the stem. Do not just test one wheel position. Test all four wheel locations.



C) Another option is to weld up the original valve stem hole and locate both valve stems in a well protected, inside location as seen in this moon buggy rock crawler, but **remember to check** for any potential brake component interference first.



LOWEST TIRE PRESSURE

Problem: How low of a tire pressure can I run without damaging the Coyote Dual, Internal, Pneumatic Boltless Beadlock?

Discussion: Although the Coyote Dual, Internal, Pneumatic Boltless Beadlock can be used as a “limp flat” for a mile or less, you cannot drive on a flat or “very low” tire pressure for greater distances. When you drive too far on too low a tire pressure or a flat, the Case Tread overlap sewing is worn away by constant abrasion by the tire’s (inside) tread surface. These pictures are what beadlock failure looks like when you run too far on too low a tire pressure or a flat.

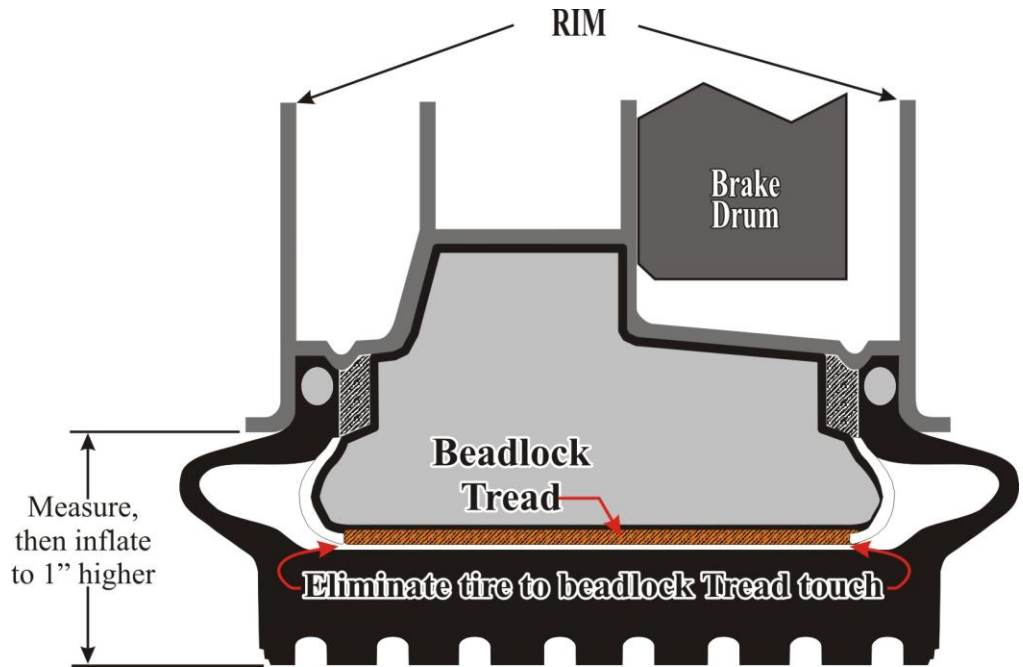
The lowest tire pressure you can run is determined by a combination of the tire’s age, condition and temperature, and the vehicle’s weight. The next paragraph describes how to determine the lowest pressure you can run.

Note: These are pictures of the original Staun beadlock, but the principle also applies to the Coyote Dual, Internal, Pneumatic Boltless Beadlock.



Solution: With the beadlocks installed and inflated on your fully loaded vehicle on flat ground, completely deflate both front and both rear tires (beadlock fully inflated) and measure the distance from the ground to the bottom of the rim. This assumes that the vehicle is heavy enough to completely compress the tire and it is touching the inflated beadlock. If the tire is not fully compressed, then this method can still be used, it will just produce a little more than one inch tire tread to beadlock Tread clearance.

Your objective is to ensure that the beadlock Tread (yellow OD) never touches or rubs the inside of the tire tread. Measure the height of the rim from the ground and then add air to the completely flat tire until the bottom of the rim is one inch higher than with the tire flat. Do this for all four tires. Now measure each one inch elevated tire's pressure. This is the lowest tire pressure you can run. However, this assumes that the vehicle will be driven in such a manner so as not to produce severe bumps as in climbing or descending steep hills or whoop-de-doo level terrain.



TREAD OVERLAP BALANCE

Problem: I can't balance my Coyote Dual, Internal, Pneumatic Boltless Beadlock equipped tires.

Discussion: It's rare that you cannot balance a Coyote Dual, Internal, Pneumatic beadlock equipped tire; however, the beadlock Case has a feature that helps with this. Note that the Case Tread has an overlap sewing area. This makes the Case heaviest at that spot.



Solution: Air Channel placement can compensate for the Tread overlap heavy spot. At installation, simple arrange the Air Channel to be 180° across from the Tread overlap.

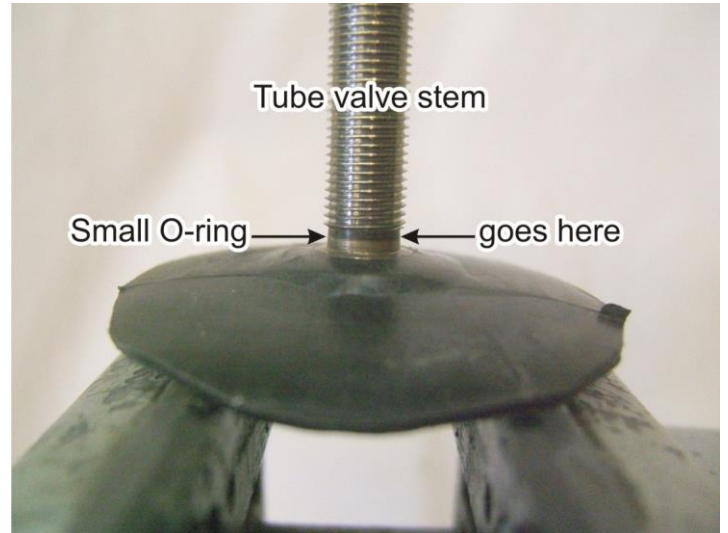
Note: Coyote Dual, Internal, Pneumatic Boltless Beadlocks differ in color, sewing and Air Channel design from the original Staun beadlocks (pictured), but the principle is the same.



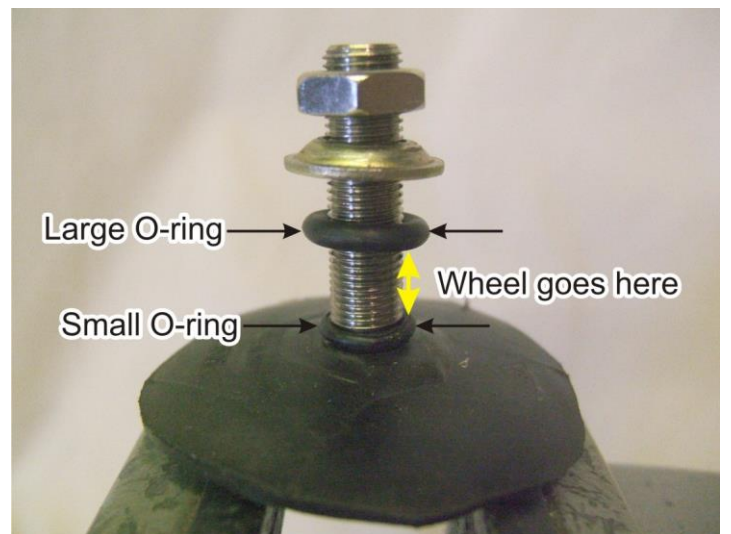
VALVE STEM O-RING ORDER

PROBLEM: The Coyote Dual, Internal, Pneumatic Boltless Beadlock inner tube vendor sometimes supplies the inner tubes with the large and small O-rings in the wrong order on the metal valve stem.

DISCUSSION: The Coyote Dual, Internal, Pneumatic Boltless Beadlock all-thread inner tube valve stem is designed to receive a small O-ring at the base - the intersection of the metal stem and the rubber. Remembering that your Coyote Dual, Internal, Pneumatic beadlock equipped rim is still a tubeless tire, this small O-ring provides the primary seal for the inner tube valve stem thus preventing tire air leaks through that valve stem hole.



SOLUTION: First check to see that the smaller O-ring is at the base of the metal valve stem. If not, simply remove both and put them in the correct order as shown in this picture. The yellow line shows the location of the rim. The large O-ring goes on the outside of the rim and is another air seal plus it accommodates the curved surface of the wheel where the cone washer seats.



RIM PREPARATION FOR INNER TUBE REPLACEMENT

PROBLEM: Coyote Dual, Internal, Pneumatic Boltless Beadlock inner tubes can be damaged by rim blemishes in the installation process on used rims.

DISCUSSION: Coyote Dual, Internal, Pneumatic Boltless Beadlock inner tubes have a smaller ID than the rim diameter and must be stretched over the rim quite tightly. In the process, if the rim is gouged and scratched, these flaws may cut the tube when stretching it over the outside diameter. This is not covered by the warranty.

SOLUTION: First, carefully inspect 100% of the rim's OD for any sort of blemish or imperfection, particularly on the side of the rim that you will be stretching the inner tube over. This is normally the valve stem side of the rim, but on reverse rims, it will be the brake side. Using the tools you deem best (usually, just a fine file will work perfectly), remove all potential tube damaging flaws until you feel no sharp protrusions or cuts. Use a rag for final flaw inspection to avoid cuts to your hands and fingers.

O-RING ORDER: This is covered in more detail in BLIN-8, Valve Stem O-rings. The smaller O-ring goes at the base of the inner tube's metal valve stem and the larger O-ring goes on the outside of the rim as shown in this picture. The yellow line shows the location of the rim.

If your inner tube came with two nuts, only one is required.

