ASSEMBLY/DISASSEMBLY INSTRUCTIONS
WHEEL, TIRE, AND BEADLOCK

ROCK MONSTER

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Rev. 3/2005

Notice concerning tire selection for Hutchinson *Rock Monster wheels*

Hutchinson does NOT select or recommend specific tires. The selection of the internal beadlock in Rock Monster 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.

Please contact your tire dealer to determine the proper tire and rim application.

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Purpose

This instruction provides a guide for the manual assembly/disassembly of The Rock Monster Wheels, Beadlocks and Tires.

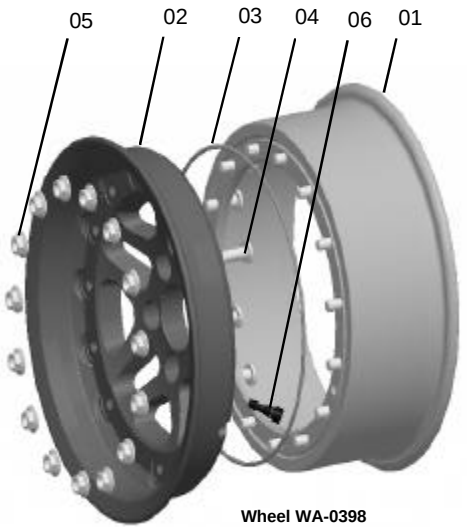
Rock Monster Wheels

Beadlock

Tire

Bill of Materials

ITEM	DESCRIPTION	HUTCHINSON P/N	QUAN.
01	Inner Rim, 15 x 5.5	WI-0398	1
02	Outer Rim, 15 x 2.5	WO-0398	1
03	O-Ring	50033	1
04	Stud	80009	15
05	Nut	80011	15
06	Valve	40040	1
07	Lug Cover snap fit	70033	1
08	Logo Disk-Rock Monster	70034	1



Wheel WA-0398

List of Tools& Consumables

Tools that are essential for procedures contained in this manual:

- Torque Wrench, foot-pound increments (Up to 100 foot-pounds)
- 1/2” Drive Wrench
- 3/4” Socket (assembly nuts)
- Tire Spoon (Tire Iron)
- 17mm metric deep wall socket (Assembly nuts)
- Cleaning rags
- Valve core remover
- Tire pressure gauge
- Valve Stem installation tool
- Slotted (flat) tip screwdriver 7/16” wide blade
- 3 lb. rubber mallet

Assembly Preparation

1. Degrease the rim bead seats with denatured alcohol and wipe with a clean rag. Allow to dry.

2. Wipe the tire beads with a clean rag to remove dirt and grease.

3. Wipe the Beadlock edges with a clean rag to remove any dirt or foreign materials.

4. Remove all dirt and foreign objects from mating surfaces and wheel O-ring groove.

5. Wipe the O-ring groove on the wheel with a clean dry rag. Make sure the O-ring goove is completely clean and free of debris.

6. Wipe the mating surfaces clean on the inner and outer wheel halves. Check for any damage to the components. Discard and replace all damaged components.

7. Verify sufficient assembly nuts are available for assembly. Nuts should be replaced each time the wheel is disassembled.

Rock Monster Wheels

Beadlock

Tire

Assembly Preparation

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

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 rim components from seating properly or cause a bead hang-up (tire bead no seated properly). Assembling such components can lead to explosive separation, resulting in serious injury or death.

WARNING: Failure to properly match tire and rim/ wheel sizes may result in serious injury or death. Mounting a smaller diameter tire on a larger rim diameter rim/wheel (for example, mounting a 16” tire on a 16.5” rim/wheel) can cause the bead to fail during mounting or when inflating the tire. The tire may then rupture during inflation or when placed in service on a vehicle. The resulting tire blowout can result in flying debris or cause loss of control of a moving vehicle. Be sure the diameter shown on the tire exactly matches the diameter stamped on the rim/wheel.

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

WARNING: Deflate tire before loosening assembly nuts. Disassembly of an inflated wheel may cause serious injury or death.

WARNING: Use an OSHA approved tire safety cage when inflating a tire.

Assembly: Beadlock into Tire

1. To insert beadlock Enhanced Mobility Device (EMD) into tire, lay the tire down on a horizontal surface (refer to Figure 1).

2. Compress the rubber beadlock from its round shape into an oval shape (refer to Figure 2).

3. Holding the beadlock with both hands, rotate it into place inside the tire cavity. Place the beadlock inside the tire and release the release it (refer to Figures 3-5).

Figure1

Figure2

Figure3

Figure4

Figure5

Assembly: Creating Inner Rim Subassembly

Materials required for this procedure:
A. Inner Rim
B. Tire/Beadlock subassembly
C. O-ring

1. Assemble the Tire/Beadlock assembly to the Inner Rim by inverting the wheel and placing it down through the tire. Center the air passage groove of the Beadlock between two Inner Rim assembly studs. Installing by hand, press firmly to ensure a snug fit to reduce the possibility of the section dropping out when picking up the Inner Rim Subassembly. (refer to Figures 1-3)

2. Turn the subassembly back over to insert the O-ring. (refer to Figure 4) The O-ring and the O-ring groove on the Inner Rim must be clean and free of debris. Use a small amount of petroleum based product (Lithium grease or Vaseline) on the O-ring to keep it in position during installation.


Figure1


Figure2


Figure3


Figure4

CAUTION: Be sure to hold the wheel securely while inserting into tire or it may slip out and cause

Assembly: Creating Outer Rim Subassembly (Outer Rim, valve)

Materials required for this procedure:
A. Outer Rim
B. Valve

Tools required for this procedure:
A. Valve stem installation tool

1. On the Outer Rim, pull the valve through the valve hole. Attach the valve stem installation tool by threading it to the threads of the valve (under the cap). Pull until seated. (refer to Figures 1-4)


Figure1


Figure2


Figure3


Figure4

Assembly: Inner Rim Subassembly to Outer Rim Subassembly

Tools required for this procedure:
A. 1/2” Drive wrench
B. 3/4” socket
C. Torque wrenches (foot-pound increments) (upt o 100 ft-lbs)
D. 3 lb rubber mallet

Materials and consumables for this procedure:
A. Inner Rim Subassembly (to include: Tire, Beadlock, Inner Rim, and O-ring).
B. Outer Rim Subassembly (to include: Outer Rim and valve).
C. Wheel assembly nuts

Assembly: Inner Rim Subassembly to Outer Rim Subassembly

1. Place the Inner Rim Subassembly studs facing up onto a non-scratching surface. Place the Outer Rim subassembly over top of the Inner Rim Subassembly. (refer to Figure 2) Be sure to align the valve witht he groove in the Beadlock for air passage. (refer to Figure 3).

2. Assemble the nuts on the three long studs and tighten them - bringing the rim halves closer to enable the engagement of the assembly nuts to the assembly studs of the Inner Rim. (refer to Figures 4 and 5) The rim halves should be close enough for the assembly nuts to finger tighten to a minimum of four threads. Using a star pattern, torque the nuts to 60 ft-lbs. Follow up with a torque wrench, torque to 75-80 ft-lbs.

3. Check to ensure that the assembly does not have any obvious distortions or misalignments that may create a problem during inflation.


Figure1


Figure2


Figure3


Figure4


Figure5

<u>CAUTION:</u> Retorque nuts in a star pattern to 75-80 ft-lbs at initial 50-100 miles and 5,000 miles thereafter. Replace nuts when they have been dismounted 10 times or when the prevailing toque drops less than 1 ft-lb.

Tire Inflation

1. Place the tire assembly into an OSHA* approved tire inflation safety cage and inflate to approximately 30 psi.

2. Check the tire bead seating.
   A. Visually check the space between the rim flange and the tire while the tire is lying flat.
   B. If spacing is uneven from side to side, deflate tire.
   C. Visually check the GG** Groove to ensure proper seating of the tire on the rim.

3. If any of these conditions exist, disassemble and restart by examining the O-ring; replace if necessary.

4. If no problems are noted, continue to inflate to the tire manufacturer's recommended air pressure and inspect for air leaks.

5. Verify if the assembly is leak proof by placing the wheel in a water tank or let sit for 48 hours (refer to Figure 1). If the air loss leakage rate is less than 1 psi in 48 hours, the wheel, tire,and Beadlock assembly is acceptable for use.

WARNING: Inflating a tire with a hand held air chuck is dangerous. Use an OSHA approved tire inflation safety cage (refer to Figure 2).

Figure1

Figure2

*OSHA - Occupational Safety & Health Administration
** GG Groove - Line on a tire to ensure proper tire bead seating on a rim

Balance Tire/Wheel/Beadlock assembly

1. Dynamically balance the wheel to within the recommended specification for balance (refer to Figure 1).

2. For this configuration, use ‘Stick-on’ balance weights up to 6 ounces per side.

Figure1

Disassembly: Removing Outer Rim from Tire/Beadlock

Tools required for this procedure:
A. Valve core remover
B. Torque wrench (foot-pound)
C. Slotted (flat) tip screwdriver 7/16” wide blade
D. Tire Iron (Tire spoon)

WARNING: Deflate tire before loosening assembly nuts. Disassembly of an inflated wheel may cause serious injury or death.

1. Prior to disassembly, remove air valve core. Run a fine wire into the valve to ensure air passage is not blocked (refer to Figure 1).

2. Remove all balance weights from wheel.

3. Lay the wheel assembly face up on a horizontal surface with assembly nuts facing upwards.

4. Keep three assembly nuts secure (equally spaced) on the long studs .

5. ***Gradually*** loosen the remaining twelve nuts using the star pattern. (refer to Figures 2 and 3).


Figure1


Figure2


Figure3

Disassembly: Removing Outer Rim from Tire/Beadlock (Continued)

6. Use two slotted (flat tip) screw drivers to gently pry the outer flange away form the tire bead. (refr to Figures 4-7) and follow the three points below.

* Insert one screwdriver between the rim flange and the tire. Pull down on one screw driver until it is approximately horizontal to the floor.

* Place the screwdriver between the flange and the tire, pushing up the blade of the screwdriver will push the tire down and off of the beadseat.

* Work your way around the assembly with the screwdrivers at intervals of 45 degrees. The Outer Rim should be free after working once around.

7. Upon removal of the Outer Rim, inspect all parts for warping, excessive wear or damage. Replace defective parts as needed.

8. Set Outer Rim aside and clear of remaining assembly. Be careful not to damage the rim halves mating surfaces.


Figure4


Figure5


Figure6


Figure7

Disassembly: Removing Inner Rim from Beadlock from tire

Tools required for this procedure:
A. Slotted (flat) tip screwdriver 7/16” wide blade

1. Remove the O-ring and discard. (refer to Figure 1)

2. Flip the assembled components over.

3. Use two flat tip screwdrivers to gently pry the Inner Rim flange from the tire bead. (refer to Figures 2-4)

* Use screwdrivers between the flange and the tire, pull one screwdriver down unitl it is horizontal to the floor and lifts the rim flange up.

* Use the screwdriver between the flange and the tire. Push the tire bead down. The blade of the screwdriver will push the tire bead down and off of the beadseat.

* Work your way around the assembly with the screwdrivers at intervals of 45 degrees. The Inner Rim should be free after working once around.

4. Remove the Inner Rim from the tire and inspect for worn or damaged components and replace as needed. (refer to Figure 5)

5. Set the rim halves aside to maeke room for the Beadlock removal from the tire. Place the rim halves together to prevent potential mating surface damage.


Figure1


Figure2

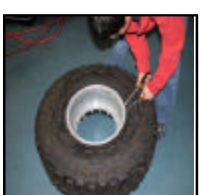


Figure3

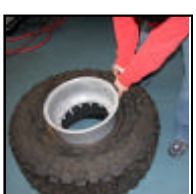


Figure4


Figure5

Disassembly: Removing Beadlock from tire

1. To remove the rubber Beadlock, stand the tire on end, enabling one side of the Beadlock to fall off-center into the tire chamber. (refer to Figures 1 and 2)

2. Set the tire back on the ground.

3. Compress the Beadlock into the oval shape. Twist and pull out of the tire cavity. (refer to Figures 3 and 4)

4. Inspect components for wear and damage and repalce as needed.


Figure1


Figure2


Figure3


Figure4