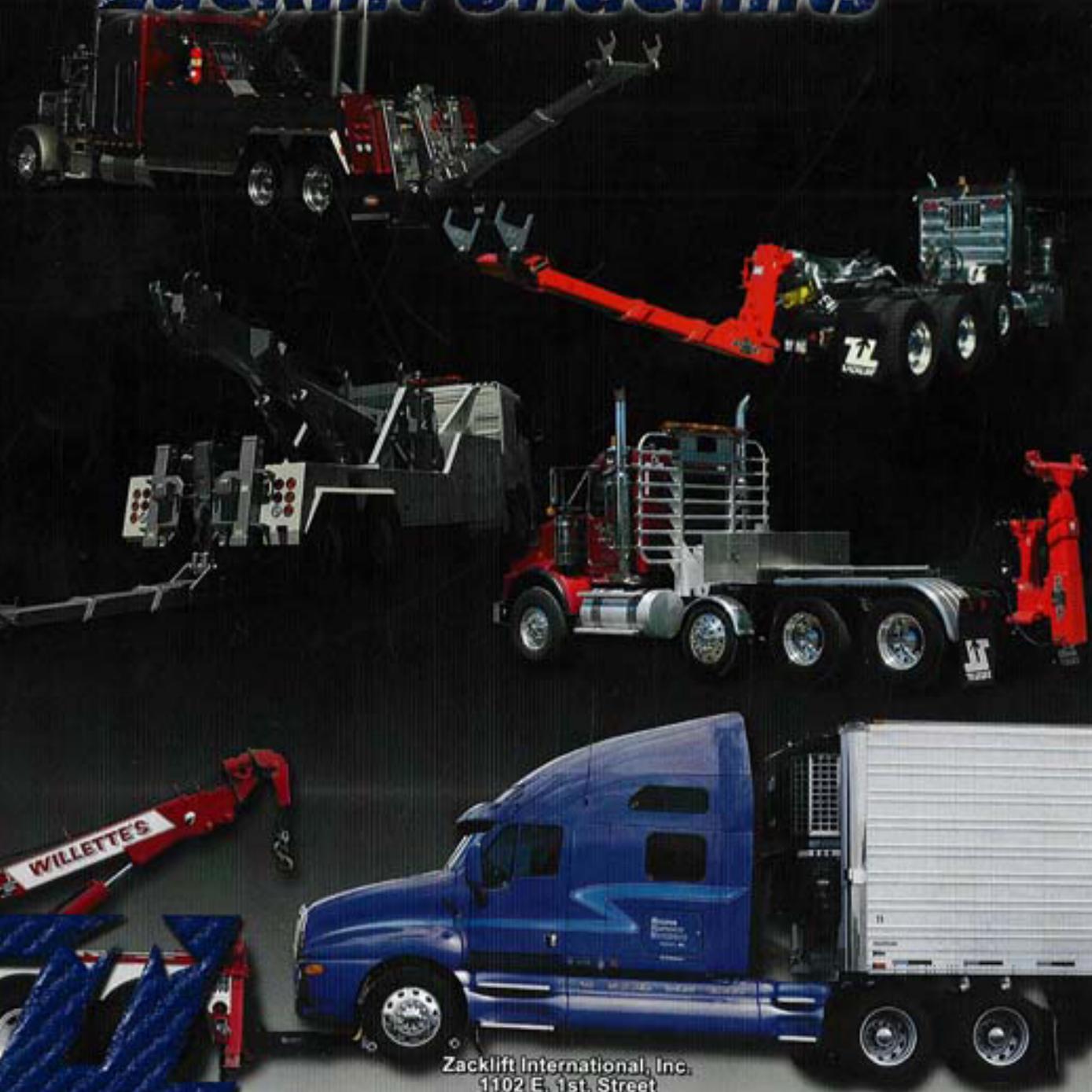


# Installation & Operations for Zacklift Underlifts



Zacklift International, Inc.  
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2010\_10\_28EURO



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## Introduction to Zacklift

Thank you for purchasing your Zacklift Wheel and Frame Lift. We appreciate your business and would like you to be assured we will continually strive to earn your confidence in the years of Zacklift service that are ahead of you.

Feel free to call on us whenever we can be of further assistance. We will look forward to serving you in the future.

All ratings are structural ratings only and will vary based on chassis weight, wheel base and location of the Zacklift tilt cylinder.

Read this entire installation manual before beginning installation. Follow the step-by-step operating instructions and pay close attention to the following warnings:

1. Always lift load into mechanical safety latch. Latch is located on front of main upright tube. Failure to do so would result in severe damage to Zacklift.
2. Only use tilt cylinder for lifting, regardless of how high you must lift a load.
3. Never use fold-up feature for purpose of lifting load. Costly breakage of internal parts and possible personal injury could result.
4. Always use safety chains to secure load to towing vehicle. Follow chain-up procedures outlined by State and Federal guidelines.
5. To avoid possible injury stand clear of Zacklift while operating.
6. Always retract grid completely into lock position before folding to prevent pivoting of grid head.
7. Fifth Wheeler mounted Zacklift must always be supported on legs, stands, or other supportive hardware when not in use to avoid injury from collapse.
8. Stand clear of Zacklift and Fifth Wheel mounting frame when off truck, resting on stabilizing hardware. Stand clear of Zacklift and Fifth Wheel mounting frame while loading and unloading structure from chassis.

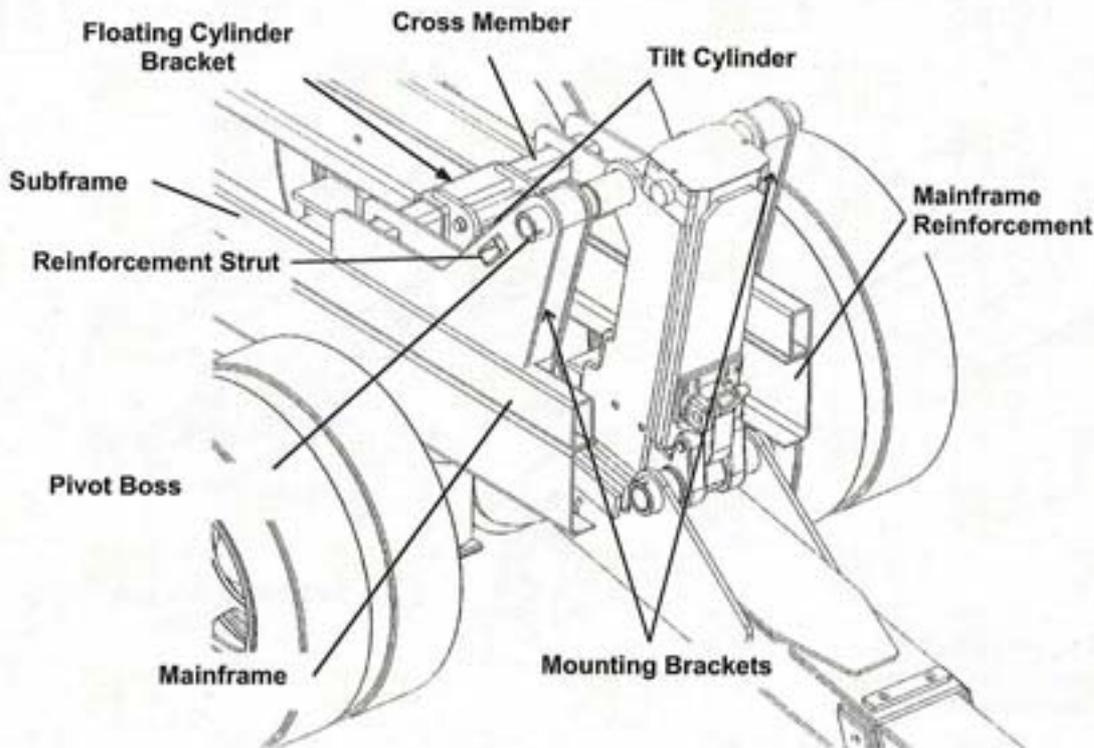
## **Notes:**

- 1. Read all instructions carefully before beginning installation.**
- 2. Ideal installation of a Zacklift is as close to the rear axle of the truck as possible. Be sure to allow enough room for any movement of cylinder and truck springs.**
- 3. Tack or bolt all parts temporarily before welding completely.**
- 4. Make sure all work is done on level ground that is level to make accurate measurements.**
- 5. If frame is aluminum, plates must be bolted on.**
- 6. It is suggested that on a permanent mounting (not Fifth Wheel-Mounting) weak or rotted sub frame be removed and replaced with an adequate and suitable material.**

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## Installation Overview

- Ideal installation of a Zacklift is as close to the rear axle as possible. Be sure to allow enough room for clearances.
- The factory advises that all chassis have a subframe in addition to a mainframe, an inadequate subframe should be replaced with at least 4" x 6" x 3/8" rectangular steel tubing.
- If your truck frame is aluminum all attachments must be bolted. Make sure all bolts are of adequate strength.
- Before installation of your Zacklift you will need to box the mainframe and subframe of your truck.
- Tack-weld or bolt all mounting parts temporarily ( *to check for proper function and clearance* ) before final welding or bolting.
- It is advised to work on solid level ground during the entire installation. Make sure the truck frame and or wrecker body is level before starting installation.



A-1

## Preparing wrecker body

1. Before starting the installation remove or protect any air lines, hydraulic lines, or wiring.
2. To begin installation remove a section of the wrecker deck approximately 36" wide by 50" deep see fig. 1-A This allows access for reinforcement of the main frame, inspection and possible replacement or reinforcing of the subframe, and installation of the mounting ears and crossmember. In some applications you will need to relocate the winch control rods to fully recess the Zacklift. This will be covered in section "E"
3. Cut the tailboard to allow for recessing of the Zacklift. Remember the object is to mount the unit as close to the rear axle as possible for the best weight distribution. The cutout should be centered on the tailboard and have a minimum of 1/2" clearance on both sides of the Zacklift main body.
4. With the tailboard and deck cut out you now have access to reinforce or "box" the mainframe and subframe. Use at least 3/8" material (*not supplied*) This should be done in such a way to tie the mainframe and subframe together. The reinforcement should extend from the tailboard to well in front of the rear axle.

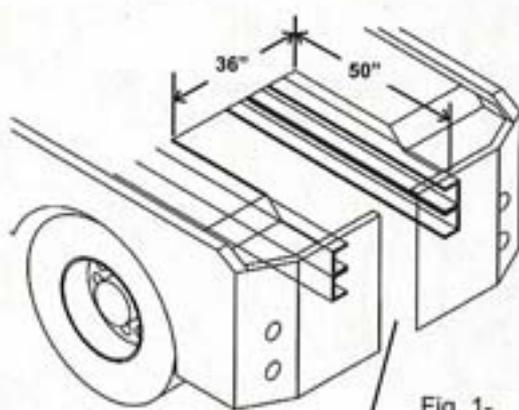
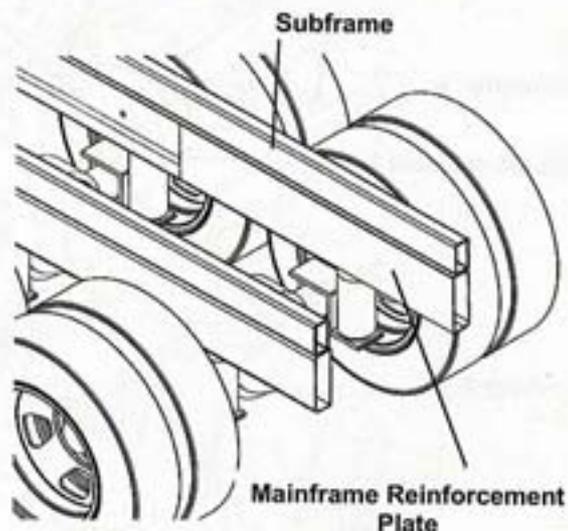


Fig. 1-

Tailboard cutout 1/2" clearance on both sides of Zacklift mainbody



## Preparing the bare frame

1. In almost all cases the rear crossmember must be removed, so as to mount the Zacklift as close to the rear axle as possible for the best weight distribution.
2. A subframe must be installed prior to installation of the Zacklift. The subframe should be made of at least 4 x 6 x 3/8" rectangular tubing and should run from the rear end of the frame to at least in front of the rear axles. Ideally the subframe should run all the way to the cab. The subframe should be connected to the mainframe by using plates as in fig. 2-A Welding the subframe to the mainframe is not recommended
3. It is also recommended to reinforce or "box" the mainframe using at least 3/8" plate (*not supplied*) see fig. 2-A

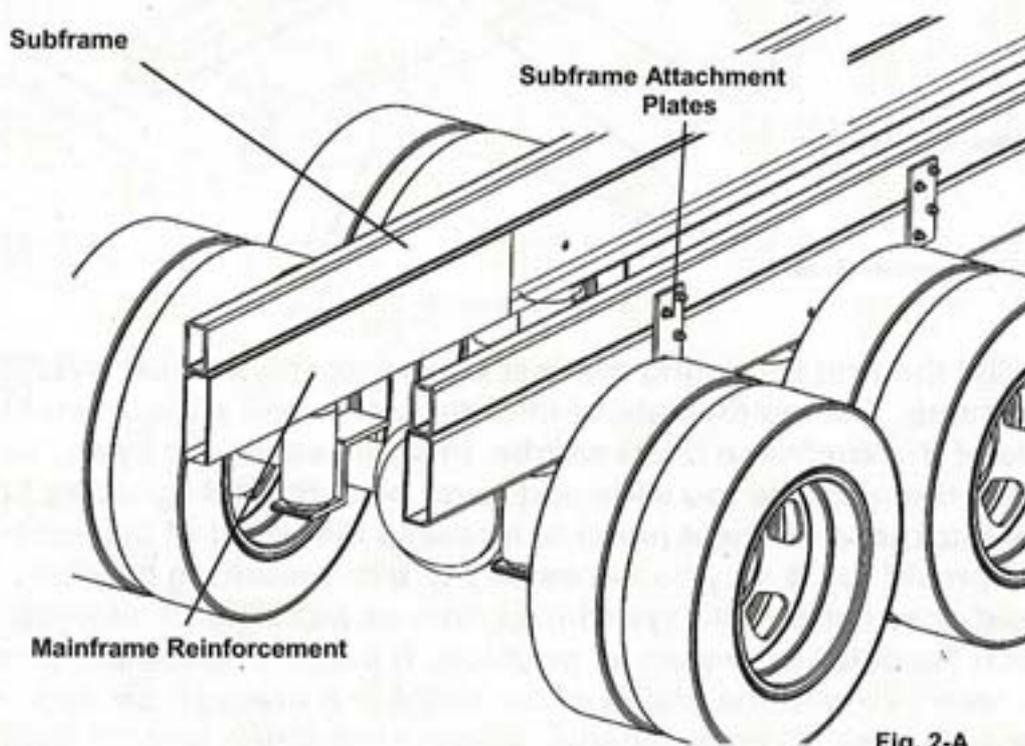
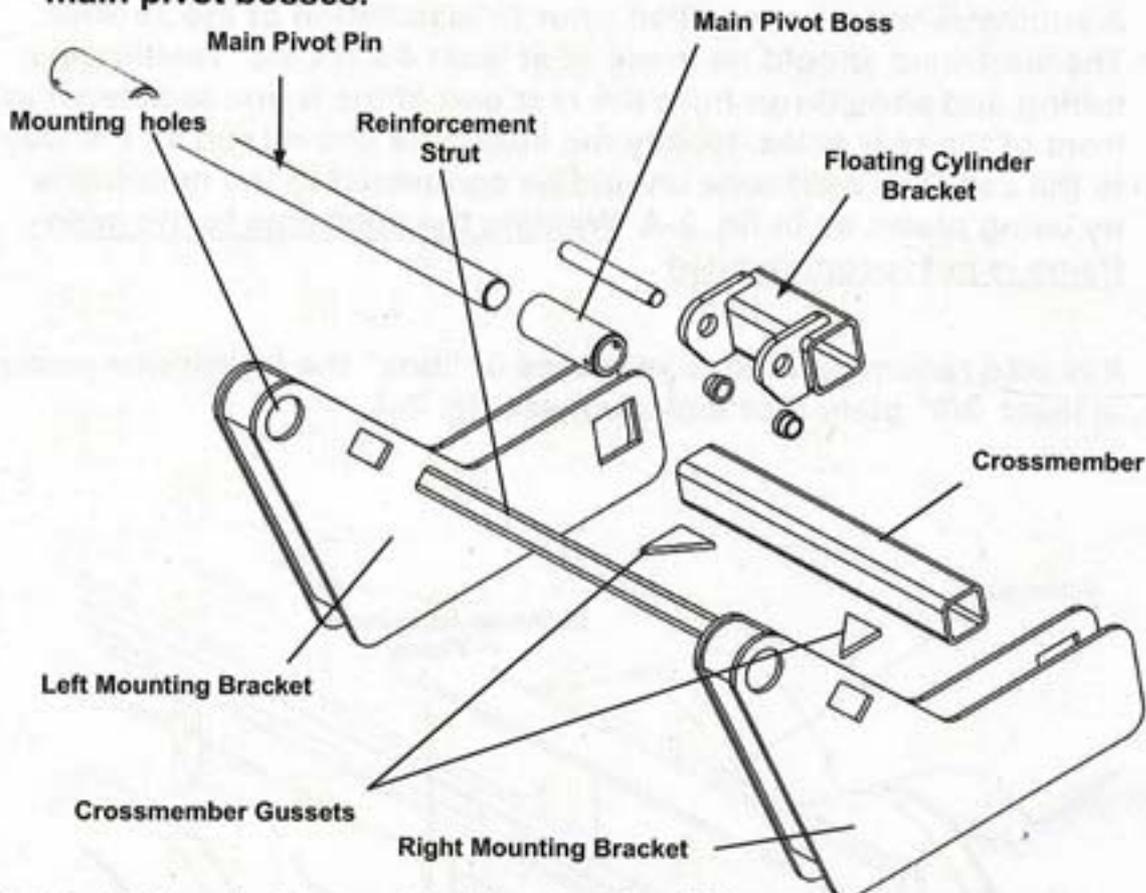


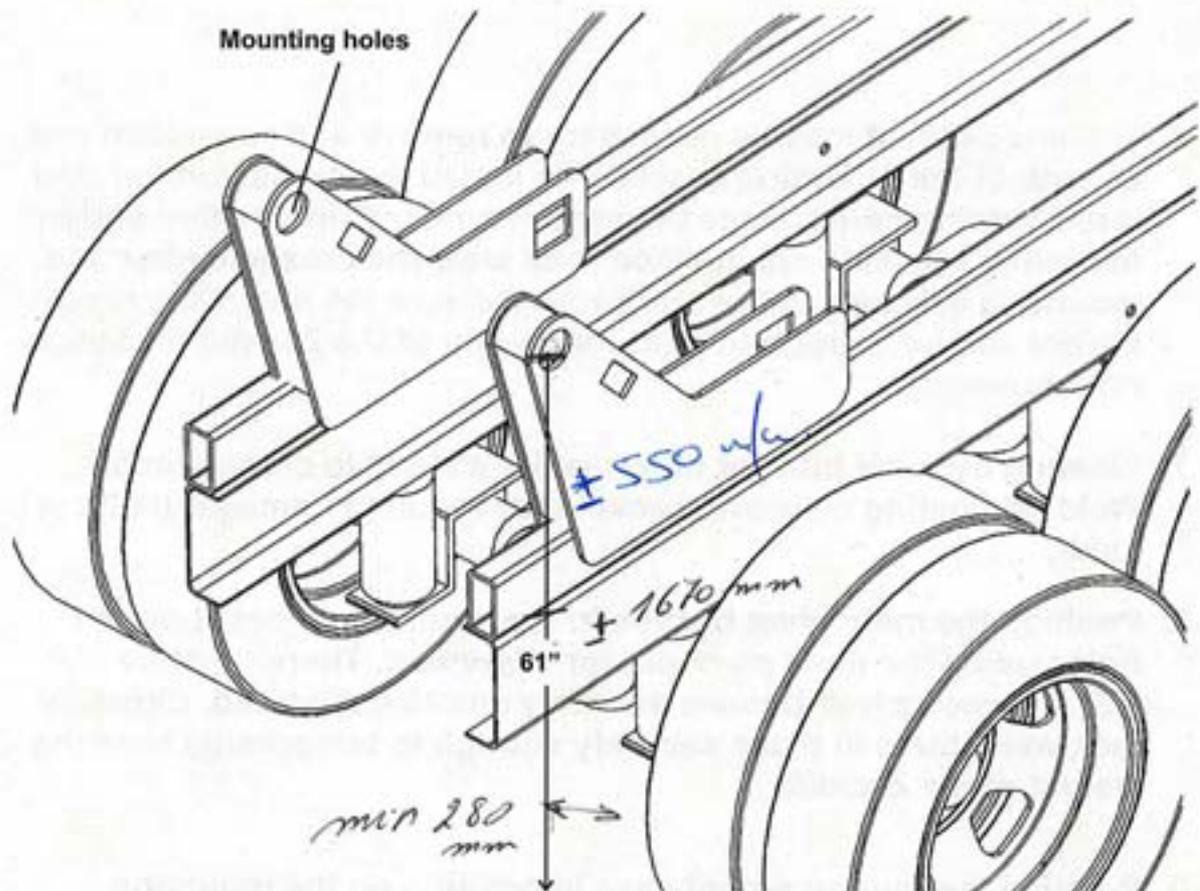
Fig. 2-A

## Mounting System

1. The mounting system is made up of six main components, two mounting brackets one left one right, the reinforcement strut, the tilt cylinder crossmember, the crossmember gussets, and the main pivot bosses.



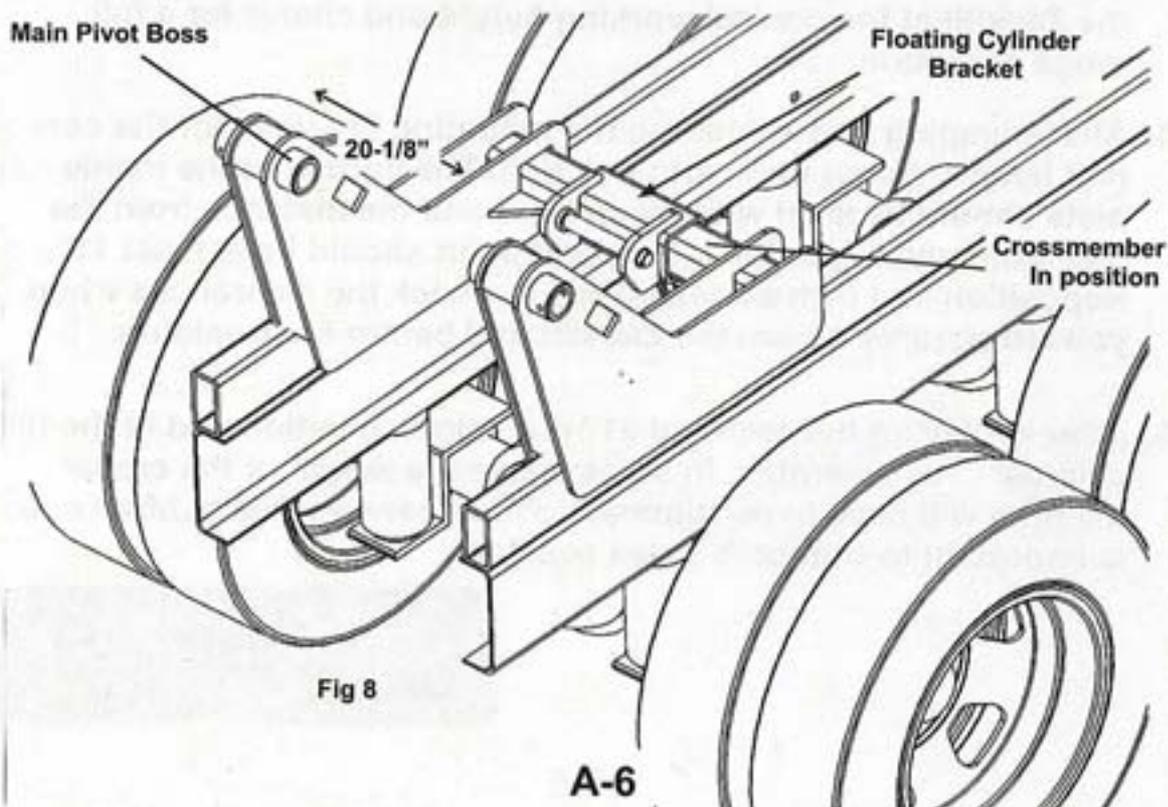
2. Install the first mounting bracket by sliding the bracket over the subframe. The inside plate of the bracket should slide down the inside of the subframe like a saddle. In some cases the space between the plates is too wide and must be shimmed by using various thickness of sheet metal to increase the width of the subframe (not provided). It may be necessary to trim mounting brackets to avoid obstruction. Always trim as little as possible to allow as much "saddle" to remain as possible. It may be necessary to trim the web between the plates of the mounting brackets so as to slip brackets over frame & achieve correct mounting height. Always trim as little as possible.



3. The object of trimming the mounting brackets is to put the center of the main pivot point exactly 61" from ground level. This puts the Zacklift at the correct working height and allows for a full range of motion.
4. After trimming and shimming the mounting brackets for the correct height, clamp them into position. The bottom of the inside plate should be level with the ground and the distance from the rear axle housing to the main pivot point should be at least 11". Reposition and trim as necessary. Recheck the clearances when you temporarily mount the Zacklift and before final welding.
5. After achieving the required 61" pin height, position and fit the tilt cylinder cross member. In some cases the length of the cross-member will have to be trimmed to fit in between the subframe. It is important to trim both sides equally.

**IMPORTANT!!!**  
Check all clearances before final welding!!

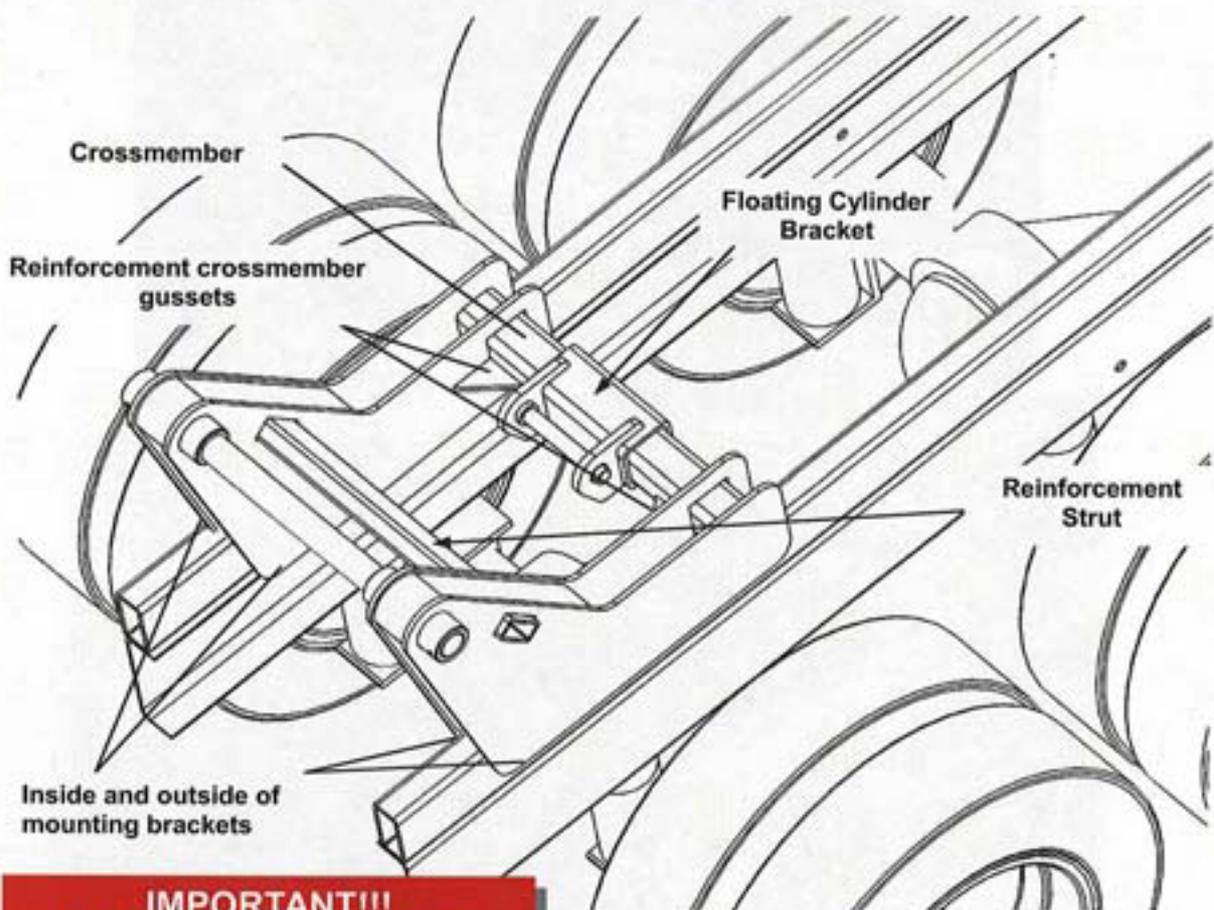
6. In some cases it may be necessary to remove and reposition one or both of the mounting brackets to install the crossmember into the mounting holes. Once the crossmember is in position and the mounting brackets are in place, tack weld the crossmember and mounting brackets to the subframe. Be sure the mounting brackets are secure enough to hold the weight of the Zacklift for temporary mounting.
7. Floating cylinder bracket must not be welded to crossmember. Welding floating cylinder bracket may result in damage to tilt cylinder.
8. Position the main pivot bosses in the mounting bracket pivot holes using the main pivot pin for alignment. There must be 20-1/8" between pivot bosses and they must be centered. Carefully tack weld them in place securely enough to temporarily hold the weight of the Zacklift.
9. Position the reinforcement strut in position on the mounting brackets. Trim to length and tack weld until final welding and assembly.



10. Temporarily mount the Zacklift and the tilt cylinder to the mounting brackets and crossmember. Check for proper clearances. Pay close attention to where the Zacklift is in relation to the rear axle housing, allowing for spring deflection, and where the hydraulic fittings will be located on the outer horizontal. You may want to do more trimming of the tailboard at this time.

11. Remove the Zacklift from the mountings and complete the final welding of the mounting brackets, crossmember, to frame (Not Floating Cylinder Bracket) reinforcement strut and all gussets. When welding in the main pivot bosses you must keep them aligned. It is helpful to keep the pivot pin in place during this process

12. The crossmember must be securely reinforced with gussets to the subframe. This bracing is critical to support the weight of the vehicle in tow on the crossmember.



**IMPORTANT!!!**  
Do not weld floating cylinder  
bracket to crossmember!!

A-7

# Fifthwheeler Installation

Support Bar  
Socket

Beam

Upper Tilt Cylinder  
Mount

Zacklift Pivot Pin

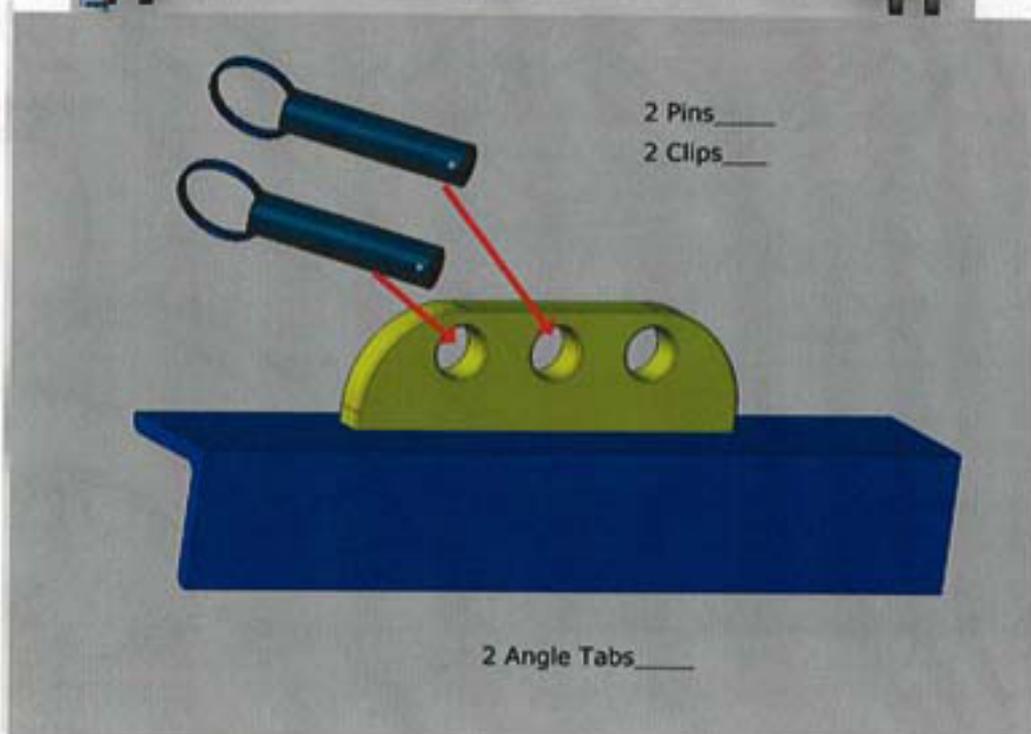
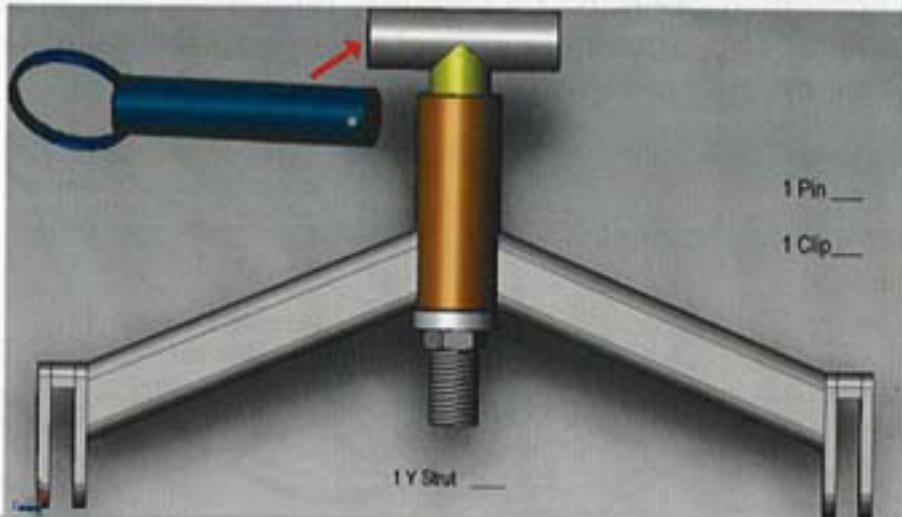
King  
Pin

Frame  
Clamps

Angle  
Pad

Frame width  
Adjustment  
Bolts

Y-Strut

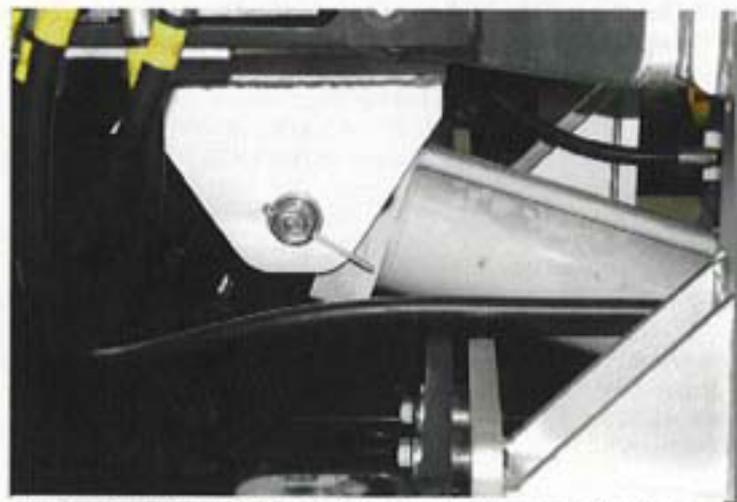




1. Remove rear crossmember only if needed. **(in rare cases)**
2. Set FIFTHWHEELER beam on truck frame in approximate location.
3. Adjust 5th wheel plate to approximate position.
4. Screw king pin up or down to level the rear angle pad on chassis frame.



6. Install Y-Strut and frame tab. Frame tab will need to be drilled to match existing holes in frame or make new holes in frame.



9. Put tilt cylinder into position by pinning at top of cylinder to beam.



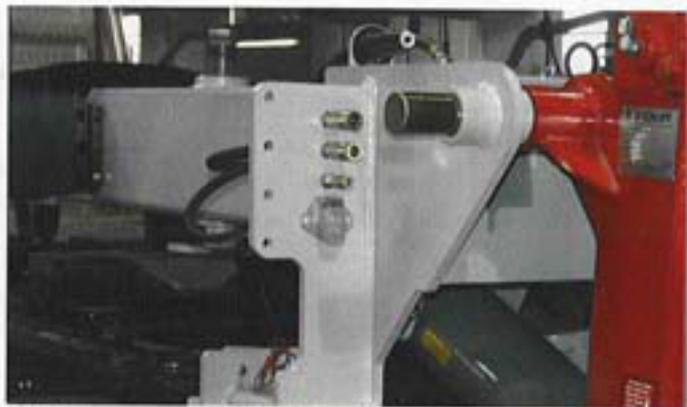
5. Slide the entire beam and 5th wheel plate forward or back into approximate position so as the heel of the horizontal section of Zacklift underlift is 10 inches from differential for clearance.



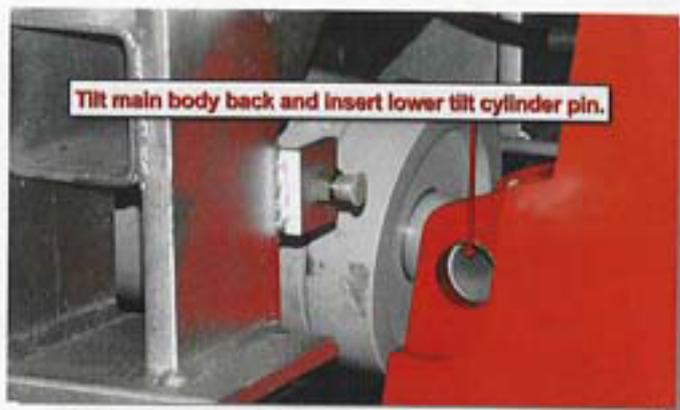
7. Tighten bolts on rear angle pad to truck frame.
8. Fit slotted edge under truck frame. Tighten bolts securely.



10. Remove main pivot pin.



11. Be sure to use bushing (supplied) in Zacklift . Bolt securely.

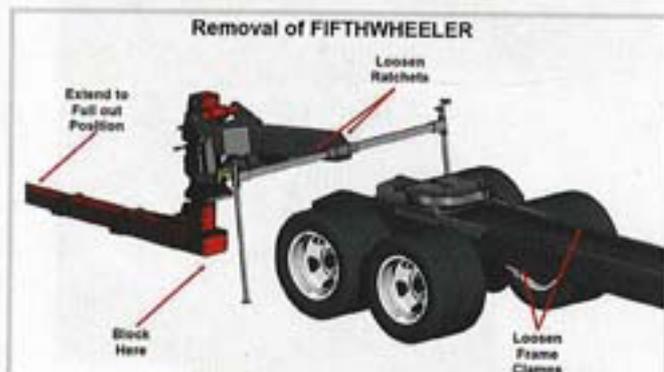


12. Put tilt cylinder into position by pinning.



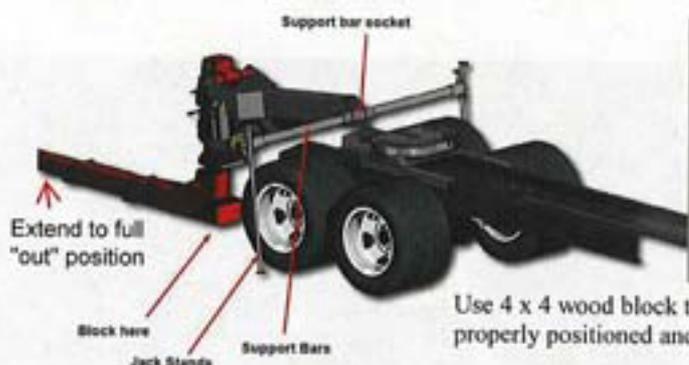
13. Connect all hoses. All are marked for proper installation.

## Removal of FIFTHWHEELER



1. To remove FIFTHWHEELER loosen frame clamps.
  2. Extend horizontal section of Zacklift to full out position.
  3. Block unit under horizontal main. (see illustration)
  4. Use "down" function to lift FIFTHWHEELER beam slightly above truck frame.
  5. Pull king pin latch.
  6. Use "tilt" function to lift front of FIFTHWHEELER beam.
  7. Disconnect all hydraulics, air and electrical connections.
  8. Carefully stabilize FIFTHWHEELER with supplied supports (see page K-5 for view of supplied supports) to secure it in an upright position to prevent tipping when vehicle is re-moved.
- WARNING FAILURE TO STABILIZE FIFTHWHEELER COULD RESULT IN SERIOUS INJURY OR DEATH.**

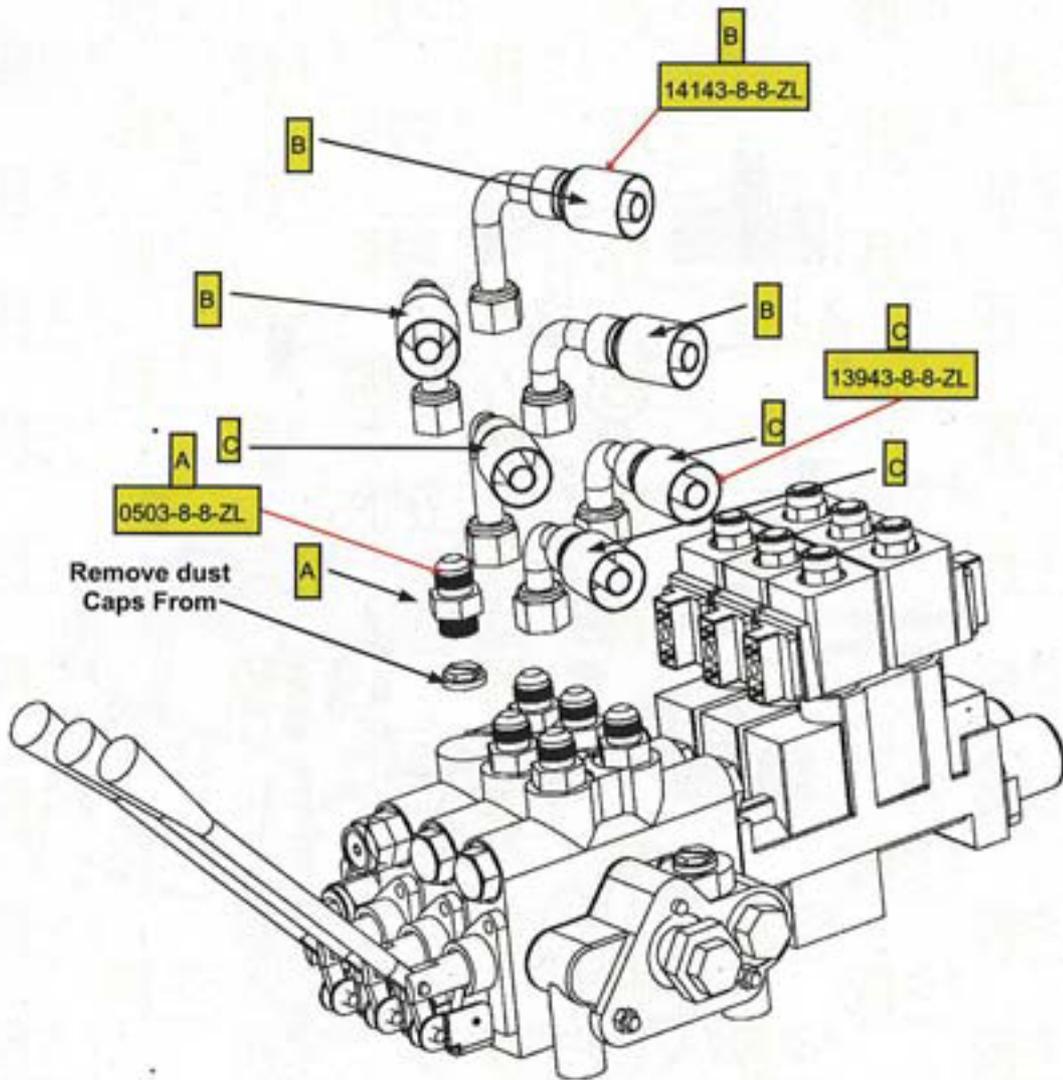
## Jack Stands Installation



Use 4 x 4 wood block to support horizontal tube. CAUTION Jack Stands must be properly positioned and secured before driving out from under FIFTHWHEELER.

Insert support bars into support bar socket. Support bar socket is located on FIFTHWHEELER beam near the front ratchet binders. Slide Jack Stands over ends of support bars. Crank Jack Stands up as far as needed to clear truck frame. Release king pin and loosen clamp on angle pad. Remove chain from ratchet binders before driving out from under FIFTHWHEELER.

# Hydraulic Fittings 403

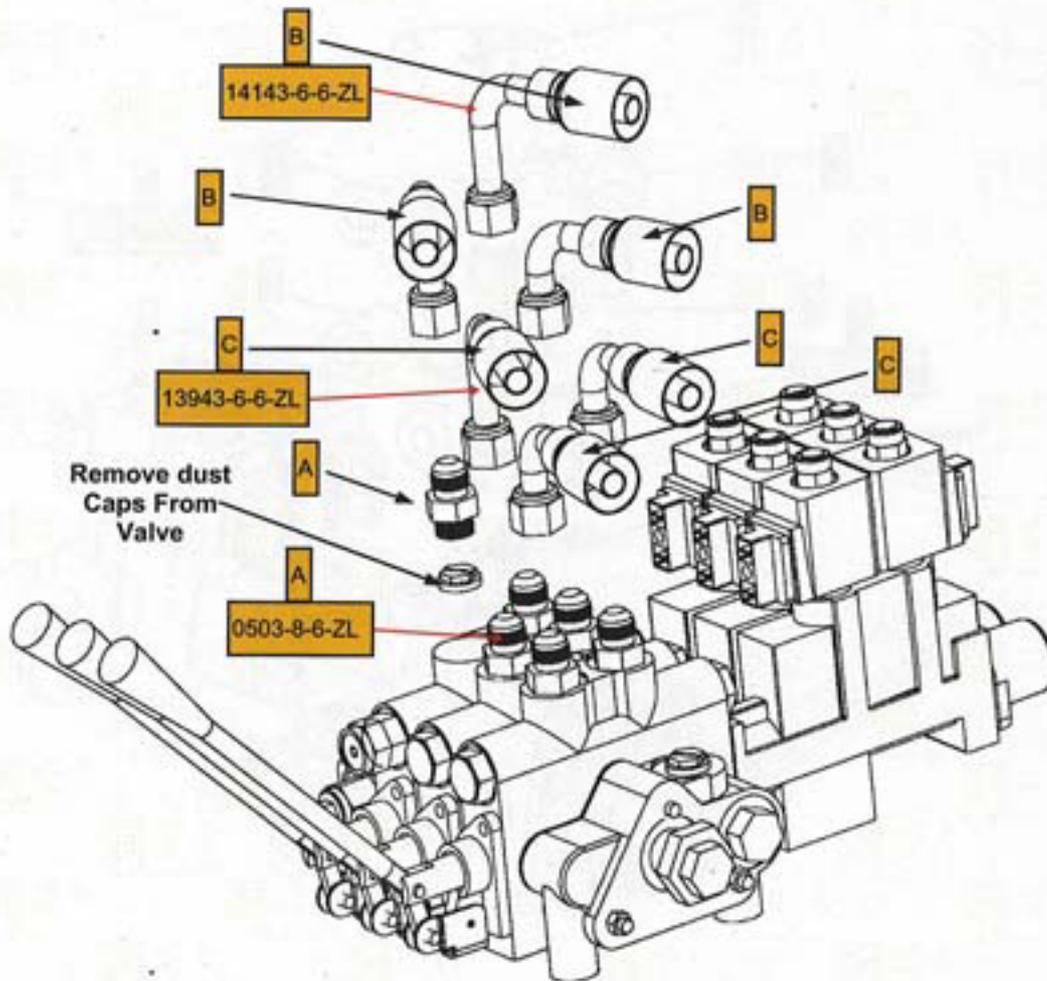


|   | Amount | Part #       | Description                        |
|---|--------|--------------|------------------------------------|
| A | 6      | 0503-8-8-ZL  | Male Tube / O ring                 |
| B | 3      | 14143-8-8-ZL | Swivel Female Bent Tube SAE Thread |
| C | 3      | 13943-8-8-ZL | Swivel Female Bent Tube SAE Thread |

C-1

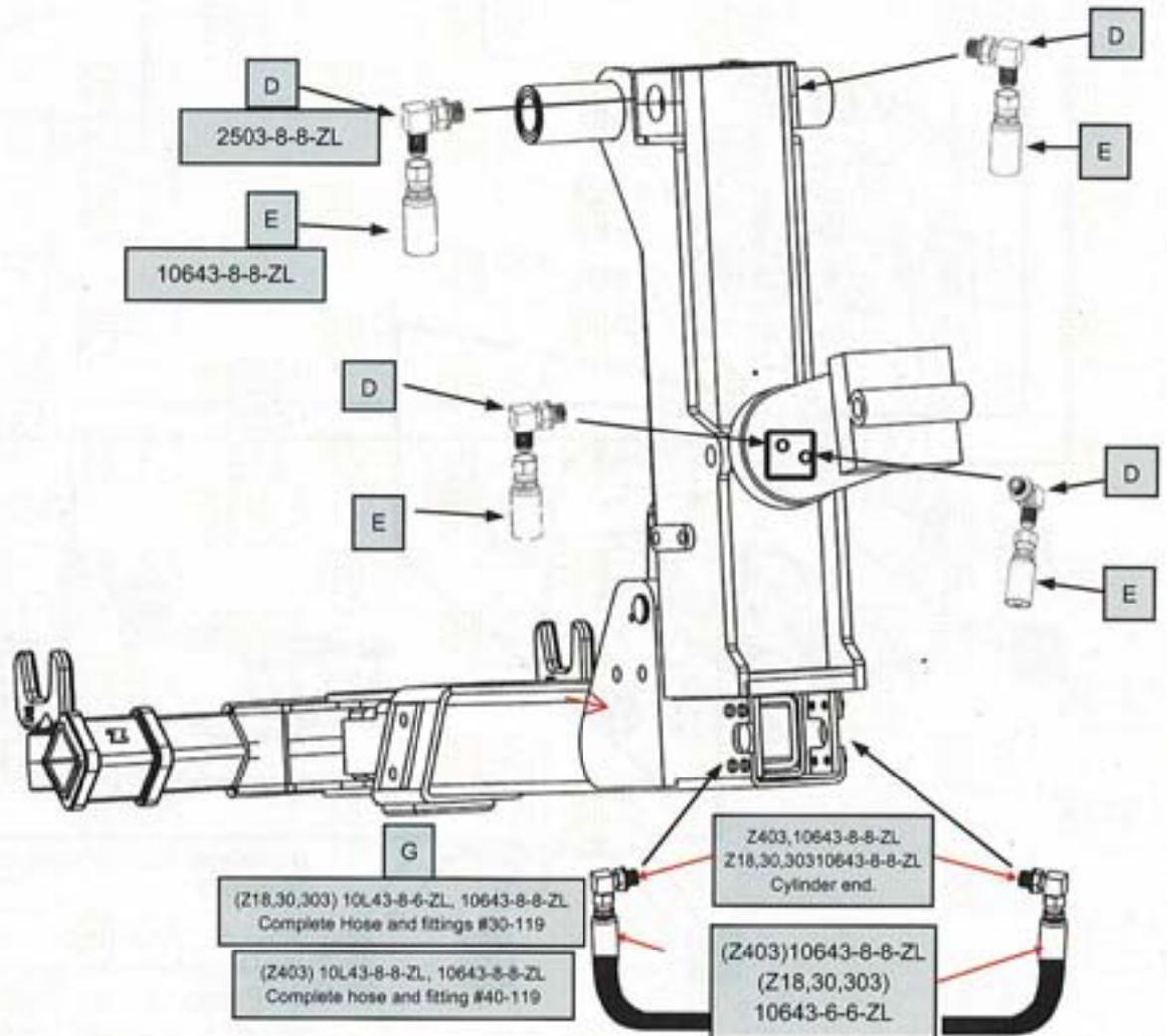
# Hydraulic Fittings

## 18/30/303



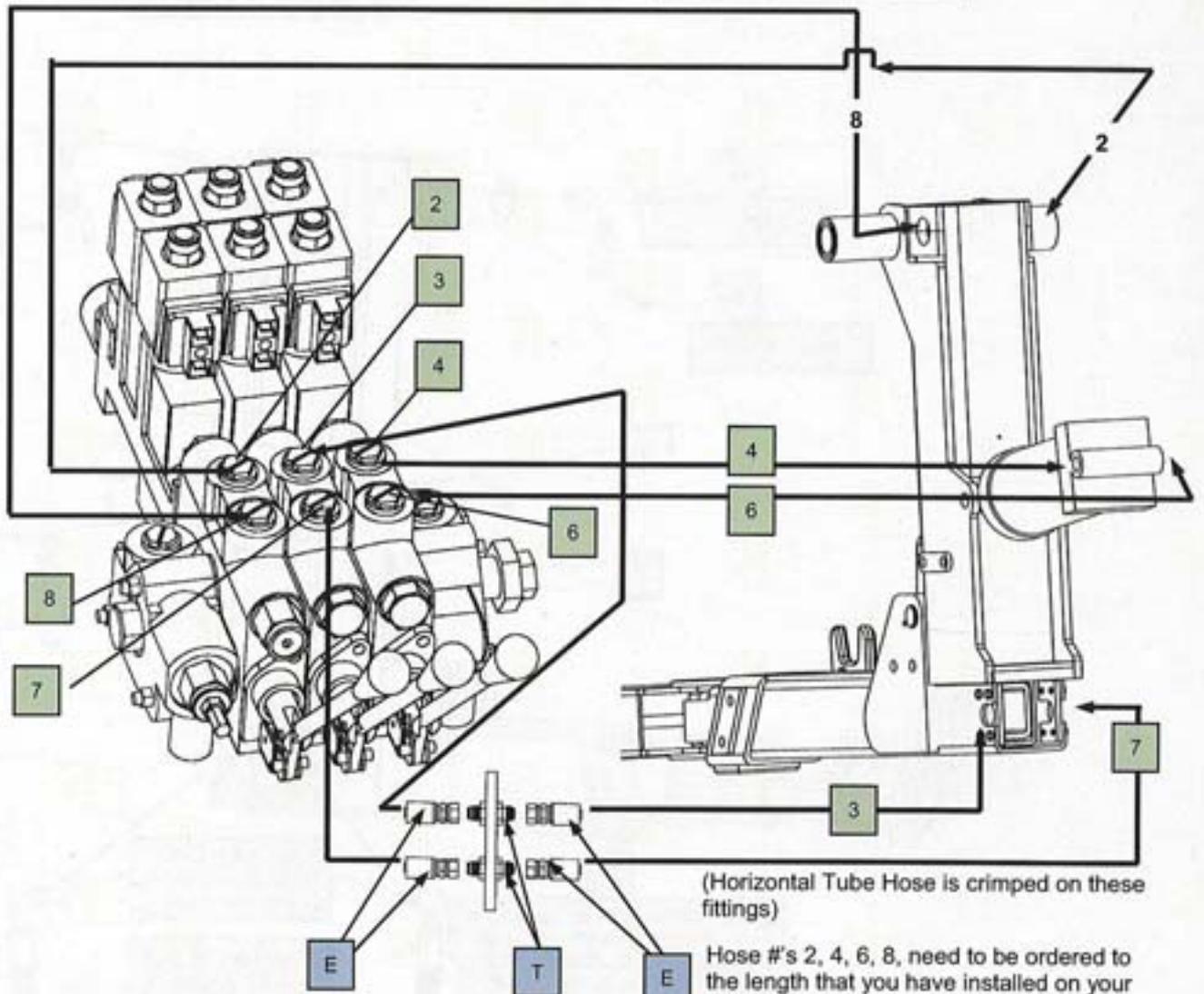
| Amount |   | Part #       | Description                        |
|--------|---|--------------|------------------------------------|
| A      | 6 | 0503-8-6-ZL  | Male Tube / O ring                 |
| B      | 3 | 14143-6-6-ZL | Swivel Female Bent Tube SAE Thread |
| C      | 3 | 13943-6-6-ZL | Swivel Female Bent Tube SAE Thread |

## Hydraulic Fittings 18/30/303/403



| 403              | Amount | Part #                               | Description                        |
|------------------|--------|--------------------------------------|------------------------------------|
| D                | 4      | 2503-8-8-ZL                          | Male Tube O-Ring                   |
| E                | 4      | 10643-8-8-ZL                         | Swivel Female SAE Thread           |
| G                | 2      | (#40-119) 10L43-8-8-ZL, 10643-8-8-ZL | Stinger Hose and Fittings Complete |
| <b>18/30/303</b> |        |                                      |                                    |
| D                | 4      | 2503-6-6-ZL                          | Male Tube O-Ring                   |
| E                | 4      | 10643-6-6-ZL                         | Swivel Female SAE Thread           |
| G                | 2      | (#30-119) 10L43-8-6-ZL, 10643-8-8-ZL | Stinger Hose and Fittings Complete |

## Hydraulic Hose Connections 18/30/303/403



(Horizontal Tube Hose is crimped on these fittings)

Hose #'s 2, 4, 6, 8, need to be ordered to the length that you have installed on your lift. Please measure length before ordering and be sure of model of Zacklift!

|   | Amount | Part#  | Description              |
|---|--------|--|--------------------------|
| E | 4      | (Z403) 10643-6-6-ZL, (Z18,30,303) 10643-6-6-ZL | Swivel Female SAE Thread |
| T | 2      | (Z403) 0353-8-8-ZL, (Z18,30,303) 0353-6-6-ZL   | Male Tube Bulkhead       |
| 8 |        |  | Lower fold function      |
| 2 |        |  | Raise unfold function    |
| 3 |        |  | Extend In                |
| 7 |        |  | Extend out               |
| 4 |        |  | Tilt up function         |
| 6 |        |  | Tilt down function       |

## Hydraulic Parts

| Item#  | Description                    |
|--|--------------------------------|
| <b>Z403 Fifthwheeler E35/F75 Valve</b>       |                                |
| 5503-8-8-ZL                                  | Male Tube / O-ring             |
| 2503-8-8-ZL                                  | Male Tube / O-ring             |
| 0103-8-8-ZL                                  | Pipe to Tube                   |
| 0103-8-6-ZL                                  | Pipe to Tube                   |
| NS-501-8FP-ZL                                | Quick Coupler                  |
| NS-502-8FP-ZL                                | Quick Coupler                  |
| NS-371-6FP-ZL                                | Quick Coupler                  |
| NS-372-6FP-ZL                                | Quick Coupler                  |
| 0153-8-8-ZL                                  | Bulkhead Connector             |
| 0503-8-10-ZL                                 | Bulkhead Fitting               |
| 0153-6-6-ZL                                  | Bulkhead Connector             |
| 0503-8-8-ZL                                  | Valve Fitting                  |
| 8-8 WFTX-WLN-S-ZL                            | Bulkhead Fitting               |
| 6-6 WFTX-WLN-S-ZL                            | Bulkhead Fitting               |
| 13943-8-8-ZL                                 | Crimped hose fitting           |
| 10643-8-8-ZL                                 | Crimped hose fitting           |
| 14143-8-8-ZL                                 | Crimped hose fitting           |
| 10643-8-8-ZL                                 | Crimped hose fitting           |
| 301-8-ZL                                     | 1/2" R2 Hydraulic hose per ft. |
| 301-6  | 3/8" R2 Hydraulic hose per ft. |
| <b>Z18/30/303 Fifthwheeler E35/F75 Valve</b> |                                |
| 2503-8-6-ZL                                  | Male Tube / O-ring             |
| 0353-6-6N-ZL                                 | Bulkhead & Nut                 |
| 0503-8-6-ZL                                  | Male Tube / O-ring             |
| 0503-10-6-ZL                                 | Male Tube / O-ring             |
| 0503-10-8-ZL                                 | Male Tube / O-ring             |
| NS-501-8FP-ZL                                | Quick Couplers                 |
| NS-502-8FP-ZL                                | Quick Couplers                 |
| NS-371-6FP-ZL                                | Quick Couplers                 |
| NS-372-6FP-ZL                                | Quick Couplers                 |
| 8-8 WFTX-WLN-S-ZL                            | Bulkhead Connector             |
| 0103-6-6-ZL                                  | Male Tube / O-ring             |
| 6-6 WFTX-WLN-S-ZL                            | Bulkhead Connector             |
| 0103-8-8-ZL                                  | Male Tube / O-ring             |
| 13943-6-6-ZL                                 | Crimped hose fitting           |
| 10643-6-6-ZL                                 | Crimped hose fitting           |
| 14143-6-6-ZL                                 | Crimped hose fitting           |
| 10L43-6-8-ZL                                 | Crimped hose fitting           |
| 13943-8-8-ZL                                 | Crimped hose fitting           |
| 10643-8-8-ZL                                 | Crimped hose fitting           |
| 301-8-ZL                                     | 1/2" R2 Hydraulic hose per ft. |
| 301-6  | 3/8" R2 Hydraulic hose per ft. |

## Hydraulic Parts

| Item#                                  | Description                     |
|--|---------------------------------|
| <b>Z18/30/303 Fifthwheeler 12 Volt</b> |                                 |
| 2503-8-6-ZL                            | Male Tube / O-ring              |
| 0353-6-6-ZL                            | Male Tube / O-ring              |
| 5503-6-6-ZL                            | Male Tube / O-ring              |
| 0503-6-6-ZL                            | Straight                        |
| 13943-6-6-ZL                           | Crimped hose fitting            |
| 10643-6-6-ZL                           | Crimped hose fitting            |
| 14143-6-6-ZL                           | Crimped hose fitting            |
| 10L43-8-6-ZL                           | Crimped hose fitting 90 deg. RC |
| 301-8-ZL                               | 1/2" R2 Hydraulic hose per ft.  |
| 301-6                                  | 3/8" R2 Hydraulic hose per ft.  |

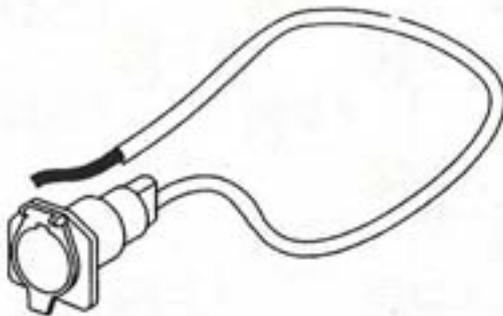
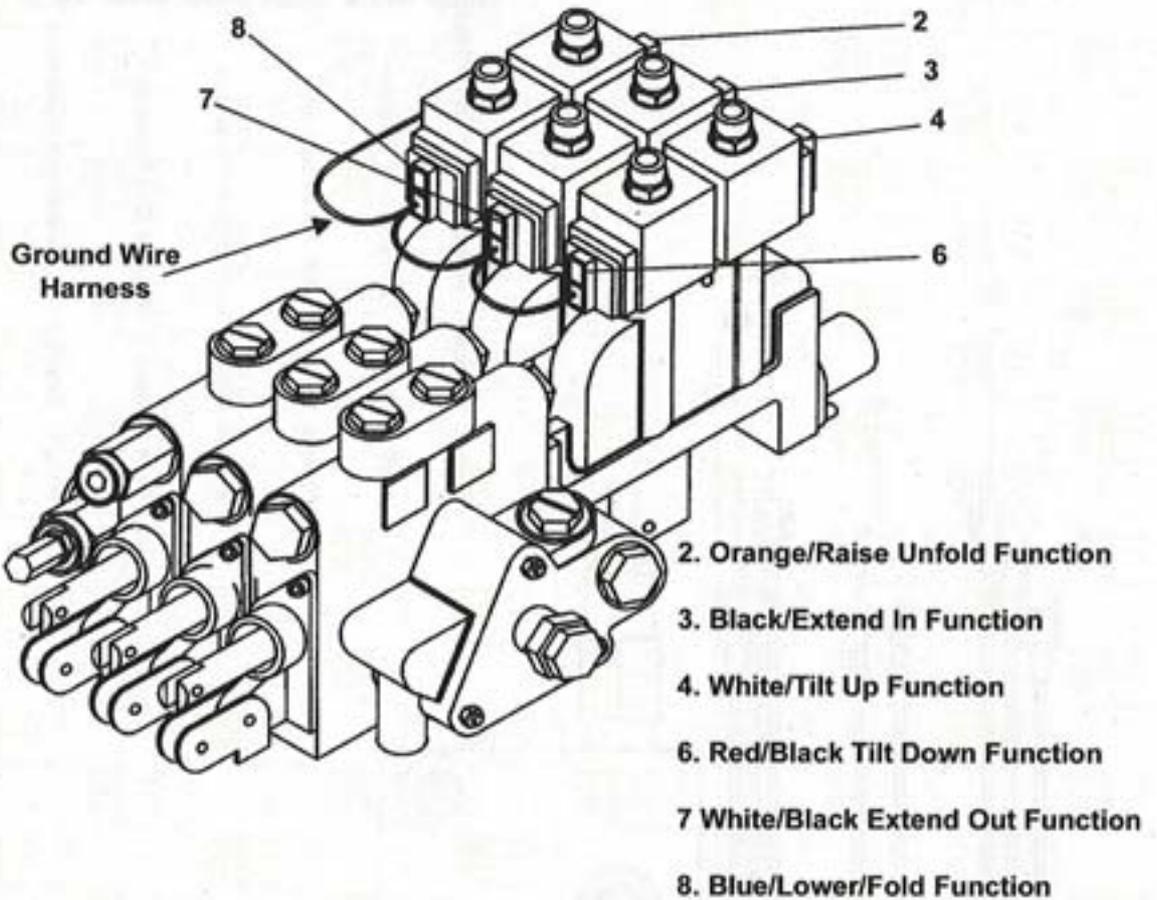
|  |  |
|--|--|
| <b>Z18/30/303 E35/F75 Valve Stationary Mount</b> |  |
|--|--|

|              |                                 |
|--------------|---------------------------------|
| 0503-8-6-ZL  | Male Tube / O-ring              |
| 2503-8-6-ZL  | Male Tube / O-ring              |
| 0353-6-6-ZL  | Male Tube / Bulkhead            |
| 53N-6-ZL     | Lock Nut                        |
| 13943-6-6-ZL | Crimped hose fitting            |
| 10643-6-6-ZL | Crimped hose fitting            |
| 14143-6-6-ZL | Crimped hose fitting            |
| 10L43-8-6-ZL | Crimped hose fitting 90 deg. RC |
| 301-8-ZL     | 1/2" R2 Hydraulic hose per ft.  |
| 301-6        | 3/8" R2 Hydraulic hose per ft.  |

|  |  |
|--|--|
| <b>Z403 E35/F75 Valve Stationary Mount</b> |  |
|--|--|

|              |                                 |
|--------------|---------------------------------|
| 0503-8-8-ZL  | Male Tube / O-ring              |
| 2503-8-8-ZL  | Male Tube / O-ring              |
| 5503-8-8-ZL  | Male Tube / O-ring              |
| 0353-8-8-ZL  | Male Tube / O-ring              |
| 53N-8-ZL     | Lock Nut                        |
| 13943-8-8-ZL | Crimped hose fitting            |
| 10643-8-8-ZL | Crimped hose fitting            |
| 14143-8-8-ZL | Crimped hose fitting            |
| 10L43-8-8-ZL | Crimped hose fitting 90 deg. RC |
| 301-8-ZL     | 1/2" R2 Hydraulic hose per ft.  |
| 301-6        | 3/8" R2 Hydraulic hose per ft.  |

## Wires from Female Socket & Harness



**Female Socket & Harness  
For Hand Held Control**

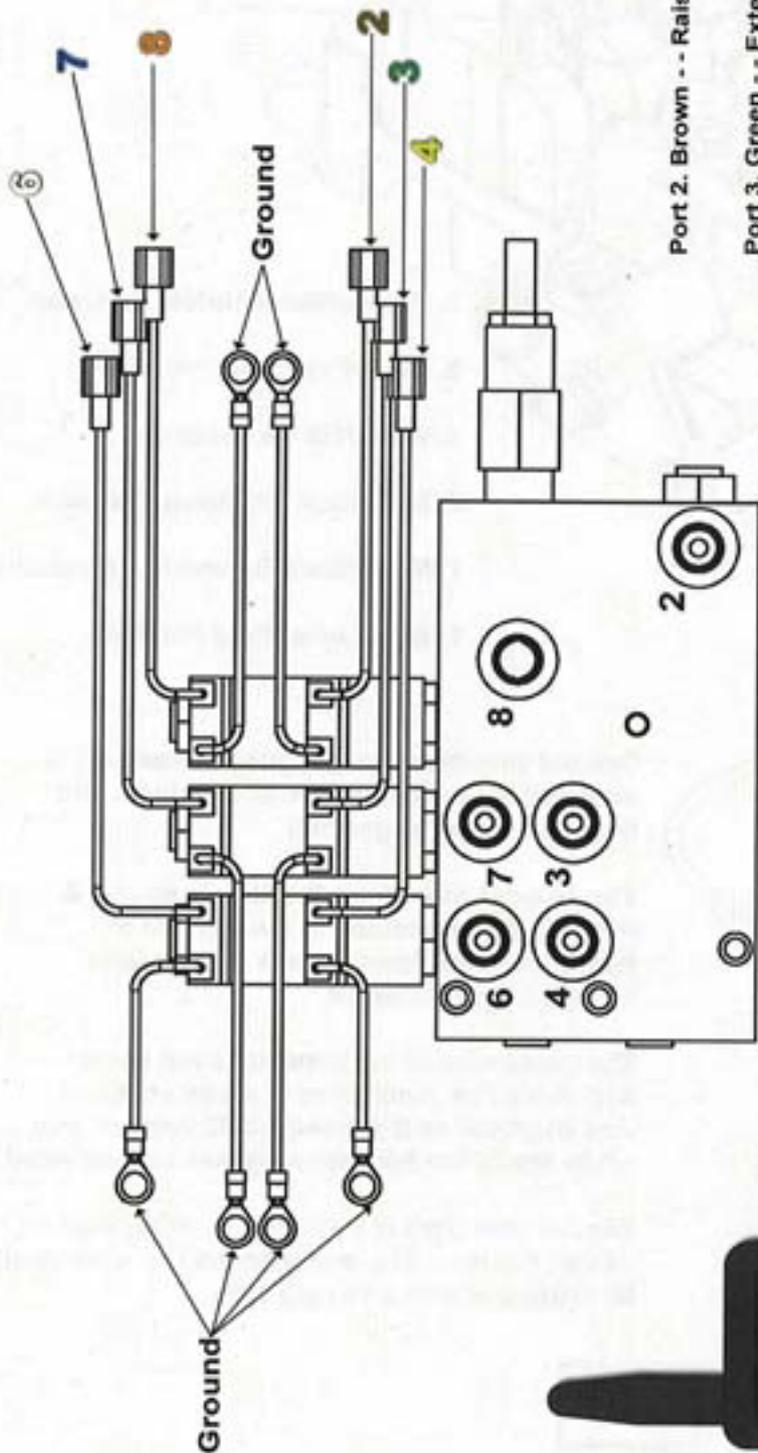
Ground wire harness (supplied in hose kit) is attached to the bottom row of terminals and then connected to ground.

The colored wires from the female socket & harness are connected to the top row of terminals using female quick disconnects included in the hose kit.

The green wire of the harness is not used, and should be terminated in a way so it will not short out as it becomes a 12 volt hot wire when any of the function switches are activated.

The red wire from the harness is connected to 12 volt Positive. The power to the red wire should be protected with a 10 amp fuse.

## Wireless remote wiring to 12 Volt Power System



Port 2. Brown -- Raise/Unfold Function



Port 3. Green -- Extend In Function



Port 4. Yellow -- Tilt Up Function



Port 6. White -- Tilt Down Function



Port 7. Blue -- Extend Out Function

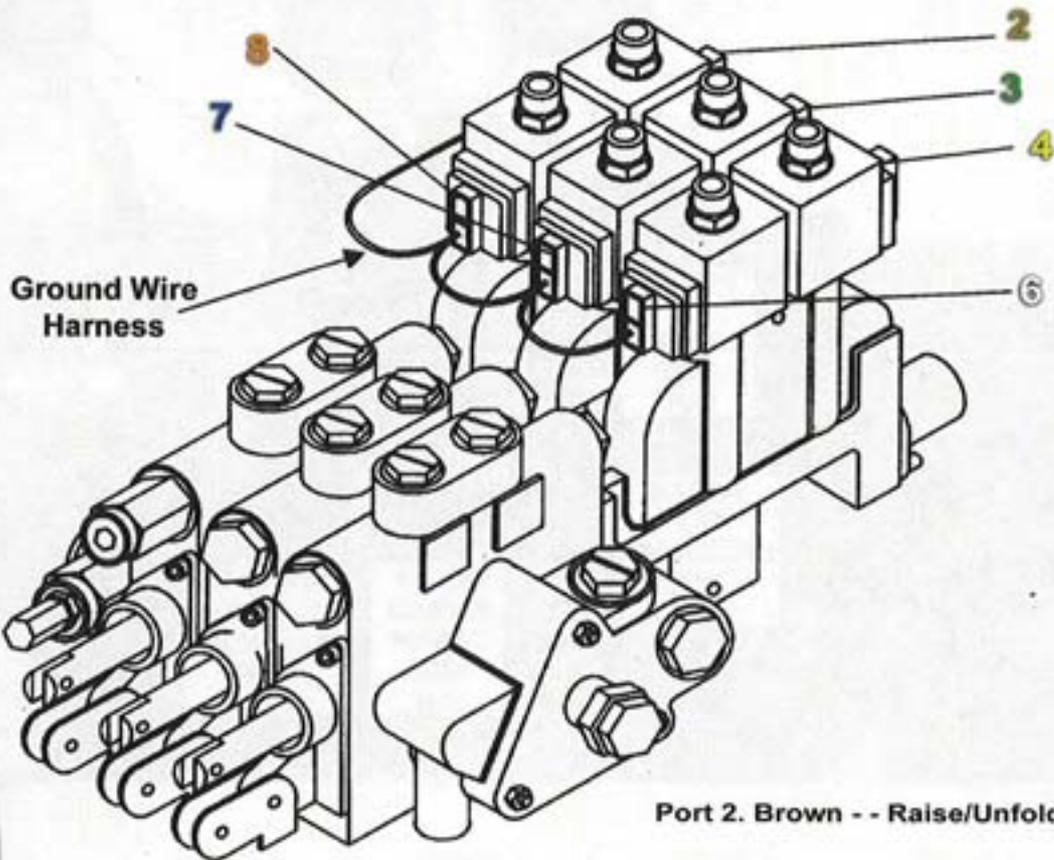


Port 8. Orange -- Lower/Fold Function

(Transmitter will be found inside receiver box.)

Gray wire to small stud on starter solenoid. **Red wire** to power side of starter solenoid mounted on motor with inline 10 amp fuse. Black wire to ground along with ground wires from coils.

## Wireless remote wiring to E35 Valve



Port 2. Brown - - Raise/Unfold Function

Port 3. Green - - Extend In Function

Port 4. Yellow - - Tilt Up Function

Port 6. White - - Tilt Down Function

Port 7. Blue - - Extend Out Function

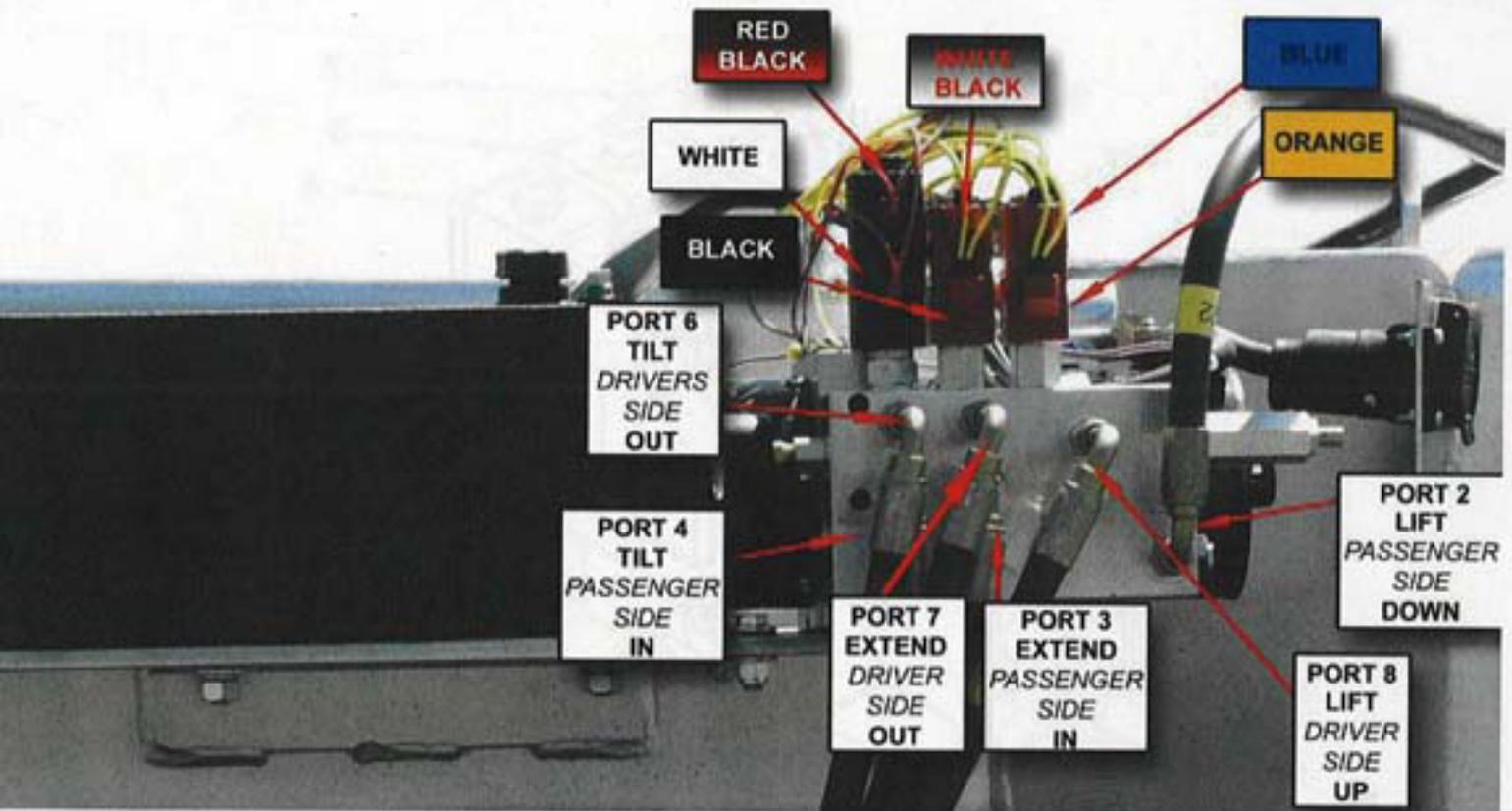
Port 8. Orange - - Lower/Fold Function



(Transmitter will be found inside receiver box.)

Tape off Gray wire, it is not needed. **Red Wire** to 12 volt power with 10 amp fuse. Black wire to ground along with ground wires from valve coils.

## 12 Volt Valve Body Wiring & Porting

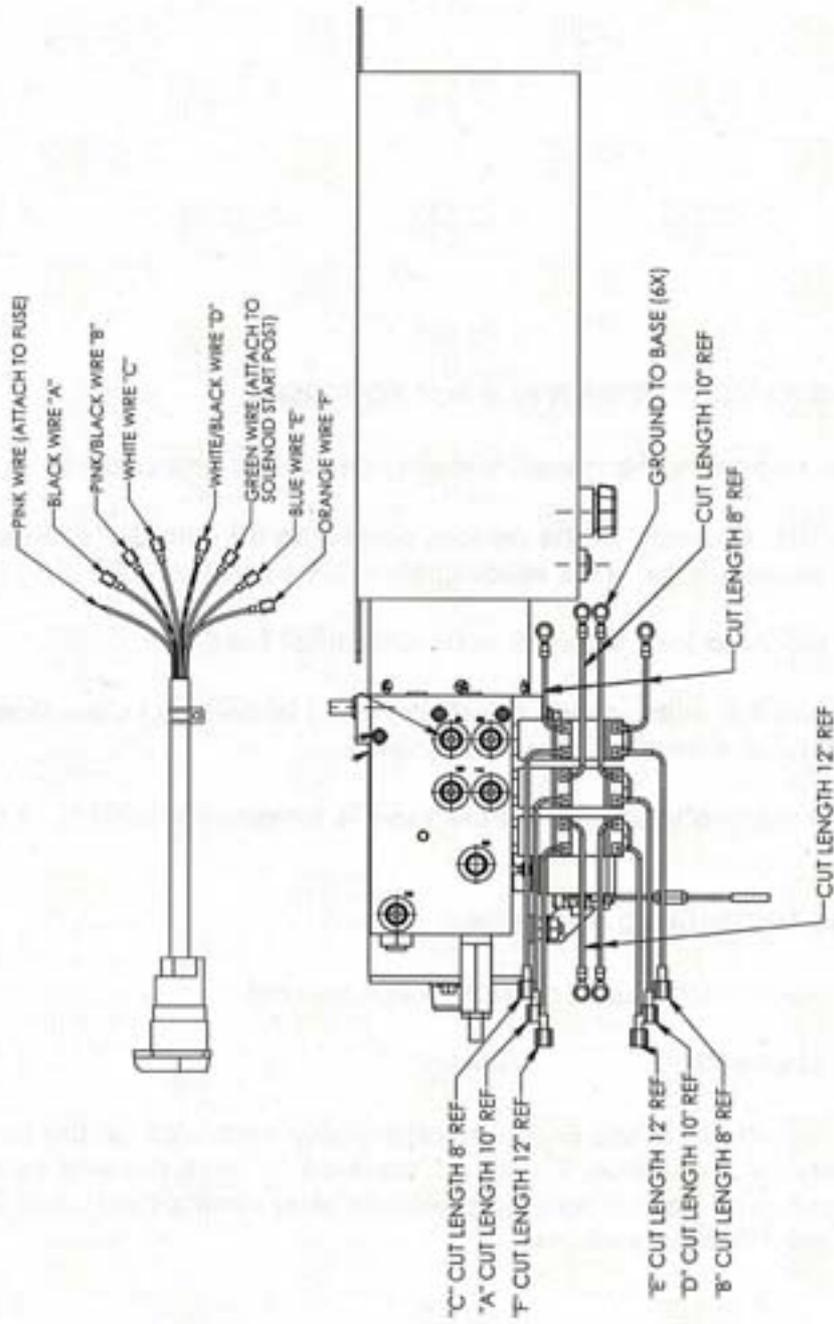


Green wire to solenoid. Red wire to 12 volt power with 10 amp fuse.

### 12 Volt Power Pack Installation

- Fill hydraulic reservoir with oil. Unit must be run in each function to fill cylinders and lines with oil and then refilled. Stroke each function fully out and fully in to expel air from cylinders and lines.
- Oil level should be  $\pm 5/16$ " above maximum line on dip stick when 1) tilt cylinder is fully retracted, 2) Lift cylinder is fully lifted up into "J" lock and unfolded, and 3) extend cylinder is fully retracted.
- The 12 Volt Power Pack can draw up to 300 amps in extreme conditions and requires all cables, connectors, lugs, etc. to be capable of handling this current load. Only use 2 gauge cable.

# MCH 12 Volt Power Pack Wiring Diagram



## 12 Volt Valve Body Wiring & Porting Troubleshooting

### TROUBLESHOOTING 12 VOLT POWER SUPPLY TO PUMP:

1. Connect voltmeter to positive terminal (hotwire) on 12 volt power pack.
2. Operate the "lift – UP" function of the remote control to lift cylinder's "dead-end". Take reading on pressure gauge. This reading should be 2500 to 2600 psi.
3. Voltmeter should not read less than 9-6 volts under full load.
4. If voltage is less than 9-6 volts, check condition of a.) battery, b.) cleanliness and soundness of terminals, c) length and diameter of battery cables.
5. Perform above test with voltmeter connected to the terminal of battery (AT BATTERY).

### TROUBLESHOOTING HYDRUALIC PRESSURE

1. Be sure all of the above installation requirements are met.
2. Run same test as above #2
3. If 2500 psi cannot be attained, the pressure relief valve cartridge on the underside of pump body will require MINIMAL adjusting. To adjust, back off ½" lock nut and screw 1/8" Allen screw in by ¼ turn increments at a time, checking pressure after each adjustment until pressure relief valve is set at 2500 psi. Tighten lock nut.

## Troubleshooting 12 volt pump installation

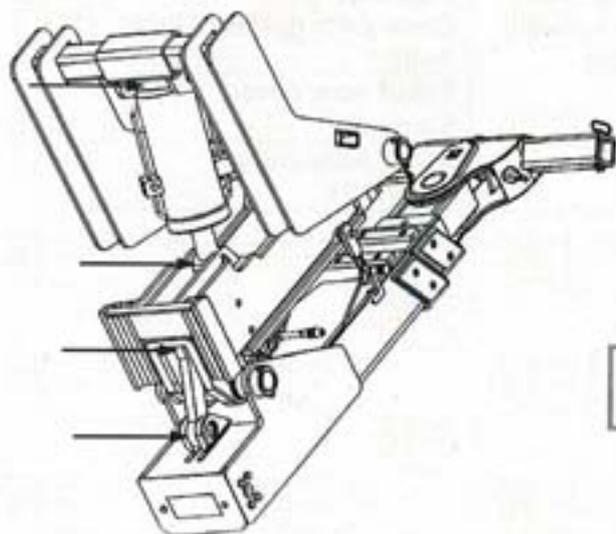
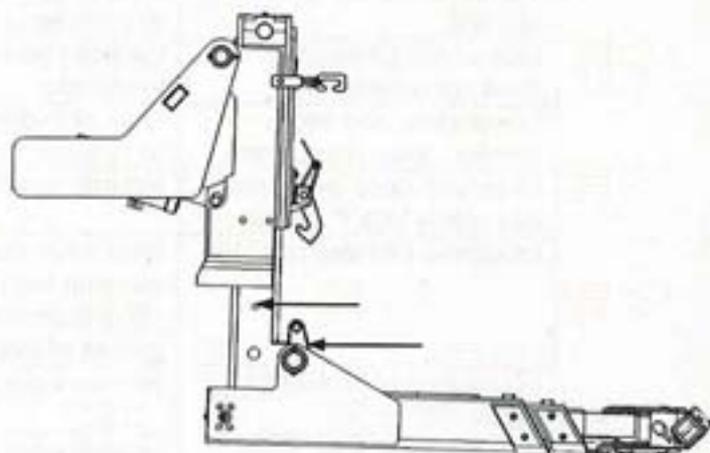
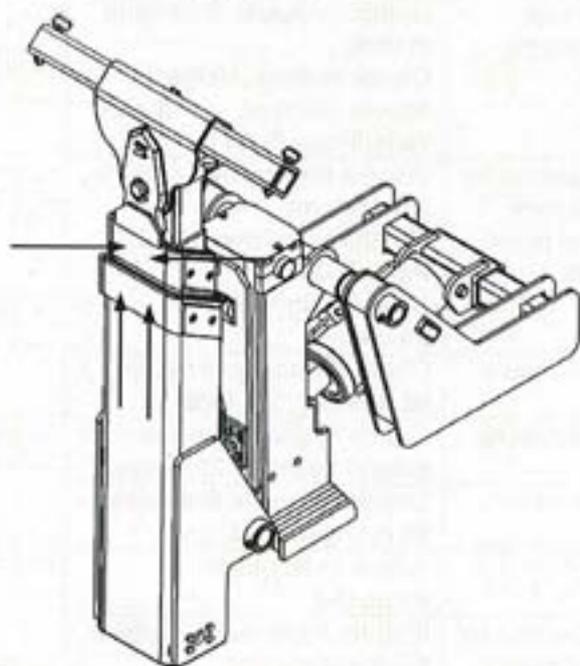
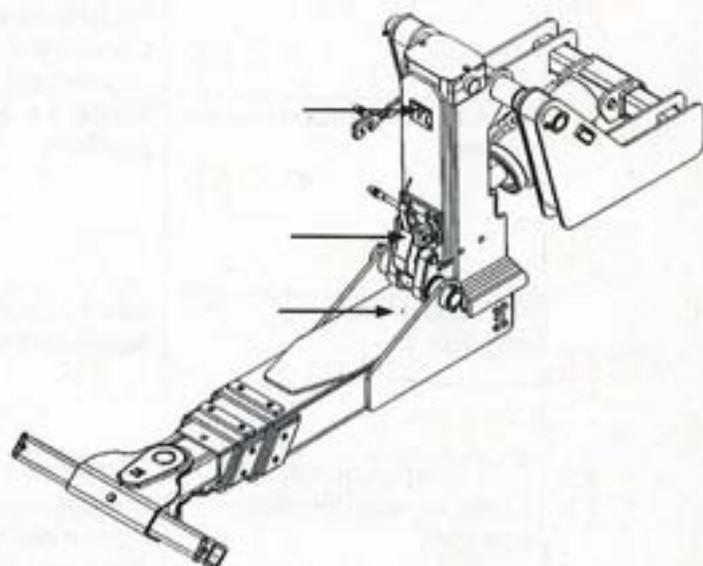
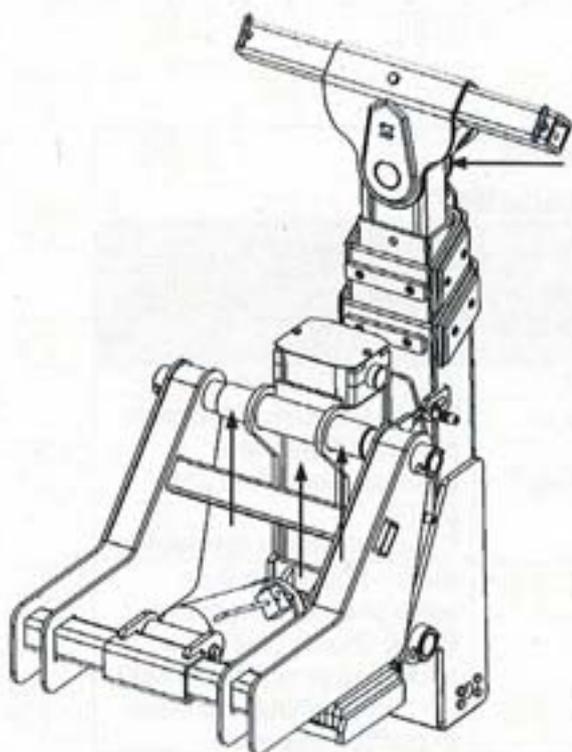
**Nearly all problems are caused by incorrect hydraulic connections. Always double check your connections to the valve. Page E-2**

| Symptom   | Possible Cause   | Solution   |
|---|--|--|
| No Zacklift functions operate                             | No hydraulic pressure to Zacklift.<br>Insufficient power supply.<br>Corroded electrical connections.                 | Check for correct hydraulic pressure from valve pressure should be 2500 psi<br>Check electrical connection                                       |
| Zacklift "lift" function has no power.                    | Hoses 8 & 2 in wrong positions   | Switch hoses 8 & 2 on valve body of lift cylinder. Port 8 should only have maximum pressure of 1000 psi. Port 2 should be equal to pump pressure |
| All Zacklift functions sluggish                           | Low hydraulic flow rate.<br>Insufficient power supply  | Check hydraulic fluid level in tank.<br>Check voltage. Voltage should not read less than 9 volts. Page <b>B-11</b>                               |
| Fold function operates. Lower or raise function does not. | Bent inner main. Caused by carrying load out of lock<br>Inner main rusted in place.<br>Wear pad adjustment to tight. | Inspect Inner main, replace if necessary.<br>Maintain to prevent rust.<br><b>Page E-2</b><br>Adjust wear pads.<br><b>Section D</b>               |
| Tilt function does not operate.                           | Lack of hydraulic pressure to cylinder   | Check hydraulic pressure to tilt cylinder. 2500 psi.   |
| Extend retract function does not operate.                 | Lack of hydraulic pressure to cylinder   | Check hydraulic pressure to extend cylinder. 2500 psi.   |
| Lower raise and fold function does not operate.           | Lack of hydraulic pressure to cylinder   | Check hydraulic pressure to lift cylinder. 2500 psi.   |
| Unable to raise inner main into safety lock ("J" lock)    | Normal wear  | Adjust safety lock<br><b>Page D-4</b>  |
| Unable to fold into fold lock                             | Bent inner main. Caused by carrying load out of lock<br>Dirt accumulation in roller guides of inner main             | Inspect Inner main, replace if necessary.<br>Clean roller guides of inner main.  |
| Looseness of horizontal members                           | Normal wear  | Adjust wear pads.<br><b>Section D</b>  |
| Looseness of inner main                                   | Normal wear  | Adjust wear pads.<br><b>Section D</b>  |
|   |  |  |

## Routine Maintenance



Arrows indicate location of zerk fittings. Grease all fittings frequently for safe operation and long life. In adverse weather conditions it is recommended that greasing be done more frequently.



F-1

# Wear Pad Identification

## Main body/Inner Main/Z18,30,303,403

### Z18:

- Part #** Z1304-40b (7/8 x 5/8" round Nylatron, 6 per main tube)  
 Z1-17a (5/8 x 4 x 5" flat Nylatron, 1 per main tube)  
 Z1-24 (1/4 x 4 x 5-1/8" flat Nylatron, 1 per inner main)  
 Z1-23 (1/4 x 2 x 5-1/8" flat UHMW, 3 per inner main)  
 Z1304-38 Plug (6 per main body)

### Z30:

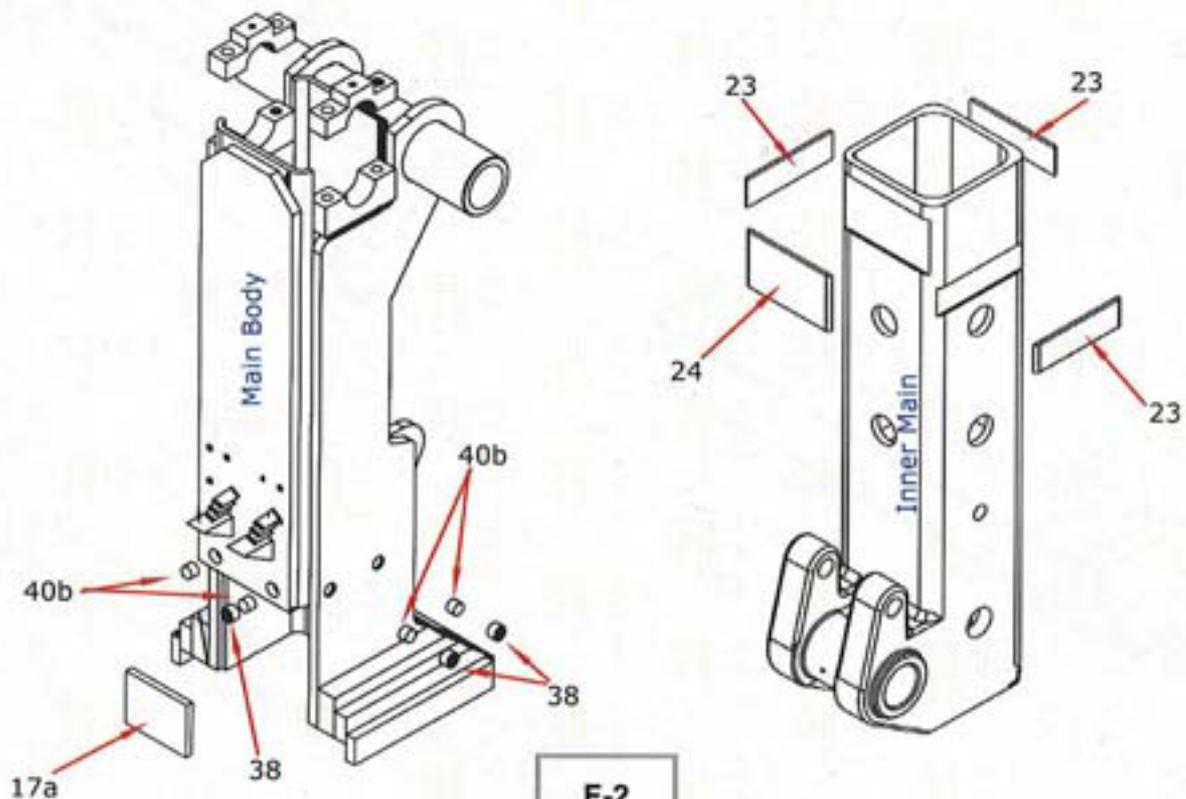
- Part #** Z1304-40b (7/8 x 5/8" round Nylatron, 6 per main tube)  
 Z30-17a (5/8 x 4 x 6" flat Nylatron, 1 per main tube)  
 Z30-24 (1/4 x 4 x 6-1/8" flat Nylatron, 1 per inner main)  
 Z30-23 (1/4 x 2 x 6-1/8" flat UHMW, 3 per inner main)  
 Z1304-38 Plug (6 per main body)

### Z303:

- Part #** Z1304-40b (7/8 x 5/8" round Nylatron, 6 per main tube)  
 Z30-17a (5/8 x 4 x 6" flat Nylatron, 1 per main tube)  
 Z30-24 (1/4 x 4 x 6-1/8" flat Nylatron, 1 per inner main)  
 Z30-23 (1/4 x 2 x 6-1/8" flat UHMW, 3 per inner main)  
 Z1304-38 Plug (6 per main body)

### Z403:

- Part #** Z1304-40b (7/8 x 5/8" round Nylatron, 6 per main tube)  
 Z4-17a (5/8 x 4 x 7" flat Nylatron, 1 per main tube)  
 Z4-24 (1/4 x 4 x 7-1/4" flat Nylatron, 1 per inner main)  
 Z4-23 (1/4 x 2 x 7-1/4" flat UHMW, 3 per inner main)  
 Z1304-38 Plug (6 per main body)



# Wear Pad Identification

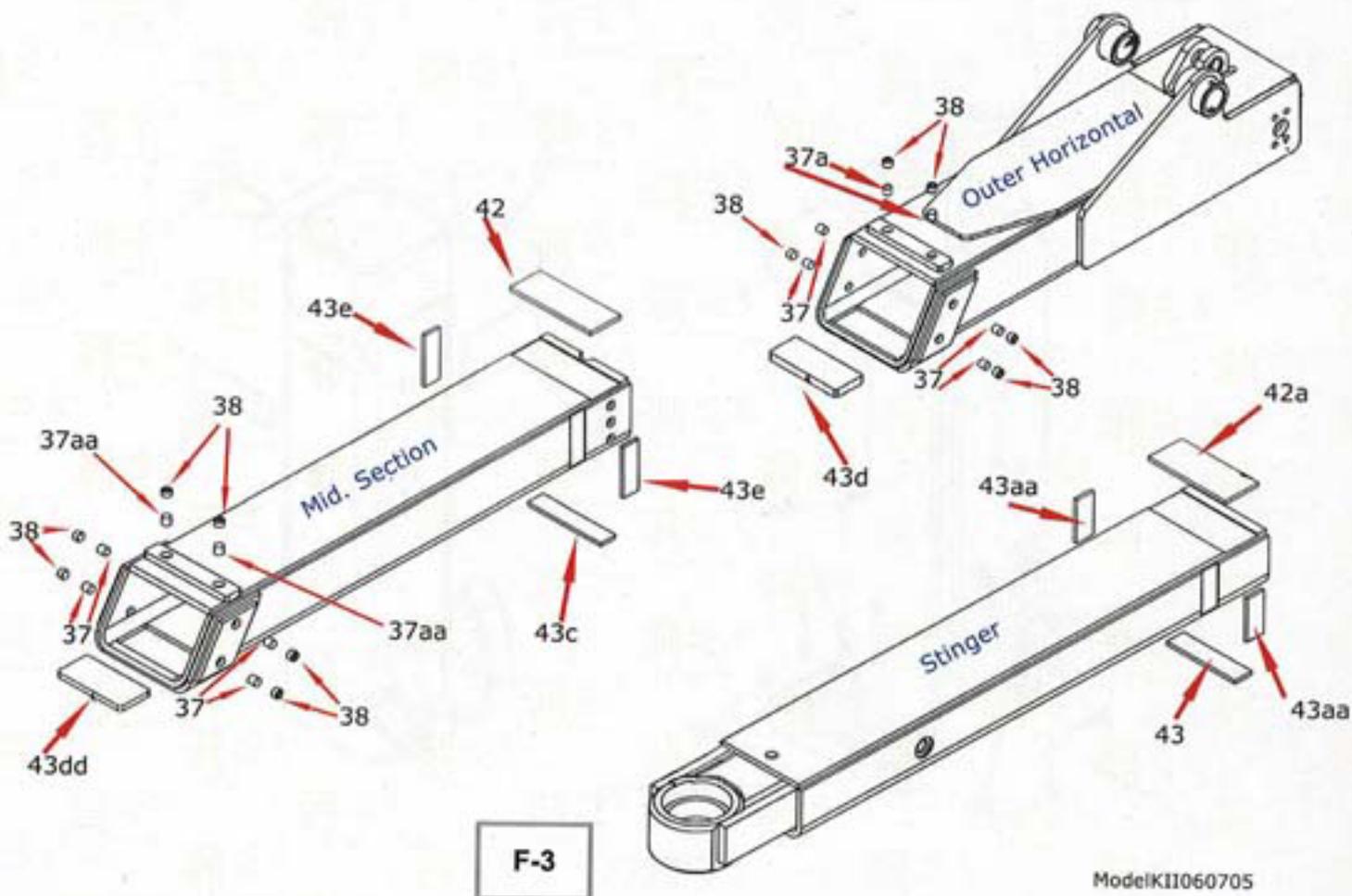
## Outer Horizontal/Mid. Section/Stinger/Z303,403

### Z303:

- Part #** Z0-37 (7/8 x 1" round Nylatron, 4 per mid section & 4 per outer horizontal)  
 Z0-37a (7/8 x 3/4" round Nylatron, 2 per outer horizontal)  
 Z0-37aa (7/8 x 5/8" round Nylatron, 2 per mid. section)  
 Z1304-38 Plug (5 per outer horizontal & 6 per mid. section)  
 Z04-42 (3/8 x 4 x 11-1/2" flat Nylatron, 1 per mid. section)  
 Z04-42a (3/8 x 4 x 10" flat Nylatron, 1 per stinger)  
 Z04-43 (3/8 x 1-7/8 x 8-1/2" flat Nylatron, 1 per stinger)  
 Z04-43aa (3/8 x 1-7/8 x 5" flat UHMW, 2 per stinger)  
 Z04-43c (3/8 x 1-7/8 x 9-1/2" flat Nylatron, 1 per mid. section)  
 Z04-43d (1/2 x 4 x 10" flat Nylatron, 1 per outer horizontal)  
 Z04-43dd (1/2 x 4 x 8-1/2" flat Nylatron, 1 per mid. section)  
 Z0-43e (3/8 x 1-7/8 x 5" flat UHMW, 2 per mid. section)

### Z403:

- Part #** Z4-37 (7/8 x 1-1/8" round Nylatron, 4 mid section & 4 per outer horizontal)  
 Z4-37a (7/8 x 7/8" round Nylatron, 2 per outer horizontal)  
 Z4-37aa (7/8 x 3/4" round Nylatron 2 per mid. section)  
 Z1304-38 Plug (5 per outer horizontal & 6 per mid. section)  
 Z04-42 (3/8 x 4 x 11-1/2" flat Nylatron, 1 per mid. section)  
 Z04-42a (3/8 x 4 x 10" flat Nylatron, 1 per stinger)  
 Z04-43 (3/8 x 1-7/8 x 8-1/2" flat Nylatron, 1 per stinger)  
 Z04-43aa (3/8 x 1-7/8 x 5" flat UHMW, 2 per stinger)  
 Z04-43c (3/8 x 1-7/8 x 9-1/2" flat Nylatron, 1 per mid. section)  
 Z04-43d (1/2 x 4 x 10" flat Nylatron, 1 per outer horizontal)  
 Z04-43dd (1/2 x 4 x 8-1/2" flat Nylatron, 1 per mid. section)  
 Z4-43e (3/8 x 1-7/8 x 6" flat UHMW, 2 per mid. section)



# Wear Pad Identification

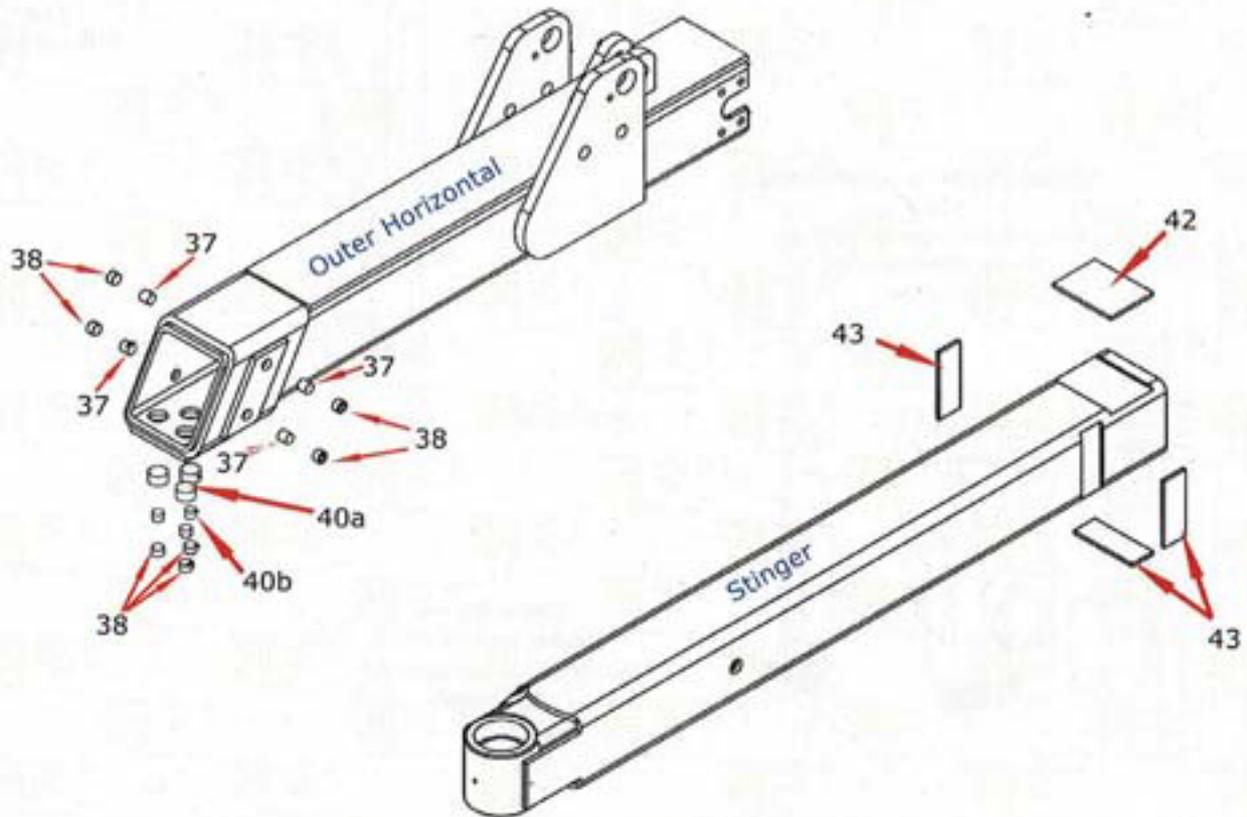
## Outer Horizontal/Stinger/Z18/30

### Z18:

- Part #** Z13-37 (7/8 x 7/8" round Nylatron, 4 per outer horizontal)  
 Z1304-38 Plug (7 per outer horizontal)  
 Z13-40a (7/8 x 1-1/2" round Nylatron, 3 per outer horizontal)  
 Z1-40b (7/8 x 3/8" round Nylatron, 3 per outer horizontal)  
 Z1-42 (1/4 x 4 x 4-1/4" flat Nylatron, 1 per stinger)  
 Z1-43 (1/4 x 1-7/8 x 4-1/4" flat UHMW, 3 per stinger)

### Z30:

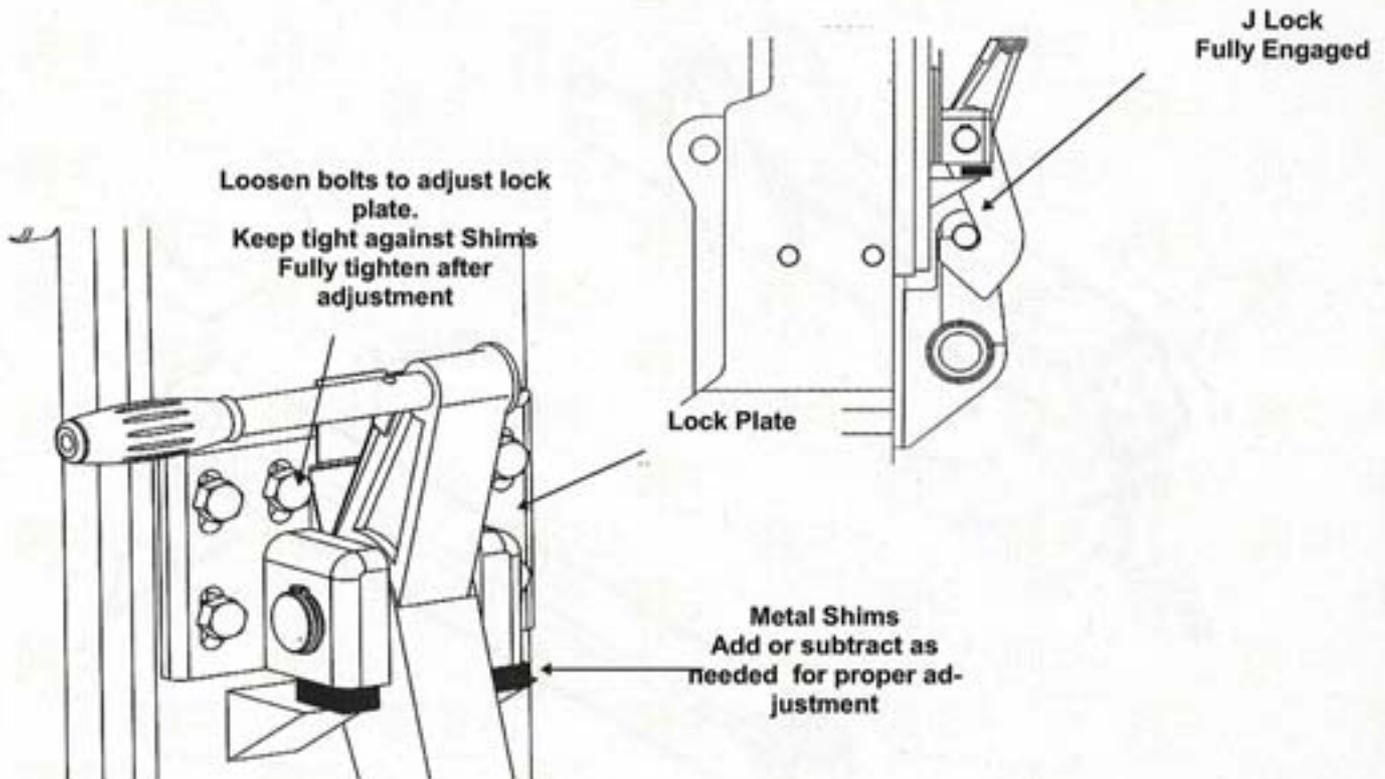
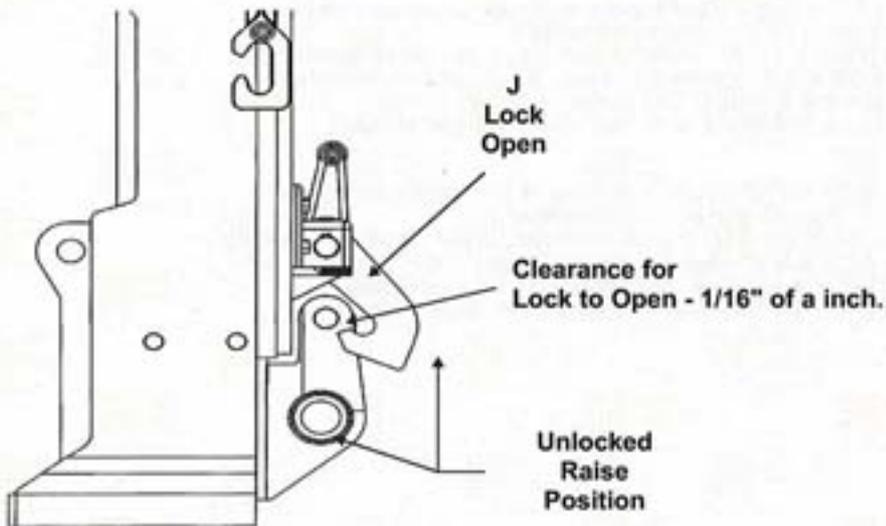
- Part #** Z13-37 (7/8 x 7/8" round Nylatron, 4 per outer horizontal)  
 Z1304-38 Plug (7 per outer horizontal)  
 Z13-40a (7/8 x 1-1/2" round Nylatron, 3 per outer horizontal)  
 Z3-40b (7/8 x 5/8" round Nylatron, 3 per outer horizontal)  
 Z3-42 (1/4 x 4 x 5-1/4" flat Nylatron, 1 per stinger)  
 Z3-43 (1/4 x 1-7/8 x 5-1/4" flat UHMW, 3 per stinger)



F-4

## J Lock Adjustment

Adjusting the J Lock is important to the safe operation of the Zacklift.  
When properly adjusted there should be just enough clearance to open the  
J Lock with the Zacklift loaded, and the Zacklift in the fully "Unlocked Raise"  
Position.



## Tilt Cylinder (7 x 12")-- Placement of Pilot-to-Open Check Valves

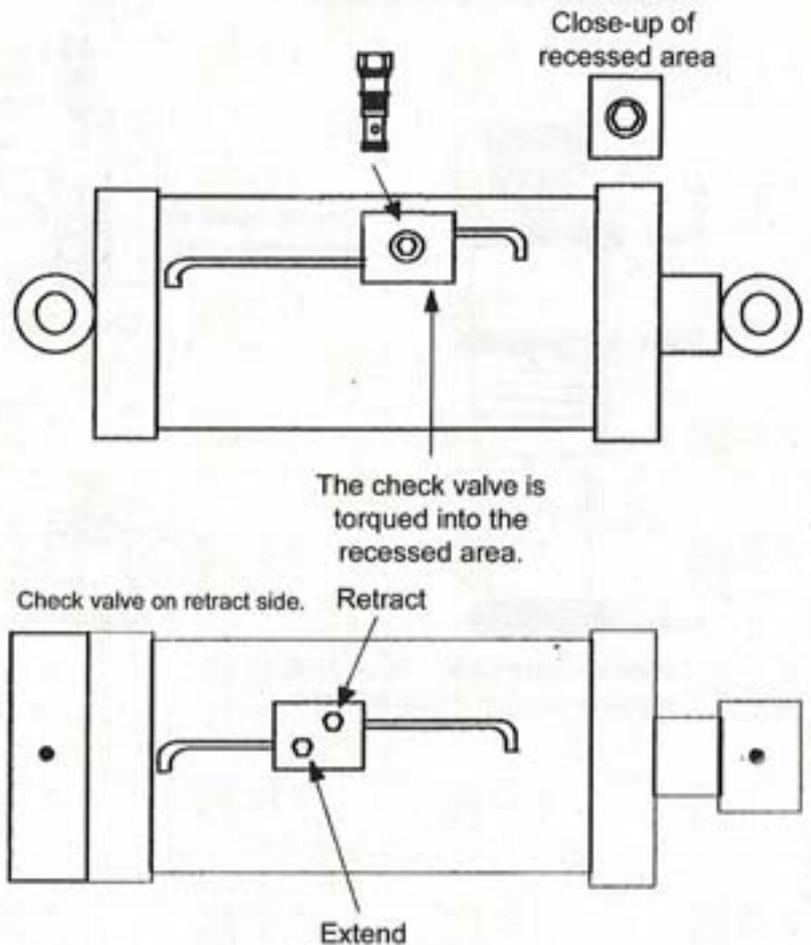
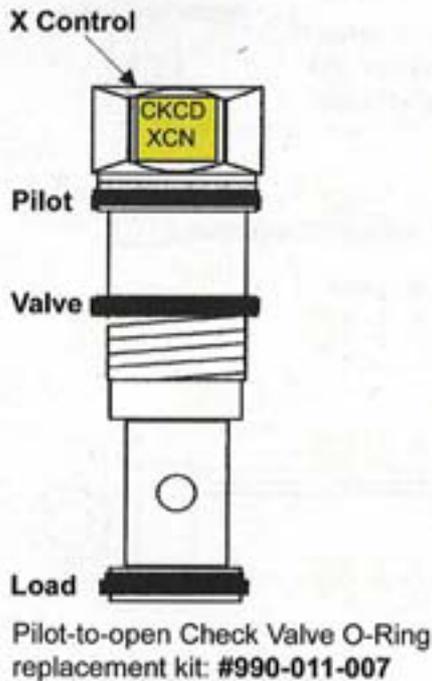
Pilot-To-Open Check Valve

Suitable for load locking application

CKCD- XCN preset to 35psi

Installation Torque 30 to 35lb. ft.

**Tilt Cylinder**  
**Z403**



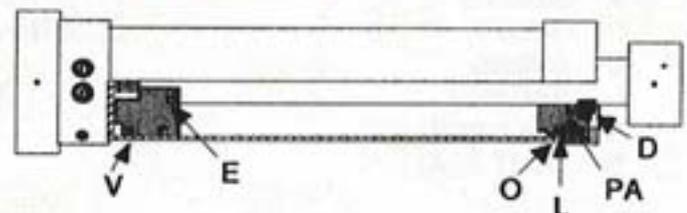
## Tilt Cylinder--Repair Kit Parts and Location

Cylinder size 7 x 12

REPAIR KIT:  
Part # RK-7.00-003

Cylinder part number: Z4-05

V UNIRING  
O O-RING  
E O-RING  
L BACKUP  
PA POLY-PAK  
D DUST SEAL



G-1

## Tilt Cylinder (6 x 11-3/4")-Placement of Pilot-to-Open Check Valves

### Pilot-To-Open Check Valves

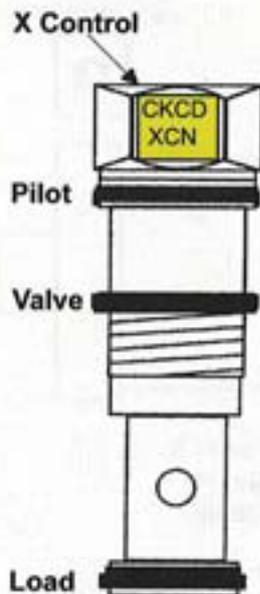
Suitable for Load Locking Application

CKCD- XCN preset to 35psi

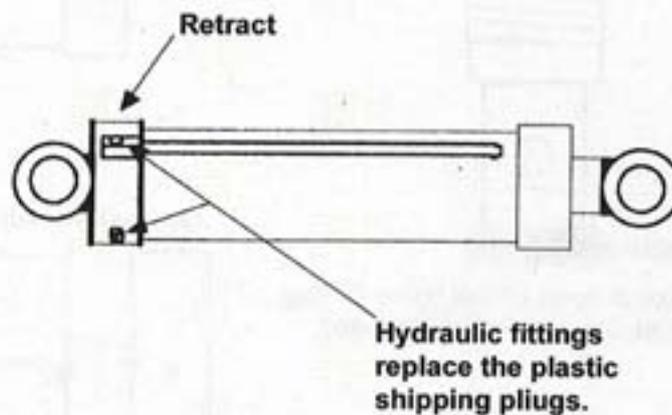
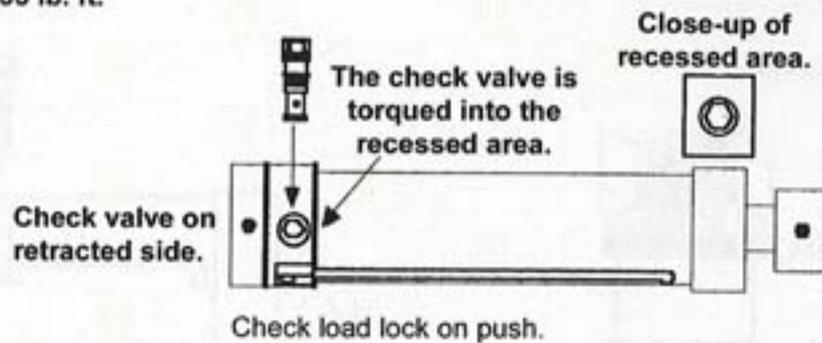
Installation Torque 30 to 35 lb. ft.

## Tilt Cylinder

Z30/Z303



Pilot-to-Open Check Valve O-Ring replacement kit: # 990-011-007



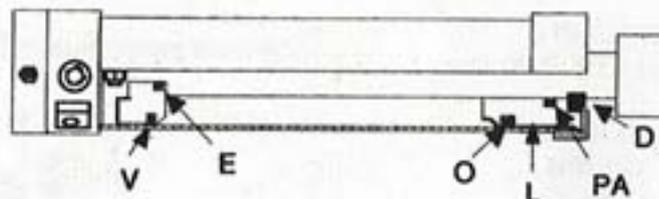
## Tilt Cylinder-Repair Kit Parts and Location

Cylinder size: 6 x 11-3/4"

Cylinder part number: Z30-05

Repair Kit:  
Part # RK-6.00-017

- V UNIRING
- O O-RING
- E O-RING
- L BACKUP
- PA POLY-PAK
- D DUST SEAL



## Z18 Tilt Cylinder (5 x 12")-Placement of Pilot-to-Open Check Valves

Pilot-To Open Check Valves  
 Suitable for load locking application

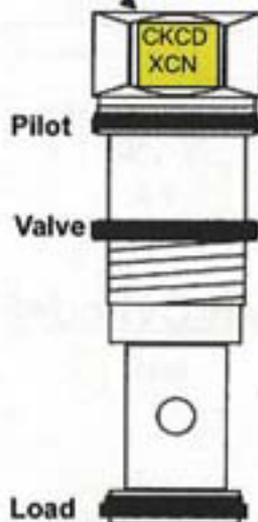
CKCD- XCN preset to 35psi

Installation Torque 30 to 35 lb. ft.

### Tilt Cylinder

**Z18**

X Control

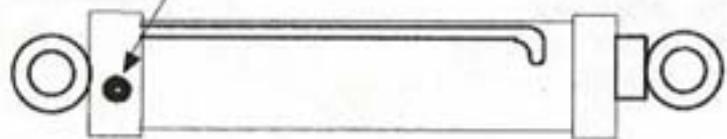


Pilot-to-Open Check Valve O-Ring  
 replacement kit: # 990-011-007

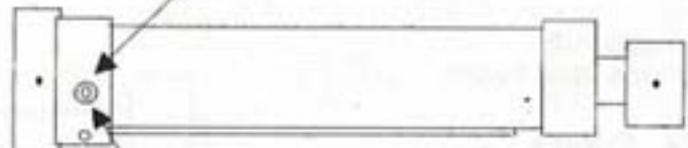
Close-up of  
 recessed area.



The check valve is  
 torqued into the  
 recessed area.



Hydraulic fittings  
 replace the  
 plastic plugs.



Retract  
 Check valve on  
 retract side.



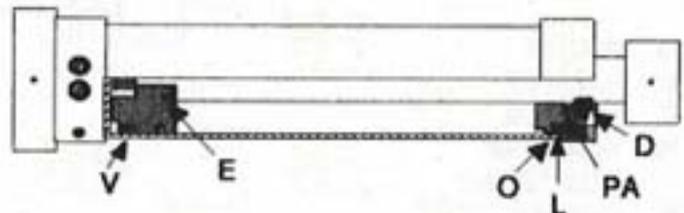
## Z18 Tilt Cylinder-Repair Kit Parts and Location

Cylinder size: 5 x 12

Cylinder part number: Z1-05

Repair Kit:  
 Part # RK-5.00-012

- V UNIRING
- O O-RING
- E O-RING
- L BACKUP
- PA POLY-PAK
- D DUST SEAL



G-3

## Lift Cylinder-Repair Kit and Location

Cylinder size: 5 x 17"

Cylinder part number: Z30-15

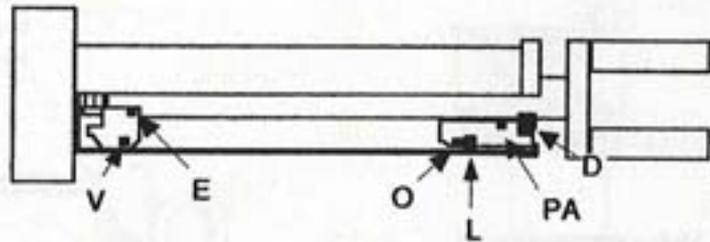
### Lift Cylinder

Z30/Z303

Repair Kit:

Part # RK-5.00-012

- O O-RING
- L BACKUP
- V UNIRING
- PA POLY-PAK
- D DUST SEAL
- E O-RING



Cylinder size: 6 x 17"

Cylinder part number: Z4-15

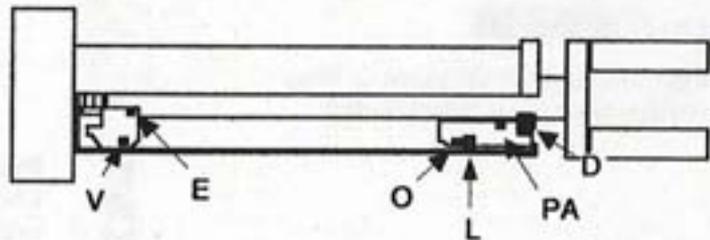
### Lift Cylinder

Z403

Repair Kit:

Part # RK-6.00-018

- O O-RING
- L BACKUP
- V UNIRING
- PA POLY-PAK
- D DUST SEAL
- E O-RING



Cylinder size: 4 x 17"

Cylinder part number: Z1-15

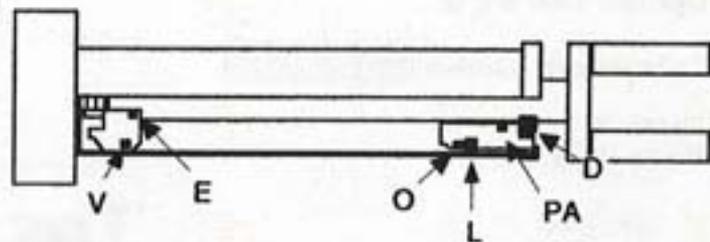
### Lift Cylinder

Z18

Repair Kit:

Part # RK-4.00-014

- O O-RING
- L BACKUP
- V UNIRING
- PA POLY-PAK
- D DUST SEAL
- E O-RING



# Extend Cylinder 3 x 30 x 46-1/8 x 2 Placement of Pilot-to-Open Check Valve

## Extend Cylinder

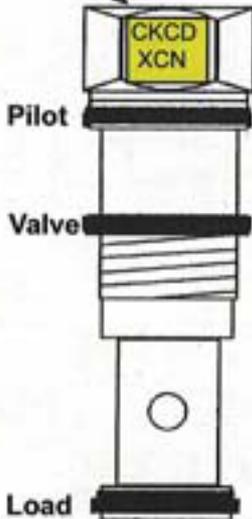
Pilot-to-Open Check Valve  
Suitable for loading application

CKCD- XCN

Installation Torque 30 to 35 lb. ft.

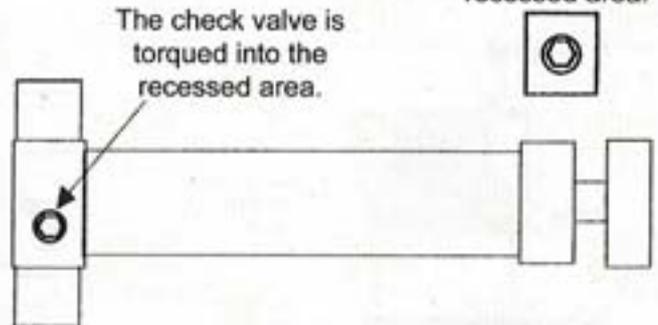
**Z303/Z403**

X Control



Pilot-to-open Check Valve O-Ring  
Replacement kit: # 990-011-007

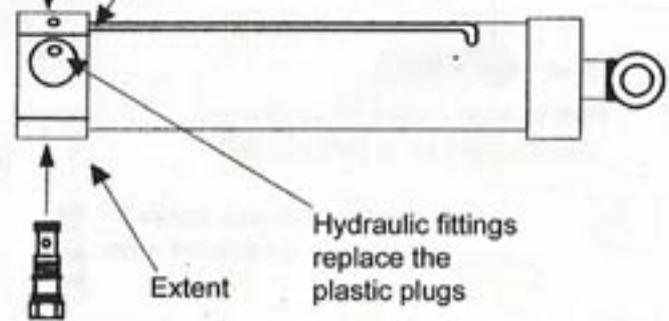
Close-up of recessed area.



Check load lock on pull.

Check valve on retract side

Check valve on extend side



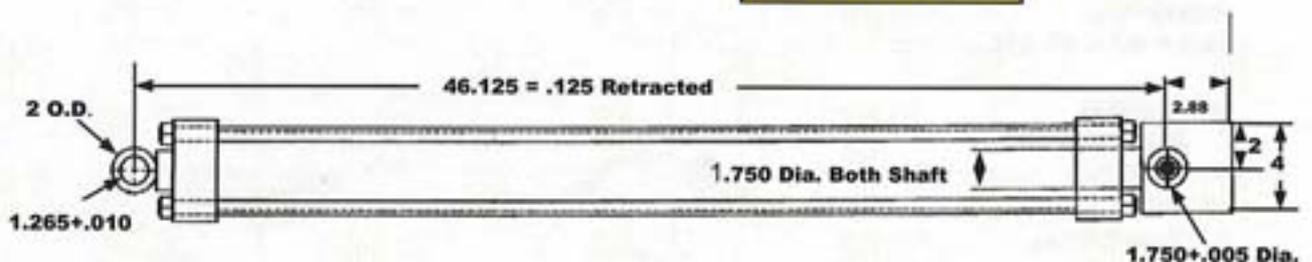
Repair Kit:  
Part # RK-3.00-160

## Extend Cylinder-Repair Kit Parts and Location

Cylinder size: 3 x 30 x 46-1/8 x 2

Cylinder part number: Z0-33c fits Z303

Z4-33c fits Z403



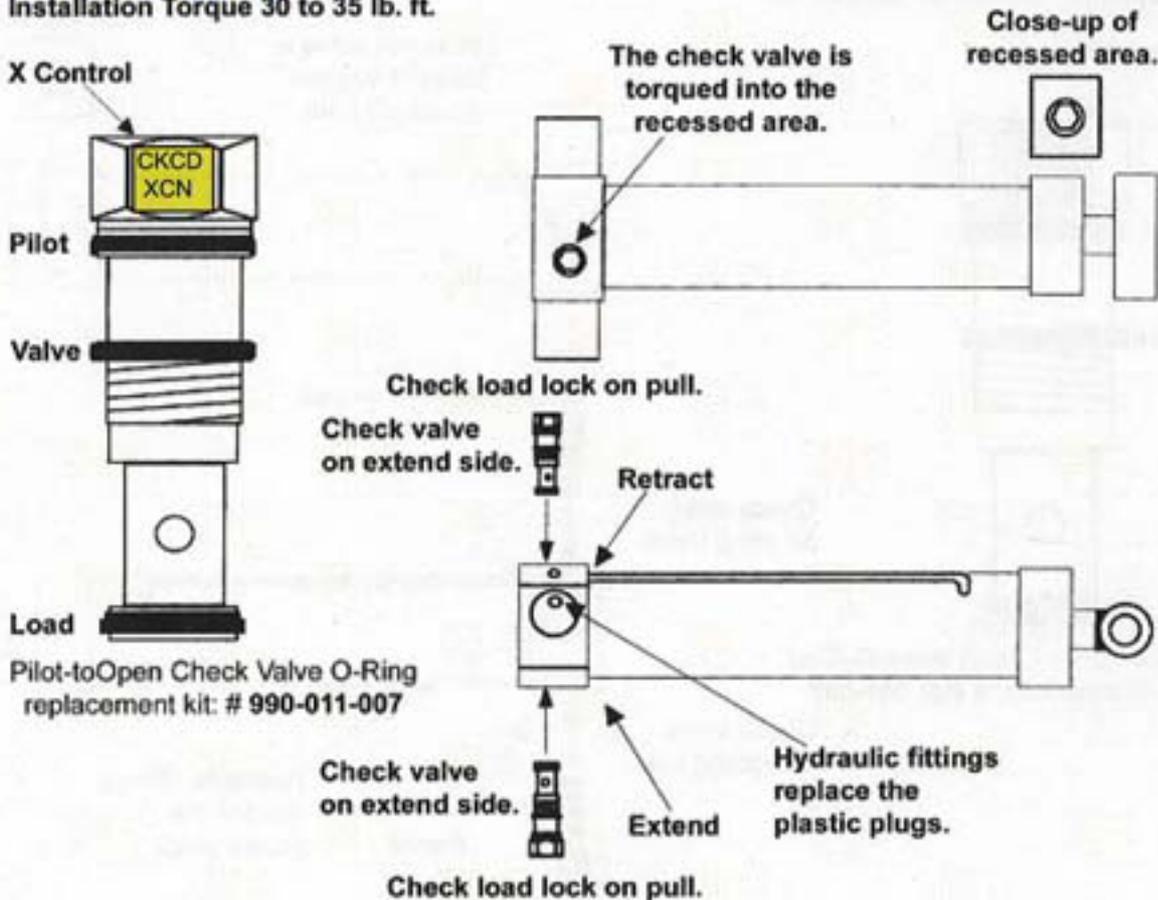
G-5

## Extend Cylinder (3 x 30")-Placement of Pilot-to-Open Check Valves

### Extend Cylinder

**Pilot-to-Open Check Valves**  
 Suitable for Load Locking Application  
 CKCD- XCN preset to 35psi  
 Installation Torque 30 to 35 lb. ft.

**Z18/Z30**



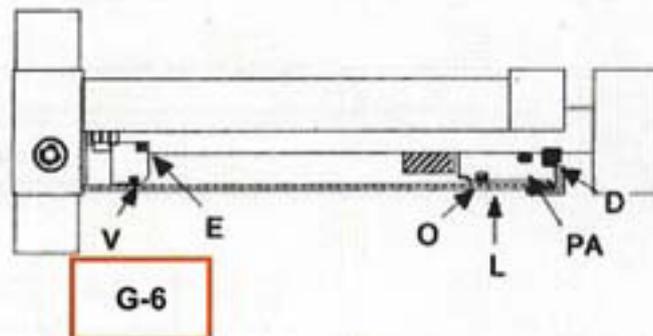
## Extend Cylinder-Repair Kit Parts and Location

Cylinder size: 3 x 30"

Cylinder part number: Z13-33

Repair Kit:  
 Part # RK-3.00-016

- O O-RING
- L BACKUP
- V UNIRING
- PA POLY-PAK
- D DUST SEAL
- E O-RING



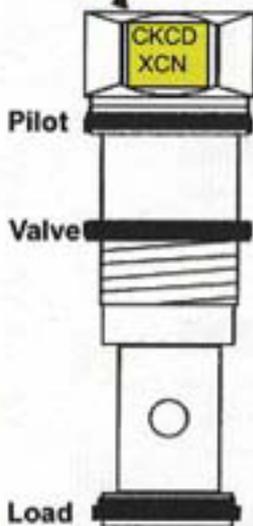
## Extend Cylinder (3 x 24")-Placement of Pilot-to-Open Check Valve Extend Cylinder

**Pilot-to-Open Check Valve**  
Suitable for loading application

**CKCD- XCN**

Installation Torque 30 to 35 lb. ft.

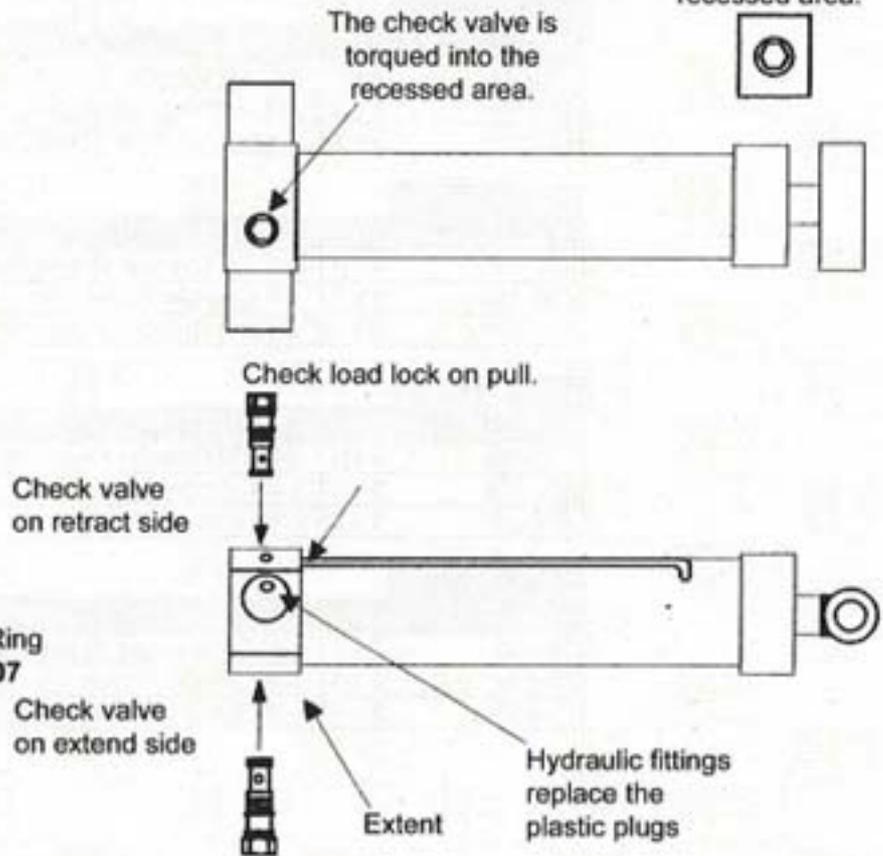
X Control



Pilot-to-open Check Valve O-Ring  
Replacement kit: # 990-011-007

### 38,000lb Stiff Legs

Close-up of recessed area.

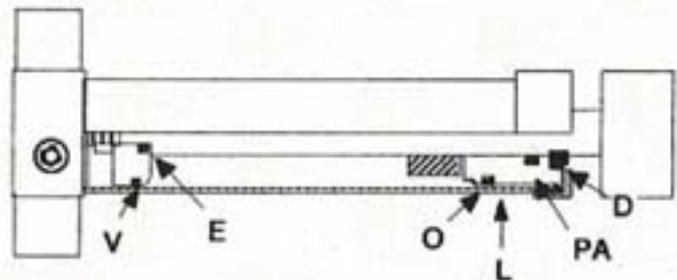


## Extend Cylinder-Repair Kit Parts and Location

Repair Kit:  
Part# RK-3.00-016

O O-RING  
L BACK  
V UNIRING  
PA POLY-PAK  
D DUST SEAL  
E O-RING

Cylinder size: 3 x 24  
Cylinder part number: ZAC-0490-01



G-7

## Seal Kit Identification

Seal Kits, Extend, Lift, Tilt / Z18,30,303,403

| <b>Z18:</b>   |                                      |
|---------------|--------------------------------------|
| <b>Part #</b> | <b>Description</b>                   |
| Z1-05b        | 5 x 11-3/4" Tilt Cylinder Repair Kit |
| Z1-15b        | 4 x 17" Lift Cylinder Repair Kit     |
| Z13-33b       | 3 x 24" Extend Cylinder Repair Kit   |

| <b>Z30:</b>   |                                      |
|---------------|--------------------------------------|
| <b>Part #</b> | <b>Description</b>                   |
| Z30-05b       | 6 x 11-3/4" Tilt Cylinder Repair Kit |
| Z30-15b       | 5 x 17" Lift Cylinder Repair Kit     |
| Z13-33b       | 3 x 35" Extend Cylinder Repair Kit   |

| <b>Z303:</b>  |                                      |
|---------------|--------------------------------------|
| <b>Part #</b> | <b>Description</b>                   |
| Z30-05b       | 6 x 11-3/4" Tilt Cylinder Repair Kit |
| Z30-15b       | 5 x 17" Lift Cylinder Repair Kit     |
| Z04-33b       | 3 x 35 x 30" Extend Cylinder Kit     |

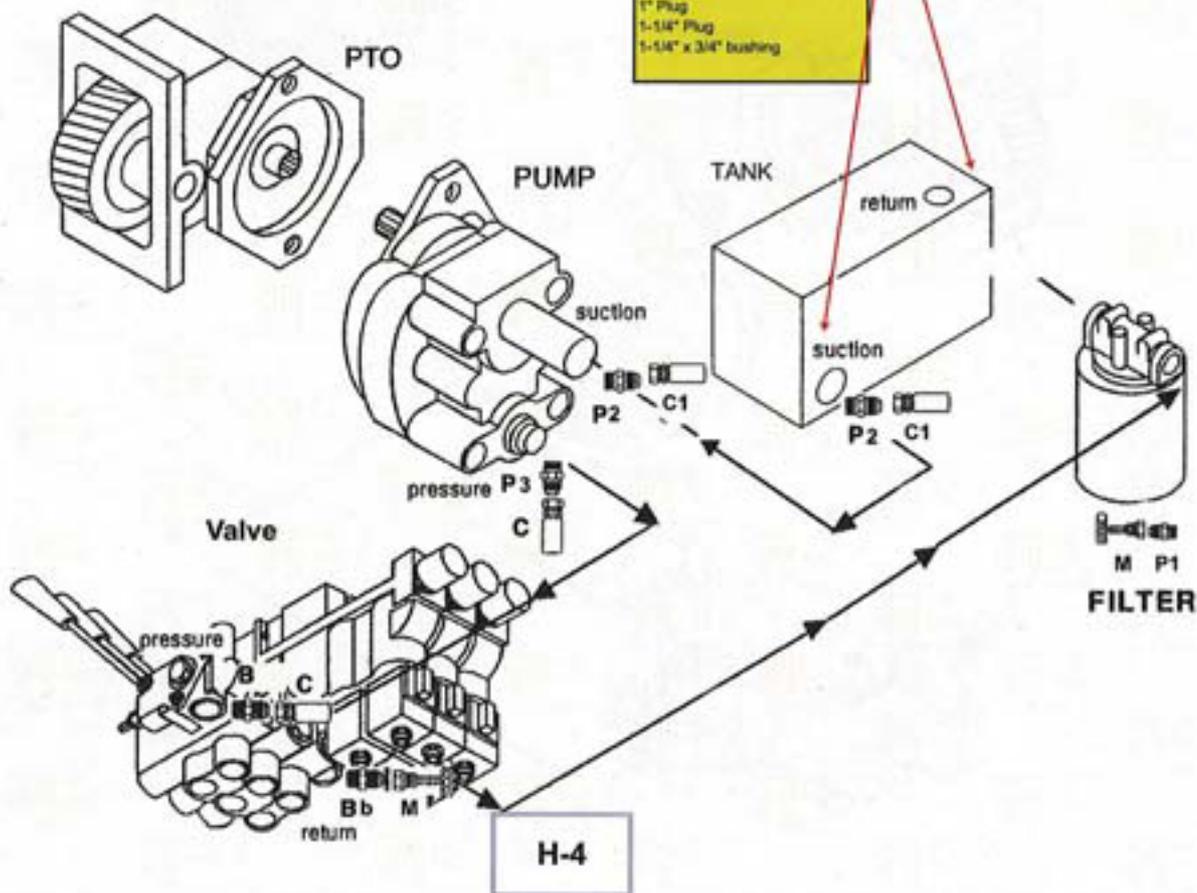
| <b>Z403:</b>  |   |
|---------------|---|
| <b>Part #</b> | <b>Description</b>                      |
| Z4-05b        | 7 x 11-3/4" Tilt Cylinder Repair Kit    |
| Z4-15b        | 6 x 17" Lift Cylinder Repair Kit        |
| Z04-33b       | 3 x 35 x 30" Extend Cylinder Repair Kit |

# Z18/Z30/Z303 PTO/Pump Installation

|   |   |
|---|---|
|  | <b>B</b> 0503-8-10-ZL (0503-8-8-ZL, CB4 Valve only) |
|  | <b>Bb</b> 0503-12-10-ZL                             |
|  | <b>C</b> 10643-8-8-ZL                               |
|  | <b>C1</b> 10643-16-16-ZL                            |
|  | <b>M</b> 5503-12-18-ZL                              |
|  | <b>P1</b> 2404-12-12-ZL (return)                    |
|  | <b>P2</b> 2404-16-16-ZL (suction)                   |
|  | <b>P3</b> 2404-8-12-ZL (pressure)                   |
| <b>Bulk hose</b>  |   |
| 20' 1/2" pressure   |   |
| 12' 3/4" return   |   |
| 8' 1" suction   |   |

### Tank Connection Parts (Black Pipe)

- 1" x 2" Nip
- 1" x 3/4" Bell Reducer
- 3/4" x 2" Nip
- 3/4" St. Elbow
- 1/2" Plug
- 1" Plug
- 1-1/4" Plug
- 1-1/4" x 3/4" bushing



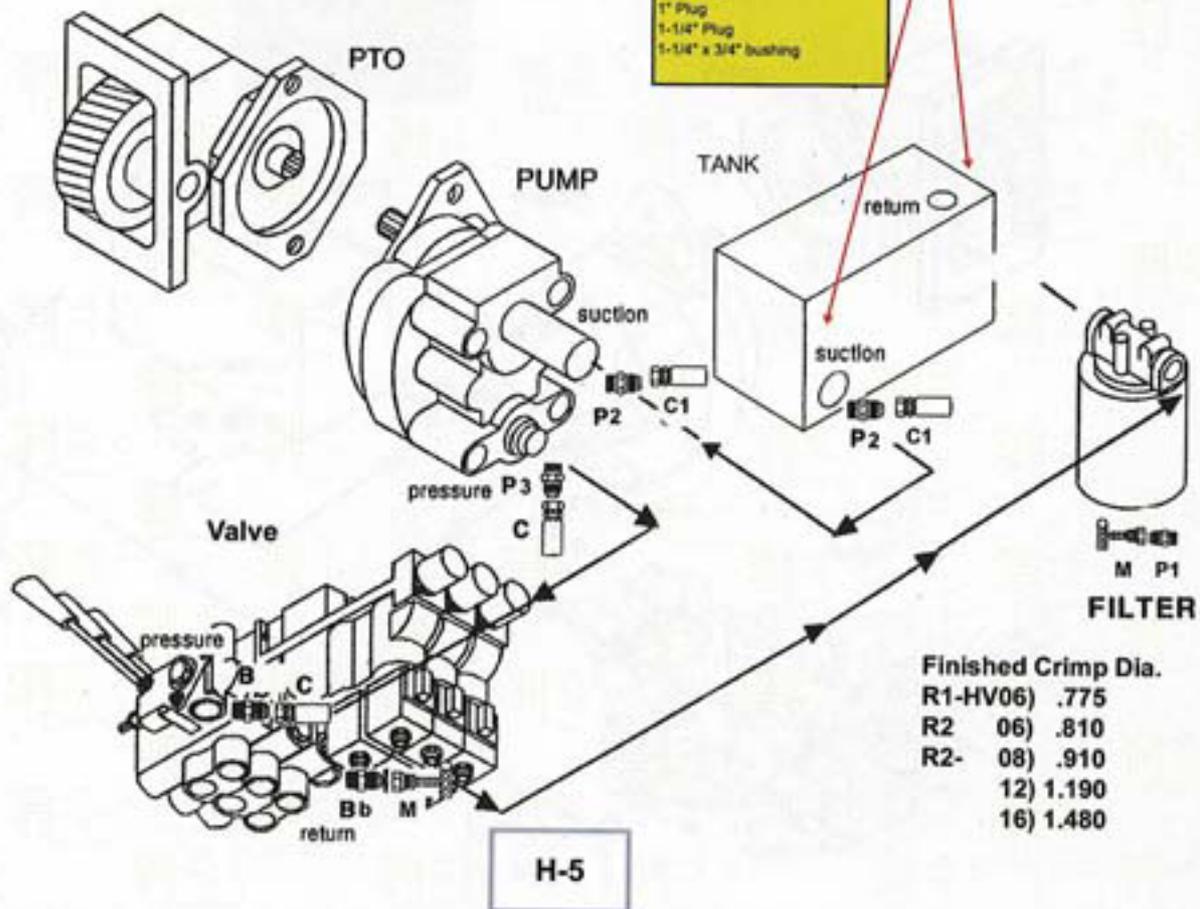
# Z403

## PTO/Pump Installation

|   |                                   |
|---|-----------------------------------|
|  | <b>B</b> 0503-8-10-ZL             |
|  | <b>Bb</b> 0503-12-10-ZL           |
|  | <b>C</b> 10643-6-6-ZL             |
|  | <b>C1</b> 10643-16-16-ZL          |
|  | <b>M</b> 5503-12-18-ZL            |
|  | <b>P1</b> 2404-12-12-ZL (return)  |
|  | <b>P2</b> 2404-16-16-ZL (suction) |
|  | <b>P3</b> 2404-8-12-ZL (pressure) |
| <b>Bulk hose</b>  |                                   |
| 20' 1/2" pressure   |                                   |
| 12' 3/4" return   |                                   |
| 8' 1" suction   |                                   |

### Tank Connection Parts (Black Pipe)

|                        |
|------------------------|
| 1" x 2" Nip            |
| 1" x 3/4" Bell Reducer |
| 3/4" x 2" Nip          |
| 3/4" St. Elbow         |
| 1/2" Plug              |
| 1" Plug                |
| 1-1/4" Plug            |
| 1-1/4" x 3/4" bushing  |



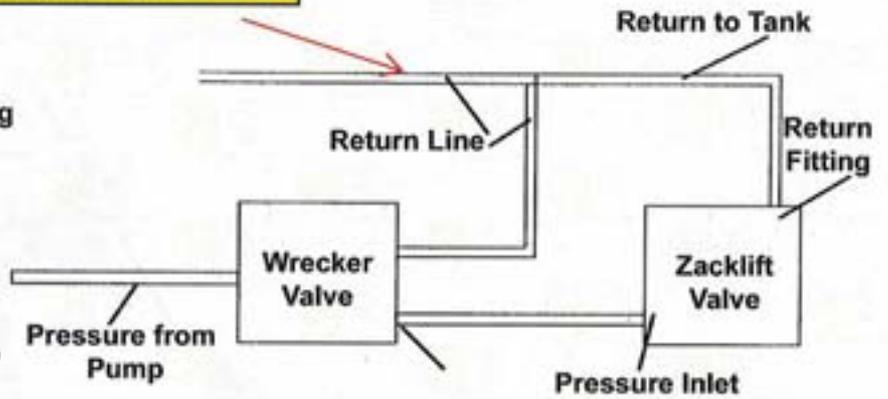
# Existing Hydraulic Systems

Zacklift recommends a 25 Micron filter on return line. Recirculate fluid throu filter for 1 hour before using Zacklift valving.

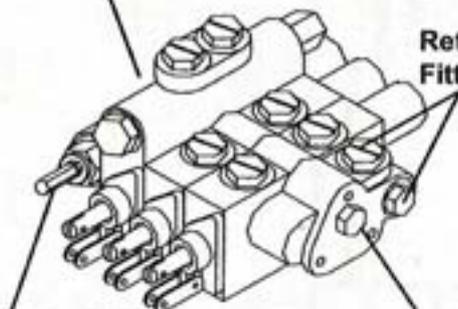
Use of a power beyond fitting or power beyond plate is recommended for tapping into an existing hydraulic system.

Other methods of entering the system may be possible, such as, the use of a flow divider.

Consult the wrecker valve manufacturer for specific instructions.

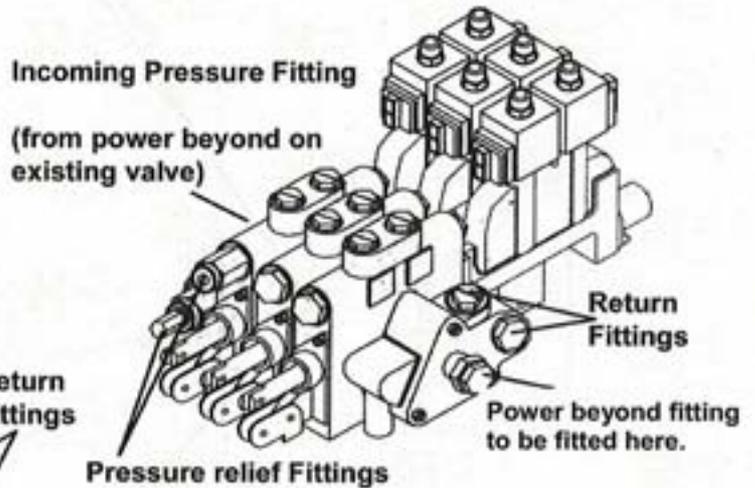


Incoming pressure fitting (from power beyond on existing valve)



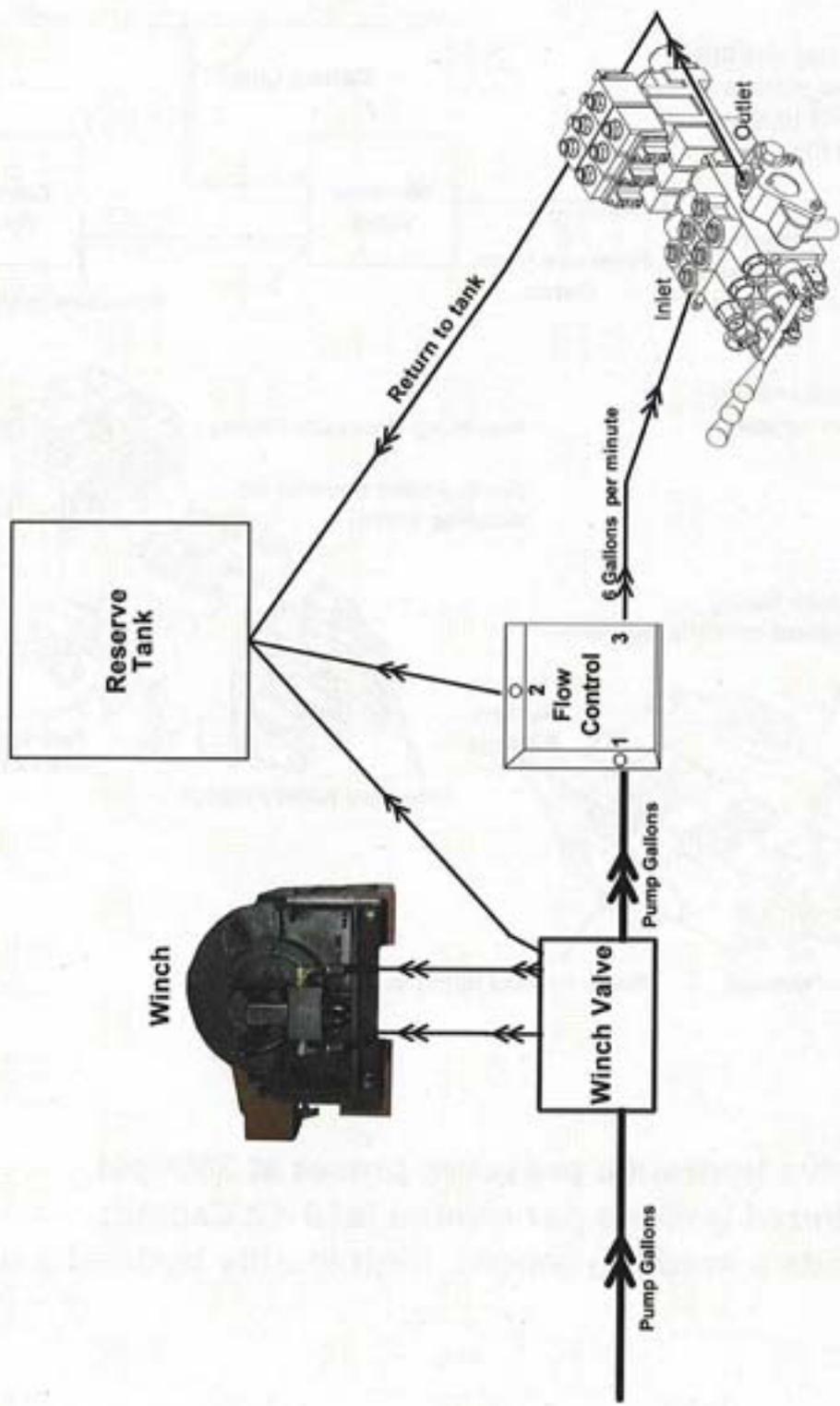
Pressure relief fittings

Power beyond fitting to be fitted here.



## NOTE:

Zacklift valve hydraulic pressure preset at 2600psi. Recommended gallons per minute is 10-12. Zacklift recommends a medium weight, high quality hydraulic oil.



# Flow Control to Winch & Valve

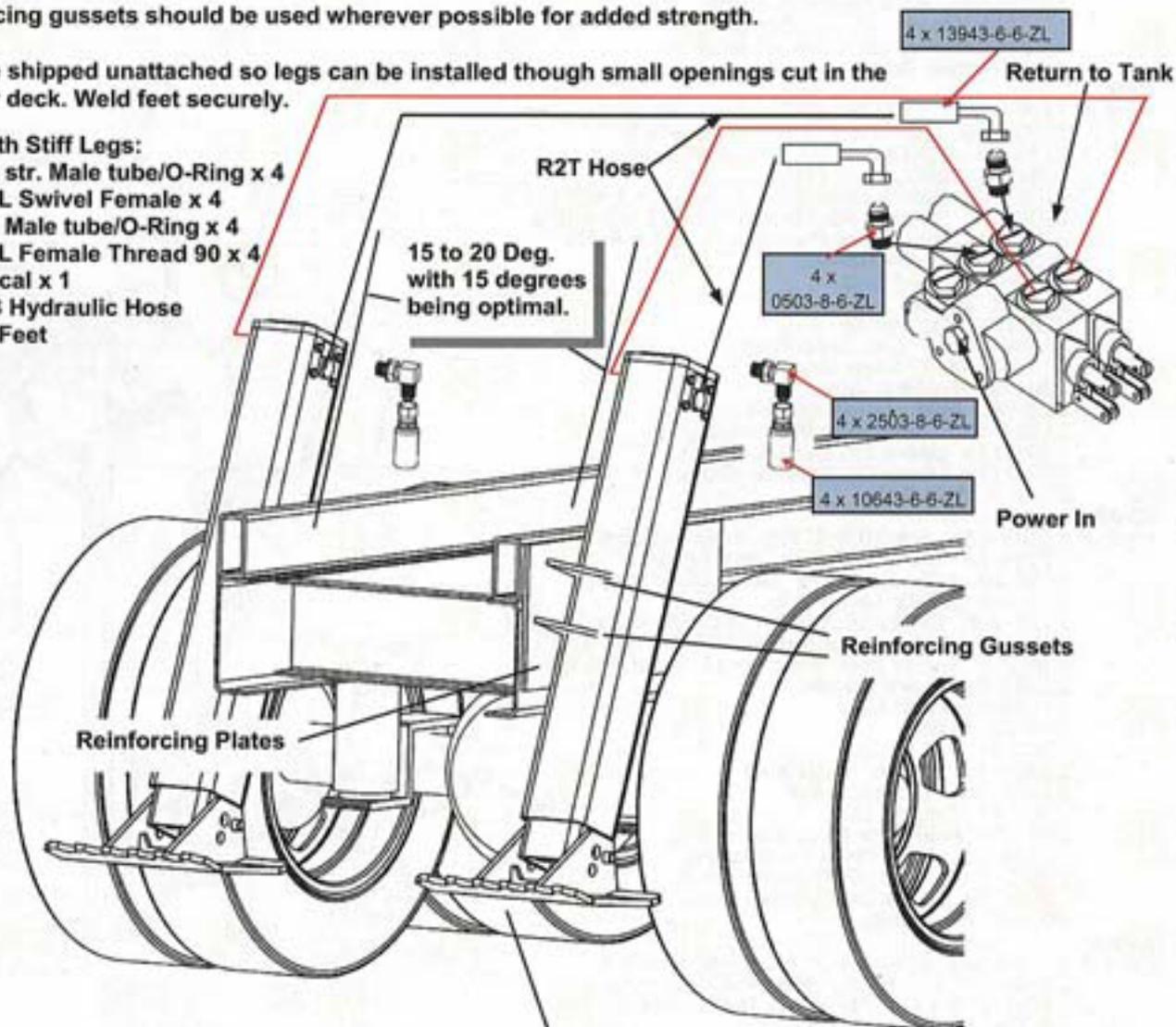
I-1

## Stiffleg Installation

- Stifflegs should be mounted at an angle of approximately 15 to 20 degrees from vertical with 15 degrees being optimal.
- The 20,000 pound model stifflegs should be mounted at a height of 10" from ground level
- The 25,000 and 38,000 pound model stifflegs should be mounted at a height of approximately 12" from ground level.
- The subframe and mainframe should be tied together with reinforcement plates as shown. This provides a solid mount for the installation of the stifflegs
- Remember to "tack weld" everything in place and check for correct function before final welding.
- Reinforcing gussets should be used wherever possible for added strength.
- Feet are shipped unattached so legs can be installed through small openings cut in the wrecker deck. Weld feet securely.

### Included with Stiff Legs:

- 0503-8-6-ZL str. Male tube/O-Ring x 4
- 10643-6-6-ZL Swivel Female x 4
- 2503-8-6-ZL Male tube/O-Ring x 4
- 13943-6-6-ZL Female Thread 90 x 4
- Stiff Leg Decal x 1
- 3/8" R2T 3/8 Hydraulic Hose 24 Feet



To flip foot pad, pull 1" pin and hair pin, push claw down. Replace pin in lower hole, and replace hair pin.

10" from ground 20,000 lb. Model

12" from ground 25,000 & 38,000 lb. Models

J-1

# Main Body Parts Identification

## Main Body/Z18,30,303,403

### Z18:

- Part #** Z1304-14b 3/4-10 x 3" Hex Bolts Grade 8  
 Z1304-16 1/2-13 x 1" Hex Bolt Grade 8  
 Z130-19 1/2-13 x 1-1/4" Hex Bolt Grade 8  
 Z1-20a Safety Lock Plate  
 Z130-20b Safety Lock Shim Set (1/8 x 1 x 2-1/2")  
 Z130-20c Safety Lock Pyramid (1-1/2 x 2-1/2")  
 Z1-21a Safety Lock Pivot Pin (1-1/4 x 4-1/4")  
 Z1304-21b Lock Handle  
 Z1304-21c Red Grip  
 Z1-22 J Lock  
 Z1-22a Flat Spring  
 Z1304-26a 1-1/4" Snap Ring  
 Z1304-36a 1" Snap Ring  
 Z1-98 Folding Lock  
 Z13-98b Fold Lock Pivot Bolt  
 Z1304-106 Main Pivot Pin Bushing  
 Z1-215a Upper Lift Cylinder Block  
 Z1-215c Lower Lift Cylinder Block  
 Z1-317 Main Body

### Z30:

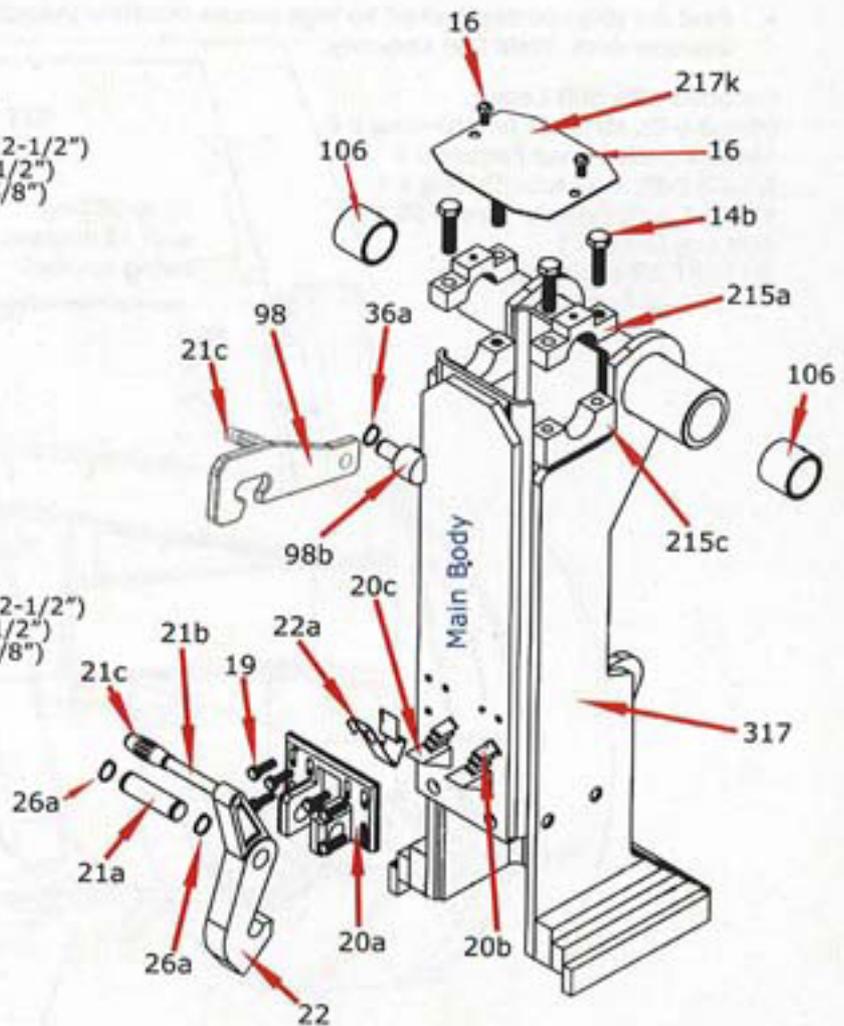
- Part #** Z1304-14b 3/4-10 x 3" Hex Bolts Grade 8  
 Z1304-16 1/2-13 x 1" Hex Bolt Grade 8  
 Z130-19 1/2-13 x 1-1/4" Hex Bolt Grade 8  
 Z30-20a Safety Lock Plate  
 Z130-20b Safety Lock Shim Set (1/8 x 1 x 2-1/2")  
 Z130-20c Safety Lock Pyramid (1-1/2 x 2-1/2")  
 Z30-21a Safety Lock Pivot Pin (1-1/4 x 4-5/8")  
 Z1304-21b Lock Handle  
 Z1304-21c Red Grip  
 Z30-22 J Lock  
 Z30-22a Flat Spring  
 Z1304-26a 1-1/4" Snap Ring  
 Z1304-36a 1" Snap Ring  
 Z304-98 Folding Lock  
 Z13-98b Fold Lock Pivot Bolt  
 Z1304-106 Main Pivot Pin Bushing  
 Z30-215a Upper Lift Cylinder Block  
 Z30-215c Lower Lift Cylinder Block  
 Z3-317 Main Body

### Z303:

- Part #** Z1304-14b 3/4-10 x 3" Hex Bolts Grade 8  
 Z1304-16 1/2-13 x 1" Hex Bolt Grade 8  
 Z130-19 1/2-13 x 1-1/4" Hex Bolt Grade 8  
 Z30-20a Safety Lock Plate  
 Z130-20b Safety Lock Shim Set (1/8 x 1 x 2-1/2")  
 Z130-20c Safety Lock Pyramid (1-1/2 x 2-1/2")  
 Z30-21a Safety Lock Pivot Pin (1-1/4 x 4-5/8")  
 Z1304-21b Lock Handle  
 Z1304-21c Red Grip  
 Z30-22 J Lock  
 Z30-22a Flat Spring  
 Z1304-26a 1-1/4" Snap Ring  
 Z1304-36a 1" Snap Ring  
 Z304-98 Folding Lock  
 Z04-98b Fold Lock Pivot Bolt  
 Z1304-106 Main Pivot Pin Bushing  
 Z30-215a Upper Lift Cylinder Block  
 Z30-215c Lower Lift Cylinder Block  
 Z0-317 Main Body

### Z403:

- Part #** Z1304-14b 3/4-10 x 3" Hex Bolts Grade 8  
 Z1304-16 1/2-13 x 1" Hex Bolt Grade 5  
 Z4-19 1/2-13 x 1-1/2" Hex Bolt Grade 8  
 Z4-20a Safety Lock Plate  
 Z4-20b Safety Lock Shim Set (1/8 x 1 x 3-1/4")  
 Z4-20c Safety Lock Pyramid (1-1/2 x 3-1/2")  
 Z4-21a Safety Lock Pivot Pin (1-1/4 x 6-5/8")  
 Z1304-21b Lock Handle  
 Z1304-21c Red Grip  
 Z4-22 J Lock  
 Z4-22a Flat Spring  
 Z1304-26a 1-1/4" Snap Ring  
 Z1304-36a 1" Snap Ring  
 Z304-98 Folding Lock  
 Z04-98b Fold Lock Pivot Bolt  
 Z1304-106 Main Pivot Pin Bushing  
 Z4-215a Upper Lift Cylinder Block  
 Z4-215c Lower Lift Cylinder Block  
 Z4-317 Main Body



# Inner Main Parts Identification

## Inner Main/Z18,30,303,403

### Z18:

- Part #** Z1-15 4 x 17" Lift Cylinder  
 Z1-25 Inner Main  
 Z1-26 Safety Lock Pin (1-1/4 x 5-5/8")  
 Z1304-26a 1-1/4" Snap Ring  
 Z1-28 Roller Pin (1-3/8" x 3-7/8")  
 Z1-29 Roller  
 Z1-30 Dogbone  
 Z1-41 Lower Done Bone Pin (1-3/8 x 2-3/4")  
 Z1304-41a 1-3/8" Snap Ring

### Z30:

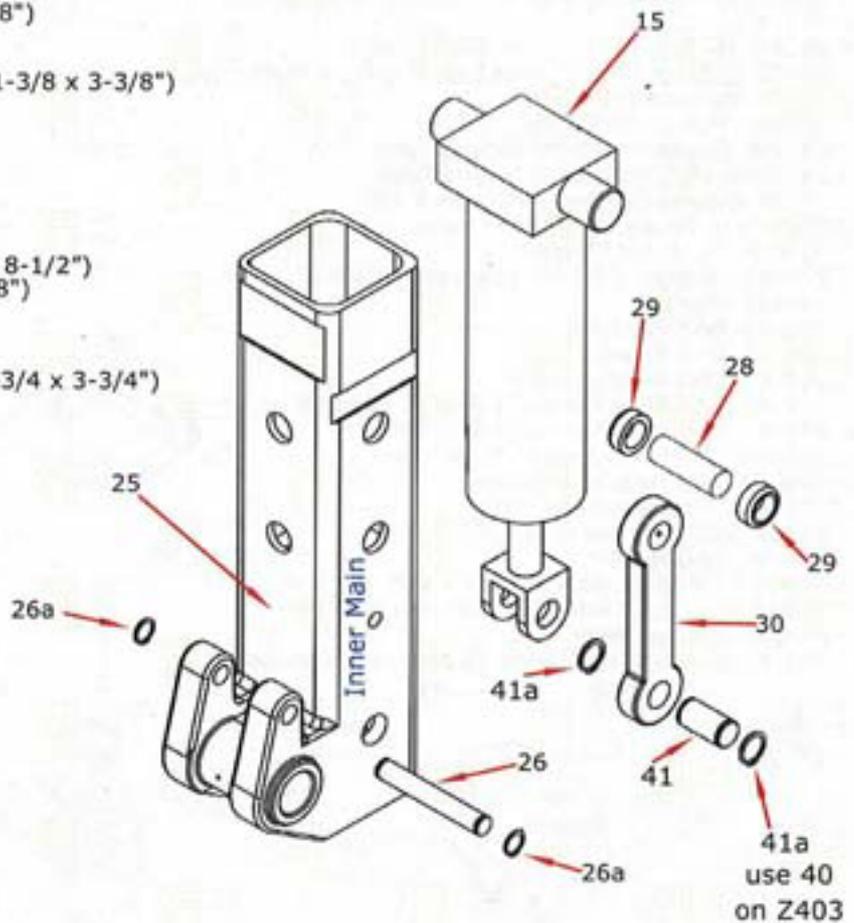
- Part #** Z30-15 5 x 17" Lift Cylinder  
 Z30-25 Inner Main  
 Z30-26 Safety Lock Pin (1-1/4 x 6-5/8")  
 Z1304-26a 1-1/4" Snap Ring  
 Z30-28 Roller Pin (1-3/8 x 5-7/8")  
 Z30-29 Roller  
 Z30-30 Dogbone  
 Z30-41 Lower Done Bone Pin (1-3/8 x 3-3/8")  
 Z1304-41a 1-3/8" Snap Ring

### Z303:

- Part #** Z30-15 5 x 17" Lift Cylinder  
 Z30-25 Inner Main  
 Z30-26 Safety Lock Pin (1-1/4 x 6-5/8")  
 Z1304-21d 1-1/4" Snap Ring  
 Z30-28 Roller Pin (1-3/8 x 5-7/8")  
 Z30-29 Roller  
 Z30-30 Dogbone  
 Z30-41 Lower Done Bone Pin (1-3/8 x 3-3/8")  
 Z1304-41a 1-3/8" Snap Ring

### Z403:

- Part #** Z4-15 6 x 17" Lift Cylinder  
 Z1304-21d 1-1/4" Snap Ring  
 Z4-25 Inner Main  
 Z4-26 Safety Lock Pin (1-1/4 X 8-1/2")  
 Z4-28 Roller Pin (1-3/4" x 5-7/8")  
 Z4-29 Roller  
 Z4-30 Dogbone  
 Z1304-40 1-3/4" Snap Ring  
 Z4-41 Lower Done Bone Pin (1-3/4 x 3-3/4")

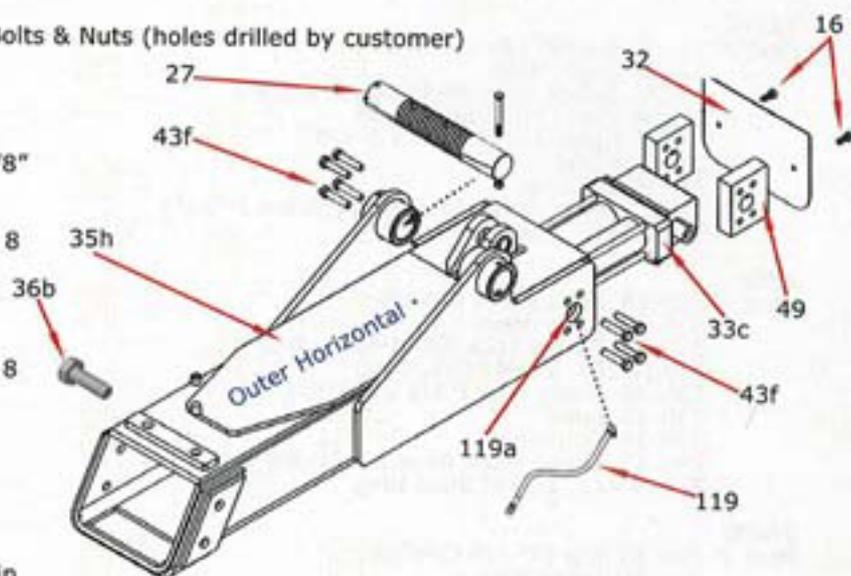


# Horizontal Parts Identification

## Outer Horizontal, Mid Section, Stinger/Z303,403

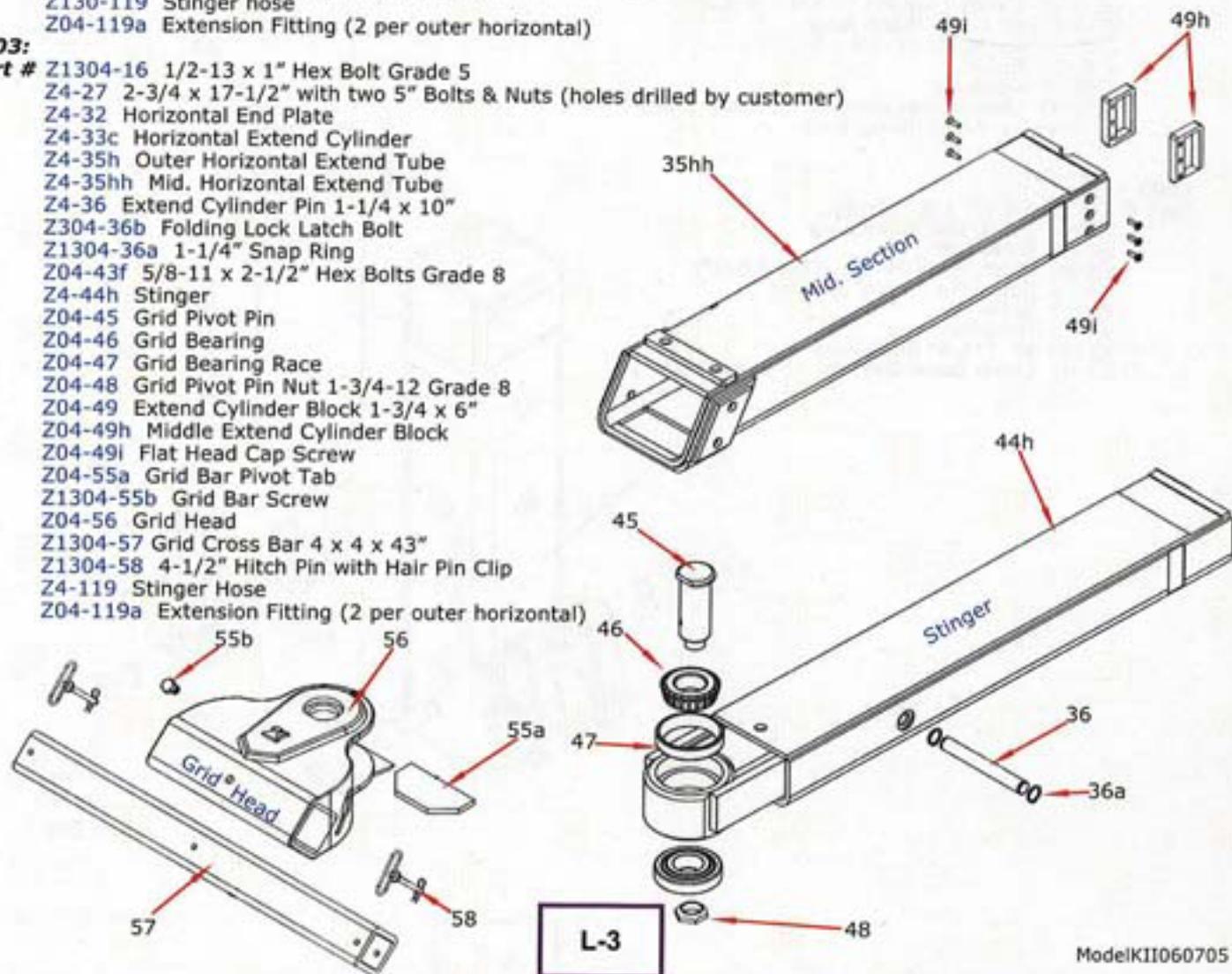
### Z303:

- Part #** Z1304-16 1/2-13 x 1" Hex Bolt Grade 5  
 Z0-27 2-1/2 x 17-1/8" with two 4-1/2" Bolts & Nuts (holes drilled by customer)  
 Z0-32 Horizontal End Plate  
 Z0-33c Horizontal Extend Cylinder  
 Z0-35h Outer Horizontal Extend Tube  
 Z0-35hh Mid. Horizontal Extend Tube  
 Z30-36 Extend Cylinder Pin 1-1/4 x 10-1/8"  
 Z304-36b Folding Lock Latch Bolt  
 Z1304-36a 1-1/4" Snap Ring  
 Z04-43f 5/8-11 x 2-1/2" Hex Bolts Grade 8  
 Z0-44h Stinger  
 Z04-45 Grid Pivot Pin  
 Z04-46 Grid Bearing  
 Z04-47 Grid Bearing Race  
 Z04-48 Grid Pivot Pin Nut 1-3/4-12 Grade 8  
 Z04-49 Extend Cylinder Block 1-3/4 x 6"  
 Z04-49h Middle Extend Cylinder Block  
 Z04-49i Flat Head Cap Screw  
 Z04-55a Grid Bar Pivot Tab  
 Z1304-55b Grid Bar Screw  
 Z04-56 Grid Head  
 Z1304-57 Grid Cross Bar 4 x 4 x 43"  
 Z1304-58 4-1/2 Hitch Pin with Hair Pin Clip  
 Z130-119 Stinger hose  
 Z04-119a Extension Fitting (2 per outer horizontal)



### Z403:

- Part #** Z1304-16 1/2-13 x 1" Hex Bolt Grade 5  
 Z4-27 2-3/4 x 17-1/2" with two 5" Bolts & Nuts (holes drilled by customer)  
 Z4-32 Horizontal End Plate  
 Z4-33c Horizontal Extend Cylinder  
 Z4-35h Outer Horizontal Extend Tube  
 Z4-35hh Mid. Horizontal Extend Tube  
 Z4-36 Extend Cylinder Pin 1-1/4 x 10"  
 Z304-36b Folding Lock Latch Bolt  
 Z1304-36a 1-1/4" Snap Ring  
 Z04-43f 5/8-11 x 2-1/2" Hex Bolts Grade 8  
 Z4-44h Stinger  
 Z04-45 Grid Pivot Pin  
 Z04-46 Grid Bearing  
 Z04-47 Grid Bearing Race  
 Z04-48 Grid Pivot Pin Nut 1-3/4-12 Grade 8  
 Z04-49 Extend Cylinder Block 1-3/4 x 6"  
 Z04-49h Middle Extend Cylinder Block  
 Z04-49i Flat Head Cap Screw  
 Z04-55a Grid Bar Pivot Tab  
 Z1304-55b Grid Bar Screw  
 Z04-56 Grid Head  
 Z1304-57 Grid Cross Bar 4 x 4 x 43"  
 Z1304-58 4-1/2 Hitch Pin with Hair Pin Clip  
 Z4-119 Stinger Hose  
 Z04-119a Extension Fitting (2 per outer horizontal)

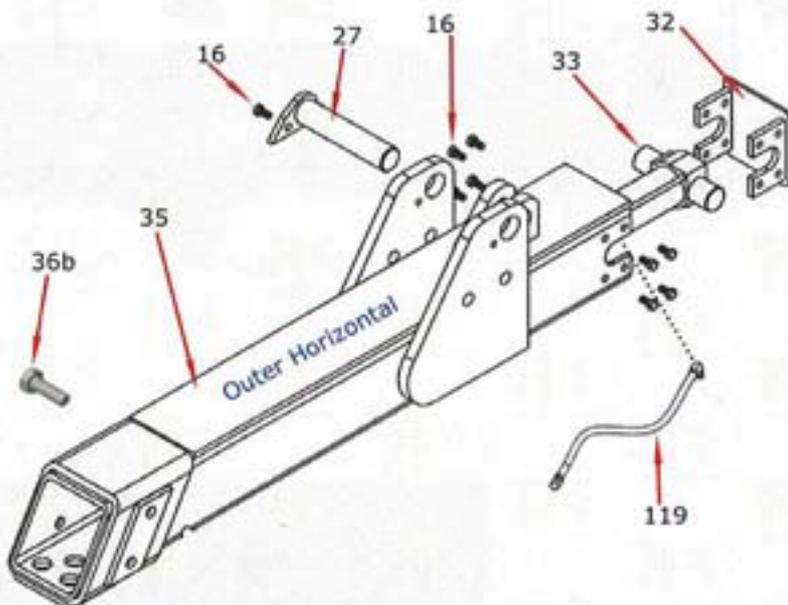


# Horizontal Parts Identification

## Outer Horizontal, Stinger/Z18,30

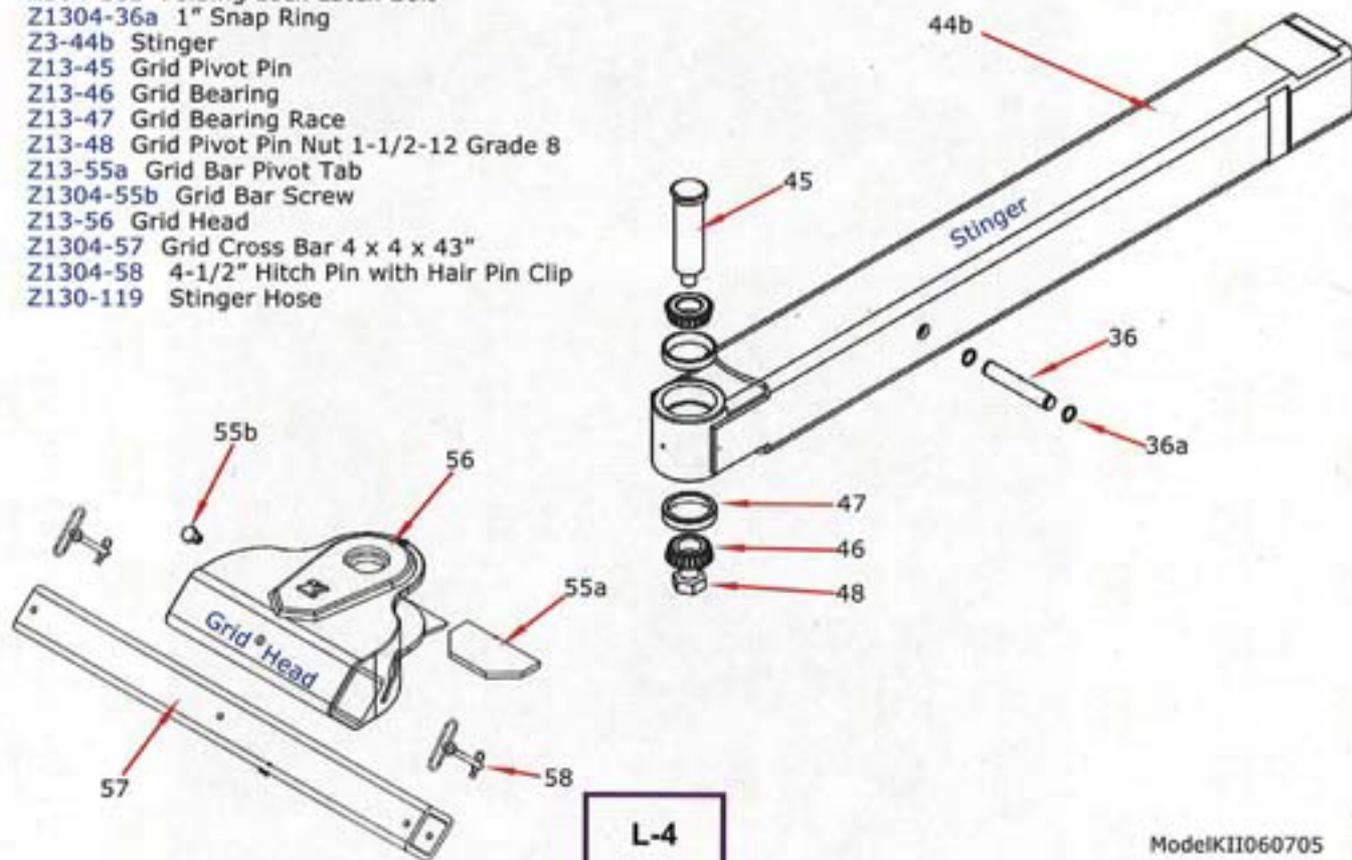
### Z18:

- Part #** Z1304-16 1/2-13 x 1" Hex Bolt Grade 5  
 Z1-27 Exend Arm Pivot Pin (2 x 8-3/8") with 1 bolts & Tear Drop Plate  
 Z1-32 Horizontal End Plate  
 Z13-33 Horizontal Extend Cylinder  
 Z1-35 Outer Horizontal Extend Tube  
 Z1-36 Extend Cylinder Pin 1 x 5"  
 Z1-36b Folding Lock Latch Bolt  
 Z1304-36a 1" Snap Ring  
 Z1-44b Stinger  
 Z13-45 Grid Pivot Pin  
 Z13-46 Grid Bearing  
 Z13-47 Grid Bearing Race  
 Z13-48 Grid Pivot Pin Nut 1-1/2-12 Grade 8  
 Z13-55a Grid Bar Pivot Tab  
 Z1304-55b Grid Bar Screw  
 Z13-56 Grid Head  
 Z1304-57 Grid Cross Bar 4 x 4 x 43"  
 Z1304-58 4-1/2 Hitch Pin with Hair Pin Clip  
 Z130-119 Stinger hose



### Z30:

- Part #** Z1304-16 1/2-13 x 1" Hex Bolt Grade 5  
 Z3-27 Exend Arm Pivot Pin (2-1/2 x 12") with 1 - 4-1/2" Bolt & Nut.(no plate)  
 Z3-32 Horizontal End Plate  
 Z13-33 Horizontal Extend Cylinder  
 Z3-35 Outer Horizontal Extend Tube  
 Z30-36 Extend Cylinder Pin 1 x 6"  
 Z304-36b Folding Lock Latch Bolt  
 Z1304-36a 1" Snap Ring  
 Z3-44b Stinger  
 Z13-45 Grid Pivot Pin  
 Z13-46 Grid Bearing  
 Z13-47 Grid Bearing Race  
 Z13-48 Grid Pivot Pin Nut 1-1/2-12 Grade 8  
 Z13-55a Grid Bar Pivot Tab  
 Z1304-55b Grid Bar Screw  
 Z13-56 Grid Head  
 Z1304-57 Grid Cross Bar 4 x 4 x 43"  
 Z1304-58 4-1/2" Hitch Pin with Hair Pin Clip  
 Z130-119 Stinger Hose



# Fifthwheeler Parts

Support Bar  
Socket

Beam

Upper Tilt Cylinder  
Mount

Zacklift Pivot Pin

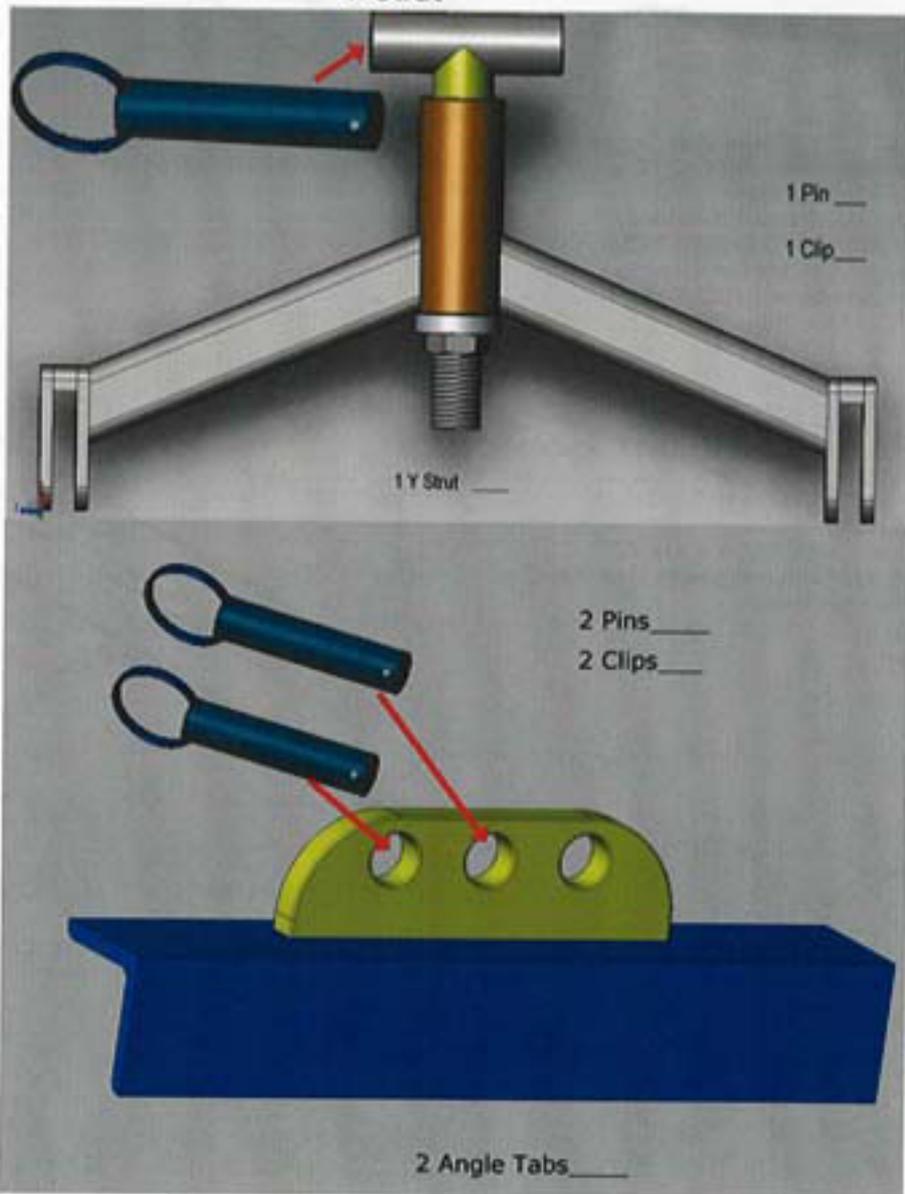
King  
Pin

Frame  
Clamps

Angle  
Pad

Frame width  
Adjustment  
Bolts

Y-Strut



# Stationary Mounting Parts Identification

## Stationary Mounting/Z18,30,303,403

### Z18:

- Part #** Z1-05 5 x 11-3/4" Tilt Cylinder  
 Z1304-05a PO Check Valve  
 Z1304-41a 1-3/8" Snap Ring  
 Z1304-201 Mounting Ear  
 Z1304-201e Collar 2-1/2 ID x 3-1/2 OD  
 Z1304-201f Tilt Cylinder Shaft 2-1/2 x 38"  
 Z1304-201g 4-1/2" Bolt and Nut  
 Z1304-201h Reinforcement Crossmember  
 Z1304-203 Floating Crossmember  
 Z1304-203a Crossmember  
 Z130-203b Upper Tilt Cylinder Bushings  
 Z130-204 Upper Tilt Cylinder Pin 1-3/8 x 11-1/4" with 2 Cotter Pins  
 Z130-206 Lower Tilt Cylinder Pin 1-3/8 x 6-1/4"

### Z30:

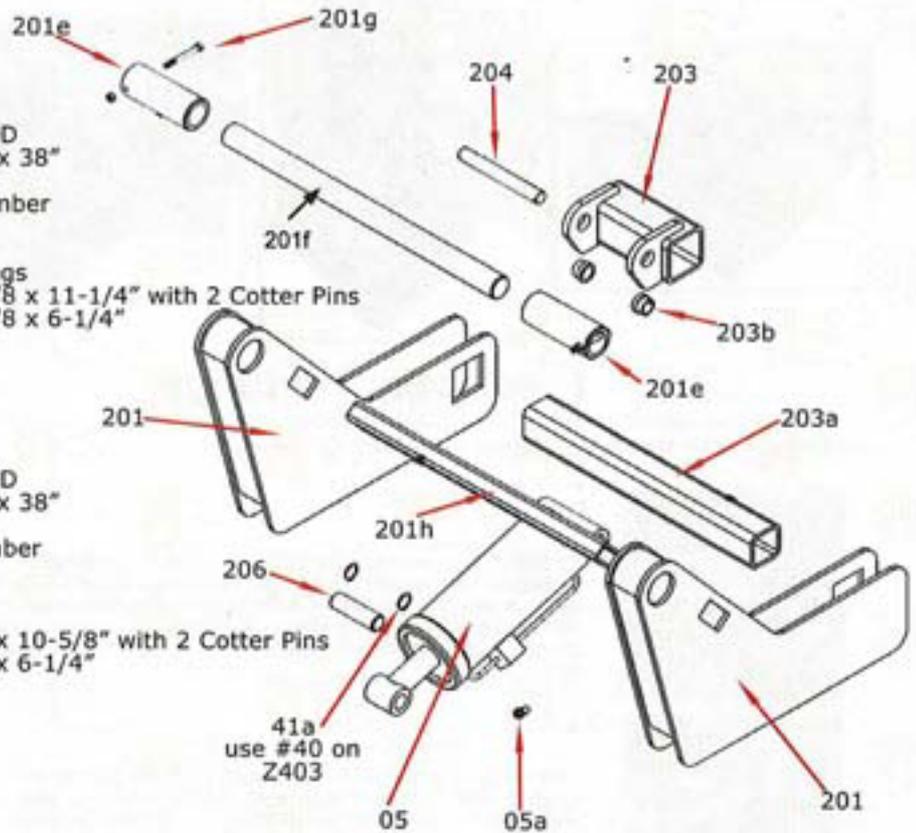
- Part #** Z30-05 6 x 11-3/4" Tilt Cylinder  
 Z1304-05a PO Check Valve  
 Z1304-41a 1-3/8" Snap Ring  
 Z1304-201 Mounting Ear  
 Z1304-201e Collar 2-1/2 ID x 3-1/2 OD  
 Z1304-201f Tilt Cylinder Shaft 2-1/2 x 38"  
 Z1304-201g 4-1/2" Bolt and Nut  
 Z1304-201h Reinforcement Crossmember  
 Z1304-203 Floating Crossmember  
 Z1304-203a Crossmember  
 Z130-203b Upper Tilt Cylinder Bushings  
 Z130-204 Upper Tilt Cylinder Pin 1-3/8 x 11-1/4" with 2 Cotter Pins  
 Z130-206 Lower Tilt Cylinder Pin 1-3/8 x 6-1/4"

### Z303:

- Part #** Z30-05 6 x 11-3/4" Tilt Cylinder  
 Z1304-05a PO Check Valve  
 Z1304-41a 1-3/8" Snap Ring  
 Z1304-201 Mounting Ear  
 Z1304-201e Collar 2-1/2 ID x 3-1/2 OD  
 Z1304-201f Tilt Cylinder Shaft 2-1/2 x 38"  
 Z1304-201g Bolt and Nut  
 Z1304-201h Reinforcement Crossmember  
 Z1304-203 Floating Crossmember  
 Z1304-203a Crossmember  
 Z130-203b Upper Tilt Cylinder Bushings  
 Z130-204 Upper Tilt Cylinder Pin 1-3/8 x 11-1/4" with 2 Cotter Pins  
 Z130-206 Lower Tilt Cylinder Pin 1-3/8 x 6-1/4"

### Z403:

- Part #** Z4-05 7 x 11-1/4" Tilt Cylinder  
 Z1304-05a PO Check Valve  
 Z1304-40 1-3/4" Snap Ring  
 Z1304-201 Mounting Ear  
 Z1304-201e Collar 2-1/2 ID x 3-1/2 OD  
 Z1304-201f Tilt Cylinder Shaft 2-1/2 x 38"  
 Z1304-201g Bolt and Nut  
 Z1304-201h Reinforcement Crossmember  
 Z1304-203 Floating Crossmember  
 Z1304-203a Crossmember  
 Z130-203b Not used on Z403  
 Z4-204 Upper Tilt Cylinder Pin 1-3/4 x 10-5/8" with 2 Cotter Pins  
 Z4-206 Lower Tilt Cylinder Pin 1-3/4 x 6-1/4"



# STANDARD EQUIPMENT

Height x Width



**FORKS** All forks are high tensile steel.

**Chain Fork pair** Slotted for 3/8" chain, provide a Tow-Bar like hook-up.

**1 x 2.5 Fork pair** General low profile front axle fork. This specially engineered fork provides a snug fit around axle.

**Torsion Bar Fork pair** Rounded for secure fit on torsion bars and front axles. Eliminates load shift.

**6 x 6.5 Fork pair** Curved engineering allows for solid, no-slip positioning of frames, axles and cross members.

**9 x 4 Forks pair** Tall, wide surfaced fork for frames, cross members and axles or for turning sideways on front springs.



**12" Reach Extenders** increase the reach with any fork and move a large rear differential away from the underlift's crossbar.

## 1 receiver, 3 settings

Fork receivers, along with cross bar, feature Zacklift's trademark 'diamond' design, engineered for maximum strength. Fork receivers can be positioned on either side of the cross bar and at two height settings.



Zacklift's hydraulic components have been carefully selected for the highest quality, and most trouble-free, long-life service possible. The U.S. manufactured sectional valve features electric over hydraulic operation, not lower quality air operation. Additional sections may be conveniently added.



The valve includes both levers and a 15' corded remote control. The additional lever operation assures no down time if a remote control is ever left behind. A wireless remote control is always an option with either system.



If self contained power is required, Zacklift offers a NO-CHARGE OPTION of a 12 Volt Electro-Hydraulic Power System 15' corded remote also included. Both choices also include a custom, roto molded cover.

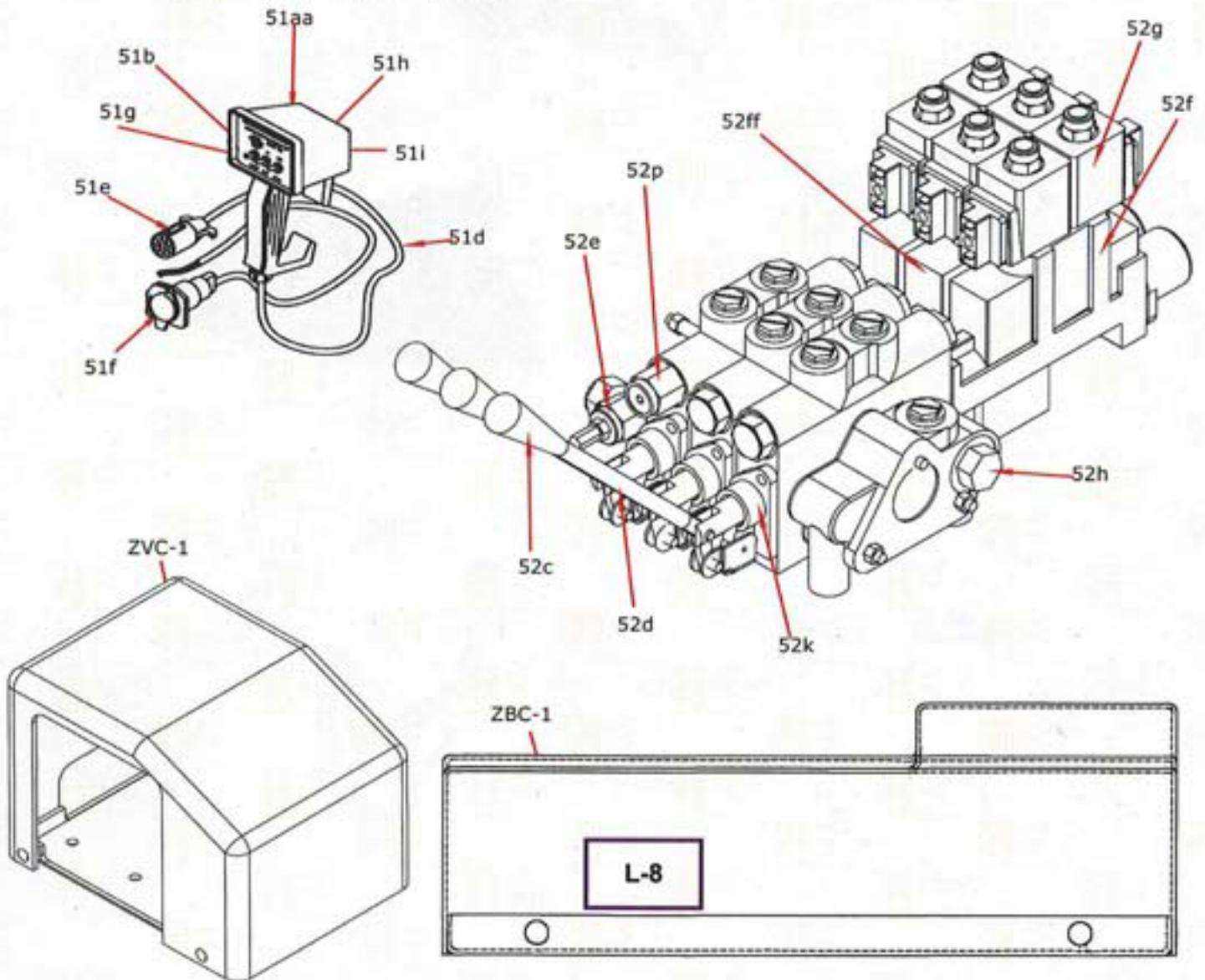
The exceptionally low profile of the Zacklift allows for more single picks under low bumpers and airfoils. Engineered with *Timken Roller Bearings* in the critical pivot hub, the rotation point will provide years of trouble free service. These "Million-Mile" roller bearings will far outlive the bushing found in other underlifts.



# Standard Equipment Identification

## Standard Equipment

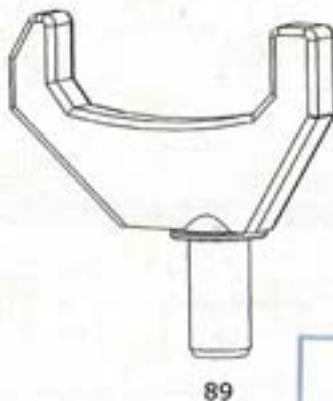
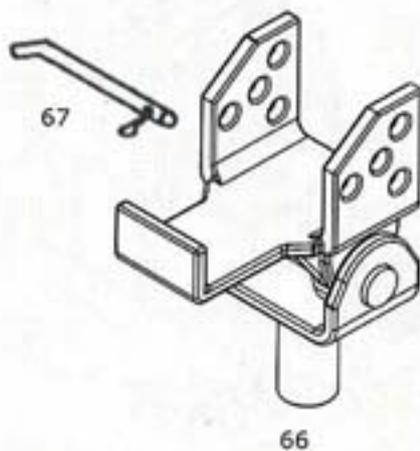
|               |            |   |
|---------------|------------|---|
| <b>Part #</b> | Z1304-51aa | Remote Control Complete                     |
|               | Z1304-51b  | Toggle Switch                               |
|               | Z1304-51d  | Remote Control Cord per foot                |
|               | Z1304-51e  | 9 Way Plug Male End                         |
|               | Z1304-51f  | 9-Way Plug w/Cover No Wire Female End       |
|               | Z1304-51ff | 9-Way Plug w/Cover 18" wire Lead Female End |
|               | Z1304-51g  | Silicon Boot for Switch                     |
|               | Z1304-51h  | 3 Hole Plastic Enclosure Box                |
|               | Z1304-51i  | Face Plate                                  |
|               | Z1304-52a  | Manual/Electric Valve Complete              |
|               | Z1304-52c  | Knob  |
|               | Z1304-52d  | Lever with Knob                             |
|               | Z1304-52e  | Relief Cartage                              |
|               | Z1304-52f  | Solenoid Valve Section                      |
|               | Z1304-52ff | Motor Spool Solenoid Valve Section          |
|               | Z1304-52g  | 12 Voil Coil                                |
|               | Z1304-52h  | Power Beyond                                |
|               | Z1304-52k  | Clevis Sub Assembly                         |
|               | Z1304-52p  | 1000 pound Pressure Relief                  |
|               | ZVC-1      | Manual/Electric Valve Cover                 |
|               | ZBC-1      | 12 Volt Power Pack Cover                    |



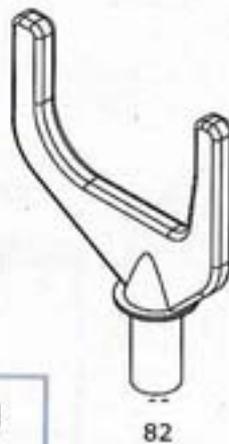
# Optional Equipment Identification

## Optional Equipment

- Part #** Z1304-66 Spring Fork  
Z1304-67 Spring Fork Pin  
Z1304-81a 5" Height Extenders  
Z1304-82 Mack Fork 8-3/4 wide x 6" deep  
Z1304-82a Big Mack Fork 10-3/4 wide x 6-3/4" deep  
Z1304-88 Scoop-n-Go Fork  
Z1304-89 Steertek Fork 8-1/4 wide x 3" deep  
Z10-1019A Cable Guide fits Z403  
Z10-1019B Cable Guide fits Z30, Z303  
Z101019C Cable Guide fits Z18



M-1



# Optional Equipment Identification

## Optional Equipment

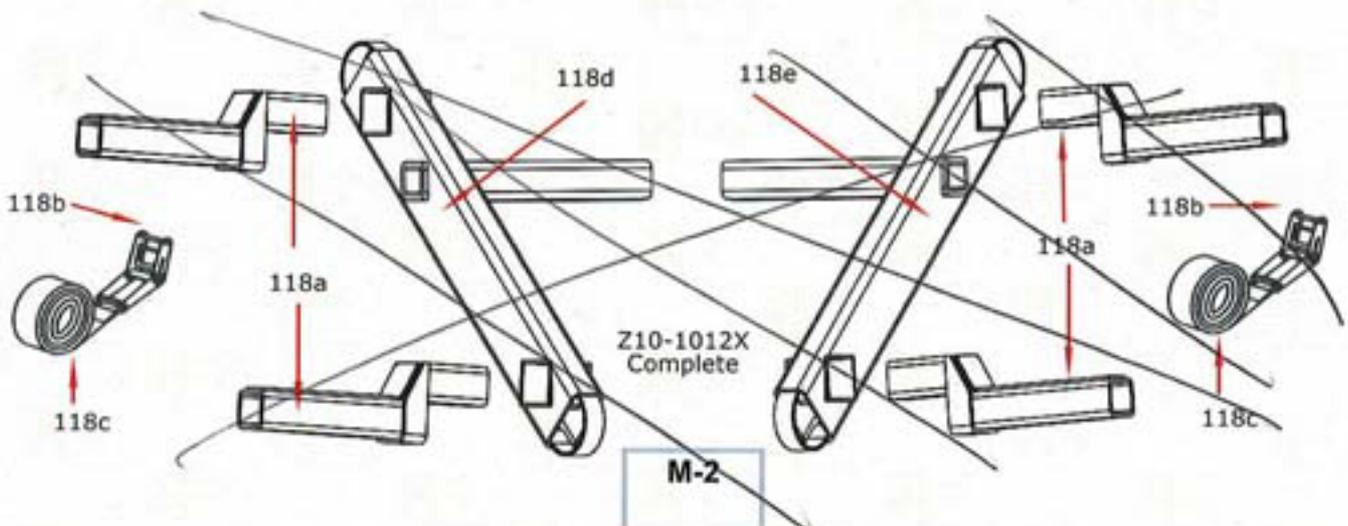
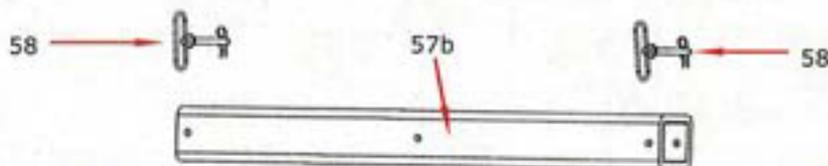
- Part #** Z1304-57b 4 x 4 x 60" Grid Bar  
 Z1304-58 4-1/2" Hitch Pin with Hair Pin Clip  
 Z1304-118a HDMP Wheel Lift Arm (Single)  
 Z1304-118b 3" Ratchet  
 Z1304-118c 3" Strap  
 Z1304-118d HDMP Drivers Side Main Section  
 Z1304-118e HDMP Passengers Side Main Section  
 Z10-1025X Trailer Fifthwheel Hitch Complete  
 Z10-1012X Heavy Duty Multi Position Wheel Lift Complete  
 Z10-1026X Safety Chain Attachment Blocks



#10-1026X  
Safety Chain Attachment Blocks



#10-1025X  
Trailer/Fifthwheel Hitch Complete

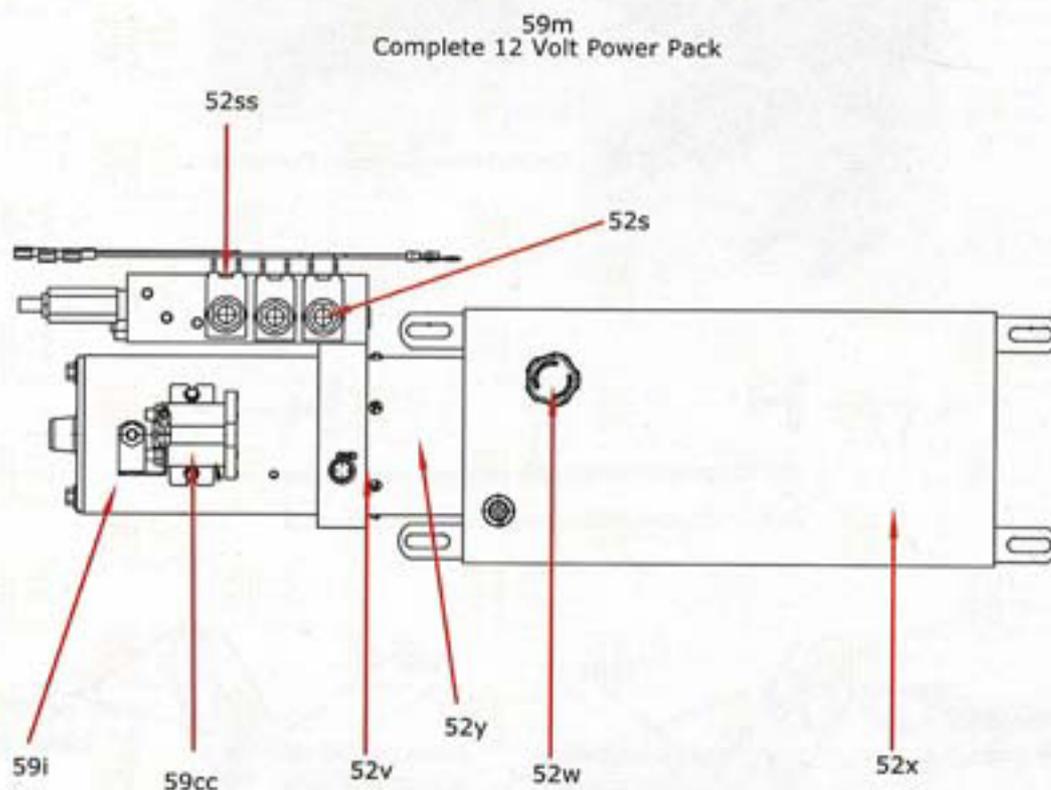


# 12 Volt Power Pack Parts Identification

## 12 Volt Power Pack (MCH)/Z18,30,303,403

### 12 Volt Power Pack (MCH):

- Part #** Z1304-52s 12 Volt Cartridge, 4W/3P, Valve (MCH 3 valves per unit)  
 Z1304-52ss 12 Volt Coil, 10 VDC (MCH 6 coils per unit)  
 Z1304-52t Exchange 12 Volt Coils for 24 Volt (not show)  
 Z1304-52v O-Ring  
 Z1304-52w Breather Cap  
 Z1304-52x Steel Reservoir  
 Z1304-52y Internal Pump Assembly (MCH)  
 Z1304-59cc Internal Ground Starter Solenoid (MCH)  
 Z1304-59i DC 12V Heavy Duty Motor (MCH)  
 Z1304-59m 12 Volt Power System Complete (MCH)



# CARROSSERIE VAN WIEMEERSCH N.V.

DEPANNAGESYSTEMEN - KIPPERS - WISSELSYSTEMEN - ALUVAN  
HMF AUTOLAADKRANEN - TECHNAMICS HAARKARMSYSTEMEN

Industrieweg 152-154  
9030 GENT-MARIAKERKE

Zacklift International

Tel. (09) 227 49 50  
Fax (09) 227 93 38  
H.R. Gent 148.802  
B.T.W. BE 431.849.839  
Fortis Bank 290-0357004-65

## UW ZACKLIFT GEBRUIKEN

### GEVAAR !!

Kans op knelling

Niet in de werkzone van de lift staan

Sta buiten het bereik van de Zacklift bij gebruik of opvouwen

Onnodig oponthoud in de werkzone van de lift kan verwondingen of dood veroorzaken

### OPLADEN MET VORKENHOUDERS EN VORKEN

- 1 1) Controleer dat de dwarsbalk stevig in de dwarsbalkhouder is bevestigd bij middel van de dwarsbalk-bout.
- 1 2) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Vouw de uitschuifarm naar binnen toe om de opvouwsluiting los te maken van de vastzettingspal.
- 1 3) Klap de opvouwsluiting weg van de uitschuifarm bij niet gebruik.
- 1 4) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
**UITPLOOIEN : AANDACHT !** – De Papegaaibek veiligheidssluiting niet openen wanneer de Zacklift opgevouwen is. Dit kan leiden tot verwonding of dood.
- 1 5) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
**OPENEN** van de Papegaaibek veiligheidssluiting : a) trekken en draaien aan de hendel tot verticale positie  
b) de veiligheidssluiting naar de cabine toe duwen  
(eventueel heffen om de Papegaaibek sluitpin los te maken)
- 1 6) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
De uitschuifarm laten zakken tot 50 à 80 mm van de grond.
- 1 7) Pas de vorkhouders aan tot de gewenste hoogte en breedte. Zorg dat de verankeringspin wordt teruggeplaatst in de dwarsbalk. Er zijn 2 hoogte-posities mogelijk. De vorkhouders kunnen langs beide zijden van de dwarsbalk geplaatst worden.

- 1 8) Grote verlaagde vorken – grote V vorken – kleine verlaagde vorken – Torsiestang vorken  
Kies de kleine verlaagde vorken om onder lage bumpers te schuiven. De torsiestang vorken dienen voor het slepen op de torsiestang van een bus, de grote verlaagde vorken voor de achterzijde en de grote V vorken voor het vrachtwagenchassis.
- 1 9) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen. Gebruik hiervoor de knik-beweging.  
De Zacklift knikken om de dwarsbalk en dwarsbalkhouder onder de voorbumper van het af te slepen voertuig te schuiven.
- 1 10) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen. Gebruik hiervoor de knik-beweging.  
De uitschuifarm uitschuiven tot de vorken gepositioneerd zijn onder het ophefpunt.
- 1 11) Vorken en houders moeten op zelfde afstand van de as geplaatst worden. Dit is belangrijk om verschuiven van het afgesleepte voertuig te vermijden.
- 1 12) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen. Gebruik hiervoor de knik-beweging.  
De uitschuifarm omhoog knikken voor grotere bodemvrijheid alvorens recht omhoog te heffen.
- 1 13) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen. Gebruik hiervoor de knik-beweging.  
Hef de uitschuifarm omhoog tot de Papegaai-bek veiligheidssluiting inspringt. Bij elke afsleping moet de uitschuifarm in de Papegaai-bek veiligheidssluiting vergrendeld zijn.
- 1 14) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
Zorg dat de Papegaai-bek veiligheidssluiting altijd in gesloten positie is alvorens af te slepen. De hendel moet tegen de verticale profiel geplaatst worden.
- 1 15) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen. Gebruik hiervoor de knik-beweging.  
**BELANGRIJK** : altijd 50 mm opening laten.  
De binnenste uitschuifarm INTREKKEN tot de gewenste afsleeppositie  
**BELANGRIJK** : minimum 50 mm opening laten om de dwarsbalkhouder tijdens het afslepen te laten draaien
- 1 16) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen. Gebruik hiervoor de knik-beweging.  
De maximale laadhoogte wordt bereikt als de Zacklift in de gesloten Papegaai-bek veiligheidssluiting zit en de Zacklift dan zo veel mogelijk naar boven wordt geknikt.
- 1 17) **AANDACHT !!!** Gebruik de opvouwfunctie niet om hoogte te winnen.  
Dit kan de Zacklift beschadigen en ontnemt alle recht op waarborg.  
Dit kan persoonlijke verwondingen veroorzaken.  
De opvouwfunctie dient enkel om de Zacklift in transportpositie te brengen.  
De knikfunctie dient gebruikt te worden om hoogte te winnen.
- 1 18) Verzeker de lading aan het afsleepvoertuig met de veiligheidskettingen. Niet gebruiken van de veiligheidskettingen ontnemt alle recht op waarborg.

#### **AFLADEN MET VORKHOUDERS EN VORKEN**

- 1 19) Verwijder de veiligheidskettingen.

- I 20) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
**OPENEN** van de Papegaaibek veiligheidssluiting : a) trekken en draaien aan de hendel tot verticale positie  
b) de veiligheidssluiting naar de cabine toe duwen  
(eventueel heffen om de Papegaaibek sluitpin los te maken)
- I 21) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Laat de uitschuifcilinder zakken tot 50 à 80 mm van de grond
- I 22) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Knik de uitschuifarm neerwaarts tot de banden de grond raken.
- I 23) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Laat de uitschuifcilinder zakken om vrij te zijn van lage onderbouw en lage hinderingen.
- I 24) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Trek de uitschuifarm in naar gesloten positie om kantelen van de dwarsbalkhouder in transportpositie te vermijden.
- I 25) Trek de binnenste uitschuifarm in transportpositie.  
**BELANGRIJK** : Trek de dwarsbalkhouder tot tegen de buitenste uitschuifarm om kantelen bij niet gebruik tegen te gaan.
- I 26) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Hef de uitschuifarm in de Papegaaibek veiligheidssluiting
- I 27) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
**SLUITEN** van de Papegaaibek veiligheidssluiting : a) trekken en draaien aan de hendel tot verticale positie  
b) de veiligheidssluiting van de cabine wegduwen  
(eventueel heffen om de Papegaaibek sluitpin los te maken)
- I 28) Verwijder de vorken en vorkhouders voor opberging. Plaats de verankeringspinnen terug.
- I 29) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Vouw de uitschuifarm in de transportpositie
- I 30) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Knik de uitschuifarm in de transportpositie
- I 31) Sluit de opvouwsluiting over de vastzettingsspal met de uitschuifarm naar de cabine geknikt.

**GEVAAR!!**

Kans op knelling  
Niet in de werkzone van de lift staan  
Sta buiten het bereik van de Zacklift bij gebruik of opvouwen  
Onnodig oponthoud in de werkzone van de lift kan verwondingen of dood veroorzaken

### **OPLADEN MET WIELLIIFT**

- J 1) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
**UITPLOOIEN** : **AANDACHT!** – De Papegaaibek veiligheidssluiting niet openen wanneer de Zacklift opgevouwen is. Dit kan leiden tot verwonding of dood.
- J 2) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
**OPENEN** van de Papegaaibek veiligheidssluiting : a) trekken en draaien aan de hendel tot verticale positie  
b) de veiligheidssluiting naar de cabine toe duwen  
(eventueel heffen om de Papegaaibek sluitpin los te maken)
- J 3) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
De uitschuifarm laten zakken tot 50 à 80 mm van de grond.
- J 4) Verwijder de korte dwarsbalk van 1.100 mm. Plaats de lange dwarsbalk van 1.525 mm.  
Controleer dat de dwarsbalk stevig in de dwarsbalkhouder is bevestigd bij middel van de dwarsbalk-bout.
- J 5) Schuif het hoofdsteen in de dwarsbalk. Pas het hoofdsteen aan tot de gewenste breedte en/of binnenpositie van de banden van het af te slepen voertuig.
- J 6) Plaats de eerste wielarm. 4 verschillende posities zijn mogelijk om verscheidene bandenmaten te kunnen opheffen. Zorg ervoor de de armen dezelfde positie hebben en dat ze stevig in de hoofdsteenen bevestigd zijn.
- J 7) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
De Zacklift knikken om de dwarsbalkhouder, dwarsbalk en 2-delige wielarm onder de voorbumper van het af te slepen voertuig te schuiven.
- J 8) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
De uitschuifarm uitschuiven tot de wielarmen de banden raken.
- J 9) Plaats de 2<sup>de</sup> wielarm om elke band stevig te borgen.
- J 10) Binnenste hoge positie.  
De wielarmen worden in binnenste hoge positie gedraaid voor kleine banden. Beide armen dienen geplaatst te worden.
- J 11) Buitenste positie.  
Buitenste positie van de wielarmen is nodig voor grotere banden. Hoge of lage positie dient gekozen

als nodig voor het stevig borgen van de banden in de wiellifarmen.  
Zorg ervoor dat de wiellifarmen in dezelfde positie staan.

- J 12) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Hef de uitschuifarm omhoog tot de Papegaaibek veiligheidssluiting inspringt. Bij elke afsleping moet de uitschuifarm in de Papegaaibek veiligheidssluiting vergrendeld zijn.
- J 13) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
Zorg dat de Papegaaibek veiligheidssluiting altijd in gesloten positie is alvorens af te slepen. De hendel moet tegen de verticale profiel geplaatst worden.
- J 14) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
De maximale laadhoogte wordt bereikt als de Zacklift in de gesloten Papegaaibek veiligheidssluiting zit en de Zacklift dan zo veel mogelijk naar boven wordt geknikt.
- J 15) **AANDACHT !!!** Gebruik de opvouwfunctie niet om hoogte te winnen.  
Dit kan de Zacklift beschadigen en ontnemt alle recht op waarborg.  
Dit kan persoonlijke verwondingen veroorzaken.  
De opvouwfunctie dient enkel om de Zacklift in transportpositie te brengen.  
De knikfunctie dient gebruikt te worden om hoogte te winnen.
- J 16) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
**BELANGRIJK** : altijd 50 mm opening laten.  
De binnenste uitschuifarm **INTREKKEN** tot de gewenste afsleppositie  
**BELANGRIJK** : minimum 50 mm opening laten om de dwarsbalkhouder tijdens het afslepen te laten draaien
- J 17) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
De opening van 50 mm wordt gemeten van het uiteinde van de buitenste uitschuifarm tot het uiteinde van de dwarsbalkhouder.
- J 18) **VEILIGHEIDSBINDRIEM**  
Bind steeds een veiligheidsbindriem rond de banden tijdens het afslepen. Omring de band en wiellift en trek stevig aan.
- J 19) Verzeker de lading aan het afsleepvoertuig met de veiligheidskettingen. Niet gebruiken van de veiligheidskettingen ontnemt alle recht op waarborg.

#### **AFLADEN MET WIELLIIFT**

- J 20) Verwijder de veiligheidskettingen en veiligheidsbindriemen, .
- J 21) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
**OPENEN** van de Papegaaibek veiligheidssluiting : a) trekken en draaien aan de hendel tot verticale positie  
b) de veiligheidssluiting naar de cabine toe duwen
- J 22) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Laat de uitschuifcilinder zakken tot 50 à 80 mm van de grond

- J 23) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Knik de uitschuifarm neerwaarts tot de banden de grond raken en de gewichtsdruk van wielliftarmen vrijkomt.
- J 24) Verwijder de wielliftarmen van het hoofdsteunbeen. Berg de armen en steunbenen op om verlies te vermijden.  
Plaats de verankeringspinnen terug.
- J 25) Trek de binnenste uitschuifarm in transportpositie.  
**BELANGRIJK** : Trek de dwarsbalkhouder tot tegen de buitenste uitschuifarm om kantelen bij niet gebruik tegen te gaan.
- J 26) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Hef de uitschuifarm in de Papegaaibek veiligheidssluiting
- J 27) **OPENEN** : Trekken en draaien  
**SLUITEN** : Bij afslepen altijd in gesloten positie  
SLUITEN van de Papegaaibek veiligheidssluiting : a) trekken en draaien aan de hendel tot verticale positie  
b) de veiligheidssluiting van de cabine wegduwen
- J 28) **WAARSCHUWING** : geen gebruik maken van de opvouwfunctie om de lading te dragen of verplaatsen.  
Gebruik hiervoor de knik-beweging.  
Vouw de uitschuifarm in de transportpositie.  
Knik de uitschuifarm in de transportpositie.
- J 29) Sluit de opvouwsluiting over de vastzettingsspal met de uitschuifarm naar de cabine geknikt..

### **GEVAAR !!**

Kans op knelling

Niet in de werkzone van de lift staan

Sta buiten het bereik van de Zacklift bij gebruik of opvouwen

Onnodig oponthoud in de werkzone van de lift kan verwondingen of dood veroorzaken

|                |                      |                     |                      |
|----------------|----------------------|---------------------|----------------------|
| Atomic Head    | Dwarsbalk-houder     | Axle                | As                   |
| Grid Bar       | Dwarsbalk            | To shift / shifting | Verschuiven          |
| Grid Bar Screw | Dwarsbalk-bout       | To avoid            | Vermijden            |
| Extend Arm     | Uitschuifarm         | Important           | belangrijk           |
| Fold lock      | Opvouwsluiting       | Height              | hoogte               |
| Bolt           | Vastzettingsspal     | Warrantie           | waarborg             |
| Warning        | Waarschuwing         | Damage              | Beschadiging         |
| To lock        | Sluiten              | Safety Chains       | Veiligheidskettingen |
| To unlock      | Openen               | Danger              | Gevaar               |
| To extend      | Uitschuiven          | To load             | Opladen              |
| To retract     | Intrekken            | To unload           | Afladen              |
| To fold        | Opvouwen             | Ground              | Grond                |
| To unfold      | Uitplooien           | Tire(s)             | Bande(n)             |
| To tilt        | Knikken              | Storage position    | Transportpositie     |
| To raise       | Heffen               | To remove           | verwijderen          |
| To lower       | Laten zakken / Dalen | HDWL                | 2-delige wiellift    |
| To clear       | Losmaken             | Main rail           | Hoofdsteunbeen       |

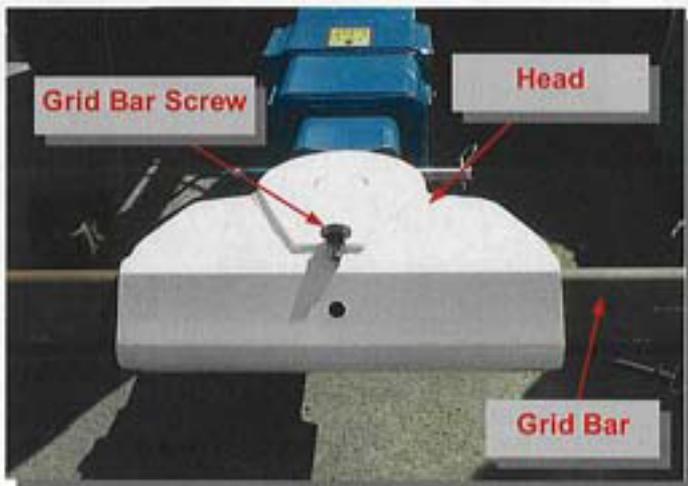
|                      |                                   |                           |                        |
|----------------------|-----------------------------------|---------------------------|------------------------|
| Jay Bird Safety Lock | Papegaaijbeek veiligheidssluiting | HDWL arms                 | Wiel lift armen        |
| Caution              | Aandacht !                        | Size of tires             | Bandenmaat             |
| Injury               | Verwonding                        | To touch                  | Raken                  |
| Death                | Dood                              | To cradle                 | Borgen                 |
| To pull              | Trekken                           | Inward/upper positioning  | Binnenste hoge positie |
| To twist             | Draaien                           | Outward/upper positioning | Buitenste hoge positie |
| To tow / towing      | Afslepen                          | Inward/lower positioning  | Binnenste lage positie |
| Handle               | Hendel                            | Outward/lower positioning | Buitenste lage positie |
| To push              | Duwen                             | Safety tie down strap     | Veiligheidsbindriem    |
| Fork(s)              | Vork(en)                          | To wrap                   | Binden                 |
| Fork Bracket(s)      | Vorkhouder(s)                     | Pressure                  | Druk                   |
| Hitch Pin            | Verankerpin                       |                           |                        |
| Big Scoop Forks      | Grote verlaagde vorken            |                           |                        |
| Big V Forks          | Grote V vorken                    |                           |                        |
| Low Scoop Forks      | Kleine verlaagde vorken           |                           |                        |
| Torsion Bar Forks    | Torsiestang vorken                |                           |                        |
| Vehicle              | Voertuig                          |                           |                        |
| Lift point           | Ophelpunt                         |                           |                        |
|                      |                                   |                           |                        |

# OPERATING YOUR ZACKLIFT



**Stand clear of this unit when in use or during storage. CRUSH HAZARD. Stand clear. Not standing clear of this equipment at all times could result in injury or death.**

# Frame Lifting Loading



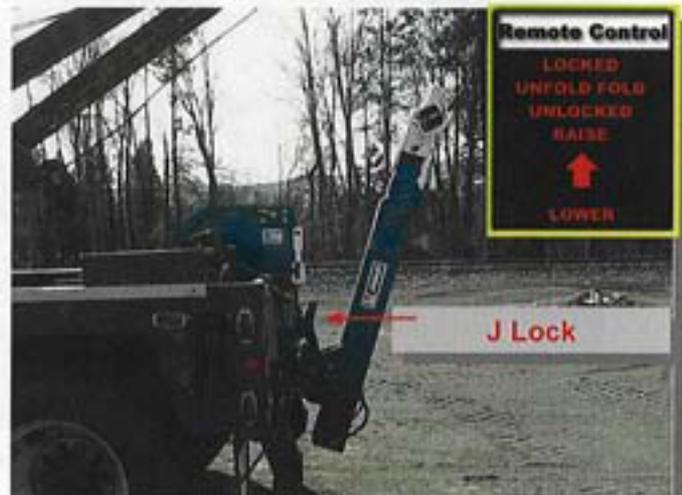
1) Check that Grid Bar is firmly attached to Head by Grid Bar Screw.



2) Fold Extend Arm towards outer Vertical Tube to clear fold lock from bolt. Lift fold lock off bolt to unlock.



3) Tilt fold lock back out of operators way when not in use.



4) UNFOLD: CAUTION — do not unlock J Lock when unit is folded. Unlocking when unit is folded could result in injury or death.

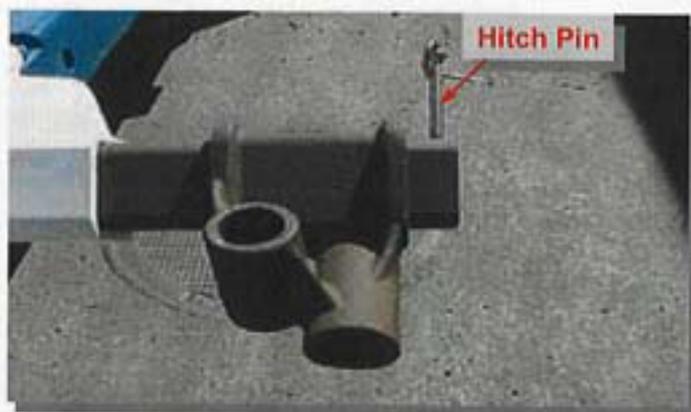


5) Unlock J Lock by pushing in towards vertical tube. May have to raise to clear J lock pin.

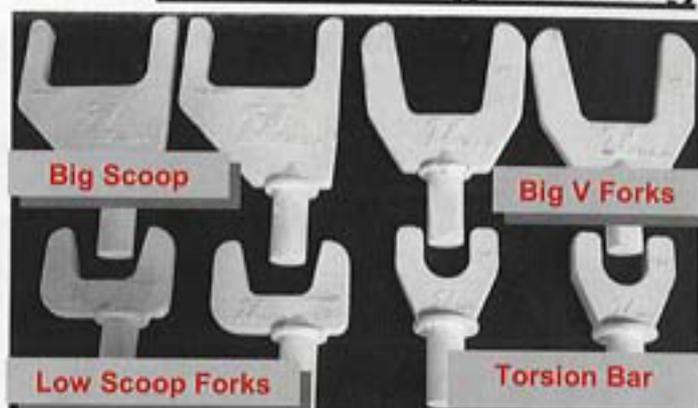


6) Lower Horizontal Tube until it is about 2" or 3" inches from the ground

## Frame Lifting Loading



7) Adjust Fork Brackets to desired height and width. Be sure hitch pin is replaced in Grid Bar. Two height settings are possible and Brackets may be positioned to receive on either side of Grid Bar.



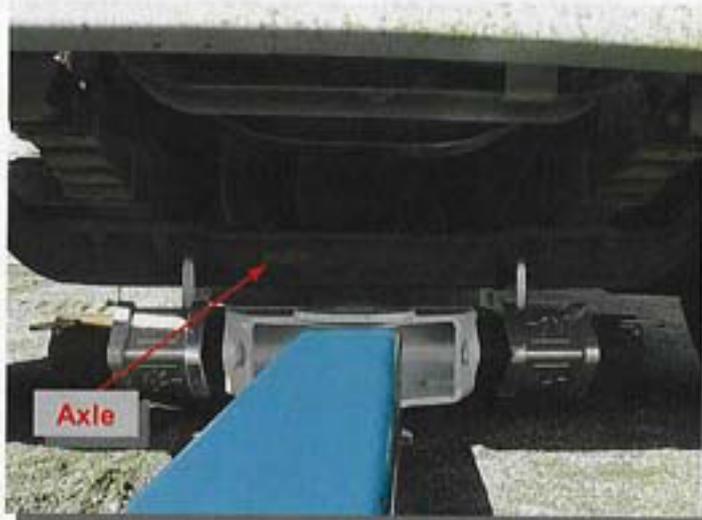
8) Select Low Scoop Forks for sliding under low bumpers, Torsion Bar Forks for bus torsion rod, Big Scoop Forks for rear ends and Big V Forks for the main frame.



9) Tilt Zacklift down to slide Head and Grid Bar under the front bumper of the towed vehicle.



10) EXTEND Horizontal Extend Tube out until Forks are positioned under lift point.



11) Forks and Brackets must be evenly spaced along the axle. This is important to avoid shifting of towed vehicle.



12) To clear low air foil TILT Horizontal Extend Tube upward before lifting straight up.

# Frame Lifting Loading



**Raise**

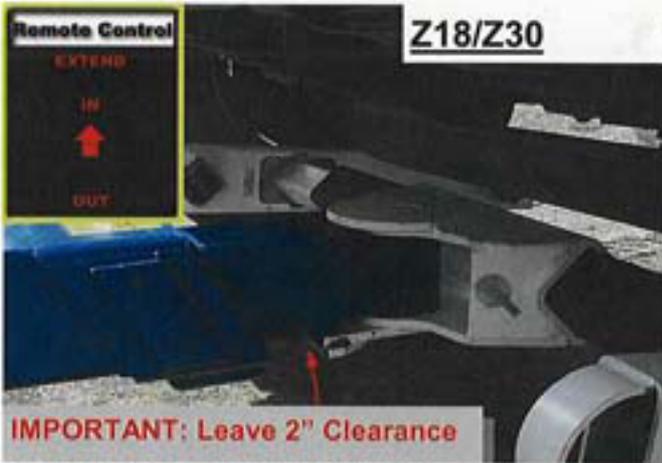
13) RAISE Horizontal Extend tube until J Lock is engaged. Zacklift Horizontal Extend tube Must be engaged into J Lock at all times when towing.

## Caution!!!

Do Not use Fold-up feature to gain height. Using fold to gain height will damage Zacklift and void all warranties and could also cause personal injury. The fold feature is to be used exclusively for the purpose of folding the Zacklift into storage position. Use tilt function for gaining height.



14) Make sure J Lock is in "Locked" position before towing. J Lock is pulled out, away from vertical main tube and completely hooking around J lock pin.

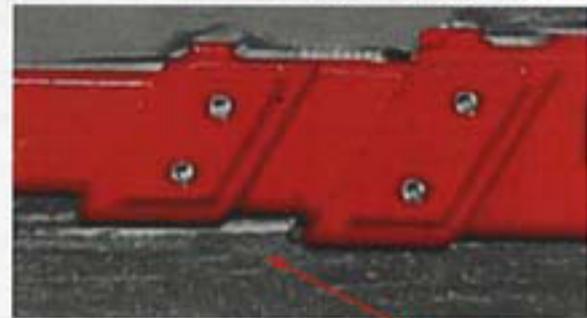


**IMPORTANT: Leave 2" Clearance**

15) RETRACT Inner Horizontal Tube to the towing position. IMPORTANT: Leave at least 2 inches extended to allow the Head to properly pivot during towing.

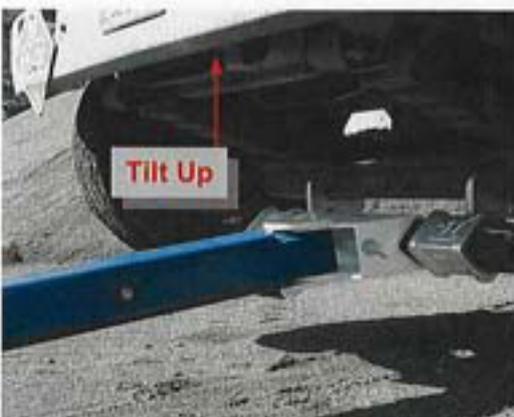
## Z403 Z303

Extend either section 2" to allow head to pivot during towing.



15a

**2" Minimum**



16) Maximum load lifting height is achieved by raising lift into the Locked position and functioning upward tilt.

17) Secure load to towing vehicle with Safety Chains. Failure to secure vehicle to tow voids warranty. Follow all State and Federal regulations.

### Federal Regulation 49cfr393.1

Every motor carrier, and employees directly concerned with the installation and maintenance of equipment and accessories shall comply and be conversant with the requirements and specifications of this part, and no motor carrier shall operate any vehicle or cause or permit to be operated, unless it is equipped in accordance with said requirements and specifications.

### Federal Regulation 49CFR.71

(10) Safety devices in case of tow bar failure or disconnection  
(i) the towed vehicle shall be connected to the towing vehicle by a safety device to prevent the towed vehicle from breaking loose in the event the tow-bar fails or becomes disconnected. When safety chains or cables are used as the safety device for that vehicle, at least two safety chains or cables meeting the requirements of paragraph (h)(10)(ii) of this section shall be used... (ii) if chains or cables are used as the safety device, they shall be crossed and attached to the vehicle near the points of bumper attachments to the chassis of the vehicles. The length of chain used shall be no more than necessary to permit free turning of the vehicles. The chain shall be attached to the tow-bar at the point of cross or as close to that point as is practicable.

## Frame Lifting Unloading



18) Remove Safety Chains.



19) UNLOCK J Lock by pushing in towards main body.



20) LOWER Horizontal Tube to within 2' - 3" from the ground.



21) TILT down until tires touch the ground.

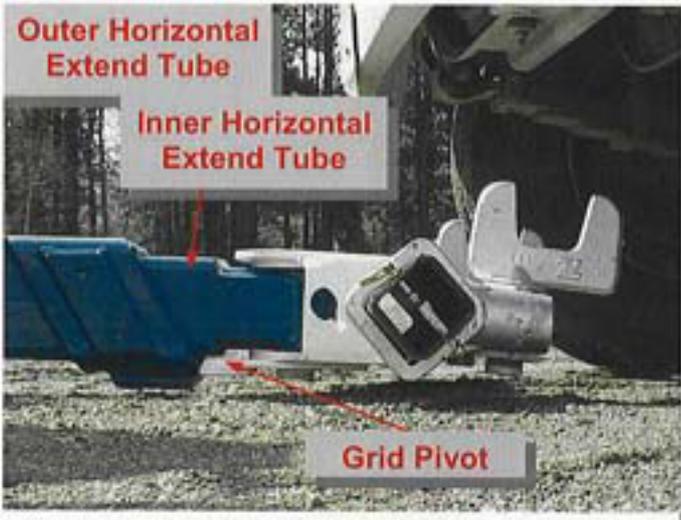


22) Lower Horizontal Extend Tube to clear undercarriage obstructions and low air foile before retracting.



23) RETRACT (Extend In) Horizontal Extend Tube to locking position to avoid pivoting when in storage position.

## Frame Lifting Unloading



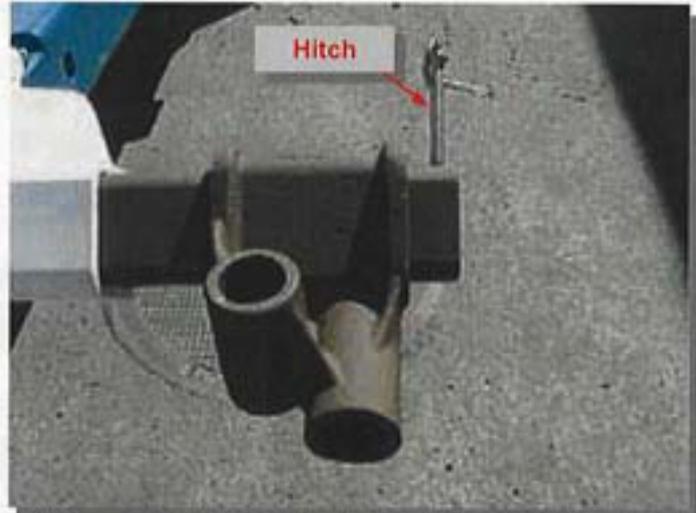
24) Retract Inner Horizontal Tube to the storage position. **IMPORTANT:** Retract the Head to butt against the Outer Horizontal to prevent tilting when not in use.



25) Raise Horizontal Extend Tube engaging J Lock.



26) LOCK J Lock by pulling out & completely hooking around J Lock pin.



27) Remove Forks & Fork Brackets for storage. Replace Hitch Pins in Grid Bar.



28) FOLD Horizontal Extend Tube for storage.



29) Tilt in towards cab for storage.

## Frame Lifting Unloading



30) With Horizontal Extend Tube tilted back towards cab, Lock fold-lock securely on bolt.



**Stand Clear of this unit when in use or during storage. CRUSH HAZARD. Stand clear. Not standing clear of this equipment at all times could result in injury or death.**

## J-1

# Heavy Duty Wheel Lift



#1) UNFOLD CAUTION - Do not unlock J-Lock when Zacklift is folded. Unlocking when Zacklift is folded could result in injury or death.



#3) Lower Horizontal section until it is about 2" from the ground.



#5) Extend horizontal section till crossmember bumps tires.



#2) After unfolding raise Zacklift to clear J-Lock pin. Push and hold lowering Zacklift until clear of J-Lock pin.



#4) Remove wheel trays and place on ground behind tires.



#6) Adjust wheel rod until proper length is achieved. Slide strap winch to align with tire.

# Heavy Duty Wheel Lift



#7) Slide wheel tray onto wheel rod and against tire. Make sure pull pins are both fully engaged



#8) Lift Zacklift fully into J-Lock. Pull strap over wheel and place hook into slot in rear of wheel tray.



#9) Tighten strap with bar provided



#10) Tilt up to get proper towing height.

Z18/Z30/Z402



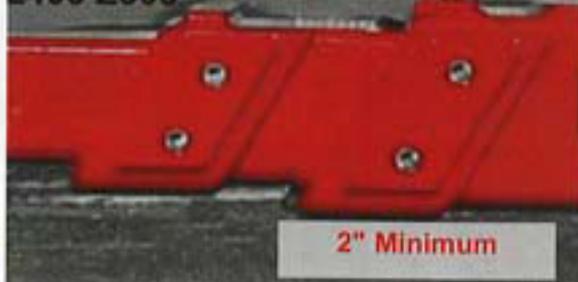
**IMPORTANT: Leave 2" Clearance**

#11) Z403/Z303: Extend middle horizontal extend tube at least 2" from outer horizontal extend tube. This will create an equalization of pressure with inner tube, allowing head to pivot properly during towing. The head will appear to be locked against the inner extend tube but will disengage when turning.

### Caution!!!

Do Not use Fold-up feature to gain height. Using fold to gain height will damage Zacklift and void all warranties and could also cause personal injury. The fold feature is to be used exclusively for the purpose of folding the Zacklift into storage position. Use tilt function for gaining height.

Z403 Z303



**2" Minimum**

## J-3

# Heavy Duty Wheel Lift

### Federal Regulation 49CFR.71

#### (10) Safety devices in case of tow bar failure or disconnection

(i) the towed vehicle shall be connected to the towing vehicle by a safety device to prevent the towed vehicle from breaking loose in the event the tow-bar fails or becomes disconnected. When safety chains or cables are used as the safety device for that vehicle, at least two safety chains or cables meeting the requirements of paragraph (h)(10)(ii) of this section shall be used. . . (ii) if chains or cables are used as the safety device, they shall be crossed and attached to the vehicle near the points of bumper attachments to the chassis of the vehicles. The length of chain used shall be no more than necessary to permit free turning of the vehicles. The chain shall be attached to the tow-bar at the point of cross or as close to that point as is practicable.

### Federal Regulation 49crf393.1

Every motor carrier..., and employees directly concerned with the installation and maintenance of equipment and accessories shall comply and be conversant with the requirements and specifications of this part, and no motor carrier shall operate any vehicle or cause or permit to be operated, unless it is equipped in accordance with said requirements and specifications.



- #12) Secure load to towing vehicle with Safety Chains. Failure to secure to vehicle in tow voids warranty.



# OPERATING YOUR ZACKLIFT



**Stand clear of this unit when in use or during storage. CRUSH HAZARD. Stand clear. Not standing clear of this equipment at all times could result in injury or death.**

**COMPLETED WARRANTY CARD MUST BE RETURNED TO ZACKLIFT WITHIN 30 DAYS OF PURCHASE FOR WARRANTY COVERAGE ELIGIBILITY.**

## **W A R R A N T Y**

Zacklift International Inc. warrants each new ZACKLIFT wheel lift to be free from defects in material and workmanship for a period of one (1) year from date of original purchase from Zacklift International Inc.

The sole obligation of Zacklift International Inc. under this Warranty, statutory or otherwise, is limited, at its discretion, to the replacement or repair at its factory, or at a point designated by Zacklift International Inc., of such part or parts as shall appear to it upon inspection to be defective in material or workmanship.

This Warranty does not obligate Zacklift International Inc. to bear the cost of labor or transportation charges in connection with the replacement or repair of any part found to be defective. Further, all obligations of Zacklift International Inc. under this Warranty are null and void if (1) the product has been repaired or altered by any person not authorized by Zacklift International Inc., (2) the product has been subject to misuse, abuse, negligence, or accident, or all operating procedures have not been properly followed, (3) the specified lift and/or tow ratings have been exceeded, (4) the specified maintenance and lubrication requirements for the product have not been met, or (5) the product is used to lift individuals.

Zacklift International Inc. makes no warranty with respect to hydraulic power options, cylinders, valves, and related components, such being subject only to the 90 day warranties of their respective manufacturers.

ZACKLIFT INTERNATIONAL INC. SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR CONTINGENT LIABILITIES ARISING OUT OF THE USE OF THE PRODUCT OR THE FAILURE OF ANY PARTS OR PRODUCTS TO OPERATE PROPERLY. THE WARRANTY DESCRIBED ABOVE IS THE ONLY WARRANTY MADE, AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Zacklift International Inc., whose policy is one of continuous improvement, reserves the right to improve its products through changes in design or materials as it may deem desirable without being obligated to incorporate such changes in products of prior manufacture.

This Warranty is not transferable and will become effective only upon completion and mailing of the attached Warranty Card to Zacklift International Inc. at the address shown.



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