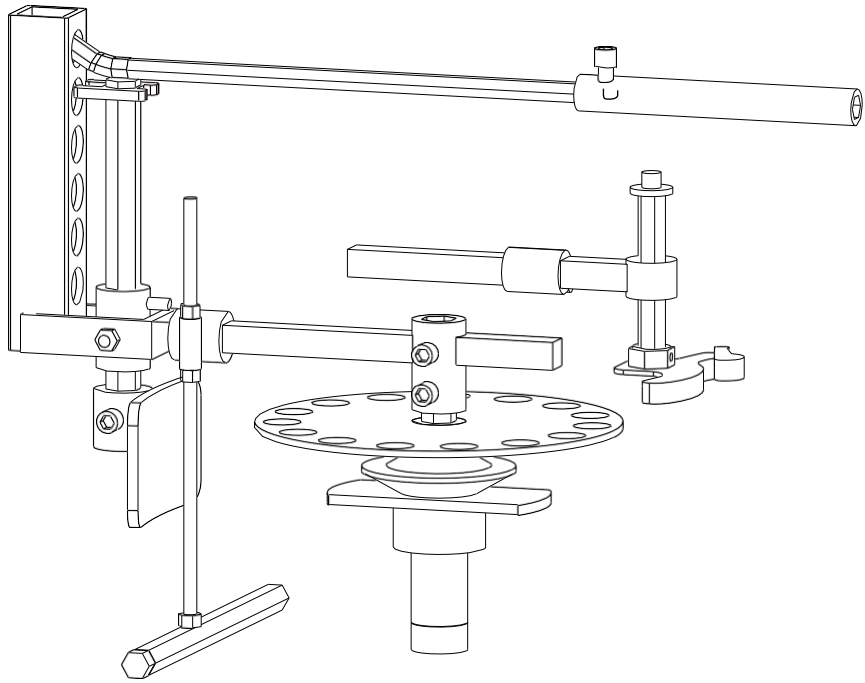
2-IN-1 MANUAL CAR TIRE CHANGER

USER MANUAL

Model: YB1978 | Range: 12–21 Inches | Power: 100% Manual Progressive Leverage

Visit Us: www.eztirechanger.com



- Before installation and use, please carefully read this manual.
- Please keep this manual properly for future reference

Comprehensive Safety Precautions

WARNING: MUST READ THIS USER MANUAL CAREFULLY BEFORE OPERATION. Failure to follow these strict operational standards may result in severe personal injury, catastrophic rim damage, or equipment failure.

1. Kinematic Familiarization: Before engaging in the equipment, operators must fully comprehend the structural mechanics, performance tolerances, and operational procedures of the tire changer. Consult certified professionals if any uncertainties arise.

2. Age-Restricted Operation (Minor Prohibition): Operation of this commercial-grade equipment is strictly prohibited for individuals under the age of 18. The application of high manual torque and the inherent risks of mechanical kickback present an unacceptable safety hazard to minors.

3. Structural Integrity Verification: Prior to each operation, perform a comprehensive inspection. Ensure the equipment is free of defects and that all structural hardware and fasteners are securely tightened for optimal working conditions.

4. Tool-to-Tire Compatibility: Utilize only the specific attachments and equipment rated for your exact tire profile and rim dimensions. Implementing incompatible tooling may result in component damage or severe operational failure.

5. Operational Workspace Management: Maintain clean and oil-free work environment to ensure stable footing. Verify that the operational radius has sufficient spatial clearance to allow unobstructed operator movement during high-leverage tasks.

6. Atmospheric Pressure Equalization: Prior to demounting, the valve core must be completely removed to achieve total atmospheric deflation. During the mounting phase, ensure the wheel is properly seated on the hub fixture before torquing the center locking hardware.

7. Torque Modulation: Dynamically control your manual force input. Applying excessive leverage or jerky brute force can cause structural fatigue to the equipment or permanent damage to the tire bead.

8. Methodological Adherence: Strictly execute the prescribed operational sequences. Deviating from the manual's procedures dramatically increases the risk of mechanical binding and operator injury.

9. Safety Exclusion Zone: Maintain an appropriate physical safety radius from tension-loaded components (such as the bead breaker and pry bar) to mitigate the risk of injury in the event of unexpected mechanical slip or kickback.

10. Preventative Maintenance Schedule: To maximize the lifecycle and precision of the equipment, execute routine maintenance including cleaning, pivot-point lubrication, and structural hardware inspections.

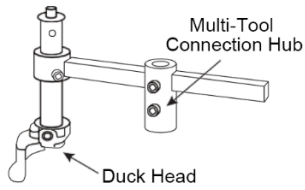
11. Dynamic Adjustment Prohibition: Adhere strictly to mechanical safety codes: Never attempt to calibrate, repair, or tighten components while the machine is under mechanical tension or in active operation.

12. Emergency Abort Protocol: In the event of a structural anomaly or unsafe mechanical binding, immediately cease all applied leverage and step clear of the tension zone. Relieve pressure safely and consult a professional technician for assessment before resuming work.

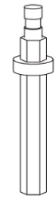
Box Inventory & Part Identification

- **Inspect all items upon unboxing. (Package Weight: 25.3kg / 55.8 lbs)**
  Box size: 60 x 15 x 40 cm / 23.6 x 5.9 x 15.7 inches

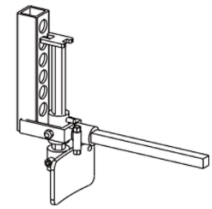
1 Duck Head Assembly



2 Connection Arm



3 Bead Breaker Shovel Assembly



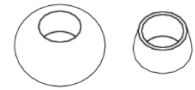
4 Pull-Rod Locking Mechanism



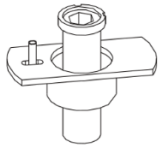
5 Leverage Fulcrum Block



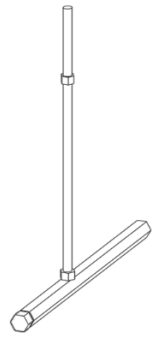
6 Centering Cones (Set of 2)



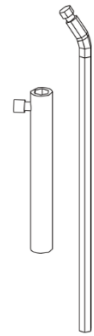
7 Center Support Mast



8 Run-Flat Leverage Pull-Rod



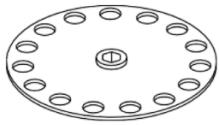
9 Main Power Lever Bar



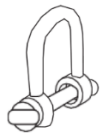
10 Tire Iron (Pry Bar)



11 Rotation Turntable Base



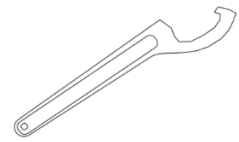
12 Quick-Release Safety Pin



13 Hex Wrench



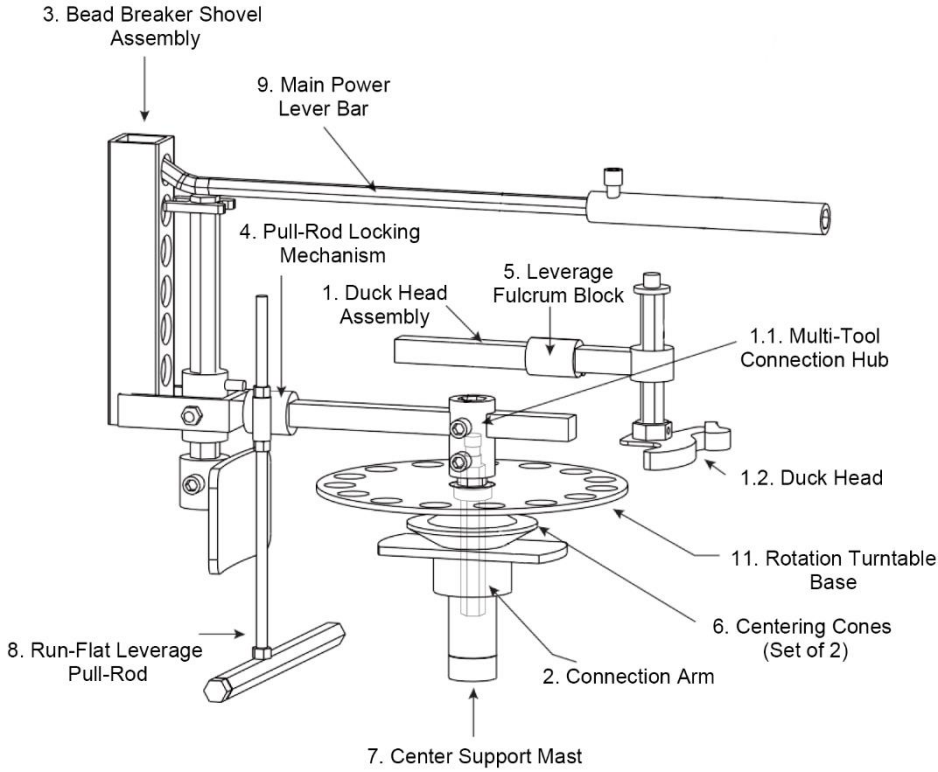
14 Crescent Wrench



Parts No.	Component Name	Technical Function & Engineering Feature
1	**Duck Head Assembly**	Precision steel head for zero-damage demounting and mounting.
1.1	**Multi-Tool Connection Hub**	Central receiver that slides onto the support mast, allowing the user to quickly swap between the Duck Head Assembly and Bead Breaker Shovel Assembly.
1.2	**Duck Head**	Precision steel head for zero-damage demounting and mounting.
2	**Connection Arm**	Attaches to the center support mast to hold the Duck Head or Bead Breaker attachments.
3	**Bead Breaker Shovel Assembly**	High-torque pressing assembly for dislodging stiff tire beads. Features an integrated Adjustable Stop Bolt to control kickback and prevent rim contact.
4	**Pull-Rod Locking Mechanism**	Locks the Run-Flat Leverage Pull-Rod securely in place during the high-tension bead-breaking process.
5	**Leverage Fulcrum Block**	The essential metal resting block that provides mechanical leverage for the tire iron.
6	**Centering Cones (Set of 2)**	Small and Large cones to perfectly secure varying wheel hub center sizes.
7	**Center Support Mast**	The primary vertical column that anchors the connection arm, Duck Head, and bead breaker shovel.
8	**Run-Flat Leverage Pull-Rod**	Pro Feature: Provides extreme pulling power for stiff Run-Flat tires.
9	**Main Power Lever Bar**	High-torque driving handle for rotating the turntable assembly.
10	**Tire Iron (Pry Bar)**	Heavy-duty bar for manually manipulating the bead over the Duck Head.
11	**Rotation Turntable Base**	The main base platform featuring an Anti-Rotation Indexing Pin to lock the wheel hub securely in place.
12	**Quick-Release Safety Pin**	Secures the Run-Flat Pull-Rod and attachments under heavy load. Precision-machined from high-tensile steel to prevent component displacement or "kick-out."
13	**Hex Wrench**	For fine-tuning structural bolts and setting radial clearances.
14	**Crescent Wrench**	For torquing the main center hub nut.
BONUS PARTS	**Bead Depressor Clip (Bead Buddy)**	Physically holds the tire bead down into the wheel's drop-center during the mounting phase to prevent binding.
	Anti-Abrasion Protective Mat	Acts as a high-friction buffer to prevent surface abrasion between equipment and floor. Features high-density, anti-slip composite material for a "Zero-Scratch" workspace.

Product Overview

Product Diagram



Product Specifications

Model: YB1978

Working Principle: Based on human ergonomics and manual lever mechanics

Working Range: 12–21 inches

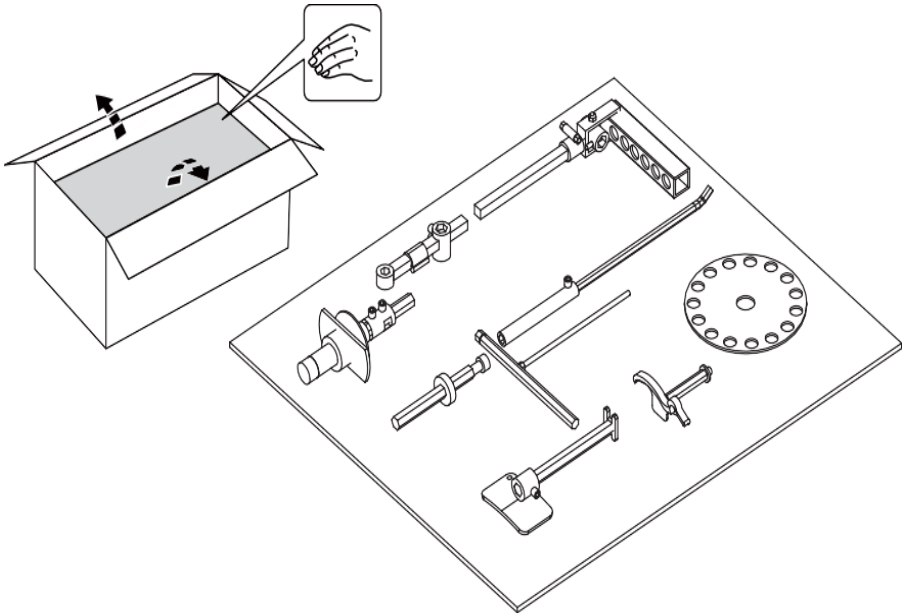
Unboxing Preparation

Assembly Preparation

1. **Safety Protocol (Personal Protective Equipment):** Before beginning assembly or operation, ensure you are wearing heavy-duty protective gloves and safety eyewear. This gear is essential to protect against high-torque tension, mechanical pinch points, and heavy steel components.

2. **Unbox & Surface Prep:** Unbox the unit and lay the provided Protective Floor Mat on a clean, level floor surface. This prevents abrasion to both the machine's finish and the wheel rims during the installation process.

3. **Inventory Layout:** Neatly organize all components and hardware according to the Box Inventory list to ensure a streamlined and error-free assembly process.



Phase 1.1: Bead Breaker Shovel Assembly (#3) Installation

1.1

Bead Breaker Shovel Assembly (#3)

1. **Locking Mechanism Installation:** Slide the Pull-Rod Locking Mechanism (#4) onto the main tubular arm of the bead breaker assembly. Install the designated retaining washers and locking bolts to secure it into position.

2. **Pivot Collar Integration:** Slide the Shovel Pivot Collar (the structural mounting bracket) onto the end of the main arm, aligning it flush with the mounting through-holes.

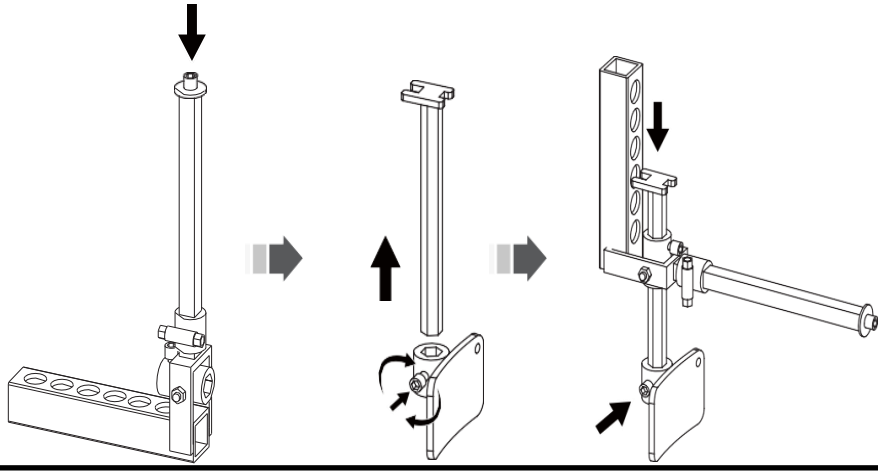
3. **Critical Orientation Alignment CRITICAL WARNING:** The collar features an asymmetrical design. You must ensure the wider profile faces inboard (towards the center axis of the machine) and the narrower profile faces outboard (towards the operator and tire zone).

4. **[Optional Configuration] Advanced Run-Flat Configuration:** The Quick-Release Safety Pin is an advanced feature designed specifically for Run-Flat tires or high-stiffness sidewalls that are difficult to demount.

5. **Installation:** When extra stabilization is required, insert the Quick-Release Safety Pin into the dedicated mounting hole on the Bead Breaker Shoe.

6. **Shoe Mounting & Torque:** Position the Bead Breaker Shoe (the shovel head) inside the pivot collar. Insert the main pivot bolt through the collar and shoe, install the washer and locking nut, and apply appropriate torque to secure the joint.

7. **Articulation Check:** Manually test the assembly to confirm that the Bead Breaker Shoe pivots freely and smoothly. Verify there is no mechanical binding or excessive lateral play.



Phase 1.2: Bead Breaker Shovel Assembly (#3) Installation

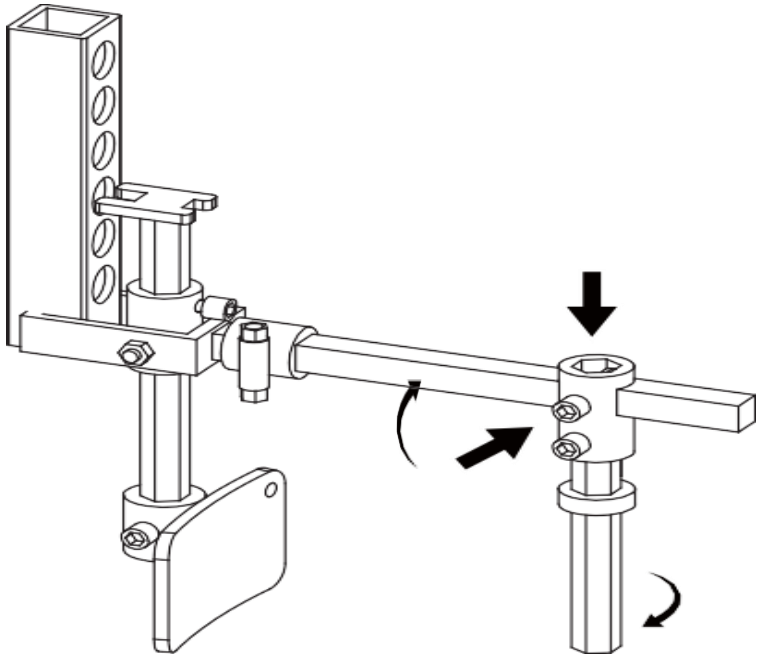
1.2

Bead Breaker Shovel Assembly (#3) Connection Arm (#2) Mounting

1. **Positioning:** Loosen the securing bolt on the Center Support Mast (#7). Insert the connection arm of the Bead Breaker Shovel Assembly (#3) directly into the receiver channel of the mast until it is completely flush and fully seated.

2. **Articulation Verification:** Hand-tighten the securing bolt. Manually confirm that the bead breaker arm rotates (pivots) smoothly without friction or mechanical binding.

3. **Final Lockdown:** Once smooth articulation is verified, apply final torque to the securing bolt to lock the assembly in place.

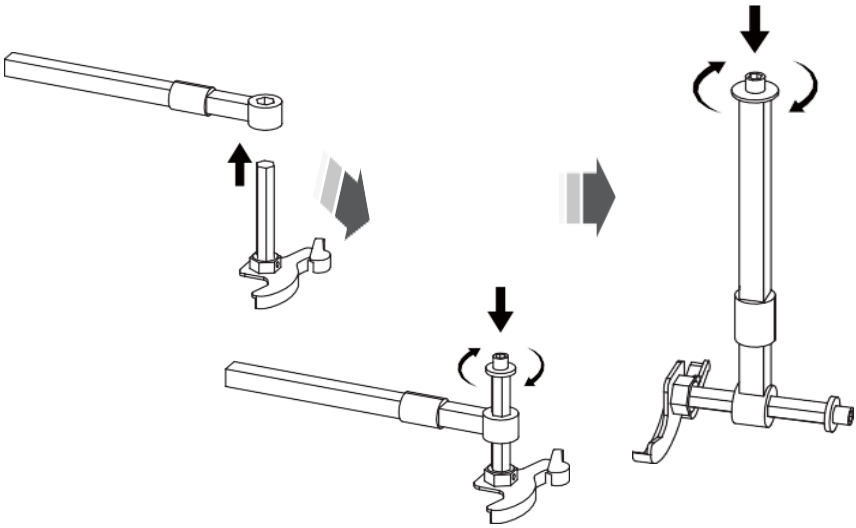


Phase 2: Duck Head Assembly (#1) Installation

2

Duck Head Assembly (#1) & Fulcrum Block Mounting (#5)

1. **Fulcrum Block Integration:** Slide the **Leverage Fulcrum Block (#5)** directly onto the square mounting stem of the **Duck Head Assembly (#1).**
2. **Hub Insertion:** Insert the square mounting stem (with the Fulcrum Block now attached) into the receiving port of the **Multi-Tool Connection Hub (#1.1)**.
3. **Structural Fastening:** Install the designated flat washer and tighten the primary securing bolt. Apply final torque until the joint is completely rigid and fully locked in place.



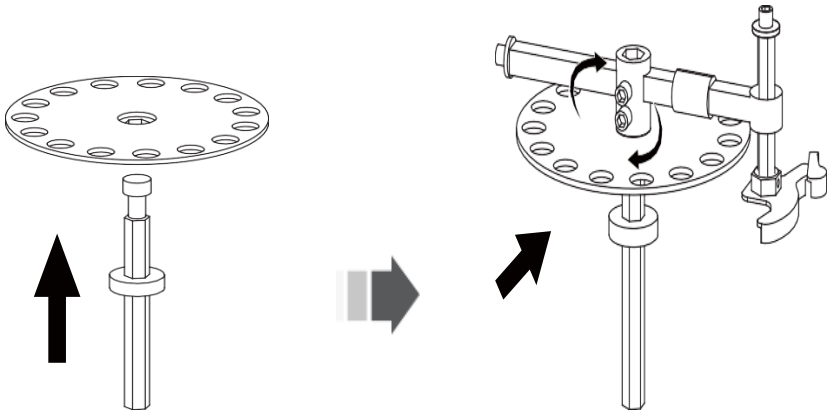
Phase 3.1: Center Support Mast (#7) Installation

3.1

Rotation Turntable Base (#11) Mounting

1. **Component Mating:** Insert the **Connection Arm (#2)** through the recessed face of the **Rotation Turntable Base (#11)**.

2. **Coupling:** Align the Connection Arm with the **Multi-Tool Connection Hub (#1.1)** and hand-tighten the fastening hardware to ensure proper engagement.



Phase 3.2: Center Support Mast Installation

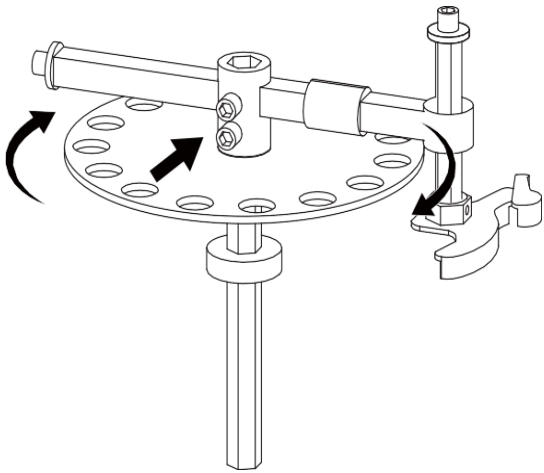
3.2

System Calibration & Completion

1. **Operational Test:** Manually verify that the Rotation Turntable Base rotates freely and smoothly without any mechanical interference.

2. **Final Torque & Completion:** Once smooth rotation is confirmed, securely tighten the locking nuts using the **Hex Wrench (#13).**

   (Phase 1 Installation of the Tire Changer and Duck Head Assembly is now officially complete.)

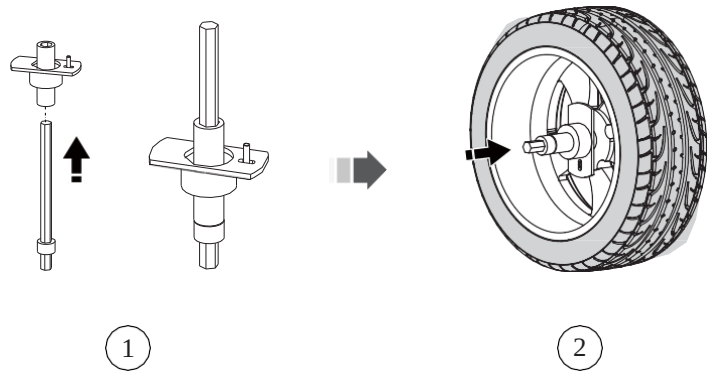


A: Bead Breaking Procedure

1

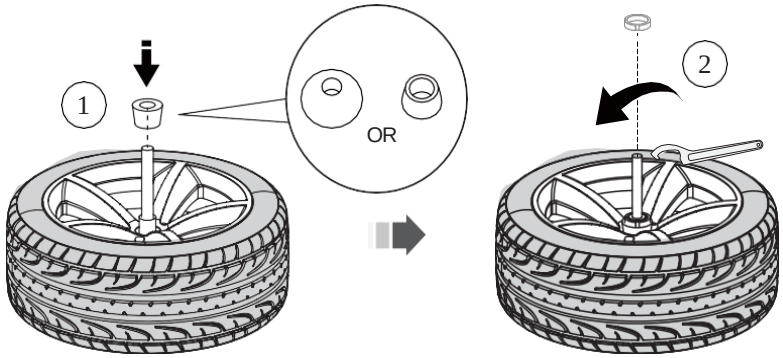
Wheel Mounting & Hub Securing

1. Insert the **Connection Arm (#2)** (threaded vertical section) directly into the **Center Support Mast (#7).**
2. Lower the completely deflated wheel assembly over the arm until the wheel hub sits perfectly flat.



2

1. Select the appropriate **Centering Cone (#6)** based on the specific diameter of your rim's center bore and slide it onto the **Connection Arm (#2)** to ensure perfect concentricity.
2. Install the primary locking nut and apply final torque using the **Crescent Wrench (#14)** to securely anchor the wheel

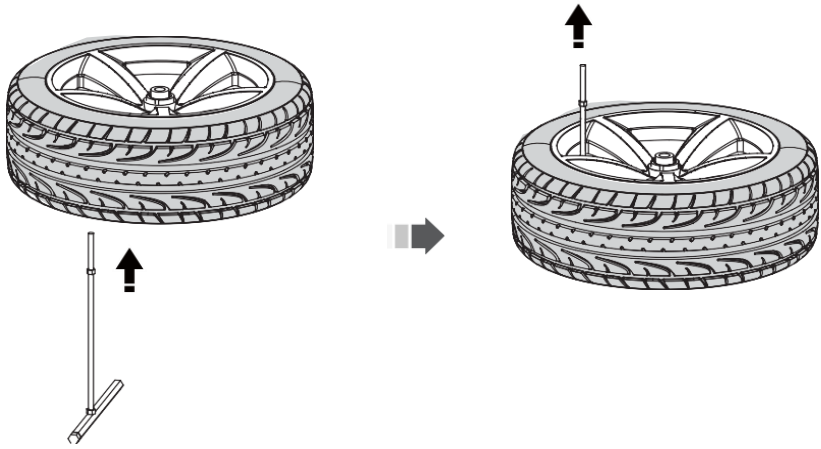


A: Bead Breaking Procedure

3

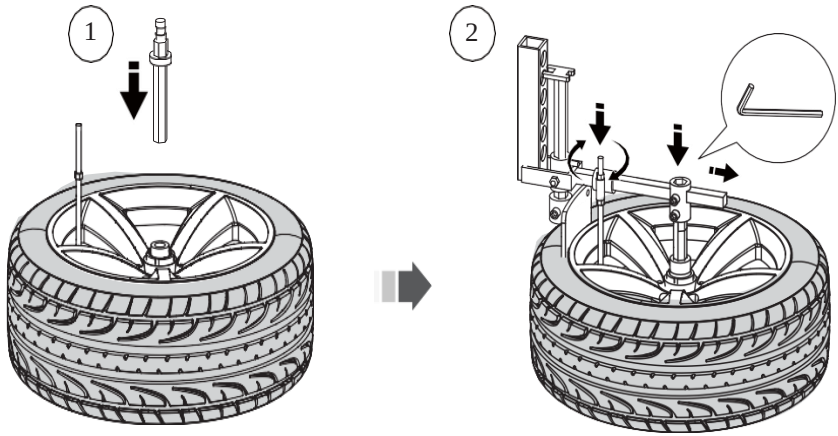
Bead Breaker & Pull-Rod Attachment

Insert the **Run-Flat Leverage Pull-Rod (#8)** downwards through the rim.



4

1. **Insert the Connection Arm (#2)** into **the Center Support Mast (#7)**.
2. Mount the **Bead Breaker Shovel Assembly (#3)** onto the arm and securely tighten the locking nut (indicated by the arrow) to fix the assembly's vertical position.



A: Bead Breaking Procedure

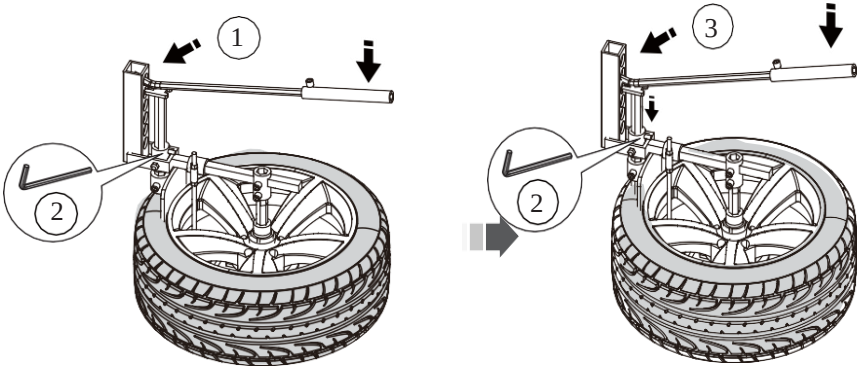
5

Progressive Leverage & Wheel Inversion

1 (Top Bead Break): Insert the **Main Power Lever Bar (#9)** into the FIRST (Top) Hole. IMPORTANT: The bar must be secured and tightened using the **Hex Wrench (#13)**. Apply downward force.

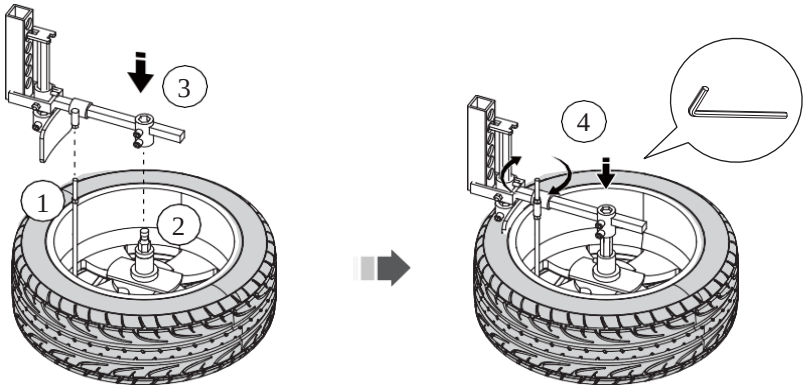
2 To increase depth, loosen the Adjustable Stop Bolt, relocate the bar to the next sequential holes (Hole 2, then Hole 3, etc.), retighten the bolt, and press down until the bead fully separates.

⚠ CAUTION: Always maintain a firm, two-handed grip on the Main Power Lever Bar to safely manage mechanical torque



6

Remove the wheel and flip it over (reverse-side up) to prepare for the bottom bead break. Reinstall the **Run-Flat Leverage Pull-Rod (#8)** and the **Bead Breaker Shovel Assembly (#3)**, ensuring all locking hardware is fully retightened

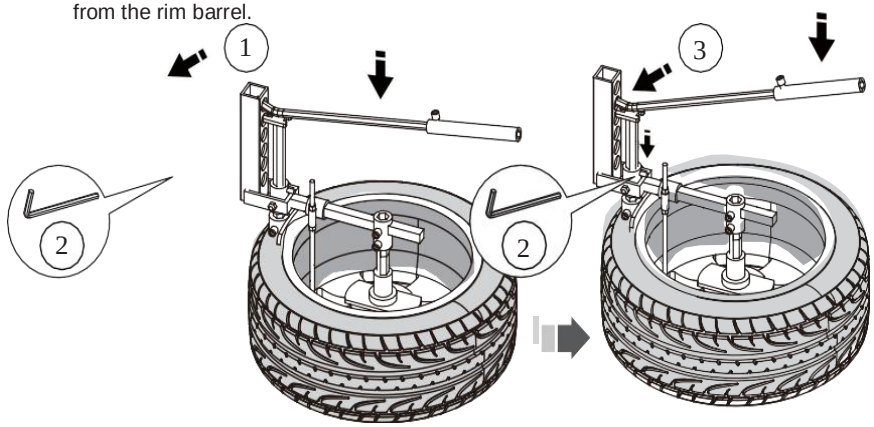


A: Bead Breaking Procedure

7

Execute a 3-to-5-hole progressive leverage protocol (depending on your specific rim size and depth). Move the Main Power Lever Bar (#9) sequentially (First Hole ➔ Second Hole ➔ Third Hole...).

CRITICAL: At each stage, the lever bar must be secured, and the **Adjustable Stop Bolt** must be locked using the **Hex Wrench (#13)** to ensure structural stability and precise depth control. Apply incremental pressure until the bottom bead is completely dislodged from the rim barrel.



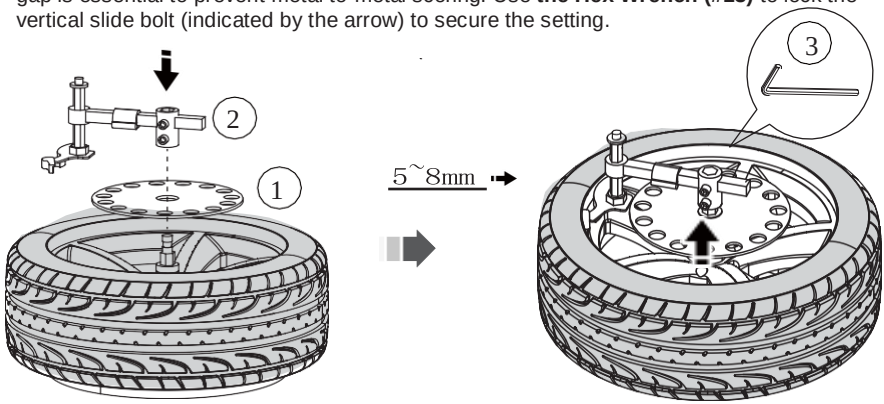
B: Removing Tire from the Rim **(Tooling Configuration & Zero-Damage Calibration)**

1

1. System Setup: Invert the wheel assembly so the "face" (front side) of the rim is facing upward. Install the **Rotation Turntable Base (#11)** and mount the **Duck Head Assembly (#1)** onto the **Center Support Mast (#7)**.

2. Tool Engagement: Maneuver the **Duck Head (#1.2)** into the interface gap between the tire bead and the rim flange.

3. Precision Alignment: CRITICAL CALIBRATION: Adjust the **Duck Head (#1.1)** so it maintains an axial clearance of exactly 5–8mm above the rim edge. This "Zero-Contact" gap is essential to prevent metal-to-metal scoring. Use **the Hex Wrench (#13)** to lock the vertical slide bolt (indicated by the arrow) to secure the setting.



B: Removing Tire from the Rim **(Tooling Configuration & Zero-Damage Calibration)**

2 **Lubrication & Counter Pressure Stabilization**

Advanced Lubrication: Apply a liberal amount of tire mounting lubricant or concentrated soapy water to the contact point where the Duck Head meets the tire bead.

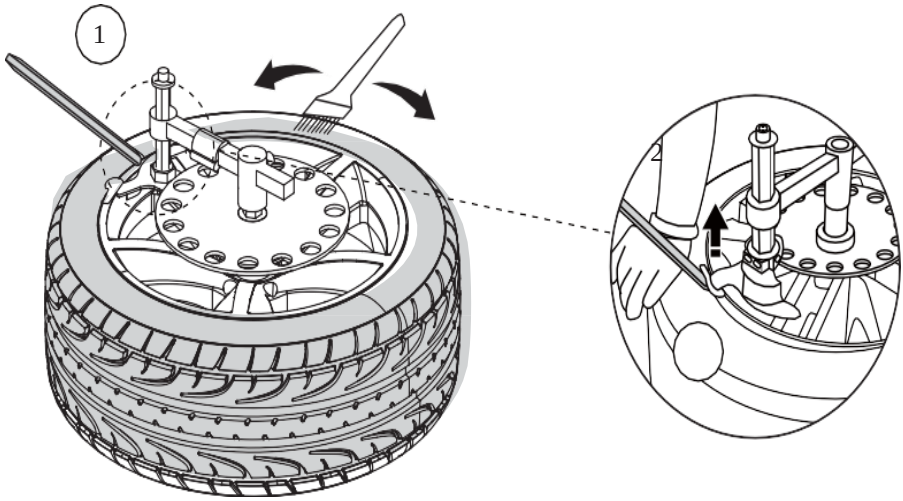
Safety Tip: Ensure the Duck Head is aligned with the valve stem to prevent damage to internal TPMS sensors.

Bead Seat Stabilization: For maximum leverage, the operator should utilize body weight by standing on the tire with both feet.

Pro Option: Alternatively, install the **Bead Depressor Clip (Bonus part)** into the rim's drop center on the opposite side of the **Duck Head (#1.1).** This holds the bead in the deepest part of the rim, providing the slack needed for easier removal.

Lever Engagement: Insert the **Tire Iron (Pry Bar) (#10)** into the leading edge "knuckle" of the Duck Head.

⚠ **CAUTION:** Maintain a firm, secure grip on the **Tire Iron (Pry Bar) (#10)** always to manage the initial tension



B: Removing Tire from the Rim (Tooling Configuration & Zero-Damage Calibration)

3

Rotational Torque & Dual-Bead Separation

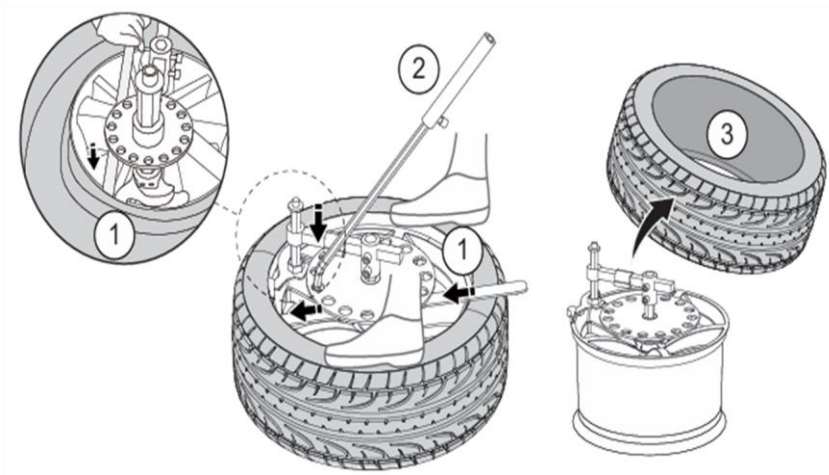
Upper Bead Lift: Use the **Tire Iron (Pry Bar) (#10)** to pry the upper bead over the Duck Head knuckle until the bead is resting securely on top of the tool.

Primary Rotation: While maintaining stabilization (feet on tire or using the **Bead Depressor Clip (Bonus part)**), insert the **Main Power Lever Bar (#9)** into the **Rotation Turntable Base (#11).** Rotate the entire assembly clockwise with steady, even force until the upper bead is completely separated from the rim.

Lower Bead Extraction: Manually lift the tire to expose the lower (inner) bead. Insert the **Tire Iron (Pry Bar) (#10)** approximately 5cm (2 inches) deep under the lower bead. Repeat the levering process to pull the lower bead over the **Duck Head (#1.2)** knuckle.

Final Clearance: Rotate the turntable clockwise once more to fully dislodge the tire from the rim barrel.

⚠ **OPERATIONAL CAUTION:** Grip both the **Tire Iron (Pry Bar) (#10)** and the Lever Bar firmly throughout the process. Use your body weight and the turntable's mechanical advantage to assist in managing high rotational torque.



C: Tire Mounting Procedure

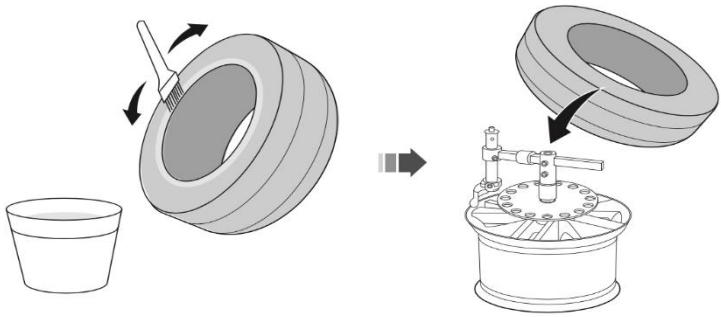
1

Pre-Mounting Prep & Valve Alignment

Apply a generous layer of tire mounting paste or lubricant to both the upper and lower tire beads.

Place the tire onto the rim at an angle.

CRITICAL ALIGNMENT: Position the **Duck Head (#1.2)** directly opposite the valve stem (180 degrees) to ensure the bead has maximum room to stretch into the drop-center without snagging the valve



2

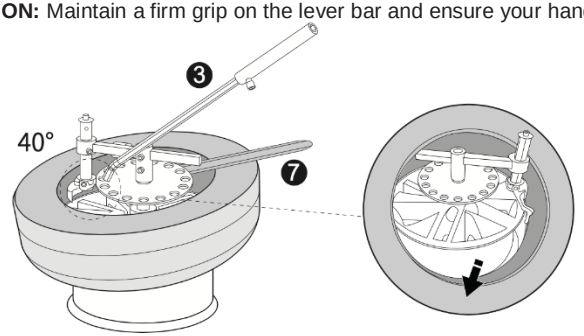
Seating the First Bead

Place the lower tire bead over the "tail" of the **Duck Head (#1.2).**

Maintain a 40-degree angle on the tire. Insert the **Main Power Lever Bar (#9)** into the **Rotation Turntable Base (#11).**

Rotate the assembly clockwise. Ensure the lower bead slides smoothly under the **Duck Head (#1.2)** and into the rim barrel.

⚠ **CAUTION:** Maintain a firm grip on the lever bar and ensure your hands are clear of the pinch zone



C: Tire Mounting Procedure

3

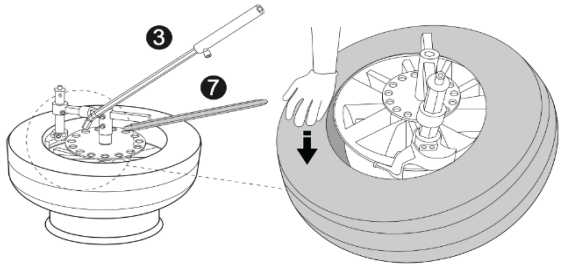
Seating the Second Bead

Position the upper bead over the **Duck Head (#1.2)**.

Apply downward pressure on the side of the tire opposite the **Duck Head (#1.2)** to keep the bead in the drop-center.

Rotate the turntable clockwise with the **Main Power Lever Bar (#9)** until the upper bead is completely seated inside the rim.

⚠ **CAUTION:** Maintain a firm grip on the lever bar and ensure your hands are clear of the pinch zone.



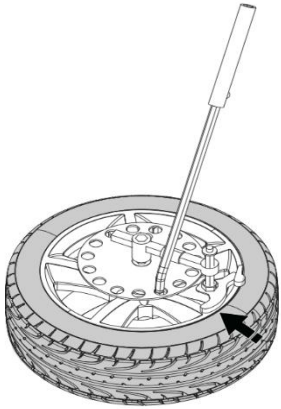
4

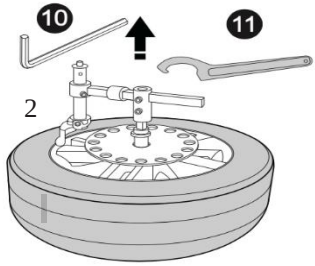
Equipment Removal & System Reset

Once mounting is complete, use the **Hex Wrench (#13)** to loosen the **Duck Head (#1.2)** vertical slide and the **Crescent Wrench (#14)** to release the primary center locking nut.

Disassemble the **Connection Arm (#2)** and the **Duck Head Assembly (#1)** from the mast.

Remove the finished wheel from the **Rotation Turntable Base (#11).**





A COMMITMENT TO EXCELLENCE

Dear Valued Customer,
Thank you for investing in the **LCTX EZ Tire Changer**. We are proud to provide you with commercial-grade automotive equipment engineered for precision, durability, and zero-damage performance.
To ensure the maximum lifespan of your equipment and to guarantee your personal safety, it is imperative that you read and fully understand all mechanical instructions and safety warnings within this manual prior to operation.
We stand behind the structural integrity of our tools. If you require technical assistance, replacement parts, or any questions regarding operational procedures, our dedicated customer support team is here to help.

CUSTOMER SUPPORT & RESOURCES
For instructional videos, warranty registration, and full product catalogs, please visit our official website:

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