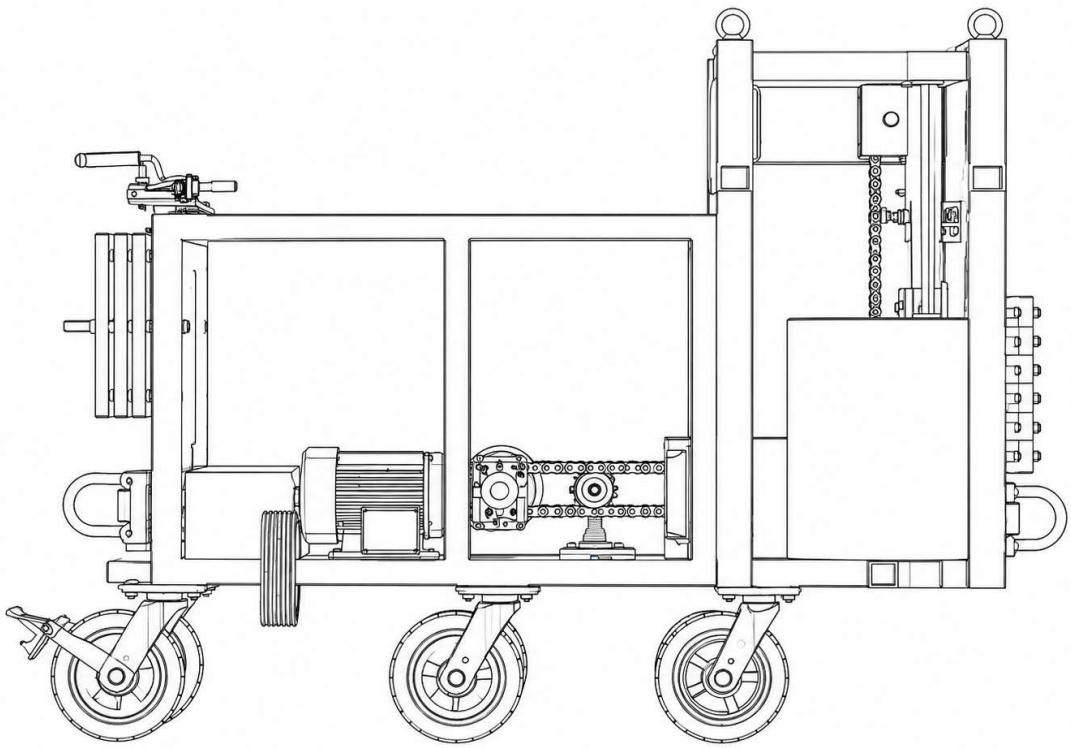
ConcreteBreakerUSA®

RESIDENTIAL CONCRETE BREAKER

PATENT PENDING

OPERATOR'S & MAINTENANCE MANUAL



Initial Public Release — Revision 1.0 — August 15, 2026

ConcreteBreakerUSA
A Division of Blue Topaz Enterprises, Inc.
Sugar Land, Texas USA

Manual Information

Specifications and product information are subject to change as product improvements are incorporated.

IMPORTANT: Read this manual completely before operating or servicing the machine. Keep this manual with the breaker for the life of the equipment.

How to Use This Manual

Symbol	Meaning
WARNING	Potential for severe injury or death.
CAUTION	Potential for equipment or property damage.
IMPORTANT	Critical operating or maintenance information.
TIP	Technique that can improve productivity or ease of operation.

Table of Contents

1. Introduction

Congratulations on your purchase of the ConcreteBreakerUSA Residential Concrete Breaker.

This machine is designed specifically for residential concrete demolition where conventional demolition equipment may be physically demanding, inefficient, or unable to access confined work areas.

Unlike handheld demolition hammers, the breaker uses a mechanically lifted drop-weight striker to fracture concrete while minimizing operator fatigue.

Typical applications include:

- Sidewalks
- Driveways
- Patios
- Walkways
- Small slabs
- Similar residential concrete surfaces

The operator positions the machine over the intended impact point and allows the machine to deliver repeated controlled impacts to fracture the concrete.

TIP: Allow the machine to do the work. The operator's primary job is proper positioning; the striker supplies the impact energy.

2. Safety

General Safety

- Read and understand this manual before operating the machine.
- Never allow untrained personnel to operate the breaker.
- Never operate while fatigued or under the influence of drugs or alcohol.
- Never modify a safety device or guard.
- Operate only from stable, level concrete surfaces.
- Keep children and unauthorized personnel away from the work area.

Personal Protective Equipment

- Safety glasses with side shields
- Hearing protection
- Heavy work gloves
- Steel-toe footwear
- Long pants

Additional protective equipment may be required by local regulations or jobsite requirements.

WARNING: The striker weighs approximately 350 lb and can cause severe injury or death. Never place any part of the body beneath the striker or reach into the guide rail assembly while electrical power is connected.

Electrical Safety

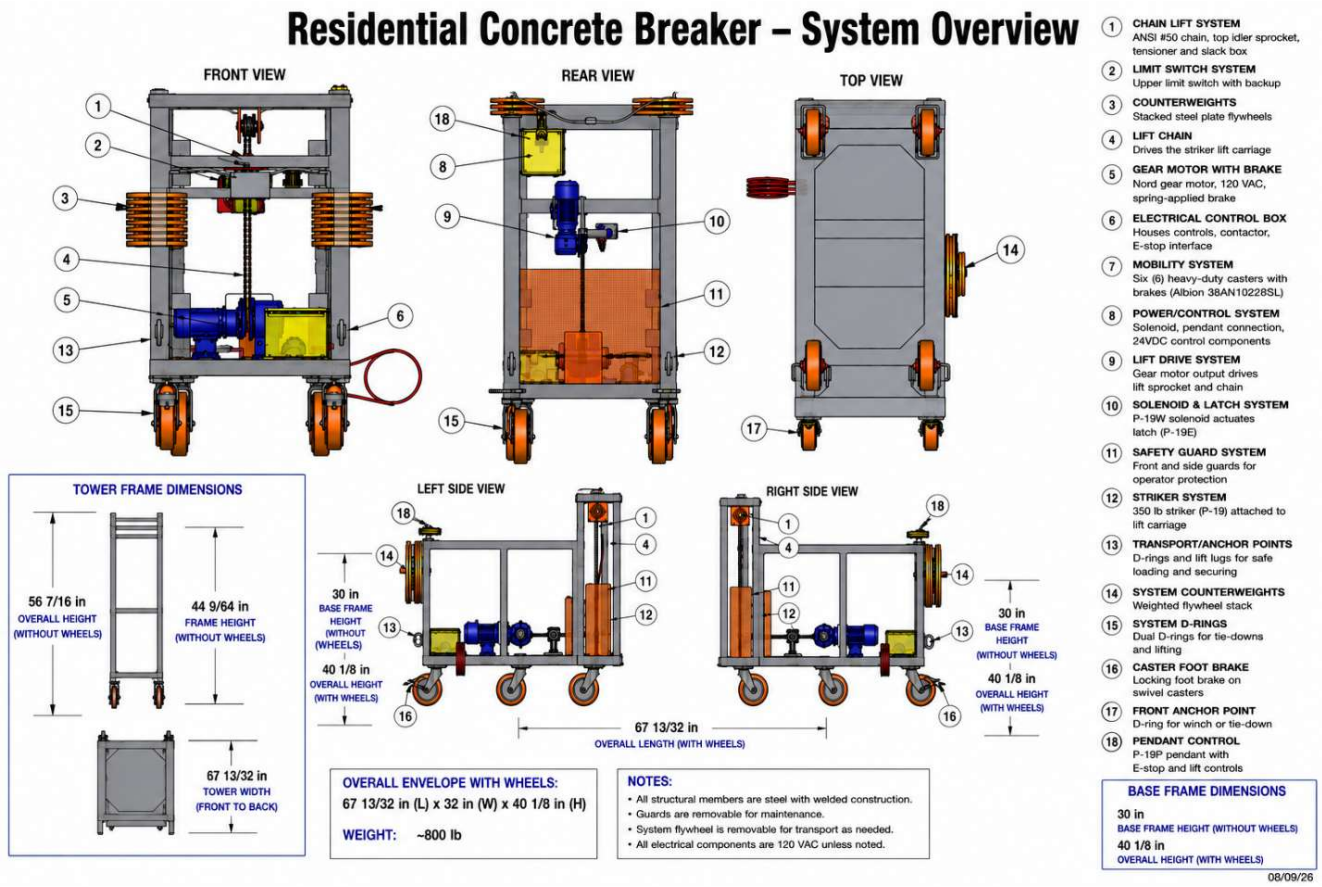
- Use only a properly grounded 120 VAC electrical supply.
- Inspect the power cord before every use.
- Do not operate with damaged cords or connectors.
- Do not operate while standing in water.
- Disconnect electrical power before inspection or maintenance.

Transport Safety

- Install the transport lock before moving the machine.
- Disconnect electrical power and secure the pendant.
- Move slowly and avoid sudden direction changes.
- Do not transport across broken concrete.
- Keep the machine on intact concrete or another stable supporting surface.

3. Know Your Breaker

The Residential Concrete Breaker is a portable, electrically powered drop-weight machine. A chain-driven lifting mechanism raises a vertically guided striker using an electric gearmotor equipped with a spring-applied brake. At the latch position, the striker is retained until the electrically actuated latch releases it. Gravity then accelerates the striker downward to deliver impact directly to the concrete.



System overview — major assemblies and overall machine envelope.

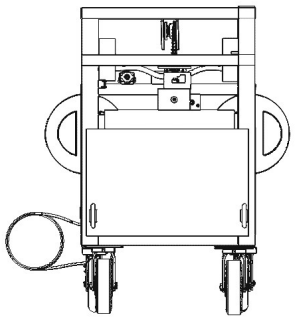
Major Components

Component	Purpose / Operator Check
Main frame	Structural foundation. Inspect for cracks, loose fasteners, bent members, or transport damage.
Guide rail assemblies	Control vertical striker movement. Keep clean and inspect for wear, weld damage, deformation, and debris.

Striker	Approx. 350 lb working mass that delivers impact. Do not modify weight or geometry without manufacturer approval.
Chain lift assembly	Raises the striker. Includes sprockets, ANSI chain, tensioner, and slack-management enclosure.
Gearmotor & brake	Supplies lifting power; spring-applied brake prevents unintended lift-system movement when power is removed.
Solenoid release & latch	Retains and releases the striker. Release and reset must occur positively every cycle.
Transport lock	Mechanically secures the striker for transport, inspection, and service.
Safety guards	Protect personnel from moving mechanical components. Operate only with guards installed.
Caster wheels	Permit manual positioning on solid supporting surfaces.

IMPORTANT: Normal operation is: position the machine, deliver one or more impacts, move backward onto intact concrete, and reposition. Do not roll forward across fractured concrete or demolition debris.

4. Machine Specifications



	Value
Overall Length	60 in
Overall Width	32 in
Overall Height	54 in
Estimated Operating Weight	800 lb
Power Supply	120 VAC household electrical service
Striker Weight	350 lb
Maximum Lift Height	Approximately 30 in (subject to production verification)
Application	Residential concrete demolition
Machine Configuration	Electric drop-weight concrete breaker
Operator Requirement	One operator

5. Before You Operate

Receiving Inspection

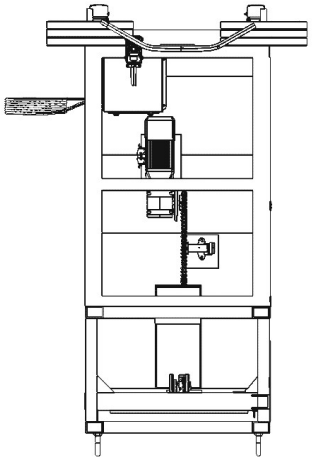
1. Inspect the machine completely before placing it into service.
2. Check for shipping damage, bent structural members, damaged wiring, loose hardware, missing guards, damaged caster wheels, damaged guide rails, and chain damage.
3. Verify that all ordered accessories are present.
4. Report shipping damage immediately to the carrier.

Daily Pre-Operation Inspection

Area	Verify
Structure	Frame, weldments, guide rails, guards, and mounting hardware are undamaged and secure.
Mechanical	Chain, sprockets, rollers, guide rails, transport lock, and striker are in serviceable condition.
Electrical	Power cord, pendant cable, connectors, control enclosure, and Emergency Stop are undamaged.
Safety	Guards are installed; work area is clear; PPE is available; bystanders are clear.
Functional check	Lift striker, verify positive latch engagement, release striker, and verify smooth travel and return to the lower position.

IMPORTANT: Do not begin demolition until all deficiencies are corrected and the functional lift-and-release check has been completed successfully.

6. Operating Instructions



Prepare the Work Area

1. Inspect the work area and remove loose material that could interfere with machine movement.
2. Identify utility covers, water valves, electrical boxes, gas lines, drainage structures, landscaping features, and other obstructions.
3. Verify that the concrete to be removed is clear of obstructions that could interfere with the striker or machine frame.
4. Establish a safe working area and keep bystanders clear.

Position the Machine

1. Move the machine onto the concrete to be demolished.
2. Position the striker directly above the desired impact location.
3. Whenever practical, begin near a free edge of the slab.
4. Verify that all caster wheels are fully supported on intact concrete and that the machine is stable and level.

Connect Electrical Power

1. Verify the machine power switch is OFF.
2. Connect to a properly grounded 120 VAC electrical outlet.
3. Route the power cord so it cannot become pinched or entangled. Keep it behind the operator whenever practical.

Lift and Release

1. Remove the transport lock.
2. Verify that personnel are clear of the operating area.
3. Using the pendant, raise the striker and observe the lifting cycle.
4. Continue lifting until the striker reaches the latch position and engages positively.
5. If the striker does not latch correctly, discontinue operation and determine the cause.
6. Activate the striker release.
7. Allow the striker to fall freely and complete the full impact cycle.

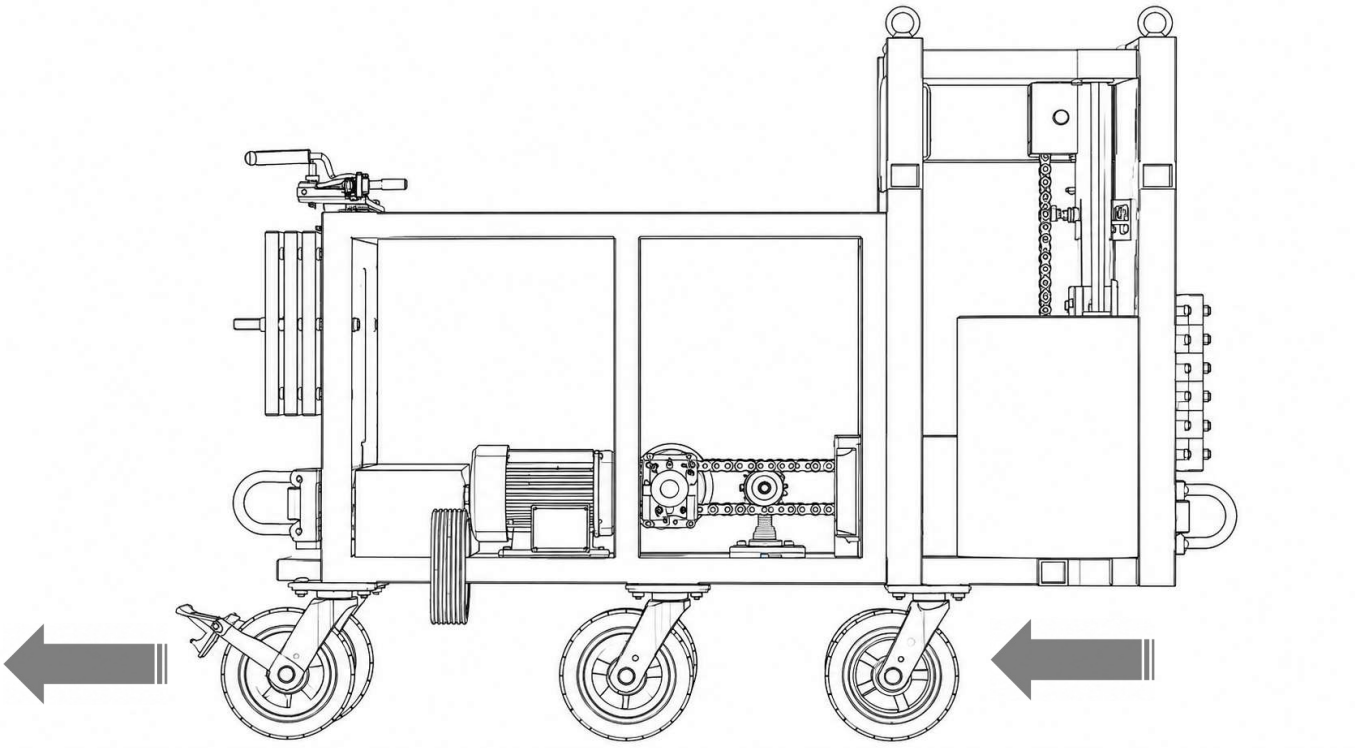
8. After impact, verify that the striker has come to rest before repositioning the machine.

WARNING: Never attempt to stop, guide, or interfere with striker movement by hand.

Evaluate and Reposition

1. Inspect the concrete after each strike.
2. If the concrete has fractured satisfactorily, move to the next impact location.
3. If another impact is required, continue from the same stable position.
4. Avoid repeated impacts after the concrete has already separated.
5. Move the machine backward until every caster wheel is again on solid, intact concrete.
6. Align the striker over the next impact point and repeat the operating sequence.

7. Concrete Breaking Technique



Technique	Recommended Practice
Begin at a free edge	Whenever possible, start at an exposed slab edge so fractures can propagate naturally.
Work in one direction	Progress methodically across the slab instead of jumping randomly between impact points.
Allow cracking to develop	Observe the slab after impact before deciding that another strike is necessary.
Reposition frequently	Once a satisfactory fracture is produced, reposition rather than continuing to strike the same location.

Operate from solid concrete	Move backward after each successful fracture so all wheels remain supported on intact concrete.
Follow crack patterns	Place subsequent impacts so new fractures extend naturally from existing cracks when practical.
Reinforced concrete	Use the breaker to fracture the surrounding concrete. Remove reinforcing steel afterward with appropriate tools.
Thick or hard concrete	Expect additional impacts or closer impact spacing depending on strength, thickness, reinforcement, aggregate, existing cracks, and subgrade support.

TIP: Good positioning produces better results than rushing the operation or repeatedly striking the same location.

CAUTION: Do not intentionally strike utility covers, valve boxes, drain structures, exposed reinforcing steel, or buried utilities.

8. Transportation & Lifting

Manual Repositioning

1. Install the transport lock and disconnect electrical power.
2. Secure the power cord and pendant.
3. Move the machine slowly and maintain full control.
4. Avoid steep slopes whenever possible and never allow the machine to free roll.
5. Operate and transport only on surfaces capable of supporting the full machine weight.

Avoid mud, loose gravel, soft soil, excavations, broken concrete, and other unstable supporting surfaces.

Lifting the Machine

WARNING: Lift only from the designated lifting lugs. Use both front lifting lugs OR both rear lifting lugs. Never connect one front lug and one rear lug together.

Before Lifting

1. Park on a firm, level surface.
2. Lower the striker completely.
3. Install the transport lock.
4. Disconnect electrical power.
5. Secure the pendant and power cord.
6. Inspect the lifting lugs and all rigging before use.

Lifting Procedure

1. Attach properly rated lifting equipment to both front lifting lugs or both rear lifting lugs.
2. Verify both lifting connections are secure.
3. Raise the machine slowly until the caster wheels just clear the ground.
4. Stop and verify that the machine is stable and properly balanced.
5. Continue lifting only after confirming that the machine is secure.

6. Position the machine over the pickup or trailer.
7. Lower slowly until all caster wheels are fully supported.
8. Remove lifting equipment and secure the machine for transport.

- Never stand beneath a suspended load.
- Never exceed the rated capacity of the lifting equipment.
- Verify the transport lock is installed before lifting.

9. Shutdown

1. Ensure the striker has come to a complete stop.
2. Install the transport lock.
3. Disconnect electrical power.
4. Coil and secure the power cord.
5. Store the pendant to prevent damage.
6. Remove accumulated concrete debris.
7. Inspect the machine for damage that may require repair before the next operating day.
8. Report or record any unusual machine behavior observed during operation.

The machine is now ready for transport or storage.

10. Maintenance Schedule

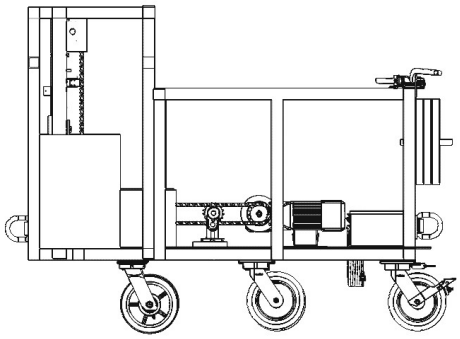
Proper maintenance is essential to safe operation and long service life. Only qualified personnel should perform maintenance beyond routine inspection and lubrication.

WARNING: Disconnect electrical power before maintenance. Install the transport lock before servicing any component associated with the striker assembly.

Interval	Component / Area	Action
Before each use	Machine frame	Inspect
Before each use	Guide rails	Inspect / clean
Before each use	Guide rollers	Inspect
Before each use	Striker	Inspect
Before each use	Chain	Inspect
Before each use	Power cord	Inspect
Before each use	Pendant	Inspect
Before each use	Safety guards	Inspect
Before each use	Transport lock	Inspect
Weekly	Lifting chain	Lubricate
Weekly	Accessible fasteners	Inspect / tighten

Weekly	Caster wheels	Inspect / clean
Weekly	Machine	General cleaning
Monthly	Release solenoid	Inspect
Monthly	Motor brake	Inspect
Monthly	Upper limit switch	Inspect
Monthly	Chain tension	Inspect / adjust as required
Monthly	Roller bearings	Inspect

11. Chain Maintenance



Inspection

- Bent or cracked links
- Rust or corrosion
- Stiff joints
- Missing rollers
- Excessive wear

Replace damaged chain immediately.

Lubrication

1. Apply a quality chain lubricant evenly to the lifting chain.
2. Operate the lifting mechanism slowly to distribute lubricant.

3. Remove excess lubricant; heavy buildup attracts abrasive concrete dust.

Chain Tension

Condition	Effect
Too loose	May jump sprocket teeth, produce rough lifting, and accelerate wear.
Too tight	Increases bearing loads, chain wear, and motor loading.

Maintain chain tension according to the machine adjustment procedure. Replace the chain if cracked links, excessive wear, unacceptable elongation, or significant corrosion is present.

12. Guide Rails & Rollers

Guide Rails

- Verify straightness and weld integrity.
- Verify secure mounting.
- Keep rail surfaces clean.
- Remove concrete dust and debris.
- Do not allow hardened concrete to accumulate inside guide channels.

Rollers

- Check smooth rotation and bearing condition.
- Inspect roller surfaces for wear or flat spots.
- Verify mounting security.
- Replace damaged rollers promptly.

During lifting, the striker should travel smoothly without binding or excessive side movement. Unusual movement requires inspection before continued operation.

13. Electrical System

WARNING: Disconnect electrical power before servicing any electrical component.

Component	Inspection
Power cord	Inspect before each operating day. Replace immediately if insulation, plug, or cord is damaged.
Pendant	Inspect cable, buttons, housing, and strain relief. Replace damaged components before operation.
Wiring	Check secure routing, abrasion, crushed insulation, and electrical connections.
Emergency Stop	Test periodically. Machine operation must cease immediately when activated.
Upper limit switch	Verify positive operation. Do not bypass or modify.
Motor brake	Lift system should remain stationary whenever lifting power is removed.

14. Striker & Latch Assembly

WARNING: Disconnect electrical power and install the transport lock before servicing the striker or latch assembly.

Component	Inspect / Verify
Striker	No visible cracks, bent or damaged components, loose hardware, abnormal surface damage, or binding in the guide rails.
Latch	No excessive wear, rounded contact surfaces, cracks, loose fasteners, or misalignment. Engagement must be positive.
Release mechanism	Latch engages fully, release occurs cleanly, striker falls freely, and latch resets correctly.
Guide roller alignment	Striker remains centered and travels without binding, hesitation, or excessive side movement.

Do not lubricate the latch unless specifically recommended by the manufacturer. Excess lubricant may attract abrasive concrete dust.

15. Troubleshooting

If a problem cannot be corrected using the checks below, discontinue operation and inspect the machine before further use.

Problem	Possible Causes	Corrective Action
Motor does not operate	No power; tripped breaker; Emergency Stop activated; damaged cord or pendant; wiring fault.	Verify electrical supply and Emergency Stop. Inspect cord, pendant, and electrical connections.
Striker will not lift	Chain damage or looseness; obstruction; gearmotor or brake malfunction.	Inspect chain, sprockets, guide rails, brake operation, and mechanical path. Remove obstruction.
Striker will not latch	Latch damage, misalignment, wear, or foreign material.	Inspect and clean latch surfaces; verify alignment; repair or replace damaged components.
Striker will not release	Solenoid malfunction; electrical fault; latch binding; mechanical interference.	Inspect solenoid, wiring, latch movement, and surrounding area for debris.
Striker falls slowly	Mechanical binding; guide rail contamination; damaged rollers; bent guide rail.	Inspect and clean rails and rollers. Repair damaged components before use.
Poor breaking performance	Positioning; concrete conditions; reinforcement; worn striker; repeated impacts on already fractured concrete.	Reposition on intact concrete; allow fractures to develop; move after satisfactory cracking.
Excessive noise	Loose hardware; chain or roller wear; frame damage; mechanical interference.	Stop operation immediately and inspect before continued use.

16. Storage

Short-Term Storage

1. Clean the machine and remove loose concrete debris.
2. Inspect for damage.
3. Disconnect electrical power.
4. Install the transport lock.
5. Store on a level surface.

Long-Term Storage

1. Clean the machine thoroughly.
2. Lubricate the lifting chain.
3. Inspect exposed metal surfaces and repair damaged paint as required.
4. Store indoors whenever practical.
5. Protect electrical components from moisture.
6. Before returning to service, complete the full pre-operation inspection.

17. Replacement Parts

Use only replacement parts meeting the original equipment specifications.

Normal Service / Wear Items
Lifting chain
Guide rollers
Roller bearings
Electrical switches
Limit switches
Solenoid
Pendant assembly
Power cord
Safety decals
Transport lock hardware

Production editions may include exploded assembly illustrations and replacement part numbers as the design is finalized.

18. 12-Month Limited Parts Warranty

ConcreteBreakerUSA warrants the breaker frame, striker assembly, fabricated components, and other ConcreteBreakerUSA-manufactured parts against defects in materials and workmanship for 12 months from the date of delivery under normal use and service.

Components and accessories manufactured by third parties—including the gearmotor, solenoid, sensors, switches, electrical components, casters, chain-drive components, and similar purchased items—are covered by the applicable warranty provided by their respective manufacturer. ConcreteBreakerUSA does not extend or increase the warranty period provided by the original component manufacturer.

Warranty does not cover:

- Normal wear items
- Improper operation
- Unauthorized modifications
- Damage resulting from abuse or neglect
- Failure to perform required maintenance

Maintain inspection and maintenance records to support warranty claims.

19. Records & Checklists

Machine Record

Field	Information
Model	
Serial Number	
Purchase Date	
Dealer	
Telephone	
Owner	
Address	

Daily Operator Checklist

Check	Item
☐	Machine frame inspected
☐	Guide rails clean
☐	Guide rollers inspected
☐	Striker inspected
☐	Chain inspected
☐	Sprockets inspected
☐	Electrical cord inspected
☐	Pendant inspected
☐	Emergency Stop tested
☐	Transport lock inspected
☐	Guards installed
☐	Caster wheels inspected
☐	Work area clear
☐	PPE worn
☐	Functional lift-and-release cycle completed

Maintenance Log

Date	Machine Hours	Maintenance Performed	Technician	Remarks

20. Revision History

Revision	Date	Description
Draft A	August 2026	Customer review draft — reorganized and simplified operator's and maintenance manual.
1.0	August 15, 2026	Initial public release. Production Operator & Maintenance Manual.