

# Chief Streamliner

**USERS MANUAL**





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

Chief Automotive Technologies, Inc. warrants for one year from date of installation and/or purchase any of its products 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, INC. 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.**

## 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. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.
8. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
9. Keep hair, loose clothing, fingers and all parts of the body away from moving parts.
10. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
11. Use only as described in this manual. Use only manufacturer's recommended attachments.
12. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

**SAVE THESE INSTRUCTIONS**

The Streamliner machine features adjustable height capabilities and a one tower pulling system. The work platform adjusts to eight different heights to accommodate any type of surface preparation work (i.e. sanding, application of body filler, small parts removal/installation, etc.). Working heights range from floor level up to 28 inches (70 cm). The system's lifting capacity is 5,000 lbs. (2,270 kg) and its pulling capacity is 4 ton (35.6 kN). The tower base mounts to any of the six pulling ports and its adjustable features allow pulling at most angles.

This manual identifies system components, basic setup and general safety tips. **DO NOT** operate the Streamliner without first reading and understanding this manual.

**⚠ CAUTION:**

- Maintain a minimum of 20 inches (50cm) around all moving parts of machine and vehicle.
- Persons operating the Streamliner must be at least 18 years of age, must be trained in the operation of the Streamliner and must have demonstrated their qualifications to the employer. They must also be specifically assigned to operate the Streamliner by the employer and this assignment must be made in writing.

**Machine Installation**

1. Position machine on a flat surface. Allow adequate working room on all sides.
2. Position hydraulic pump cabinet far enough to side of machine so it does not interfere with vehicle loading and unloading or tower usage.

**⚠ CAUTION: To prevent personal injury from leaking hydraulic fluid:**

- **DO NOT** lay cabinet on side. (Position as shown in Figure 1.)
- **DO NOT** drive or roll objects over hoses.
- **Fill only** with all cylinders retracted.
- **DO NOT** overfill.

**IMPORTANT:** (Filling Oil Reservoir)  
Use only light hydraulic oil (215SSU @ 100 Degrees F). Fill to 75mm from top of reservoir. Be certain reservoir vent is open at all times.

3. Attach cord hanger for remote control switch and cord to cabinet. (See Figures 2 and 3.)



Figure 1



Figure 2



Figure 3

4. Connect pump to electrical outlet.  
**IMPORTANT:** If extension cord is required, it must be a 12 gauge minimum.

5. Attach lift cylinder hose to mainframe.

- If directing hose toward rear of machine, loop hose around cylinder (see Figure 4 or Figure 5) and secure it to appropriate porta-frame bracket using clamp and bolts provided. Hose will extend underneath treadway extension when extension is installed.
- If directing hose to front of machine, extend hose forward and toward desired side of mainframe. Extend hose through hole in porta-frame. (See Figure 6 and its inset.) Attach hose to porta-frame bracket using clamp and bolts provided. (See Figure 7.) Hose will extend underneath treadway extension when extension is installed.

**NOTE:** To prevent hose movement within the clamp, secure two plastic ties on each side of the clamp. (See Figure 8.)

6. Attach hydraulic pump hose to lift cylinder hose. (See Figure 9.)

7. Connect the included air hose to the pneumatic cylinder on the lock release mechanism. (See Figure 10.) Connect the other end of the air hose to the outlet side of the air valve located in the pump cabinet. (See Figure 11.)

8. Connect the shop air line to the inlet side of the air valve located in the pump cabinet. (See Figure 11.)



Figure 4

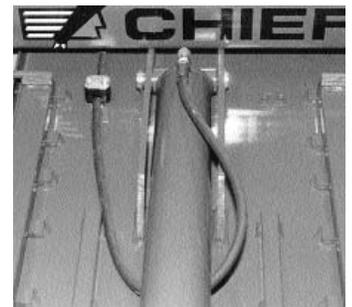


Figure 5

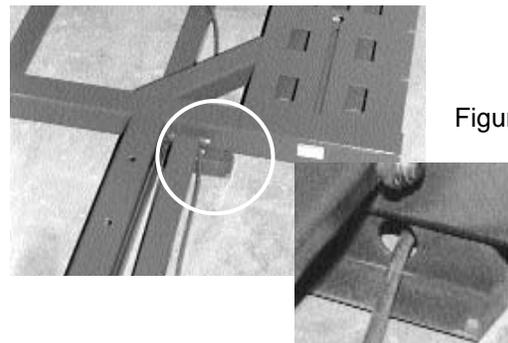


Figure 6



Figure 7



Figure 8

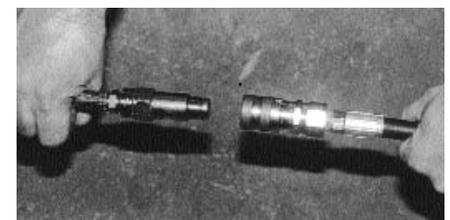


Figure 9

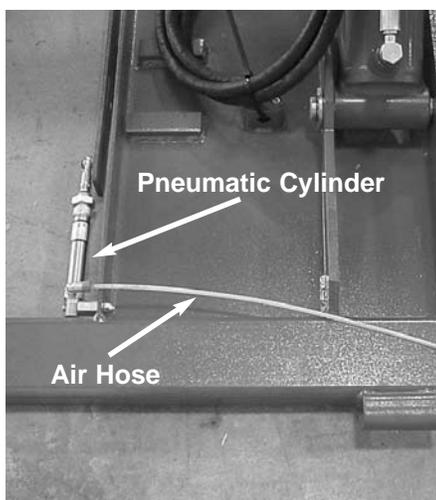


Figure 10

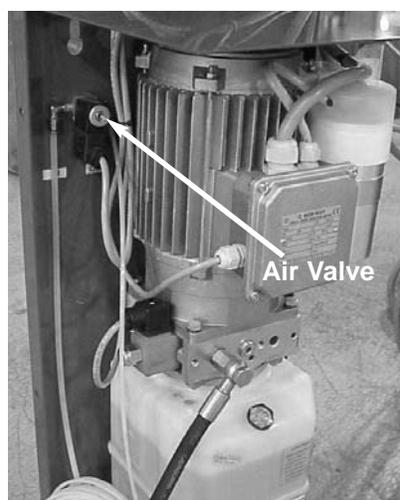


Figure 11

9. Make sure that the ground wire is properly connected to the cabinet. (See Figure 12.) Close the cabinet.
10. Position treadway extensions at ends of treadway and slide the extensions onto porta-frame structure. (See Figure 13 and its inset.)

**CAUTION:** To prevent personal injury and/or property damage while loading and unloading vehicle make certain treadway extensions are securely attached to porta-frame.

11. Attach wheel stops to one end of tread-way extensions. Wheel stop bolts interlock with holes in extensions. (See Figure 14 and its inset.)
12. Attach loading ramps to opposite end of mainframe. Loading ramp bolts interlock with holes in treadway extensions. (See Figure 15 and its inset.)

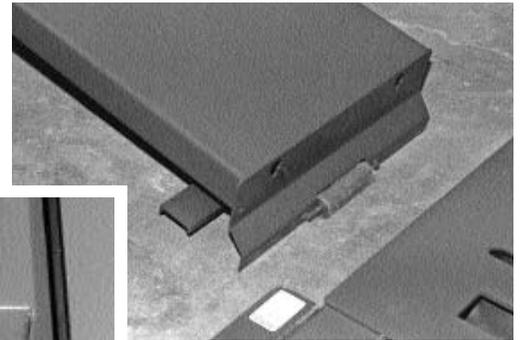


Figure 13

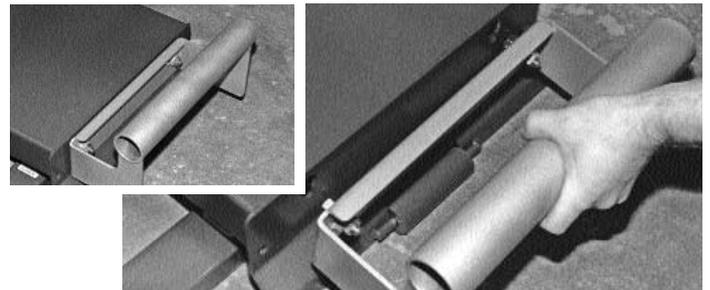
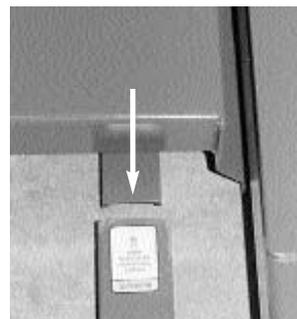


Figure 14

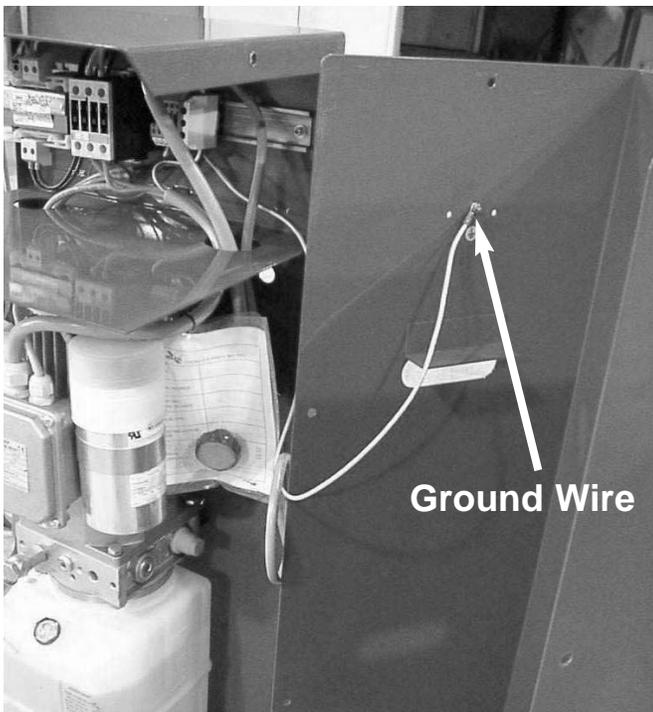


Figure 12

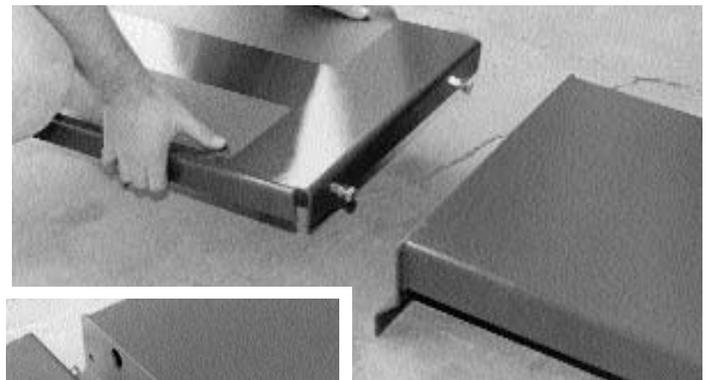


Figure 15

## To load vehicle

**IMPORTANT:** Make certain mainframe extensions, wheel chocks and loading ramps are installed.

- ▲ WARNING:** To prevent personal injury or death from explosion or fire:
1. Vehicles with fuel leaks should not be placed on the Streamliner.
  2. Fuel tanks must not be removed or replaced on the Streamliner.
  3. Cleanup and ventilation of fuel spills is mandatory before operating the electric pump, grinding, welding, drilling or smoking.

1. With the aid of an assistant to guide you, drive vehicle slowly onto mainframe (see Figure 16) until vehicle is centered over mainframe. Wheels should be close to but not touching wheel stops. (See Figure 16 inset.)
2. Engage vehicle's parking brake and block its wheels.
3. Remove loading ramps from treadway extensions.
4. Remove one wheel stop and attach it to treadway extension at rear of mainframe.

**▲ CAUTION:** To prevent personal injury always keep feet clear when raising or lowering the Streamliner.

## Supporting / Securing Vehicle

**IMPORTANT:**

- Use support stands for all surface work (i.e. sanding, etc.) Two styles are provided - 'vertical' and 'offset'. Two supports are also provided, 'pinchweld' and 'frame rail'. (See Figures 17 and 18.) The supports may be used in either stand.

**▲ CAUTION:** DO NOT attempt to make a pull when support stands are installed.

- Use anchoring stands when using a pulling tower. Figure 19 shows anchoring stand being secured to mainframe. The clamp jaws mount to vehicle's pinch-weld or to t-tabs welded to frame rails. A tall mast can be mounted to the anchoring stand for measuring purposes. (See Figure 20.)

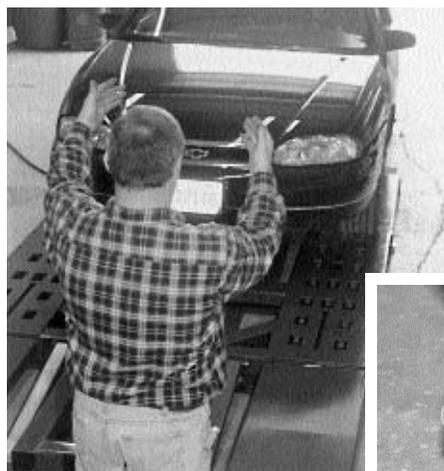


Figure 16

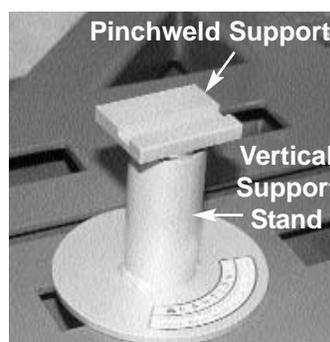
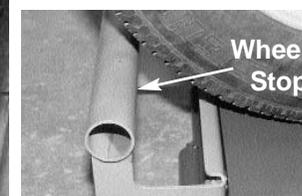


Figure 17

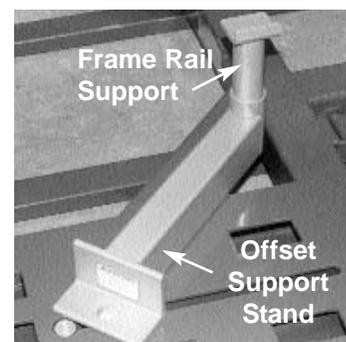


Figure 18

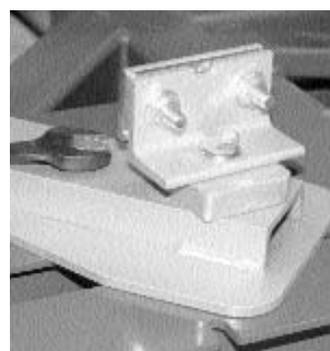


Figure 19

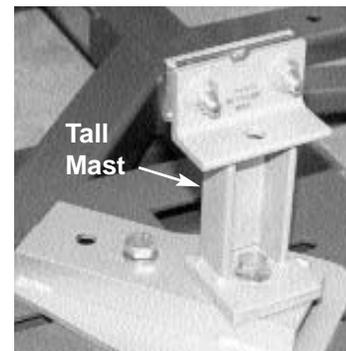


Figure 20

### Support Stand Installation

1. Assemble support stands. (See examples - Figures 17 and 18 on page 4.)
2. Position support stands on mainframe below structural components at front and rear corners of vehicle's center section.

**CAUTION:**

- 1) To avoid personal injury due to vehicle falling, entire circular base of vertical support stand must be positioned squarely on mainframe. (See Figure 21.)
- 2) To avoid personal injury due to vehicle falling, mounting pins on offset supports must engage treadway brackets (see Figure 22 and its inset) and treadway lock inserts must be installed (see Figure 23 and its inset).

**IMPORTANT:** If vehicle's ground clearance does not allow installation of support stands at main frame's lowest level, use appropriate lifting device to assist the installation process.

3. Press 'up' button to raise mainframe until support stands contact structural components.

**IMPORTANT:** Vehicle pinchwelds must rest with grooves on pinchweld supports and frame rails must rest securely on frame rail supports.

4. When vehicle is firmly positioned on stands, press 'up' button again and raise mainframe to desired height.

**CAUTION:** Field of motion of load carrying device must be free of persons and obstructions.

5. Partially depress the down button to allow the machine to lower engaging the safety lock arms with the lock arm stops. (See Figure 25.)

**IMPORTANT:** The down button is a two-position switch. (See Figure 24.) Partially depressing this button releases the hydraulic pressure allowing the machine to lower. Fully depressing this button releases the hydraulic pressure and activates the pneumatic cylinder to raise the safety lock arm above the lock arm stops.

6. Position control switch on mainframe or cabinet cord hanger. DO NOT lay control switch on the floor.

7. To lower vehicle and remove support stands, make certain treadway extensions and wheel stops are installed. Press 'up' button to release lock arms from stops. (See Figure 26.) Fully depress the down button to release the safety lock arm and lower the mainframe.

**CAUTION:** Field of motion of load carrying device must be free of persons and obstructions.

8. Remove support stands from mainframe.

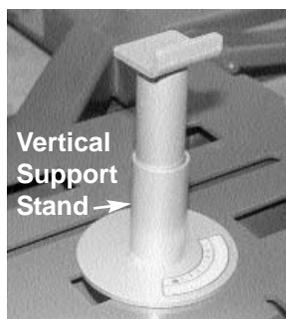


Figure 21

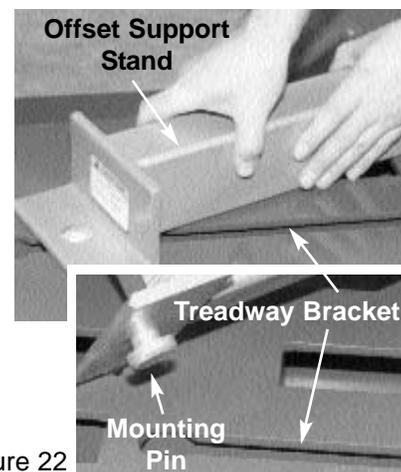


Figure 22

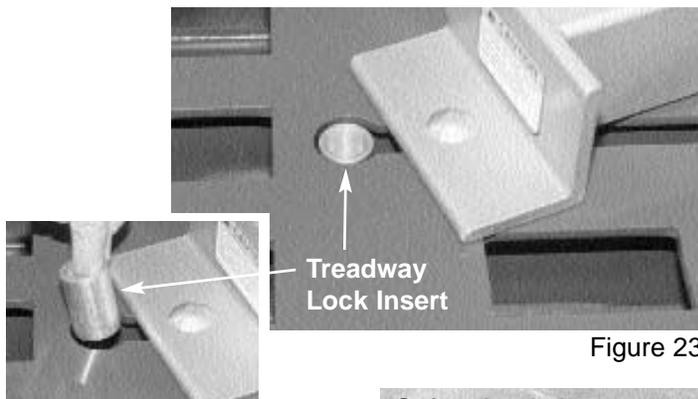


Figure 23

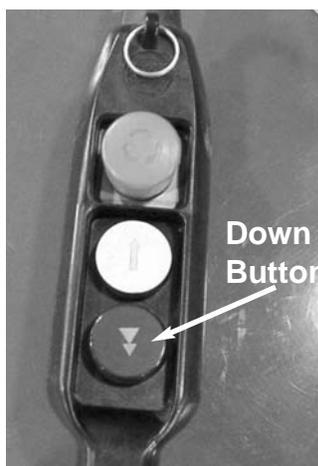


Figure 24

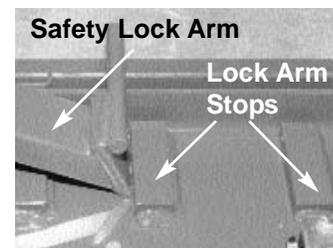


Figure 25

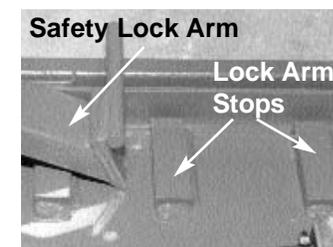


Figure 26

## Anchoring Stand Installation

**NOTE:** If vehicle is to be measured, the tall optional masts may be required.

1. Insert sliding nut into tie down hole next to treadway slot and slide it into the treadway slot. (See Figures 27 and 28.)

2. Position anchoring stands on mainframe below front and rear corners of vehicle's center section. Thread anchoring stand bolt into sliding nut in treadway bracket. (See Figure 29.) Do not tighten securely at this time.

3. Adjust position of anchoring stands so clamp jaws are directly below vehicle's pinchweld or below t-tabs welded to frame rails.

**IMPORTANT:** If vehicle's ground clearance does not allow installation of anchoring stands at mainframe's lowest level use appropriate lifting device to assist the installation process.

4. Press 'up' button to raise mainframe until vehicle's pinchwelds (or t-tabs) fit securely within clamp jaws.

5. Tighten clamp jaw bolts. (See Figure 30.) Also tighten bolts securing mast to anchoring stand (see Figure 31.) and anchoring stand base to mainframe.

6. Press 'up' button again to raise mainframe to desired height.

**CAUTION:** Field of motion of load carrying device must be free of persons and obstructions.

7. Partially depress 'down' button to engage safety lock arms with stops. (See Figure 32.)

8. To lower vehicle and remove anchoring stands, make certain treadway extensions and wheel stops are installed. Press 'up' button slightly to release lock arms. Fully depress 'down' button to lower mainframe to first pair of stops from bottom. Partially depress 'down' button at this location making certain safety lock arms engage the stops. (If using optional tall masts, lower mainframe to lowest level.)

**CAUTION:** Field of motion of load carrying device must be free of persons and obstructions.

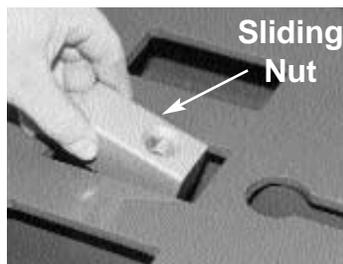


Figure 27

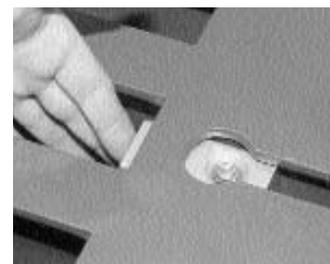


Figure 28



Figure 29



Figure 30



Figure 31

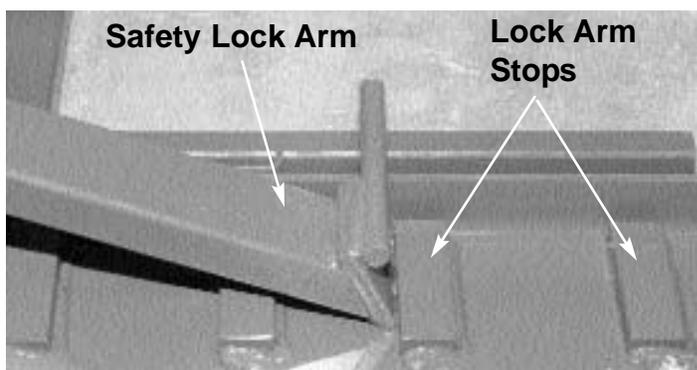


Figure 32

9. Loosen clamp bolts so they will detach from vehicle when further lowering mainframe.
10. Press 'up' button slightly to release lock arms. Fully depress 'down' button to lower mainframe to lowest level.
11. Remove anchoring stands from mainframe.

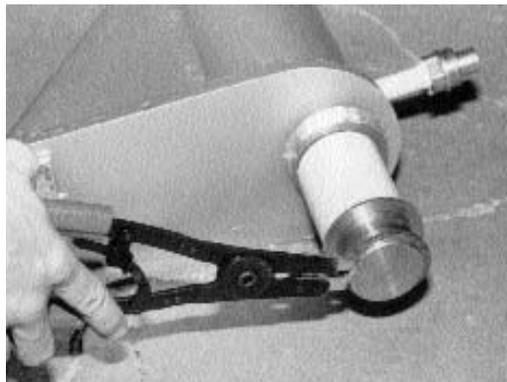


Figure 33

### To Unload Vehicle

1. Determine if vehicle will be driven forward or rearward off of mainframe and install loading ramps and wheel stops accordingly.
2. Drive vehicle off machine using assistant to guide you.



Figure 34

### Tower Installation / Usage

#### CAUTION:

- 1) Only one pulling device may be used at a time.
- 2) Only a Streamliner tower or lifting device provided with this product may be used. No exceptions!
- 3) DO NOT use tower to make a pull until vehicle is secured to mainframe.
- 4) The hydraulic pump pressure is set at 3,000 psi (210 bar). Any tampering, altering or adjustment to this system, or the use of any other hydraulic pump with this product, may cause serious personal injury and/or damage to equipment and property.

#### **Initial Installation**

1. Remove retaining ring and two washers from tower pivot post. (See Figure 33.) Leave one washer on pin.
2. With the aid of an assistant, position tower in tower arm assembly. (See Figure 34.)
3. Reinstall washers and retaining ring as shown in Figure 35.

**NOTE:** A second washer may be required at top of post if tower mast does not rotate freely.



Figure 35

4. Remove tape from tower head.
5. Install tower handles. (See Figure 36.) Secure each handle by tightening its set screw. (See Figure 37.)

### Basic Usage

**IMPORTANT:** DO NOT raise machine with tower installed unless a vehicle is on the machine.

### Nuts, Bolts, Clamps

**CAUTION:** To prevent personal injury from flying objects:

- 1) Check all bolts, nuts and clamps for deformation or elongation prior to each use.
- 2) Deformed or elongated materials must be replaced! If they look deformed, they are deformed.

When pulling is required:

1. Lower mainframe and install anchoring stands.
2. With mainframe at its lowest level (or first lock arm stop from bottom), push tower (using handles) toward mounting port. Fully engage tower in mounting port making certain lower lip of tower arm overlaps bottom edge of mainframe. (See Figure 38 and its inset.)
3. Raise mainframe to desired height and engage lock arms with stops  
**IMPORTANT:** Release system's hydraulic pressure. If hose is disconnected with pressure on the system, it will be very difficult to reconnect the hose.
4. Lift spring-loaded pin on tower arm and rotate tower to achieve desired pulling angle. (See Figure 39.) Fully engage the pin to prevent accidental movement.

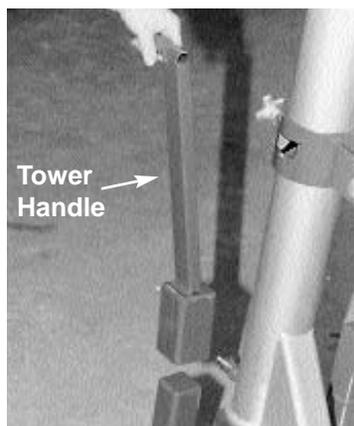


Figure 36



Figure 37

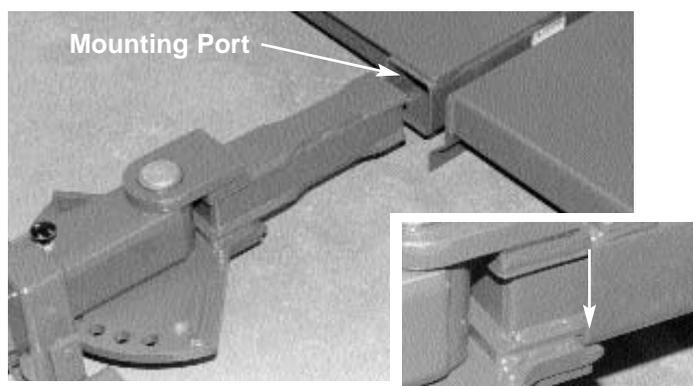


Figure 38

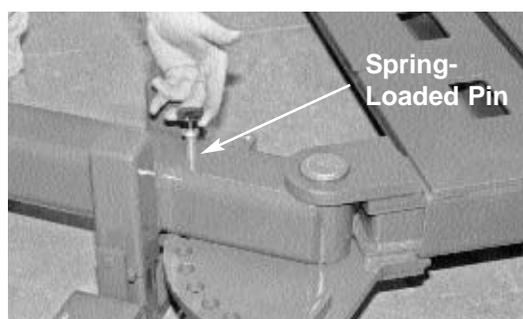


Figure 39

5. Rotate tower pipe as needed to align chain and collar with pull. Disengage spring-loaded pin on collar assembly to adjust collar up or down. (See Figure 40.) Fully engage the pin in a pinning hole to secure.

6. To adjust chain length, grip chain on each side of tower. (See Figure 41.) Lift tail of chain outward until it is approximately 45 degrees from tower. Disengage chain from tower head and pull chain to either increase or decrease chain length.

7. Let tower chain hang free momentarily to remove twist. Then, without twisting chain, attach hook to vehicle. Pull end of chain to tighten. (See Figure 42.)

**IMPORTANT:** Remove twist from chain before attaching hook to vehicle. Make certain that chain links between roller and hook align.

8. **Verify system is lowered against stops and pressure is released prior to disconnecting hose from lift cylinder hose.** Then attach hose to tower fitting. (See Figure 43.) Press 'up' button on control switch to operate system. Press 'down' button to release pressure.

**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.

9. When tower is no longer needed, push 'down' button to release pressure.

10. Detach tower chain and hook from vehicle and remove hydraulic hose from tower fitting.

11. Reconnect hydraulic hose to lift cylinder hose and lower mainframe to lowest level (or first pair of lock arm stops from bottom).

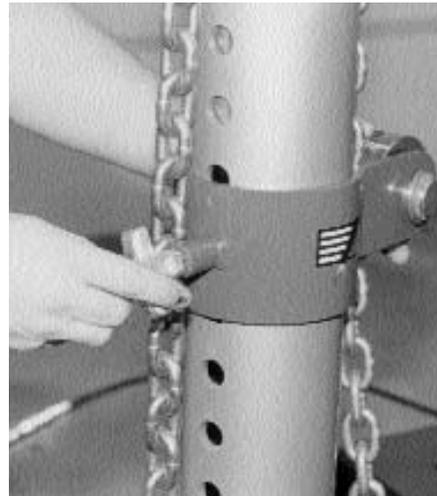


Figure 40

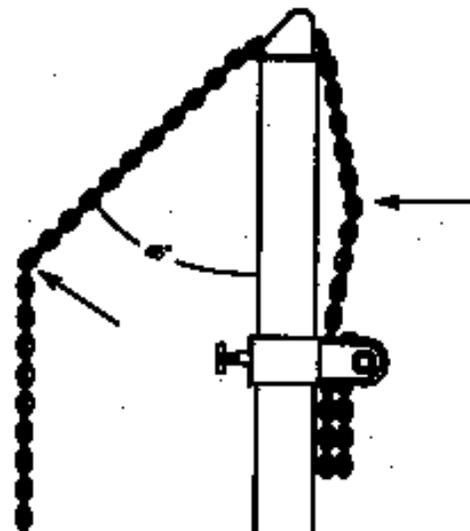


Figure 41

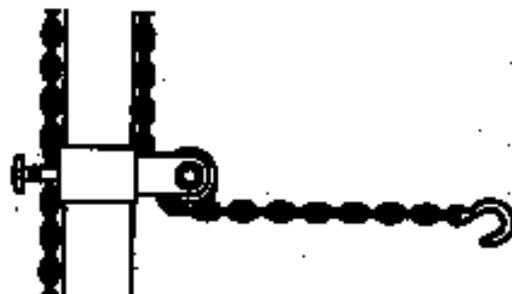


Figure 42



Figure 43

**IMPORTANT:** Verify system is lowered against stops and pressure is released prior to disconnecting hose from lift cylinder hose. Then attach hose to tower fitting. (See Figure 43.)

12. Remove tower from machine.

**IMPORTANT:** Make certain tower head has lowered before attempting to disengage hydraulic hose from tower fitting.

**CAUTION:**

- 1) Only one pulling device may be used at a time.
- 2) Only a Streamliner tower or lifting device provided with this product may be used. No exceptions!
- 3) DO NOT use tower to make a pull until vehicle is secured to mainframe.
- 4) The hydraulic pump pressure is set at 3,000 psi (210 bar). Any tampering, altering or adjustment to this system, or the use of any other hydraulic pump with this product, may cause serious personal injury and/or damage to equipment and property.

**Optional Accessories**

The Streamliner System accommodates several optional accessories. Additional **support stands** or **anchoring stand bases** can be purchased.

Other optional accessories include: **portability package**; **4" auxiliary ram and ram base**; **mainframe (front) extension**; **front movable crossmember**; and, **auxiliary ram adapter**.

The **portability package** consists of four caster assemblies (see Figure 44 and its inset) that mount to the four corners of the porta-frame. A lift lever (see Figure 45 and its inset) is used to elevate the front (or rear) of the machine to allow installation of the caster assemblies. After engaging lever with mainframe, lever must be lowered until it locks.

The **4" auxiliary ram package** consists of a ram base and a 4" auxiliary ram. (See Figure 46.) The ram features couplers that mate with the Streamliner's hydraulic hose. The assembly can be used when vehicle ground clearance prohibits installation of support stands or anchoring stands. The 4" ram should be positioned within a ram base and be placed squarely on the mainframe below a structural component of the vehicle.

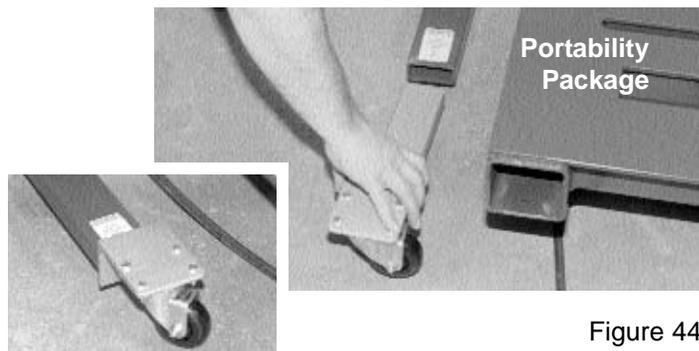


Figure 44

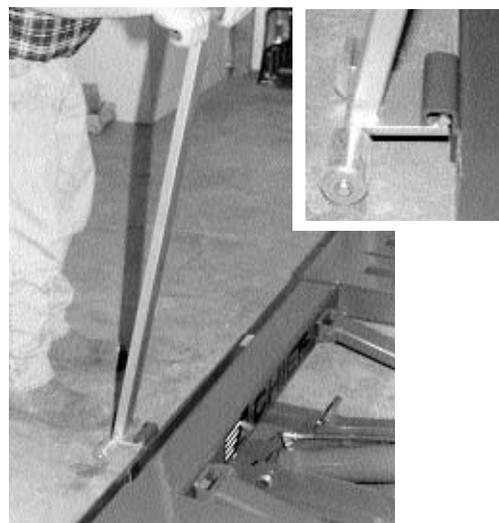


Figure 45



Figure 46

**Optional Accessories.....continued**

The **mainframe (front) extension** (see Figure 47) attaches to the tower mounting ports at the front of the mainframe. It must be secured with lock pins. (See Figure 47 inset.) The length of the attachment matches the width of the mainframe and it provides tower mounting ports at the front corners of the machine.

A **front movable crossmember** is available which can be positioned at various locations at the front of the machine. (See Figure 48.) The crossmember provides a sturdy base for perpendicular lifts or down pulls. It is held in place by drop-in hitch pins (top surface) and bolt-on plates (bottom surface). (See Figure 48 inset.)

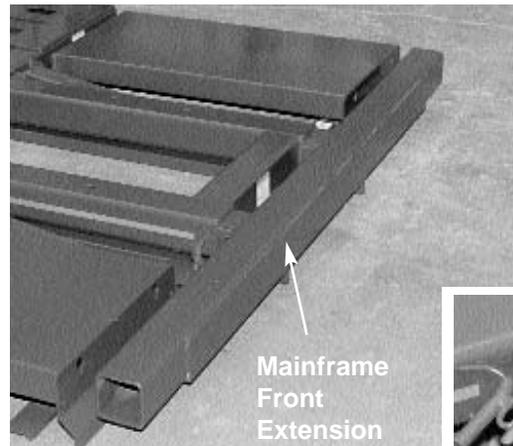


Figure 47

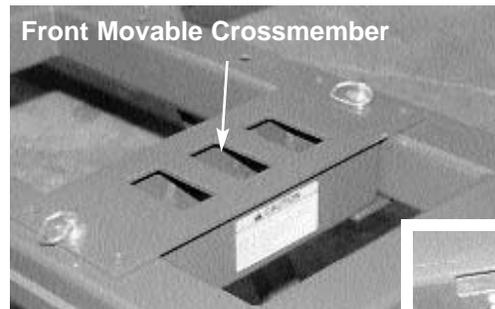


Figure 48







**P.O. Box 1368  
Grand Island, Nebraska 68802-1368  
Phone: 308/384-9747  
Fax: 308/384-8966**

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

**Chief reserves the right to alter product specifications  
and/or package components without notice.**