

# CENTURION

## USERS MANUAL



## **CHIEF'S LIMITED ONE-YEAR WARRANTY & LIABILITY**

Chief Automotive Technologies warrants for one year from date of installation and/or purchase any components of Centurion which do not perform satisfactorily due to defect caused by faulty material or workmanship. Chief's obligation under this warranty is limited to the repair or replacement of products which are defective and which have not been misused, carelessly handled, or defaced by repair or repairs made or attempted by others.

**CHIEF AUTOMOTIVE TECHNOLOGIES DOES NOT ASSUME RESPONSIBILITY FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM THE OPERATOR'S NEGLIGENCE OR MISUSE OF THIS PRODUCT OR ITS ATTACHMENTS. CHIEF MAKES NO WRITTEN, EXPRESS OR IMPLIED WARRANTY WHATSOEVER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE REGARDING THE EQUIPMENT OR ANY PART OF THE PRODUCT OTHER THAN THE LIMITED ONE-YEAR WARRANTY STATED ABOVE.**



### **Table of Contents**

Important Notice	4
Maintenance and Safety	5
Information and Controls	9
Standard Accessories	15
Optional Accessories	17

This users manual is written to familiarize operators with the safe and efficient operation of the Chief Centurion. The Centurion machine features full frame repair capabilities with 360 degree pulling access around the vehicle.

Towers are provided with the Centurion and up to ten towers can be added as optional equipment. Each tower mounts to the bottom plate of the mainframe. A unique tower roller design allows easy movement around the machine and a "Lock" force clamp secures the tower to the mainframe when making a pull. Each tower is equipped with one 55-ton hydraulic ram operated by an electric over hydraulic pump.

**NOTE:** Illustrations shown in this manual may vary slightly from actual product.

This manual is not intended to replace Chief Heavy Duty Training. For information concerning Training, contact Chief Automotive Technologies

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**IMPORTANT:**

1. **DO NOT** attempt to operate the Chief Centurion without first reading this entire manual.
2. Complete safety information is highlighted throughout this manual and is identified by:



This safety alert symbol identifies safety information. Operator injury could result if these **CAUTION** notes are not followed.

3. Qualified service personnel must check operational capacity of the Centurion system prior to its initial use and at intervals of no more than one year. Contact Chief Automotive Technologies or contact your authorized Chief Automotive Technologies representative.
  4. Persons operating the Centurion system must be at least 18 years of age, must be trained in the operation of the Centurion system, and must have demonstrated their qualifications to the employer. They must also be specifically assigned to operate the Centurion system by the employer and this assignment must be made in writing.
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## IMPORTANT SAFETY INSTRUCTIONS


When using your garage equipment, basic safety precautions should always be followed, including the following:


1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
4. Do not let a cord hang over the ledge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
6. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
7. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
8. Keep hair, loose clothing, fingers and all parts of the body away from moving parts.
9. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
10. Use only as described in this manual. Use only manufacturer's recommended attachments.
11. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
12. Read and observe all safety decals on machine. Replace any worn or missing decals as needed.


## SAVE THESE INSTRUCTIONS


## General Safety Tips


### General

-  DO NOT operate this machine unless:
- 1) You are authorized in writing by your employer.
  - 2) All towers are properly secured to machine.
  - 3) Vehicle's wheels are blocked and parking brake is set.
  - 4) Field of motion of load carrying device is free of persons and obstructions.


-  Persons operating the Centurion Heavy Duty system must be at least 18 years of age, must be trained in the operation of Centurion system, and must have demonstrated their qualifications to the employer.


-  DO NOT attempt to operate the Centurion pulling system without first reading this entire manual.


-  Always wear safety glasses when using the Centurion machine or any of its accessories.


-  Maintain a free space of 20 inches (50cm) minimum around all moving parts and pinch points on machine.

### Optional Crossmember


-  DO NOT use optional crossmember as a step.

-  DO NOT use optional crossmember to make angular pushes or pulls.

-  During removal and reinstallation of optional crossmember, hold crossmember firmly to support its weight. Always use a helper when moving. Following installation, install support pins at each end of crossmember to prevent accident disengagement.

-  To avoid damage to the mainframe, crossmember must be installed and located properly when using equipment.

### Ramps

-  The loading ramps must always be chained to the Rack Deck when loading and unloading vehicle.

### Tower Movement



#### **WARNING**

Fully engage Lock clamp on mainframe to prevent tower movement during the pull.



When pushing tower, keep one hand on tower lever and the other on the tower pipe. Also, keep hands away from all pinch points...i.e. roller assemblies on bottom mainframe plate and force clamp pinning location on top mainframe plate.



When engaging Lock clamp, keep hands away from all pinch points...i.e. roller assemblies on bottom mainframe plate and force clamp pinning location on top mainframe plate. NOTE: Hoses may need to be disconnected when moving towers.

### Pulling



#### **WARNING!**

To avoid severe personal injury to yourself and others: DO NOT position yourself close to, or in line with chains, clamps, or other accessories while pressure is applied to this system.



- To prevent personal injury from flying objects:
- Check all bolts, nuts and clamps for deformation or elongation prior to each use.
  - Deformed or elongated materials must be replaced.
  - If materials look deformed, they are deformed. Replace them.



Remove twist in chain before applying pressure to the chain.



Keep pin and pin retainers fully set in place.




Always use a safety chain, nylon strap, or welding blanket over the pull chain when making pulls so if pulling attachment, hook, or chain slips the safety device will absorb some of the energy and keep the parts from causing injury or damage.

## Machine Maintenance


### Check And Inspect

These components should be checked prior to use and anytime a problem is suspected.

 **CAUTION:** To avoid personal injury when performing any maintenance function, always wear safety glasses and safety shoes.

### Tower Chains, Tie-Down Chains

The tower chains/hooks and tie-down chains/hooks supplied with the Chief Centurion are high quality, high strength chains/hooks. If replacement is required, purchase only the original Chief Centurion product from an authorized Chief Automotive representative.

 **CAUTION:** To avoid personal injury or damage to property:

- DO NOT Heat chain or hook while repairing vehicle - 600 degrees F (316 degrees C) of heat on chain will weaken it.
- DO NOT Tip load chain hook. Tip loading chain hook will stress hook beyond its designed capability and could cause hook to fail.
- DO NOT Pull with twisted chain links. Pulling with twisted links will stress chain links beyond their designed capability and could cause chain to fail.

Tower chains must be inspected for wear, nicks, gouges, stretched and bent links. If found, replace chain.

Tower chain hooks and pins must be inspected for twist and stretched openings. If found, replace them.

### Tower Rollers

Inspect inside and outside tower roller wheels for damage. The inside and outside roller bearings are lubrication free. Use compressed air to clean. DO NOT lubricate.

### Power and Control Cords

Inspect power and control cords for worn insulation or other damage. If found, replace cord(s).

### Cleaning and Lubricating

These components should be cleaned and lubricated as specified for trouble free operation and extended service. When lubricating use the following:

Oil — Use 30 weight motor oil for all components requiring oil.

Grease — Use a SUS750 Lithium type grease such as lubricate #630-2 for all components requiring grease.

### Eliminating Air In Hydraulic System

All air has been removed from hydraulic system at the factory, but if hydraulic system is opened to replace a system component, it is necessary to bleed air from system prior to using it.

## Machine Maintenance (cont.)

### Refill Hydraulic Fluid Reservoir

The hydraulic pump contains 3 gallons of hydraulic oil. When refilling or adding oil, fill to within 1" (25mm) of fill port using SUS 215 viscosity @ 100°F (38°C) 10W Hydraulic Oil.

#### Caution:

1. Fill pump reservoir with all cylinders retracted.
2. DO NOT overfill pump reservoir.

### Hoses

Inspect all hydraulic hoses and connections on a regular basis. If leaks, abrasions, worn spots, or several bends are noticed, replace immediately.

### Cylinder and Fittings

Inspect all hydraulic cylinder, fittings, and connections. If leaks or damaged fittings are found, repair, tighten or replace immediately.

### Outer Track

Using compressed air, blow dirt and debris from outer track. If necessary, use stiff brush to remove build-up of dust and paint on outer track surface.

Visually inspect outer track for damage. Although small dents or upsets in the outer track may not affect the operation of the tower, they might indicate tower adjustment is necessary.

### Lock

With normal use, the pivots on the Lock clamp should stay free of dirt and operate smoothly and quietly. Extended periods of non-use or damp environments may adversely affect the operation of the Lock.

Use compressed air to blow dirt and debris from Lock pivot points. Apply a few drops of oil to Lock pivot pin and handle shaft pivots and work mechanism.

### Tower Rollers

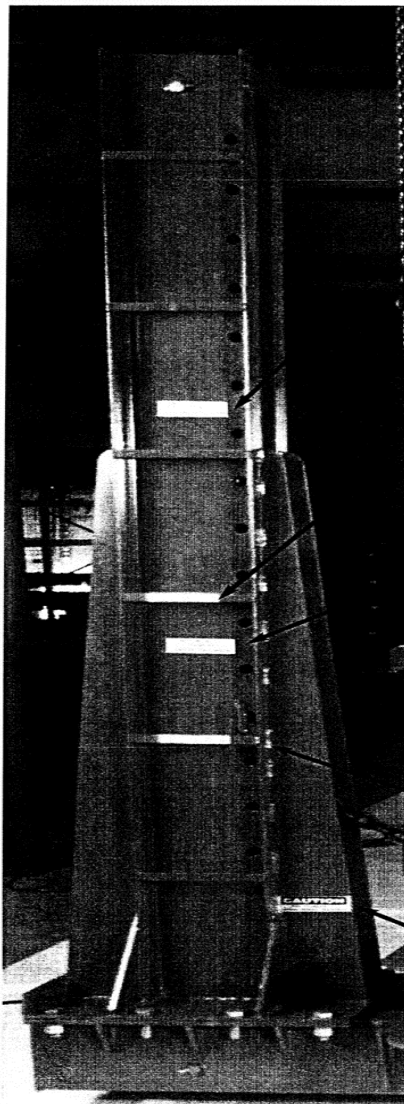
Using compressed air, blow dirt and debris from the tower outside wheel assemblies. Visually inspect bearings to make sure they have grease contacting the unit and rotating freely. Inspect roller bolts and confirm lock nuts are located securely in place.

#### Caution: Wear safety glasses while using compressed air to blow out dirt and dust.

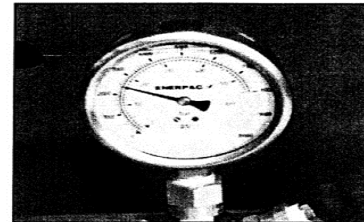




## Pulling Tower Safety Information

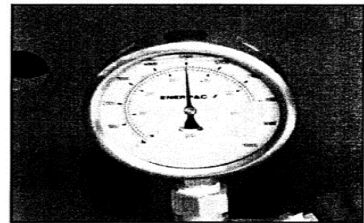


**Maximum Pull  
2500 PSI  
Above This Point**



**Tower Chain Hook Rests Not  
Intended To Be Used As A Ladder**

**Maximum Pull  
5000 PSI  
Above This Point**



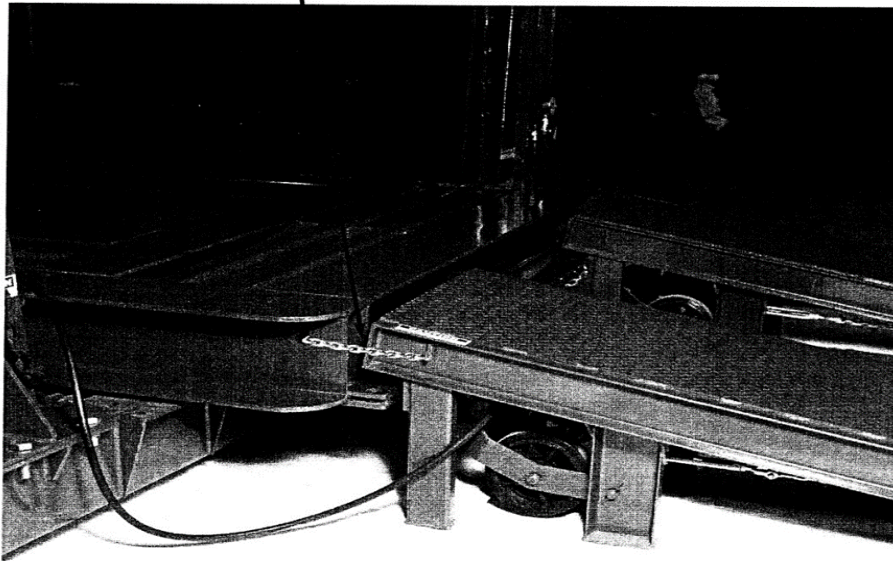
**Tower Chain Hook Rests Not  
Intended To Be Used As A Ladder**

**CAUTION**  
ALWAYS CHAIN TOWER  
UPRIGHT BACK TO DECK  
WHEN PUSHING  
FROM THE TOWER

**CAUTION**  
DO NOT STAND  
BEHIND TOWER  
WHEN PULLING

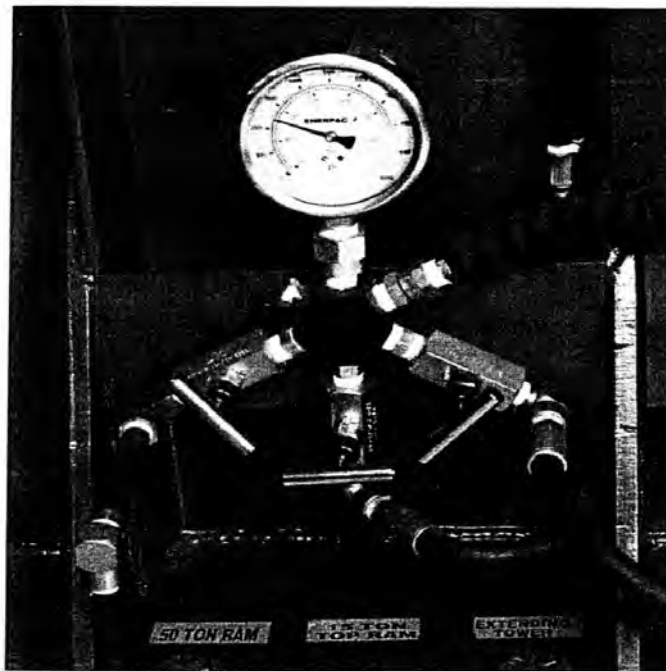


CAUTION:  
ALWAYS CHAIN LOADING RAMPS  
BEFOR LOADING VEHICLE



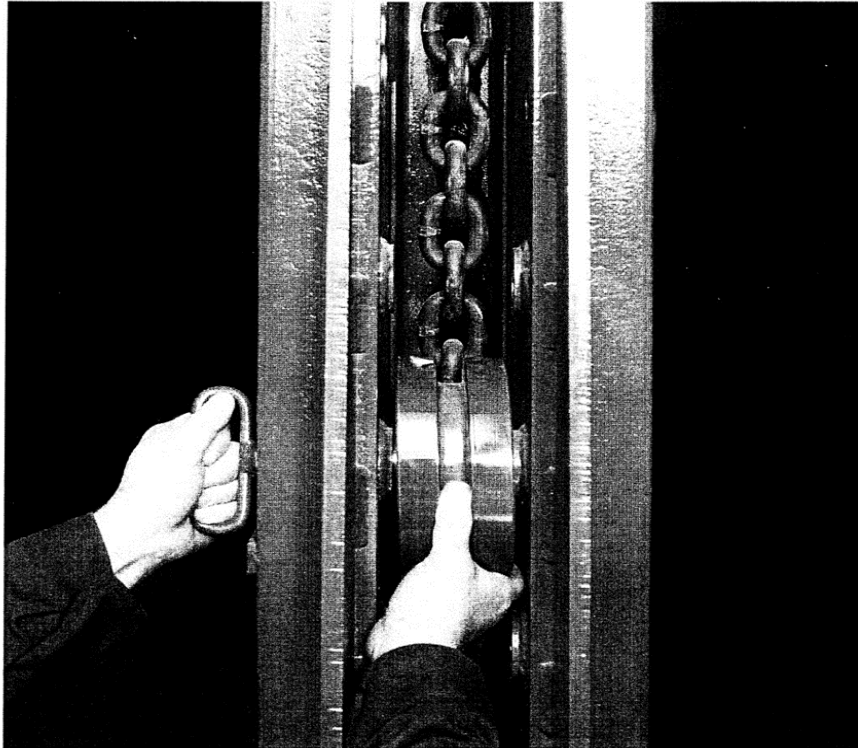


## TOWER CONTROLS 50-TON RAM CONTROL



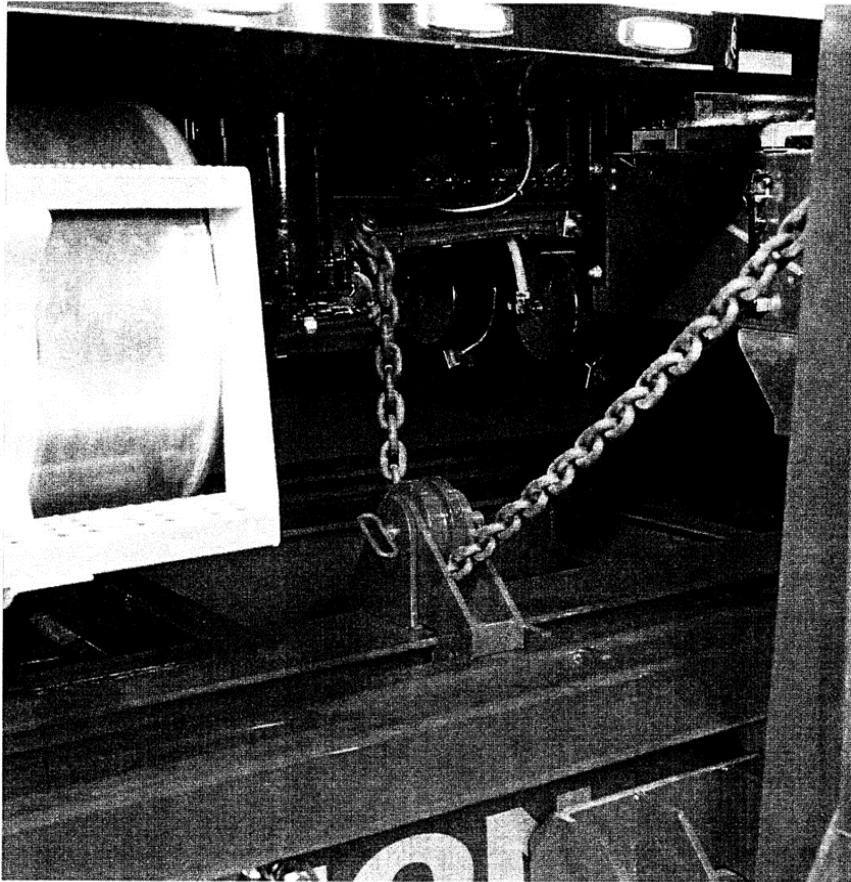


## TOWER CONTROLS PULL HEIGHT ADJUSTMENTS





**DOWN PULL ADAPTOR  
MAXIMUM PULL  
5,000 PSI**





## Standard Accessories

\*May not be exactly as shown

### HD Centerline Gauge Set



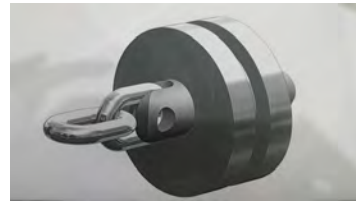
-Deluxe centerline gauge kit

-Includes 15' tram bar

P/N GMC17508

\*\*Less strut tower gauge

### Down Pull



-Down-pull adaptor with chain and aluminum chain wheel

P/N GMC17585A

### Stacking Blocks



-Safely support HD frame rails

-Bolt together to reach any height

P/N GMC17656S

### Overhead Power Lift Bar



-Support engine during pull

-Allow pulls on upper cab

P/N GMC17668A



## Standard Accessories

\*May not be exactly as shown

### 20 Ton Hydraulic Jack Stand



-Use for removing frame twist and sag

-Use for re-arching flat-bed trailers

P/N GMC17502A

### Ratchet Load Binders



-Secure vehicle to deck

-Use to tie back towers/stands

P/N **CHIEF HD PART NUMBER**



## Optional Accessories

\*May not be exactly as shown

### Wide Flange Hook



- For performing horizontal pulls on frame rails
  - Extra wide for better dispersion of pulling power
- P/N GMC17599A

### Narrow Flange Hook



- For performing horizontal pulls on frame rails
  - Narrow for access to tight spaces
- P/N GMC17589A

### Mechanical Jack Stand



- Use as a fulcrum on down pulls
  - Use under high corners when removing twist
  - Run anchoring chains over top of stand for horizontal anchor
- P/N GMC17501A





## Optional Accessories

\*May not be exactly as shown

### Sliding Crossmember



-This accessory provides capability to perform lifts and pushes from the center of the deck

P/N GMC17587S

### Flange Wrench



-Adjustable head ensures the correct angle and leverage

-For straightening light bends and crimps in frame rails

P/N GMC17593A

### Multi-Hole Pull Plate



-For horizontal or vertical pull

-Attaches to flat surface of frame rail

P/N GMC17595S

### Frame Twist Clamp



-Used with two opposing wedges

-Used to correct twist in rail

-Can also be used to pull up or down

P/N GMC17591A



## Optional Accessories

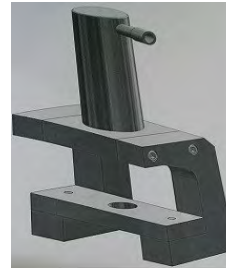
\*May not be exactly as shown

### Rail Chain Protectors



- Hangs on the inside or outside of frame rail
- Supports chain while anchoring and pulling
- Prevents damage to rail flanges
- 3 profiles available
- P/N GMC17504S (5")
- P/N GMC17505S (9")
- P/N GMC17506S (12")

### 20 Ton Flange Press



- Straightens flange and web
- Will remove dimples from radius of rail
- Comes with radius kit
- P/N GMC17523A

### Frame Spread Blocks



- Blocks hang on flange while cradling a 25 ton hydraulic ram
- P/N GMC17520S





**996 Industrial Drive  
Madison, IN 47250  
Phone: 800-445-9262  
Fax: 866-275-0173**

**[www.chiefautomotive.com](http://www.chiefautomotive.com)**