

EZ LINER EXPRESS

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 its EZ Liner Express Repair System 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.

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. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
4. Keep hair, loose clothing, fingers and all parts of the body away from moving parts.
5. Use only as described in this manual. Use only manufacturer's recommended attachments.
6. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

SAVE THESE INSTRUCTIONS

I. Lift Pump Assembly

1. Assemble Pump Holder by placing the handle shaft over the stem on the base. Insert locking pin at bottom of the handle shaft (see Figure 1).

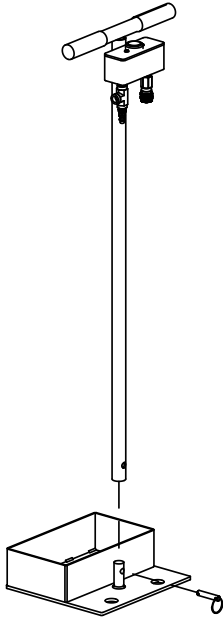


Figure 1

2. Place Lift Pump in the Pump Tray (see Figure 2). The Lift Pump can be identified by having a female disconnect on the hydraulic outlet and the pump does not have a pressure gauge.
3. Connect the airline from the Air Valve Tee to the Lift Pump (see Figure 2).

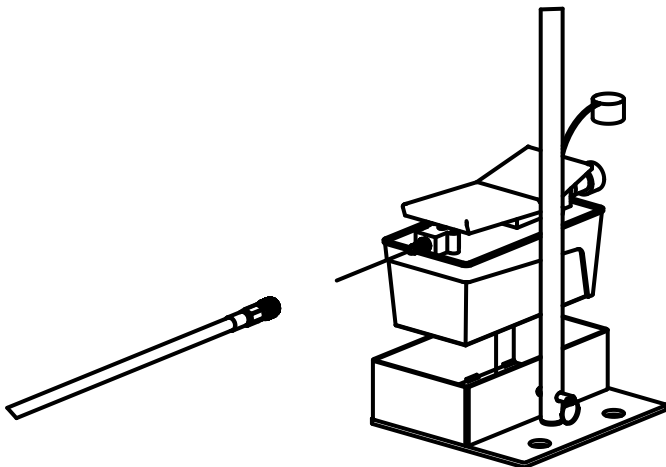


Figure 2

4. Connect the Safety Latch airline from the lift to the quick disconnect on the Air Valve Assembly on the side opposite the Air Valve Tee (see Figure 3).
5. Connect the male end of the hydraulic hose from the lift to the female disconnect on the Lift Pump (see Figure 2).
6. Connect the shop airline to the open quick disconnect on the Air (see Figure 3).

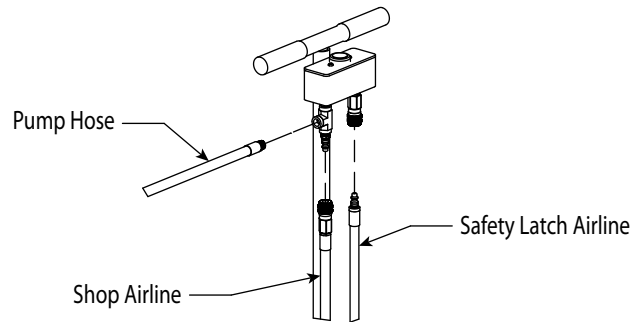


Figure 3

II. Tower Assembly

1. Set the brake on the Rear Casters (see Figure 4).

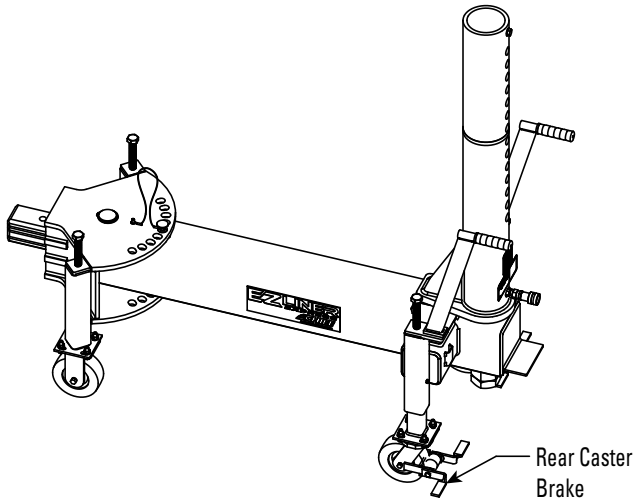


Figure 4

2. Remove the 1/2-13NC HHCS and 1/2" washer from the top of the Tower Pipe (see Figure 5).

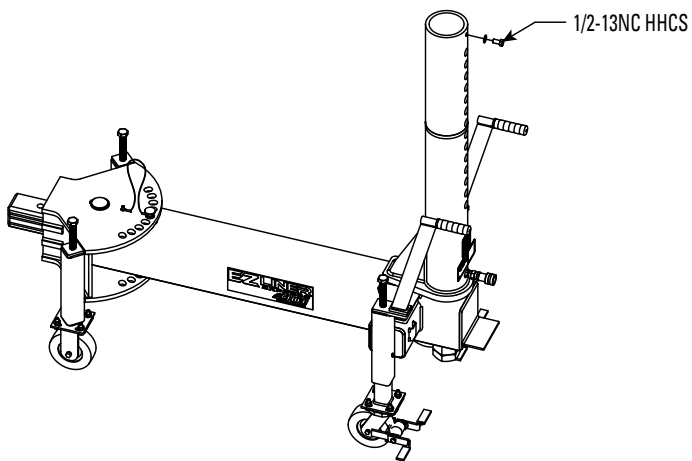


Figure 5

3. Install the Collar Assembly on the Tower Pipe (see Figure 6). Align the handle end of the Collar Assembly with the fourteen Collar Pin holes on the back of the Tower Pipe. Move the Collar Assembly vertically until the Collar Pin engages one of the Collar Pin holes on the Tower Pipe.

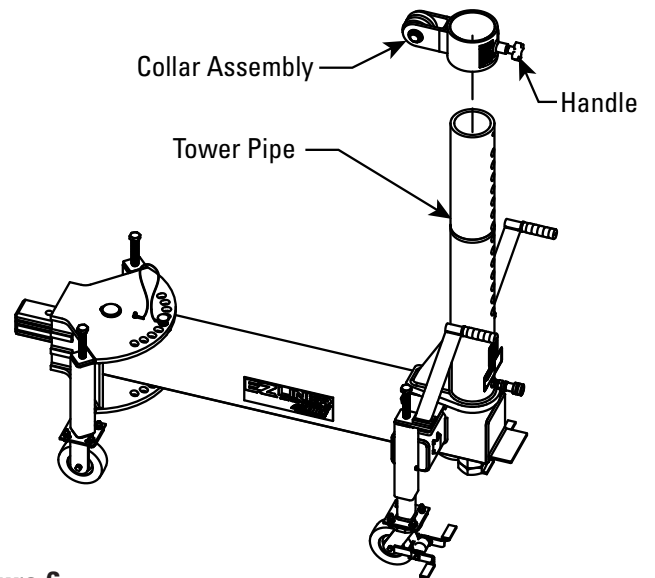


Figure 6

4. Insert the Tower Head Assembly into the top of the Tower Pipe. Align the chain stop end of the Tower Head with the Collar Pin Handle or rear of the Tower Pipe (see Figure 10).

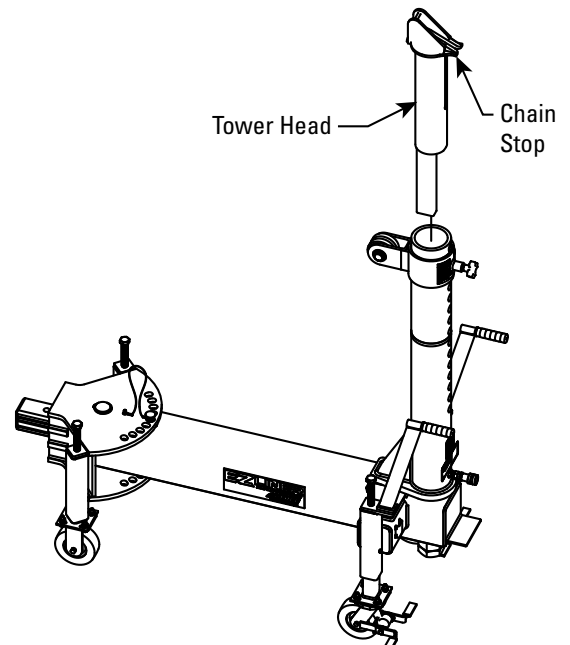


Figure 7

5. Reinstall the 1/2-13NC HHCS and 1/2" washer into the top of the Tower Pipe (see Figure 8).

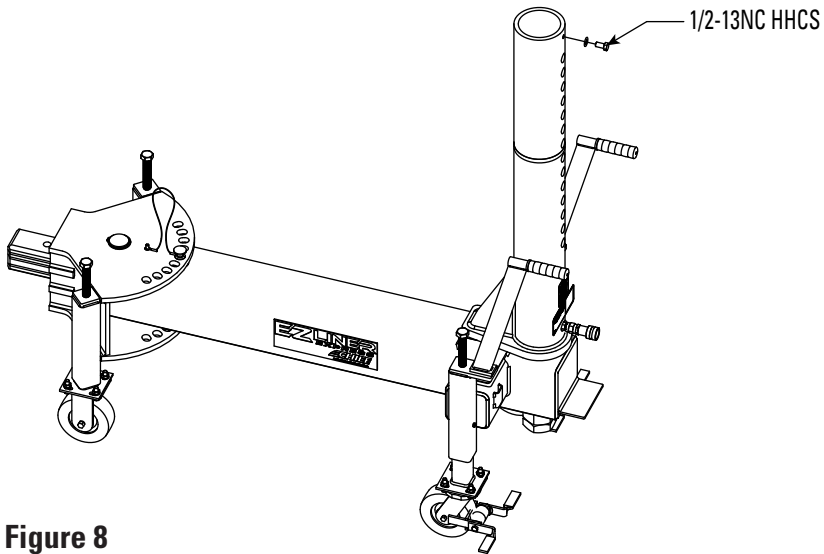


Figure 8

6. Remove the (4) M6 tower leg retaining bolts (see Figure 9).
7. Screw in the (4) M20 tower leg height adjustment bolts so that approximately 2" of the M20 bolt is still exposed (see Figure 9).

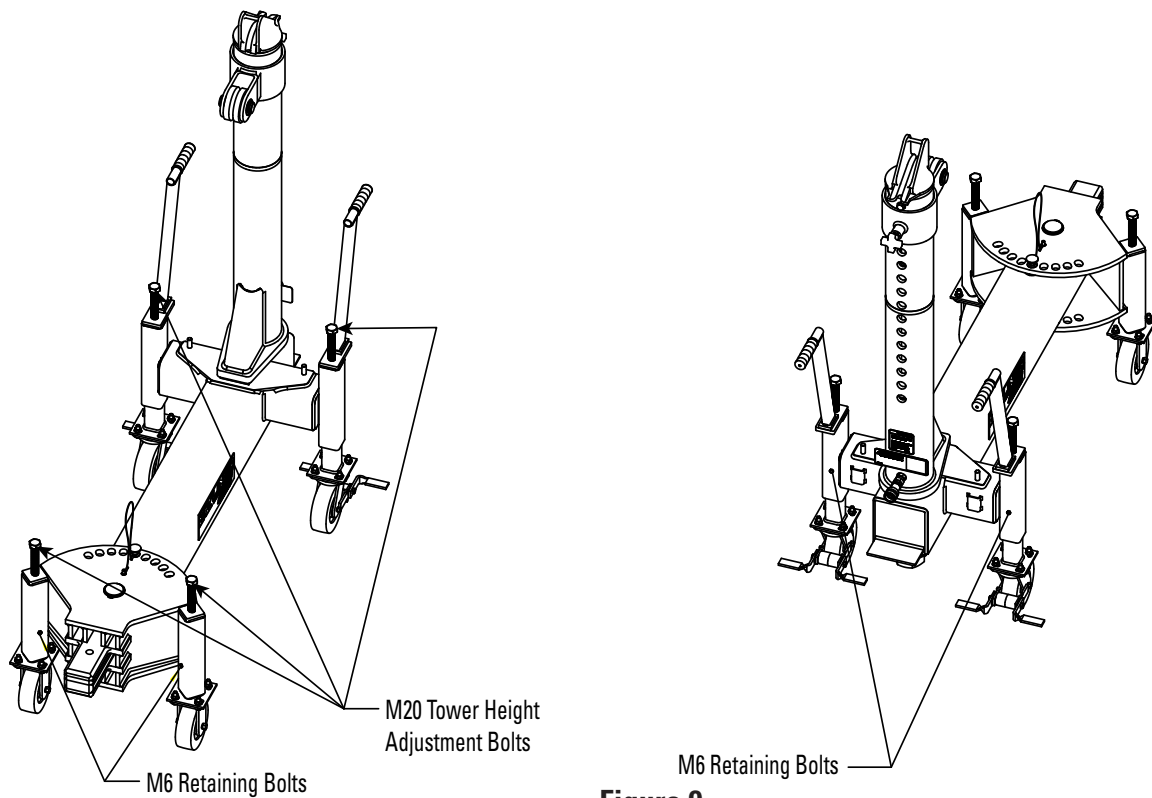


Figure 9

8. Insert the Tower Pump Storage Ring into one of the brackets on the rear of the Side Supports of the Tower (see Figure 10).

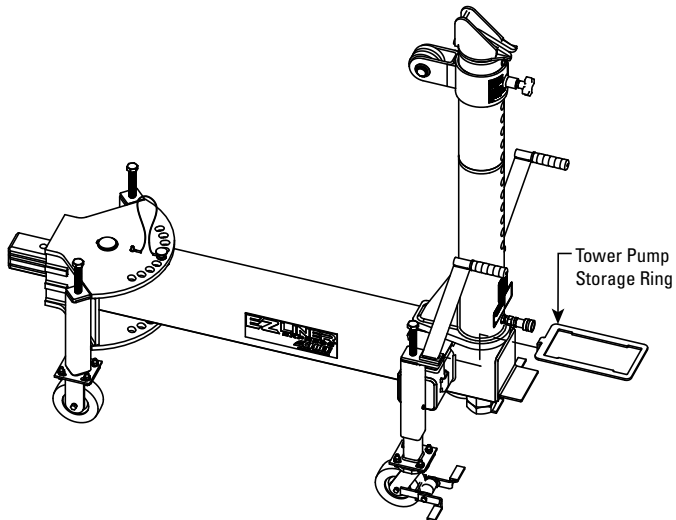


Figure 10

9. Insert the Tower Pump into the Tower Pump Storage Ring. The Tower Pump can be identified by having a hose with a male disconnect attached and a pressure gauge (see Figure 11).

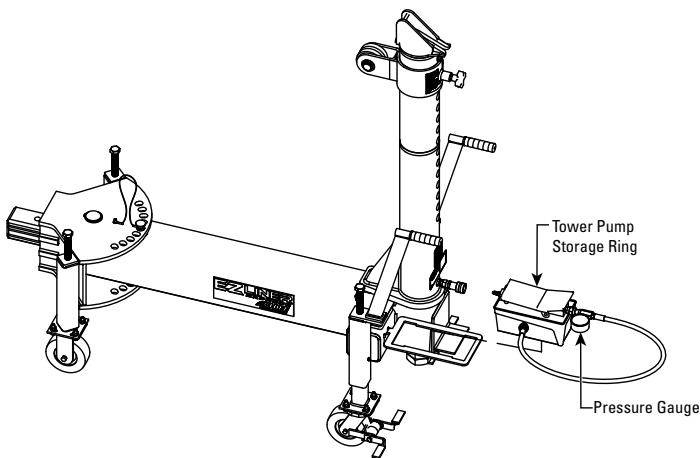


Figure 11

10. Connect the hose from the Tower Pump to the female disconnect protruding from the cylinder in the Tower Pipe (see Figure 12).

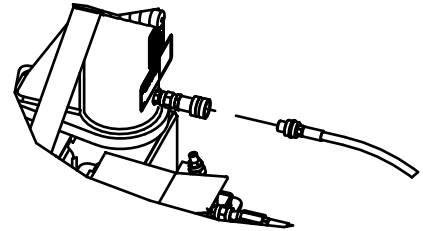


Figure 12

III. Set Stabilization Leg Height

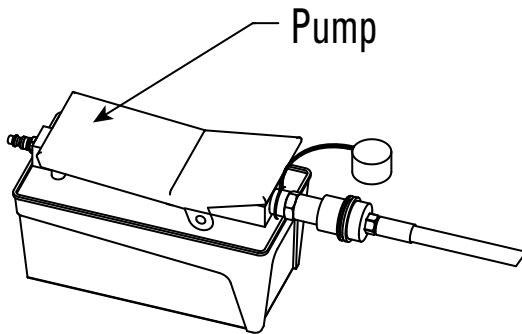


Figure 13

1. Raise the lift by pressing the pump portion of the pedal on the Lift Pump until the mainframe reaches the height where Tower Insert Plug can be inserted into the Mounting Port on the mainframe (approximately the height where the Safety Latch falls into the first Latch position) (see Figures 13 and 14).

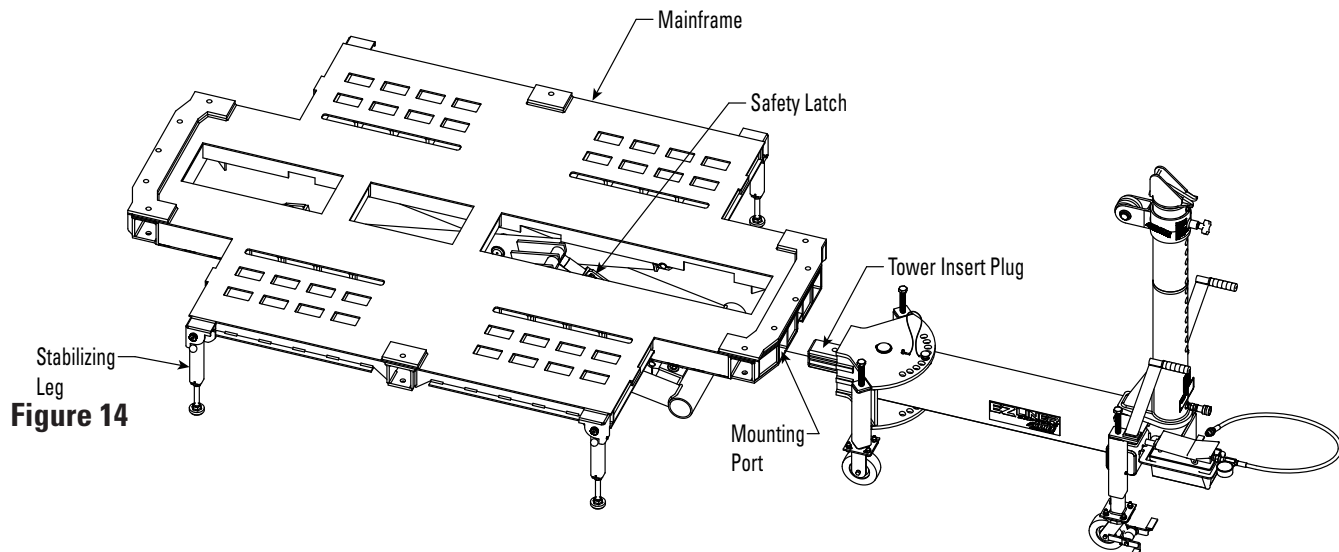


Figure 14

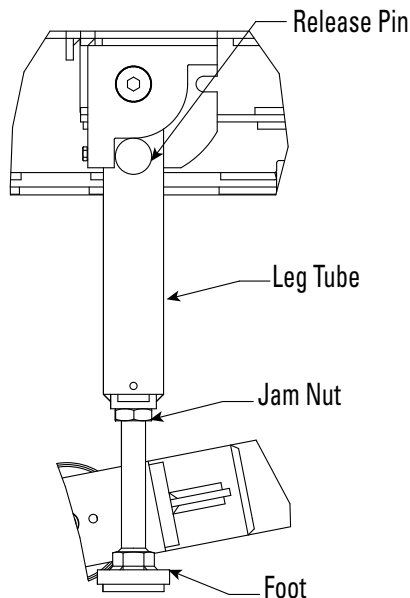


Figure 15

2. Pull the spring-loaded release pin on the stabilizing leg to allow the stabilizing legs to lower and lock in the vertical position (see Figure 15).
3. Unscrew each foot to lower the foot until the foot makes full contact with the floor (see Figure 15).
4. Tighten the jam nut against the bottom of each Leg Tube to lock each Leg height (see Figure 15).
5. Retract all stabilizing legs to the horizontal or storage position by pulling the spring loaded leg release pin and rotating the legs up until the legs are locked into the horizontal position.

- Disengage the Safety Latch by pressing the Release Button on the Air Valve on the Pump Stand. And lower the lift completely by pressing the release portion on the pedal of the Lift Pump (see Figure 16).

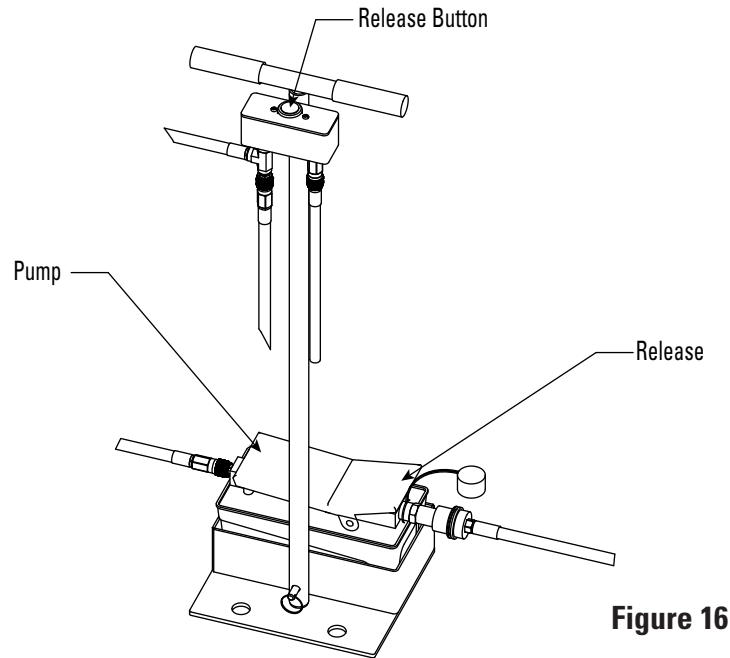


Figure 16

IV. Locate Ramps

- Roll a Ramp to each of the four corners of the lift (see Figure 17).

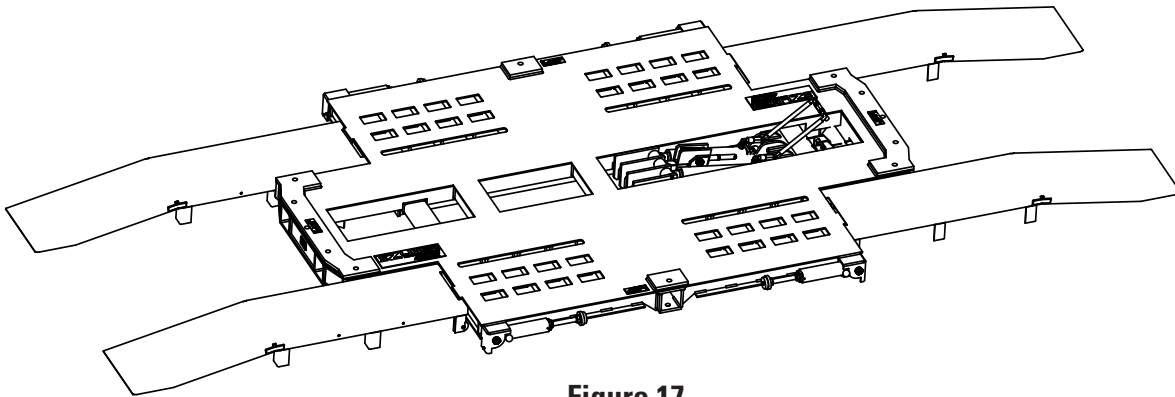


Figure 17

- Hook Ramps to the Lift Mainframe by hooking the tab from Mainframe into slot on the Ramp (see Figure 18).

Tip: To aid in locating the ramps when reinstalling the ramps while preparing to unload the vehicle from the lift, you may want to mark the floor with the location of the ramps.

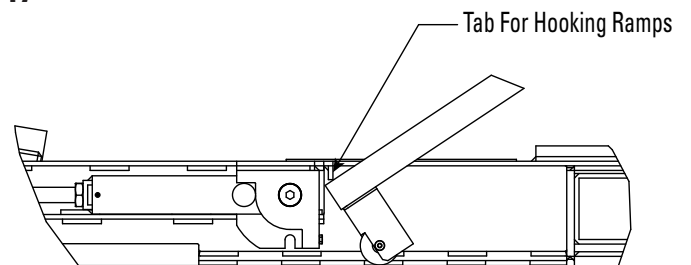


Figure 18

V. Verify Installation

1. Verify that with a vehicle that the vehicle lift has been installed correctly and the safety latch and stabilization legs work correctly.

VI. Safety Instructions:

- 1.) Remain clear of lift whenever raising or lowering a vehicle.
- 2.) Avoid excessive rocking of vehicle while on lift.
- 3.) Do not override any lift controls or safety mechanisms.
- 4.) Lift is to be used by trained personnel only.
- 5.) Proper maintenance and inspection is necessary for safe operation.
- 6.) Do not operate a damaged lift.
- 7.) Make sure mainframe is resting securely on the stabilization legs before pulling on vehicle.
- 8.) Make sure the lift is on the safety locks before working on the vehicle.
- 9.) Be Sure no one is standing in front or behind lift while vehicle is being driven onto or backed off the lift.
- 10.) DO NOT permit employees or customers on lift when it is either being raised or lowered.
- 11.) Never overload lift: capacity of lift is 5,500 lbs. CAPACITY SHOULD NOT BE EXCEEDED.
- 12.) Keep area around lift clean of tools, debris, grease, and oil.
- 13.) Replace all caution, warning, or safety related decals on the lift when unable to read or missing.
- 14.) The vehicle lift shall be operated with respect to the complete operating instructions.
- 15.) DO NOT permit employees or customers under lift.
- 16.) Lift is intended for lifting an unoccupied vehicle with a weight of 5,500 lbs (2,500 kg) with wheelbase of 77 in (1956mm) minimum and 136 in (3455 mm) maximum.
- 17.) DO NOT lower the lift completely with the vehicle mounted in the Anchor Stands

VII. To Load Vehicle

⚠ WARNING To prevent personal injury or death from explosion or fire:

1. Vehicles with fuel leaks should not be placed on the EZ Liner Express.
2. Fuel tanks must not be removed or replaced on the EZ Liner Express.
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 the mainframe until vehicle is centered over mainframe. All wheels should be located on ramps (see Figure 19).

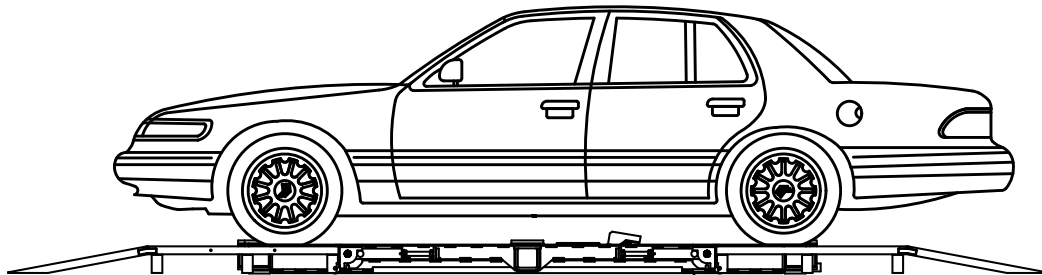


Figure 19

VIII. Supporting Vehicle

Use Support Stands for all surface work (i.e. sanding, etc.).

⚠ CAUTION DO NOT attempt to make a pull when support stands are installed. Use Anchoring Stands when using a Pulling Tower.

1. Place the Support Holder on the mainframe and locate the Support Holder below structural components at the front and rear corners of the vehicle's center section.

⚠ CAUTION To avoid personal injury due to vehicle falling, entire rectangular base of Support Stand must be positioned squarely on the mainframe.

IMPORTANT If vehicle's ground clearance does not allow installation of Support Stands at rack's lowest level, use appropriate lifting device to assist the installation process.

2. Place the Lift Pads into the Support Holders (see Figure 20).

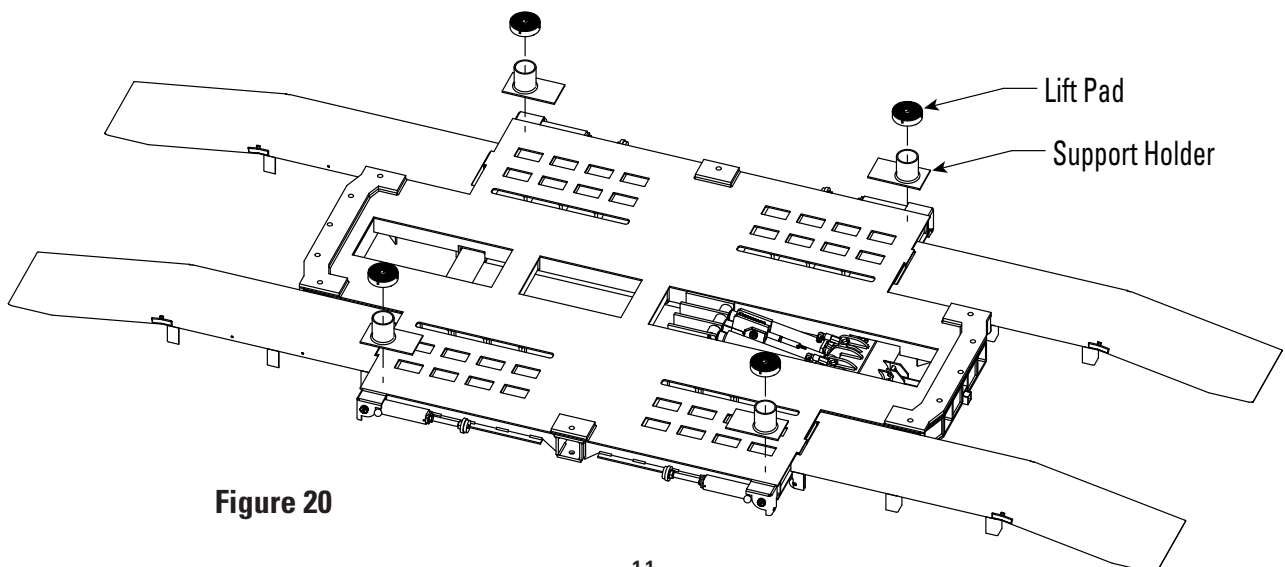


Figure 20

IX. Raise Vehicle

1. Press the pump portion on the pedal of the Lift Pump (see Figure 21) to raise the mainframe until the Lift Pads contact the structural components of the vehicle (see Figure 22).

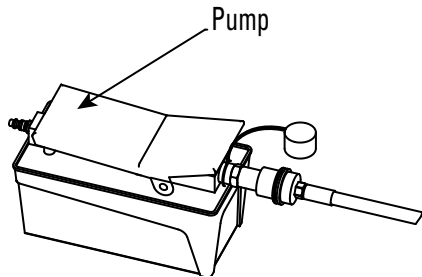


Figure 21

2. When the vehicle is firmly positioned on the Support Stands, press the pump portion on the pedal of the Lift Pump to raise the vehicle high enough to place the Wheel Stands underneath the wheels of the vehicle (see Figure 22).

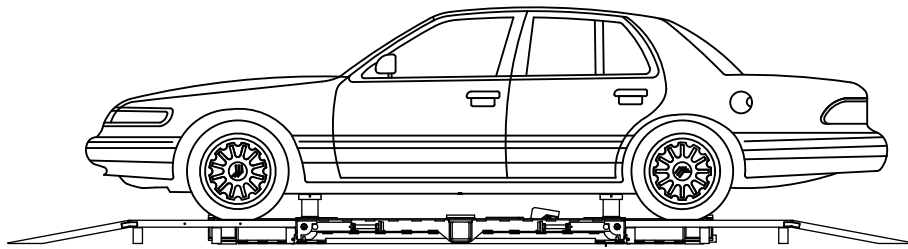


Figure 22

3. Remove the Ramps by lifting the sloped end and rolling them to a designated location.
4. Place the Wheel Stands under each tire of the vehicle (see Figure 23).

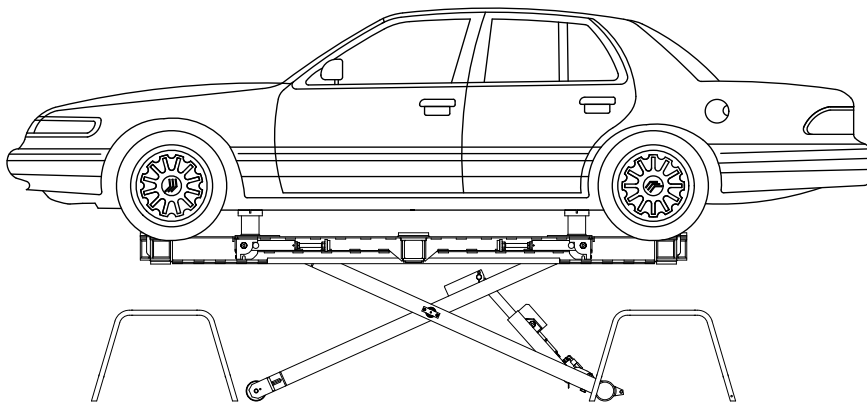


Figure 23

X. Lower Vehicle to Wheel Stands

1. Lower the vehicle by pressing the release portion on the pedal of the Lift Pump until the vehicle starts to make contact with the Wheel Stands (Figures 24 and 25).

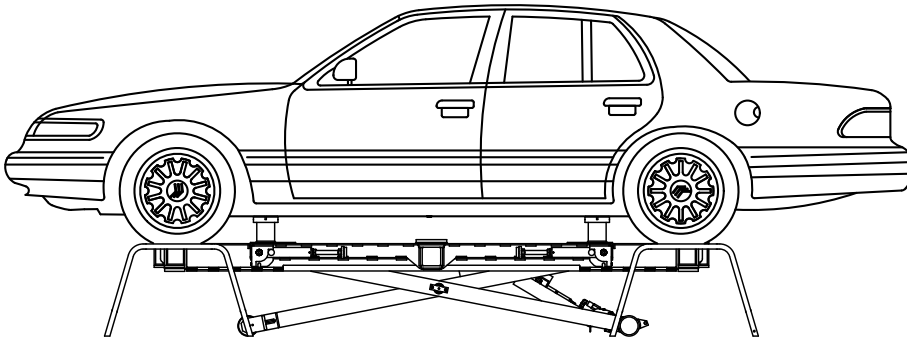


Figure 24

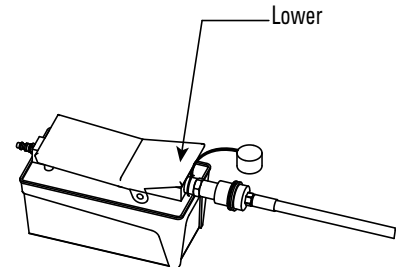


Figure 25

2. Make sure that the Wheel Stands are centered under the vehicle's tires.
3. Disengage the Safety Latch by pressing the Release Button on the Air Valve on the Pump Stand. And lower the lift completely by pressing the release portion on the pedal of the Lift Pump.
4. Remove the Support Stands and lift pads (see Figure 26).

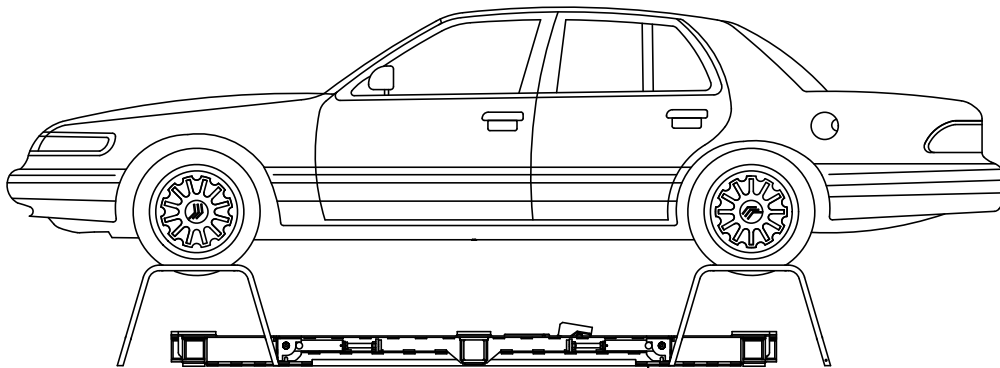


Figure 26

XI. Install Anchor Stands

1. Install the UMS Adapter in Anchoring Stand Base and position stand at front of the center section on side of vehicle that must not move with pull (see Figure 27 & 28).

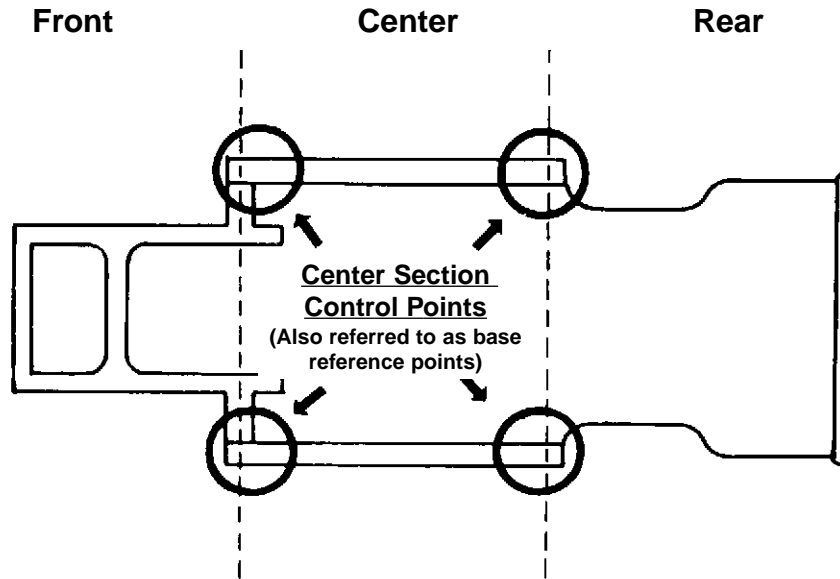


Figure 27

2. Prepare a second anchoring stand (as required) and position it on same side of vehicle at rear of center section.
3. Position anchoring stands directly below anchoring locations on pinchweld. Prior to positioning, observe pinchwelds to determine where clamp jaws should be attached. If possible, select reinforced pinchwelds that are free of obstructions (lines, etc.). Select locations in corners of center section and avoid locations in center of rocker.

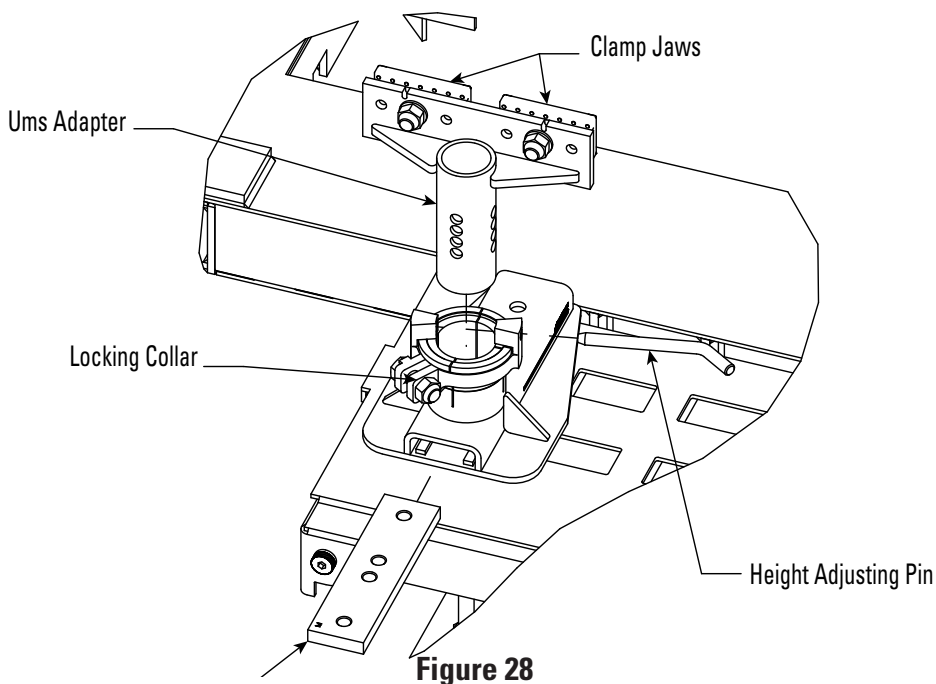


Figure 28

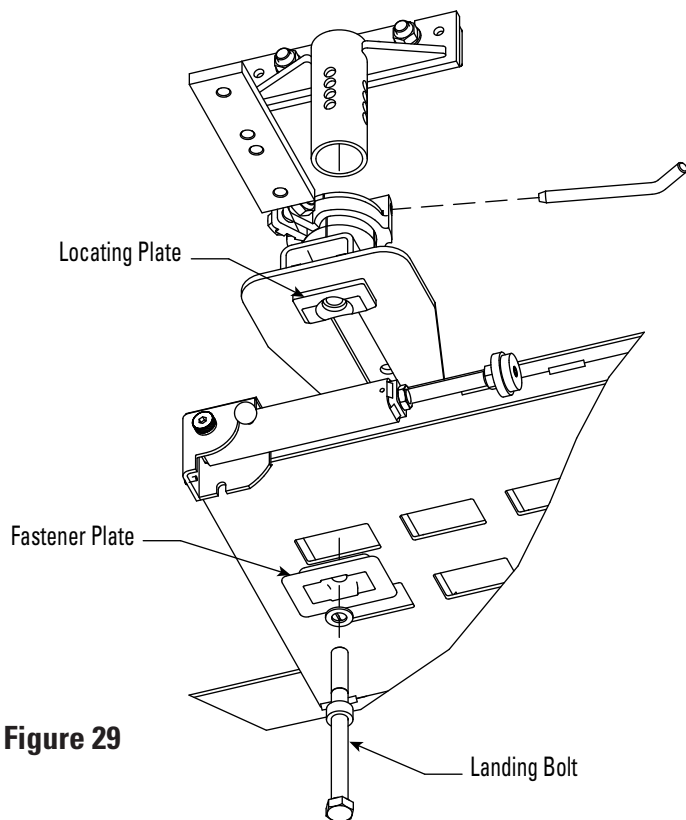


Figure 29

4. Center locating plate in most convenient tie down hole below attachment point on pinchweld. Anchoring stand installs more easily with locating plate positioned in tie down hole 3 to 4 inches outboard of attachment points.
5. Install anchoring stands on opposite side of vehicle. Repeat Steps 1 – 4.
6. Raise the mainframe and Anchor Stands up to the vehicle by pressing the pump portion of the Lift Pump.
7. Align the Anchor Stands so that the pinchweld of the vehicle is engaged in the clamp jaws.

IMPORTANT Rocker must rest firmly on top of the clamp jaw assembly prior to tightening.

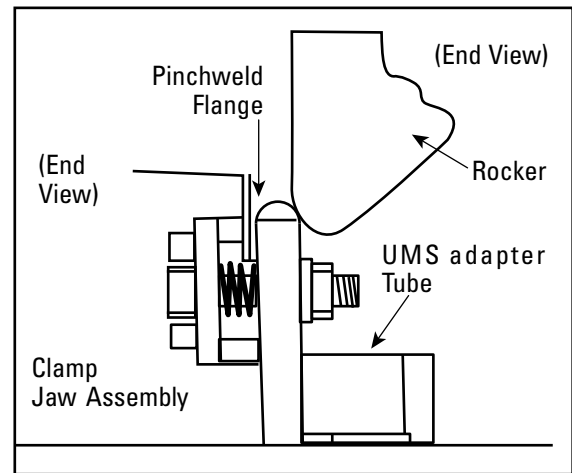


Figure 30

8. Secure anchoring stands to mainframe.
 - a. Install the fastener plates on the bottom of the mainframe in the same slots as the locating plates.
 - b. Tighten the Fastener Plates through their respective locating plates and to the Fastener bars using the Fastener Plate Bolt.
9. Tighten Clamp Jaws and Locking Collars.

IMPORTANT

Clamp jaws must be retightened after initial pulls are made. Clamp jaws will seat themselves during initial pull, resulting in a loosening of the clamp jaws. Clamp jaws may slip if not retightened.

XII. Raise Lift and Vehicle to Pulling Height and Lower Stabilizing Legs

1. Raise the lift and vehicle by pressing the pump portion of the pedal on the Lift Pump until the all of the Stabilization Legs can fall and become completely vertical (see Figure 31).

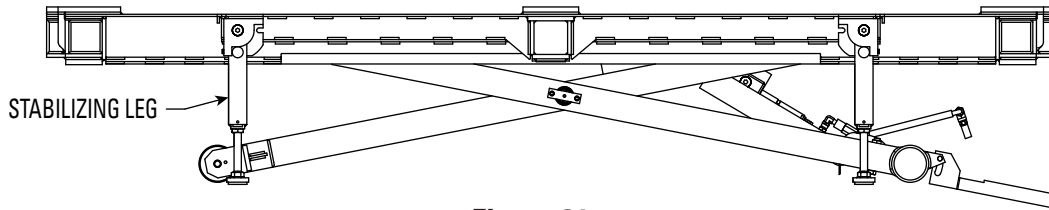


Figure 31

2. Pull the spring-loaded release pin on the leg to allow the leg to lower to a vertical position.
3. Lower the lift and vehicle unto the Stabilization Legs by pressing the Release portion of the pedal on the Lift Pump.

XIII. Tower Usage

Do not raise machine with tower installed.



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.



**Remove The Tower/Mainframe Pin
Prior To Pulling**

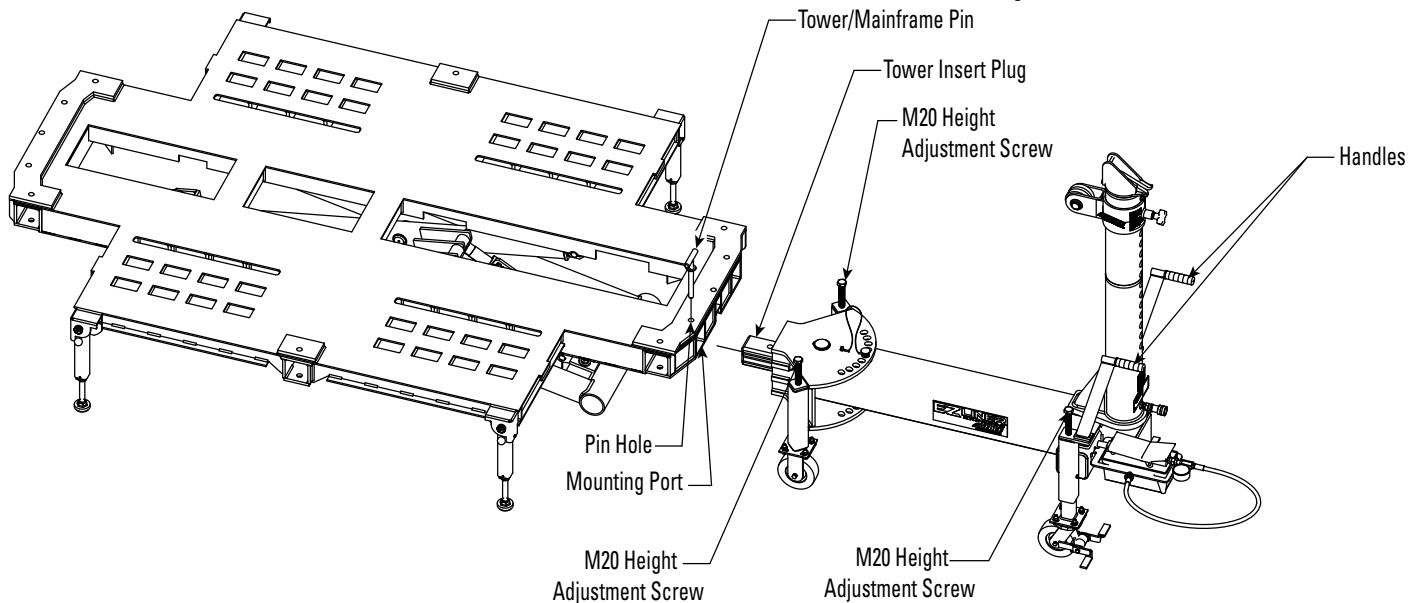


Figure 32

1. Push Tower (using handles) toward the tower mounting port on the mainframe (see Figure 32). Raise or lower the tower by tightening or loosening each M20 tower height adjustment bolt (4 total, see Figure 33) so that the insert plug on the tower is at the same height as the mounting port of the mainframe.

2. Push the Tower (using handles) so that the Tower Insert Plug is inserted into and fully engages the Mounting Port. To ensure full engagement, place the tower/mainframe pin into the pinhole on the mainframe. The tower/mainframe pin should proceed to fall completely through the top and bottom surfaces of the mainframe and completely through the pin hole in the Tower Insert Plug. In other words, the tower/mainframe pin should stop when the pin stop hits the top mainframe surface. **Remove the tower/mainframe pin prior to pulling!**

⚠ WARNING Failure to completely engage tower insert plug with the tower port on the mainframe could cause injury and damage to the tower or mainframe.

⚠ IMPORTANT
Remove
The Tower/Mainframe Pin
Prior To Pulling

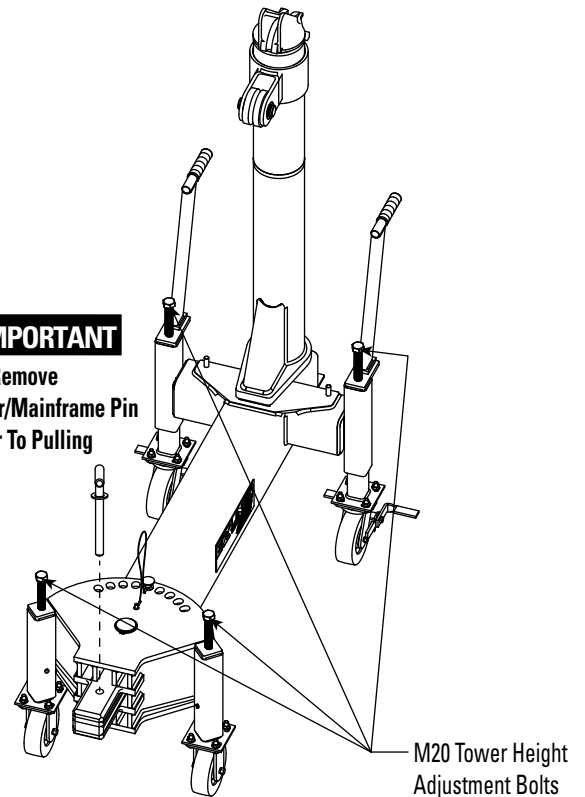


Figure 33

3. Pull the position pin on the Tower Arm and rotate the tower to achieve the desired pulling angle. Replace the position pin in the Tower Arm once the desired pulling angle is achieved (see Figure 34).

⚠ IMPORTANT Remove The Tower/Mainframe Pin
Prior To Pulling

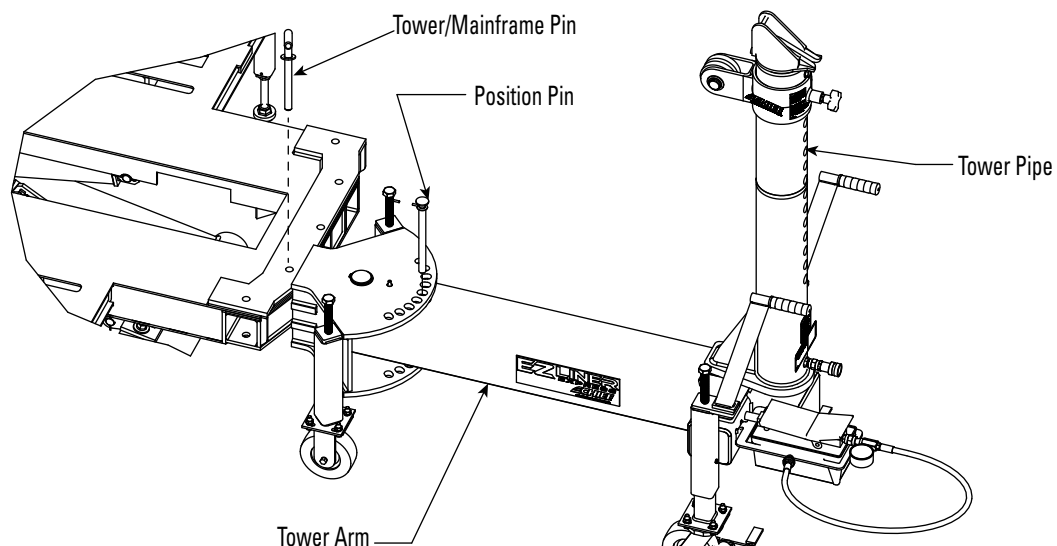


Figure 34

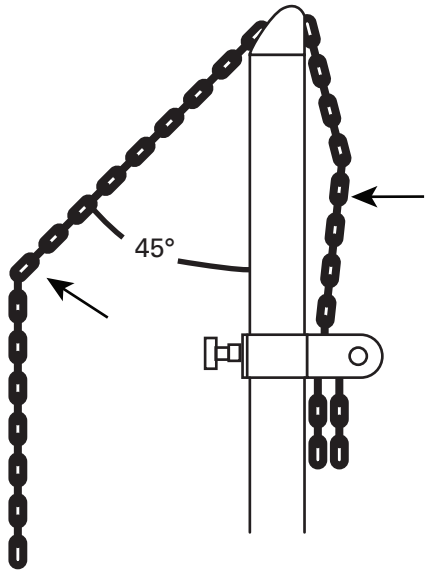


Figure 35

6. To adjust chain length, grip chain on each side of tower. Lift tail of chain outward until it is approximately 45 degrees from tower (see Figure 35). Disengage chain from tower head and pull chain to either increase or decrease chain length.

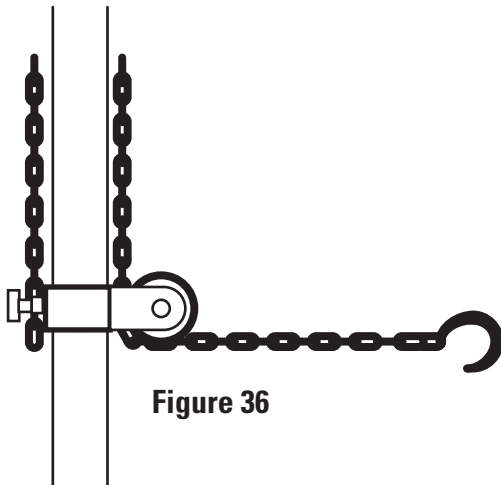


Figure 36

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 36).

IMPORTANT

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

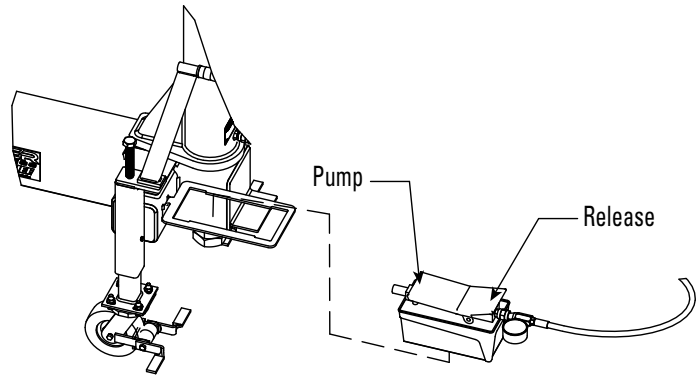


Figure 37

8. Remove the Tower Pump from the Tower Pump Storage Ring (see Figure 37) and position pump away from the tower and out of the direct line of the pull.
9. Connect the shop airline to the Tower Pump (see Figure 38).

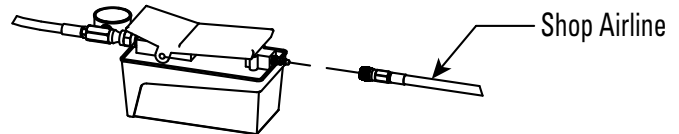


Figure 38

10. Push the pump portion of the pedal of the Tower Pump to perform a pull. Push the release portion of the pedal on the Tower Pump 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.

⚠ WARNING To avoid personal injury to yourself and others: **DO NOT** pull more than 3-tons above the designated line on tower (see Figure 39).

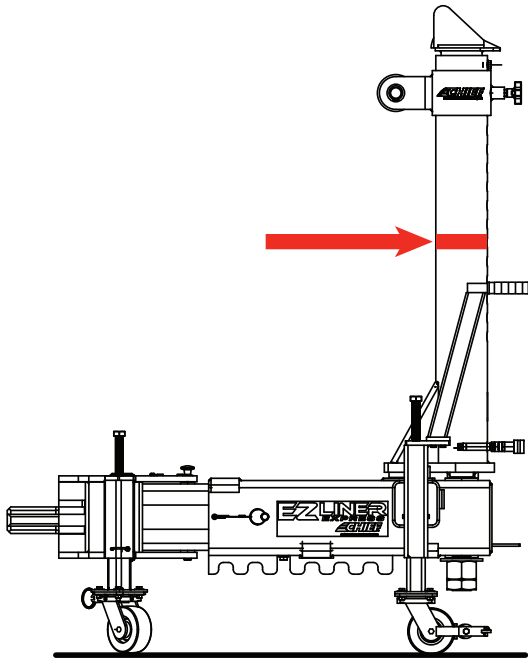


Figure 39

11. When the tower is no longer needed, push the release portion of the pedal on the Tower Pump to release hydraulic pressure.
12. Detach the tower chain and hook from vehicle, disconnect the shop airline from the Tower Pump, and place Tower Pump into Tower Pump Storage Ring.
13. Remove the Tower for the mainframe by pulling the Insert Plug out of the mainframe port using the handle.

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

CAUTION

- 1) Only one pulling device may be used at a time.
- 2) Only an EZ Liner Express 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 6,100 psi (420 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.

XIV. Vehicle Unloading

1. Replace the wheels on the vehicle if they were removed.

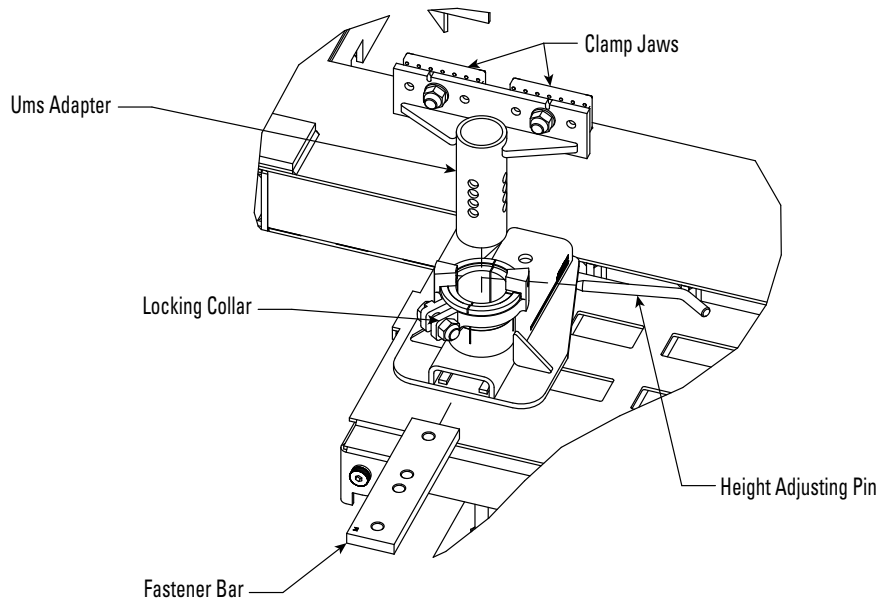


Figure 40

2. Loosen the Clamp Jaws and Locking Collars (see Figure 40).

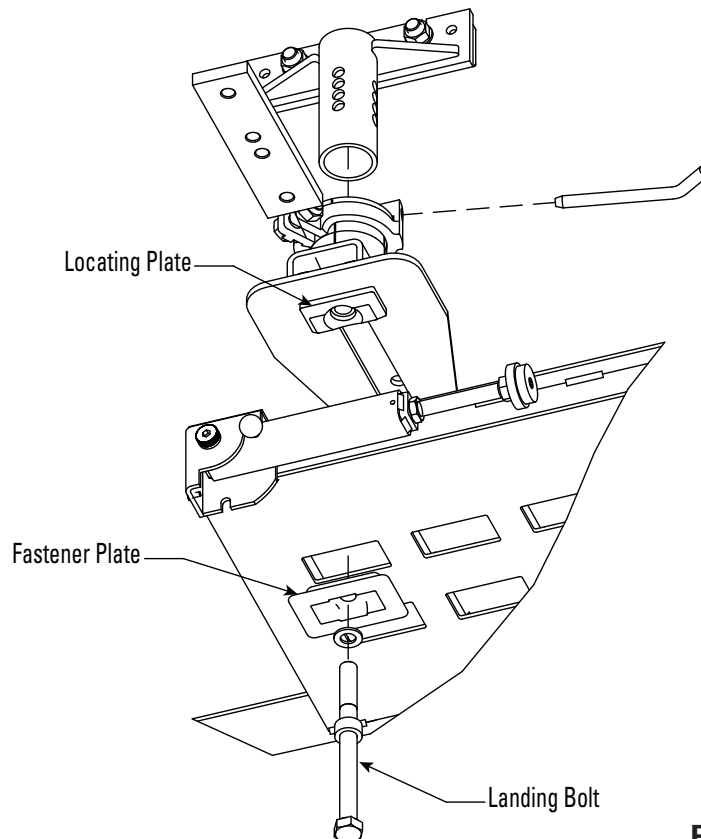


Figure 41

3. Remove the Fastener Plate Bolts and Fastener Plates from the bottom of the mainframe (see Figure 41).

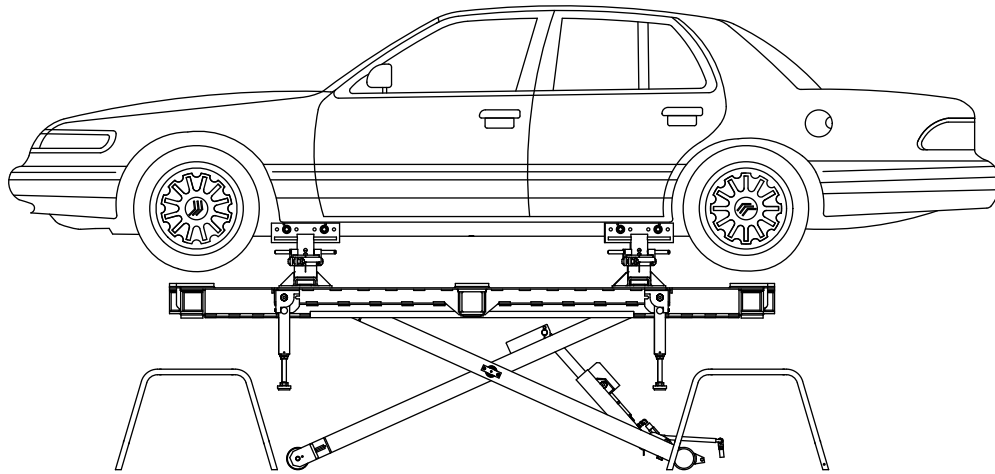


Figure 42

4. Raise the mainframe and vehicle high enough to be able to place the wheel stands under the tires of the vehicle by pressing the pump portion of the pedal on the Lift Pump (see Figure 42).

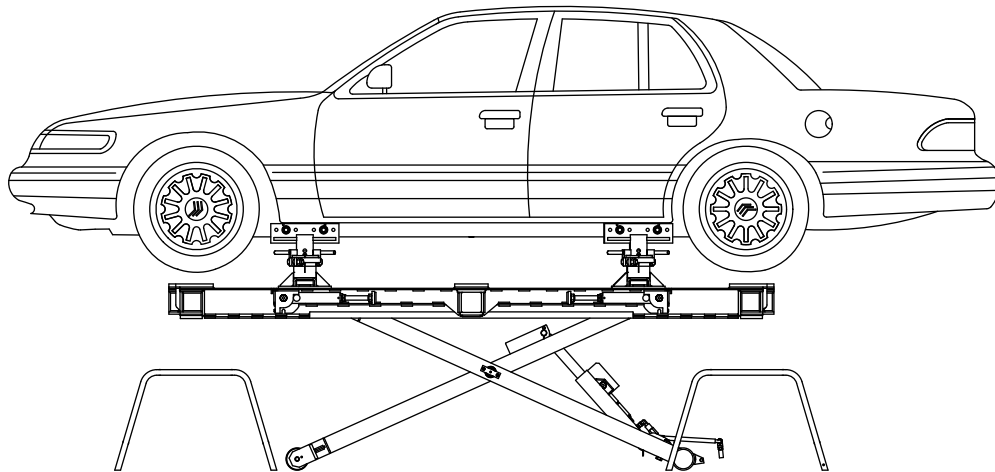
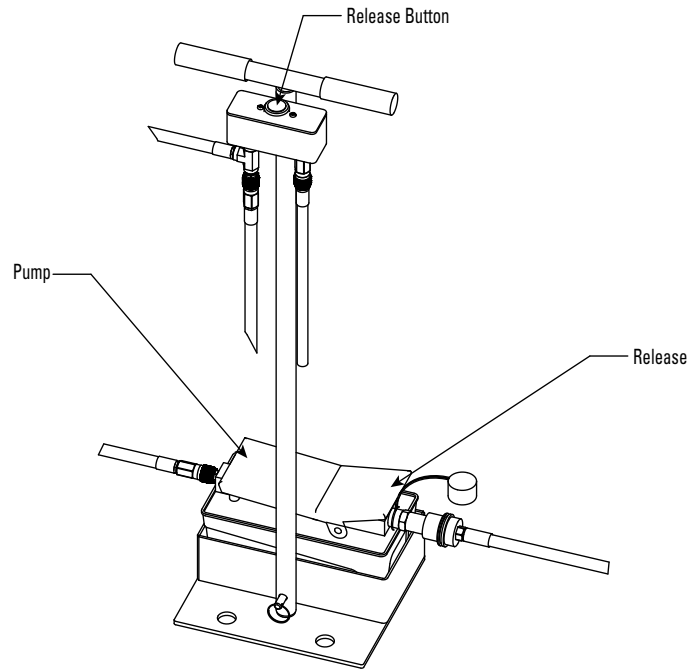
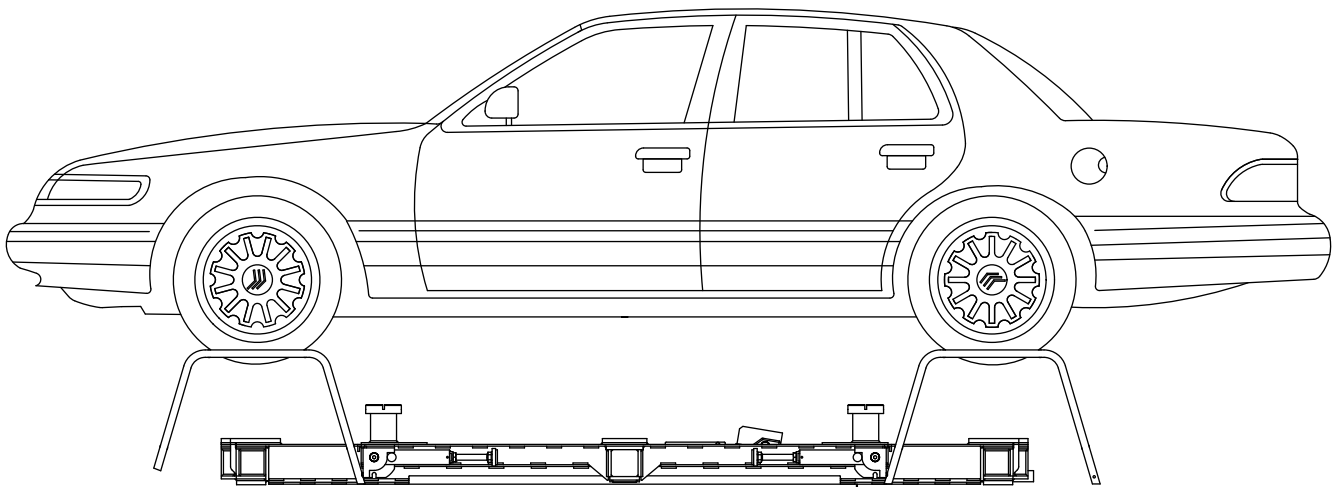


Figure 43

5. Retract the legs to the horizontal or storage position by pulling the spring loaded leg release pin and rotating the legs up until the legs are locked into the horizontal position (see Figure 43).

6. Disengage the Safety Latch by pressing the Release Button on the Air Valve on the Pump Stand (see Figure 44).
7. Lower the vehicle by pressing the release portion on the pedal of the Lift Pump until the vehicle starts to make contact with the Wheel Stands (see Figure 44).
8. Make sure that the Wheel Stands are centered on the vehicle's tires.
9. Lower the lift completely by pressing the release portion on the pedal of the Lift Pump (see Figure 44).
10. Remove the Anchor Stands from the mainframe.

**Figure 44****Figure 45**

11. Place the Support Holder on the mainframe and locate the Support Holder below structural components at the front and rear corners of the vehicle's center section (see Figure 45).

CAUTION

To avoid personal injury due to vehicle falling, entire rectangular base of Support Stand must be positioned squarely on the mainframe.

IMPORTANT

If vehicle's ground clearance does not allow installation of Support Stands at rack's lowest level, use appropriate lifting device to assist the installation process.

12. Place the Lift Pads into the Support Holders.

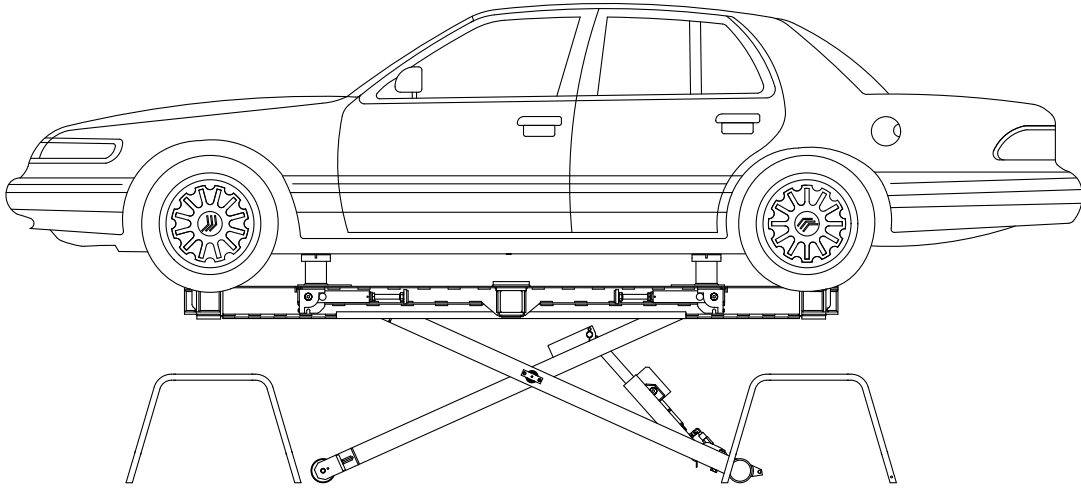


Figure 46

13. Raise the mainframe and Support Stands up to the vehicle and lift the vehicle off of the Wheel Stands by pressing the pump portion of the Lift Pump (see Figure 46).
14. Remove the Wheel Stands.

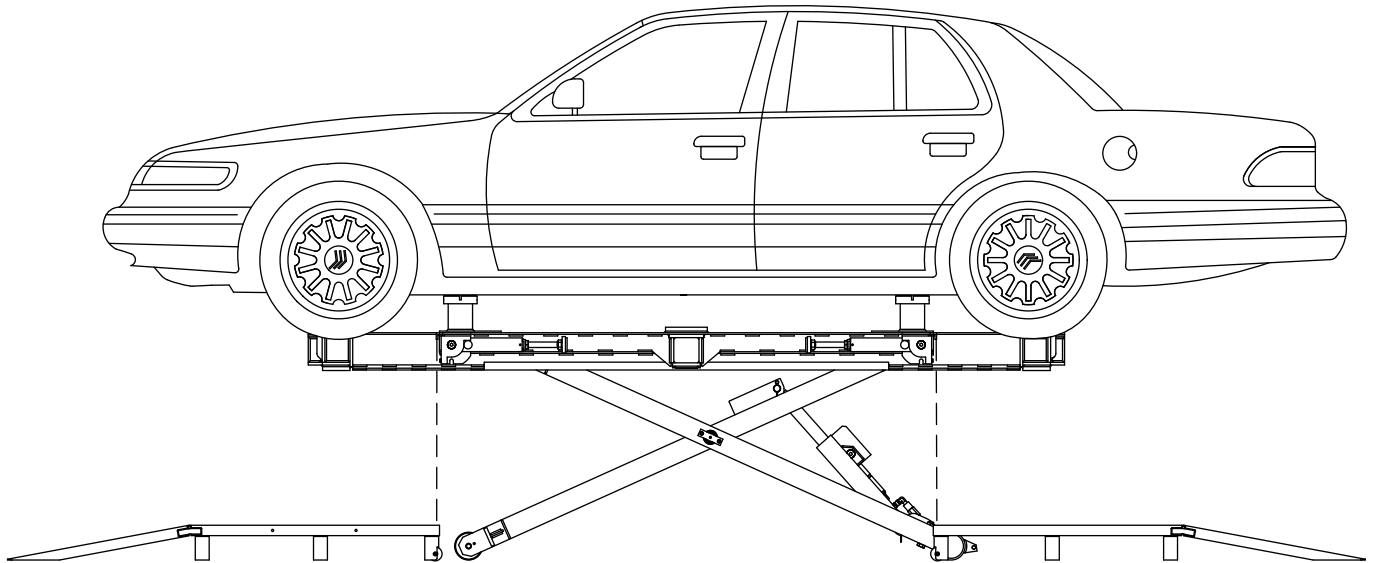


Figure 47

15. Replace the ramps to their original positions so that the ramps are in close proximity to the deck with less than an 1/2" (12mm) gap between the deck and the ramp. Note: the ramps only need to be engaged with the ramp tab on the mainframe while loading the vehicle onto the mainframe.

16. Disengage the Safety Latch by pressing the Release Button on the Air Valve on the Pump Stand and lower the lift completely by pressing the release portion on the pedal of the Lift Pump (see Figure 48).

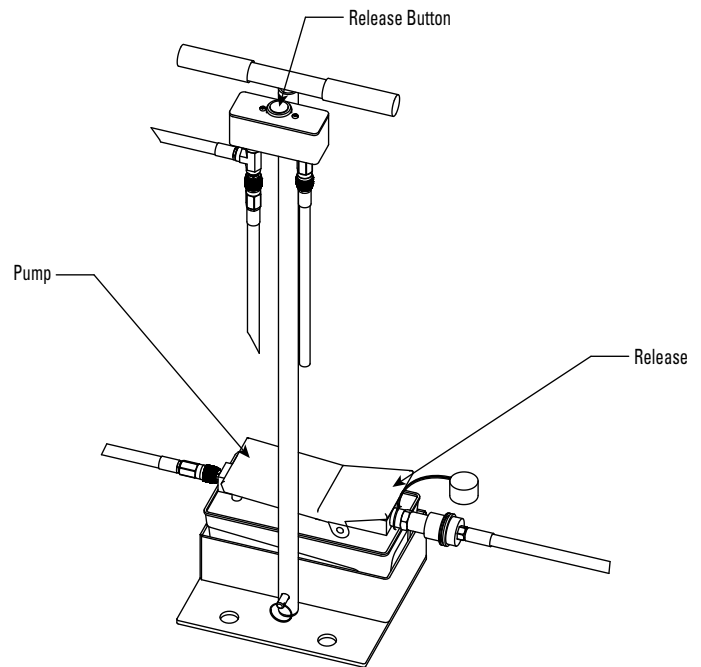


Figure 48

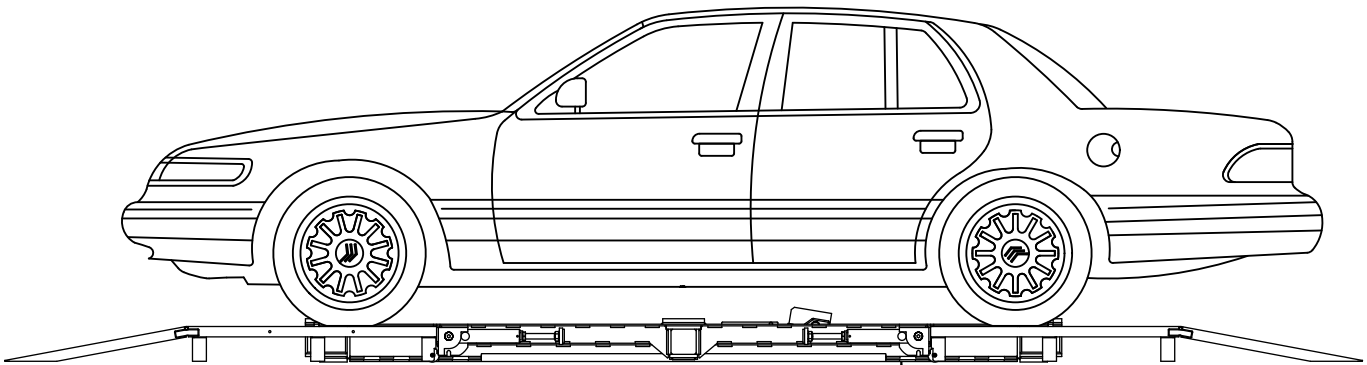


Figure 49

17. Remove the Lift Pads and Support Holders from the mainframe.
18. With the aid of an assistant to guide you, drive vehicle slowly off of the mainframe until vehicle is clear of all ramps (see Figure 49).

XV Inspection and Maintenance

Daily

- Inspect hydraulic and pneumatic hoses for damage
- Inspect hydraulic hoses for leaks
- Inspect chain for damage

Monthly

- Inspect safety latch functionality
- Inspect deck for damage
- Grease rollers, wheels, and pins
- Grease tower insert plug

Yearly

- Replace hydraulic fluid with Mobil DTE 13M or equivalent

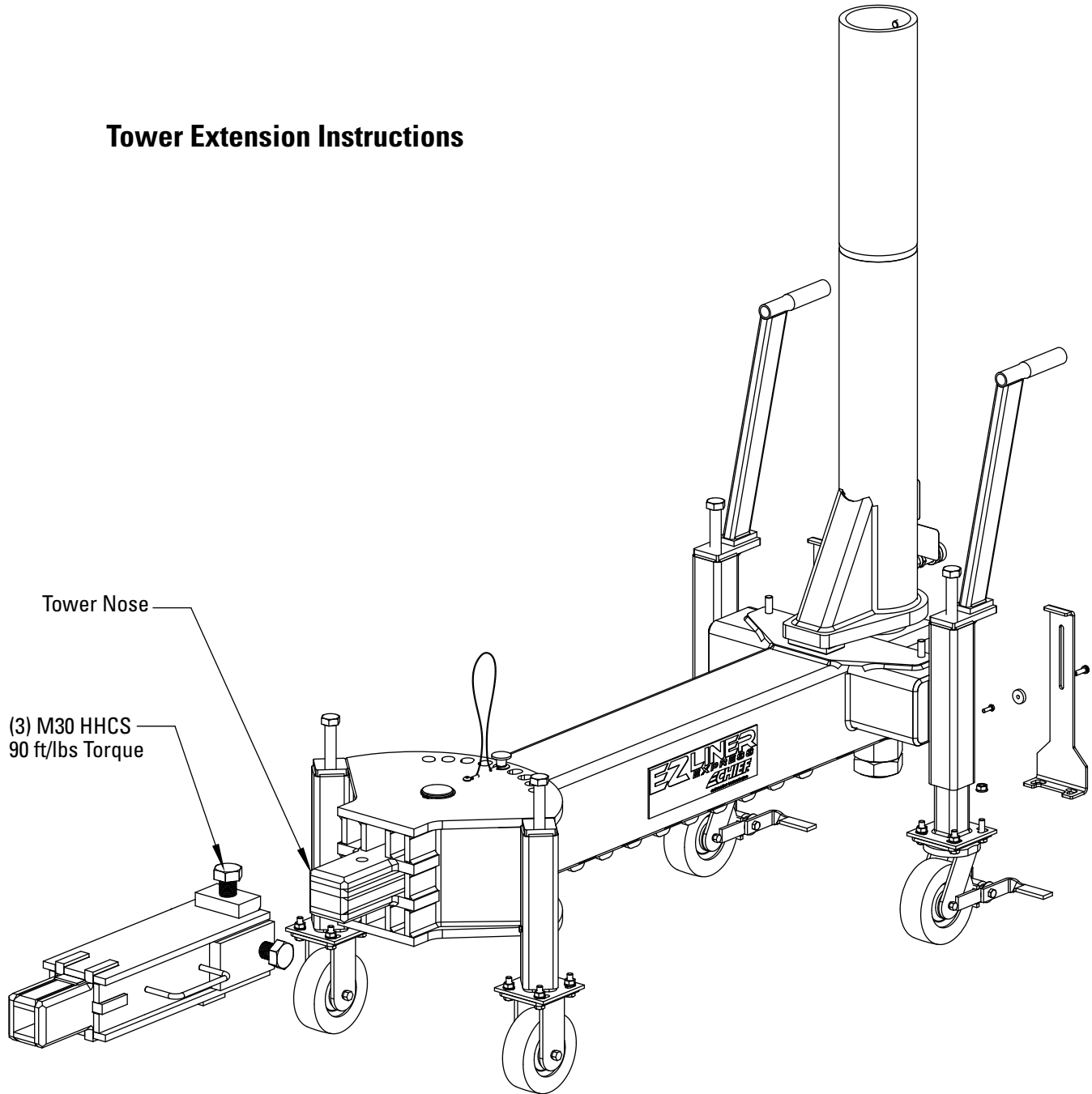
Troubleshooting:

Symptom	Possible Causes	Corrective Action
Cylinder does not extend, move or respond to pressurized fluid	<ul style="list-style-type: none"> • Lift is overloaded • Loose couplers • Faulty couplers • Pump malfunction • Inadequate air supply • Lift is loaded when completely lowered 	<ul style="list-style-type: none"> • Remedy overload condition • Tighten couplers • Replace couplers • Replace pump • Ensure air source can dedicate 7.8 CFM @ 110~175 PSI • Raise vehicle off of lift
Lift responds to pressurized fluid, but system does not maintain pressure	<ul style="list-style-type: none"> • Lift is overloaded • Pump or valve malfunction • Connection leaking 	<ul style="list-style-type: none"> • Remedy overload condition • Replace pump • Replace connection
Lift responds slower than normal	<ul style="list-style-type: none"> • Loose connection • Restricted hydraulic line or fitting • Hose leaking 	<ul style="list-style-type: none"> • Tighten connections • Clean and replace if damaged • Replace hose
Cylinder will not retract	<ul style="list-style-type: none"> • Malfunctioning disconnect • Mainframe is on safety latch • Stabilization legs are not in the raised position 	<ul style="list-style-type: none"> • Lower mainframe to the safety latch. Depressurize pump and hose, replace disconnect. • Raise lift high enough that safety latch is disengaged. • Retract stabilizaiton legs
Cylinder does not fully extend	<ul style="list-style-type: none"> • Reservoir overfilled • Fluid level in pump is low 	<ul style="list-style-type: none"> • Lower mainframe to the safety latch. Depressurize pump and hose, disconnect pump, then drain fluid to proper level. • Lower mainframe to the safety latch. Depressurize pump and hose, disconnect pump, then fill fluid to proper level.
Poor performance	<ul style="list-style-type: none"> • Fluid level in pump is low 	<ul style="list-style-type: none"> • Ensure proper fluid level

Troubleshooting:

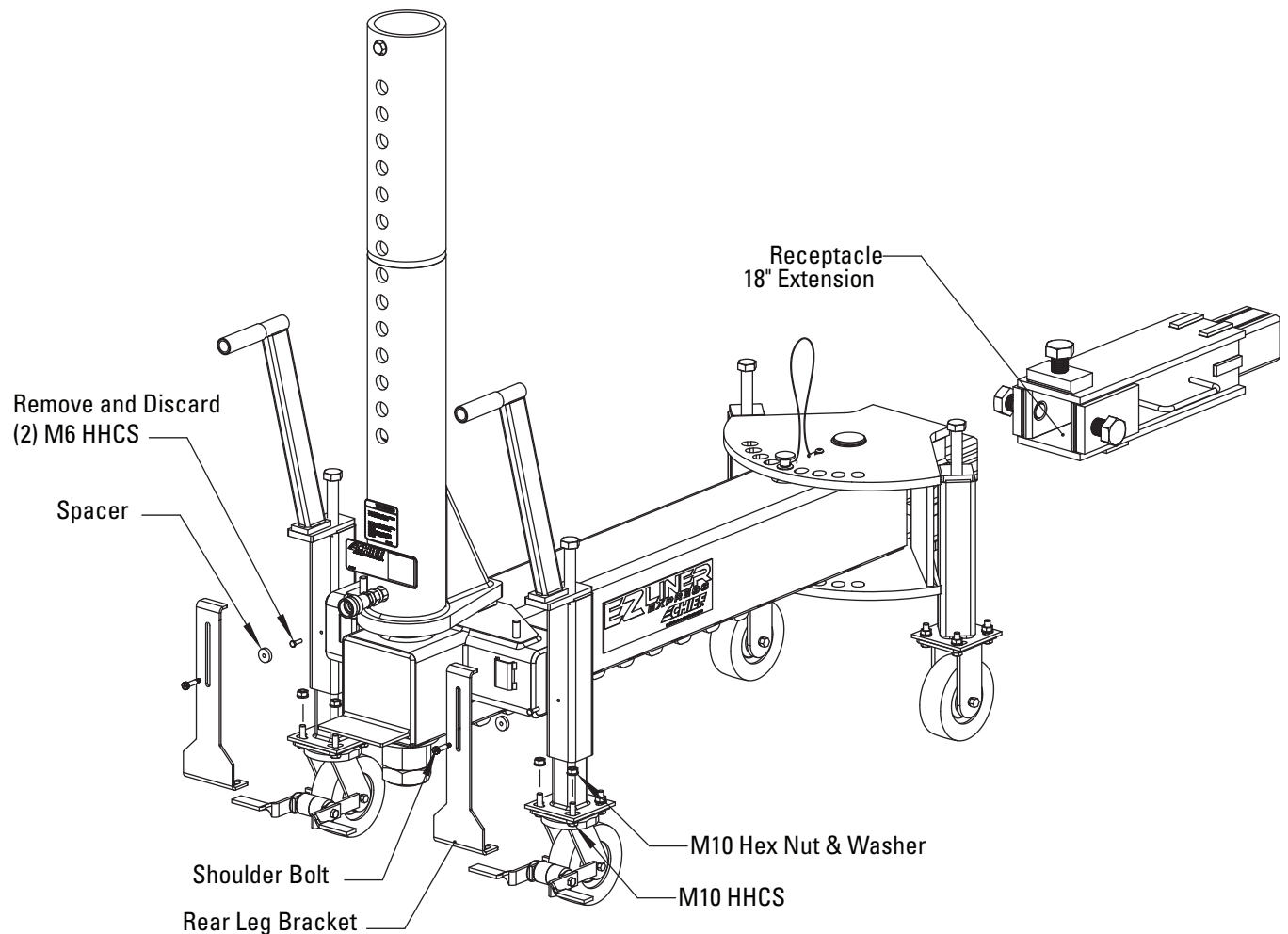
Lift is making unusual sounds	<ul style="list-style-type: none"> • Rollers, wheels, and pins do not have adequate lubrication 	<ul style="list-style-type: none"> • Grease rollers, wheels, and pins
Safety Latch is not engaging or disengaging	<ul style="list-style-type: none"> • Corrosion • Obstructions 	<ul style="list-style-type: none"> • Lubricate latching mechanism • Remove obstructions & debris in latching mechanism
Tower is no longer pulling	<ul style="list-style-type: none"> • Tower cylinder is fully extended • Damage to tower insert plug or to mainframe 	<ul style="list-style-type: none"> • Release pressure and remove chain slack before repulling • Inspect tower insert plug and mainframe for damage. Replace as needed.

Tower Extension Instructions



1. Caution: 18" Extension is Heavy. Team lift is recommended.
2. Insert Tower Nose into receptacle of 18" Extension.
3. Visual inspect and confirm Tower nose has been fully inserted and is seated tight against 18" Extension.
4. Tighten the (3) M30 HHCS to 90 ft/lbs. located on the 18" Extension.

Tower Extension Instructions



1. Remove and Discard (2) M6 HHCS located in back of Caster Leg.
2. Remove (4) M10 Hex nut and Washers, retain for later use.
3. Place Rear Leg Bracket over M10 HHCS and replace M10 Hex nut and Washers.
4. Place Spacer between Rear leg Bracket and Rear Leg, Typ (2) places. Pass Shoulder bolt thru Rear Leg Bracket and Spacer. Thread into Rear leg and tighten.

NOTES:

NOTES:



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**Chief reserves the right to alter product specifications
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