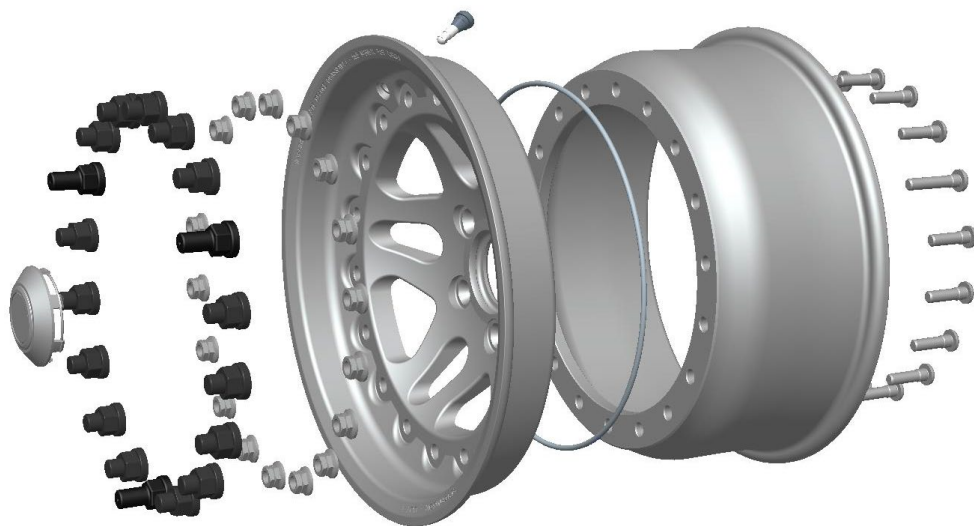




HUTCHINSON®



ROCK MONSTER® Wheel Installation Manual



SAFETY NOTES

Notice concerning tire selection for Hutchinson® wheels and beadlocks

Hutchinson® does NOT select or recommend specific tires. The selection of the internal beadlock in Hutchinson wheels, is based in part on the bead thickness of customer's tire. It is the customer's responsibility to assure that the tire selected is appropriate for the application and rim size.

WARNING: Wheel and beadlock product may contain chemicals which are known to the State of California to cause cancer.

ASSEMBLY PREPARATION

IMPORTANT: Federal OSHA (Occupational Safety & Health Administration) regulations require all employers to ensure that employees servicing wheels understand the safety information contained in this manual. Do not permit your employees to service wheels unless they are thoroughly trained and completely understand all related safety information.

WARNING: Inflating a tire with a hand-held air chuck is dangerous. Use an OSHA approved tire inflation safety cage.

WARNING: Serious injury or death may result from using damaged or worn parts. These parts may fail during inflation, later during handling, or while in service on the vehicle.

WARNING: Dirt or corrosion can prevent wheel components from seating properly or cause a bead hang-up (tire bead not seated properly). Assembling such components can lead to explosive separation, resulting in serious injury or death.

WARNING: Failure to properly match tire and wheel sizes may result in serious injury or death. Mounting a smaller diameter tire on a larger diameter wheel (for example, mounting a 16" tire on a 16.5" wheel) can cause bead failure during mounting or when inflating the tire. Failure to comply with this warning may lead to tire rupture during inflation/ in-service on a vehicle and the resulting tire blowout may cause flying debris or complete loss of control of a moving vehicle. The diameter shown on the tire must match the stamped wheel diameter exactly.

WARNING: Improperly applied or excess paint can cause unexpected wheel failure that could result in serious injury or death. Excess paint could cause wheel assembly nuts to loosen, resulting in a wheel failure and sudden loss of air pressure and complete loss of vehicle control.

CAUTION: Check torque (in tightening direction only) of assembly nuts at 50-100 miles [80-160 KM]. Retorque to the specified value if required. Always torque using a star pattern. Periodically inspect nuts in service. Hutchinson® recommends every 3000 miles [5000 KM].

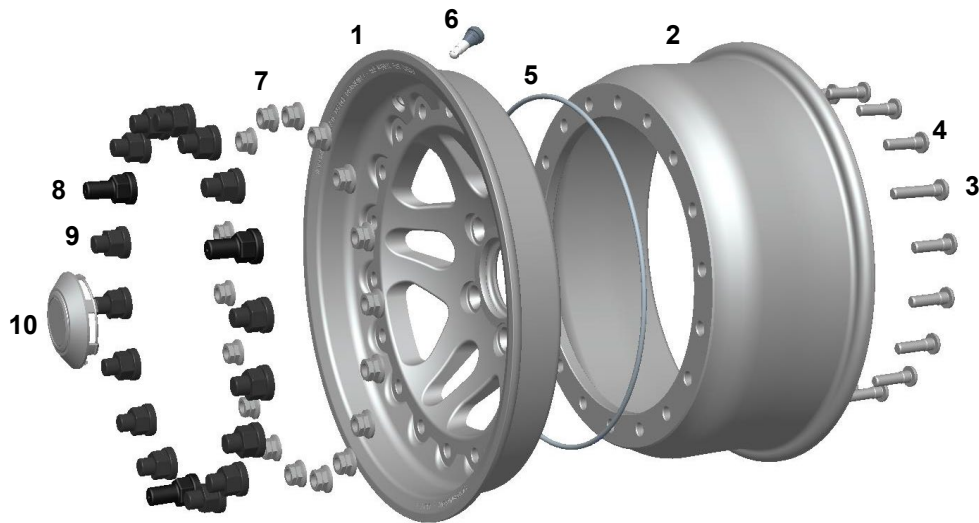
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These instructions are for all Rock Monster® by Hutchinson® wheels and beadlocks, regardless of part number. To identify part numbers or order replacement parts, go to www.rockmonsterwheels.com for a list of service providers.

WHEEL ASSEMBLY MATERIALS

1. Outer Rim Assembly
2. Inner Rim Assembly
3. Stud (long)
4. Stud (short)
5. O-ring
6. Valve
7. Nut
8. Nut Cap (long)
9. Nut Cap (short)
10. Hub Cover
11. Beadlock



Tire
(not included)



TOOLS NEEDED

1. Pneumatic Impact Gun – $\frac{1}{2}$ " Drive (*Optional*)
2. $\frac{3}{4}$ " 6-point Deep Impact Socket
3. 1" 6-point Deep Socket
4. Tire Pliers (*Optional*)
5. Torque Wrench – $\frac{1}{2}$ " Drive
(*Minimum 100 FT-LB capacity*)
6. Valve Core Remover (*standard bore*)
7. 21oz Non-Marking Hammer
8. Tire Mounting Lubricant/Soap Solution
9. Slide Hammer/Bead Breaker
10. 30" Tire Spoon
11. 22" Tire Spoon

Not shown:

1. Valve Stem Installation Tool
2. Tire Pressure Gage
3. Cleaning Rags



TIRE PRESSURE MONITORING SYSTEM (TPMS) (!) Installation Kit/Tools

(Kit includes items 1 and 2)

1. Thread Sealant
2. Bracket Assembly –includes brack screw, and barrel screw
3. TPM Sensor (REF) (*Not Supplied*)

Tools

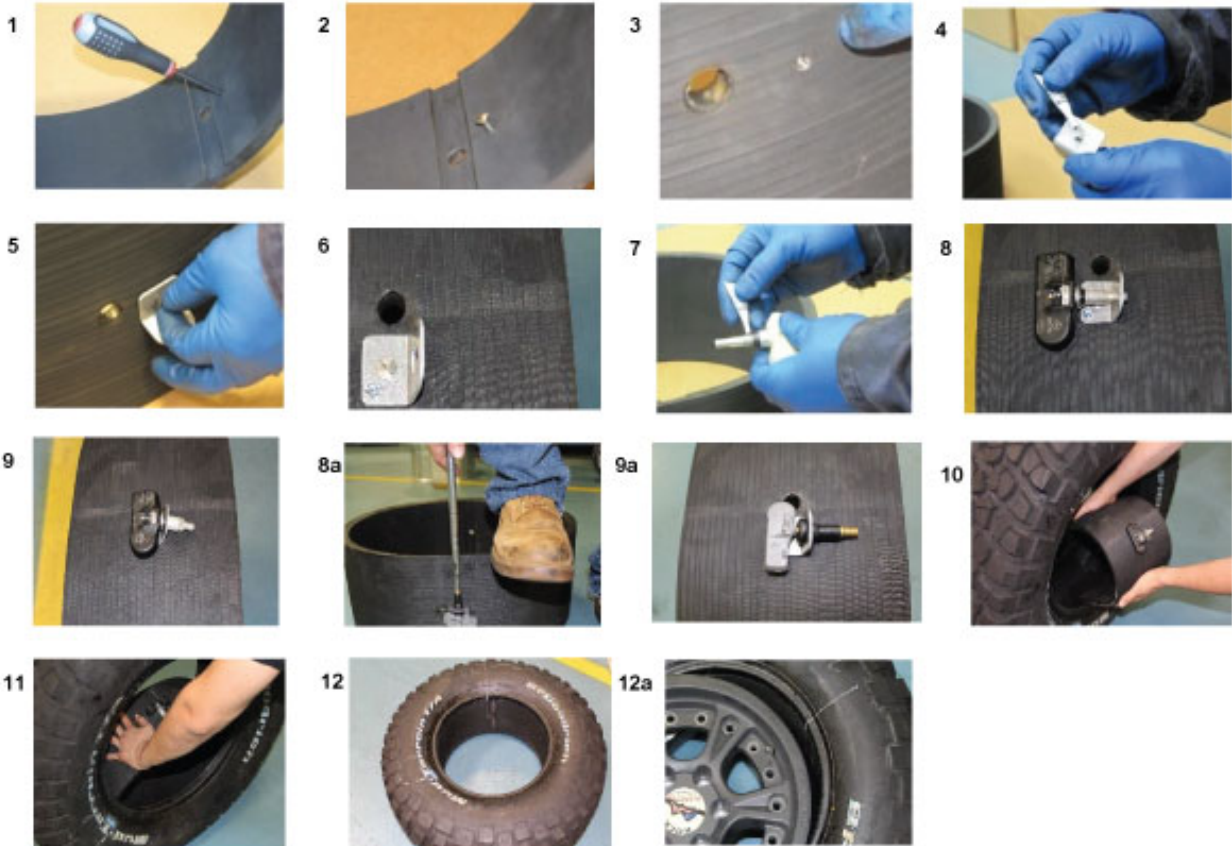
4. 21oz Non-Marking Hammer
5. 11mm Deep Socket
6. Ratchet – $\frac{1}{4}$ " Drive
7. Flat Head Screwdriver
8. #1 Phillips Head Screwdriver
9. $\frac{1}{4}$ " socket or nut-setter
10. Drill
11. Beadlock (REF)



WHEEL/BEADLOCK ASSEMBLY INSTRUCTIONS

(If not using TPMS kit, skip to step 10)

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|---|---|
| <p>1 Open hole in BL with a #1 Phillips screwdriver, if required.</p> <p>2-3 Insert female end of barrel screw from ID. Push firmly or use hammer to insert until head is flush.</p> <p>4 Install male end of barrel screw into bracket. Apply thread sealant onto male threads of barrel screw.</p> <p>5 Install bracket to outside of BL by threading male portion of barrel screw into female portion. Tighten male portion using flat head screwdriver while preventing female portion from turning.</p> <p>6 Position bracket as shown, so that the valve will be parallel with axis of BL (align perpendicular to the circumference of BL), and install screw with a drill and ¼" socket or nut-setter.</p> | <p>7 CLAMP-IN VALVE: Apply thread sealant on TPM sensor (large thread). NOT REQUIRED IF USING SNAP-IN VALVE</p> <p>8-9 CLAMP-IN VALVE: Install TPM sensor onto bracket. Tighten barrel nut to manufacturer's recommended torque.</p> <p>8a-9a SNAP-IN VALVE: Install TPM sensor onto bracket. With the BL laying flat and secured to the ground by a foot, use valve stem installation tool to pull the sensor into the bracket.</p> <p>10-11 Collapse and stuff BL into tire, making sure to not damage TPM sensor, if equipped.</p> <p>12 Align TPM sensor with fill valve (outer rim) prior to assembling wheel (mark side wall and BL ID with chalk).</p> |
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WHEEL/BEADLOCK ASSEMBLY INSTRUCTIONS (continued)

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|---|--|
| <p>13 Center BL in tire.</p> <p>14-16 Lube tire/inner rim bead seat and insert inner rim into tire.</p> <p>17 Flip tire w/inner rim over and lube tire bead seat. Prop the wheel up using 2x4's (optionally, use an inverted milk crate or empty wire spool) so wheel is pushed as far as possible into the tire</p> <p>18 Clean wheel o-ring groove. Check o-ring for debris.</p> <p>19-20 Install o-ring into back side of outer* rim. Starting at 6 o'clock, work around both sides evenly until approximately at 2 o'clock and 10 o'clock positions, then slide remainder into place at 12 o'clock position. Do not roll o-ring, or it may roll out of the groove. Can also use knee to hold 6 o'clock position in-place until fully seated. *The o-ring on the 18" wheels are on the inner rim.</p> <p>21 Lube outer rim bead seat.</p> | <p>22-23 With outer rim face up, align spoke on outer rim with long stud (or locate long stud away from valve), and insert into tire.</p> <p>24 Assemble nut onto each of the protruding long studs (start threads by hand).</p> <p>25-26 Drive outer rim down evenly until all nuts bottom out, making sure the o-ring doesn't fall out or get pinched, until each of the remaining assembly studs is completely exposed.</p> <p>27 NOTE: 2 PC nut hex must be aligned on both top and washer portion.</p> <p>28 Assemble remaining nuts and torque all using a star pattern to 100 +/-5 FT-LB [135 +/-7 N-m]. Loosen and re-torque if hex is misaligned.</p> <p>29 Inflate tire-wheel assembly (not shown). See tire sidewall for maximum pressure permitted.</p> |
|---|--|
- NOTE: Outer rim comes with pull through valve installed. To install insert stem from backside, thread-on valve puller, and seat valve in rim. Take care not to scratch face of rim with valve puller (use cardboard to pry against). Ensure valve rib is properly seated prior to wheel assembly. ***o-ring groove is in inner rim on 15" (WA-0398) wheel.**

- 18" wheels are rated to 80 PSI [4.1 BAR] maximum
- 17" wheels are rated to 80 PSI [4.1 BAR] maximum
- 16" wheel (WA-0604) is rated to 80 PSI [5.5 BAR] maximum
- 15" wheel (WA-0398) is rated to 35 PSI [2.4 BAR] maximum

If higher pressure is required, contact Hutchinson.

WARNING: Hutchinson® recommends always inflating tires in an OSHA-approved safety cage.



WHEEL/BEADLOCK ASSEMBLY INSTRUCTIONS (continued)

- 30 Dynamically balance assembly. Maximum of 6 oz. per side, 12 oz. total.

For 17" wheels, use adhesive weights on the furthest outboard flat surface on inner diameter of inner rim, and clip-on (MC-type) weights on inner rim flange.

For 16" wheel use clip-on (MC-type) weights on both flanges.

For 15" wheel use clip-on (MC-type) balance weights on inboard flange and adhesive weights on outboard flange.

- 31-35 Install nut caps (if equipped, optional). Hammer on until snug on wheel face, then tighten ¼-turn using a 1" deep socket. (Install long caps on long studs and remaining on short studs.)

- 36-38 Install hub cover (if equipped) by snapping firmly into retention groove in face. Align lug hole clearance notch with lug holes on outer rim.

- 39 a,b,c Remove hub cover (if equipped) by using a flat head screw driver in pry notch to pry cover from outer rim. Protect wheel face from damage and use a short 2x4 block to increase leverage.

- 40-41 Remove valve core and allow tire to deflate completely.

WARNING: ENSURE THAT THE TIRE IS COMPLETELY DEFLATED BEFORE CONTINUING OR SERIOUS INJURY MAY RESULT.

- 42 Remove nut caps (if equipped) by unthreading with a 1" deep socket to permit re-use.

- 43-45 Disassemble nuts leaving the 3 or 4 long studs until last. Gradually back off the last evenly until rim is loose.

- 46-48 Apply tire soap to edge of outer flange. Pry the outer flange away from tire bead using a tire slide hammer/bead breaker. Alternatively, use tire spoons to work the outer rim out of the tire. Continue prying every 90° around the rim until it is free of the tire.



WHEEL/BEADLOCK ASSEMBLY INSTRUCTIONS (continued)

49-50 Remove outer rim*. Flip assembly over and apply tire soap to inner flange. Remove inner rim.

51-53 Loosen beadlock by pressing foot inside tire. Remove beadlock.

54 If valve requires replacing, remove valve stem by using a valve puller. Pull through outer rim hole while protecting surface of outer rim from damage. Install in similar fashion until base is full seated and rib on front can't be pushed back through.

*If outer rim remains attached to inner rim, invert assembly (face down) and elevate tire sidewall using 2x4's. Using a block of wood and hammer, strike backpad of outer rim to unseat from inner rim, being careful not to damage wheel.

